Abstract

This paper examines challenges involved in managing product-centered communities. Using the notion of customer role ambiguity, the paper explores the ambiguity involved in balancing sound business modeling with voluntary customer participation in a computer gaming setting. The case study identifies three different customer role ambiguities – role absorption, business model violation, and non-organizational network elements – with important implications for community management. We suggest that an understanding of these implications is critical for making product-centered communities viable alternatives to traditional software development.

1. Introduction

Many of the most viable and flourishing virtual communities on the Internet are product-centered. The Linux community [16, 26] and the Doom community [9] are two examples of communities that are closely associated with particular products. Many authors note how these types of communities have considerable commercial potential in terms of customer relations [8], marketing [10], and product development [34]. The underlying assumption in all these accounts is that virtual communities are useful for involving customers as co-producers in activities that traditionally are performed by companies only. In short, they portray the customer as both value consumer and producer.

While this enhanced customer role (both consumer and producer) presents companies with new opportunities, it also puts forward new organizational challenges. Needless to say, there is potential role ambiguity involved in crossing the traditional producer-customer boundary. On the one hand, customers act in the role of producers by devoting time and energy to value-adding activities such as product development and marketing without monetary compensation; on the other hand, the customers act in the role of consumers of the value produced by these activities. While there exists research on customer role ambiguity in marketing, see e.g., Beard [2], Webb [33], previous research on virtual communities seems to overlook this issue. How can we understand customer role ambiguity in community management?

In this paper, we identify customer role ambiguity as a critical issue for successful community management practice. Using a case study of a computer gaming community, we illustrate how customer role ambiguity can emerge in product-centered communities and, furthermore, suggest certain themes for future research on the topic.

2. Customer Role Ambiguity in Community Management: Related Literature

2.1 What is Community Management?

In reviewing the literature, one can see that community management is broadly referred to as the activities of community development and community cultivation. Being at an early stage, the field of community management tends to be associated with a variety of aspects such as interaction and information design [19, 20, 24], technical platforms and system architectures [15, 28], communities as business models [29, 30], communities as collaboration platforms [14], identity-construction and trust [6, 17, 31], and the open source management [16, 26]. While this body of knowledge is important in understanding the characteristics and perceptions of the emerging field of virtual communities, it portrays a rather fragmented picture from which it is difficult to extract a common understanding of community management.

Throughout this paper, we refer to “community management” as the activity of establishing, maintaining, and re-producing a virtual community for commercial purposes. One distinctive feature of
community management is that parties outside the traditional organizational boundary handle parts of the management activities.

2.2 Customer Role Ambiguity

Previous research on community management typically recognizes how virtual communities intersect with an enhanced customer role. Hagel and Armstrong [7, 8] and Martin [18], view virtual communities as tools for creating economic value by involving customers in business processes. In other words, apart from being merely consumers of the value created, customers also produce value when engaging in virtual communities. While this opportunity is promising and especially relevant for companies aiming at the business-to-consumer market, however, the community management literature tends to overlook that this enhanced customer role is likely to come with role ambiguity.

To better understand role ambiguity, one can look closer at how this construct has been conceived in organizational theory, see Kahn et al [12] and Jackson and Schuler [11]. This literature refers to role ambiguity as an individual’s uncertainty about the expectations surrounding his or her role in a job-related context [2]. One of the negative consequences of role ambiguity is that it interferes with goal accomplishment, which leads to job dissatisfaction. Even though role ambiguity has been mostly used to explain job stress and dissatisfaction, there are reasons to believe that the concept can be transferred to describe the uncertainty that customers or vendors might feel about the expectations surrounding the enhanced customer role in product-centered communities. One reason for this is that marketing researchers such as Beard [2], Webb [33] and Singh [27] already have illustrated how role ambiguity can be transferred to ambiguity occurring in producer-customer relationships.

In what follows, we use a case study of a computer gaming community to illustrate how customer role ambiguity can occur in product-centered communities. These illustrations work as a basis for suggesting four themes for future research on customer role ambiguity and its implications for community management practice.

3. Illustrating Customer Role Ambiguity: The Clusterball Case Study

3.1 Research Site

Daydream Software AB is a Swedish company that develops computer games for the PC market. The company unifies competence concerning game development and interactive online entertainment. Up to 2001, the company has released three computer games: Safecracker, Traitors Gate, and Clusterball, of which Clusterball was the first game to be played, distributed and paid for via the Internet.

In addition to technical innovations related to the online game Clusterball, Daydream also extended the company’s policy in terms of product development when developing the game. In a prospect that was published and distributed to shareholders in early 2000, the CEO of Daydream declared, “The customer is our best product developer”. The reason to this was twofold. First, there was recognition of the value of customer expertise. The possibility to extract customer knowledge and incorporate it in new products was considered valuable for the process of product development. Second, the relationship between the company and its customers would benefit in that the two parties came closer due to a shared interest in the product. It was believed that Daydream could learn about its customers and that this would improve the company’s ability to respond to general changes in customer demands and also to better meet individual preferences.

To realize the vision of involving the customers in product development, there was a need for a technical solution that enabled Daydream to interact with its customers. To serve this need a virtual community and a customer relationship management (CRM) database were developed. In the virtual community all players of Clusterball could register as members and interact with each other and with employees at Daydream in discussion forums or in a chat. In being a virtual meeting-place for all gamers, the virtual community provided the possibility to establish contact with a large network of gamers that could be of interest to Daydream. In addition, the CRM database system made it possible to learn about individual gamers and their preferences.

3.2 Research Methodology

This study was conducted as an interpretive case study [13, 32] in which assumptions and intentions held by different organizational actors at Daydream were of importance in our understanding of the context. The study was conducted between January and October 2000 and included 600 hours of participant observation in which we got to know the people and the every-day work that was carried out at Daydream.

The data sources were of three different kinds. First, data sources such as document review, official press
3.3 The Clusterball Case

As outlined earlier, Daydream intended to involve its customers in developing Clusterball. By introducing “Clusterball ambassadors” and by involving the customers in parts of the design work, the company enhanced the role of its customers. However, to manage this enhanced customer role brought with it certain difficulties both for Daydream and the customers.

Below, we use this case study of a computer gaming community to illustrate the enhanced customer role and how, as a result, customer role ambiguity can emerge in product-centered communities. The illustrations serve as the base for our further discussion on how customer role ambiguity might have implications for community management.

3.3.1 Role Ambiguity Created by Role Absorption

In order to strengthen the relationship between the company and its customers, the marketing department at Daydream introduced the concept of “Clusterball ambassadors” soon after the game was released. An ambassador would be a person with good skills in playing Clusterball, an active member of the community and a person of good language and moral that would have a positive influence on other community members. Also, an ambassador would be a person with the ability to handle conflicts without loosing the temper. According to the community manager at Daydream, there were several reasons for introducing ambassadors to the game. First, they would be able to introduce the game to their local network of contacts such as friends, people in their hometown and people in surrounding areas. Second, they would be helpful in the work of improving and realizing community activities such as administration and hosting of Clusterball tournaments. Finally, they would strengthen the relationship between Daydream and the rest of the gaming community. In doing this, the ambassadors would contribute both to daily company activities as well as in representing Daydream in its contact with potential customers.

The first ambassadors were appointed in the autumn of 2000. These persons were selected by employees at Daydream and were individually contacted by e-mail in which the community manager at Daydream explained the concept of Clusterball ambassadors. In all, five persons of different nationalities were selected and all of them were interested in becoming ambassadors in terms of what Daydream said that they expected from them.

In short, the initiative to appoint Clusterball ambassadors was successful in that it engaged gamers in company-related work. By the end of the year 2000 the ambassadors had hosted their own tournaments as well as contributed with content to the Clusterball website.

However, to enhance the customer role by having ambassadors as representatives of the company also brought with it customer role ambiguities. After a couple of months, there were misunderstandings between Daydream and one of the ambassadors regarding his behavior. From the company’s point of view the ambassador had become too absorbed by his role as an ambassador and representative of Daydream. This was reflected in the initiatives he took in the community. Instead of being only a supportive link between the company and the gamers, he started to act as if he ruled the community and the community members. The ambassador had a fierce tone and commented other gamers in a dominant way. This behavior was considered a bad role model and the decision from Daydream was to let the ambassador leave his assignment.

According to the ambassador, one major problem was that the terms from Daydream were unclear which made him unsure of what he was expected to do on the company’s behalf. Due to ambiguities in what the intentions with Clusterball ambassadors were, he found it hard to combine his role as an ordinary gamer with the role of an ambassador representing the company. Most often, difficulties arose when he got frustrated because of an unfair game or an irritating posting to the community forum. In such situations, he acted as if he ruled the community by giving other community members reprimands in a dominant way.

In sum, the misunderstandings between Daydream and the ambassador illustrate the problem to handle the enhanced customer role. In this case, the ambassador had difficulties in handling his role as both an ordinary gamer and an ambassador, which resulted in the company loosing trust in him as a company representative.

3.3.2 Role Ambiguity Created by Business Model Violation

Computer games are often released with a separate game engine and additional maps. According to this
business model the customer is charged for the game engine but not for the additional maps that can be downloaded as patches to the game or bought as complementary CD-ROMs. For example, in the online multiplayer game Quake the customers are charged for the game engine and a predefined set of “maps” (the landscapes in which the game takes place). Additional maps and expansion packages can be downloaded and are free of charge. Moreover, the Quake gamers are encouraged to design their own maps, as so called “mappers”. As Quake is a successful and widespread game many other games are developed and released according to this business model. Hence, most gamers are used to be charged for the game engine and then enjoy complimentary features for free, as well as they are used to be part of the design work.

In opposite to this, Daydream was to profit not by selling the game engine but instead by selling Clusterball venues. On July 17 2000, the Clusterball game engine could be downloaded for free from the Clusterball website. After downloading the game engine the first two venues could be enjoyed for free. Thereafter, all additional venues had to be purchased by the customers. Another difference was that all the Clusterball venues were pre-designed by in-house developers at Daydream. Even though the gamers were encouraged to contribute to the design in that they could leave their suggestions on improvements in the virtual forum, employees at Daydream conducted the actual design work.

Considering the experience of most gamers to design parts of computer games (for example maps in Quake), it is not surprising that the Clusterball gamers soon wanted to have a stronger influence also over the design of Clusterball. To better meet this need, the gamers were offered the possibility to design their own “skins”, i.e., the look of the ship that you are flying when playing Clusterball. To be able to express oneself by designing an original skin was an important feature of the game and it got much attention in the Clusterball community. However, as many games offer the possibility to design more than particular features such as skins, the gaming community soon strived for more. On August 27, there was a posting to the virtual forum in which one of the gamers asked people at Daydream about releasing the source code of Clusterball. This would imply that all customers would be able to modify the game and that the control of its development to a greater extent was outside the company producing it. This question was never put attention to by Daydream since a critical issue, and a prerequisite for the business model, was to make profit on the product by selling additional venues developed by in-house programmers.

In sum, this example illustrates the difficulties experienced in having customers as both consumers and producers of value. On the one hand, Daydream wanted to encourage voluntarily participation from its customers. On the other hand, there was a need to profit by commercial utilization of this participation. There are reasons to believe that this issue echoes the challenge of keeping the community members engaged as product developers at the same time as they constitute the group on which profit is to be made.

### 3.3.3 Role Ambiguity Created by Non-organizational Network Elements

Daydream intended the Clusterball community members as important components in diffusing the game. Using their networks of gamers, the community members were able to break the news about Clusterball to well established gaming communities on the Internet. This activity was important in the process of engaging a critical mass of gamers in Clusterball tournaments and team competitions. Following this engagement process, several communities outside the direct control of Daydream were established around Clusterball. On Clusterball fan sites such as ballsnatchers (www.ballsnatchers.com), clusterkings (www.geocities.com/clusterballkings) and kryptonweb (www.kryptonweb.de.vu), the most experienced Clusterball gamers contributed a lot in building an interest in the game by providing virtual discussion forums, reviews on gaming sessions and skin tutorials for less experienced gamers.

While this customer-driven activity was important to diffuse Clusterball, however, it also produced some unexpected customer role ambiguities. First, the appearance of individually developed Clusterball websites made it hard to tell where information originated. Without making it explicit to the community of gamers, Daydream supported certain fan sites by providing the developers with content and news about Clusterball. While Daydream argued that this made information even more credible since it was believed to originate in the gaming community itself, this made it hard for the customers to tell whether the information came from Daydream or from individual gamers interested in telling their own story on Clusterball. Second, the diffusion of Clusterball could no longer be fully controlled by Daydream since the activity of developing and maintaining fan sites were outside the organizational boundaries.

### 4. Customer Role Ambiguity in Community Management: Three Suggested Research Themes
As illustrated by the Clusterball case, the enhanced customer role in product-centered communities brings with it customer role ambiguity. In what follows, we explore how customer role ambiguity adds new dimensions to three traditional elements of business organization: trust building, business modeling, and organizational transformation.

4.1 Trust Building

As shown in research on interaction in virtual communities, see for example Rheingold [25], Donuth [6], Turkle [31] and Markham [17], trust is an important property in community cultivation and a prerequisite for any virtual community to evolve in the first place. In the literature cited above, however, trust is studied among community members in non-profit communities, i.e., there is no commercial dependency between the parties involved.

Recently, trust has been recognized as one of the key factors in commercial settings such as electronic commerce and online bidding processes [1, 5]. This literature focuses on how to establish trust between trade parties that never meet physically. One of the lessons learned is that better models and representations of trust need to be developed due to different kinds and conceptions of trust [4, 5].

So, what are trust implications of the enhanced customer role in product-centered communities? To what extent can customer role ambiguity negatively influence trust building in product-centered communities? The enhanced customer role implies an increased dependency between vendors and consumers. When using the community to extract customer knowledge and incorporate this in products, a sudden loss of devotion and trust of participant customers would be devastating for producing value. Looking at the Clusterball case, Daydream appointed certain gamers as ambassadors of the game. In many respects, the cooperation between Daydream and the ambassadors worked well in that the two parties shared the similar interest of diffusing Clusterball among a larger number of players.

However, the case also illustrates how the enhanced role of the customers can be hard to manage, and how misunderstandings can occur in such relationships. Recall that one ambassador had to leave his assignment because he virtually became absorbed in his role as Clusterball ambassador. It is likely that this role absorption negatively influenced the trust built between the community and Daydream. In view of this role absorption, Daydream learnt that there are reasons to make their expectations on Clusterball customers more explicit.

The Clusterball case points out at least two important research questions that the current literature on trust and virtual communities fail to cover (see Table 1): In what situations can customers work as trust builders in product-centered communities? To what extent can product developers reduce customer role ambiguity by making customer expectations explicit?

4.2 Business Modeling

While it is difficult to assess and model the value generated in virtual communities, there is little doubt that successful communities do generate value for their members. This value can be, for instance, the source code in open source communities, the gathered expertise in specialized communities, or the shared pleasure of communication in MUDs.

However, the commercial setting of product-centered communities makes the value generation question more complicated. The sponsor of the community basically expects the community to generate value that can be exploited commercially. In short, this expectation creates a potential conflict of interests between the sponsor and the community members in product-centered communities, which we need to know more about.

The Daydream case illustrates that business model violation can work as a source of customer role ambiguity. Since the Clusterball business model was designed so that revenues came from selling additional venues rather than from selling the game engine, Daydream had to downplay customer involvement initiatives that were related to the venues. This downplaying occasioned ambiguity in light of Daydream’s explicit intention to involve the customers in the product development process. There is little research, if any, on business model violation in relation to community management. Important research questions are (see Table 1): What implications do the enhanced customer role have for the design of online business models? How does one design profitable business models that still encourage voluntary customer participation?

4.3 Organizational Transformation

As noted in IS literature, see e.g., Bloomfield et al [3] and Orlikowski [21, 22], information technology and organizational transformation is often intertwined, and establishing successful community management is likely to require organizational transformations of different kinds.
There are recent accounts on how “internetworking” technologies such as extranets, intranets, and communication platforms make organizations more open [23]. Product-centered communities are likely to contribute to such a development in that they enhance the customer role over the traditional producer-consumer boundary. Enhancing the customer role means that the distinction between the organization and its context gets indistinct. When the customer partly represents the organization, it is likely that the design of the organization needs to be adjusted in accordance with this enhanced customer role.

The Clusterball case illustrates how the enhanced customer role makes the distinction between the organization and non-organizational elements blurry. While benefiting from both the official Clusterball community and the network of non-organizational communities (ballsnatchers, clusterkings, and kryptonweb) in diffusing the Clusterball game, Daydream simultaneously lost control over the diffusion process to parties outside the organization. This lost control cuts both ways. On the one hand, it creates novel forms of intermediation. On the other hand, novel forms of intermediation might, for instance, confront existing market plans, which suggests that the sponsor of a product-centered community needs to adapt its market organization to reflect a situation where marketing is conducted both inside and outside the traditional organizational boundary. These kinds of problems are generally under-researched in the community literature. Important questions are (see Table 1): What are the novel forms of intermediation created by the enhanced customer role in product-centered communities? How can organizational structures and processes be designed to reflect/support the novel forms of intermediation that is created by the enhanced customer role?

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5 Conclusion

This paper argues that the enhanced customer role found in product-centered community settings is likely to come with customer role ambiguities such as role absorption, business model violation, and non-organizational network elements. We suggest that while role ambiguity is a critical issue for community management, it is nevertheless overlooked by current literature on this topic. In order to progress our understanding of how to successfully manage communities for commercial purposes, we therefore need to assess the consequences of customer role ambiguity for classic dimensions of business organization such as trust building, business modeling, and organizational transformation. We suggest that such an understanding is critical to make product-centered communities a viable alternative to traditional software development.

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7. References


