Collaborative Entrepreneurship: Idealism or an Emerging Reality?
Towards an alternative inter-organizational model for re-humanizing management

Hector Rocha¹ and Raymond Miles²

Abstract

This paper examines a new inter-organizational form which is emerging from collaborative innovation processes within and across communities of firms operating in complementary markets.

Idea sharing think tanks around high tech centers at leading universities and, more generally, around clusters, are well-documented phenomena. These inter-organizational processes and forms rest on collaborative capabilities. However, mainstream theories and even policies aimed at developing these capabilities are based on an incomplete set of assumptions about human nature, which constrain the very development of capabilities sought by them.

The argument of this paper is that the sustainability of the processes and results of the emergent inter-organizational communities depends on a richer set of assumptions about human nature than that provided by mainstream management theories. The risks and demands involved in the design and operation of cross-organization collaborative communities require a challenging set of assumptions about human nature, which go far beyond the notion of enlightened self-interest embedded in neo-classical economics and even beyond the more complex models of human needs and motivation currently employed.

Building on this argument and the evaluation of actual communities of firms, this paper contributes an inter-organizational network model based on the assumptions about human motives and choice offered by Aristotle.

The conclusions of this paper are twofold. First, it argues that enlightened self-interest hinders rather than fosters the process of developing collaborative capabilities, given that this process will stop when difficulties affecting the pay-offs of the relationship arise in the short run. Second, it explains that a set of assumptions that takes both self-regarding and other-regarding preferences as ends is required in order to develop and sustain collaborative capabilities in the analyzed inter-organizational communities. Members of such communities have to understand and share these assumptions on a continuing basis in order to sustain their collaborative efforts and outcomes.

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Introduction

Is there evidence of an emerging inter-organizational form? In the affirmative case, what are the assumptions upon which it is based and how are these assumptions useful in predicting its evolution, sustainability and contribution to personal, organizational and societal development? This paper tries to answer these two questions, based on examples of what we see as an emerging reality: the creation of collaborative communities at the inter-organizational level.

Given this aim, it is useful to consider why, how, when, and where new organizational forms are created. (Miles and Miles, 1999; Miles, Snow, and Miles, 2000; Miles and Miles, 2008). New forms emerge around practices aimed at helping the firm utilize growing production and/or market focused knowledge and capabilities. The emergence of the vertically integrated functional form (u-form) to facilitate manufacturing efficiencies in the late 19th and early 20th century and the evolution of the multi-divisional M-form designs in the 1920s to exploit expanded market capabilities are well documented (cf. Chandler, 1962; Drucker, 1954; Rumelt, 1974). In the post WW II era Matrix structures and self-managing cross-functional project teams emerged in the early days (50s and 60s) of the aero space pioneers such as TRW in order to facilitate innovation (see e.g. Delbecq and Finney, 1974). In the 1980s, the concept of networks became key as supply chain linkages of firms, long at work enhancing both production and marketing in the clothing industry, appeared in publishing and consumer goods distribution facilitated by the computer (Miles and Snow, 1984, 1986, 2003 and forecast in Miles and Snow, 1978). At the intra-organizational level, it became clear in the latter decades of the 20th century that local responsiveness, global integration and worldwide learning had to be managed simultaneously (Barlett and Ghoshal, 1989) a
realization which resulted in an internal differentiated network structure (Ghoshal and Nohria, 1994).

Most recently network structures have been found not only at the intra-organizational level and within supply chains but also at the inter-organizational level across complementary markets. Inter-organizational federations and communities have begun to emerge to facilitate the sharing and utilization of knowledge primarily in high tech arenas. Miles et al illustrated this evolution in their 2000 article, “The Future.org,” explaining both the timing and nature of the new forms and describing the emergence of the managerial capabilities essential to allow the new forms to function and the development of these into a societal “meta-capability”.

### Table 1
**Economic and Organizational Evolution**

<table>
<thead>
<tr>
<th>Economic Era</th>
<th>Standardization</th>
<th>Customization</th>
<th>Innovation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meta-Capability</td>
<td>Coordination</td>
<td>Delegation</td>
<td>Collaboration</td>
</tr>
<tr>
<td>Business Model</td>
<td>Market Penetration</td>
<td>Market Segmentation</td>
<td>Market Exploration</td>
</tr>
<tr>
<td>Growth Driver</td>
<td>Learning-Curve Gains and Scale Economies</td>
<td>Know-how Transfer to New Markets</td>
<td>Entrepreneurial Empowerment</td>
</tr>
<tr>
<td>Organizational Model</td>
<td>Functional</td>
<td>Divisional, Matrix, and Network</td>
<td>Alliances, Spin-offs, and Federations</td>
</tr>
<tr>
<td>Key Asset</td>
<td>Tangible Assets</td>
<td>Information</td>
<td>Knowledge</td>
</tr>
</tbody>
</table>

Source: Miles, Snow and Miles (2000).

Having discussed practices toward an enhanced organizational model for the 21st century, Miles et al described such a form and its features in a detailed model called OpWin (Miles, Miles and Snow, 2005). They argued that their model exemplifies the new species of collaborative inter-organizational network organization demanded by the global economy.
New evidence demonstrates the emergence of key elements of the model proposed by Miles et al. For example, the Blade.org (data processor) community parented by IBM and Intel, the Syndicom community operating in the medical device community, and a large number of less formally designed collaborative open source communities in Northern Italy, Denmark, Finland and Norway, where cultural values and community building traditions are supportive of the underlying capabilities and conditions essential to create and sustain the new form for value creation.

The concept of meta-capability helps us in discovering and understanding the parallelism between the evolution of organizational forms and managerial philosophies (Miles and Snow, 1978; Ghoshal and Bartlett, 1997; Miles and Miles, 1999), and their role in explaining either the empowerment or constraint of the full development of network capabilities (Miles and Snow, 1978; 1992; Miles et al, 2005). In fact, wealth creation, in the early 20th century was mainly achieved by internal coordination, in the latter half of the 20th century by the meta-capability of delegation within first divisional and then matrix structures, and most recently and in the future by the meta-capability of collaboration, both at the intra-firm (Nahapiet et al. 2005) and inter-organizational (Miles et al., 2000, 2005; Rocha, 2006a) levels.

Given this co-evolution between organizational forms and assumptions, this paper aims at exploring the required set of assumptions for the sustainability of the processes and results within the emergent inter-organizational communities. In order to achieve this aim, this paper is structured as follows. First, it summarizes the key features and assumptions of this model (Section 1). Second, it makes explicit the methodological assumptions, which are based on a combination of qualitative evidence-based research, management practice, history and philosophy. The complete model is built considering empirical evidence from emerging cases in four inter-organizational network cases and
two inter-organizational regional communities from both the developed and developing world (Section 2). Third it deepens the model from the standpoint of the required managerial assumptions and their impact on practice, focusing on two sets of assumptions about human motives and rationality. We show how being aware of and acting in accordance with these two groups of assumptions are necessary for the sustainability of inter-organizational collaboration (Section 3). Finally, this paper answers the research questions and develops the main conclusions, considering a more comprehensive although not complete view of human and organizational potential for inter-organizational collaboration (Section 4).

1 Collaborative Entrepreneurship – Key Features and Assumptions

a) Key features

Innovation in markets occurs when product or service ideas are developed and / or adapted to new or expanded market uses (Schumpeter, 1934; cf. Miles et al, 2007; Rocha and Birkinshaw, 2007). The innovation potential of individual firms may be limited not only by firm systems and processes that reduce the motivation or ability of their members to engage in knowledge sharing innovation producing activities but also by the limits, real or imagined, imposed by their own market strategies. That is, firms focused on one or more closely related markets tend to limit their own innovation efforts in order to both lessen the costs of development and sustain the returns from their existing line. Thus, as documented in the R&D experiences of even such innovative firms as Xerox and IBM, the focus on existing products and markets is a key barrier the innovation process faces.
It is the constraints imposed on knowledge utilization by managerial and market barriers that is driving community building practices within and across firms. Therefore, we expect an organizational form focused on the design and operation of a community of firms addressing complementary markets will be created to enhance the potential for the fuller utilization of the entrepreneurial capability of all of its members.

OpWin is the fictional model created by Miles et al to describe this inter-organizational form (Miles et al. 2005; Figure 1).

**Figure 1**
Collaborative Entrepreneurship – Model

Source: Miles, Snow and Miles (2000)
It is a collaborative venture across firms that had already experienced the benefits of both planned and unplanned collaborative innovation activities growing out of supply chain interactions. OpWin is a dynamic network of member firms and temporary affiliates, in which each is a profitable independent entity and their resources are often shared in business ventures with other firms, usually but not always within the network (Miles et al. 2006).

The founders analyzed the values and processes that had been involved in their successful collaborative efforts and set out to purposely expand these processes by enhancing their own ability to share knowledge and engage in collaborative ventures and by inviting other firms who addressed complementary markets and with whom they had developed trusting relationships into their community. As the OpWin Community honed its design and expanded its size, it specified several structural and process characteristics that its leaders believed were essential:

1. Creation and adoption by all members of a commitment to trustworthy behavior and the pursuit of equitable treatment among all members in all interactions.

2. The design of effective processes, including behavioral protocols, to enhance the likelihood of positive actions and joint gains from the engagement of community members in knowledge exchange and collaborative entrepreneurial projects.

3. The creation of an efficient community owned mechanism to enhance the likelihood of member ideas finding value-generating market utilization – a secure “idea bank” describing current development projects and those anticipated.
4. The investment in, as a community owned asset, the creation of a set of central services to assist in the design and operation of collaborative inter-organizational ventures, the location and induction and training of new members, the design and maintenance of inter-organizational governance mechanisms to assure adherence to collaborative values and to grow and expand the community and to seek external venture opportunities for entrepreneurial initiatives not being pursued by community members.

Clearly the values and design features of the OpWin community are not those advocated in the current theory of the firm and/or the prescriptions for the operation of either individually owned or corporate form single firms or for clearly defined, legally structured partnerships and joint ventures among firms. To facilitate innovation and market exploration, OpWin promotes a process that encourages collaborative entrepreneurial interaction first and the allocation of returns second – the exact reversal of the process generally prescribed to control opportunistic behavior. Without question the time and effort investments expected to be made by OpWin members to guarantee the maintenance of trust and the common pursuit of equitable treatment may be viewed as both extensive and expensive. So too, however, are the time and effort investments required in traditionally designed and managed firms in order to feel assured that the possibilities for opportunistic behavior have been removed. Thus, the design and operation of collaborative firm communities rests clearly on different assumptions concerning how organization managers and members are or can be motivated to behave.

b) Assumptions

The proponents of the OpWin model recognized the fact that it was based on the necessary assumptions that people could learn to be trusted in the pursuit of equitable
inter-organizational collaborative entrepreneurship. In particular, the main assumptions underlying the OpWin model are the following (Miles et al 2005):

- expectation that membership carries a positive economic value sustained by the opportunity to participate in innovations across multiple markets driven by knowledge shared within and across firms
- mutual identification of interests
- attention to the intrinsic value of relationships
- information sharing
- long-term commitment
- the continuous pursuit of equitable rewards
- taking pleasure in acknowledging others’ ideas
- voluntary collaborative behavior by independently owned and governed firms.

The understanding of these assumptions, in turn, was based on extensive research illustrating the leadership models and their underlying assumptions that have emerged to facilitate the development and operation of each new structural and process design (See e.g., Miles, 1975) as well as the evolution of alternative strategy, structure, and process models (See e.g., Miles and Snow, 1978).

Many aspects of the OpWin design and their underlying values and assumptions flowed from the researchers analysis of currently operating inter-organizational communities such as the Taiwanese based electronics firm Acer and its community of suppliers and distributors, as well as the R&D focused Australian community of firms TCG. It also drew upon the experience of inter-organizational collaborative processes and achievements in an industrial-municipal alliance in Denmark and a variety of organizational communities concentrated geographically (Rocha, 2004a) as well as the
evolution of collaborative engineering processes in the US Civil Construction industry (Miles et al 2005).

For example, the authors modeled aspects of Opwin’s key operating guidance mechanisms on a set of written behavioral protocols at TCG and some features of Opwin’s value sharing indoctrination of new members on the printed philosophy and expected practices offered by Acer CEO Stan Shih. Similarly, the careful documentation of successful collaborative efforts at OpWin reflected in part similar practices recording the outcomes of successful collaborative innovations in the city of Kulundberg, Denmark. Finally, the training in collaborative processes required of all new members reflected the pre-project workshops utilized in “partnering” practices common in the US civil construction industry (cf Miles et al. 2005).

Of course shared values and inter-firm learning opportunities in geographically clustered Industrial Districts have been recognized as far back as Marshall’s 19th century insights (Rocha, 2004a) and as extensively as Saxenian’s examinations of technology clusters in California and across the US. (Saxenian, 1994). What is different in the OpWin case is the purposeful design of an inter-organizational collaborative community and its sustaining and innovation generating processes and mechanisms, in addition to not having geographical proximity as one of its key features.

2 Collaborative Entrepreneurship – Idealism or a growing emerging reality?

This section expands the model presented in the previous section based on new emerging cases, all of them using qualitative research and case analysis (Yin, 1994; Einsenhardt, 1989) as a method for conceptualizing from the analyzed cases (see Appendix A). This is a phenomenon-driven methodology, given that real organizations and people are both the starting point and the cornerstone for understanding emerging
inter-organizational networks (Miles, 1975; Rocha 2004a; Rocha and Ghoshal, 2006; cf. Gilson, 1935).

**Blade.org - An Emerging Community of Firms**

The Blade.org community ([www.Blade.org](http://www.Blade.org)) was founded by IBM, the principal designer/builder of the new blade (disc) guided and operated data processor and Intel, the supplier of the key operating chip devices, aided by a dozen or so “founding” suppliers and potential downstream operating firms. The founders offered full information on all aspects of the key design features of the processor to member firms and promised that changes in key design features would only be made after full disclosure and discussion with member firms.

The community has quickly (two years) grown to over 100 firms and is now directed, to a large degree, by members interacting in a set of committees focused on technology, marketing, customer interactions, etc. Not surprisingly, the firms involved have, through their contacts, opened up user applications not imagined in the original plans and have generated a variety of improvements in the design of processor peripherals. Perhaps the most interesting development (in addition to the creation of committees involving customers and venture capital firms) are the number of collaborative innovations occurring spontaneously among members of the community, at both the downstream (applications) and upstream (component design) ends of the process.

**Syndicom Communities**

The Syndicom collaborative community ([www.Syndicom.com](http://www.Syndicom.com)) began around the desire of a group of spine surgeons to confer with a larger group of
colleagues concerning patient treatment and the design of spinal corrective devices. To this end, Syndicom has helped design and support communities of surgeons across three continents, totally literally hundreds of participants, consulting on patient care across a secure internet system. In addition, Syndicom has helped surgeons create a series of entrepreneurial clusters sharing ideas to develop, patent (with the help of attorneys sharing equity) and produce (with the help of equity sharing manufacturers of innovative new orthopedic devices). Further, they have used the community design process to help create and manage FDA trials of new devices. Finally, Syndicom is currently being sought by medical supply firms to help them engage in collaborative innovation process both within their boundaries and at their margins (with customers and suppliers). The evolution of Syndicom is more diffuse and less predictable than that of Blade, but its members have clearly begun to share a deep understanding of the values and behaviors supporting effective collaborative processes and to use this understanding to guide their effort (Miles et al, 2006).

**European Firm Communities**

The Finnish, Danish, and North Italian examples are in the main demonstrations that firms in those areas may have substantial ability to engage quickly and extensively in trust based collaborative activities. In Finland, one can argue that it may well be that both the heavy reliance on community solidarity through wars and recessions and the heavy investments made in enhanced welfare and security, provide a value and belief base that promotes collaborative behaviors (Castells and Himanen; 2002; Miles et al. 2005). The Northern Italian collaborative textile communities (e.g. the famous example of the Prato textile community composed of many small “weavers without looms” brought together in fluid alliances by entrepreneurs and ship design and
furnishing communities on the east and west Northern Italian coasts) are perhaps classic historical and geographic cultural communities. There are also emergent clusters of knowledge and innovation sharing firms emerging in Denmark and Norway (Rocha, 2004a)\textsuperscript{2} and the Miles et al team is working with scholars in Finland, Denmark, Norway, and Switzerland to explore them using the methodology described in Appendix A.

**Argentinean Food Bank Network**

The Red Argentina de Bancos de Alimentos (Argentinean Food Bank Network) was founded in 2003 by the 12 Food Banks that were working in Argentina at that moment. Its mission is promoting human development through nutrition training and food assistance both to the downstream network members and the final user: people with nutritional handicap and hunger.

The main objectives of the network is the creation, development and support of local Food Banks through training, exchanges of good practices in logistic and quality assurance, communication, fundraising and collaboration between the parts of the network.

The network represents the Food Banks both at the national and international levels. In 2006, the Red became a founding member of the Global FoodBanking Network bringing them together with the national Food Banks Networks of Canada, United States and Mexico (http://www.globalfoodbanking.org/who_we_are/mission.shtml).

The functioning of the network has contributed to linking Multinational Corporations operating in Argentina such as Kraft, Nestle, Pepsico, and Banco Santander with non-governmental organizations and public agencies dedicated to nutrition. In 2007, the contribution of the network in terms of distributed food and
people reached grew 12% on average, compared to 2006. To date it has distributed 5,000 tons of food and reached 130,000 people.

The main challenge the network faces is developing a sustainable sense of membership and a solid economic base. This challenge together with the creation of awareness of the hunger situation and the promotion of the joint work and alliances between all the sectors in Argentina are typical of the emerging collaborative inter-organizational network, which has to harmonize centrality of values and core competencies with strong relationships among independent organizations.

**LATAM South Cone Ovine Network**

The LATAM Ovine Network, named Ovis XXI, began in 2003 based on an innovation provided by the Australian company, Multi Purpose Merinos (MRM®), which has developed a cross-breed of sheep that produces ultra soft and long wool fiber using advanced genetics and breeding techniques from Australia. Strict quality protocols are used, and will be certified in the near future. The fiber is offered as yarns, fabric and garments that feel like cashmere. Ovis XXI is currently present in Argentina, Chile and Uruguay. This network currently involves over 800 thousand sheep, 15 multiplying studs, 11 consulting services companies, 36 accredited professionals, 90 sheep breeders, independent technical and management consultants, and both NGO and government agencies.

From the very beginning, Ovis XXI was based on an intrinsic network mindset, which means that value creation cannot be created without the commitment, trust, sharing of knowledge, and equitable rewards between the central node and the independent firms belonging to the network. These are the core assumptions upon
which the services of the central node and the contribution of the whole network are based.

Ovis XXI has contributed to communities of breeders across three countries; facilitating the development of their technical, innovative and managerial capabilities and their connections to providers and markets. This has been done by the provision of services such as on site training, diffusion of knowledge and innovation practices, the co-creation of new products and markets, and quality assurance mechanisms. In addition, almost all of the new business has been developed with the participation in both capital and decision making of the participant firms, which create the conditions for commitment and trust among them.

However, these same contributions put pressure on finance, which in turn, diverts the managerial time of the central node. As in the case of Syndicom, the evolution of Ovis XXI is more diffuse and less predictable than that of Blade. Financial constraints due to rapid growth across the network chain are putting pressure on the values and behaviors which have been present from the very beginning. The challenge is to achieve sustainable production by growing the number of lambs produced, and improving both the quality of the stock and the price for each animal, innovating not only on the product side but also through the vision, process and network structure. In particular, the main challenge of the central node and the whole network is to create and maintain commitment to the shared definitions about mission, vision, and strategic intent, focusing on the contributions of each independent member to the whole network, and harmonizing consolidation with controlled growth.
LATAM Emerging Geographical Concentrated Communities or Clusters

Economic geographers, economists, sociologists, researchers in business and management, and policymakers have witnessed an increased interest in the study of clusters or geographical concentrations of interdependent firms, governmental agencies, and non-governmental organizations in related industries during the 1990s (Rocha, 2004a). One of the several reasons explaining this interest in clusters is their assumed impact on firm performance, regional economic development, and national competitiveness (Porter, 1998).

Latin American countries (LACs) are a natural setting for both research and policy-making on clusters. In effect, LACs currently have the option to adopt a cluster-led strategy to foster regional and national development (Rocha, 2004b). After the state-led import substitution strategy between 1950 and 1970, and the macro-economic liberalisation reforms and market-led strategies between 1980 and 2000, local development policies based on private-public partnerships with emphasis on micro-economic improvements rather than macro-economic reforms appear as the most appealing strategies. Firms and sectors perform very differently even under similar macroeconomic conditions in several LACs (Elstrodt et al, 2002; Porter, 2001), which has led some authors to argue that a macroeconomic climate is a necessary but not a sufficient condition for competitiveness (Porter, 2001).

However, LACs’ specificities in terms of public policies, industrial organization, and development suggest additional arguments underlying cluster outcomes in LACs as compared to other countries. Research on clusters in LACs has begun to consider some of these specificities (cf. Schmitz and Nadvi, 1999; Altenburg and Mayer-Stamer, 1999; Pietrobelli and Rabellotti, 2004), which are not captured in general frameworks because of either data constraints (Solvell et al, 2003:33; Porter and van der Linde, 2002) or the
lack of specific knowledge on those countries. For example, the development-related issues of poverty and inequality that characterize LACs (Morley, 2001) are not included in the general frameworks on cluster outcomes (cf. Porter, 1990; Solvell et al, 2003).

Given this research need, a meta-study of 19 empirical studies and a total of 146 clusters in LATAM concludes that clusters contribute to both development and growth at the firm and regional levels, but that they are also a potential source of socio-economic divides (Rocha, 2004b; 2006b). In particular, clusters show positive impacts on economic development indicators such as innovative capacity, employment, product upgrading, and employment training and growth indicators such as production and exports, but no impact on functional and inter-sectoral upgrading or even negative impact on economic and social divides.

The most accepted arguments relating clusters to development and growth such as the role of external economies, the special competitive and socio-cultural cluster environment, knowledge spillovers and increasing returns could explain the observed relationships. However, the results are contingent on the definition of development and additional factors that qualify the most accepted arguments on the relationship between clusters, development and growth at the firm and regional levels. As for the definition of development, poverty and inequality dimensions should be considered to reach general conclusions on the relationships of interest. Especially important are the governance mechanism and the degree of commitment of large firms within the cluster, given that hierarchical coordinating mechanisms coupled with a lack of embeddedness in the region are potential sources of economic and social divides. These, in turn, increase inequality, which is a key indicator of regional development in LACs, the most inequitable in the world (Morley, 2001; IADB, 1998; 2000; Edwards, 1995).
In sum, LACs’ specificities such as poverty and income inequality and the emergent nature of clusters in LACs are potential sources of more inequalities in terms of both incomes and capabilities if alternative governance mechanisms and ways of rooting firms in the local economy are not taken into account (Rocha, 2004b; 2006a).

These new insights and their comparison with the European network models ask for more research on the necessary assumptions underlying proposed network models, given that different contributions are expected in different contexts.

3 Collaborative Entrepreneurship – Deepening the assumptions on human nature and their impact on practice

As noted earlier, we argue that the assumptions on which the emerging inter-organizational network are based require a richer view of human nature than that underlying most management models nowadays. This section aims at deepening these assumptions from two standpoints: human motives and human rationality. It is known that the way we see human nature shapes our managerial assumptions, theories and practice, which makes relevant the understanding of both the rational and motivational human assumptions of proposed models and their link to managerial practice (Miles, 1975; Whetten, 1989; Rocha and Ghoshal, 2006). The rest of the section support this argument by defining the terms (sections a and b) and illustrating the importance of deepening these assumptions on human nature, their relationship with the proposed model and their impact on practice using four cases and their associated arguments (section c)³.

a) Assumptions about ends – Human Motives
Mainstream approaches to firm interactions are based on the assumption of self-interest as evidenced by the fact that Game Theory is the dominant approach in economics and management. This approach assumes that people are driven by self-interest and, therefore, the main challenge is how to develop cooperative behavior out of self-interest (Axelrod, 1984). However, this framing of collaborative realities is unfortunate because it excessively focuses on partial assumptions about human nature (Rocha, 2006b).

In order to have a more comprehensive motivational framework, we go back to previous studies on leadership values (Miles, 1975) and human motives and rationality (Perez Lopez, 1993; Rocha and Ghoshal, 2006). It could be argued that Maslow’s model of a hierarchy of needs, McGregor’s Theory Y, Miles “Human Resources” perspective or Jensen and Meckling’s understanding of human nature (Jensen and Meckling, 1994) could be enough for having a richer motivational framework. Why, therefore, is this going back to earlier studies necessary? Two reasons explain it.

First, McGregor’s Theory Y and Miles “Human Resources” perspective rested on managers operating at the high end of Maslow’s Hierarchy – pursuing at least the beginnings of Self-Actualization. Of course, the job design and leadership challenges they were addressing held only a fraction of the challenge presented by the risks to both individuals and firms posed by knowledge sharing and the pursuit of equity in inter-organizational communities. However, it is necessary to go beyond Maslow’s model in order to have a wider understanding of inter-organizational relationships. The reason is that Maslow assumes that individuals are driven by hierarchical arranged impulses and these impulses are not subject to guidance by intelligence and will. In other words, individuals lack self-dominion over their needs. An Aristotelian explanation would recognize that there are human needs, but individuals are able to guide the impulse that
emerge from human needs and establish which needs are to be satisfied, when, and how. This is a key feature distinguishing human beings from animals: the capability of guiding rather than being determined by their impulses. This human capability is more important when two needs go in opposite direction. For example, when appetite asks for more pleasure but health asks for stopping eating. Pleasure and health could go in the same direction, but when one contradicts the other human will, guided by intelligence, has to make a choice.

Second, Jensen and Meckling’s model, which focuses on the fact that people make trade-offs motivated by wants rather than needs, assumes the possibility of substitution between different means in order to maximize a given end. When trade-offs happen, the substitution will depend on the driver of behavior (the goal to be maximized): if it is pleasure, therefore individuals are able to substitute morality (Jensen and Meckling, 1994) for more pleasure or wealth; if honor drives behavior, therefore there would be substitution of material and safety needs for social needs as in the case of enlightened self-interest –for example, donations to be praised by others even when the donor is in need - or high-risk sports. Assuming that people always trade these motives off as if they were commodities (cf. Jensen and Meckling, 1994) leads to the analysis of these different motives using objective functions, indifference curves, and ratios (cf. Etzioni, 1988, Mansbridge, 1990a; Jensen, 2002). However, diverse motives have different underlying explanations and implications about others’ interests. For example, alternative responses to why people buy fair trade products could be: price for value (pleasure in a broad sense, including having more wealth), compassion for the poor producers (sentiments), fair trade is the right thing to do (duty), or it promotes human dignity (excellence). This richer view of human motives leads to the following
conclusion: if excellence drives behavior, therefore there is harmonization of different ends rather than substitution between different means (cf. Rocha and Ghoshal, 2006).

In sum, based on different conceptions of human nature, Maslow argues that human development is satisfaction of human needs, which are presented and expected to activate hierarchically; Jensen and Meckling argue that human development is the capability of making substitutions and choices based on wants; Aristotle argues that human development is to strive for the highest good –i.e. excellence- using his specifically rational human capabilities –i.e. intelligence and will. This latter explanation acknowledges that human beings are capable of both maximizing and harmonizing behavior, because they are free to choose among both alternatives, and point out to the consequences of following each path⁴.

Given the previous reasons, in order to understand and prescribe on inter-organizational networks and the development of collaborative capabilities, we use a motivational bi-dimensional framework based on the concept of self-love, defined as the inclination of human beings to strive for their own good and perfection (Aristotle, 1984b; Aquinas, 1960; Book I, 60, 3)⁵. Every motivation has two dimensions: the objective dimension is what we consider good for ourselves –i.e. pleasure, sentiments, duty, or excellence- while the subjective dimension refers to whose interest, whatever it might be, is taken into account –self-interest, others’ interests, self-interest as end and others’ interests only as means, or both self-interest and others’ interests as ends. Therefore, the unidimensional continuum self-interest – unselfishness is transformed into a bi-dimensional object – subject motivational space. The resulting matrix allows the specification of eight qualitatively different motives and improves the richness of potential analysis (Figure 2).
**Figure 2**

**Assumptions about human Motives**

<table>
<thead>
<tr>
<th>Subject – whose interests?</th>
<th>Object – what is good?</th>
<th>View</th>
</tr>
</thead>
<tbody>
<tr>
<td>Only self</td>
<td>Only others’</td>
<td></td>
</tr>
<tr>
<td>Self as end and others’ only as means</td>
<td>Both self and others’ as ends</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pleasure</th>
<th>N/A</th>
<th>1 Narrow self-interest</th>
<th>2 Instrumental or Enlightened self-interest</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sentiments</td>
<td>N/A</td>
<td>3 Unselfishness (sentiment-driven altruism)</td>
<td>4 Instrumental or Enlightened self-interest</td>
<td>5 Sentimental love</td>
</tr>
<tr>
<td>Duty</td>
<td>N/A</td>
<td>6 Unselfishness (Duty-driven altruism)</td>
<td>N/A</td>
<td>7 Duty</td>
</tr>
<tr>
<td>Excellence</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>8 Excellence</td>
</tr>
</tbody>
</table>

Source: Rocha and Ghoshal (2004; 2006)
The description of each individual motive has been done elsewhere and is beyond the scope of this paper. It is enough for our purpose stating that many alternatives to self-interest have been proposed so far. These alternatives include sentimental love (Smith, 1999), duty (Kant, 1993) and excellence (Aristotle, 1984). (See Rocha and Ghoshal, 2006 for a review). According to Aristotle, the basic human tendency is toward good (1984b, Book I, 1). Good can be understood in different ways: pleasure, wealth, honor, or excellence (1984b, Book I, 4). However, he argues that the greatest of all the goods is excellence (1984b, Book I, 5) because it helps to develop to their full potential what is specifically human. Happiness occurs when the human being develops his excellences (1984b, Book I, 13; Book X, 6-7) (Figure 2, motive 8).

Excellence, which results from intelligent and voluntary efforts rather than nature (1984b, Book II, 1), is a habit that fosters the development of human potentialities. In other words, an excellence is formed by voluntary acts rather than determined by genes and reinforces or empowers the basic human capabilities to achieve their potential or tendency to their specific goods. Compared with animals and plants, human beings have specific faculties –i.e. intelligence and will- that allow for intellectual life. Human beings also have inferior faculties they share with animals and plants, allowing for sensitive and vegetative life, respectively (Aquinas, 1963). Excellence guides human potentialities toward their fulfillment, empowering human capabilities according to what is specifically human: intelligence and will. Good is related to what is according to nature: that which is good expands human capabilities.

Summing up our understanding of assumptions about ends, we argue that human nature has the potential to develop different motivations aided by self-scrutiny and freedom, which allow human beings to step back from, evaluate, and choose among
preferences, including others’ preferences as well as their own (Hirschman, 1985; Sen, 2002). Acknowledging that individuals do make trade-offs (Jensen and Meckling, 1994:5) aided by a means-end or instrumental rationality logic, we argue that this is not the most important feature of human nature; seeking good and perfection, evaluating intrinsically non-substitutable goods is. This wider lens is not neutral, given that it has an impact on managerial practice as we will show in section c).

b) **Assumptions about the relationship between means and ends – Human Rationality**

The mainstream assumption about rationality is instrumental or end-means rationality. Instrumental rationality assumes that goals are given, whatever the goal is pursued (cf. Etzioni, 1988:135; 151; Jensen, 2002).

However, we have seen that the nature of human motives is marked by the existence of simultaneous ends. The existence of multiple ends is the result of not only having different qualitatively internal motivations –i.e. pleasure, sentiments, duty, or excellence - but also considering others’ interests, as Figure 2 shows. Intuition and the natural and laboratory experiments (cf. Rocha and Ghoshal, 2006) show that pleasure, sentiments, duty, and excellence are not exchangeable commodities by their own nature as it is the case of cars, bananas, or cinemas. The existence of qualitatively different ends implies that instrumental or means-end logic has to be complemented with part-whole logic or a practical rationality approach.

Practical rationality can be traced back to the Aristotelian concept of practical wisdom (Aristotle, 1984b Book II, 1; VI, 5), which stresses the idea of holism (Solomon, 1992) or part – whole relation. In effect, practical rationality focuses on
different ends while instrumental rationality aims at connecting an action with an external end (Aristotle, 1984b, Book VI, 5). Contrary to instrumental rationality, which allows the separation between given ends and the means to achieve them, practical rationality requires that each part be present to get the whole (García Sánchez, 2004). Multiple ends are evaluated rather than selected; the issue is how different ends are connected and evaluated rather than how to select the best means to maximise an assumed end. Its reference to ends makes practical rationality related to the concept of substantive rationality (Weber, 1968), which is defined as the “degree to which the provisioning of given groups of persons (…) with goods is shaped by economically oriented social action under some criterion (…) of ultimate values, regardless of the nature of these ends” (Weber, 1968:85). However, while practical rationality is concerned with how different ends are interconnected and evaluated, substantive rationality stresses the idea that behaviour is oriented toward values, “whether they be ethical, political, utilitarian (…) or whatever” (Weber, 1968:85).

Practical rationality allows a bigger picture for analysing and predicting interactions in collaborative communities. For example, cooperative incentive structures such as an Assurance Game or institutional arrangements such as local regulation of common property (Kollock, 1998) could fuel human potential to follow an excellence driven process, while monetary incentives could foster temporary cooperation that would disappear if those external incentives were eliminated (cf. Miles, Miles and Snow, 2005; Rocha and Ghoshal, 2006).

c) What kind of human assumptions are needed for the sustainability of the collaborative entrepreneurship model?
We argue that both a self-love and a practical rationality approaches are necessary lenses for deepening our understanding of collaborative entrepreneurship. Otherwise, the description, explanation and prescription would be partial and even harmful for the new community of organizations. Good habits such as mutual identification of interests, attention to the intrinsic value of relationships, information sharing, long-term commitment, equitable rewards, and taking pleasure in acknowledging other’s ideas that were found in the multiple inter-organizational networks could be interpreted in two opposite ways. This interpretation and understanding is not neutral, given the impact that the way we see has on what we do and finally get. For example, applying an instrumental rationality logic, those assumptions could be taken as variables of a maximization function, which implies that only one of them could be the end and the other variables are means. Alternatively, those habits could be seen as different manifestations of either latent or developed excellences. In this case, a wider lens such as that provided by a self-love and practical rationality approaches is necessary for understanding and developing inter-organizational relationships. We illustrate and support this point based on four cases and their related arguments.

First, empirical evidence shows that people’s concern for fairness or equitable treatment, a key assumption of the proposed model, is reduced when monetary pay-offs dominates behavior (Rabin, 1993). This finding could be interpreted in, at least, two ways: first, all rational people have their price and are willing to trade-off everything (self-interest and instrumental rationality dominates behavior; Jensen and Meckling, 1994). Therefore, no concern for fairness would be expected if the pay-off is high enough. Alternatively, people’s concern for fairness is crowded-out by external incentives, but no-price, regardless how high, could completely extinguish the concern
for fairness of at least some people (other motives such as duty and excellence mingled with practical rationality dominate behavior; (cf. Kollock, 1998; Frey and Jegen, 2001). In this case, a result opposite to the previous alternative may be expected when an incentive structure targeting fairness is put in place.

Second, the Syndicom case described in the previous section is best explained when a self-love rather than a self-interest approach is used for its understanding. In the early clusters of 10 to 15 spine surgeons each that Syndicom helped surgeon leaders put together in the hope that they would become on line consultants to one another in diagnosing patient problems and prescribing treatment alternative costs and benefits. The technology allowed real time sharing of patient x-rays (with patient confidentiality protected) and it provided the potential of a dozen or so skilled consultants for each non-routine case. However, it had to overcome the surgeon’s concerns about displaying their own inadequacies (perhaps by asking for help on a case that others would see as having an obvious diagnosis and solution or by offering diagnostic and/or treatment suggestions that others might judge to be naïve) as well as their concerns about such consultations taking time away from their highly lucrative practice demands. For each cluster one or two leaders (with the urging of Syndicom process guidance) posted early cases and responded with quick critiques. The ones getting the help provided quick appreciative feedback. As the more reluctant collaborators watched (and read the analyses provided by Syndicom) others began to both post cases and responses. As more and more postings occurred, with each receiving more and more responses and appreciative comments, the clusters began to flourish with all participants becoming increasingly appreciative of the impact collaboration was having on their diagnostic and treatment expertise. This case shows two things. First, it is possible pursuing mutual economic and innovative benefits and at the same time attempting to live enduring
habits or excellences such as giving credit to others, trust and leading by example. Second, the learning dimension of excellences is evident given that their development needs a repetition of good human acts, especially when difficulties in building a collaborative community arise. This enduring learning dimension is absent in more reductive views of human nature such as that of enlightened self-interest (Rocha and Ghoshal, 2006), in this particular case a game-theory approach, given that the prescription is to defect when semi-permanent difficulties –defined in terms of pay-offs- arise.

Third, in the Blade.org experience, an increasing number of firms have engaged in the collaborative design of new processor applications (downstream) or in the creation of improved or enhanced designs of parts and components (upstream value creation). The effort by IBM and Intel to behave in a trustworthy manner with all the network participants created an environment of trust that encouraged respect to one another and built a commitment to joint returns while, at the same time, developing the excellence of equitable treatment and trustworthy behavior. This explanation highlights the inclusive and harmonization dimensions of excellences, which, as in the previous case, is not taken into account when a self-interest approach is used for the understanding and prescription of collaborative behavior.

Four and finally, many of the examples provided in the previous section and other related examples such as the software and microelectronic industry in Costa Rica (Oxfam, 2002) and some multinational corporations in the consumer goods industry in India and Latin America (cf. Prahalad and Hammond, 2002; Prahalad and Hart, 2002) could be interpreted as cases in which organizations could be motivated by both enlightened self-interest or excellence (cf. Rocha and Ghoshal, 2006).
In fact, following neoclassical economic thinking, it could be argued that multinational corporations (MNCs) motivated by self-interest might see developing countries solely as a source of cheap labor and would therefore outsource production and minimize the costs of the working environment in order to maximize profits in the short run. Therefore, the local concentration of activities would be guided towards profit maximization rather than towards both wealth creation and local development (e.g. harmonization of two ends rather than maximization of one of them). This motivation–behavior–outcome relationship based on self-interest can be seen in the blue jeans industry in Torreon, Mexico (Bair and Gereffi, 2001) and the sportswear industry in countries such as Indonesia, Viet Nam, and the Philippines (Oxfam, 2002; 2003). In contrast, MNCs that are moved by excellence are more likely to see developing countries as entities that include different stakeholders who contribute to the value-creation process and whose legitimate interests are intrinsic to the very nature of businesses. Their practices would tend to develop the local base, creating links with local suppliers and training local employees, and their outcomes would tend to balance the benefit received by different stakeholders. This relationship between motivation, behavior and outcomes based on excellence could be inferred from the software and microelectronic industry in Costa Rica (Oxfam, 2002) and in some MNCs in the consumer goods industry in India and Latin America (cf. Prahalad and Hammond, 2002; Prahalad and Hart, 2002).

Generalizing the previous cases and arguments, we argue that attention to the intrinsic value of relationships, trust, equitable treatment and rewards, and long-term commitment towards collaboration for a synergic creation of value are based on two meta-assumptions: heterogeneous motivational structure that goes beyond, but
encompasses, self-interest, and practical or part-whole rationality, which goes beyond, but encompasses instrumental or end-means rationality.

From a motivational standpoint, consider the assumption of paying attention to the intrinsic value of relationships. This assumption is more probable when either duty or excellence is taken into account as the main human motive (Figure 2, cells 6 and 7). The reason is that these motives consider the other party as an end rather than a means as the criterion for judging the goodness of an act. Contrary to mainstream economic approaches based on self-interest, a self-love view shows that both duty and excellence are the only non-egoistic motives because they involve the possibility of counter-preferential choice - i.e. choices that go against the individual’s own welfare and sentiments (Sen, 1990a). This means that committed behavior cannot be credited to enlightened self-interest, because commitment excludes treating others as means (cf. Rocha and Ghoshal, 2006).

From a rationality standpoint, consider the assumption of equitable treatment. The existence of multiple ends is the result of not only having qualitatively different internal motivations –i.e. pleasure, sentiments, duty, or excellence - but also considering others’ interests, as Figure 2 shows. Intuition and the natural and laboratory experiments described above shows that pleasure, sentiments, duty, and excellence are not exchangeable commodities by their own nature as it is the case of cars, bananas, or cinemas. The existence of qualitatively different ends implies that instrumental or means-end logic has to be replaced with part-whole logic or practical rationality approach. This approach is a necessary assumption for promoting sustainable equitable treatment, which goes beyond the pay-off received by each party and reach the very motives that drives that pay-off.
This section has made explicit the assumptions on human motives and rationality underlying the inter-organizational collaborative model presented in the previous section (cf. Figure 3). The following section concludes and proposes lines for future research.

**Figure 3**

**Collaborative Entrepreneurship – Expanded Model**

<table>
<thead>
<tr>
<th>Network Services - General</th>
<th>Leadership and Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continuing Education</td>
<td>Advisory Council</td>
</tr>
<tr>
<td>Identification of opportunities and new members</td>
<td>Leaders Council</td>
</tr>
<tr>
<td>Maintain Innovation Catalogue</td>
<td>Facilitators</td>
</tr>
<tr>
<td>Project Management Software</td>
<td>Innovation Teams</td>
</tr>
<tr>
<td>Communication</td>
<td></td>
</tr>
<tr>
<td>Network Leadership and Strategic Planning</td>
<td></td>
</tr>
<tr>
<td>Institutional Processes</td>
<td></td>
</tr>
<tr>
<td>Developing common values</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Supporting Assumptions - Specific</th>
<th>Supporting Assumptions – Human Nature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovation is driven by sharing knowledge across markets and firms</td>
<td>Heterogeneous and interrelated motives (including self-interest but beyond it)</td>
</tr>
<tr>
<td>mutual identification of interests</td>
<td>Practical rationality (part-whole)</td>
</tr>
<tr>
<td>attention to the intrinsic value of relationships</td>
<td></td>
</tr>
<tr>
<td>information sharing</td>
<td></td>
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<tr>
<td>long-term commitment</td>
<td></td>
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<tr>
<td>equitable rewards</td>
<td></td>
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<tr>
<td>taking pleasure in acknowledging others’ ideas</td>
<td></td>
</tr>
<tr>
<td>Independent ownership and governance of each firm</td>
<td></td>
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</tbody>
</table>

4 Conclusions and contributions for further research

This paper is an attempt to go a step forward towards the sustainability of collaborative inter-organizational networks.
For this purpose, it integrates previous and new research and tries to answer two research questions: Is there evidence of an emerging inter-organizational form? In the affirmative case, what are the assumptions upon which it is based and how are these assumptions useful in predicting its evolution, sustainability and contribution to personal, organizational and societal development?

The answer to the first research question is affirmative, given that there is evidence of a new inter-organizational form in which collaborative entrepreneurship thrives.

What are the necessary assumptions upon which this form is based? The following conclusions attempt to answer this research question.

First, innovation and, more generally, development processes within and across communities of organizations operating in complementary markets require collaboration as the key meta-capability for the sustainability of those communities and their outcomes.

Second, collaboration is more than a meta-capability. It is also an attitude that rests on and shapes strong values such as trust, equitable treatment, commitment to shared goals, and focus on the intrinsic value of inter-organizational relationships.

Third, this collaborative capability and attitude implicit in the new inter-organizational network rest, at the end, on a particular set of assumptions about human nature. The current view either implicit or explicit in mainstream management theories is that people are motivated by self-interest guided by instrumental rationality logic. Difficulties and co-creation of value are two of the common factors at work in the process of development of inter-organizational networks. A reductive view of human nature such as enlightened self-interest and its associated frameworks are not conducive to the sustainability of these networks when difficulties arise, because their
prescription is to defect when semi-permanent difficulties –defined in terms of pay-offs- appear. Therefore, the assumptions of enlightened self-interest and instrumental rationality are not enough for the development and sustainability of inter-organizational networks; a richer view of human nature is required.

Fourth and finally, both a self-love and a practical rationality approaches are richer lenses for the description, explanation and prescription on the new inter-organizational form and the sustainability of its impact. Good habits such as mutual identification of interests, attention to the intrinsic value of relationships, information sharing, long-term commitment, equitable rewards, and taking pleasure in acknowledging other’s ideas that were found by Miles et al. (2005), are different manifestations of excellences. Given that excellences take both self-regarding and other’s regarding preferences as ends, the proposed approach gives credit to human nature for developing excellence-based collaboration, for which learning and time become crucial dimensions. Therefore, this paper provides a richer set of assumptions than that provided by mainstream management theories in order to sustain collaboration within and across communities of firms.

Based on the previous conclusions, this paper contributes to theory and practice. From the conceptual and theoretical standpoints, this paper has enriched the collaborative inter-organizational network suggested in previous works, proposing a set of conceptual assumptions about human motives and choice offered by Aristotle. This set of assumptions creates a more flexible framework, which helps to explain phenomena, interpret the work of others and guide future research (Miles and Snow, 2003 [1978]) and practice.

From the practical standpoint, this paper provides additional evidence in order to increase the external validity of the proposed inter-organizational network model and
more sustainable basis for business and public policy. In addition to the original cases from software, integrated systems, and biotechnology industries (Miles et al. 2005), this paper provides cases from other industries (for example, Medical and Ovine industries) and organizations belonging to the private and public sectors (for example, Syndicome and the Food Bank Network). Also, this paper contributes cases from developing economies (LATAM Ovine Sector, LATAM clusters, and Food Bank Network). This integration is important because developing economies face different problems and challenges and therefore this reality has allowed some qualifications to the original model. A phenomenon-driven model based on both a richer set of assumptions and more diversified cases are important contributions for more efficient, effective and sustainable business and public policymaking.

We hope this paper trigger even more collaborative research among colleagues and collaborative policymaking among researchers and practitioners. This has been our own experience, which have been focused on the quality of a four-year process of dialogue, trusting that our contribution to having more humane collaboration theories and practices will be bigger than our individual works.
The phenomenon-driven nature of this study makes conceptualizing the emerging inter-organizational community a challenge (cf. Rocha, 2004a and Rocha and Sternberg, 2005 for the case of inter-organizational communities geographically concentrated). This communities are complex phenomena and given their emerging nature there are no readily available secondary data to use as proxies.

Therefore, we have relied on the validity criterion used in qualitative research (Yin, 1984). Validity is defined as the extent to which the operational definition captures the concept under study and two of the main strategies are extensive reviews of the literature on the concept (cf. Miles, Miles and Snow, 2005; Rocha, 2004a) and in deep interviews and/or participation in the cases.

As for this latter strategy, we have used case research, using two steps. First, the gathering of secondary data through desk research in order to have a preliminary picture of the organizations and the sectors in which they operate, and to complement and triangulate the information gathered in the second stage. Second, we have had interviews and face to face interaction with at least 15 members of each community, including different levels of membership and different management groups. Therefore, our method was both collaborative and participative. We engaged in dialogues and discussions with managers as co-researchers given their first-hand knowledge of the reality we were trying to identify and analyze.


Delbecq, Andre, and Filley, Alan, 1974,. Program and Project Management in a Matrix Organization: A Case Study, Monograph No. 9, January, Bureau of Business Research and Service, Graduate School of Business, University of Wisconsin-Madison


1 For an extensive historical, conceptual and empirical review of geographical concentrated inter-organizational relationships, nowadays known as clusters, see Rocha (2004a-b).
2 The Northern Italian cases are examples of the Cultural-Institutional School of clusters and the Nordic innovation cases are examples of the Innovation approach to clusters. For a detailed review of cluster theories, concepts, processes and practices, see Rocha (2004a).
3 This section heavily relies on the synergies between three previous works: Miles and Miles (1999); Miles et al. (2005); and Rocha and Ghoshal (2004; 2006).
5 Self-love is a natural tendency shared by all human beings. Self-love has to be distinguished from selfishness, which is a special kind of self-love, and narcissism, which is a psychological pathology.
6 Cf. Rocha and Ghoshal, 2006
7 For a detailed explanation of and prescription from each motive, see Rocha and Ghoshal (2006).
8 Note that in the case of unselfishness, the personal interests that are negatively affected are welfare in the case of sentiment-driven altruism (cell 3), and welfare and sentiments in the case of duty-driven altruism (cell 6). Sentiments in the former case and duty in the latter case are the interests that drive human behaviour, and therefore they are not negatively affected.