

On a new concept of community: social networks, personal communities and collective intelligence

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ABSTRACT

This text essentially deals with the transmutation of the concept of “community” into “social networks”. This change is due largely to the boom of virtual communities in cyberspace, a fact that has generated a number of studies not only on this new way of weaving a society, but also on the dynamic structure of communication networks. At the core of this transformation, concepts such as social capital, trust and partial sympathy are called upon, to enable us to think about the new forms of association that regulate human activity in our time.

Key words: computer communication networks; community networks; collective intelligence.

The current generalized interconnection among people has drawn the attention of many theorists as regards the effects of this interconnection on the scenario of individual relationships and on how collectives behave as high density networks. Individual and collective relationships, particularly in cyberspace, have been arousing the interest of social network scholars, of sociologists, virtual ethnographers, cybertheorists, specialists in information and knowledge management, and ultimately of all who feel that there is something new to be investigated, that the current vertigo of collective interaction may be understood within a certain logical framework, within certain patterns, as was announced by structural analysts of social networks (Wellman & Berkowitz, 1988) in the 1980s.

Themes such as “emerging intelligence” (Steven Johnson, 2001), “intelligent collectives” (Howard Rheingold, 2002), “global brain” (Heylighen et al., 1999), “society of mind” (Marvin Minsk, 1997), “connective intelligence” (Derrick de Kerckhove, 1997), “intelligent networks” (Albert Barábasi, 2002), and “collective intelligence” (Pierre Lévy, 2002) are increasingly recurrent among renowned theorists. These terms all point at the same situation: we are networked, interconnected with an increasing number of points with growing frequency. This situation gives rise to the desire to better understand the activities of these collectives, of how behaviors and ideas propagate, of how news travel from one point to another across the planet, etc. The boom of virtual communities seems to have become a true challenge to our understanding.

But above all, it is important to stress that all types of groups, communities and societies are the result of a difficult and continuous *negotiation* of individual preferences. This is precisely the reason why the fact that we are increasingly interconnected to one another implies that we have to face, one way or another, our own preferences and the relation of

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these preferences to those of others. And we mustn't forget that this negotiation is neither obvious nor easy. Additionally, what we call "individual" preferences are in fact the result of a truly collective construction, in an ongoing game of suggestions and inductions that is ultimately the dynamics of society.

Communities

Amidst the turmoil in cyberspace, a consolidated term such as "community" has been discussed and even questioned by some theorists. Some claim, with a nostalgic tone, that it has failed, and regret that it has been eroded and lost meaning in the present world. Others point at instances of resistance that would prove its pertinence even in our individualistic capitalist society. Yet others believe that the meaning of the concept has simply changed.

In a book published in 2001, named "Community: seeking safety in an insecure world", Zygmunt Baumann, a well known sociologist for his work on the phenomenon of globalization, seeks to analyze what is currently happening to the notion of community. It is possible to see a series of concepts in the authors text: individualism, freedom, transitoriness, cosmopolitanism of the "successful people", aesthetic community, safety. Baumann supposes that there is an opposition between freedom and community. Considering that the term "community" implies the fraternal obligation of sharing advantages among its members, regardless of their talents or importance, selfish individuals, who perceive the world through the lens of merit (the cosmopolitans) would have nothing to gain in the well-woven web of communal obligations, and a lot to lose if they're captured by it (Baumann, 2001).

The text advocates the idea that today community and freedom are conflicting concepts: there's a price to pay for the privilege of 'living in community'. The price is paid in the form of freedom, also known as 'autonomy', 'right to self affirmation' and to 'identity'. Whatever the choice, something is gained and something is lost. Not belonging to a community means not having protection; achieving a community, if this ever happens, may mean losing freedom in the short term (Baumann, 2001).

It is interesting to notice that the apparent opposition between freedom and community found in Baumann is actually connected to the meaning he attributes to the notion of "community", which is weaved with long-term commitments, inalienable rights and inescapable obligations. The commitments that would make the community an ethical one would be those to 'fraternal sharing', thus reaffirming the right of all to a communal insurance against the mistakes and misfortunes that are the inherent risks of individual life (Baumann, 2001).

As we can see, for Baumann, individual life is full of risks, and the desire for living in freedom means living without safety. On the other hand, community, the place of safety, takes us to the most traditional sense of the term as we know it, where the ties are forged by local proximity, kinship, solidarity of neighborhoods which would be the basis of consistent relationships.

Barry Wellman and Stephen Berkowitz (1988) conduct a more complex analysis of the concept of community and contribute elements that allow us to think this problem in a different manner. They depart from the principle that we are associated in networks, but through personal communities.

They argue that while most people know that they have plenty of useful community bonds, they often believe that others lack such bonds. To prove this point, these people evoke common images of masses of individuals pushing and elbowing one another in crowded streets, solitary people sitting in front of the TV set, hordes demonstrating in the streets or employees lined up in front of their machines or computers (Wellman & Berkowitz, 1988).

This means that each one of us has a clear view of the network of relationships to which we belong. However, the network to which others belong is not easily perceived. This includes not only those people we do not know, but also those who are part of our relations, people we know and with whom we have weak bonds, in the words of Granovetter (1974), and who probably have strong bonds with another network which is unknown to us.

Wellman and Berkowitz (1988) say that, until 1960, many sociologists shared the popular belief in the disappearance of the "community" in large cities and spent a lot of energy trying to explain why this would happen. Many of their efforts focused on the apparent cataclysm of the changes associated with the industrial revolution in the last two centuries.

This revolution would supposedly have given rise, for example, to the new forms of exploitation, the absence of communal bonds, the emergence of new forms of social pathology and the loss of personal identity.

Wellman and Berkowitz (1988) state that many recent analyses suffer from a “pastoral syndrome”, that nostalgically compares contemporary communities with the supposedly good old days. So much so that urban sociologists say that the size, density and heterogeneousness of contemporary cities have bred superficial, transitory, specialized bonds, disconnected from the neighborhoods and streets. With this, the bonds of the extended family have become weaker, leaving individuals to fend for themselves, with few transitory and uncertain friends. As a result, solitary individuals will suffer from more serious diseases due to the absence of the social support provided by friends and relatives. But the authors ask the following questions: have these things actually disappeared? Is it really true that interpersonal bonds are now probably fewer in number, shorter in duration and specialized in terms of content? Are personal networks about to disappear, and are the few remaining bonds good only to serve as the basis for disconnected relationships between two people, instead of serving as the foundation for more extensive and integrated communities?

New techniques that enable more systematic collection of data, developed in the 1950s, have shown that contemporary communities were not as dead as many thought. On the other hand, and equally important, researchers have shown that pre-industrial communities were not as solidary as they were believed to be. When the societies of developing and underdeveloped countries are analyzed, we see that many places lack support communities, social networks, or consistent kinship bonds. For Wellman and Berkowitz (1988), these results show that the relationships within these pre-industrial societies are generally hierarchical, with specialized exploitation bonds, with a deep divide between factions. Additionally, historians have systematically been using demographic sources and archives to demonstrate that many pre-industrial revolution communities were less solidary than was originally thought.

That is, if we respect the traditional concept of community, communities would neither be completely doomed in industrial societies nor found so often in pre-industrial ones. What recent network analysts highlight is the need to *change* our understanding of the concept of community: new forms of community have emerged, which made our relation with the old forms more complex. In fact, if we focus directly on the social bonds and informal systems of exchanging resources instead of focusing on people living in neighborhoods and small towns, we will have an image of interpersonal relationships which is very different from the one we are used to. This takes us to a transmutation of the concept of “community” and “social network”. If solidarity, neighborhood and kinship were prevailing aspects when trying to define a community, they are now only some among the many possible patterns of social networks. At present, what structural analysts seek to assess are the ways in which alternative structural patterns affect the flow of resources between the members of a social network. We are faced with new forms of association, immersed in a complexity called social network, with several dimensions, that mobilizes the flow of resources between countless individuals distributed according to variable patterns.

Social Capital

In the wake of this shift in the perspective from the concept of “community” to the concept of “social networks”, many social science authors began to investigate, from the 1990s onwards, the empirical concept of social capital (Burt, 2005; Lin, 2005; Narayan, 1999; Portes, 1998; Grootaert, 1997; Fukuyama, 1996; Putnam, 1993; Coleman, 1990). This notion may be understood as the individuals’ ability to interact, their potential to interact with those around them, with their relatives, friends, co-workers, and also with those who are distant and may be accessed remotely. Social capital here means the ability of individuals to *produce* their own networks, their personal communities.

It is pertinent to note that James Coleman (1990) and Robert Putnam (1993), who are among the first scholars to analyze the notion of social capital, tried to define it as the internal social and cultural coherence of a society, the rules and values that govern the interaction among people and the institutions they’re involved with. The importance of the role of institutions is very clear here, because they work as mediators of social interaction, since they disseminate values of integration among men and women. Schools, companies, clubs, churches, families are still references for social relations, despite all the crises that these institutions have been facing.

Understanding their role and influence within a community is part of the process of assessing the social capital. Countries which have been devastated by civil wars or invasions (such as Rwanda and Iraq, for example)² notice a

² Not even the red Cross, an institution believed to be immune to social turmoil was spared from attacks in Iraq.

sharp deterioration of their social fabric, caused by the fact that the institutions fail to play an active role. Reconstructing them is the safest way to restore part of the social capital lost (which is basically lost trust).

However, as we said, the institutions play the role of regulators and mediators of deeper processes. When analyzing the social capital, we focus on microsociological variables such as sociability, cooperation, reciprocity, proactivity, trust, respect, sympathies. Hence the fact that many studies on social capital point at the need to survey information on the everyday life of people such as, for example, surveying if they talk to their neighbors, receive telephone calls, frequent clubs, churches, schools, hospitals, etc. It is necessary to survey the involvement of individuals in local associations and networks (structural social capital), assess the level of trust and adherence to rules (cognitive social capital) and also analyze the occurrence of collective actions (social cohesion). These would be some basic indicators of the social capital of a community.

But why would this actually be considered as “capital”? The social relations are perceived as a type of “capital” precisely when the process of economic growth is driven not only by natural capital (natural resources), produced capital (infrastructure and consumer goods) and financial capital. In addition to these, it would be necessary to determine *how economic actors interact and organize themselves* to generate growth and development. Understanding these interactions comes to be considered a type of wealth that has to be exploited, capitalized on. As Grootaert and Woolcock (1997) say, one of the concepts of social capital as proposed by sociologists R. Burt, N. Lin and A. Portes is related to the resources – such as information, ideas and support – that individuals are able to resort to thanks to their relationship with others. These resources (‘capital’) are ‘social’ to the extent that they are accessible only within these relationships and through them, unlike physical capital (tools and technologies) and human capital (education, skills), for example, which are essentially the property of individuals. The structure of a certain network – who relates to whom, the frequency and the terms of these relations – therefore plays a fundamental role in the flow of resources through the network.

There is, however, a strong trend in neoclassical economy to reject analyses which attempt to introduce social variables into contemporary economic theories. In his famous book “Trust: The Social Virtues and the Creation of Prosperity”, Francis Fukuyama (1996) criticizes the prevailing perspective of neoclassical economics and its consequences to a genuine reflection on social capital. He radically disagrees from the premises of this theory, which is fundamentally based on a view of human nature as selfish. He argues that all the impressive edifice of contemporary neoclassical economic theory rests on a relatively simple model of human nature, that is, the idea that human beings are individuals who maximize rational utility. That is to say that they strive to acquire the greatest possible number of things that they think may be useful for them. They do it in a rational manner, and they perform this calculation as individuals who seek to maximize the benefit for themselves, with no concern for the benefit of any group they might be part of. Neoclassical economists propose that human beings are essentially rational but selfish individuals, who aim at maximizing their material well-being (Fukuyama, 1996).

He argues that this perspective is insufficient to explain political life, with all its emotional developments, and is not sufficient either to explain many aspects of economic life, since not all economic actions derive from what is traditionally known as economic reasons (Fukuyama, 1996). The theses that individuals make choices based on the maximization of utility, and thus act in a rational manner, does not seem to resist an analysis that considers life in networks and associations, typical of most men. This is also the perspective of Mark Granovetter (2000). From his point of view, this theses illustrates the difficulties economists have in including the numerous variables of the social arena into their point of view.

Partial Sympathy and Trust

What Fukuyama (1996) and Granovetter (2000) actually criticize is the belief of economists in a fundamentally selfish human nature. This belief that has been and still is the basis of many philosophical trends is harshly criticized by David Hume (1983). According to Hume, the view of selfishness as the pillar of human nature is the easiest way to think about society. Hume has a different stand that does not exclude selfishness, but rather places it as a particular case of a more general condition: the partiality of our nature. According to Deleuze’s interpretation of Hume, if by selfishness we mean the fact that every inclination pursues its own satisfaction, the principle of identity, $A = A$, i.e., the formal and empty principle of a logic of man emerges, and of an incult, abstract man, with no history and no difference. In concrete terms, selfishness denotes only *some* of the means organized by man to satisfy his inclinations, as opposed to

other possible means. These may be generosity, heredity, the customs, the habits. The inclination can never be dissociated from the means organized to satisfy it (Deleuze, 1953).

Hume's (1983) major thesis is that our generosity is limited by nature. What is natural in us is a limited generosity. Man would be therefore partial, rather than selfish. The truth is that men are always part of a clan, of a community. Therefore, the essence of private interest is not selfishness but rather, partiality. In fact, men's selfishness would only restrict one another. This is why we have to invoke the social contracts, precisely because they would be a way of restricting a type of selfishness that is supposedly "natural" in man. As regards sympathies the problem is of a different nature: it is necessary to integrate them into a positive totality. As Deleuze (1953) reminds us, what Hume reproaches in the contract theories is that they present an abstract and false image of society, by defining society in a negative manner, by seeing a set of limitations to egotisms and interests, rather than understanding it as a positive system of invented enterprises.

In this sense, the problem of society is not a problem of limitation but rather of *integration*. Integrating sympathies implies making sympathy overcome its contradiction, its natural partiality. Esteem, respect and trust are inherent to sympathy. Our challenge is to extend sympathies to make it possible to build larger groups than those created by partial sympathy. It has to do with inventing the means and devices that enable men to extend their sympathies beyond their clan, family or neighborhood. That is extending sympathies beyond what is configured as a type of partiality: the "communities" in the most traditional sense. For us to constitute a society, we have to undertake to integrate sympathies to build a greater whole. The feelings of esteem, respect and trust are practical examples that point at the means to integrate our sympathy with the sympathies of others. Earning the esteem, respect and trust of a stranger means working to build a bond of affection that is broader than the one of our partialities. This is one of the roles, if not the most important role of institutions: not exactly the role of governing or regulating the relationships among men, but of mobilizing their inclinations, integrating them into a greater whole, by using the values and regulations. It is in this sense that Fukuyama (1996) says that social capital differs from other forms of human capital to the extent that it is usually created and transmitted by social mechanisms such as religion, tradition or historical habit.

One of the essential aspects in the consolidation of personal communities or social networks is certainly the feeling of mutual trust that has to exist to a higher or lesser degree among people. The construction of this trust is directly linked to the ability each one supposedly has to relate to others, to perceive the other and include him/her into his universe of reference. This type of inclusion or integration concerns precisely the straightforward and often forgotten attitude of recognizing, in the other, his abilities, competencies, knowledge, habits. The more an individual interacts with others, the more he is apt to recognize behaviors, intentions and values that make up his environment. Conversely, the less someone interacts (or interacts only in limited environments), the less he will tend to fully develop the fundamental ability to perceive the other. In other words, recognizing is an ability developed by an individual that enables him to perceive, detect and locate a characteristic that had not been perceived before and that for this very reason, simply did not exist within his field of perception. But recognizing is also and at the same time, valuing somebody, accepting the person into one's environment, integrating this person as a colleague or partner.

This dynamics of recognition is certainly one of the bases for building trust, not only individual but collective trust as well. Social networks can only be built on the basis of mutual trust disseminated among individuals. This may be verified to a higher or lower degree, but trust must be present to the larger extent possible.

In an invaluable book called "Building Trust", Robert Solomon and Fernando Flores (2002) insist that trust is dynamic although many act as if it were a state. According to them, trust is in fact part of the vitality of relationships, not part of their inert core. Trust is a social practice, not a set of beliefs. It is an aspect of culture and the product of a practice, not only a matter of individual attitude or psychology. The problem of trust is a practical one: how to build and maintain trust, how to move from distrust to trust, from abuse of trust to the restoration of it. Trust has to do with reciprocal relationships, not with prediction, risk or dependence relationships. Trust has to do with weaving and keeping commitments and the problem of trust is not the loss of trust but the failure to foster the weaving of commitments.

When Fukuyama (1996) states that social capital is an ability that derives from the prevalence of trust in a society or in certain parts of this society, we mustn't forget that in order to increase social bonds, it is necessary to invest in the construction and development of trust relationships, which requires at least years of encounters and interactions. It is a fact that trust is more easily destroyed than built, and that its production entails costs, investment, at least of time and efforts, if not money. Maintaining the social capital is also costly.

At a more profound level, the level of social capital of a community is a factor that points at the potential for interrelation among people and at this ability to build collective trust, but it is also an indicator of the level of negotiation of the preferences of each individual. Therefore, assessing the social capital of a collective means understanding at which stage the negotiation among people is, that is, if it is unstable, with weak institutions and social violence or if it is rich with clear collective actions and high level of trust.

Digital Networks

Digital networks are today an essential factor in understanding the expansion of new forms of social networks and the increase of social capital in our society. Testimonials such as Howard Rheingold's for instance have proved that the synergy of people over the Web, depending on the project they're involved in, may be multiplied with great success. The different forms of virtual communities, the P2P strategies, the mobile communities, the boom of blogs and wikis, the recent orkut fever are proof that cyberspace is a crucial driver of the increase of social and cultural capital available.

This understanding has actually consolidated gradually since the beginning of the 1990s. Rheingold, in his book *Virtual Community* (1996) realized at that time that virtual communities were not only places where people met, but also the means to achieve several ends. He anticipated that the collective minds of peoples and their impact on the material world might become one of the most surprising technological issues of the next decade. Long before, in 1976, American researcher Murray Turoff, who devised the electronic information exchange system (EIES), considered the starting point of the current on-line communities, predicted that computer-based conference could provide human beings with a way to exercise their collective intelligence capacity. He said that a successful group would show a greater degree of intelligence as compared to any of its members (Turoff apud Rheingold, 1996). This introduced the idea that the interconnection of computers could breed a new form of collective activity, centered around the broadcast and exchange of information, knowledge, interests etc. Steven Johnson (2001) shares this vision, and says that we can look at the first years of the Web as an embryonic phase that evolved from its cultural ancestors such as the magazines, newspapers, shopping malls, the television, etc. But today there is something utterly new, a type on second wave of the interactive revolution triggered by the computer: a model of interactivity based on the community, on the many-many collaboration.

Rheingold (1996) not only verified the emergence of virtual communities, but, motivated especially by the plethora of information that characterized the Web in its infancy, saw deeper relationship in these communities.

In fact, one of the network's problems was the excessive supply of information with few effective filters able to retain essential, useful data, of interest to each individual. While programmers strove to develop intelligent agents to search and filter the tons of information that piled up in the network, Rheingold realized that there were "social contracts between human groups – much more sophisticated although informal – which allow us to act as intelligent actors towards one another".

The idea of a collective mind or collective intelligence started to consolidate, and it could not only solve problems together, in group, collectively, but could work on behalf of an individual, for his benefit. Rheingold (1996) says that virtual communities host a large number of professionals that deal directly with knowledge, which makes these communities a potentially practical tool.

When the need arises for a specific piece of information, a specialized opinion or the location of a resource, the virtual communities work as a genuine living encyclopedia. They can help their members deal with the overload of information.

Virtual communities then would end up working as truly intelligent human filters.

All this adds to the real possibility of measuring and mapping out the collective activity over digital media, whether directly through on-line search or indirectly via intelligent agents or via tracking. There are presently many analyses of social networks that use the Internet for mapping and research³. A great effort is being made to develop a theory of networks by many theorists, inspired mainly by American psychologist Stanley Milgram. In the 1960s, Milgram proposed a description of the network of interpersonal connections that connect individuals within a community

³ Visit the following sites of Social Network Analysis : <<http://www.sfu.ca/~insna>> and Cyberatlas <<http://www.cyberatlas.guggenheim.org/home/index.html>>.

(Milgram, 1967). His hypothesis drove the mathematical formulations of Duncan Watts and Steven Strogatz (1998) on the theory of the “small world” and the collective dynamics of networks (the theory of the six degrees of separation or six steps). Physics Albert-László Barabási has become known for his research on the role we “specialists” (hubs) play in networks in general and in cyberspace in particular. Like Rheingold, Barabási (2002) has often mentioned a sociology of affluence on the Web, promoted by the way the links between pages are established⁴. This relation between sociology and the theory of networks has motivated a number of surveys as Mark Buchanan (2002) shows in his book, *Nexus*, where he establishes a series of associations between the works of Granovetter and Fukuyama, for example, and the mathematical thesis of Watts and Strogatz.

Pierre Lévy (2002) has also advocated the participation in virtual communities as a stimulus to the formation of collective intelligences, to which individuals can resort to exchange knowledge and information. He essentially sees the role of communities as intelligent filters that help us deal with the excess of information, and also as a mechanism that opens us to the alternative visions of a culture. He says that a network of people interested in the same themes is not only more efficient than any search mechanism but above all it is more efficient than traditional cultural mediation, which always filters too much, ignoring the details of situations and the needs of each one.

Just like Rheingold, Lévy is convinced that a virtual community, when conveniently organized, represents a wealth of distributed knowledge, capacity for action and potential cooperation.

Conclusion

The concept of social networks enables a broader understanding of human interaction than the concept of community. The sociological analysis of Granovetter (2000) and Wellman (1988) have taken this direction in the end of the 1970s and so have the philosophical proposals of Deleuze and Guattari (1982). Concepts such as rhizoma and collective agency aimed at translating the feeling that society at the end of the 20th century was no longer organized according to the conventional parameters of place, kinship, neighborhood, etc (Deleuze and Guattari, 1982). These reflections emerged in fact at the same time a revolution began in the means of communication. This revolution eventually caused a key change in the way individuals interact, in the way each one could interact and keep in contact with others. This is what we experience today, with the emergence of cyberspace, the multiplication of on-line collaboration tools, mobile communication technologies integrating to traditional media, etc.

The most well known result of all this process is the emergence of virtual communities, which have always been criticized for the lack of physical contact between the participants. But the concept of community itself has rarely been discussed. Expecting what was romantically implied by “community” from virtual communities, as Baumann (2003) does, would mean refusing to see what has been occurring to the collective movements of present times. As Pierre Lévy (2002) says, virtual communities are a *new way of making society*. This new way is rhizomatic, transitory and dissociated from time and space. It is rather based on cooperation and objective exchanges than in the permanence of bonds. And this was only possible with the support of new communication technology.

It is precisely the problem of ambiguity produced by the concept of community that the notion of social network solves. It is no longer the case of defining community relations only in terms of close and persisting bonds, but to go further and think of personal networks. It is each individual who is able to build his own network of relationships, although this network cannot be exactly defined as a “community”. At a deeper level, it is at the core of the current technological revolution that the power of Hume’s concept, partial sympathy, is perceived. The possibility of integrating sympathies within cyberculture is unprecedented in our history. Men are able to find zones of proximity where it would seem impossible: people share ideas, knowledge and information on their problems, difficulties and needs, which would be impossible in most cases among close relations, for the simple fact that local networks are by definition limited in time and space. Local networks or “communities” in the traditional sense are precisely the result of the natural partiality of human beings. Expanding them is our challenge.

⁴ Visit <www.nd.edu/~alb/>.

There is still a lot to learn about the formation of social networks, the inflow of ideas and information across human associations in cyberspace. What is clear today for the crowd that inhabits the virtual world is that we are before a phenomenon that compels us to think differently about the way we organize groups and communities.

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