

The influence of intangible forms of capital on farms

Vliv nehmátatelných forem kapitálu na fungování zemědělských podniků

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Abstract: Intangible issues, which are often very difficult to be quantified become more and more the field of interest of social sciences. There are many research works demonstrating that various types of knowledge, institutions, social networks, and social relations have a great influence on human activities as for efficient achievement of the actors' goals. This paper relates expert knowledge (shaping professional qualification) to human capital and tacit knowledge (understood as a broader, general, and contextual knowledge) to cultural capital. Both forms of capital exist in their primary form only in concrete individual persons. Concerning collective persons (firm, community), cultural and human capitals are transformed into intellectual capital. Work with specific knowledge, tacit knowledge and capitals corresponding to them shows the role of social networks and social capital in their organization. Using the analysis of two farms based on natural experiment, the paper demonstrates the role of tacit knowledge and cultural capital (opposing to the overestimated role of expert knowledge and human capital). The conclusions outline social determination of both types of knowledge through social networks and social capital needed for an efficient work of a farm.

Key words: social capital, cultural capital, human capital, intellectual capital, expert knowledge, tacit knowledge, social networks

Abstrakt: Nehmátatelné a často obtížně kvantifikovatelné záležitosti se stále více stávají předmětem zájmu sociálních věd. Jak ukázala řada výzkumů, znalosti, vědění, instituce, sítě a sociální vztahy obecně mají nezanedbatelný vliv na působení různých aktérů ve sféře hospodářské či sociální a na efektivní dosahování jejich cílů. Tento článek vychází z propojení znalostí (formujících profesionální kvalifikaci) s lidským kapitálem a vědění (chápané jako širší obecné a kontextuální vědomosti) s kulturním kapitálem. Obě formy kapitálu jsou ve své primární podobě přítomny pouze v konkrétních osobách. U kolektivních osob (podnik, obec) jsou transformovány do kapitálu intelektuálního. Při práci se znalostmi a věděním a odpovídajícími kapitály je ukázána také úloha sociálních sítí a sociálního kapitálu v jejich organizaci. Na základě analýzy dvou zemědělských podniků za využití metody přirozeného experimentu je demonstrována úloha vědění a kulturního kapitálu (oproti přeceňované úloze znalostí a lidského kapitálu). Závěr přibližuje sociální determinaci vědění a znalostí prostřednictvím sociálních sítí a sociálního kapitálu a naznačuje možnosti jejich využití pro efektivní fungování zemědělského podniku.

Klíčová slova: sociální kapitál, kulturní kapitál, lidský kapitál, intelektuální kapitál, znalosti, vědění, sociální sítě

The contemporary world faces many processes, which shape it into a new form. Ambiguous influences of globalization (e.g. Giddens 1998, 2000; Bauman 1999, 2002), growing risks which we are exposed to through our own activities depending on the locally disembedded expert systems typical for so-called reflexive modernity (Beck 2004; Giddens 1998), processes like ICTs development, cloning, discussed impacts of GMOs confirm this sentence. The result is the situation when the entire society (incl. its rural segment) experiences changes which are considered by some authors as being similar to the fundamental transition from traditional

to modern society. That is why some writers use also the term "post-modern society" (e.g. Bauman 1995) to emphasize the essential nature of change into the new type of society in which modernity is replaced by post-modernity. Although not all authors accept and share this term and ideas about fundamental transition of society (see Ritzer 1997: 143), there exists a general agreement that we experience deep changes of society we live in. The discussion is rather about the degree of how fundamental these changes are. Nevertheless, as Bělohradský (Bělohradský 2002) points out, the paradigm of modernity in the frame of which the scientists

discover unchangeable laws of nature, engineers using scientific achievements develop better and fairer world for everyone and order beats the chaos is already over. In the contemporary world (called post-modern or not), other principles are valid. Order and chaos are complementary, an observer sets up what s/he observes through his/her observation, every value is limited in history, and discrepancies and contingency cannot be removed.

It means that not any more the precise, concrete, clear, stable and tangible so-called objective elements based on the belief in the power of reason (Bacon's "knowledge is power") are considered the only crucial factors for the work of the systems. On the contrary, also the intangible factors which are difficult to be measured or visualized (they are "invisible") are referred as being important for the development. Just to mention North's (North 1994: 754) efforts to set up economic theory of dynamics showing that socially constructed institutions and time are important to understand economic changes and to provide the background for an economic policy aiming at improving economic efficiency. The nature of intangible factors is not of the traditional objective origin or being independent on actors. It is because they are generated and constructed by actors in their activities, which are implemented in the field of other actors.

In such turbulent world, the production factors are not only labour, land and capital (more or less tangible factors of production) but also technology and organization (Swedberg 2003: 58). The last two elements take us close to flexible, relative, often intangible products of social construction: technologies to knowledge (because technologies are developed using knowledge) and to knowledge economics, and organizations to social networks or social relations (because organizations are established upon institutionalized social relations) and to network economics. However, what is not evident yet are the links between knowledge and networks (social relations). This paper will address this topic.

OBJECTIVES OF THE PAPER AND METHODS USED

If this paper would not include the words "intangible forms of capital" in its title, its objectives can be worded in an easy way: to show the role of expert knowledge and tacit knowledge in the farms. However,

to be a scientific paper, it is necessary to bring new and non-trivial findings. It is obvious that tacit knowledge and expert knowledge are important in whatever type of activities and they are important for the work of any farm. This fact is not necessary to explain in details again. Moreover, this issue has been already deeply addressed and commented in this journal (see for example Tichá 2001; Hron 2004). The papers of Tichá and Hron also indicate that expert knowledge and tacit knowledge are somehow bound (in a sense they are formed and constrained by structures). It means they are organized and coordinated in a certain way. The reason is that expert knowledge and tacit knowledge should have such features (order) which enable successful activities of all participating actors. It is because the power of expert knowledge and tacit knowledge could be rationally exploited by any individual to achieve his/her goals, however, the result of the activities of many such actors need not be always the benefit and welfare of all involved.

The backgrounds of this paper are skeptical, similarly as institutional economics is skeptical (see Mlčoch 1996: 5) in the conviction that the competition of atomized individuals endowed with unlimited rationality (unbounded expert and tacit knowledge) results in itself in the best of the possible worlds. This assumption is not real. Every expert and tacit knowledge is bound (both by capacities of our brain and by the societies and ties we live in – i.e. expert and tacit knowledge are determined both biologically and socially). It is why the Nobel Prize winner in economics J. Stiglitz (2003: 23) insists we should study people and economics as they are, not as we would like them to be. This challenge is in accordance with the words of another Nobel Prize winner in economics R. Coase (1994: 721). When he got the prize, he claimed to investigate the world with non-zero transaction costs. He appealed to study of the real world (i.e. the world of transaction costs). If we are not investigating such a world, if we do not put the actors into the networks of social relations and into institutions, which influence our knowledge, we are in the unreal worlds of zero transaction costs.

The goal of this paper is to show how expert and tacit knowledge are socially determined and how important is this determination in the work of farms. Social determination influences the features of both types of knowledge and the ways of their use¹. In the other words, the objective of this paper is to show the links between various types of knowledge and its social

¹ To show biological determinants would require other approaches, other forum, and other journal. However, it is expert and tacit knowledge that might serve as a bridge to join social and natural sciences. It can be an interesting challenge for the scientists.

context influencing in the form of social networks the knowledge. It will contribute to demonstrating what issues create the order of expert and tacit knowledge in the way they are exploitable (not ill exploitable) because various actors in the market have various (and imperfect) information (i.e. also various tacit and expert knowledge). Such information asymmetry has deep impacts on the economics (Stiglitz 2003: 23). Therefore, this text will show how a broader social context (not only biological and psychological capacity of our brain) creates such features of knowledge, which can be utilized in economic activities.

Because the paper is written in social sciences, it is not possible to comply fully with the sometime required structure of the text (goals and methods-material-results-discussion-conclusion) which is rooted in the writings originating in natural sciences. Moreover, it is difficult to use some of the established methods of natural sciences (and the mentioned structure of the text responds to the methods used). The appropriateness of using the quantitative oriented directed experiment exploited by natural sciences can be doubted above all because experimenting with people would be the evidence of use (better to say misuse) of unbounded reason as it was proved in various totalitarian regimes.² However, what is possible to use, it is the natural experiment of a non-quantitative nature. It is the experiment, which uses certain situation when natural evolution resulted in bifurcation of investigated objects under the influence of circumstances, which were not a generated by the researcher. Not an external involvement of the researcher but general social and economic development resulted in the possibility to compare two various systems. Of course, it is necessary to analyze both compared settings in details, and a scientist cannot intentionally intervene into these settings. On the other hand, no scientific work is immune from some degree of intervention into investigated objects; therefore, the experimental nature of method used is not under question. With the background in ethnomethodology (its contextuality) as it was outlined by H. Garfinkel and J. Sacks (1990) and in heuristic intervention investigation method (acknowledging some degree of intervention into the investigated objects) as it was developed by J. Kabele (1999b), this text will use the natural experiment of the qualitative type. It is because of the natural character of the circumstances when specific and unique situations (which are difficult to be quantified using statistics) are concerned. Such methodological background

is close to qualitative approaches is sociology (see Disman 1993; Majerová, Majer 1999) or to historical and social methodological approaches in economics (see Swedberg, Granovetter 1992: 3).

The comparison of two farms will be used to achieve the outlined objective of the paper. These farms operate in the same village. After 1989, their chances were equal and they could be of the same legal type of business, for instance. However, one was privatized from state farm into joint-stock company, which changed its institutional owners several times. The second was transformed from the former United Agricultural Cooperative into agricultural trading cooperative of owners. Comparing these farms and analyzing the role of expert and tacit knowledge in their work, the paper will highlight the social determination of the knowledge existing in investigated farms and will show how the knowledge is used and exploited for the benefits of the farms and the community.

THEORETICAL BACKGROUND (HUMAN, CULTURAL, INTELLECTUAL AND SOCIAL CAPITAL)

The previous text used terms expert knowledge and tacit knowledge. Therefore, it is necessary to frame them into a certain context and outline their differences.

Expert knowledge will be understood (according to Bělohorský 2003: 5) as achieved results of the specific education process, which are fragmented into various areas of expertise. A person possesses expert knowledge as the specific form of knowledge. It shapes the nature of human qualification and forms human capital because such capital reflects technical knowledge and skills (Lin 2001: 190) considered as expertise acquired through education. Human capital is always tied to (embodied in) a concrete man/woman and represents the sum of immaterial wealth owned by a man/woman and used by him/her to acquire certain income from his/her activities. According to G. Becker (Becker 1994: 732–734), who coined the concept of human capital, the individuals themselves decide about the investments into this capital through qualification and medical care. The income of such a person depends on how much did s/he invested into his/her human capital, and how high (valuable) did s/he make this capital to be measured on labour market. Human capital as the set of expert knowledge, skills and abilities which have ideal features

² The question of impossibility to use directed experiments in economics (and also in other social sciences) is addressed by J. Stiglitz (2003: 23)

cannot be separated from (deprived from) a concrete man/woman as it can be done in the case of financial or material wealth (Becker 2002). For instance, to separate the knowledge from a person, the knowledge must be materialized. However, then it loses the nature of human capital and becomes material wealth. Knowledge is something an individual uses to enter labour market. It is his/her private good into which a person invests to get certain return on labour market in the form of certain income.

Opposing to expert knowledge, tacit knowledge will be understood as the sum of general achieved results of the whole socialization (not only education) process that are in possession of a person. Comparing with expert knowledge, tacit knowledge is rather a public good because more than with qualification and investments into the qualification (specialized education of a person) it is linked with socialization. In the socialization process, sometimes seemingly useless and general skills are formed through various agents (not only through schools but also, and above all, through family or peer groups). Referring to public goods concept (Samuelson and Nordhaus 1992: 311; developed by Bělohradský 2002), the typical features of tacit knowledge in its personal form are:

- It cannot be delivered to individuals in a limited amount according to the amount of payment (delivered to one, it must be delivered to all, otherwise the system does not work).
- None can be excluded (with eligible costs) from consuming tacit knowledge.
- Consumption of tacit knowledge by a person “A” does not decrease the possibility of the other people to consume the same good. Socialization generates tacit knowledge (comparing to simple expert education, which generates expert knowledge).

Tacit knowledge means to think independently. It means (Bělohradský 2003: 5) to be skilled in processing the information using the categories as semantic oppositions and to be skilled in distinguishing between the specific contexts of information and their general sense. Tacit knowledge understood in this way is more efficient to join with cultural capital. Such capital (according to Lin 2001: 43, 190) means the resources acquired through social identification and reciprocal recognition. A French sociologist P. Bourdieu has developed cultural capital as a term. Similarly like human capital, cultural capital is bound to an individual. However, it differs from human capital (based on the research of P. Bourdieu) in the way that knowledge which people acquire is not influenced only by what people invest into this knowledge but also by their origin – i.e. by certain capital which is

the outcome of investments into people in the past, especially by their families. Therefore, their knowledge does not depend only on the biologically given capacities of a person developed through his/her investments in health or education but also on his/her social status rooted in family background. Acquired knowledge is therefore influenced by a wider social context and therefore by another form of immaterial capital than the human one. It is why Bourdieu (1983: 185-190) thinks about cultural capital with its three components:

- embodied in an individual – embodied state of cultural capital (external wealth converted during certain time into integral part of the person /*habitus*/ which cannot be transmitted instantaneously to other people because it is always joined with its bearer);
- objectified – objectified state of cultural capital (material objects and media which are already transmissible in their materiality; but to use them after transition, an individual needs to have the first element – embodied in him/her; simply speaking, without skills to understand, which are available only to each person, it is not possible to read the book which includes the objectified cultural capital of other people);
- institutionalized – institutionalized state of cultural capital (objectifies embodied element of cultural capital in the direction of relative autonomy of its bearer; they are, for example, academic qualifications /like human capital/ which enable to distinguish the formally embodied element of cultural capital of an autodidact from those who passed the specialized education; this element influences social stratification).

Cultural capital therefore includes also human capital as P. Bourdieu (1998) documents it in the case of education. What economizing understanding of human capital considers as talent or skills (self-interest of an actor), can be much better understood as the result of cultural function of “teaching” in the family. The students from the “right family” are taught not in school but by their parents when they are fostered up to get “all they need” for the life in the society (this is “the sense for the game” which forms the *habitus* of acting individuals, as Bourdieu writes). The education in schools depends more than on individuals and their free wills on cultural capital, which the family invested into its children in the form of tacit knowledge about culture and its symbols in which s/he grows up. That is why tacit knowledge should be included into cultural capital, which involves the dimension of family background. Not only direct investments but

also the family background (defining what symbols we learnt and were taught in the family) influences our chances in the society. In this case, the sources acquired through social identification, identity and reciprocal recognition and acknowledgment by other (which is related to the theories of social status and social roles) are concerned. More than qualification it is general education, socialization and the skills to work with information, which are different in various cultures that are of the interest to understand the knowledge.

Human and cultural capitals are composed of sources, which are primary possessed by individuals (it is the wealth in "his/her head"). Persons can dispose of these forms of capital in various ways (in the case of human capital the freedom in disposing is emphasized, in the case of cultural capital, which includes also human capital, social determination of disposing of this capital is emphasized).

Despite the outlined differences between cultural and human capital, both types of capital have in common the fact they are closely bound to a concrete person (they are embodied in an individual) and without their objectification and institutionalization (e.g. in the form of materialization), they are not transmittable. Individuals in their activities use cultural capital and its part – human capital. The materialization of these capitals is achieved through objectification and institutionalization, which are later legitimized. These processes are described by Berger and Luckman (1999: 51–127) and they are known as social construction of reality.

Every human activity as the human externalization (humans cannot exist without any activity only to be closed in themselves) requires from every man/women the habitualization of his/her activities. Habitualization results in the institutionalization of activities because the habitualization is the background of institutions that govern human activities through the patterns of behaviour, which were set up earlier (Berger, Luckman 1999: 58). This is the way aiming us out of the individual persons. From this point of view, we can address the issues asking how to deal with the situation when we are considering the group of people, e.g. a social entity understood as a collective person for whom the concepts of cultural and human capital as strongly bounded to individuals cannot be applied³. It is because a family, community, region, the state, company or a farm

acts in some way and therefore any of them can be considered as actor. It is why during the research the respondents refer to their farms as the actors with many attributes of human life. Many times the farms referred in the interviews are endowed with life ("our farm lives"), thinking ("the farm found that"), emotions ("the farm feels"), and the abilities to act ("the farm made, did").

When dealing with individual persons, we speak about cultural and human capitals that are bound to a concrete individual because in their ideal form these capitals are not transmittable. However, the question arises: when speaking about a collective person, does there exist any other form of capital, which would correspond to this existing at individual persons? Gradually it is established the concept of intellectual capital. It is also called knowledge capital (more about knowledge capital see Hron 2005: 21). This form of capital works with the objectified and materialized elements of human and cultural capital. They are the objectified and institutionalized elements of cultural capital. Intellectual capital can be defined (see Tichá 2005) as the difference between market and accounting value of a company/farm. This difference is related to the intangible assets of the company/farm. These assets consist also of cultural and human capital of the workers in the company/farm. The intellectual capital also includes customer capital (long-time relations of the company/farm with its the most important customers – i.e. the objectified form of human capital known as the expert knowledge about the consumers and their needs which is materialized in the form of consumers studies etc.) and organizational capital (e.g. patents, intellectual property, databases and cultural aspects – like the culture of sharing the knowledge – i.e. the materialized and objectified elements of cultural capital). The last element of intellectual capital (organizational capital) is sometimes labeled as structural capital.

Intellectual capital means the intangible and "invisible" assets of collective persons (in the general form of expert knowledge and tacit knowledge, or in the concrete form of science, innovation research, programmes and others). Collective persons use this asset to achieve their goals. It means an intellectual capital is used on the level of collective persons and individual person uses cultural capital (which includes the human capital) when both types of persons act (Figure 1). What is always necessary, it is the goals

³ The division into individual and collective persons is used by Kabele (1998: 177, 369) when he analyzes social changes and shows that also such social entities as organizations, groups or societies can be understood as persons who move with conscious and are also the actors, co-movers of the events. That is why collective persons become a significant element of an order into which unclear events are figured during the situations of social changes.

of action and the very action should bring the benefits for those who are concerned and for those who prepare these actions. Therefore, also various above discussed forms of capital necessitate their coordination, moreover, if the collective persons are concerned. That is why for the efficient use of intellectual capital, which is based on cultural and human capitals, also other conditions are needed.

When asking what defines the use of human/cultural and intellectual capitals in society and the way in which these capitals become the assets of the whole society, then the answer is social capital. Although this term was probably used for the first time in 1916 by the supervisor of rural schools in West Virginia L.J. Hanifan (quoted according to Putnam 2000: 19), it was introduced into scientific discourse by the works of P.F. Bourdieu. However, even in his works in the 1970s, this concept was residual category (Swain 2003: 188–189). What is interesting, it is the first Bourdieu's work in which he precisely conceptualizes the concept of social capital was originally published in German. Bourdieu (Bourdieu 1983: 190) defines social capital in this work as the aggregate of the actual and potential resources, which are linked to possession of a durable network of more or less institutionalized relations of mutual acquaintance and recognition – or in other words to membership in a group. Looking from the point of view of the groups (collective persons) such capital gives, according to Bourdieu (ibid: 191), the group members certain background in the collective

own capitals – a sort of “credential” that entitles the group members to the credit in various sense of this word (trust, honesty etc.). The profits accruing from the membership in the group are the fundamental of solidarity, which increases and multiplies these benefits. What is important, it is the fact these relations can exist only in the situation of human activities. It means social capital is available only when it is used (Falk, Kilpatrick 2000: 103–104).

Social capital in Bourdieu's understanding is not reducible into economic or cultural capital but also it is not independent fully on these capitals because it works as the multiplier for economic and cultural capital of an individual person. Social capital is for Bourdieu a rather private good because it brings the profit mostly for the individuals (Sedláčková, Šafr 2005: 5). In the same time it represents structural form of this capital (ibid: 5). It is because social capital is for Bourdieu above all about the achievement of the higher position in diversified social structure. Therefore, in Bourdieu's understanding it has the competitive nature (Lee, Árnason, Nightingale, Sucksmith, 2005: 270–271).

Comparing with Bourdieu who introduces the concept of social capital into the discourse in social sciences and relates it to an individual and the competition in social field, there is another understanding of social capital. R. Putnam (Putnam 1993, 2000; Putnam, Feldstein 2003) coins this second view. They were his thoughts about social capital published in the 1990s,

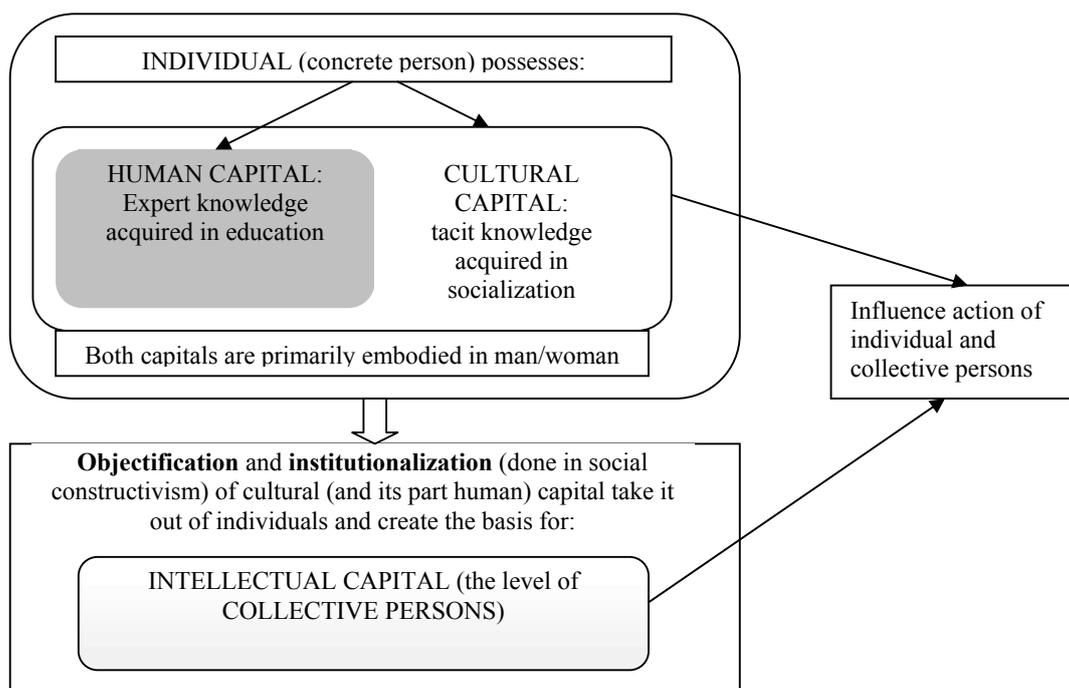


Figure 1. Relations between human, cultural, and intellectual capitals

which significantly influenced the works dealing with regional, rural or community development. Finally, developing Putnam's views, social capital became one of the most important conditions, as stated by the World Bank, for the successful implementation of the development of certain localities.⁴

In Putnam's work from 1993 "Making Democracy Work", social capital is a sort of "appendix" to investigate the role of citizenship and institutions in regional development. Putnam (1993: 163–185) outlines this concept at the end of his book when he considers the reasons of various efficiency and performance of regions in Italy. The reason he sees in civic engagement. It is based on the cooperation of equal partners and traces the roots to the social capital. Voluntary cooperation is (Putnam 1993: 167) "easier in a community that has inherited a substantial stock of social capital, in the form of norms of reciprocity and networks of civic engagement. Social capital here refers to features of social organization, such as trust, norms, and networks, that can improve the efficiency of society by facilitating coordinated actions." Spontaneous cooperation, which assumes equal partners, is facilitated by social capital.

The most important norm, which increases the amount of social capital and in this way lowers transaction costs of collective action, is in Putnam's view (Putnam 1993: 171–173) the reciprocity. Similarly as M. Shalins in his *Stone Age Economics*, he distinguishes the balanced (specific) and diffused (generalized) reciprocity. The first means "simultaneous exchange of items of equivalent value" (for example like the case when office-mate before the Christmas exchange each other their Christmas bakery). Generalized reciprocity "refers to a continuing relationship of exchange that is at any given time unrequited or imbalanced, but it involves mutual expectations that a benefit granted now should be repaid in the future."

The norm of generalized reciprocity is very similar to Mauss's (Mauss 1999: 12–14; 24–27) total commitment when he describes the gift. Under certain circumstances (in certain social context), the gift

has to be given. It is also necessary to accept the gift under these circumstances. The acceptance of the gift makes the commitment that the gift has to be (under other or similar circumstances) returned (the commitment to return the gift in the future). Such relations tie and glue the whole society (therefore Mauss speaks about total commitment).⁵

In Putnam's latter works "Bowling Alone" from 2000 and "Better Together" from 2003, the term of social capital becomes central. Putnam develops here the concepts of bonding (exclusive) and bridging (inclusive) social capital (Putnam 2000: 22–24; 2003: 2–3, 279–282). Bonding social capital is oriented into the groups. Its tendency is to support exclusivity and homogeneity of groups. It refers to the relations of individuals or the groups, which have much in common. It can be used to explain the specific reciprocity and mobilization of solidarity (here is the place especially for the dark sides of social capital which Putnam finally acknowledges in the form of bribery, nepotism etc.). On the other hand, bridging social capital aims out of the groups. It refers to the relations of individuals. These relations link individuals or groups across greater social distances. Bridging social capital is related to the generalized reciprocity; it provides the links with external assets and information diffusion. Putnam (2000: 22–23) writes in the illustrative way that while bonding social capital is a sort of sociological super-glyue which ties and bounds all people together (it is a sort of Durkheimian mechanical solidarity), bridging social capital is a sort of sociological WD-40. Those who are lay repair people know this spray stops jar, cleans and protects, eliminates moisture, and facilitates the work of rusty mechanisms. Looking from the point of view of social sciences, bridging social capitals is this type of capital which lowers transaction costs, facilitates the coordination of actors in the field of other actors who are not the members of the same group. Bonding social capital can (due to its background in the homogeneity group) facilitate the strategies of linkages. However, if the society is based only on

⁴ According to the World Bank (*The Initiative on Defining, Monitoring and Measuring Social Capital /Overview and program description/ 1998*) social capital includes institutions, relations, attitudes and values which govern the interactions among people and contribute to social and economic development. Social capital is not simply the sum of institutions that underpin the society but it is also the glue, which holds the society together. It includes shared values and norms for social action, which exist in personal relations, trust, and general sense for civic engagement and responsibility. All it makes the society to be more than the sum of individuals. Without certain sense of a common identification with the forms of governance, organization and coordination, without cultural norms and "rules of game" it is difficult to imagine working and functional society.

⁵ It is interesting Putnam never mentions Mauss's "Essay on Gift", albeit Mauss has already in the 1920s described the mechanism, which is much more latter re-discovered by Putnam as basic element of social capital in his understanding (general reciprocity).

this form of capital, it risks being similar like Bosna or Belfast (Putnam 2003: 279–280). That is why the existence of bridging social capital is necessary.

The paper has already noted that Bourdieu understands social capitals as a vertically hierarchical private good bound to an individual person who uses social capital to change his/her positions in the social field (based on composition of economic and cultural capital because these capitals influence the *habitus* /way of action/ of an individual). Such social capital can be used for the analysis of what Durkheim considers organic solidarity as the tool organizing the collective action of people. Putnam's understanding differs. His social capital is horizontally equal (based on reciprocity). It is closer to Durkheim's understanding of mechanical solidarity, which also establishes the order of collective action (in different way than organic solidarity that is based on division of labour). Putnam's social capital is rather a public good of the collective person. More than in Bourdieu's concept, it is related to cognitive issues – it is derived from ideas retained by culture – such as internalized values, norms, opinions, beliefs (Sedláčková, Šafr 2005: 5). Such social capital is more of the cooperative nature, which can, however, sometime results in its “dark side” (Putnam 2000: 350–363). This side relates to the closed social networks, corruption, mafia, nepotism (especially if bonding social capital dominates without balancing by the bridging social capital).

The reason of this paper is not to provide the criticism of Putnam's ideas. N. Swain (Swain 2003: 193–196) does it, for instance. He points out to a rather non-historical use of some facts and certain romanticism in ideas that the collective social capital of the whole communities will be the fundamental tool, which will undoubtedly result in their development. For instance in “Bowling Alone” Putnam (Putnam 2003: 402–414) abiding with his romantic ideas ends the book with the suggestion how to remedy America where the activities at the end of the 20th century were strongly individualized (also bowling is not played together in teams but individually). Putnam sees the remedy in the implementation of the programme, which will create social capitalists who will save America (Swain 2003: 196). Such programme could be based on the experience from American Gilded Age (1870–1900) and the Progressive Era (1900–1915).

Into the field marked by the concepts of social capital developed by P. Bourdieu and R. Putnam considered as two points of dichotomy, other understandings of social capital developed by authors like J. Coleman, G. Becker, F. Fukuyama or A. Giddens can be placed. Because the aim of this text is not outline social capital in details, there is the summary of this concept. Social

capital is the wealth of (assets in) our social relations (contacts). It is based both on (1) competitive nature of social status (who are we in the social hierarchy and how we enter from these hierarchical positions into the relations with others – it is also related to tacit knowledge and expert knowledge), (2) and the amount of mutual trust in the relations with other people, existing social norms, formal and informal social networks used to access resources or to solve the problems, which create social cohesion (how do we enter into equal relations with others, what is also based on our tacit and expert knowledge). Social capital means the sources acquired through social networks and social relations (it is the “wealth of our relations”). The existence and the scope of social capital (for the possibilities of its measurement see for example Lošťák 2005, Putnam 1993, 2000, Sedláčková, Šafr 2005) influences the coordination of collective actions. Social capital is referred to when explained succes of industrial clusters or addressing so-called network economics (Swedberg 2003: 65–69). This paper is founded upon the hypothesis that they are social capital and social networks, which determine our expert and tacit knowledge and it this way, they create the order of the knowledge and influence the way of its use in action.

This text has already indicated that social capital is the wealth (assets) of both an individual and a collective entity (see Lin 2001, Hudečková, Lošťák 2003). It means that the benefits from institutionalized social relations representing embedded resources can use both an individual within the collective and the whole collective. When speaking about collective persons (this view will be important because of the empirical analysis done in this text), social capital is a sort of “aggregation of valued resources (e.g. economic, political, cultural, or social, as in social connections) of members interacting as a network or networks” (Lin 2001: 26). Social networks are understood as the “channels of mutual influence” (Kabele 1999a: 49). These channels are various because also the social networks penetrate in different ways, often irregularly and in various degrees into different sectors of economic life (Granovetter 1992: 61–62). This heterogeneity is influenced also by the nature of relations in the networks. Mark Granovetter (cf. Swedberg 2003: 124–125) in his analysis of social mechanisms through which people get job distinguishes two types of social ties. Strong ties are typical for people who know each other almost on an intimate level. These people have the tendency to share the same types of information. Therefore, they mostly cannot help their group-mates with new information or the advice where to get a new job because they share similar knowledge. Strong

ties are close to Putnam's bonding capital. On the other hand, the weak ties are typical for people who know each other rather casually. Thanks to these ties, people have the access to different expert and tacit knowledge. It might be more useful for somebody who has just found out s/he needs to get answers for questions or to get a job. Granovetter speaks here about strong weak ties. The most important elements of weak ties are the bridges, which enable the transmission of information generated on the basis of weak ties. The bridges are the people who span separated worlds of strong ties (Kabele 1999a: 69). Here we are closer to Putnam's bridging social capital. However, as Granovetter demonstrates, people to get the jobs use the networks of weak ties. It means they are also used in the competition within the Bourdieu's social field (in a sense of achieving higher social status) which brings these ties close to the Bourdieu's concept of social capital.

RESULTS AND DISCUSSION

As the paper has already outlined above, in investigated community there are two farms. They will be compared to achieve the goals of this paper. Their short characterization is outlined in Table 1.

During the research formed within the institutional research "*Efektivní integrace českého agrárního sektoru v rámci evropských struktur – předpoklad trvale udržitelného rozvoje*" (Effective integration of the Czech agrarian sector into European structure – the condition for sustainable development, funded by the Czech government), also the issues of availability of (in the sense of the access to) information (information includes expert and tacit knowledge) and the use of various information were investigated.

The representatives (top management) of both coop and the joint stock company farm were typified by a very similar expert knowledge (in the sense of qualification related to human capital). It confirms similar education structure in both farms and the structure of specialization of workers reflecting similar qualification structure of both agricultural holdings. However,

we found the differences in the tacit knowledge related to the knowledge of the general context of what is going on. The differences in tacit knowledge brought us to the concepts of cultural capital.

What were the issues? Because the paper is limited in size, only one finding will be presented. The interviewed people in the Agricultural cooperative had no information (in the sense of tacit knowledge) about the operation of the limited liability company (composed of 3 Austrians and their Czech relative) in investigated region. This company bargained with local owners about buying their fields. The Farm (joint stock company) has already had this information. Its director told us: "A half year ago we made measures to deal with the potential problems emerging from situation when our renters sell their field to this company." The Farm started an intensive negotiation with the owners about the purchase of their field by the Farm to secure the land ahead of the limited liability company. The members of the top management also started to purchase the state land as natural persons. This land they rented to the Farm they control as shareholders. The Agricultural cooperative got the information about the limited liability company from the members of our research team. A coop chairperson told us: "It is very interesting, it is serious, and it can bring us problems." This situation generated the research question. What accounts for the different tacit knowledge existing among the members of the farms in one community? Why the representatives of one agricultural holding had the tacit knowledge necessary for developing future strategies of their business and another did not possess such tacit knowledge? What is even more paradoxical it is the fact, that tacit knowledge can be considered as public good but one agricultural holding was excluded from its use. The reason of the different ownership structure (Cooperative vs. Joint Stock Company) was not fully satisfactory to explain the questions.

Because the previous text suggested expert and tacit knowledge are socially determined by social capital, which is founded upon social networks, these issues started to be investigated in details in both agricultural holdings. The outcome indicated the local Agricultural

Table 1. A short description in investigated farms in the community

<i>Agricultural trading cooperative (Zemědělské obchodní družstvo)</i> : uses this name since November 1992; 1 478 ha of land (18.5 ha/worker); animal and plant production, off-farm activities; in 2000 the coop top management retired and a younger staff has been elected to manage the cooperative
<i>Farm, joint stock company (Statek, a.s.)</i> : uses this name since November 1992; 2 850 ha of land (22 ha/worker); plant and animal production, off-farm activities; in 1999 four members of top farm management bought the shares from the previous owner – an investment company

trading cooperative is still rather a sort of “extended family” which is closed and rotates around established durable networks (understood as the Granovetter’s strong ties or the Putnam’s bonding capital) of a group of local protestants who were always important actors of local farming. The Farm, joint stock company, is a group “of functionally depended people”. This group is open to the surrounding world and moves in changing social relations. It responds to the Granovetter’s weak ties or the Putnam’s bridging social capital. It is important to note that there are no significant persons between the two agricultural holdings – the bridges. The researchers became such bridges during their investigation. Based on the network analysis of the coop they were the hubs, which established with the coop the weak ties that are important for the transmission of knowledge form outside strong ties. The fact that there are no bridges between the two holdings suggests there is a competition between them and they want to protect their intellectual capital. It also means social capital is not used for the benefits of the whole community (as Putnam would suggest) but for the benefits of one individual in the detriment of others. Such situation is close to the Bourdieu’s understanding of social capital.

CONCLUSIONS

The analyzed case confirmed social determination of tacit knowledge. They are social networks, which influence the access to the information based on tacit knowledge as for the information about broader context of activities. It is tacit knowledge, which is available in the social networks. The character of the networks influences also the character of tacit knowledge. If tacit knowledge is a sort of public good then also the character of social networks and the character of social capital are very important as for the access to this good. In this way, we should work with weak networks as Granovetter suggests and with bridging social capital developed by Putnam. Weak social networks and bridging social capital are even more important for the use of tacit knowledge, if an actor should act in a very turbulent milieu where a person competes for higher social positions and uses social capital also in Bourdieu’s understanding. Social networks shape social capital both on collective level (often related to R. Putnam) and on the level of an individual (often referred to P. Bourdieu). The analyzed case indicated that compared with Putnam’s ideas, the benefits from social networks (and even from bridging social capital) use not the whole community (for the agricultural cooperative the lack of information about

purchasing the land by the limited liability company could result in serious problems in its future strategy), but only its part concentrated around the farming joint stock company. It is because social networks and social capital are used also for achieving certain positions in the social field of competing actors. Social capital coordinates in such a case the use of economic and cultural capital. Only in the moment when such competitive individualism of actors pursuing their own goals turns into devastating features (all want to achieve the benefits but the result is all are loosing), the power of the social capital outlined by Putnam is more evident. This form of social capital coordinates the action not structurally being bound to the individual but in a cognitive way being bound to the collective. That is why social capital has to be seen not only as the mechanism facilitating collective action through the support of cooperation but also as mechanism used in competition. In the second case, the result of social capital use can be negative when all participants of action are losers at the end. Such understanding of social capital is missing in Putnam’s work. He stresses only the collective dimension and it makes for him problems to deal with “dark side” of social capital. These circumstances are often neglected when social capital is considered as a sort of remedy to help Czech farming not only on the practical level (various supports to producers group and collective marketing initiatives) but also on the theoretical level (see Chloupková, Bjørnskov 2002).

The analyzed case also demonstrated that only the human capital concept is not enough for an efficient work of farms. Not only expert knowledge, talent, professional skills are important but also social networks in which we exist and through which we have an access to the information (if the networks have features of weak ties and if there are sufficient bridges) are significant. The case showed that the concept of human capital is very limited to explain all skills. That is why it is also useful to work with the concept of tacit knowledge and its relation to cultural capital of persons in social networks and intellectual capital of collective persons when doing economic analysis of the farms. Cultural capital according to the findings of this text is not rooted only in education in family and schools but can be formed also by other social groups the individual is a member of and in which s/he multiplies what s/he received in family and education.

The case in the investigated community brings us also back to Granovetter’s (1992: 53–54; 57–63) concept of embeddedness. In this concept Granovetter develops Karl Polanyi (1992)⁶. Our activities, including economic ones, are always in some way embedded in some form of social structure. Social

structures, including social networks influence our actions. The actions in modern society are founded on rational choices, which are based on expert knowledge and tacit knowledge used by the actors. These forms of knowledge through their projections into activities create also the structures in which people act. We can see here the duality of action and structures which Giddens' theory of structuration (Giddens 1984) or Bourdieu's theory of social field and *habitus* (Bourdieu 1998) aim to bridge over. Without connecting social capital with these theories, the analysis of social capital is not completed. It does not show all the possibilities social capital have in operation of the farm when joining this capital with expert knowledge and tacit knowledge. The type of information we have and we are able to use depends also on the type of social networks (structures) we are members of. Because social networks are important condition for creating social capital, an important role of this capital in the abilities to acquire and to use expert and tacit knowledge is obvious. Social capital influences the knowledge we have (see for example Putnam 1993: 164–166; 173–174 about the knowledge about others). The structuration of our activities is efficient and results in benefit of all participants, if it is based on social capital. However, this capital does not need to be considered only in the sense of Putnam's ideas as possessed by a collective. It can be also understood as the assets of an individuals (in the sense of contacts which in their sum structure the society) as P. Bourdieu views this capital. Such approach even enables to work more with the concept of cultural capital that is closer to the concept of tacit knowledge.

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⁶ Polanyi shows that economic life faces various institutions; many of them are different from the market. Human life is also embedded in these non-market institutions that influence economic life.

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