

# Cultural and Social Issues for Knowledge Sharing

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**Paper type:** Research Paper

## **Purpose of this paper**

The author shows that knowledge sharing is primarily based on a trading process – the business transaction process. Motivators as well as morale hazards for knowledge sharing based on existence needs, biosocial needs and cognitive needs are described.

## **Methodology/Approach**

An industry survey followed by interviews discovers arguments supporting the business transaction theory. Results of the interviews are clustered and categorized according to Alderfer's pyramid. Morale hazards hampering knowledge sharing are derived thereof.

## **Findings**

The comprehensive online survey, combined with personal interviews, supports the business transaction theory. According to this theory, knowledge sharing is based on a trading process. During this process, which can be regarded as information exchange process, people evaluate information on individual basis in an asymmetric way. Modern portfolio theory can help to understand the motivation behind this process. Motivators as well as morale hazards for knowledge sharing were detected.

## **Research Limitations**

The business transaction theory is valid independent from cultures. However, the findings about morale hazards are cultural dependent. These findings represent hopes and fears of the Central European society. It would be interesting to perform the study in other regions and to compare the results.

## **Practical Implications**

The results are valuable for companies which plan to improve their rewarding and incentive systems.

## **Originality/value**

Until recently researchers regarded trust, attitude and group support as the main drivers of successful knowledge-sharing cultures. This paper shows that the underlying mechanism for knowledge sharing is rather based on a trading process.

**Keywords:** social survey, knowledge sharing, information transfer, morale hazards, values, motivators

## **Introduction**

Individuals don't offer knowledge for free. Therefore, knowledge sharing can be regarded as a business transaction process. During this process humans use a tacit but probably unique function - independent from cultural roots - to evaluate the value of information. The goal of this empirical social research is to show that the business transaction theory might be the basis for knowledge sharing. After conducting a comprehensive company survey in Europe, the author found indicators supporting the theory. And he also detected morale hazards for knowledge sharing.

The author selected a subset of companies and asked employees for their thoughts about the motivators for knowledge sharing and working performance. He performed a cluster analysis and mapped the answers to Alderfer's pyramid. Very important cultural-dependant moral hazards for knowledge sharing were detected. The results show that the true issues in handling knowledge are not mastering IT systems, but people following certain patterns fulfilling their satisfaction. Therefore, the author concludes that research efforts should be more focused towards rewarding schemas and socio cultural aspects so that the quality of provided information in IT systems can be leveraged.

## **Motivation**

Knowledge management is not only an IT challenge. Foremost it is discovering how to motivate people to share valuable information so that intellectual capital of companies can be leveraged. Bontis (Bontis, 2002), Edvinsson and Malone (Edvinsson, 1997) and Sveiby (Sveiby, 1997) see intellectual capital as the "stock" of knowledge that exists in an organization at a particular point in time. A similar view is described by Nonaka and Takeuchi (Nonaka, 1995) who defined knowledge management as managing the stock of knowledge in an organization as it flows over time. Managing this stock remains a challenge, as there is the need to socialize and codify tacit knowledge. Furthermore, knowledge acquisition is only successful when people are willing to cooperate. Willingness to cooperate, in turn, is strongly dependent on the trust level (Huener, 1998) in an organization. The author discovered that it is not only the trust level that is important, it is the value of the information itself that plays a major role during knowledge exchange.

Before we talk about knowledge exchange and knowledge sharing we need to characterize what we mean. There are different perspectives. Bonifacio, Bouquet, and Cuel (Bonifacio, 2002) characterize knowledge sharing and knowledge management as the process of creating, codifying, and disseminating knowledge. They claim that knowledge can be disseminated. But this approach presumes that an objective epistemology exists, so that all contextual, subjective and social aspects of knowledge can be eliminated in favor of an objective and general codification. An interesting idea, but as soon as humans grasp information from databases of any kind they start to interpret this information. It is obvious that different knowledge is produced out of the same chunk of information in different brains no matter how the information is codified. Consequently, only information can be disseminated and exchanged – not knowledge! This view is also supported by the autopoietic epistemology school. According to this school, knowledge is a private, personal thing and intuitive and strongly linked to the user's values and beliefs. Explicit knowledge is data and information which enable other people to create their own knowledge via a "structured coupling" process as explained by Joia (Joia, 1999). There are techniques existing such as sharing knowledge through common experience, through story telling or micro articles – for all these techniques the basis is information flow based on text, speech, smell, optics (behavior) or tangibles. This information is then interpreted by our brain according to our context knowledge, previous experiences, instinct, intuition and ratio. Consequently, when the author writes about knowledge sharing in this paper he means the information exchange processes with all its different individual interpretations of transferred data. Thus, knowledge is created purely through information transfer and successful or unsuccessful knowledge sharing is a consequence thereof. Moreover, it has been proven that the transferability of knowledge itself cannot be guaranteed (Barachini, 2003).

The author (Barachini, 2003) developed a thought model which maps the information exchange process between humans to the investment processes of the modern portfolio theory. The author argues that knowledge always has been the cornerstone for mankind to survive. Therefore, in his opinion, individuals don't offer information and in the last consequence knowledge for free. To establish a successful knowledge-sharing culture an organization must especially consider trading aspects of modern portfolio theory and refrain from being exclusively dependent on trust, attitude, leadership, and group support. In the company survey presented herein the author discovered indicators supporting the business transactions theory. The author also identified moral hazards which hamper information exchange within a society. It is important to note that parts of the presented results strongly depend on European culture and cannot be generalized as such.

In this paper the author first revisits the business transaction theory. Then he describes the method how he tried to identify hints supporting the theory. The author first describes the selection process for the online survey. Then he identifies those points which from his point of view needed deeper interpretation. Subsequently the author describes crucial steps in proving his conjecture with the cooperation of interview partners which were selected from a broad industrial basis. Finally the author draws his conclusions.

## **Background of the Business Transaction Theory**

The author (Barachini, 2002) defined two types of information exchange. Type-1 is the immediate exchange of information in both directions. Thus, sender and receiver give information away. This type of duplex information exchange can be mapped to over-the-counter businesses transactions executed by banks.

Type-2 is more complicated because information flow is, first of all, unidirectional. This concept is better defined in two scenarios: 1.) when we consider the fact that we earn money by way of our profession as e.g. a teacher or 2.) when we consider that we offer information to individuals, investing in hopes to receive even more valuable information in return at some future date. Type-2 of information exchange can be mapped to the most prominent type of option contracts - the call option for stocks. This agreement gives the buyer the right to buy from the option writer a specific number of shares of a particular company at a specific purchase price at any time<sup>1</sup> up to and including a specific date. Figure-1 shows the P&L graph<sup>2</sup> of a buyer. The buyer of a call option will have to pay the writer a premium in order to get the writer to sign the contract. The fair value of an option can be evaluated by the binomial option pricing model or by the more modern method from Black-Scholes (Sharpe, 1995):

$$\text{Fair value} = N(d1) * P_s - E * N(d2) / e^{RT}$$

$$\text{Where: } d1 = (\ln(P_s/E) + (R + 0.5s^2)T) / s * \text{sqr}T, \quad d2 = d1 - s * \text{sqr}T$$

$P_s$  = Current market price of underlying stock

$E$  = Exercise price of option

$R$  = Compound risk free rate of return

$T$  = Time remaining before expiration

$s$  = Risk of the underlying stock

sqr = square root

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<sup>1</sup> For US options only

<sup>2</sup> Profit and Loss

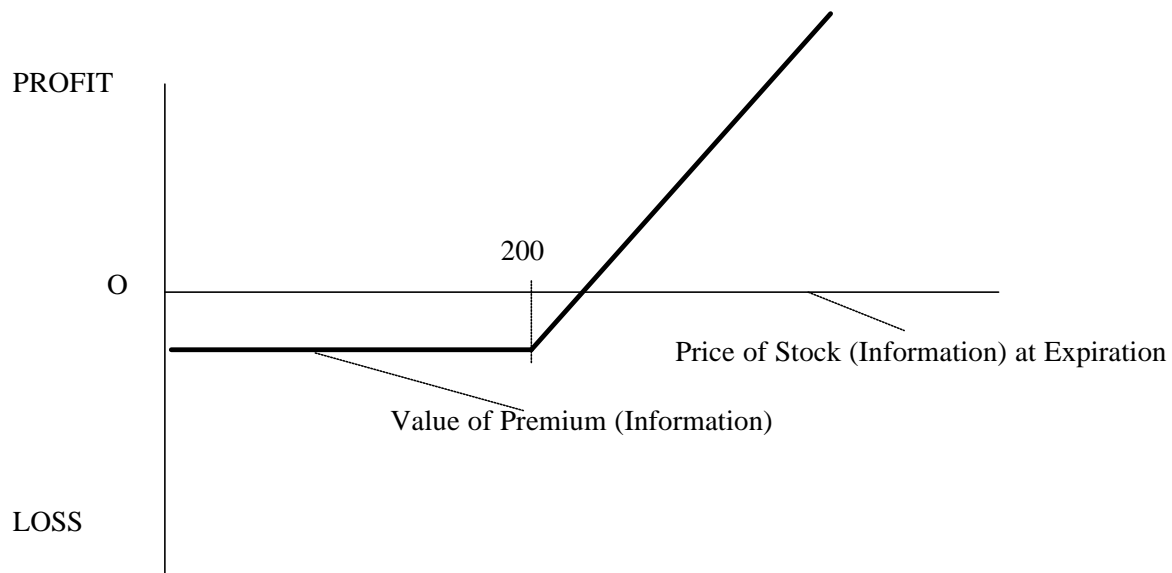


Figure-1: P&L Graph for “Buy a Call”

Figure-1 relates the value of a call option with an exercise price of 200 to the price of the underlying stock of expiration. If the stock price is below 200, the option will be worthless when it expires, and the writer will gain the premium. If the price is above 200, the option can be exercised for 200 in order to obtain a security with a greater value than 200. As a result the option buyer will realize a net gain that will equal the difference between the securities market price and the 200-exercise price. However, in practice the calculations are even more complicated due to margin requirements, commission payments, and other market-making activities.

Type-2 information exchange describes the process by which one person (the buyer) gives information away, hoping to get even more valuable information in the future. The information offered to the writer has some value - the premium. The buyer invests in hopes he will receive in return another type of information that is at least as valuable as the information premium he gave. For our purposes, the underlying asset is not stock but again it consists of information. Following the analogy of this theory, then, the person who delivers information is the buyer of a call option.

The difficulty lies in determining how to evaluate a fair price for a piece of information which is yet unknown. The Black-Scholes formula is based on statistics, whereby the exercise price is known, the risk of the underlying common stock can be evaluated, and the option has a well-defined expiration date<sup>3</sup>. In the case of information brokerage, we don't know even the value of the underlying because it is an unknown piece of information that might be offered from the writer at a future time. In the Black-Scholes formula the current market price of the underlying stock can be evaluated. Since one type of information is evaluated differently from brain to brain, no objective evaluation can be performed for information generated by humans.

Thus, each of us uses our own evaluation function which might be similar from brain to brain, however, due to different context knowledge, e.g. experience or intuition, the same piece of information is evaluated differently on an individual basis. Therefore, statistics like those in the Black-

<sup>3</sup> this is true for European options – US options can be exercised arbitrarily

Scholes formula cannot be applied immediately since the values of Ps, E, R and T represent individual functions. The parameter T is indeterminable since we don't know when and even if we will receive valuable information in the future. Thus, a fair price for information cannot be calculated. Nevertheless, the P&L statement of a call option can be used as a thought model when we talk about information exchange<sup>4</sup> between humans. By applying a very specific survey the author hoped to find justifications for the business transaction theory.

## The Method

The author selected randomly 1.500 companies from the middle sized industry segment in Europe<sup>5</sup> and asked each via mail if they would be prepared to select ten employees<sup>6</sup> to participate in an electronic questionnaire. The middle sized industry segment in Europe is characterized by employing either at least 50 employees or at least 3.65 Mio. € balance-sheet sum or at least 7.9 Mio. € turn-over. Furthermore, the author informed them that participation in the online survey would only be useful if they would be prepared to send one respondent of their choice to an interview session. The selection of the 10 employees and the selection of the interview partner were completely left up to them. The only conditions were that only volunteers were allowed to participate and that there should be a mix between different positions in the company. The participation of CEOs, top management and middle management was encouraged. Under these circumstances only 10% of the companies (150) were willing to participate in the complete study (electronic questionnaire and interview). 0.3% of the respondents of the online survey were CEOs, 18% were middle managers, and the rest were employees. The distribution of the 150 companies which were willing to cooperate is shown in Figure-2. Using the online survey, the author asked 1.500 people to score eleven statements on a continuum between 0 and 12 points (see Figure-4).

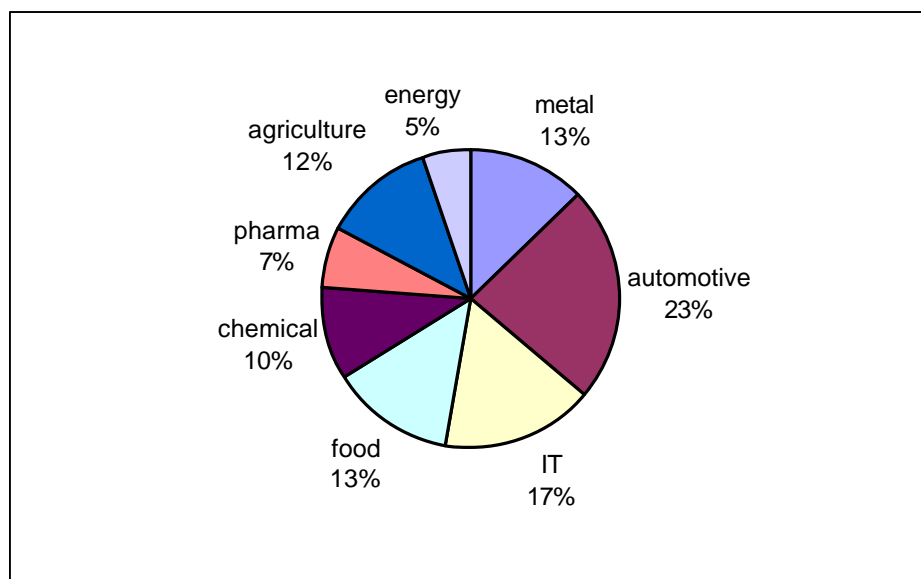


Figure-2: Distribution of medium sized companies for the online questionnaire

In the second phase of the research project the author created a focus group consisting of 40 companies out of the 150 which were willing to cooperate. A structured focus group interview protocol was developed. For practical reasons the author selected 20 employees from abroad and 20 employees from home based companies on a random basis. Two researchers conducted each of the 40 direct interviews, soliciting answers to open questions. The interviews in Germany and Switzerland were conducted via phone calls. The interviews in Austria were done face to face. The average length

<sup>4</sup> Type-2 information exchange

<sup>5</sup> Germany, Austria, Switzerland

<sup>6</sup> Management & Employees in total 1.500 persons

of the phone interviews was 1.4 hours - the domestic interviews lasted 2.2 hours on average. Figure-3 shows the distribution of the focus group which was interviewed. From the 40 people interviewed 2 were top managers, 6 came from middle management and 32 were normal employees. From the normal employees only white color workers with higher education were sent to the interviews.

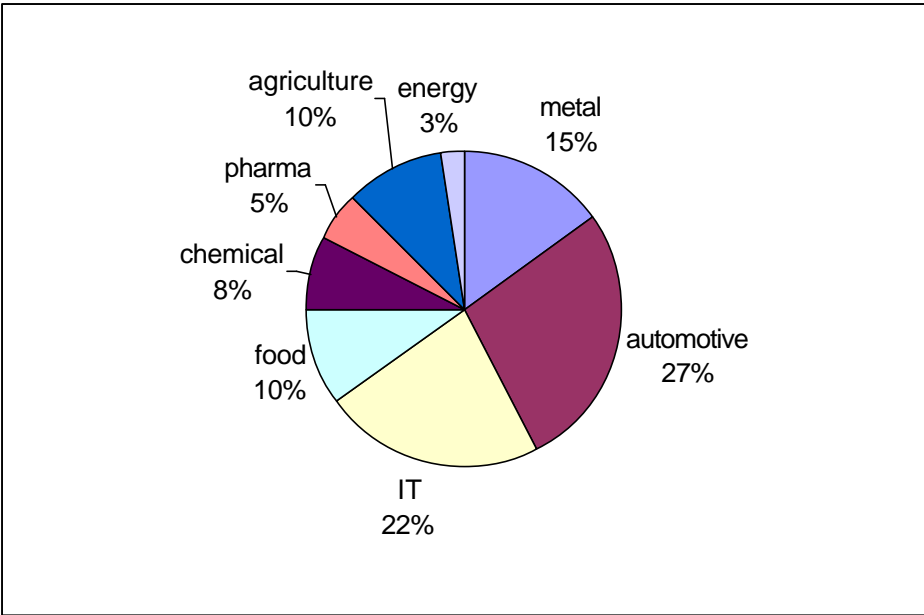


Figure-3: Distribution of interviewed focus group (40 people)

The motivation for the open interviews was twofold. Firstly, the author reassured himself that the electronic questionnaire had been understood by the respondents and that the author’s interpretation of their answer matched their intent. During the conversation the interview team reassured themselves through paraphrasing. Secondly, they tried to identify hints that would prove or disprove the business transaction theory. Finally the interview team tried to find motivators and hazards for the working performance of employees. In so doing, the author and the team performed a cluster analysis and mapped the answers to the Alderfer’s pyramid. The results reflect the current hopes and fears of the Central European culture in its world-wide context.

CODE	QUESTION	Score 0-12
	<b>What is your motivation to exchange information with colleagues in your company? Please distribute scores between 0 (low) – 12 (high)</b>	
Q1	Justification or refutation of personal perceptions	
Q2	More acknowledgement and better acceptance of my person and my ideas	
Q3	As part of a network I need to communicate (rumors, news, needs)	
Q4	I need it because of therapeutical reasons, will get sick otherwise	
Q5	I need it to learn from each other	
Q6	I need it because I have a desire to show off	
Q7	I am dependant on information and sometimes forced to use it	
Q8	To built up trust	
Q9	I am curios	
Q10	I want to reach my own goals	
Q11	I want that my group reaches its goals	

Figure-4: Questionnaire for the online survey

## Results of the Electronic Survey and its Interpretation

The results of the first electronic survey (Figure-5) show, that seven of the eleven statements were scored above the average level of six points. Figure-5 shows the means of the answers, and figure-6 shows the variances of the results. According to this plot (Figure-6) the author identified that there are exactly three statements with very low variance. Therefore, the author and his team believed it worthwhile to discuss these three statements thoroughly during the interview phase.

The author determined that “justification and refutation of perception”, “reaching own goals”, “learning from each other” and “building up trust” are the major motivations for information exchange. The latter had been previously discovered by Huener (Huener, 1998). However, this result does not yet justify the business transaction theory. The author and his team needed, therefore, to extract the meaning of the statements by conducting interviews, hoping to discover interpretations supporting the business transaction theory.

The author found that the statement “reaching own goals” needed deeper discussion, especially as it relates to the business transaction theory. Therefore, the interviewers devoted up to 50% of their time to the subject “reaching own goals”. By presenting Tuckers Prisoner’s Dilemma as an “icebreaker”, the discussion led immediately to the question of people’s goals and their values. The Prisoner’s Dilemma depicts two partners in crime confronted with the following choices: if one confesses and the other does not, the confessor goes free and the other goes to jail for a long time, if neither confesses, each goes to jail for a short time, if both confess, each goes to jail for an intermediate length of time. Each reasons that he is better off confessing because if the other confesses, he receives an intermediate sentence by confessing and a long sentence by not confessing, if the other does not confess, he goes free by confessing and receives a short sentence by not confessing. Since each reasons this way, each confesses, and so each is given an intermediate sentence, whereas if each had not confessed, each would have received a short sentence. In this strategic game trust plays a major role. People tend to evaluate games, goals and strategic positions. They intuitively evaluate the risks a certain decision might have.

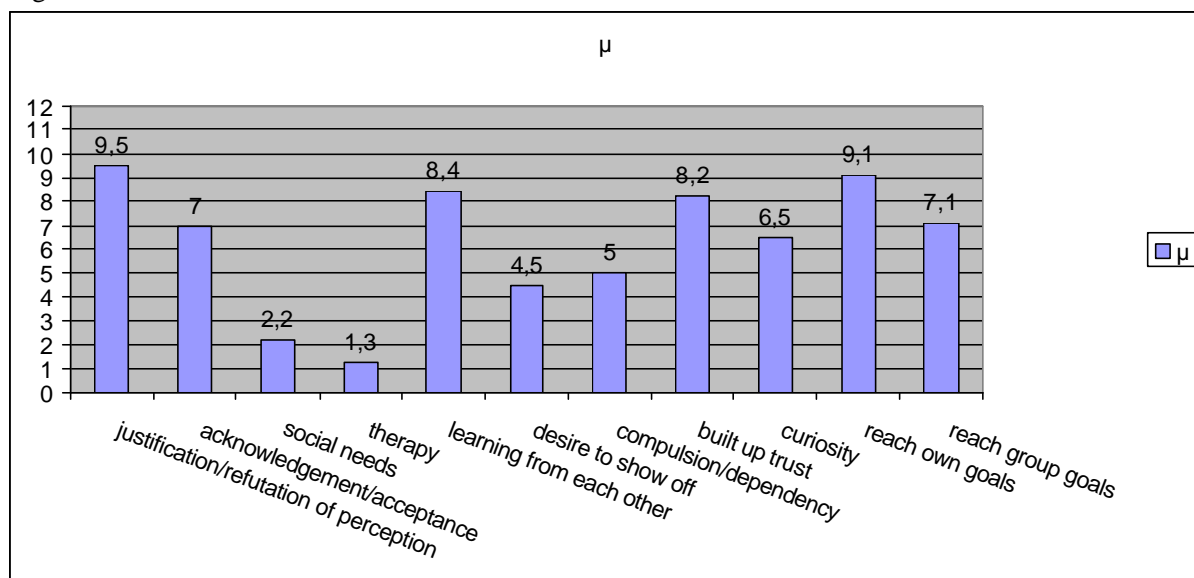


Figure-5: the mean of the answers

Two things turned out during the discussions. Firstly, if goals cannot be reached immediately then people tend to set up sub-goals. In the Prisoner’s Dilemma example immediately everybody of the interview partners asked if communication in between the partners in crime is possible - because it would be best for both of them not to confess. However, since they are not allowed to communicate there is no other way to find an optimal solution. No sub-goal will help to evaluate the optimal

solution. Hence, most of the people follow the sub-optimal solution explained above because they don't trust each other.

The sub-goal mechanism can also be observed when computer scientists are programming search functions for problem solving processes. All the sub-goals together form a solution chain which eventually end up with the original goal. By finding the optimal path in a graph a vertex gets a certain number (value) and the path which is most valuable (greatest value of all vertices summed together) will be selected as the optimal solution. Hence, the computer programs follow thought patterns produced in human brains.

In our practical daily life the process of finding solutions, so that goals or sub-goals can be reached seems to function in a similar way – the difference is that goals get a personal value in advance before a solution process starts. The value of a goal is determined by its individual importance. It turned out during the interviews that nobody could give an absolute digital number for the value of a personal goal or sub-goal. They are all evaluated in relation to each other – one goal is e.g. a bit more important than the other, the other one is less important but e.g. also necessary to survive. Considering all the answers the author concludes that the value of goals and their calculation is performed by our limbic system in a more analog than digital way. Indeed it is well known that firing of synapses in between neurons follow certain functions based on electrical and chemical procedures which can be modeled in many valued logics as e.g. in fuzzy logic or with artificial neural networks on a digital computer. Physically, if a potential is reached according to a certain function (e.g. sigmoid function) the synapse fires. There was common agreement among focus group participants that people's goals are linked with value. Thus, each goal has some personal predetermined value which might be dynamically modified by some cognitive functions. Since most of the individual goals can only be achieved through information sharing, it seems to be the summary<sup>7</sup> of all types of information and their value which constitutes the individual value of the goals. We don't know yet how the values for the individual sub-goals are calculated along this value chain until the goal node is reached. The author believes that the information trading process in between humans - with its asymmetric and individual evaluation of information - constitutes the cornerstone of this value chain. The author also suspects that values of goals and sub-goals are continuously recalculated relative to each other according to unexpected changes in the real world.

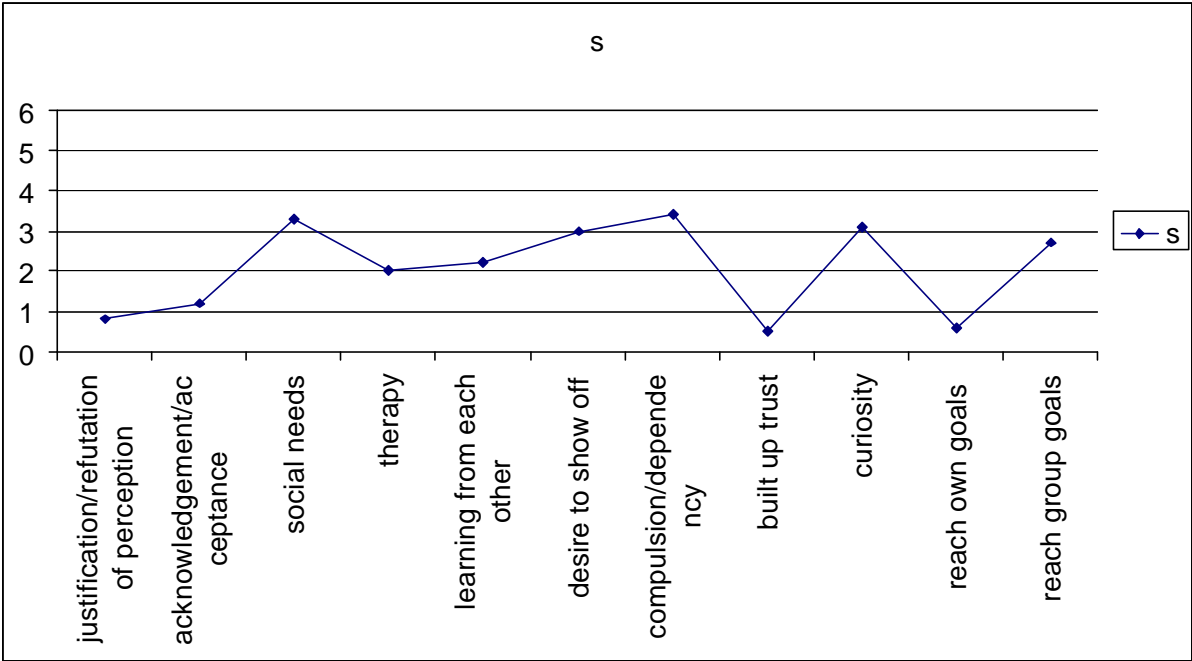


Figure-6: the variances of the answers

<sup>7</sup> Or some other mathematical function like Integral or weighted summary



The importance given by respondents to the statement “reaching own goals”, as well as the very low scoring variance, and most importantly the described aforementioned interpretation of the interview results gives us confidence that the business transaction theory is likely correct. Although the author believes that differing cultures would probably favor other factors<sup>8</sup> than “reaching own goals”, he is convinced that the business transaction theory is valid and independent from cultural differences. To his knowledge, setting up goals is a human property which is independent from culture. If we compare investigations about innovative online communities - as performed with Niketalk (Füller, 2006) – they first of all seem to reflect that information is exchanged for free. However, a deeper analysis shows that the main motivations to share information and in its last consequence knowledge in online communities are the desire to help, striving for recognition from others, and deriving enjoyment from interaction. These factors in turn create satisfaction which is of personal value to individuals. In this case the sole purpose of goal setting is fun.

Therefore, the author concludes that each and every personal goal has personal value. For reaching these goals humans need information which in turn is traded (exchanged) following the business transaction theory. In opposition to Davenport and Prusak (Davenport, 1998) who argue that besides reciprocity (exchange) knowledge is also shared to bolster the reputation of the sharer the author discovered that altruism can also be explained as goal setting. Striving for recognition reinforces satisfaction which in turn is of personal value for humans. Thus, there is always a reward during knowledge exchange - there is no “free lunch”. In the latter case people are rewarding themselves by providing information to others.

### **Hazards and Motivators for Knowledge Sharing derived from the Interviews**

The second part of the survey was devoted to the performance of employees. Some researchers see a connection between performance and knowledge sharing. Alternatively, Sveiby has shown that there is absolutely no empirical evidence that more knowledge sharing through information exchange is creating more value than competition. During the interviews the author identified motivators as well as moral hazards which hamper information exchange and thus knowledge sharing within a society. The author and his team performed a cluster analysis from interview results and mapped the answers to the Alderfer’s pyramid. The pyramid is actually following the pyramid developed by Abraham Maslow (Maslow, 1954). Maslow defined classes of needs – each class dependant on the other – therefore, the pyramid. Only if all the needs of one class are fulfilled then the needs of the next class can be reached. Alderfer (Alderfer, 1972) thinks that the needs in the Maslow pyramid are overlapping. Therefore, he reduced the Maslow pyramid to 3 classes of needs (growth needs, relatedness needs, existence needs). He called his theory the ERG theory which was first published as psychological review in 1969 and later on in a book. In contrast to Maslow the ERG theory says that it is not necessary to fulfill all the needs of one class before the needs of the next class can be reached. This reduction and the mapping from Maslow to Alderfer are shown in figure-7.

The cluster analysis was performed by matching key-words and by semantic interpretation of the answers. Note that the author and his team didn’t ask specific closed questions as in the online survey, but they posed open questions such as “how does your company support the knowledge sharing process?” or “what are your desires and fears concerning job security?” or “what do you think about the rewarding system in your company and in general?” Such indirect questions generated small stories. From these micro stories common opinions were extracted. Since we compared stories it was not possible to use any statistical model such as linear multi-variation regression or correlation coefficient formulas. Instead, the author and his team used the Delphi method (Rowe, 1999) for clustering and mapping. This method was developed by the RAND corporation in the fifties. The author presented the written and tape recorded interviews to 3 sociologists. They mapped the micro stories independent from each other to the Alderfer’s pyramid. Subsequently, they discussed all individual results at the round table so that a common agreement could be achieved. Interestingly that only 5% of the individual mappings needed deeper discussion.

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<sup>8</sup> In Japan e.g. the factor „reach group goals“ is probably more important than „reach own goals“

Like Hartmann (Hartmann, 1964), the author presents a summary of existence needs, biosocial needs, cognitive needs, and psychosocial needs. For statistical relevance, he only presents those extracted opinions which are supported by more than 70% (28 people) of focus group members. Compared to the online survey, the sample is rather small, and it represents a limited domain<sup>9</sup>. The author had also no influence on the selection of interview partners inside the companies. The author thinks that personal societal status and the organizational climate (Boulden, 1992) might have an influence on the result of the study – only well educated white color workers and management were interviewed (20% management). Right after the interview exploitation the author presented the results to the interview partners to get feedback and agreement of his interpretation.

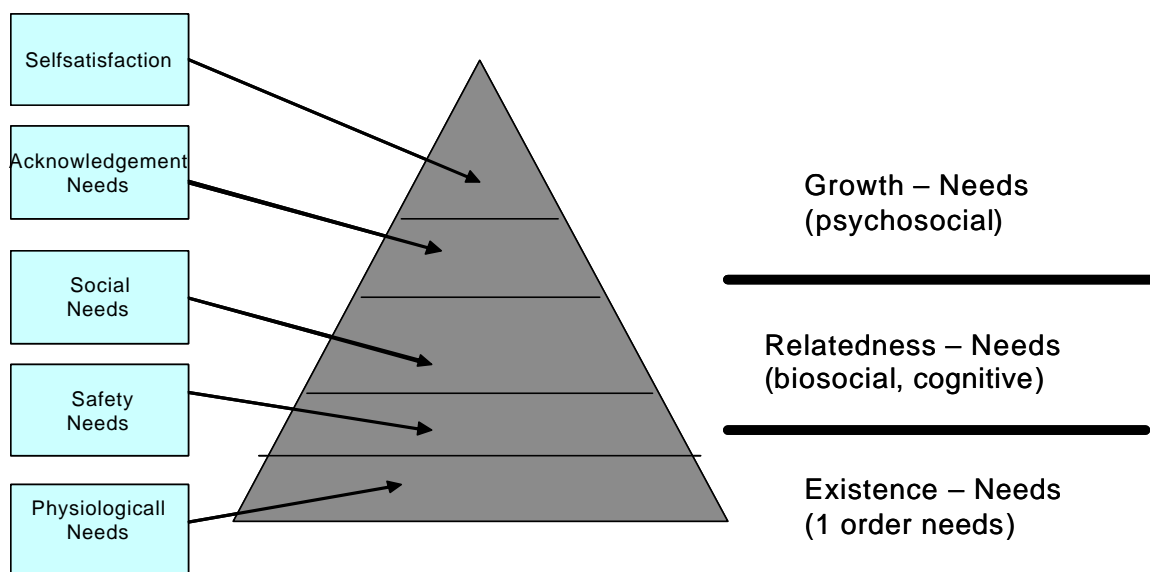


Figure-7: Map from Maslow to Alderfer

The following common existence needs and motivators were identified:

- Participation affecting company results (success) is important:

Success should be measured on individual and collective performance. Part of a salary should be dependent on the personal ability to cooperate. People felt that the European educational system is not successful in teaching cooperative working techniques.

- Salary variance between CEOs and workers is perceived as too great:

Participants cite discomfort about the salary difference between CEOs and blue color workers<sup>10</sup>. Significant differences split the society and subsequently will not promote knowledge sharing between classes. This will in turn hamper economic growth.

<sup>9</sup> 40 employees

<sup>10</sup> This is true also for white and gold colour workers

- Fringe benefits are important:

Both management and the “working class” need company binding programs. The longevity of employment directly affects the involvement in corporate knowledge processes.

The author concludes that there is a substantial moral hazard for knowledge sharing. It is the salary and, thereof derived, as well the power distance - as explained by Hofstede (Hofstede, 2005) - which hampers knowledge exchange between humans. Moreover, there is a need for improved metrics to evaluate collective performance indicators. It was felt that Central European schools don't care too much about teaching cooperation in class.

The following common biosocial needs and motivators were identified:

- Dependable information is important:

Honest, correct, and timely information is needed. Adherence to this principle prevents companies from being the object of rumors while supporting working morale in teams.

- Promotion of wellness is important:

Wellness seems to be one of the major challenges for humans. Support for a variety of sport-related activities and healthy meals in addition to the corresponding education of such puts a company in pole position.

- Integration of elderly people is important:

In contrast to e.g. China, Europe does not appreciate the accumulated know-how of elderly people. This is most probably due to the existing reward system in Europe, in which older people earn more money than younger, and very soon their salary, when value-compared, is too expensive.

The latter point needs an especially intensive consideration so that knowledge flow between generations can work properly, if not, reinventing the wheel is unavoidable. People at senior level should be much more involved into current working processes. Another very important point is dependability of information. Careless information policy could damage complete companies

The following common cognitive needs and motivators were identified:

- More knowledge sharing and incentives are desired:

Too much competition does not promote knowledge sharing. Respondents felt that companies don't exploit all the available theoretical incentive methods. Many felt that knowledge sharing is not always believed to be positive.

- Better empowerment is beneficial:

Empowerment was seen as the cornerstone for innovation. In this respect, people felt that learning is important. However, management in Europe has yet to develop the right attitude toward error acceptance. Making errors is still punished in some industries.

- Working morale and a productive atmosphere must be maintained:

Respondents suggested that gaining e.g. 1 Euro through innovation in the production cycle could easily turn to loss due to inequitable foreign exchange rates<sup>11</sup>. Innovation does not pay off in such a scenario. Moreover, high taxes on labor and low taxes on assets erode working moral.

These cognitive needs, then, reflect the typical “winner takes all” principle of the European society. Likewise, they reflect the problems of high labor costs. Working morale is hampered and knowledge sharing efforts are diminished by macro economic factors and political hazards. Concerning incentive systems for knowledge sharing, many think that there is enough theory available but the companies are investing too less in practical implementations.

Due to statistical relevance<sup>12</sup>, it was not possible to find one single common motivator or morale hazard for the psychosocial needs. Therefore, we do not mention any individual statements concerning that issue.

To summarize, the derived morale hazards for knowledge sharing provide us with hints for further research in micro-economy as well as in macro-economy. Some of these issues can only be solved within a global political context by introducing a common global currency or by introducing common global rules for corporate governance or by modifying the European school system. The author is very skeptical that these goals can be achieved immediately since there are no strong lobbies existing which would support such ideas. Fear and speculation are still major drivers of today’s businesses.

## **Conclusion**

The comprehensive online survey, combined with personal interviews, supports the business transaction theory. According to this theory, knowledge sharing is based on a trading process. During this process, which can be regarded as information exchange process, people evaluate information on individual basis in an asymmetric way. Modern portfolio theory can help to understand the motivation behind this process. Thus, trust, attitude, leadership or group support are not the sole drivers of successful knowledge-sharing cultures.

The author is aware that the online survey results might vary greatly from culture to culture. Group goals might indeed be scored higher than individual goals in cultures separate from Central Europe. However, it should be noted that goals are always linked with individual value, even those of online communities engaging in fun activities. Moreover, setting goals is a cultural independent human property. Since most of the goals can only be achieved through information sharing, it is the value of information which plays a mayor role in the value chain. It is this piece of extracted common agreement which makes the business transaction theory trustworthy.

Knowledge sharing based on information exchange and working morale is influenced by several motivators and morale hazards which were detected during the interview phase and which can be regarded as windfall profit of the study. However, the presented results, derived from the interviews in the second part of this study are cultural dependent. The results represent hopes and fears of the Central European society.

The author concludes that the quality of provided information content is dependent from the willingness to cooperate, which in turn is dependent from the value of information chunks, which in turn are rated on individual basis dependent on personal goals. The whole process works only properly in a trustful atmosphere. Thus, the quality of information provided in social ware and IT systems is also dependent thereof. Therefore, our study also explains the masses of junk information which is currently flooding databases and computers. Information content development and developers of incentive systems should consider cultural peculiarities and individual demands to a much greater

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<sup>11</sup> Product export

<sup>12</sup> The cluster analysis extracts only answers supported by more than 70% of the random sample.

extend than it is done today – and they should regard knowledge sharing as a business transaction process.

## **Acknowledgement**

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## **References**

1. Alderfer, C.P. (1972), *Existence, Relatedness, and Growth, Human Needs in Organizational Settings*, Free Press.
2. Barachini, F. (2003), "Frontiers for the Codification of Knowledge", in *Journal of Information & Knowledge Management*, Vol.001, 1-5.
3. Barachini, F.(2002), *Macht in der Wissens- und Kompetenzgesellschaft*, Shaker Verlag GmbH, ISBN 3-8322-0656-6.
4. Bonifacio, M., Bouquet, P. (2002), "Knowledge nodes: the building blocks of a distributed approach to knowledge management", in *proceedings of I-Know, Journal of Universal Computer Science*.
5. Bontis, N., Crossan, M., Hulland, J. (2002), "Managing an Organizational Learning System by Aligning Stocks and Flows", in *Journal of Management Studies*, 39, 4, pp. 437-469.
6. Boulden, G.P. (1992), "Productivity linked to Profitability: The Basis for Improved Work Life", *International Productivity Congress*, Tokyo: Asian Productivity Organizations.
7. Davenport, TH., Prusak, L. (1998), *Working Knowledge: How Organisations Manage What They Know*, Harward Business School Press.
8. Edvinsson, L., Malone, M. (1997), *Intellectual Capital*, Harper Business, New York.
9. Füller, J., Jaweck, G., Mühlbacher, H. (2006), "Equipment-Related Knowledge Creation in Innovative Online Basketball Communities", in *The Future of Knowledge Management*, Palgrave Macmillan, pp. 161-183.
10. Hartmann, N. (1964), *Der Aufbau der realen Welt, Grundriss der allgemeinen Kategorienlehre*, Berlin.
11. Huener, L., von Krogh, G., Roos, J. (1998), "Knowledge and Concept of Trust", in Krogh, Roos, Kleine (ed.) *Knowing in firms, Understanding, Managing and Measuring Knowledge*, Sage London.
12. Hofstede, G., Hofstede, G.J. (2005), *Cultures and Organizations Software of the Mind*, McGraw Hill.
13. Hofstede, G. (2001), *Culture's Consequences: Comparing Values, Behaviors, Institutions, and Organizations Across Nations*, 2nd edition, Sage, London.

14. Joia, L.A. (1999), "A new model for workers retraining in Brazil", *Journal of Workspace Learning*, 11(4), pp. 140-145.
15. Nonaka, I., Takeuchi H. (1995), *The knowledge creating company*, New York: Oxford University Press.
16. Rowe, G., Wright, G. (1999), "The Delphi technique as a forecasting tool: issues and analysis", in *International Journal of Forecasting*, Vol. 15(4), pp. 353-375, Elsevier.
17. Sharpe, F.W., Alexander, G.J., Bailey, J.V. (1995), *Investments*, Prentice Hall.
18. Sveiby, K.E. (1997), *The New Organizational Wealth: Managing and Measuring Knowledge-Based Assets*, Berret-Koehler, New York.
19. Sveiby, K.E., Simons, R. (2002), "Collaborative Climate and Effectiveness of Knowledge Work – an Empirical Study", in *Journal of Knowledge Management*, Vol 6, No 5.