Motives in Customer and User Groups

Anders Lundkvist
School of Business, Stockholm University

Introduction

Modern software development is characterised by high integration of customers and users. Applications like Netscape, Linux, VRML and Apache have in common that some people, a coordinator like Linus (Linux) or Brian (Apache, VRML), created sites for communication between customer and users. Internet has enabled new options for customer-to-customer communication, as electronic newsgroups, complaint, love, and hate sites (France and Muller, 1999). This development has proved to be new opportunities for interaction with customers in market communication, but at the same time new problems emerge. Customer-to-customer communication is not a new phenomenon; it has earlier been noted in services and relationship marketing, where exchange of information among customers is an essential part of service design and consumption.

This paper explores the motives for customers and users to share information not only among themselves, but also with companies. The evolution of electronic media as a shared

space for interaction among people also raises questions concerning identity and group behaviour. The purpose of this paper is to investigate essential theoretical tracks and develop a theoretical framework that can support studies of information sharing among customers, and with companies. Inspiration and theoretical support have been generated from theories of gift economy and communities of practice. Attention is also directed towards occurring management processes in user forums.

The discussion is based on four cases and explores the social structure in customer and user networks. The cases have been studied through (1) observations of conversational threads in electronic forums and newsgroups, (2) personal and email interviews with founders and managers of forums, and (3) by tracking changes in the structure and organisation of the forum. The four cases are: (1) Diabetes Forum studied in periods of time during 1994-1999, (2) Apache Web Server Foundation and (3) Linux that were studied in 1995-1996 and 1998, and (4) the Cisco newsgroup that was studied in 1998-1999. In all these cases computer-mediated communication has enabled interactions among people for the purpose of sharing and exchanging information, without strong personal bonds or obligations. Hence, the main question in this paper is what motivates people to share information in customer and user networks.

Diabetes Forum is here presented as an introduction to user and customer networks. This is followed by the theoretical framework, analysis and discussion.

Customer and user networks as communities

Computer-mediated spaces for people to meet, work and talk have existed, as long as there have been computers with modems, since during the 1960's. Through the years different concepts have been focused, as computer-supported cooperative work during the 1970's and 1980's, and virtual spaces and communities during the 1990's. Supportive techniques for interaction have bulletin board systems, mailing lists, IRC, Usenet and newsgroups, which each has characteristics of enabling interaction, questions and answers through conversational threads. Before the advance of the Internet in the middle of the 1990's, proprietary networks as CompuServe, America Online and Prodigy provided users with graphical interfaces and connections to a shared space with news, entertainment, shops, e-commerce and specific customer services. Many computer companies created support centres at CompuServe, where the companies invited users and customers to a discussion not only with the company, but also between users. These online support services provided in some cases the dominant share of customer support, even before the companies had started actual sales using electronic media. So among computer companies there was a tradition to create, maintain and develop online customer and user forums. To manage these forums, computer companies trained so called system operators (sys ops), whose task were to moderate and facilitate the discussions.

Diabetes Forum and managing online forums

Not only computer companies created forums. The American service provider CompuServe, today owned by America Online, hosted the Diabetes Forum. This electronic forum stared in 1989 by Dave Groves when he was thinking about the fact that he rarely discussed his disease with other diabetics. Since Dave had a background as sys op with a computer company, monitoring and moderating exchange of information on a discussion list, he thought of using the same methods in building the forum for those interested in Diabetes Forum.

During the first year the forum expanded from 3 to 2.000 members. In the year 1997 the forum had expanded further to 55.000 members, and has been stable on that level ever since. At the same time administration and management of the form have changed and become more divided according to various functions.

The basic principle with the forum is that interested people apply for a membership and then provides access to discussions, archives and libraries in the forum. Sys ops have the right to censor messages and take action if the situation so require. This seldom occurs. However, since the sys op participates in the discussion they also play the roles as facilitator and contributor to the discussion. This is one of the most important tasks for the sys ops, since vivid and lively discussions are recognized as one the more important characteristics with online forum. If there are few discussions it will not be that interesting to visit the forum, while a lively and frequently visited forum attracts further contributions. Since the discussions on the Diabetes Forum have developed in range and focus, different departments have been created to mirror the different sub interests.

Different members have also moved from a peripheral to a more central position in the forum, and thus finally started to act as sys ops.

The formal structure and administration of the forum is easily accessible in one of the archives at the Diabetes Forum available to all members. Dave and two other colleagues play the role as "forum administrator" with responsibility for the design and architecture of the forum, as with different departments, libraries and archives. It is worth noting that these people usually have another full time job on a "real" company, while they on their leisure time are involved in the Diabetes Forum. Five sys ops, members of the "emeritus staff" are veterans on the forum and are still available from time to time basis. Another four sys ops belong the "medical staff" and are experienced physicians and experts at diabetes. There are also thirteen sys ops available as "section and discussion leaders" with responsibility for the different sections and departments on the forum. In all there are 25 people with the authority of a sys op at the Diabetes Forum. This authority has been awarded them due to earlier services to the forum.
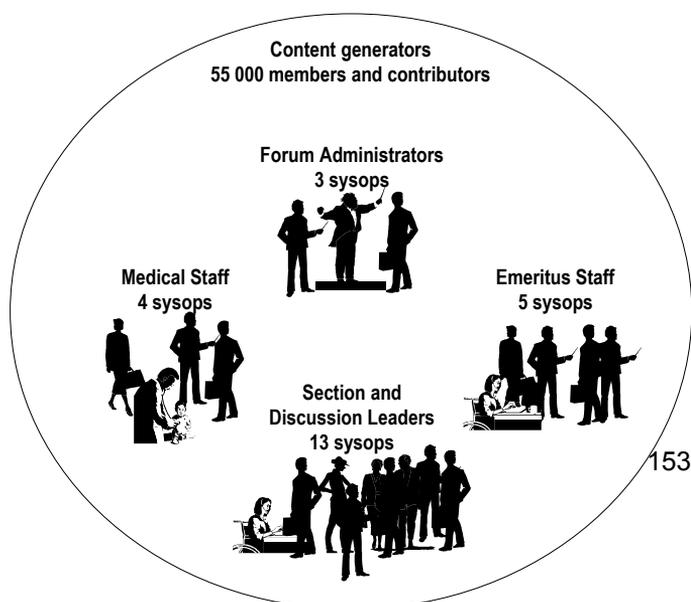
Fig 1. Organisation of the Diabetes Forum, in fall 1999. (Source: Lundkvist, 1999).

Note that these 25 sys ops do not create the content or activities at the Diabetes Forum. The challenge for sys ops is rather to commit and motivate members in engaging discussion and through this process generate a multitude of qualitative and interesting conversations. In a sense the function of the sys op could be characterized as a gardener that enables a safe space for growth, and at the same time removes weeds and un-appropriate behaviour in the garden.

Gift economy

The discussion on motives for people to share information and participate in discussion with others, who they have never met, often relies on social theories. One trail concerns the virtual common and virtual communities and emphasizes the social nature of man, where participation in common activities is a social norm of society. To give information is then not only an act of altruism, where the individual is diminished on behalf of a larger social group or community. It is rather the very act, to actually participate in discussions and information sharing which characterizes the individual. Thus, sharing information could be looked upon as self-interest, as this brings forward the individual as a group member.

In order to understand individual motives in sharing information, researchers have related to the academic field of gift economy (Kollock, 1999; Raymond, 2001; Rheingold, 1994). A gift is by nature not bonded to any obligations, negotiations or any promise of future exchange. The gift is at the same time a token on relationship between people who build their relationship through reciprocal

interactions. Hence, the gift is unique as it is intimately related to a specific giver and a specific social interaction. Mauss (1924) developed the thoughts on a gift economy from earlier studies of primitive exchange systems. An economy based on transactions without personal bonds or obligations is then referred to as the commodity economy and in contrast to gift economy. In a transaction based economy there is usually none obligation what so ever from the buyer that the next buy or transaction would be from the same supplier and to similar conditions. On the other hand, it is this non-relation between buyer and seller that allows buyers to find alternative solutions. Hence we find two different perspectives on market actors: (1) In the gift economy, actors are characterised by ongoing continuous interactions and relations. (2) Market actors in the transaction economy are supposed to be independent with personal interests, few obligations and a free will to choose among other actors.

A different way to differentiate actions in gift economy from transaction economy is to study those behaviours where the individual may enhance the value of one's interactions with others. In the gift economy, value is added by exploiting the technology of social relations (Kollock, 1999), i.e. by expanding one's social network and inherent relations. In the transaction economy value is added by improving the technology of production, i.e. those mechanisms that are affected by price and negotiations.

To many researchers and practioners (Kollock 1999; Raymond, 2001) there is a strong resemblance between patterns of behaviour in the gift economy compared to behaviours in user groups and discussion forums at the Internet. There are also differentiating patterns, as there are no bonds between the ones that give information and the

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ones that receive. Anyone can read a poster on a newsgroup, and anyone have the opportunity to write a poster. In doing so the personal relation between giver and receiver is broken. Kollock (1999) suggested that one solution to this dilemma would be to focus on generalized exchange (a thought inspired by Lévi-Strauss), i.e. the relation between the individual and the specific group. The example used was a stranded car driver, where the stranded car driver may not has an obligation to the individual that came to help, but to the next member in the collective that may be in trouble. The weakness of this type of exchange is that the personal relation is replaced with a vague and indistinct relation between the individual and the group. Individual members of the group may then "free ride" and take advantage of the exchange without contributing to the collective's development and survival.

Another difference between user networks at the Internet and the gift economy (and also transaction economy) is that the posters contributed by individuals are public to anyone. In an open computer-mediated environment any individual may benefit from those posters provided by others, without having to exhaust the material, gift or service.

Motives

The economy of user interactions on the Internet is not that easily described by using theories of gift economy or transactions, since the basic conditions are different. The elements that drive individuals to corporation and joint problem solving need a more elaborate exploration. Even if users have access to discussion groups on the Internet it does not automatically impose a common desire to participate. There are also concerns among researchers that most of the

users are only passive participants. They are "lurkers", they read the postings, but they do not contribute on their own.

The reasons for users to actively engage in discussion groups on the Internet are related to two categories of motivation. The first category includes three motivations characterised by self-interest and the other category refers to altruism.

In gift economy there is an expectation about future exchange among participants, a hope that one's actions will be repaid in the future. If one actively participates in Diabetes Forum, one expects the same level of engagement from someone else now or in the future. This expectation is defined by *reciprocity* (Archer, 1979; Cialdini, 1993; Moon, 1999). Actions of giving and taking must sooner or later be balanced. Earlier research (Constant, Kiesler & Sproull, 1996; Rheingold, 1994; Sproull and Kiesler, 1991) found that those individuals that who actively participate in joint problem solving and sharing of experiences are also the ones who receive help faster than others. During some circumstances one is more or less obliged to participate in order to receive something from others. Similar thoughts are expressed in the theory of communities of practice (Lave and Wenger, 1991; Brown and Duguid, 1991) where the establishment of a legitimated identity is essential for participation in the community. It is first when one has been recognised as a participant that one may expect some help from others. The notion of identity is a bit problematic in communities of practice. Identity is intimately linked to an individual process in relation to others through time. In computer-mediated environments there are many times the opportunity for the individual to act as someone else. Often there is no requirement to give a name or any other token of identity, or one may act with different names in different environments. Consequently there is no repository that may

store the memory of past and noble deeds, and no balance between giving and receiving that needs to be cleared.

The point made by Ostrom (1990) is that a well functioning interplay between individuals requires a well-defined and limited group. Kollock and Smith (1996) note that to develop an online community, individuals have to be recognised according to their actions. Hence there must exist some kind of repository or track record in order to link actions to specific individuals. These requirements are met by the functionality provided in forum services from AOL and CompuServe. A newsgroup on the Internet or a mailing list has similar functionalities. Messages are linked to specific users and earlier messages may be stored in a database or other repository available to anyone.

The second motivation driver is the reputation, status and prestige related to the individual. It is by participation in discussions and joint problem-solving the identity is constructed.

The third driver, efficacy, is related to the extent an individual contribution may affect environment or the group as a whole. The number of replies to a posting on a newsgroup or contributions from other users as a response to the first posting are signs on how an individual contribution may spur engagement from the group.

The motivation to share information is here related to three drivers:
(1) Reciprocity as the expectation of future exchange.
(2) Identity based on prestige, status and past actions.
(3) Efficacy as the experienced effect on the environment.

In addition to the drivers above there is another one noted in software development. It is not uncommon that programmers in frustration over what seems to be poor products take time to make some improvements. These improvements are made to benefit the individual. However, computer-mediated communication offers the opportunity to share the improvements without additional efforts. What seems to be of individual benefit may also be a contribution to the development of the group and the common good, because the transaction cost is so low. Further, there is the opportunity to receive contributions from other users, which may enhance the individual's use of the improved software.

Exploitation of motives

In the case of Diabetes Forum the management aimed to support and cultivate a common exchange of ideas and experiences. The resulting discussions were directed toward a specific interest, diabetes. However, there were neither interests in coordinating efforts in other areas of common activities, such as initiating street demonstrations, nor interest in managing the development of alternative products.

A different approach is to be found in the many user groups related to a specific product or company. Many computer companies like Intel, Sun, Microsoft, HP and Apple have encouraged customers and users to engage in joint problem-solving through Internet newsgroups, and since 1994 through Web based applications.

Deliberate attempts to coordinate individuals and groups efforts are to be found within the open source movement, as with Linux, Apache and to some extent Mozilla (Netscape).

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Apache is the dominant Internet server application available on the market, and is the result from a shared development project. Linux was originally written by Linus Torvalds, but has since then been developed to a more comprehensive operating system for personal computers. Both of these applications have in common that they are developed by voluntary and independent participants. In the case of Linux, Linus started with encouraging other programmers to send reports on errors and improvements. Programmers from all over the world sent patches of codes that would improve the program. Contributions that had been made were published on a list available on Internet, as alterations and new versions of the program. This manner allowed users to inform themselves about changes and provided a way to share experiences with other users.

Torvalds (1993) did in an interview emphasise two issues for management. The first issue concerned the matter of interest, the service or product that causes reactions. It would imply that someone first has to create the software others can react at. The second issue concerned management and commitment. Someone has to take responsibility for coordinating available resources. In the case of Linux a core of programmers organised a committee with the responsibility to coordinate resources, provide channels for merging source codes and update information on schedules and versions. Alan Cox is one example of member with the responsibility to coordinate resources. On the Internet, Alan keeps updates on daily activities within the Linux community, as with the project diary (http:www.uk.linux.org/diary). In this way other programmers are able to keep track on the present condition in the project. To Alan Linux is a project that will continue to evolve as long as there are programmers who want to continue with its development.

Apache with many similarities to Linux is also a joint development project. Some programmers as Brian Behlendorff had experiences from earlier work with open standards as with HTML and VRML. In these standardisation projects a committee coordinated a larger group of developers and Internet was used to share documents and efforts. In the same manner the development of Apache is published on the Internet, freely available to anyone.

Different from Linux, changes in Apache are determined by a voting system. Suggestions are published on a mailing list and it is up to the members to vote for specific changes. However, suggestions are not to be made by anyone. There are several levels the programmer has to qualify in order to become a full member of the Apache development team. According to Brian this structure of decision-making is known as a "meritocracy".

"The Apache Group is a meritocracy – the more work you have done, the more you are allowed to do" (Apache Group, 1999).

Both Apache and Linux apply the rules of GNU (general public license) that is an alternative to the copyright procedure. GNU is a system of rules and licences that has been developed to provide the development and distribution of Unix, HTML and VRML (Stallman, 1999). The basic idea with GNU is that the software's source code is available to anyone, but that one, who improves the source code, has to make the improvement available to everybody else. It is in this way the code evolves through the interactions of other programmers.

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The problem that is embedded in gift economy, that individuals cannot take for granted that their gifts will be repaid, is partly eliminated by using GNU. Hence, projects that apply GNU open up for continuous innovation and development, by inviting programmers to further improve the software.

Another problem related to the many interactions between programmers in the cases of Linux and Apache concerns the coordination of resources. This dilemma is known as Brooks law and describes the increasing coordinating effort with increasing resources. In the case of Linux the committee decides what changes are necessary, and in the case of Apache there is a voting procedure. Both cases are dependant on the Internet as a window to the development, so programmers themselves are able to track changes. More specific tools include web pages that are used to publish documents, ftp servers to download shared resources, email lists as a way to share information between participants and for coordination.

Members of Apache are supposed to spend their daily work as employees in formal organisations. Brian is employed at the publishing company O'Reilly and other board members are employed at companies like IBM and Hewlett Packard. The division of time between different tasks becomes a challenging question. How much time may the development of Apache steal from daily work? A different perspective would note that Apache is a neutral stage for sharing experiences between participants from many different groups and companies like IBM and Microsoft. The time individual programmers spend in developing Apache may be regarded as investment in new experiences, which would be of benefit to the companies.

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Managing newsgroups

A newsgroup is a tool for discussion among people and is available through various Internet applications, as Netscape or Microsoft Internet Explorer. One difference between newsgroups and Web pages is the opportunity to control content and distribution. In the case of Diabetes Forum sys ops have the opportunity to remove inappropriate messages. The same would apply for Web pages, where the administrator may change or remove content. In a newsgroup there are not authorities in control over content and distribution. To companies this loose control would provide new challenges.

When customer or user groups on their own, without interference from companies, create an open and shared space for interactions, companies would have to address other means of approaching the market. Computer companies often monitor discussions in newsgroups, where some are more directed toward specific questions or products, and others are more generally oriented.

The American network company Cisco Systems has used its Web pages to let users share experiences. That is one way of directing customers to a more regulated environment. There are also several active newsgroups outside the domain of Cisco. Cisco has during these circumstances both monitored and participated in discussions. Cisco staff did make clear that they will not try to take control over the newsgroups, but they will continuously monitor discussions, and help if so needed. Engagement and participation are tools for Cisco to upheld presence in these newsgroups.

Final discussion

In all the cases of Diabetes Forum, Apache, Linux and the Cisco newsgroup individuals help each other by sharing experiences and engage in joint problem solving, by using computer-mediated communication. In the software business with a tradition of beta users this is not a new phenomena. One explanation to this evolution is that programmers early had the opportunity to use computer-mediated communication to reduce transaction costs of sharing information. When customers and users in other businesses are taking advantage of computer-mediated communication this would imply similar opportunities and challenges to those businesses.

Even if computer-mediated communication reduces transaction costs for sharing information among individuals and support the formation of new groups there are other social and practical limitations. Ostrom (1990) emphasised that groups are dependant on certain boundaries and drivers. The participants themselves generate rules for participation, as penalties or sanctions for those who break the rules. Group members also generate systems for supervision and monitoring of members' activities, systems where one's action immediately is recognised by others. The rules do not have to be explicit but it is necessary that all members share the same rules. Distinctive for the electronic newsgroup is that techniques provide archives of past activities for communication and negotiation. Hence, computer-mediated communication provides means for sustaining larger groups. How large can the group be, without falling down due to overwhelming problems of coordination? Diabetes Forum with 55,000 members has well functioning sub groups with 25 active and moderating

sys ops. The newsgroups of Cisco and Microsoft are functioning without obvious control or coordination.

The thought proposed by Kollock (1999), which is supported by the theory of CoP (Lave and Wenger, 1991), is that group size and boundaries are constrained by social relations where identity is the key factor. When participants despite their contributions remain anonymous, the incitement for participation is lost. However, the Cisco newsgroup functions despite participants' mobility. This is explained as members know what to expect in norms of contribution.

This paper proposed three motives generated from gift theory for participation and contribution in computer-mediated environments. The first motive, expectation of future exchange (reciprocity) together with the second (identity), and third motive (efficacy) provide a general understanding why individuals share their time between different communities.

From the perspective of corporate management the shared environment supported by computer-mediated communication provides challenges. If participants seek support from informal networks and groups, questions arise how this is to be managed. What seems to be an escape from the organisation might be opportunities for development.

The theory of CoP attempts to integrate the traditions of work, learning and innovation (Brown and Duguid, 1991). By using the perspective of CoP it is possible to view the informal networks in computer-mediated environments as alternative roads for discoveries. When engaging in daily practices and discussions concerning problems and solutions practices are constructed. In these interactions learning

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occur among customers and companies that may be difficult to address in traditional market communication.

The notion of gift economy and the three related motives also raise questions about the relation between the company and its customers. The gift economy is characterised by interpersonal relations, a social interplay, where the relation is created and maintained by gift giving and reciprocity. Thus gift giving is the establishment of social relations, which are very far from the traditional view on company and customer interaction. However, by applying the perspective of gift giving on company and customer interaction new expectations on behaviour arise. If customers together with companies interact in exchanging ideas, solutions to problems and contributions to new products, the participants are to expect reciprocal actions. Hence, companies that do not contribute to joint problem solving in the same way as customers and users will lose in prestige and relation.

Extract from "Conversational Realities – Five Studies of User Interactions as Sources of Innovation" by Anders Lundkvist, dissertation Stockholm University School of Business, 2003. This text was first published in 1998.

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