

Chapter 14

Swift Trust and Self-Organizing Virtual Communities

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ABSTRACT

Numerous communities of experts supported by firms tend nowadays to form an important part of corporate social capital. Composed of free will agents, those communities aim at creating knowledge through cognitive interactions and heavily rely on ICTs to free themselves from many constraints. Previous studies of such virtual groupings pointed out that their organization features were not similar to market nor hierarchy. Consequently, neither price nor contract or authority are used in such communities which rather seem to self-organize. Instead of traditional economic concepts, notions such as trust and leadership are advanced to explain the functioning of these virtual assemblies. This contribution proposed a tentative model which attempts to grasp some of the empirical aspects of these communities. More precisely, we were interested in the relation between trust, performance, and organizational feature within a given virtual group. Simulations of the model with different functions of swift trust display various organizational structures similar to those described by stylized facts. The organizational attributes range from pure collaborative communities to pure competitive ones. Intermediate cases also emerge with the appearance of leader(s).

INTRODUCTION

In knowledge-based economies organizations may exist because the conduct of any complex projects necessitate to coordinate *distributed* knowledge and competencies. This ‘Simonian’ justification of

the firm has been recently confirmed by numerous empirical studies stating that most technological and organizational knowledge is created by combination of pre-existent knowledge. Since knowledge is basically held by agents with limited cognitive capacities the conduct of complex project is, at first, a process of searching and coordinating the adequate competencies. One consequence of such

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'production of knowledge by means of knowledge' is the apparition of codified modules of competencies to be exchanged across firms and sectors. Indeed firms do not necessarily possess all knowledge and competencies to manage new projects. Competencies maps, knowledge management platforms, electronic cooperative tools as well as the increase of R&D inter firms cooperation agreements during the past decades are in line with such a perspective. The diffusion of ICTs to that respect facilitates the creation and activation of networks of experts but in return might impose new constraints to the evolution of organizations.

Among those networks, virtual communities involving several potential electronically interacting free will agents represent an important case (cf.e.g. Pantelli N., Chiasson M. (eds) (2008)). Acting as technological watch, learning areas as well as coordinating devices those communities have been identified as strategic assets in promoting creation and diffusion processes. It is worth noticing that numerous communities composed of experts supported by firms tend to form nowadays an important part of their social capital. From the economic point of view it is not quite clear if such communities are reducible to standard form of allocating and coordinating resources devices such as traditional markets and organizations distinction. If they seem to perform similar tasks - although on a lower scale - they do not heavily rely on neither price or contracts nor pure hierarchical mechanisms. Notions such as trust, beliefs, imitation and leadership have been suggested to explain some specific coordination processes (cf e.g. Cohendet, Diani 2003). Much more empirical and theoretical studies have probably to be devoted to this issue in order to have better understanding of the exact nature and role of such communities This chapter is dedicated to a further understanding of the dynamics of a virtual community of knowledge and competencies sharing. We do not here directly address the important issue of individual strategic interest in

participating to such communities nor the incentive scheme or economic consequences of such networks (cf. e.g. Cowan, Jonard, Zimmermann 2003). We rather try to concentrate some attention to the evolution of bilateral interactions in line with knowledge sharing performance within a virtual community in relation with the trust issue. We are then interested in the nature of relationships within the internal community organization, be they hierarchical, reciprocal or competitive, which eventually result from peculiar conditions on the interaction of trust and cognitive distance. Indeed the development of ICTs tools, thanks for geographical constraints freeing, allows for virtual communities to emerge with a large potential spectrum in regard of competencies to be included in the groupings (enhancement of either horizontal or vertical cognitive division of labor) but this neighborhood release has also been identified as an important factor in trust determination. Since different aspects of trust has been recognized to play an important role in the establishment and permanence of bilateral interactions, the result of the overall internal dynamics of a virtual community is still unclear. In order to try to cope with this issue we will first present some stylized facts about virtual communities in line with our questioning and then present a heuristic model and the tentative implied results.

VIRTUAL COMMUNITIES, PATTERNS AND TRUST: SOME STYLIZED FACTS

Recent empirical studies in the field of economic and management sciences seem now to converge to the idea that contrarily to what was previously thought in the 90's virtual communities are not similar to 'market mechanism that allocates people and resources to problems and projects in a decentralized manner' (cf.e.g. Baker 1992). Indeed, as noticed by Ahuja and Carley (1999) premature research suggested that virtual communities tended

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