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Taking advantage of Online Communities for generating Innovative Ideas

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Taking advantage of Online Communities for generating Innovative Ideas

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Abstract

The use of the internet for business purposes and among consumers is spreading at an impressive rate. Companies use it for a lot of different activities like, for example, marketing, online shopping and customer service. However, the use of the internet for the purpose of innovation, to create ideas and concepts, is still underdeveloped. Practical experience shows that online communities are suitable for developing innovative ideas with users. To gain a deeper understanding of the underlying mechanisms we have taken a case-study approach. Based on this we generate a set of propositions concerning characteristics that a community should have in order to foster innovativeness. Our findings show that communities should be social, access should be restricted and it is necessary that users are free to post critical messages. Furthermore, the threads should be organised to create a lively discussion and users have to be able to build-up reputation.

INTRODUCTION

The importance of innovations for the long-term success and the growth of companies cannot be denied (Booz Allen and Hamilton Inc., 1982, Freeman, 1990, Cooper, 2001, Crawford and Di Benedetto, 2003). However, mere innovations do not ensure success. High flop-rates of new products constitute the largest problem of innovations. The probability of developing a successful new product increases with the market-orientation of the innovation (Cooper and Kleinschmidt, 1990, Cooper, 2001). Von Hippel goes a step further and states that new products are more successful when a special type of user – so called lead users – have created them or were involved in the process of their creation (von Hippel et al., 1999). However, identifying these lead users can be a very challenging task (Lüthje and Herstatt, 2004). In this paper we investigate a novel phenomenon on the internet – online communities – to identify suitable users.

With this paper we intent to generate propositions which characteristics an online community should have to foster the generation of innovative ideas. To develop these propositions we have chosen a qualitative case-study approach since there is only a very limited body of research available concerning the suitability of the internet to generate innovative ideas.

Users as a source of novel product ideas

Empirical research has shown that users are an important source for innovations. Users have been found to be the inventors of reliable prototypes of what later became successful products in different markets (von Hippel, 1988). User innovation is not limited to isolated industries. It has been found in a wide spectrum of industries ranging from scientific instruments (von Hippel, 1976), semiconductors (von Hippel, 1977), software and bakery goods (von Hippel, 1982), the construction industry (Herstatt and von Hippel, 1992) and library software tools (Morrison et al., 2000). Most of the early studies focused on the investigation of users in industrial markets or professional users. However, in the last few years studies have been conducted in consumer markets as well, primarily in the market for sports equipment (Shah, 2000, Franke and Shah, 2003, Lüthje, 2004). These studies in general found the same results as the studies conducted in an industrial environment, with end users willing and able to develop substantial ideas, concepts and prototypes for new products.

In addition to the fact that users innovate, special attention needs to be drawn to the point that user-innovations not only create minor modifications to existing products but often create new business fields (Herstatt and von Hippel, 1992, von Hippel et al., 1999, Lilien et al., 2002), sometimes even completely new industries as has been the case with windsurfing and kite-surfing (Shah, 2000, Tietz, 2002, Franke and Shah, 2003).

A key concern with user-innovations in a consumer-goods setting is the high number of consumer-users. Consumer goods are mainly mass-products. Thus companies face the problem of a huge pool of potential idea-generators. Online communities are a possible filter for separating promising users from the bulk of the user-group.

ONLINE COMMUNITIES

Online communities are a strongly growing phenomenon in the internet. They are used by the consumer-side as well as by the manufacturer-side for varying purposes. They already cover close to every topic-area from software to household products, from gaming to the exchange of information by experts. In the following sections we first define online communities, and then state how users and companies can profit from them.

Introduction to and definition of online communities

Online communities, or virtual communities as they often are referred to, are groups of people with common interests or goals who predominantly interact in cyberspace (Koh and Young-Gul, 2003). Community members actively interact with each other for knowledge sharing on a specific site in cyberspace, thus displaying the same kind of emotional attachment to their site as people do towards their physical place of relationship (Koh and Kim, 2004). A suitable definition has been developed by Porter. She states that a virtual community is "an aggregation of individuals or business partners who interact around a shared interest, where the interaction is at least partially supported and/ or mediated by technology and guided by some protocols or norms" (Porter, 2004). Online Communities are already today shaping the way people shop, learn, work and even meet new friends and associates (Cothrel, 1999).

Early online communities were mainly developed as self-help online networks. In these networks users shared one or more common needs (Andrews, 2001). Since then, online communities have gained and will continue to gain an important position in the internet. If companies ignore communities and their social characteristics and continue to look at consumers as isolated individuals they will miss an enormous opportunity of the web (Banks and Daus, 2002).

Armstrong and Hagel III (1995) have defined three different types of communities: communities of relationship, of fantasy and of interest. Communities of relationships are populated by people who interact regularly and cover many different topics. An early example is the community TheWELL, one of the first communities in the internet to be extensively analysed (Rheingold, 2000). In communities of fantasy, users interact in a purely fictional way. They are predominantly entertainment-driven. Communities of interest, the third form, can be subdivided by geography, subject knowledge, social interest or transactional interest. Here the content is usually limited to a specific topic connected to the definition of the community (Armstrong and Hagel III, 1995).

Three types of providers operate online communities: Independent providers, aggregators and companies. Independent providers do not depend on a company that offers a product and thus these communities are open to criticism of products and direct comparisons between competing products. These providers often are private users or magazines, newspapers or clubs as "natural owners of communities" (Armstrong and Hagel III, 1996) specialising in certain topics. Aggregators offer online communities without an affiliation to certain companies or a specialisation in certain products. (Andrews, 2001) They usually follow two aims: Either the aggregation of users to build a large pool for advertising-purposes (e.g.

Yahoo!) or the business-model of selling products via the online community (Armstrong and Hagel III, 1995, Armstrong and Hagel III, 1996, Hagel III and Armstrong, 1999). Companies, the third type of provider, will be discussed at length later on.

Users in online communities

Before purchasing a product or service, consumers like to seek advice from others (Armstrong and Hagel III, 1995). The internet is a huge database for gathering such information. However, the vast amount of readily available information has started to bewilder many web users (Rothaermel and Sugiyama, 2001). An overwhelming wealth of information tends to lead to a decrease of attention (Simon, 1977). Thus excessive information has to be filtered out (King, 1999). This is what online communities are capable of. Only the most valuable information with respect to the topic in focus are displayed (Rothaermel and Sugiyama, 2001). Users can take advantage of the filtering-mechanism of online communities.

The internet and especially online communities display a new and powerful platform for user action. Before the internet there was a large discrepancy between companies on the one hand and users on the other. If problems with a product occurred users had to rely on the company for solving these problems. With the internet the exchange of information between users is easily possible. Users exchange their ideas and are able to build a common base of their expectancies. An impressive example for the new power of users is the case of Intel. The largest producer of computer processors in the world was challenged by and conceded twice to the pressure of user-campaigns (Leizerov, 2000). Thus users enjoy online communities as a means of reducing information-asymmetry (Rothaermel and Sugiyama, 2001) and the asymmetry of power. (Leizerov, 2000, Maclaran and Catterall, 2002)

Thus online communities can be seen as information filters and powerful campaigning-tools. The question arises what motivates users to participate in online communities. Basically, they want to exchange information (Ridings et al., 2002). They go into communities for social support, entertainment and even searching for friendship (Ridings and Gefen, 2004). In online communities there is massive information availability and simultaneously the distribution of the information appears to be very efficient. There are low barriers to communication as online communities are a tool for group interaction. This also fosters a better access to competitive offerings (Banks and Daus, 2002). Briefly, users serve each other in online communities (Myron, 2004). Online communities enable people to communicate regularly without significant economic or other costs and without being in close proximity (Etzioni and Etzioni, 1999).

Companies and online communities

Firms can benefit from using online communities (Porter, 2004). Before long the ability to manage and create virtual communities is expected to become a distinguishing feature of nearly every successful business (Williams and Cothrel, 2000). Dominant communities will emerge in each topic area, and companies that learn how to connect communication and other contents are well positioned as organisers of strong communities (Armstrong and Hagel III, 1995). By focusing on one-to-one communication that has become feasible through the advent of the internet, there is a certain danger to ignore many-to-many interaction (Maclaran and Catterall, 2002).

There are three main possibilities for companies: They can ignore the existence of communities, they can "lurk" on the users (i.e. watch and analyse the behaviour of users without them knowing) or they can proactively approach them and develop a relationship (Moon and Sproull, 2001).

The first option, ignoring the existence, does not appear to be a promising one. As has been shown earlier, online communities are a growing phenomenon that can generate a lot of power. Unsatisfied users can have a high impact on the image of a company (Leizerov, 2000, Maclaran and Catterall, 2002). The second option, lurking on the users, appears tempting. An important aspect of online communities is that users interact with each other and not directly with the company. According to Larry Keeley, president of Doblin Group, a Chicago based consulting firm, "The best way to understand customers is to study them under normal, natural conditions" (Martin, 1995, P.86). If users interact with each other they will not falsify (intentionally or without intention) requirements. However, there are ethical doubts if this procedure is justifiable. In addition, when users generate ideas for a new product and the company has been lurking it will be difficult to start interacting with the users as they will notice that the company has been a "spy" and therefore might be put off by the behaviour of the company.

Thus the third option, taking a proactive approach and getting into contact with users in online communities appears to be the most promising one. A company which has successfully taken this approach is for example Lego (Justus, 1999, Moon and Sproull, 2001, Markus, 2002).

There are two possibilities to start interacting with users. The company could start its own online community. This might be a good approach because Jeppesen and Frederiksen found out that innovating users want to be recognised by the company and therefore might join the community of the company (Jeppesen and Frederiksen, 2004). However, it has to be taken

into consideration that a number of communities dealing with the topics in question might already exist. Thus, the second possibility is to get in contact with users in already existing communities. This is the path Lego has chosen. They entered a user-run community to find that the users were willing to share their ideas with them (Moon and Sproull, 2001).

Companies can strongly benefit from the use of online communities. They can leverage them to fulfil their business goals, such as

- Increase traffic on their website (Kim, 2000, Banks and Daus, 2002)

- Increase revenues from advertising (Rothaermel and Sugiyama, 2001)

- Increase the strength of their brand (McWilliam, 2000)

- Leverage positive word-of-mouth (Naylor, 2000, Banks and Daus, 2002)

- Increase sales (Brown et al., 2002) and

- Offer better product support (Armstrong and Hagel III, 1995)

Online communities can facilitate stronger relationships between firms and customers. This can lead to a better flow of feedback about the products and additional requirements for new, improved products. Further, companies can take advantage of online communities to generate innovative ideas in cooperation with users.

Online communities and innovations

It has been shown that users are an important source of innovations. Online communities are used by users as well as by manufacturers for many purposes. In the following we will highlight how online communities and innovation fit together.

In the literature three different ways of using online communities in the area of innovations are currently being discussed. These are the open source movement, toolkits for user innovations and the use of third-party communities by companies.

The open source movement has been analysed to a great extend (Lakhani and von Hippel, 2000, Raymond, 2001, Lerner, 2002, von Hippel, 2002, Open Source Initiative, 2004). Open source signifies the development of software in a community of users. This collaborative development intends to offer software free of charge to user. At the same time users are able to modify the software themselves and thus improve it and make the improved version available to others. As companies usually intend to sell the products they develop this approach is only applicable to a limited extend.

The concept of toolkits for user innovation consists of an available basic setting and a library of tools which can be used to modify existing parts and create new features. Either single users or a community of users work together to increase the offerings of an existing concept. This has mainly been analysed in the areas of computer-games and music software (Franke and von Hippel, 2002, Jeppesen, 2002, Schreier, 2003, Franke and Piller, 2004, Jeppesen and Frederiksen, 2004). In this field the innovative space for development of users is rather limited as they usually are based on a library of tools to be used for modifying existing features but will not really create new things.

The use of third-party communities by users has the clear advantage that communities have already been established around a product and the company can work together with them to improve their products and create new ones. Lego is one of the examples that has been analysed to a great extent (Justus, 1999, Moon and Sproull, 2001, Markus, 2002). Lego got into contact with an existing community and now they are exchanging their views and adopting ideas that have been created in the community. Another company that employs this approach is SAP. Here an independent community is used among others for feedback about products (see for example www.asug.com, America's SAP users' group).

One approach that has not been analysed so far (to our knowledge) is using company-own communities. We believe that this approach has advantages for companies and thus deserves more attention. As shown above, companies follow different objectives with their online communities. However, the establishment of an online community is an important task for all kinds of companies. Some companies already have online communities, using them for different purposes. So expanding the use of online communities to the generation of innovative ideas appears sensible. Generating innovative ideas is not a primary aim for most online communities. However, we are of the opinion that they are suitable for this objective and companies should employ their online communities also for this task.

Since there is only a limited body of research available, at first some ground work has to be established. To start the process of theory-building, a qualitative approach has to be taken (Eisenhardt, 1989). In our paper we analyse two different online communities run by companies, namely Sony VAIO and DELL. In the following we first give a short overview of the communities. Subsequently, a comparison of the communities is provided. Finally we develop propositions as to how a community should be structured in order to create innovative ideas.

The two communities have been selected as they both are active, i.e. a large number of messages are posted frequently. The communities are closely computer-related. Therefore a high affinity to the internet and new media can be expected and users will not be afraid of using these new media. To get a better idea of the possible impact of the two communities table 1 highlights the number of messages, of replies and how often each message has been read. All messages have been collected in March 2005. The message-threads have been sorted by date of the most recent message in the thread. For the VAIO community the initial messages go back as far as July 2004, in the DELL community only messages from 16 and 17 March were used.

	VAIO community			DELL community		
	Number of			Number of		
	messages	replies	read by	messages	replies	read by
Idea	3	18	814	2	10	140
Praise	5	114	4980	0	0	0
Complaint	7	173	4926	4	20	374
Question	15	219	5337	22	38	919
N/ A	0	0	0	2	1	33
Sum	30	524	16057	30	69	1466

Sources: VAIO: http://www.club-vaio.sony-europe.com/clubvaio/mvnforum/listthreads?forum=21
          DELL: http://forums.us.dell.com/supportforums/board?board.id=cc_pre_sales

Table 1: Overview of the communities analysed

CASE STUDY: THE SONY-VAIO COMMUNITY

Sony is a leading manufacturer of audio, video, communications, and information technology products for the consumer and professional markets (http://www.sony.com/SCA/index.shtml). VAIO is the Sony brand for PCs, notebooks and computer-related accessories.

Introduction of the Sony VAIO community

The community, called Club VAIO, is very active. It has close to 130,000 members. Next to the forum which will be analysed later there are a shop functionality, a section of opinions about VAIO where users can post their experiences with the product, an experience section where developers talk about the development of products, a learning section where online tutorials and manuals are available, a fun section with electronic cards and games, and a music section where a music tour is promoted.

To be able to enter and use the community a registration is required. To register, the serial number of a VAIO product and some personal information is required. The correctness of the

registration is verified via email. To personalise the profile a picture or avatar (animated picture) can be chosen.

The purpose of the community seems to be the creation of the image of an innovative, strongly design-oriented company. The willingness to share the experiences and stories of professional developers at Sony with users supports the open atmosphere of the club. The user is supposed to feel like a part of the VAIO community which not only contains other users but also the different functions of a global company – especially product development and design.

The Forum

The forum mainly serves the user-to-user communication. Here users can post questions, suggestions and any other comments in connection to Sony VAIO products and other topics of interest. The forum is subdivided into ten categories.

The first category is a public area containing the forum "Want to buy my first VAIO". This forum is mainly targeted at potential users who have not yet decided if they should purchase a VAIO product. This thread will be analysed in more detail later. There is a category with announcements where news for the community is posted.

In the category Club VAIO Website three forums exist with basic questions about the products and their features. Other categories are hardware, software and mobility. An interesting category is the Vizard category. Vizard is a program for multi media publishing which is being developed by Sony and other institutions. A beta version of the program had been distributed to users in the forum and industry-experts. They have tested the program and are reporting bugs and improvement requests, and give an overall feedback on handling and on missing features.

The category V-Generation is a general exchange area about users' lives, education and work. This category serves a more informal exchange between the users and helps to develop a community spirit where people get to know each other.

One category cannot be accessed by regular users. This is the category Sony Internal, a meeting point for Sony trainers. The interesting part about it is that it is in the centre of a community but cannot be accessed by the majority of the members. Despite this fact it is seen as a very interesting feature. Users see themselves in the core of the Sony organisation. From the Sony side, the trainers use the same community as their customers and therefore the probability of getting a better understanding for users increases.

At the bottom of the forum-page there is an overview of the community, including the size of the community by number of categories, threads, topics, messages and members. In addition the side contains information about the number of users online (members and guests) and the user-names of the registered users online.

The development of the members

After the subscription a new member has no status. The status gradually increases with the number of messages posted to VAIO Fan, VAIO Groupie, VAIO Guru and VAIO Master. In the literature reputation is seen as the key driver for commitment in a community (Hagel III and Armstrong, 1999, Kim, 2000, Banks and Daus, 2002). The different levels can be seen as representatives for hierarchical levels and thus a user with a higher level will enjoy a better reputation. Even a new member to the community can identify seniority at first glance. Thus this motivates users to commit themselves to the community.

Analysis of the "Want to buy my first VAIO" forum

The "Want to buy my first VAIO" forum has been selected because no expert computer knowledge is necessary to understand the messages; the messages appear to deal with the products quite critically and display feedback about the products. They are supposed to be a guideline for new potential users and thus show shortcomings and bugs that are encountered by both, new and experienced users. These messages are expected to be a good basis for improvement and innovative ideas. Furthermore, this section is comparable to a similar section of the DELL community discussed below.

In this forum 30 message-threads (i.e. the initial message and all replies to the message) were analysed – in total 554 messages. The replies to the messages were inspected in order to see if the other users agree, disagree, answer the question, have encountered the same problem or show any other reaction. The initial messages were grouped into four categories: Ideas, Praise, Complaints and Questions.

This forum is targeted at new potential users who consider buying a VAIO product. No subscription to the community is necessary to read the messages. It is thus surprising that the messages in this category are very critical. 25% of the messages consist of complaints about the product itself or about the service around the product. The most common reaction by other users to these critical messages was agreement. A large number of users had experienced similar problems. For a company, this does not seem like promoting their products. However, analysing these complaints might draw the company's attention to the areas of the largest improvement potentials for their products. When a large number of users agree that they

encountered problems with some issue, the company should know where to improve user-satisfaction.

50% of the messages were questions. 40% of the questions were answered by other users. Only in one case were the users unable to answer a question and advised the person who posted the question to contact Sony directly. The other questions were asking for advice, especially in regard to whether a Sony product or a competitor's product would be recommendable. Here the usual answer pointed towards Sony products. So in this case Sony benefited from bringing together a group of devotees who recommend the brand to each other. The same is true in the category praise. Into this category 17% of the initial messages were placed. Users just shared stories about the quality of the product and how well it works. These two categories, questions and praise, do not contain innovative ideas.

The category ideas contains 10% of the messages. The formulated ideas are minor improvements of the product. Nevertheless the suggestions of the users indicate specific areas of improvement. Taking into consideration that there were 18 replies in total to the ideas raises and that the messages were read by 814 users the potential impact becomes clear. The question arises whether number of ideas and intensity of discussion would increase when expanding the number of messages analysed. In any case, 10% of message-threads containing innovative ideas is a promising finding.

Conclusion on the Sony VAIO Club

It seems that Sony managed to create an active community. This community consists of 10-15 core members, VAIO Masters, who appear to be online every day. They take the responsibility to answer questions and comment posts of other users in the forum.

No breakthrough innovative ideas were suggested in the sample analysed. However, the ideas and the complaints about the product itself and the service could mark an outset at least for improvements. A more thorough analysis of the community would help the company to identify areas for revision. Equipped with the ideas from the community a substantial improvement appears possible.

CASE STUDY: THE DELL COMMUNITY

DELL is a leader in the computer industry and prides itself of its excellent connection to its users, at least partly due to its business-model of the one-to-one direct relationship. The forum that has been analysed can be found at http://forums.us.dell.com/supportforums?category.id=dellperiph.

Introduction to the DELL community

No explicit information about the number of the registered users is given but looking at the number of the boards (categories) and forums, and the number of messages in each of them the community appears to be very large. Also the level of activity is high. The community offers product and order support. Problems can be reported and the order status can be followed. Furthermore there is a learning area providing online and classroom-based tutorials for different customer groups.

The DELL community is not constructed with as many pictures and other graphical elements as the VAIO community. This embodies the self-comprehension of the two companies. While Sony is very design-driven, DELL is more functional. To enter the forum and read messages no registration is required. Only to post messages the user has to be registered. Anyone, independent of the possession of a DELL product, can register. The registration is verified by email. The user can enter a personal biography and choose an icon which appears next to their messages. The user can enter a service tag and a customer number but this is not required.

The Forum

The DELL community is much larger than the VAIO community. This forum has been selected because it corresponds well to the VAIO forum for potential future users –thus comparability is given. On the first level it is categorised according to user groups into home and business systems. Further categories are electronics and additional boards. Each of these again is subdivided into numerous categories according to components. Within these subcategories message-threads are available.

In the forum there are a large number of message threads. However, the number of replies is much smaller than in the VAIO community. The average number of replies ranges between 2 and 4. On the top of the thread-list there is an official DELL statement by a moderator. In most message threads this official message contains a summary of earlier questions and a frequently asked questions section.

Analysis of the "Customer Care/ Pre-Sales" forum

Like in the VAIO community 30 message-threads have been analysed. Due to the short threads only 99 messages (initial messages and replies) were taken into consideration. The threads have also been sorted into the four different categories: Ideas, Praise, Complaints and Questions, like above.

It is stunning that there have been no product complaints and no praise of the products among the threads analysed. The complaints all revered to service-problems. The majority of the messages, nearly 75%, are questions. Most of these questions address the functionalities of the products and component specifications. 35% of the questions did not have any replies at all. The majority of the questions were answered easily by other users or suggestions how the problem could be solved were given. In one incident the moderator answered the question. This shows that the messages are read by DELL employees. However, they only seem to become active when users ask questions that other users cannot answer. Still critical comments are present in the community. This means that even though the messages are read they are not censored by DELL. This again is pleasantly surprising as everybody can read these posts. The 30 analysed message-threads were read by a total of 1,466 people. Thus on the one side there is a certain danger for DELL as the reputation might suffer. On the other side users would notice censorship and communicate about it in a foreign community – i.e. without access by DELL. This could damage DELL's reputation.

The remaining messages are equally distributed between complaints about the service and ideas. The complaints are mainly directed towards the service-hotline which seems to be chronically overloaded, and problems with the repair of broken equipment.

The ideas that have been submitted are of different natures. One suggests the diversification of DELL into a different product category that is already offered by other computer manufacturers. The other idea is related to problems encountered in their computer. Here the user found a way to resolve the problem. The second idea could easily be adopted by DELL to improve their products. It is only a minor improvement but according to the replies, users seem to encounter this problem quite frequently.

Conclusion of the DELL community

The intention of DELL by creating this community probably was to disburden the official support. This certainly was successful. The community strongly focuses on this matter. One user asks a question. This question is answered by another user but no discussion is generated. This is not the best soil for generating an innovative environment.

In the following the two communities will be compared directly and following this, propositions will be generated which characteristics a community should have in order to generate innovative ideas.

COMPARISION OF THE COMMUNITIES AND GENERATION OF PROPOSITIONS

After having analysed at least a part of the two communities in the following we will derive propositions for the creation of an innovative community. The comparison of the two communities will be undertaken according to five different parameters.

Target group and environment

In both communities the target group are the users of the products the companies produce respectively. In the case of DELL the users are rather professional users who mainly want their devices to work and do not have the time to wait for service for a long time. In the VAIO community the majority of the users are home-users with the odd professional amongst them. However, users who post regularly in the community appear to be quite heavy users of the equipment.

These different target groups are reflected in the environment created for the communities. While DELL is very functional, the VAIO community is designed to create a more entertaining and social environment which invites the users to stay. As can be seen in the communities, DELL users ask a question and this question is answered but no discussion is generated. Thus we expect that a more social and entertainment-driven community is more suitable for creating an innovative environment. Our first proposition is:

A social and entertainment-driven community is more likely to generate innovative ideas for product improvements.

Access

The access is restricted in both communities. This means that the user has to be registered in order to post messages and in the case of VAIO even to read most of the messages. In the DELL community everybody can register, no matter if they own a DELL device. In the VAIO community the user needs a product identification number of a VAIO product. Without the number they are not able to register. This approach restricts the access and makes sure that only VAIO users can access the community. In the case of DELL, where everyone can register, the group of users does not exclusively consist of DELL users.

It is obvious that only users are able to find week spots and generate ideas for their improvement. Thus restricting the access by requiring an identification number to register makes the community more exclusive and reduces the risk of spam. In addition the additional

effort necessary to register will lead to a self-selection of users and only committed users will become members. This leads to our second proposition:

A restriction of access to the community will keep unmotivated users outside and enhance the focus. Thus the innovative abilities of the community will flourish.

Moderation and freedom to post

The DELL community is obviously moderated. The company-own moderators are marked by the DELL logo. However, the moderators stick to certain areas of the community and do not post messages in the user-dominated threads. The areas where the moderators are active are topics that can only be answered by company-personal. The topics deal with order and shipping details. In the other areas posts by moderators hardly ever occur.

In the VAIO community no obvious moderation can be detected. However, the community is at least being observed. No active moderation is going on. In the category "announcements" it becomes obvious that the user "clubuser" is an official Sony representative. The user does not have a special identifier (like the logo in the DELL community) and their hierarchy is just a normal level which every user can reach by just posting sufficient posts.

The moderators do not limit the freedom to post in either community. Of course vulgar language is not allowed but critical messages do occur quite frequently. Also the tone of some messages is very aggressive and accusing. Still the moderators do not try to resolve the issues by explaining the circumstances.

For the generation of innovative ideas the freedom to post critical messages appears to be extremely important. This is something both communities follow. However, a lot of companies do not grant this freedom as McWilliam found (McWilliam, 2000). Thus the third proposition is:

A community with an unrestricted freedom to post even very critical messages is more likely to generate innovative ideas.

Organisation of threads

In the DELL community there is a large number of threads, organised by product group and within the different product groups again subdivided for example by hardware parts (monitor, modem, hard drive etc.). Through the large number of subgroups the length of the different threads appears very limited. The most frequent number of replies are only 2 to 4. By the detailed subdivision it is easy to find the specific product or component the user is looking for.

In the VAIO community the average number of posts within a thread is much higher but the number of categories and subgroups is lower. This way the community appears to be more active. There are fewer messages that are unanswered than in the DELL community. In the VAIO community real discussions emerge. This is more likely to lead to innovative ideas than a pure question-and-answer approach. This leads to our fourth proposition:

Communities that are organised to facilitate discussions are more suitable for generating innovative ideas.

Hierarchy in the forums

In the VAIO community there are different levels of hierarchies which indicate seniority and commitment. The names of the hierarchy levels are chosen to indicate expertise. Users can become gurus and masters. In contrast to these names there are only two identifiers in the DELL community, member and regular. As earlier research has shown reputation is the main driver for commitment in a community (Constant, 1996, Gurak, 2001, Dickinson, 2002). Through the different levels of hierarchy in the VAIO community the motivation to be active is enforced. Through the higher commitment the likelihood of intense discussion and by this generation of innovative ideas is raised. This leads to our fifth proposition:

Communities that offer a means of displaying reputation within the community will receive more commitment and this finally will lead to more innovative ideas.

CONCLUSION AND FUTURE RESEARCH

In this article we have stressed that users are an important source for innovation. We have demonstrated that online communities are an interesting source for user-ideas. To generate a set of propositions we have provided case studies of two communities. Even though these communities are not targeted at creating innovative input, it appears that they are suitable for this task. In order to build an online community for the development of innovative ideas we have found five characteristics which we expect to improve the innovative capabilities of a community. Communities should be social and entertainment-driven, the access should be restricted, liberty to post critical messages is necessary, the threads should be organised to create a lively discussion and it has to be possible to gain reputation. A summary of the propositions is provided in table 2.

Parameter	VAIO	DELL	Proposition
Environment	entertaining and social	functional	A social and entertainment-driven community is more likely to generate innovative ideas for product improvements
Access	product ID required for registration	registration required	A restriction of access to the community will keep unmotivated users outside and enhance the focus. Thus the innovative abilities of the community will flourish
Moderation and freedom to post	no moderation, no restrictions to post	lightly moderated, no restriction to post	A community with an unrestricted freedom to post even very critical messages is more likely to generate innovative ideas.
Organisation of threads	few, but extensive threads, creating discussions	many, very short threads	Communities that are organised to facilitate discussions are more suitable for generating innovative ideas.
Hierarchy in the forums	5 (none, groupie, fan, guru, master)	2 (member, regular)	Communities that offer a means of displaying reputation within the community will receive more commitment and this finally will lead to more innovative ideas.

Source: authors

Table 2: Parameters and propositions for innovative communities

The implication for practitioners should be that they recognise the potential of online communities. To develop innovative ideas with communities they need to be managed in an adequate way. This of course is a great challenge as hardly any experiences are available.

Our research represents only a small step. The developed propositions need to be further expanded and tested. Different approaches have to be developed and other industries have to be taken into consideration.

We think that it is necessary to draw the attention of researchers as well as of practitioners towards online communities and their potential implications on the development of innovation-related topics. Online communities are a suitable tool in this area and need to be analysed more closely.

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