Miia Äkkinen

CONCEPTUAL FOUNDATIONS OF ONLINE COMMUNITIES

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CONTENTS

Figures

Tables

Abstract

The purpose of this working paper is to provide conceptual foundations for the reader interested in online communities. A useful summary of research conducted on online communities is provided in this paper. Beside several classifications for online communities, we will also pay attention to the questions why consumers belong to online communities, and what are the reasons and motives for consumers to join these communities. The different perspectives for the reasons and motives complement each other. We have proposed a value-interest framework where several theories are combined into one, integrated model. The value-interest framework looks the motives from several perspectives simultaneously. It must be remembered, however, that beside this integrated model, it is fruitful to look at the motives and reasons from the different perspectives separately, too.

1 Introduction

Virtual communities – or online communities as they are often called nowadays - have become a very popular phenomenon in our life. Discussion groups, bulletin board systems and all the other possibilities of online communities allow people to communicate with each other on the Internet. I guess one of the reasons why virtual communities have become so popular today is that the communities bring some collectivity to this world where people are isolated, far away from each other and always in a hurry.

The information technology has developed enormously during the past years, and thus the physical location of people and the distance between people are not any issues anymore. Internet makes possible to work at home, but people still seem to need collectivity which can be found in communities, whether they are online or offline. When people are getting more and more far away from each other, virtual communities can provide information, help and support. Already in 1993, when the use of the Internet was still at its infancy compared to the situation today, Howard Rheingold almost praised the power of virtual communities and the support they give for an individual. He told about an accident that happened to his child, and how he received help and support more quickly from the people in the discussion group than by relying on to public health care. Also here in Finland where the population is much

smaller, the communities that provide peer-to-peer support have become very popular. For example, the knowledge how to take care of babies does not come across from one generation to another in the same way than previously, because families live far away from each other, and young mothers are often alone with their troubles and concerns. I personally found myself using an email-based discussion group when our first child had just born, and I needed information and support from people in a similar situation. I joined a discussion group focused on baby-care and breastfeeding and suddenly I had hundreds of mothers in my network who gave me advice and told their experiences in this area.

When the Internet provides enormous amounts of information, a virtual community can serve also as a tool to filter this information. If you, for example, are searching for the hotel on the Internet, the experiences and recommendations of other people are valuable and can make the selection easier. Especially if you get a recommendation from a community member with whom you share similar values, the value of recommendation is even higher compared to a recommendation given by a stranger. Also researchers use communities for exchanging information. The researchers have founded online communities where the specialists of certain field discuss from the topic. The people interested in the environment protection will find valuable information on the discussion groups focused on this theme. The members in such community will perhaps see the world "through green eye-glasses", and the information is filtered through similar values. The online communities are also an excellent tool to disseminate information very quickly. For example in December 2004 when there was a large tsunami disaster in Thailand area, people quickly started disseminating information and searching their friends or families in discussion groups, weblogs and other online communities.

People suffer from hurry all the time and their calendars are full booked. "It sounds nice but I can't understand how on earth people have time for such discussion groups" – this is a very common comment when I am having discussions on online communities with other people. At the same time the members of online communities say that the communities give so much to them that they just have to participate the discussion or at least read the messages others have written. This is an interesting paradox, in today's world of eternal hurry, discussion

groups are an extra burden for somebody, but at the same time, an extra resource for somebody else.

In the end of 1990's there were high expectations on the business value of virtual communities. In 1998 Timmers classified the business models in e-business and claimed that virtual communities would be "the" business model of the e-business. In 1997 Hagel and Armstrong forecasted great profits for companies that would be in this business – they believed in the "big bang" effect, which means that after collecting user profiles for about five years, the companies would achieve enormous success.

Time has gone, but almost no profits have been generated. Companies have spent enormous sums on brand building of the virtual communities but these haven't been effective investments. There are only a few companies that have gained success concentrating on the "standalone" virtual community business, for example Yahoo (http://www.yahoo.com) that in 2004 was hosting more than 800.000 virtual communities and that is generating revenues from advertising. The reason for the lack of success seems obvious: revenues are just not sufficient without a big partner in the background to cover marketing expenses (Franz and Wolkinger, 2003). There has been discussion if the companies should focus on more indirect effects of the virtual communities instead of trying to generate revenues on the standalone basis.

Timmers mentioned already in 1998 that virtual communities are becoming an additional function to enhance the attractiveness and opportunities for new services of several of the other business models (e.g. e-malls, collaborative platforms, third-party marketplaces). Nowadays most e-shops compete on price (Elliot 2002), perhaps virtual communities could provide companies new competitive weapons. Zott, Amit and Donlevy (2000) have found out some means by which their research sample created stickiness, i.e. the high attractivity of the web site. Online communities and discussion forums could thus attract more visitors to the company's web site. Zott et al. (2000) claimed that companies should reward customers for loyalty, personalize the product or service offering, create virtual communities and develop ways of building trust. Amit and Zott (2001) have further noted that virtual communities

could be used as complementary service to provide more value for the customers and the company.

Several companies nowadays have discussion forums or other online communities on their web sites. Information technology, however, only provides technological infrastructures in which social activity may take place (Hagel & Armstrong, 1997). According to Butler (2001) the communities must do more than simply provide facilities for communication, they must also be sites of social structures that support ongoing activity. The availability of a technical infrastructure does not guarantee that individuals will be willing to join and participate in online social structures.

The purpose of my dissertation thesis is to find out ways how companies can use virtual communities in their business so that the communities would create value both for the company and the consumer. The purpose of this working paper is to deepen the knowledge on virtual communities and to help the author in proposing the appropriate research questions.

In this working paper the online communities are first defined, after which some classifications for online communities and their members will be presented. The main focus in this working paper is to look at the reasons and motives why people join and participate online communities. The working paper concludes with the summary of all discussed themes.

2 Definitions of virtual communities

A review of definitions (Lee, Vogel & Limayem, 2003) found that the most commonly cited definitions for virtual communities are the ones by Rheingold (1993), followed by Hagel and Armstrong (1997), and Jones and Rafaeli (2000).

Author(s)	Definition
Rheingold (1993)	Social aggregations that emerge from the Net when enough people carry on public discussions long enough, with sufficient human feelings, to form webs of personal relationships in cyberspace.
Hagel and Armstrong (1997)	Are computer-mediated spaces where there is a potential for an integration of content and communication with an emphasis on member-generated content.
Jones and Rafaeli (2000)	Are symbolically delineated computer-mediated spaces… allow groups of individuals to attend and contribute to similar set of computer-mediated interpersonal interactions.

Table 1: The most commonly cited definitions of virtual communities (Lee, Vogel & Limayem 2003)

Based on the similarities on these definitions, characteristics of a virtual community can be identified. A virtual community exists in cyberspace, having its activities supported by computer-based IT. It focuses on communications and interactions driven by participants and emphasizes on the relationship among members in a virtual community and the role of IT. (Yap & Bock, 2005)

2.1 Elements of virtual communities

Hagel and Armstrong (1997) have first defined the elements of the virtual community business model. First of all, virtual communities are identified by a specific focus (geographical area, topic, vertical industry, functional expertise etc.). In virtual communities a published content is integrated with communication. Thus understanding of the content can be clarified and evaluated by communicating with its publisher and with other members. In addition to published content, virtual communities provide environments for the generation and dissemination of member-generated content. Hagel and Armstrong (1997) see that virtual communities will seek to aggregate the broadest range of high-quality resources possible,

including competing publishers and vendors. And as last element, they see that virtual communities will increasingly be commercially orientated.

Typaldos (2000) - based on her experiences in academic and business life - has defined virtual communities to consist of 12 elements. The following listing is similar to Typaldos' work. The 12 principles function as a hierarchy. The chief principle, purpose, is supported by the other principles.

Principle	**Explanation**
Purpose	Community exists because the members share a common purpose which can only be accomplished jointly.
Identity	Members can identify each other and build relationships.
Reputation	Members build a reputation based on the expressed opinions of others.
Governance	The facilitators and members of the community assign management duties to each other, allowing the community to grow.
Communication	Members must be able to interact with each other.
Groups	Community members group themselves according to specific interests or tasks.
Environment	A synergistic environment enables community members to achieve their purpose.
Boundaries	The community knows why it exists and what or who is outside and outside.
Trust	Building trust between members and with community facilitators increases group efficiency and enables conflict resolution.
Exchange	The community recognizes forms of exchange values, such as knowledge, experience, support, barter or money.
Expression	The community itself has a "soul" or "personality"; members are aware of what other community members are doing.
History	The community must keep track of past events and must react and change in response to it.

Table 2: Elements of virtual communities
(www.mongoosetech.com/realcommunities/12prin.html on March 18th, 2004)

2.2 Virtual communities, settlements and networks

Blanchard and Markus (2004) highlight the difference between virtual settlements and virtual communities. According to Jones (1997), virtual settlements can be said to exist when objective measures of computer-mediated interaction – such as the number of messages, the proportion of public communications, the proportion of active members, and continuity of participation – exceed some threshold levels. However, only those virtual settlements in

which the members have developed affective bonds qualify as virtual communities. Jones concludes that not all virtual settlements are virtual communities, and what distinguishes between the two is the presence of affective bonds. Blanchard and Markus (2004) ask if these virtual settlements should try to develop into virtual communities. The answer is "not necessarily". Some organizations, like Amazon.com's online book reviews, meet their business objectives perfectly well.

One sometimes gets the impression that the requirements for virtual community development are few: build a virtual meeting place and people will come. The research, however, shows that there's more to it than that. Building a virtual meeting place may produce a virtual settlement. But a virtual community is a virtual settlement in which a sense of virtual community co-exists with a set of community-like behaviours and processes. It may be difficult or impossible to create true virtual communities under the aegis of a commercial venture. Further, it may possible achieve adequate commercial rewards without creating a virtual community – a virtual settlement may suffice. (Blanchard & Markus, 2004).

Wasko and Faraj (2005) have studied why individuals help strangers in electronic networks of practices. In their earlier papers the authors used the concept "electronic communities of practice"[1] but now they use the concept "electronic network of practice" when referring to the same thing. According to the authors, electronic network refers to an open network of people that are strangers for each other while electronic community refers to a more closed community of people that are familiar to each other.

In this paper the term "virtual community" includes both *virtual settlements* and *virtual networks*.

[1] Community of practice is one type of online communities. See chapter 3.1 for community classifications.

3 Classifications of virtual communities

3.1 Content-based classifications

Nowadays perhaps the most comprehensive classification related to the content of the virtual community is based on the study of Stanoevska-Slabeva and Schmid (2001). They have divided the communities in four groups: discussion, task / goal oriented, virtual world and hybrid solutions.

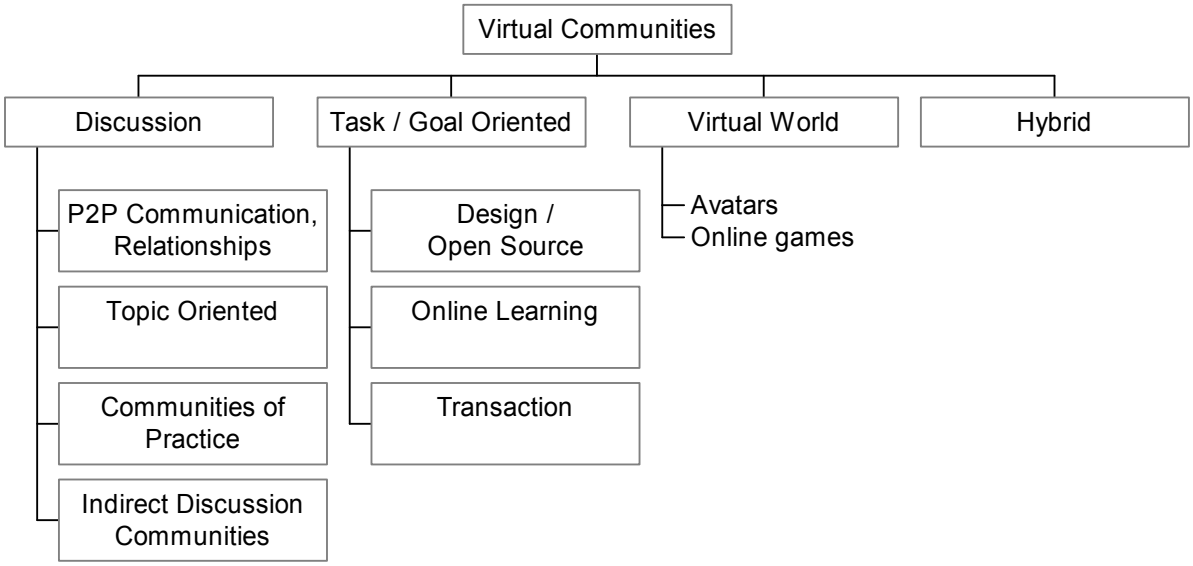

Figure 1: Classification of virtual communities by Stanoevska-Slabeva & Schmid (2001)

The first group consists of discussion communities that are dedicated to the exchange of information with reference to a defined topic. Emphasis is on content generation and exchange is related to a clearly defined topic. Four subcommunities are included in discussion communities: 1) discussion communities with direct person-to-person communication (e.g. relationship communities and social and help alliances), 2) topic-oriented communities which are related to certain defined topic (for example sports communities, product communities, ecological communities, etc.), 3) communities of practice, which emerge in organizations around certain topic and know-how, and 4) indirect discussion communities with indirect communication between members (for example Amazon.com review community).

The second group is composed of task- and goal-oriented communities that refer to communities striving to achieve a common goal by way of cooperation. The following three subtypes of task- and goal-oriented communities can be defined: 1) transaction communities, where the emphasis is the performance of market transactions, and which arise around electronic commerce platforms, 2) design communities (for example open source communities where the basic aim is the common design and development of a product), and 3) online learning communities.

Virtual worlds, the third group, are online communities arising around virtual worlds and games. The virtual worlds can provide a mapping of a real setting or can provide fantasy worlds. One special type of virtual worlds are online games. Information about participants are often represented through avatars.

The last group, hybrid communities, can contain several types of communities. An example of a hybrid community could be an online store with a three-dimensional interface simulating the store rooms and offering virtual sales persons as sales assistant. The user can take the role of a windows shopper, of a buyer or of a participant in organized games or product design teams. He can get information about products in the electronic catalogue, in chats, product forums and through the recommendation collection. He could also visit the chat café or some of the other amusement opportunities.

Hagel and Armstrong (1997) have divided communities in two main types: consumer-focused communities and business-to-business communities.

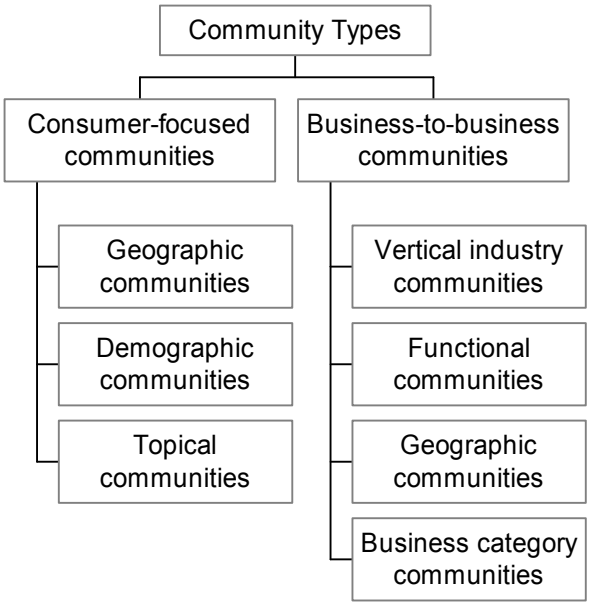

Figure 2: Community types by Hagel & Armstrong (1997)

In a consumer environment, community development may take place in one of three directions: geographic, demographic, or topical. Geographic communities are formed around a physical location in which all the community's participants have a common interest. Demographic communities focus on gender, life stage, or ethic origin. Examples include communities for teens, single parents, empty-nesters, and seniors. Topical communities center on topics of interest (excluding geography, gender, or life stage) and include communities focused on hobbies and pastimes such as painting, music, or gardening and on issues of interest such as politics or spiritual beliefs. A topical community such as travel could develop a subcommunity focused on the travel needs of parents with young children or subcommunities focused on certain destinations such as Venice.

Business-to-business communities are divided in four groups: vertical industry communities, functional communities, geographic communities, and business category communities. An example of vertical industry communities is a community of software developers, where developers are forming user groups. Functional communities serve the needs of users representing a specific business function, such as marketing or purchasing. Geographic communities in business-to-business environment may be an offshoot of local consumer communities, in which businesses catering to the needs of the consumers in a specific location

feel a need to start communicating with each other. The business category community would be geared to meet the needs of certain types of companies, such as small businesses or franchises. Subcommunities evolve also in business-to-business environment: the organizer of a vertical industry community such as apparel could over time see the community branch out into functional or business category communities.

Beside business-to-consumer and business-to-business communities, Lechner and Hummel (2002) include also consumer-to-consumer communities in their classification. There are five types of communities in their classification: 1) games, 2) interest, 3) business-to-business, 4) business-to-consumer, and 5) consumer-to-consumer.

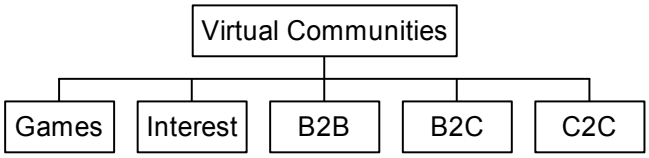

Figure 3: Classification of virtual communities by Lechner & Hummel (2002)

C.E. Porter (2004) has developed a typology that composes of several classifications. The proposed typology (see Figure 4) of virtual communities includes categories in two levels, establishment and relationship orientation.

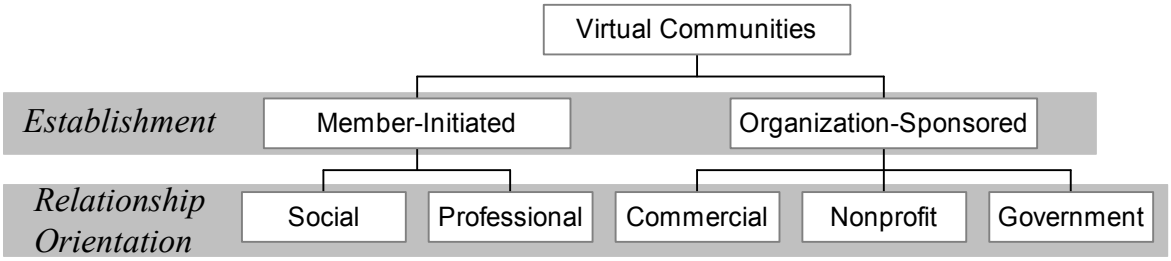

Figure 4: A typology of virtual communities by Porter (2004)

The two first-level categories are member-initiated and organization-sponsored. Member-initiated communities are those where the community was established by, and remains managed by, members. Organization-sponsored communities are communities that are sponsored by either commercial or non-commercial (for example government, non-profit) organizations.

At the second level of the typology, virtual communities are categorized based on the general relationship orientation of the community. Relationship orientation refers to the type of relationship fostered among members of the community. Member-initiated communities foster either social or professional relationships among members. Organization-sponsored communities foster relationships both among members (for example customers and employees) and between individual members and the sponsoring organization. (Porter, 2004).

According to Porter (2004) the literature suggests that five attributes could be used to characterize virtual communities: (1) purpose, (2) place, (3) platform, (4) population interaction structure, and (5) profit model.

Attribute	**Explanation**
Purpose - content of interaction	The subject that forms the basis of interaction in a virtual community, e.g. golfing or living with diabetes
Place - extent of technology mediation of interaction	• Virtual (exists only in virtual space) • Hybrid (exists in both physical and virtual space)
Platform - design of interaction	• Synchronous (e.g. chat) • Asynchronous (e.g. email) • Hybrid
Population interaction structure - pattern of interaction	• Virtual communities as computer-supported social networks • Virtual communities as small-groups or networks • Virtual communities as virtual publics
Profit model - return on interaction	The profit model attribute focuses on whether a virtual community creates tangible economic value. • Revenue-generating (host, facilitator, owner) - community enablers that host communities (e.g. Yahoo) - trading/sharing communities that facilitate the exchange of products or services among community members and often earn revenue via transaction fees (e.g. eBay) - communities as a website feature of corporations; communities are used for revenue-generating transactions • Non-revenue generating

Figure 5: Five Ps of Virtual Communities by Porter (2004)

The relationship orientations in Figure 4 can be explained by these five attributes. For example social or commercial online communities can be described by five Ps of Porter (2004).

3.2 Revenue-based classifications

The following classifications are focused not only on the content of the community but the profitability of them and the classifications are related more to the business model perspective.

Plant (2003) has three axes in his classification: 1) the regulation of the community (regulated – not regulated), 2) is the community a for-profit community or a not-for-profit community, and 3) the openness of the community (open – closed). He finds examples from each combination, e.g. education communities belong to the cell not-for-profit / open / regulated.

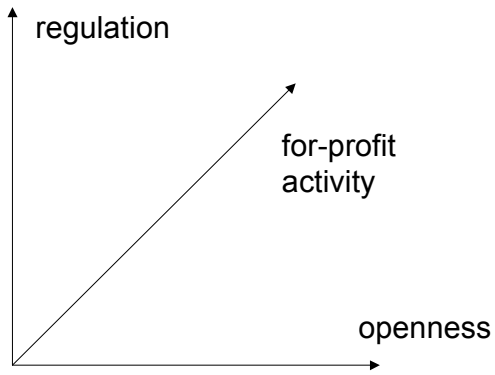

Figure 6: Classification of virtual communities by Plant (2003)

Hagel and Armstrong (1997) have divided the types of revenues for community organizers in three types: subscription fees, usage fees and member fees. Subscription fees consist of a fixed monthly charge for participation in the community. Usage fees are charges based on the number of hours of usage or the number of pages accessed or some combination of the two. Member fees are divided in two sub-groups: 1) content delivery fees that are charges for downloading specific information, such as a company investment report or a magazine article, and 2) service fees that are charges for specialized services, such as a notification service when specified vendor products are offered for sale at predetermined price.

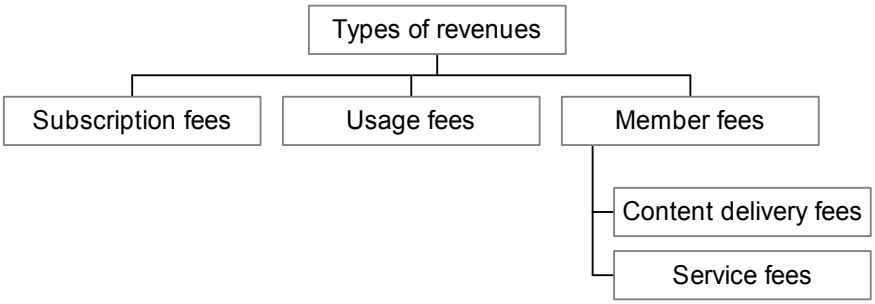

Figure 7: Types of revenues by Hagel and Armstrong (1997)

Hanson (2000) divides the communities according to the basis of revenue generation to provider-based revenues and user-based revenues. Provider-based revenues include revenues from content and sponsorship, retail alliances, exclusive deal or banner advertising. User-based revenues include product and sales revenues, subscription fees and pay-per-view transaction fees.

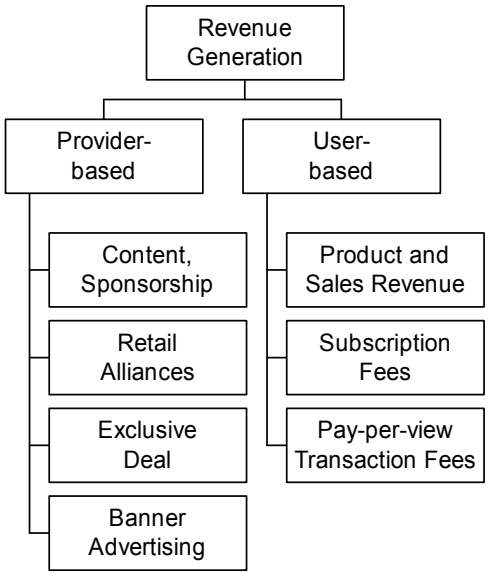

Figure 8: Classification of virtual communities by Hanson (2000)

Franz and Wolkinger (2003) have also classified models for revenue generating in virtual communities. Their contribution is in dividing the virtual communities in two main groups according to the revenue generation model which can be standalone or add-on. As mentioned in the beginning of this paper, there has lately been discussion if the companies should concentrate on more indirect effects of the virtual communities instead of trying to generate

revenues on the standalone basis. The standalone revenues include advertising, e-commerce, subscriptions and other sources. The add-on part includes indirect revenues from customer integration, market research and product development.

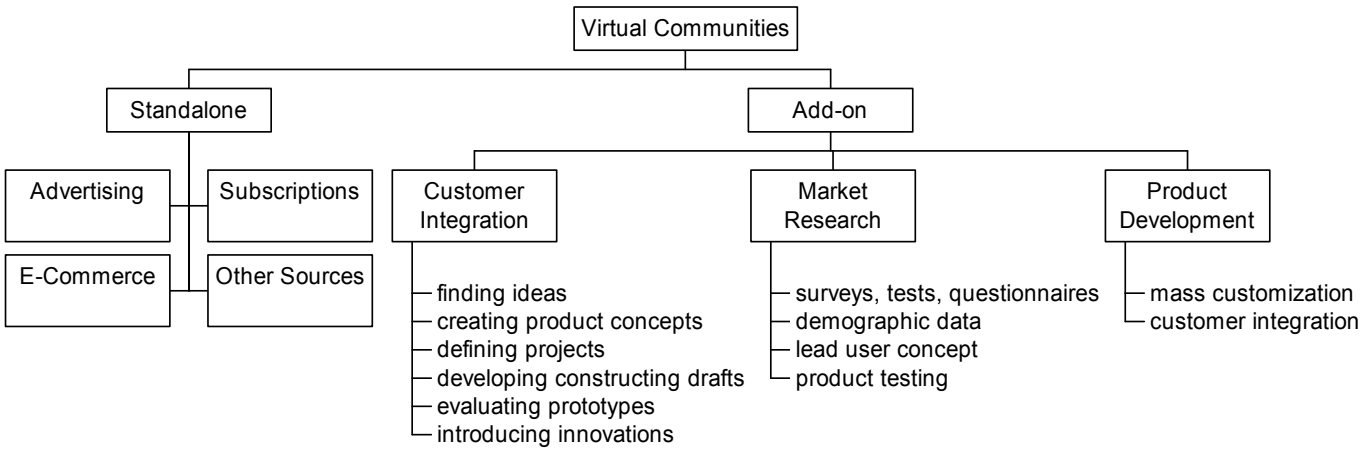

Figure 9: Classification of virtual communities by Franz & Wolkinger (2003)

The following elements that are often mentioned in the literature can also be added to the add-on element that is providing indirect revenues for the company:

- improve products
- innovation process
- discover new streams of revenue
- customer loyalty
- consumer stickiness
- customer feedback
- consumer created content
- customer information
- possibility to influence the action of users

Cothrel (2000) has presented the following objectives for virtual communities. The objectives are to build stronger relationship, increase efficiency and new innovations, acquire new customer and direct revenues. These objectives of Cothrel can be combined with the previous model. The first three modules cover the add-on part in the previous model and the "direct revenues" module is similar to "standalone" element in the previous model.

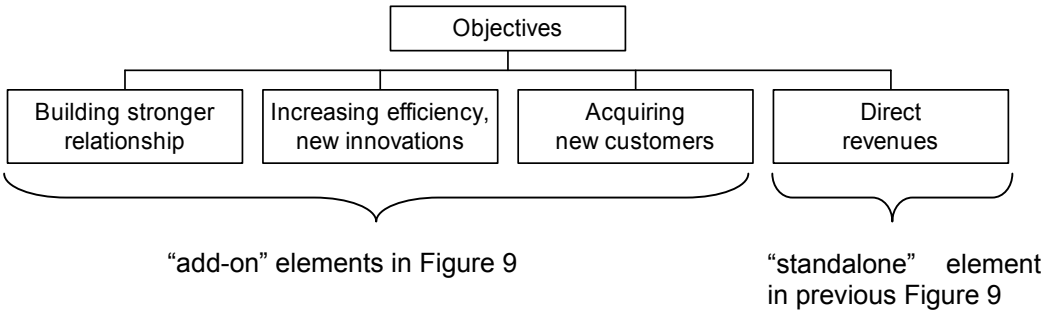

Figure 10: Objectives of virtual communities by Cothrel (2000)

Holmström (2000) has divided the purposes of online communities in three areas: interactive purposes, indirect strategic purposes, and direct commercial purposes. These concepts could perhaps be integrated by looking on the add-on element in the above model and examine it by purposes. Cothrel (2000) has examined the communities according to their members.

	Business-to-business	Business-to-consumer	Employee-to-employee
Members	Customer Supplier Distributor	Consumer	Employees
Objectives	Stronger relationships Insight Efficiency Innovation Revenues	Stronger relationships Insight Low customer acquisition costs Revenues	Stronger relationships Insight Efficiency Innovation Revenues

Table 3: Classification of communities according to their members by Cothrel 2000

3.3 Classifications of members

Because different type of members may have different kind of motivations and reasons to join online communities, the member types are first classified. Members are examined here also in relation to trust.

Members can be classified in two levels. The first level focuses on the actual membership of the community (member vs. non-member), and on the second level the members are specified more accurately on different member types.

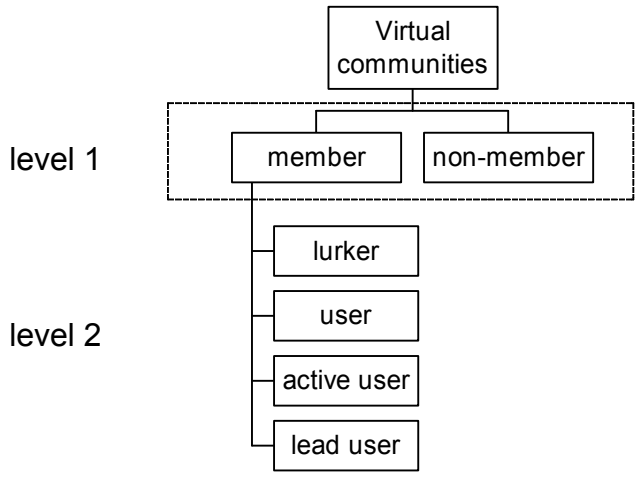

Figure 11: Classification of members in virtual communities

Member vs. non-member. In the first level the interest is in the membership of the community, the consumer is a member of the virtual community or is not. According to Brown et al. (2001), community members in retailer sites account for 1/3 of all users but generate 2/3 of all online sales. It is believed that virtual communities lead to higher customer purchase and retention rates and increased visit frequency. The authors also believe that community members are more likely to purchase online than non-members.

Lurker vs. poster. Preece et al. (2004 forthcoming) have divided the members to passive lurkers and active posters. The majority of members in communities are lurkers that just read the messages that others write. Preece et al. (2004) were looking after reasons why lurkers will not participate in active discussions and actually found many reasons. One common explanation for example was that lurkers don't have to ask questions in a discussion group because by just following the discussions they get answers to their own questions, too. Traditionally community moderators have eagerly tried to convert lurkers into active posters. Preece et al. (2004), however, conclude that this need not be done.

The literature related especially to open-source communities talks a lot about so called free-riders. For example Wasko and Faraj (2005), mentioned also in Chapter 2.2, have studied why individuals help strangers in the electronic networks of practices. It seems irrational that individuals voluntarily contribute their time, effort, and knowledge toward the collective benefit, when they can easily free-ride on the efforts of others. However, if everyone chose to

free-ride, the electronic network of practice would cease to exist. Theories of collective action help explain why individuals in a collective choose not to free-ride, and suggest that individuals forego the tendency to free-ride due to the influence of social capital (Coleman 1990, Putnam 1993 and 1995).

User vs. active (or power) user. Are there differences between standard user and very active users? In a commercial virtual community, active members provide valuable information for new members. Some companies also reward active members for such operation.

User vs. lead user. Franz and Wolkinger (2003) have compared the behaviour of standard user and lead user in an Austrian virtual community. According to von Hippel (1986) lead users are defined as users that are "at the leading edge" in terms of a related new product and who expect a relatively high benefit from solutions to satisfy their needs. Franz and Wolkinger (2003) that these lead users may not be confused with power users as their activeness is based on their activities concerning the design and development of the community. Franz and Wolkinger (2003) found differences in the behaviour of standard and lead users, the lead users for example are more willing to pay for typical community tools and services and they are more interested in entertainment and communication than in the offered content.

Trust and membership. Gefen (2002) claims that customer loyalty, in general, is about earning customer trust: customer who trust the vendor will come back and will recommend the vendor to other customers. And vice versa, customers who don't trust the vendor will not recommend the vendor. Jarvenpaa et al. (2000) mention the process of transference which means that individuals begin trusting unknown others because the unknown others are trusted by a person they trust. This is exactly what happens in virtual communities. When one member writes in the community about his experiences on the successful purchase he made in some e-shop and about the excellent service he received there, the other members may go shopping there, too. They start to trust an unfamiliar e-shop because the community member they trust, has trust in it.

Koufaris and Hampton-Sosa (2004) studied the development of initial trust in an online company by new customers. They found that reputation of the company and the willingness

of the company to customize it's products and services affect the initial trust. Koufaris and Hampton-Sosa (2004) continue that overall, trust has a positive effect on customer attitude towards the company and customers who trust a company are more likely to buy from its web site. Mass customization may increase customer trust due to its inherent need for interaction and communication between the company and its customers.

Koufaris and Hampton-Sosa (2004) believe that there are tools that would promote trust. The tools mentioned are trusted third parties, online reputation systems, agents, virtual reality technologies, economic incentive mechanisms, government involvement and video-conferencing. In my opinion, also virtual communities should be included in this list.

Rheingold stated already in 1993 that individuals are using new technologies, such as the Internet, to fulfill both social and economic goals. There are a few studies that have approached the reasons why people join virtual communities. Butler (2001) has provided a resource-based model of online social structures which suggests that unless provided with economic and/or social benefits, customers will not contribute to such forums. Gu and Jarvenpaa (2003) used economic theory, social exchange theory, and social identity theory to understand incentives in technical discussion boards. They found out that self-interest, reciprocity, and identity are three core concepts associated with voluntary contributions in shared databases and public forums (Gu and Jarvenpaa, 2003). Reasons why people join virtual communities are studied also by Wasko and Faraj (2000, 2005) in their knowledge related research and by Dholakia et al. (2004) in their study on social influence model in the online communities. Ridings and Gefen (2004) have studied the virtual community attraction and examined why people hang out online.

It must be noted that in this paper we do not make a difference between motives to join an online community or to stay in it, and the motives are discussed in one group. An individual may join the community in order to find some peer-to-peer support but may stay in it for example because of the addiction for the Internet and this community.

4 Theoretical explanations on the reasons and motives to belong to an online community

4.1 Economic theories

Hagel and Armstrong (1997, 26-30) pay a special attention to the economics and to the change in power between vendor and customer. Because of virtual communities the power is shifting from vendor to customer thus creating reverse markets. The power of this shift has not, however, been as powerful as Hagel and Armstrong have expected.

Hagel and Armstrong expected that the virtual communities would accelerate the process of aggregating purchasing power. Individuals in virtual communities often represent the most attractive purchasers of specific categories of products and services. Through their distinctive focus, virtual communities thus serve as magnets, conjoining customers who share common purchase profiles and who collectively represent a disproportionate amount of the purchase activity in specific transaction categories. Virtual communities will bring purchasers together in environments that will make them far more effective in leveraging their collective power. Virtual communities also arm potential purchasers with far more information than they have typically been able to access conveniently and cost effectively in the past. Moving away from this traditional information asymmetry is likely to create reverse markets in which power shifts to the customers. The sharing of information between customers is growing, and no combination of published experts could match the collective insight and experience of a community of people who share a passionate interest.

This shift in power is more a macro-level phenomenon, and that's why we will next look at the economic reasons from a micro-level perspective of a consumer.

4.1.1 Resource-based model

According to the resource-based model for online social structures model, people use their resources, namely time, energy, attention, and knowledge for the purposes of the community (Butler, 2001). If the perceived benefits from the community membership exceed the sacrificed resources, the community will create value for its members. It is like the classic

definition of customer perceived value: value will be created for the customer if he or she will perceive more benefits than sacrifices (Zeithaml, 1988). Butler (2001) links the perceived benefits and sacrificed resources to the amount of members. If the perceived benefits from the community membership exceed the sacrificed resources, the community will create value for its members, and the amount of members will grow. But if the perceived benefits are less than the sacrificed resources, the members will leave the community and there will be a membership loss.

Butler (2001) has created a comprehensive list of the benefits that are provided for the members of traditional (offline) social groups and communities. The benefits of the offline social structures are opportunities for affiliation or companionship, opportunities to influence people, social support, access to information, and the ability to disseminate ideas rapidly, and support for collective action. Online social structures provide a variety of benefits by supporting the development of interpersonal relationships, feelings of companionship, and perceptions of affiliation, encouraging discussion and knowledge sharing, allowing individuals to access information and quickly disseminate their ideas, providing social and emotional support, and enabling collective activities such as software development and political action. Social structures provide both in online and offline communities a variety of benefits for individual members, enabling them to attract and retain members. Whether the goal is to support professional development, provide social support, develop the market for a product, or engage in collective action, social structures rely on the continued involvement of individuals.

Sacrificed resources:	**Perceived benefits:**
• Time • Energy • Attention • Knowledge	• Opportunities for affiliation or companionship • Opportunities to influence people • Social support • Access to information • Ability to disseminate ideas rapidly • Support for collective action • Support the development of interpersonal relationships, feelings of companionship, and perceptions of affiliation • Enable collective activities (e.g. software development and political action)

Table 4: Resources and benefits of communities by Butler (2001)

4.1.2 Economic theory

Gu and Jarvenpaa (2003) use the economic theory in their study on online discussion boards for technical support. A person will contribute only if the benefits overweight the costs. The authors refer to Olson (1965) when saying that in collective settings such as discussion boards where there are no incentives to contribute, and hence no possibility of self-interested action, the equilibrium prediction is of no contribution. Incentives are tangible or intangible returns valued by the contributor and they are supposed to increase the benefits.

Gu and Jarvenpaa proposed that user contribution increases with incentives provided by discussion boards. They also believed that user contribution increases with other users' contribution level with competitive incentives. Incentives are justified based on the economic theory that they increase customers' utility for contributions.

4.2 Social theories

4.2.1 Social exchange theory

The other theory used by Gu and Jarvenpaa (2003) is the theory on social exchange. Social exchange theory argues that people will contribute not because of benefits from incentives per se, but because of benefits resulting from what is received in return, or future reciprocity (Bearman 1997, Blau 1964). People make contributions as long as others are believed to reciprocate. Social exchange theory (Blau 1964) posits that individuals engage in social interaction based on an expectation that it will lead in some way to social rewards such as approval, status, and respect. This suggests that one potential way an individual can benefit from active participation is the perception that participation enhances his or her personal reputation in the network. Building reputation is a considered a strong motivator for active participation (Donath 1999).

Discussion boards promote social exchanges between those customers posting questions and those providing answers. Social exchange theory argues that the expectation of reciprocity motivates individuals to contribute above and beyond the equilibrium predicted by economic models of utility (Blau 1964). Social exchange theory suggests that the key to increasing customer contribution is to increase other customers' contributions.

4.2.2 Social identity theory

The third theory in the study of Gu and Jarvenpaa (2003) is the social identity theory. This theory describes how a customer identifies with the other customers. The theory links others' contributions to the way that discussion boards help members define and maintain their social identity. In social identity theory, a sense of unity among customers engenders cooperation and hence motivates contribution. People derive a sense of self from the entities to which they belong and / or participate and this identity affects how they respond and act (Hogg and Terry 2000). Social identity refers to "the individual's knowledge that he belongs to certain social groups together with some emotional and value significance to him of this group membership" (Tajfel 1972, p.292, in Hogg and Terry 2000).

Social identity is generated through self-categorization. People categorize each other into "in-group" and "out-group" based on perceived similarities (we) and differences (they). Those who are placed into the same category will no longer be considered individually but depersonalized into one entity or in-group. Self-categorization generates group-like thinking and behavior. Those who are in the same in-group category are treated favorably, and those in a different category, or in an out-group, are less likely to receive favorable treatment. Categorization is expected to be particularly strong in computer-mediated contexts because communication in such a setting masks individuating information of self and others (Lea and Spears 1992). The more limited the cues on others, the more people are likely to stereotype and over-attribute, and the more they tend to assume similarity with the in-group and dissimilarity with the out-group (Lea and Spears 1992).

People may, however, be motivated to share with others due to a sense of social norm or social identification, not necessary in return for personal gain. It has been especially mentioned by Wasko and Faraj (2005) that individuals voluntarily contribute their time, effort, and knowledge toward the collective benefit, when they can easily free-ride on the efforts of others. Wasko and Faraj (2005) have focused on the question why individuals help strangers in these electronic networks. There is no immediate benefit to the contribution, and free-riders are able to acquire the same knowledge as

everyone else. To understand this paradox, they applied theories of collective action to examine how individual motivations and social capital influence knowledge contribution in electronic networks[2].

It seems irrational that individuals voluntarily contribute their time, effort, and knowledge toward the collective benefit, when they can easily free-ride on the efforts of others. However, if everyone chose to free-ride, the electronic network of practice would cease to exist. Theories of collective action help explain why individuals in a collective choose not to free-ride, and suggest that individuals forego the tendency to free-ride due to the influence of social capital (Coleman 1990; Putnam 1993, 1995). Social capital is typically defined as "resources embedded in a social structure that are accessed and/or mobilized in purposive action" (Lin 2001, p.29). Social capital concepts have been offered as explanations for a variety of pro-social behaviours, including collective action, community involvement, and differential social achievements. According to Putnam (1995), social capital resides in the fabric of relationships between individuals and in individuals' connections with their communities.

In order to contribute knowledge, individuals must think that their contribution to others will be worth the effort and that some new value will be created, with expectations of receiving some of that values for themselves (Nahapiet and Ghoshal, 1998). These personal benefits or "private rewards" are more likely to accrue to individuals who actively participate and help others (von Hippel and von Krogh, 2003).

Factors affecting the knowledge contribution	
Individual motivations	Reputation Enjoy helping
Structural capital	Centrality
Cognitive capital	Self-rated expertise
Relational capital	Commitment Reciprocity

Table 5: Factors affecting the knowledge contribution (Wasko & Faraj, 2005

[2] The authors have earlier (Wasko and Faraj, 2000) used the concept "electronic communities of practice" but here (Wasko and Faraj, 2005) they use the concept "electronic network of practice" when referring to the same thing. Now they have made a difference between more closed communities of people familiar to each other and open networks of strangers.

4.2.3 Social influence model

Dholakia, Bagozzi and Klein Pearo (2004) studied the social influence model of consumer participation in network- and small-group-based virtual communities. They studied the size of the communities, and the values that people perceive from the use of virtual communities were included in their empirical survey. Seven different types of online communities were included in the survey (e-mail lists, website bulletin boards, Usenet newsgroups, real-time online-chat systems, multiplayer virtual games, and multi-user dungeons (MUDs). Most of the communities were topic-oriented, for example, "Lord of the Ring enthusiasts" and "Pokemon collectors". The study focused on the individual motives for participation in the virtual communities, and five different values was developed for participants: 1) purposive values, 2) self-discovery values, 3) maintaining interpersonal interconnectivity, 4) social enhancement, and 5) entertainment value.

The first and the largest group of values is purposive value, which is a combination of informational and instrumental values. Informational value is one that the participant derives from getting and sharing information in the virtual community, and from knowing what (presumably credible) others think. Instrumental value is one that the participant derives from accomplishing specific tasks, such as solving a problem, generating an idea, influencing others regarding a pet issues or product, validating a decision already reached or buying a product, through online social interactions. The authors define purposive value as the value derived from accomplishing some pre-determined instrumental purpose (including giving or receiving information) through virtual community participation.

The secondly mentioned group of self-discovery values involves understanding and deepening salient aspects of one's self through social interactions. Whereas purposive value relates to utilitarian concerns connecting one's self to external objects or issues, self-discovery focuses on intrinsic concerns, constituted by or embedded in the self itself. Maintaining interpersonal interconnectivity, the third value, refers to the social benefits derived from establishing and maintaining contact with other people such as social support, friendship, and intimacy. Many participants join such communities mainly to dispel their loneliness, meet like-minded others, and receive companionship and social support.

Social enhancement is the fourth value that a participant derives from gaining acceptance and approval of other members, and the enhancement of one's social status within the community on account of one's contributions to it. Also peer recognition is related to the social enhancement. This can be seen quite often for example in communities for open-source software development. The last element in the

framework is the entertainment value, which is derived from fun and relaxation experienced while playing games or otherwise interacting with others. (Dholakia et al. 2004)

The first two values – purposive and self-discovery – are mainly self-referent while the latter two values – maintaining interpersonal interconnectivity and social enhancement – are group-referent, which means that the referent of these values is the self in relation other group members. The distinction between self- and group-referent values is important, because the authors claim that the type of virtual community dictates which values are more influential in predicting social influence and participation therein.

Values	**Explanation**
Purposive values (self) • informational values • instrumental values	To get information To learn how to do things To provide others with information To contribute to a pool of information To generate ideas To negotiate or bargain To get someone to do something for me To solve problems To make decisions
Self-discovery values (self)	To learn about myself and others To gain insight into myself
Maintaining interpersonal interconnectivity (group)	To have something to do with others To stay in touch
Social enhancement values (group)	To impress To feel important
Entertainment values	To be entertained To play To relax To pass the time away when bored

Table 6: Participation values (Dholakia et al. 2004)

Ridings and Gefen (2004) found same type of reasons and motives in their own research. They started their study by comparing online communities to offline communities. Research in social psychology has revealed different motivations for individuals to join regular, non-CMC (computer-mediated communication) groups. Humans have a need to belong ad be affiliated with others, because groups provide individuals with a source of information and help in achieving goals, give rewards, and according to social identity theory, people form a social identity of values, attitudes and behavioral intentions from the perceived membership in distinct self-inclusive real or imagined social groups. These motivations for joining traditional, face-to-face groups can be extended to examine membership in virtual communities. (Ridings & Gefen, 2004)

After reviewing the literature, Ridings and Gefen (2004) state that the most frequently cited reason to join a virtual community is to access information. Another reason why people join a virtual community is the social support that the community can provide. Many studies suggest that virtual communities are places where people go to find emotional support, sense of belonging, and encouragement, in addition to instrumental aid. Another possible reasons why people join virtual communities are to seek friendship or the recreation the communities provide.

Riding and Gefen (2004) asked members in 27 online communities (bulletin boards) why did the member join this virtual community.

Category	**Examples**
Exchange information (obtain and transfer information about a topic, educate about a topic, learn new things)	To get new ideas. To learn about new things. To find out how to better grow flowers in my garden. To learn about new technologies for my business. To share my knowledge of woodworking with others. To share my successes and failures with home-schooling with others.
Social support (obtain and give emotional support)	A way for me to express my anger to others who will sympathize with me. To talk out my problems and get advice. I can easily let out my emotions here and others will understand. To support others going through a rough time. To let others know that I have gone through it too.
Friendship (to make friends)	To "hang out" with people I enjoy. To socialize. To talk with people with the same interests and values. To chat with people with similar interests. To find others like me.
Recreation (for entertainment)	Because it is fun. I enjoy reading and posting in the community.
Common interest (love of the topic of the community)	I like talking about baseball. Because I love woodworking is my true love.
Technical reasons (technical features in the community)	The interface is easy to use. The search function is really cool.

Table 7: Category descriptions by Ridings and Gefen (2004)

The reasons for joining a virtual community seemed to be linked to the type of community (health / interest / pets / professional / recreation). For the group of Interest, Pets, and Recreation communities, information exchange was cited most often with friendship being the second most popular reason. Individuals in communities centered around the more serious, and sometimes not so voluntary, life matters of Health and Professional issues also sought information but members in these virtual

communities cited social support as the second most popular reason. The context of a health problem or a discussion of one's profession may necessitate more of a need for social support. According to the authors, the major contribution of the study shows that virtual communities, like real ones, are joined not only because of utilitarian information exchange, but also because they serve the social need of having a friend and getting social support.

4.3 Interest-based theories

Dholakia et al. (2004) have already touched these interest-based theories when they mentioned that the values can be divided in self and group levels. Here we will look at this subject of interest more specifically.

4.3.1 Self-interest vs. community-interest

Wasko and Faraj (2000) have approached online communities from the perspective of knowledge exchange. The motivation to exchange knowledge is affected by whether the decision to share is viewed as primarily economic and motivated by self-interest, or non-economic and motivated by community interest and moral obligation. They asked the members of three electronic communities of practice why they have participated in the community. These communities were technically oriented communities dedicated to developing valuable programming knowledge in rapidly changing technical fields. The reasons to participate were divided into three groups: tangible returns (such as valuable information), intangible returns (such as enjoyment from playing a game), and community interest (see Table 8).

Returns	**Examples**
Tangible returns	Useful – info valuable Answer to specific question Personal gain
Intangible returns	Enjoyment / entertaining Learn
Interaction with a community (community interest)	Multiple viewpoints Peer group Altruism / pro-social behaviour Reciprocity Advance the community

Table 8: Returns from participating in communities (Wasko & Faraj, 2000)

Tangible returns include access to useful information and expertise, answers to specific questions, and personal gain. There are many facets as to what people consider useful: actually receiving help when

seeking advice, the help received is delivered quickly, and the information provided in the community is valuable. Some members indicated that the information available in the community is up to date, not available via other sources, and would otherwise be impossible to find. Electronic communities are fast and useful sources of information, but these communities are also excellent sources of expertise. Another tangible return is to receive help on a specific problem. Some people participate in he community to receive some sort of personal gain or status related to their professional position. Participants indicate that the community is an important resource to enhance standing in the profession, to establish a reputation that will hopefully translate into a job, or even to generate clients for consulting business.

Participation in the electronic community of practice is also a source of intangible returns in the forms of intrinsic satisfaction and self-actualization. Participation in the community is challenging, helps to refine own thinking, and contributes to the development of new insights. Participation 'is fun' in general, and many participate in the community because they enjoy learning and sharing with others. One person highlighted the significance to feel competent. People also participate in the community to enhance their own learning and self-efficacy. People note that answering questions is a challenge, and that working through problems helps to refine their own thinking.

Related to the community interest, it was mentioned that people do not use the forum to socialize, nor to develop personal relationships. Instead of these they are interested only in knowledge exchange on as professional a level as possible. Many people value the processes of exchange, interaction, and the availability of feedback more so than simple access to information. The ability to access and interact with colleagues is highly valued when people are geographically isolated, or do no have access to other members of the practice at their location. In addition, people indicate that they participate in the community due to moral obligation resulting in pro-social and altruistic behaviors. These people note that they are willing to help others at their own expense, or because it is part of being a member in the community. For some members, willingness to help others seems to be a matter of 'been there, done that, or 'the right thing to do'. Finally, people are willing to help others because they are interested in maintaining the community or profession as a whole. Giving back to the community in return for help was by far the most cited reason for why people participate. Unlike the direct reciprocity noted in social exchange theory (Blau, 1964), many of the comments reflect that people do not expect to receive future help from the same individual, but reciprocity in this context reflects generalized reciprocity.

4.3.2 Self vs. altruistic

Chesney (2004) focused on knowledge sharing and reported the results of a study into a public space Internet portal which publishes guitar tabs (tablatures) online, to examine what motivates people to participate in this activity and what benefits they get from doing so. Two models for knowledge sharing, open source and the bulletin board, can be compared to determine which tab publishing is closest to. The author ends up to a conclusion that posting guitar tabs appears to be closer to the open sources model of sharing knowledge but this not clear cut. With the bulletin board model, knowledge is usually shared in response to a request; the work is not being published to get feedback on it. With the open source model, knowledge is shared because a programmer sees a need for additional functionality in the software and feels they can write the code to achieve it.

Motivations for publishing tabs online were grouped equally into two categories: self and altruistic.

Categories	**Motivations**
Self - reasons related to the person who published the tabs	Ego To improve guitar playing Pleasure To document tabs To improve transcribing skills To beat boredom Return on investment To avoid buying expensive music books
Altruistic - reasons that were for the benefit of others	To share the song with others Guilt, feeling they owe it to the community To avoid others having to buy expensive music books
Benefits	Satisfaction Positive feedback Fame in the community None

Table 9: Self- and altruistic reasons for knowledge sharing (Chesney 2004)

4.3.3 Value-interest framework

Äkkinen and Tuunainen (2005) have proposed that the customer values of a virtual community should be viewed in terms of both interest and values (see Table 10). The value dimension for the framework is provided by Dholakia, Bagozzi and Klein Pearo (2004): purposive values, self-discovery values, social enhancement, and entertainment. The value "maintaining interpersonal interconnectivity", however, is not included in this framework, because we think that interconnectivity is more a property or a pre-

requirement for an online community to exist, rather than a motive to join virtual communities. The examples given by Dholakia et al. (2004) for maintaining interpersonal interconnectivity (to have something to do with others, to stay in touch) are embedded in the social enhancement values in this framework. The dimension for interest consists of self-interest and community-interest (Wasko & Faraj 2000). Originally the authors divided self-interest into tangible and in-tangible benefits, but here they are handled as a whole.

Our Value-Interest framework (see Table 10) divides values into those derived from purposive values, self-discovery, social enhancement and entertainment. Each value can then be discussed in the context of self-interest and community-interest.

Interest / Value	*Self-interest*	*Community-interest*
Purposive values	Receive and share information	Performing a collective task
Self-discovery	Reflecting own thoughts Learn	Need to belong to a group
Social enhancement	Appraisal and status Online acquaintances	Peer support Reciprocity
Entertainment	Way to spend free-time Relax	Multi-user online games

Table 10: Value-Interest framework for reasons to join/belong to online communities (Äkkinen & Tuunainen, 2005)

Examples of purposive values derived from self-interest are receiving information or, on the other hand, the joy of sharing information with somebody. When looking purposive value from the community side, purposive values are created, for example, from performing a collective task. Self-discovery values include, for example, reflecting own thoughts and learning in the self-interest side, and the need to belong to a group in the community-interest side. Need to belong to a group is related with the sense of the community, as well as the coherence of the group. When social enhancement values and self-interest are encountered, the reasons for participating in online communities include appraisal and status. But, when we talk about community-interest, there can be reasons like peer support and reciprocity which are related more to sharing and emotional things than social enhancement values presented by Dholakia, Bagozzi and Klein Pearo (2004). When entertainment values are divided into self- and community-interests, online community can be a way to spend one's free time. When we look this from the perspective of the community-interest, the reason is same but it will be realized through, for instance, multi-user online games.

We expect that in commercial online communities the consumers are more interested in generating value for themselves than for the community. We also expect that in commercial context the purposive values are the most important values for the consumers.

5 Summary and conclusions

5.1 Classifications

The online communities are classified in this paper in two main groups: one is the classification based on the content of the community, and the other is the classification based on the revenue generation. The most important classifications are presented in the next table:

Content-based classifications	**Revenue-based classifications**
Stanoevska-Slabeva & Schmid (2001): 1. discussion communities 2. task / goal oriented communities 3. virtual worlds 4. hybrid solutions	Plant (2003): 1. regulation of the community (regulated – not regulated) 2. profitability of the community (for-profit – not-for-profit) 3. openness of the community (open – closed)
Hagel & Armstrong (1997): 1. consumer-focused communities (geographic / demographic / topical communities) 2. business-to-business communities (vertical industry / functional / geographic / business category communities)	Hagel & Armstrong (1997): revenue types 1. subscription fees 2. usage fees 3. member fees
Lechner & Hummel (2002): 1. game communities 2. interest communities 3. business-to-business communities 4. business-to-consumer communities 5. consumer-to-consumer communities	Hanson (2000): 1. provider-based revenues 2. user-based revenues
C.E. Porter (2004): 1. member-initiated communities (social / professional communities) 2. organization-sponsored communities (commercial / non-profit / government communities)	Franz & Wolkinger (2003): 1. standalone (advertising / subscriptions / e-commerce / other sources) 2. add-on (customer integration / market research / product development)

Table 11: Summary of classifications for online communities

Also the members of the community are classified in this paper. The members can be grouped into several types: members vs. non-members, so called lurkers vs. posters, users vs. active (or power) users, or users vs. lead users.

5.2 Theoretical explanations

The theoretical explanations why people join or belong to online communities are divided in this paper into three main groups: 1) economic theories (or models), 2) social theories (or models), and 3) the interest perspective. The theories and models are summarized in the table below.

Economic theories for online communities consist of two theories: resource-based model and economic theory. In the resource-based model (Butler, 2001) people use online communities if the perceived benefits exceed the sacrificed resources. In the economic theory presented by Gu and Jarvenpaa (2003) people use online communities if the perceived benefits exceed the costs.

Social theories consist here of three theories or models that are theories for social exchange, social identity, and social influence:

- Social exchange theory (presented by Gu and Jarvenpaa, 2003, originally from Blau 1964) highlights the reciprocity of the community members: the people in online communities give something to the community and expect to get something back in the spirit of reciprocity immediately or later on in the future.

- According to the social identity theory, discussion boards help members define and maintain their social identity. It is mentioned related to the social identity theory, that people may be motivated to share with others due to a sense of social norm or social identification, not necessary in return for personal gain. It seems irrational that individuals voluntarily contribute their time, effort, and knowledge toward the collective benefit, when they can easily free-ride on the efforts of others. Theories of collective action help explain why individuals in a collective choose not to free-ride, and suggest that individuals forego the tendency to free-ride due to the influence of social capital.

- When the social influence model of consumer participation in online communities was studied by Dholakia et al. (2004), they developed five different values to participate in online communities: 1) purposive values, 2) self-discovery values, 3) maintaining interpersonal interconnectivity, 4) social enhancement, and 5) entertainment value. Same type of reasons and motives were found by Ridings and Gefen (2004).

The third aspect is related on the interest of the community members. There were some studies were the motives and reasons to join communities were divided into two groups: self-interest and community-interest or altruism. In the study of Wasko and Faraj (2000) the The reasons to participate were divided into three groups: self-interest (including tangible and intangible returns), and community-interest. Chesney (2004) found out that the motivations for publishing guitar tablatures online in an online community were grouped into two categories: self and altruistic. Äkkinen and Tuunainen (2005) have proposed that the customer values of a virtual community should be viewed in terms of both interest and values. The Value-Interest framework of Äkkinen and Tuunainen (2005) divides values into those derived from purposive values, self-discovery, social enhancement and entertainment. Each value can then be discussed in the context of self-interest and community-interest.

Economic theories	**Social theories**	**Interest perspective**
Resource-based model • benefits > resources Economic theory • benefits > costs	Social exchange theory • (future) reciprocity Social identity theory • social identity of members • collective action Social influence model • purposive values • self-discovery values • maintaining interpersonal interconnectivity • social enhancement values • entertainment values	Self vs. altruistic Self vs. community Value-interest framework

Table 12: Summary of theories and models related to the reasons and motives to join online communities

5.3 Discussion

Because people generally use online communities if the perceived benefits exceed the sacrificed resources and costs, economic theories can be seen as basic assumptions on the top of which values coming from social theories (especially from the social influence model) are situated. The third perspective is interest, because the motives can be divided into self-interest and more altruistic community-interest. These can be viewed in a matrix format as Äkkinen and Tuunainen (2005) have proposed in their Value-Interest Framework. The same in a more generic format is in the figure below.

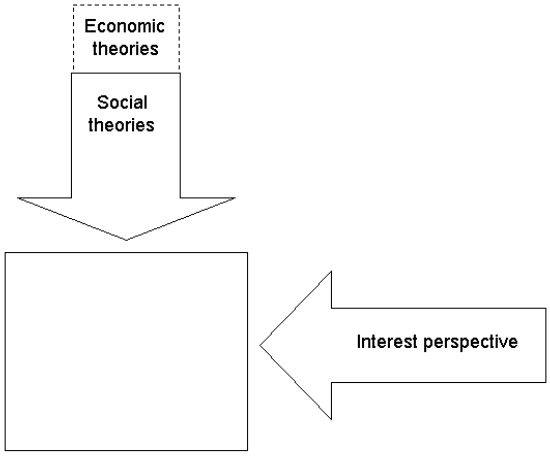

Figure 12: Theoretical explanations

The first empirical results seemed to fit well to the Value-Interest Framework (Äkkinen & Tuunainen, 2005). But when the commercial aspect increased in the interviews, we found out that this framework is not appropriate for every purposes. In the context of commercial online communities the framework appeared to be too narrow. Thus the framework should be extended to cover commercial dimensions, too. Beside this extension, it must be remembered to look at the reasons and motives also against the other theories and models presented in this working paper, instead of using only this Value-Interest Framework of Äkkinen and Tuunainen (2005). For example in technical-oriented open source communities seems to be emphasized the things mentioned in the social identity theory. People may be motivated to share with others due to a sense of social norm or social identification, not necessary in return for personal gain. It seems irrational that individuals voluntarily contribute their time, effort, and knowledge toward the collective benefit, when they can easily free-ride on the efforts of others. Theories of collective action help explain why individuals in a collective choose not to free-ride, and suggest that individuals forego the tendency to free-ride due to the influence of social capital.

6 Suggestions for further research

Online communities and brand. In the early days of the Internet it was believed that Internet would decrease the significance of brands because of the lower transaction costs provided by the Internet. This didn't happen. For example Timmers (1999) noted that when a brand name is used to host the e-mall, this is expected to enhance the trust and confidence of customers, and therefore increase readiness to buy. Nowadays there are virtual communities related to certain brands, for example "Harley Davidson customers" and "Barbie collectors".

According to Heitmann et al. (2004) brand communities are a traditional concept to enhance customer attraction, loyalty and retention. Brand communities are supported through either companies or customers themselves. Heitmann et al. suggest that companies could employ the brand communities for marketing purposes.

By brand Heitmann et al. (2004) mean the value proposition which is conveyed through the product, the product use and the marketing communication. Brand communities are defined by Muniz and O'Guinn (1996) as a specialized, non-geographically bound community, based on a structured set of social relationships among users of a brand. Heitmann et al. (2004) conclude that the constituting elements of a brand community are a common means to communication, a place or space to interact, a shared product interest, member entities and the relation between them.

Online communities in multichannel environment. According to Sillence and Baber (2004) the members of communities employ a range of digital technologies to support their activities and sense of community, and thus the communities could be called "integrated digital communities". Sillence and Baber present a study of the effect of combining two popular technologies, short message system (SMS) and the World Wide Web. Their study aimed to see if a community, with a specific focus on the 2002 Soccer World Cup, can be developed and supported for the duration of the tournament using a combination of SMS and web based integration.

Communities of practice. Beside consumer-oriented communities, it would be interesting to the "CoPs", virtual communities of practice, e.g. a virtual community of ISS researchers or a community of GSS facilitators and study the value-creation process in communities-of-practice. Decentralized, Internet-based group support systems would be extremely useful in virtual communities of practice and this provides an interesting research area.

Online communities in product development. Recently there have been a lot of studies related to the virtual communities as a tool to integrate customers to product development processes. Füller et al. (2004) have published an interesting article on how to utilize the innovative potential of online communities. The authors have divided the innovation process in different phases: 1) idea generation and concepts, 2) design and engineering and 3) test and launch, and they present how virtual communities can add more value to the process. According to Jeppesen & Molin (2003) there are two kinds of innovative processes in the consumer online community: one that breeds new content to the product and another that supplies ideas for new product versions or genuinely new products. Also Nambisan (2002) has studied designing virtual customer environments for new product development.

Leckner (2003) claims that customers are likely to take into account other customers' opinion during configuring a product, and the taste of a single person is often influenced by peers and community. Leckner suggests that the answer to the question "How to integrate the customer into the design and development phase of the product ?" is in using online configurator tools, e.g. on automakers' sites. Community of customers provide benefits during adapting a product to the customer's needs and preferences according to Leckner. The theme "new product development" – one of the add-on services - could be approached by case study and find out new ways for members to participate e.g. in the process of generating new services to the web site.

Online game communities. Games are one element in the topic-based classification of Lechner and Hummel (2002). Currently there is a lot of research going on around mobile games in Helsinki School of Economics and thus this research area would fit in to this. The first studies related to the success of virtual communities are focused on game communities, e.g. Ginsburg and Weisband (2004) have studied the business success in the case of internet chess club.

Online communities in traditional companies. The most studies related to virtual communities and their commercial use are focused on companies that sell products and services in the company's web site. It would be interesting to find out how a more traditional company that operates in business-to-business environment and is not selling anything in the internet could use virtual communities. An industrial organization could for example create virtual communities horizontally for sales agents or vertically for manufacturers in the manufacturing process. Usually people talk about extranets in this kind of situations but virtual communities could be a start for an extranet or complement the extranet with standardized community solution for information sharing. One of the cases presented in Sloan Management Review by Williams and Cothrel (2000) is focused on Ford Motor Company where engineers share knowledge, collaborate in work groups, and find knowledge using the company's intranet. Ford's community improves the speed, quality, and cost efficiency of new product development. Thus there is a "back-up" from the literature to ensure that communities are not the same as intranets / extranets.

Social software. Jim Cashel has interviewed in 2003 Joseph Cothrel who has done much research on virtual communities. Cothrel: "Social software encompasses everything what is called community and collaborative software up to now (e-mails, discussion forums, groupware, instant messaging), plus the relatively recent additions of blogs (=weblogs), wikis and the yet-to-be-named category of tools for connecting with other people (Meetup, Ryze, Friendster, etc). … A few years ago I used to talk about

three eras in the development of online communities: formation, fragmentation, and integration… Blogs have taken that fragmentation a step further. Conversations that previously were captured in a single discussion thread are now distributed across many separate blog sites. Even though blogs take fragmentation further than ever before, they also pave the way toward integration – toward weaving online community interactions into our life and work in useful ways… Social software adapts to its environment, instead of requiring its environment to adapt to software.

7 References

Amit, Raphael; Zott, Christopher (2001). Value creation in e-business. Strategic Management Journal, 22: 493-520

Bearman, P. (1997). Generalized exchange. American Journal of Sociology (102:5), March 1997, pp.1383-1415

Blau, P.M. (1964). Exchange and Power in Social Life, Wiley, New York.

Blanchard, Anita L.; Markus, Lynne M. (2004). The Experienced "Sense" of a Virtual Community: Characteristics and Processes. The DATA BASE for Advances in Information Systems, Winter 2004 (Vol. 35, No. 1)

Brown, Shona L.; Tilton, Andrew; Woodside, Dennis M. (2001). The Case for Online Communities. The McKinsey Quarterly, 2002 Number 1.

Butler, B.S. (2001). Membership Size, Communication Activity, and Sustainability: A Resource-Based Model of Online Social Structures. Information Systems Research, Vol. 12, No. 4, p.346

Cashel, Jim (2003). Interview with Joseph Cothrel. Available at: http://www.onlinecommunityreport.com/features/cothrel2 (18.2.2004)

Chesney, T. (2004). "other people benefit. i benefit from their work." Sharing Guitar Tabs Online. Journal of Computer Mediated Communication, Vol. 10, Issue 1, Article 5, November 2004. Available at http://jcmc.indiana.edu/vol10/issue1/chesney.html (4.4.2005)

Coleman, J.S. (1990). Foundations of Social Theory. Belknap Press, Cambridge, MA

Cothrel, J.P. (2000) Measuring the success of an online community. Strategy and Leadership, February 2000, pp.17-21.

Dholakia, U.M., Bagozzi, R.P. & Klein Pearo, L. (2004). A social influence model of consumer participation in network- and small-group-based virtual communities. International Journal of Research in Marketing. 21 (2004), 241-263

Donath, Judith S. (1999). Identity and deception in the virtual community. In M. A. Smith and P. Kollock (eds.), Communities in cyberspace. (pp. 29–59) London: Routledge.

Elliott, Steve (2002). Electronic commerce. B2C Strategies and Models. Wiley & Sons, 2002.

Franz, Reinhard; Wolkinger, Thomas (2003). Customer Integration with Virtual Communities. Case study: The online community of the largest regional newspaper in Austria. Proceedings of the Hawai'I International Conference on System Sciences, January 6-9, 2003, Big Island, Hawaii.

Füller, Johann; Bartl, Michael; Ernst, Holger; Mühlbacher, Hans (2004). Community Based Innovation: A Method to Utilize the Innovative Potential of Online Communities, in: Proceedings of the 37th HICSS Conference, Hawaii 2004.

Gefen, David (2002). Customer Loyalty in E-Commerce. Journal of The Association for Information Systems (Volume 3, 2002), pp.27-51

Ginsburg, Mark; Weisband, Suzanne (2004): A Framework for Virtual Community Business Success: The Case of the Internet Chess Club, in Proceedings of the 37th HICSS Conference, Hawaii 2004

Gu, B. & Jarvenpaa, S. (2003). Online Discussion Boards for Technical Support: The Effect of Token Recognition on Customer Contributions. Proceedings on 24. International Conference on Information Systems.

Hagel, John III; Armstrong, Arthur G. (1997). Net Gain: Expanding Markets through Virtual Communities. Harvard Business School Press.

Hanson, Ward (2000). The Principles of Internet Marketing. Cincinnati, OH: South-Western College Publishing.

Heitmann, Mark; Prykop, Catja; Aschmoneit, Peter (2004). Using Means-end Chains to Build Mobile Brand Communities. Proceedings of the 37th HICSS Conference, Hawaii, 2004.

Hogg, M. A. ; Terry, D. J.(2000). "Social Identity and Self-Categorization Processes in Organizational Contexts," Academy of Management Review (25:1), January 2000, pp. 121-140.

Holmström, Helena (2000). "Getting to know your customers. Implications of virtual communities in on-line commerce" in Svensson, L.; Snis, U. et al. (eds.): Proceedings of IRIS 23, University of Trollhättan

Jarvenpaa, Sirkka L.; Tractinsky, Noam; Vitale, Michael (2000). Consumer trust in an Internet store. Information Technology and Management 1 (2000), pp.45-71.

Jeppesen, Lars Bo; Molin, Måns J. (2003) Consumers as Co-developers: Learning and Innovation Outside the Firm. Technology Analysis & Strategic Management. Vol. 15, No. 3, September 2003

Jones, Quentin (1997). "Virtual communities, virtual settlements, and cyber-archaeology: A theoretical outline," Journal of Computer-Mediated Communication, 3, Available at http://www.ascusc.org/jcmc/vol3/issue3/jones.html (8.4.2005)

Jones, Q. ; Rafaeli, S. (2000). Time to Split, Virtually: "Discourse Architecture" and "Community Building" Create Vibrant Virtual Publics. Electronic Markets, 10 (4), 214-223.

Koufaris, Marios; Hampton-Sosa ,William (2004). The Development of Initial Trust in an Online Company by New Customers. Information & Management 41 (2004), pp. 377-397.

Lea, M.; Spears, R. (1992) "Paralanguage and Social Perception in Computer-Mediated Communication," Journal of Organizational Computing (2:3), 1992, pp. 321-341.

Lechner Ulrike; Hummel, Johannes (2002). Business Models and System Architectures of Virtual Communities: From a Sociological Phenomenon to Peer-to-Peer Architectures. International Journal of Electronic Commerce. Volume 6, Number 3, Spring 2002, pp. 41

Leckner, Thomas (2003). Support for online configurator tools by customer communities, in: Proceedings of the 2nd Interdisciplinary World Congress on Mass Customization and Personalization (MCPC), 2003. Available at: http://e-business.fhbb.ch/eb/publications.nsf/id/271 (8.4.2005)

Lee, F. S. L., D. Vogel, and M. Limayem (2003). "Virtual Community Informatics: A Review and Research Agenda", The Journal of Information Technology Theory and Application (JITTA), 5:1, 2003, 47-61.

Lin, N. (2001). Social Capital, Cambridge University Press, Cambridge, UK

Muniz, A.; O'Guinn, T. (1996). Brand community. Journal of Consumer Research, Vol. 27, No. 2, pp.412-432

Nahapiet, J.; Ghoshal, S. 1998. Social capital, intellectual capital and the organizational advantage. Academy of Management Review, Vol. 23, No. 2, 242–266

Nambisan, Satish (2002). Designing virtual customer environments for new product development: toward a theory. Academy of Management Review, 2002. Vol. 27, No. 3, pp.392-413.

Olson, M. Jr. (1965). The Logic of Collective Action, Harvard University Press, Cambridge, MA

Plant, Robert (2004). Online communities. Technology in Society. 26(2004), pp.51-65.

Porter, Constance Elise (2004). A Typology of Virtual Communities: A Multi-Disciplinary Foundation for Future Research. Journal of Computer Mediated Communication, Vol. 10 (1), Article 3, November 2004. Available at: http://jcmc.indiana.edu/vol10 /issue1/porter.html (4.4.2005)

Preece, Jenny; Nonnecke, Blair; Andrews, Dorine (2004 forthcoming). The top five reasons for lurking: improving community experiences for everyone. Computers in Human Behavior.

Putnam, R. (1993). Making Democracy Work: Civic Traditions in Modern Italy, Princeton University Press, Princeton, NJ

Putnam, R. (1995). Bowling Alone: America's Declining Social Capital, Journal of Democracy (6), pp.65-78

Rheingold, Howard (1993). The Virtual Community: Homesteading on the Electronic Frontier, Mass, Addison Wesley

Ridings, Catherine M. & Gefen, David (2004). Virtual Community Attraction: Why People Hang Out Online. Journal of Computer Mediated Communication, Vol. 10, Issue 1, Article 4, November 2004. Available at http://jcmc.indiana.edu/vol10/issue1/ridings_gefen.html (4.4.2005)

Sillence, E.; Baber, C. (2004). Integrated digital communities: combining web-based interaction with text messaging to develop a system for encouraging group communication and competition. Interacting with Computers, 16 (2004), pp.93-113.

Stanoevska-Slabeva, Katarina; Schmid, Beat F. (2001). A Typology of Online Communities and Community Supporting Platforms. Proceedings of the 34th Hawaii International Conference on System Sciences 2001.

Timmers, Paul (1998). Business Models for Electronic Markets. Electronic Markets, Vol 8, No.2, pp.3-8.

Typaldos, Cynthia (2000). Community Standards. Interview in “Fast Company” by Katharine Mieszkowski. Issue 38, September 2000, page 369.
http://www.fastcompany.com/online/38/ideazone.html

von Hippel, Eric (1986). Lead Users a Source of Novel Product Concepts. Management Science, vol 32. No.7, pp.791-805

von Hippel, Eric; von Krogh, Georg (2003). “Open Source Software and the “Private-Collective” Innovation Model: Issues for Organization Science” Organization Science 14 (2) 208-223

Wasko, M. McLure & Faraj S. (2000). “It is what one does”: why people participate and help others in electronic communities of practice. Strategic Information Systems. No. 9, pp.155-173

Wasko, M. McLure; Faraj S. (2005). Why Should I Share? Examining Social Capital and Knowledge Contribution in Electronic Networks of Practice. MIS Quarterly, Vol. 29, No. 1, pp.35-57 / March 2005

Williams, Ruth L.; Cothrel, Joseph (2000). Four smart ways to run online communities. Sloan Management Review, 41(4):81-91

Yap, Lee Xian; Bock, Gee-Woo (2005). An empirical investigation of the effects of size on strength of relationship and commitment in a virtual community, in proceedings of 13th ECIS (European Conference on Information Systems), Regensburg 2005.

Zeithaml, V.A. (1988). Consumer Perceptions of Price, Quality, and Value: A Means-End Model and Synthesis of Evidence. Journal of Marketing, Vol. 52 (July 1988), pp.2-22.

Zott, C.; Amit, R.; Donlevy, J. (2000). Strategies for value creation in e-commerce: best practice in Europe. European Management Journal, vol. 18, no. 5, pp.463-475

Äkkinen, Miia & Tuunainen, Virpi Kristiina (2005). Sources of value-creation in consumer-oriented online communities – Results from a pilot study. Frontiers of e-Business Research 2004 (FeBR 2004), Seppä, M. et al. (ed.), 52-67, Tampere University of Technology and University of Tampere.