

Dynamic Characteristics of Online Co-Creation Community with Commercial Output

Santi Effendi*^a and Lukas Prochazka^b

^a Department of Strategy and Management, The Norwegian School of Economics and Business Administration, Bergen, Hordaland, Norway. Email: Santi.Effendi@nhh.no

^b Department of Management, University of Economics, Prague, Czech Republic. Email: xpro119@vse.cz

Abstract

The importance of online co-creation communities in new product development are recognized by academia and industry. The literature has hinted that online co-creation community as any community in general evolves over time. Most studies on this community considered merely its current state, neglecting its dynamic characteristics. Using Preece's (2000) purpose-policy-people model and netnography as research method, we analyzed the dynamic transformation of an online co-creation community with commercial output that takes place during the period where the product was being co-created (i.e. co-creation phase) and the period where the co-creation output was being commercialized (i.e. commercialization phase). Our sample is an online co-creation community comprising of 470 online members, who co-created a tangible output, namely the Business Model Generation book. Our data comprises 169 postings, including 1,360 comments, pictures, and attachments. We find that the community's purpose and policy may change depending on the phase where the community is at. Motivations to join and contribute to the community advancement and the collaborative activities are closely related to the existing purpose and to the extent that the current policy fits the member's interest. The pride expressed by members can change during the two phases depending on the purpose, the experience during collaborative activities, the community identity, and the collaboration output. Orientation and concentration of collective innovation, as we found out, may change overtime and hence, alter the community's characteristics. Collaborations and member interactions may take place in international or regional arena and in virtual or offline space based on what is deemed effective in a particular phase. We conclude that the purpose-policy-people components experience a dynamic change during the co-creation and the commercialization phases.

Introduction

Joint-development activities with online consumer groups have proven to generate commercially successful consumer goods (Shah, 2000; Füller, Jawecki, & Mühlbacher, 2006). This phenomenon has been recognized by both academia and industry. Most studies provide characteristics of online co-creation community by considering merely its current state (Von Krogh, Spaeth, & Lakhani, 2003; Füller et al., 2006; Kozinets, Hemetsberger, & Hope, 2008; O'Hern & Rindfleisch, 2008; Davidovici-Nora, 2009), neglecting the fact that online co-creation

community as any community in general evolves over time. The literature has given only a vague hint concerning various aspects influencing the development of such community (Kozinets et al., 2008; O'Hern & Rindfleisch, 2008; Davidovici-Nora, 2009). We address the research gap by treating the change in the characteristics of online co-creation community as dynamic continua. In particular, we investigate an online co-creation community with commercial output. The community comprises 470 online members, who co-created a tangible output – the Business Model Generation book. We explore the transformation of the BMGen community characteristics from the period where online members collectively created the BMGen book (i.e. *co-creation* phase) into the phase where the BMGen book was already created and being commercialized (i.e. *commercialization* phase). We pose the following research question: “How do the characteristics of online co-creation community with commercial output differ at the phase of co-creation from the characteristics at the phase of commercialization?”

Literature Review

Dynamic Characteristics of Online Co-Creation Community

We are aware of the importance of online consumer community in the co-creation process in many areas (Shah, 2000; Von Krogh et al., 2003; Füller et al., 2006; Davidovici-Nora, 2009). By providing more original and valuable ideas than professional developers (Kristensson, Gustafsson, & Archer, 2004) and by allowing the companies to comprehend and anticipate consumers' need (Matthing, Sanden, & Edvardsson, 2004), online consumer communities have proven to benefit the process of product or service innovation (Hsieh & Chen, 2005). The literature has recognized that online co-creation community, like any other society in general, also undergoes stages of development (Wenger, McDermott, & Snyder, 2002; Pitta & Fowler, 2005; Davidovici-Nora, 2009), meaning that such community experiences certain evolutionary changes, hence, possesses dynamic characteristics. However, we know little about the development of this community. The community aspects that may change and the factors influencing these changes have not yet been explored systematically. Only few studies have attempted to construct a developmental model of online community (e.g. Wenger et al., 2002), but the model does not fit online co-creation community. We aim to use *purpose*, *policy*, and *people* elements for exploring the dynamic characteristics of online co-creation community with commercial output. These three elements are mentioned in Preece's (2000, p.10) basic definition of online community as “a group of *people*, who come together for a *purpose* online, and who are governed by *norms and policies*.” Based on the findings of several case studies (e.g. Von Hippel & Von Krogh, 2003; Davidovici-Nora, 2009), we divide the development of online co-creation community into two stages, namely *co-creation* and *commercialization* phases. The former stage refers to the period where joint-development activities take place, and the latter refers to the period after the activities end and the co-created product has been launched into the market.

Purpose

Purpose refers to shared interest or need that provides a reason for online community. *Purpose* affects member interactions and the community's characteristics (Preece, 2000) It defines the community's *practice* and *identity* and member identity. Practice is displayed through the complementary interaction of participation and reification (Wenger, 1998). To pursue shared interest and the community's objective, members participate in the co-creation process and in other activities, which connect the members together. Reification is realized when the community produces a co-creation, manifesting member experience into “thingness” (Wenger 1998, p55).

Repeated community practice overtime and the objective underlying the practice define the community and its members, giving them identity.

Pitta and Fowler (2005) consider shared interest, relationship building, and transaction as the relevant needs for consumers to join an online co-creation community. Shared interest is satisfied through sharing experiences, preferences and information among members within the boundary of common interest. Relationship is built around intense experience shared by members and may grow increasingly important over time, connecting the members with close and intimate ties. Transaction refers to the informational exchange, aiming for facilitating economic exchange.

The community identity affects the way members express pride, for instance, by identifying themselves with names related to the community. As a study by Zhang & Watts-Sussman (2008, p.63) on Donkey Pot Travel Forum reveals: “*Following the nickname of the forum (donkey pot), they [community members] proudly call themselves donkeys, a name not only implying the joint enterprise of the community but also symbolizing tolerance, persistence, contribution, and modesty in Chinese literature – all desirable characteristics for a backpacker.*”

Policy

Policy refers to tacit assumptions, rituals, protocols and rules guiding people’s interaction. As Preece (2000, p.94) stated “Communities need policies to direct online behavior.” A key *policy* of online co-creation community is that collaborative activities are typically conducted virtually, and thus, are not constrained by time, geographical, and physical boundaries (Kozinets et al., 2008). Arrasvuori and Olsson (2009, p.119) states that “The way the policy of an online community is defined and the intensity with which it is enforced can regulate or nurture participation.” In other words, *policy* may affect member motivation to contribute to co-creation activities. Shah (2006) argues that when collective knowledge development in the co-creation process is fixed and led by the companies, members’ freedom becomes restricted and their willingness to contribute tends to decrease. In contrast, *policy* allowing open access to collective knowledge provides members high autonomy, which is beneficial to nurture a high level of intrinsic motivation and psychological ownership, because such pool of knowledge may augment members’ knowledge and skills and connect them with like-minded others (O’Hern & Rindfleisch, 2008). This makes co-creation process enjoyable and satisfying.

People

People are the pulse of online community (Preece, 2000, p.82), referring to the characteristics of online co-creation community and its members and to the interaction among community members. We use the typology of online innovation community by Kozinets et al. (2008) and the characteristics of *lead users* vs. *non-lead users* identified by Von Hippel (2005). Kozinets et al. (2008) categorize online co-creation communities into four types. The goal-oriented communities are defined as *crowds* if contributors to the collective innovation are dispersed and as *hives* if contributors are a concentrated few number of members. The communities creating innovation as a byproduct and not as a specific goal are defined as *swarms* if the concentration of collective innovation is low and as *mobs* if the concentration is high. These characteristics are, however, not static. As the authors suggest, an online co-creation community can evolve into another type, implying that the characteristics of such community can change dynamically. Von Hippel (2005) distinguishes community members into *lead users* and *non-lead users* depending on their level of involvement on and know-how about the co-creation.

Compared to *non-lead users*, *lead users* face in advance needs that will become general in a marketplace. They are positioned to benefit significantly by obtaining a solution to these needs.

Member Interaction

People is affected by and also affects *purpose* and *policy*. In the beginning of online co-creation community development, interaction and collaboration among members follow the community's *purpose* by taking place online. As the community develops, interaction and collaboration can expand from virtual to face-face contacts (Parks & Floyd, 1996). *Policy* changes may affect the members' freedom and interaction mode. For instance, the firm controlling the co-creation process may revoke the rights of online co-creation community to use development tools, and hence limit the members' ability to share the co-creation output with non-members (O'Hern & Rindfleisch, 2008). Overtime, member interaction may affect *purpose* and *policy*. Collective knowledge, common value, and common practice are cultivated within the community through continuous interactions and communications, where members keep each other up to date about their knowledge, learning, and experiences (Wenger, 1998; Pitta & Fowler, 2005; Von Hippel, 2005). If seen necessary for the community well-being, members may use the pool of collective knowledge and experience to redefine the original *purpose* and *policy*.

According to Parks and Floyd (1996), 33 per cent of online relationships migrated offline to face-to-face contacts. Various reasons may inspire this shift providing the community goals and norms remain the same (Nip, 2004). Typically, the initiative is set off by online public discussion that strengthens the members' interest in particular issues, and this in turn motivates them to arrange offline gatherings (Rogers, Collins-Jarvis, & Schmitz, 1994). Members are usually not looking to meet any particular members, but want to form relationships with other members located at proximate geographical location (Sessions, 2010). Although constrained, members of physically dispersed online communities may sometimes establish offline gatherings. Offline gatherings are generally broadcasted online and are open to all members to participate. They take place in a pre-arranged location and may be scheduled routinely or randomly. Offline meetings entail more social context cues and are felt to be more personal compared to online meetings (Sproull & Kiesler, 1986). Hence, face-to-face contacts can assist identity development by allowing more immediate feedback than online interaction (Daft & Lengel 1986).

Methodology

We focus on the qualitative characteristics of an online co-creation community in its virtual collaboration platform (i.e. forum of discussion). We thus consider *netnography* to be the most relevant research method. *Netnography* is ethnography applied for the online environment. It is faster and less expensive method than traditional ethnography and more naturalistic than focus groups or interviews (Kozinets, 2002). Our study includes two steps: (1) observation and data gathering, and (2) data analysis and interpretation of findings. Our dataset consists of conversations on the Business Model Hub, which is an online platform where individuals interested in business model innovation (BMI) gather and co-created a book named Business Model Generation (BMGen). A total of 470 business people from 45 countries co-authored the book (Haines, NA) using the hub as the primary collaboration platform. This indicates that the BMGen community is an online co-creation community. Using *netnography* and HyperResearch qualitative analysis tool, we coded and scrutinized 169 conversations (including 1,360 comments, pictures, and attachments) posted from August 21, 2008 until September 4, 2010. Since June 19,

2009 is the official launching date of the book, we categorized the conversations posted before this date into the *co-creation* phase and the conversations posted after this date into the *commercialization* phase.

Results

We find that the BMGen community has undergone a shift from the *co-creation* to *commercialization* phase. Our analyses on the dynamic changes of *purpose*, *policy* and *people* elements in the community during these phases are outlined in the following sub chapters.

Purpose

At the *co-creation* stage, hub 1.0, the first version of BMGen hub, served as a platform for the review of the book's finished chapters (book chunks) and for co-authors and less active members to discuss BMI related topics. With the former as the main purpose, hub 1.0 was a success: "*The Business Model Hub1.0 has served our purpose of writing a book well.*" *Practice* is displayed through the complementary interaction of *participation* and *reification* (Wenger, 1998). BMGen members participate by sharing experiences and solutions to various BMI case studies and by taking part in the book co-creation process. Reification is reached when the BMGen community produced the BMGen book, which is a manifestation of the community's experience in BMI field. Member contributions to the book's content had the highest frequency (i.e. 403 contributions), indicating that discussions in hub 1.0 were strongly focused on developing the book's content. The second most frequent topic was BMI itself, represented by examples of interesting business models of companies the members knew or worked for. Member participation taking form in such discussions helped create a knowledge base that resulted in reification. For instance, the discussions served as an inspiration for authors, who implemented discussion parts into the next book chunks they were working on.

Following the book launch, hub 1.0 vitality decreased as it had lost its main purpose (i.e. to create the BMGen book): "*The Business Model Hub1.0 has served our purpose of writing a book well. Now that we achieved this goal the energy levels (i.e. discussions) are close to 0.*" Hub 1.0's second purpose (i.e. to gather and share knowledge for BMI practitioners) then became the primary emphasis: "*In its [hub 1.0's] second incarnation the goal is knowledge exchange, which shall be much more 'many-to-many' than we experienced until now...*" In this *commercialization* phase, hub 2.0, the second version of BMGen hub, bore two objectives: (1) to gather and provide knowledge for BMI practitioners to continue making the impact in BMI field: "*One of the most valuable jobs that the hub can support is the feedback from many practitioners in the field of BMgen. Nowhere is such a large group found together.*" and (2) to be the viral marketing source for the book: "*True viral comes when people can not only tell their friends about a great product, but when these friends also have a chance to try it out and then again tell their friends.*" These new *purposes* redefined the BMGen community's *practice* and *identity*. The community realized that their existence was independent of the book. The discussions about the book's content dropped, and the discussions about the book's marketing strategies increased.

Motivations of Joining & Contributing to the Community

Shared interest, relationship building, and transaction are the relevant needs for potential members to join an online co-creation community (Pitta & Fowler, 2005). In the *co-creation* phase, the BMGen community's *practice* and *identity* created a motivation for contribute the

“revolution” in the BMI field, which at that time gained a lot of attention from various business experts: *“I think this is just the beginning of the way in which humans organize themselves, nothing short of a revolution.”* Relationship building was the motivation to join the community: *“It’s great to be here with all of you. I’m looking forward to learn a lot and to connect with people that care about the same things I care about.”* In the *commercialization* phase, hub 2.0’s *purpose* (i.e. to gather and share knowledge for BMI practitioners) enhanced new members’ motivation to build relationship with the community: *“So many people are now using the Business Model Canvas and the content of the book. It is becoming urgent to connect all these experiences in one place - on our Hub!”* The total number of members dramatically increased from 450 to 1,257 people at the time of our data gathering. Many joined the community to get more details about a topic they found interesting in the BMGen book or to give a feedback to it. As many relationships had already been built, relationship building did not seem to be the main incentive for joining the community in this phase. Relationship maintenance became more important, serving as the driver to continue contributing to the discussions in the hub: *“Wow. I am looking forward to see the Hub ‘alive’ again with all the wonderful stories to share on business and life ;-) I really missed it!”* The information exchange (transaction) was strongly influenced by the new *purpose* of creating a platform for discussion on BMI.

Expression of Pride

The impact of *purpose* on *identity* influences the way members convey their pride. The BMGen community’s main *purpose* in the *co-creation phase* (i.e. to finish the BMGen book) made the members identify themselves as practitioners in an important field. BMGen members took pride being part of the community because they dealt with topic that gained a lot of attention from experts. Later, once the community gathered enough members and began to discuss the first outcomes, they became proud also on the process of information exchange within the hub: *“I agree that is impressive how quickly and deeply hub members reacted. I’m extremely thankful and enjoy the exchange a lot.”* Near the book launch, members began to appreciate the first outcomes of their work: *“I know it is not finished yet but watching the whole process and looking at the product as it currently stands I have to say that I have received far more than my money’s worth of information”*. They took pride on the book and the efforts: *“It has been great to be part of the 474 co-authors, 77 forum discussions and 1360 comments.”* In the *commercialization* phase, the members’ identity was strongly connected to the co-created book and fully expressed their pride on the book’s physical output. Instead of sharing the pride among themselves, the old members informed their contacts about the book to motivate them to join the community: *“I can’t wait to get into the whole book, and to show it around my contacts and colleagues.* The pride of the co-created book reinforced the pride of being the community member that initially emerged in the *co-creation* phase: *“Well deserved and proud to be a part of the community!”*.

Policy

Shah (2006) argues that members’ willingness to contribute is likely to decrease when collective knowledge development in the co-creation process is fixed and led by the firm/innovator. Since the beginning, the BMGen community’s *policy* had been mainly initiated and set up by Alexander Osterwalder – the book’s main author. Yet, the community did not experience a decrease in contribution, possibly because Alexander as a leader always communicated potential *policies* to the community. Such communication endowed high autonomy to the members, nurturing their intrinsic motivation and psychological ownership. *Policies* were easily accepted by the community, because they fit the members’ preference and

opinion. As an online co-creation community, in the *co-creation* phase, the BMGen community set up *policies* for the book's co-creation and other community activities to take place online, allowing interactions and collaborations not constrained by time, geographical, and physical boundaries. To ensure the contribution to the book's co-creation, hub 1.0 was arranged as a closed platform with an entry fee ranging from 24 to 243 USD, depending on the member's entry phase (Osterwalder, 2008). Consequently, collective knowledge (i.e. book chunks and discussions pertaining to the business model innovation) within the community was only accessible to BMGen members and not to public. As hub 2.0 bore different *purpose* (i.e. to gather and share knowledge for BMI practitioners), the members participated in long discussions about having a new *policy* for the hub. The community decided to extend hub 2.0 to Facebook and LinkedIn and make it to be an open platform: "*An open hub would be the forum for questions, ideas, cases, experiences, values and tools around business models and innovations.*" This *policy* allowed collective knowledge to be fully accessible to all community members.

People – Community Type

We define the BMGen community in the *co-creation* phase as a *hive* due to its goal-orientation and high concentration of collective innovation (Kozinets et al., 2008), indicated by the fact that 10 % of the most active users posted 78 % of all comments. The author and old members were those having the major impact on the co-creation output. Alexander was the main contributor, posting 590 out of 1696 comments. The first 100 members posted 1,116 out of 1696 comments. The existence of such a small portion of active members is confirmed by other members' acknowledgement quotes to congratulate and thank the "core members" after the book launch: "*Congratulations to the core team, to the extended team (amazing contribution and intensity of commentary)...*" Although the BMGen community remained goal-oriented in the *commercialization* phase, we see a dispersion of the collective innovation. The community shifted from *hive* to *crowd*. Members began to discuss BMI related topics in smaller groups, in some cases using even their own language instead of English.

People – Member Characteristics

We identify the BMGen members in the *co-creation* phase as *lead users*, because they identified early the importance of BMI: "*I was at a conference in Amsterdam yesterday. Business Models in Media were a hot topic.*" These *lead users* faced in advance the needs that will be general in the marketplace: "*We're in a revolution. And being in a revolution kind of weird because the old stuff is still very much visible and the new stuff is barely noticeable.*" The BMGen members were also positioned to gain significant benefits by obtaining a solution to these needs. Many members were consultants, academics or entrepreneurs who recognized the commercial potential of the developed knowledge: "*I am working with the Government of Canada (GC) and my main focus is on developing a new business model for the delivery of procurement services across the GC... The BMI [business model innovation] approach has been a critical part of the success...*" When the BMGen community grew, both the book and the community gained popularity and recognition. In this *commercialization* phase, *non-lead users* began joining the community. Compared to *lead users*, they contributed less. This is reflected in the number of postings by both types of members. *Lead users* (i.e. the first 100 community members in the *co-creation* phase) created more than 60 % of all the posts. *Non-lead users* (i.e. the last 100 of those who joined the community before the book launch) posted only 35 comments. In the newcomers' group, *non-lead users* outweighed the *lead-users*. The number of *non-lead users* grew due to motivations different to the *lead users*' motivation. Many *non-lead*

users found the BMGen community owing to *lead users'* recommendation or after the BMI topic had been discussed by broader audience.

Member Interaction

In the beginning of the *co-creation* phase, the BMGen community had a very apparent international orientation: *"I'm fascinated myself about where all the participants on the Hub come from... The Business Model Generation is indeed a global phenomena."* The international orientation was characterized by the members' diverse origins, English as the hub language, and the online interaction platform: *"I feel amazing sitting here in Bangalore, I can talk to you half way around the world."* As a part of the international-oriented co-creation process, the BMGen book's physical production was conducted in an international platform. The book chunks were written and reviewed in the hub and the book was designed in London, United Kingdom, edited in Portland, USA, photographed in Toronto, Canada, and finally produced in Amsterdam, Netherlands (Haines, NA). In the end of *co-creation* phase, BMGen members began to shift their online collaboration from international to regional arena due to an anticipated need for localizing the book's language and content so that it could gain higher regional acceptance and benefit the people in the region: (a) *"I believe that we can find a different audience through offering the content in peoples native language."*; (b) *"... if there would be examples from e.g. Brazil, India etc. the book could gain more individualization and win acceptance in the defined regions."*

At the *commercialization* stage, some members initiated the development of physical local hub, starting with organizing face-to-face meeting with members in the same region. Offline gatherings were arranged using local languages, indicating that the invitation applied only for members in pre-defined region. The main reasons underlying face-to-face meetings include: (1) celebration and discussion about the book: *"Now that we have received the beautiful hard copy of the book I would very much enjoy being able to meet face to face to discuss/debate the finished product."*; (2) discussion about the implementation of BMI methods described in the book: *"I am based in Toronto and would be interested in meeting in person to hear about the experience of others putting the canvas into practice."*; (3) development of a community of practice: *"...we could think of a organizing a meeting... When this works out, there may be an opportunity to work towards a Community of Practice."*; (4) involvement in collaborative activities: *"I am Brisbane based and would be happy to be involved in something collaborative."*; and (5) existence of other members, either many or few, in the same or nearby region: (a) *"Since there is also a large group of Dutchies active @ The Hub, let's meet as well in The Netherlands."* and (b) *"I guess there are three of us in the HUB who are from Bangalore, India. We can start a local bmgen meet-ups."* The initiative was well-received in the community and topics surrounding face-to-face meetings became contagious: *"As a follow-up to the UK and Norway initiatives, anyone interested to get something like that started in Australia?"*

Conclusion

Our research focused on dynamic aspects of online community co-creating a commercial product. Using *netnography* as a research method, we identified the dynamic changes of *purpose*, *policy*, and *people* elements characterizing online co-creation communities, as well as their impacts in the *co-creation* and *commercialization* phases. Firstly, the *purpose* reflecting the very objective of the community may evolve depending on the phase of development of the community. A minor purpose in the *co-creation* phase can become the major one in the following

phase. The shift of the hub's *purpose* from a platform for facilitating BMGen book's co-creation into a platform for discussing BMI topics became the new shared interest of community members. However, such transition had not been anticipated by the creator of the community. Such development has motivated prospective members to join the community, as well as on the pride of existing members to be part of the community. Secondly, as *policy* is strongly influenced by *purpose*, the community's development is necessary once the *purpose* changes. In our case, we identified a development from a closed group with entry fee to an open platform with no barriers to entry. Such *policy* transformation was crucial to reinforce the new *purpose*. Finally, changes of *purpose* and *policy* lead to the establishment of new structure of the community and also to different characteristics of users that have become attracted by the new structure. In our case, we observed a community of mostly *lead users* becoming a place of interest for *non-lead users*. Such progress results in changes in the orientation of collective innovation. Due to a huge increase of the number of less active users in the *commercialization* phase, the BMGen community quickly transformed itself from a *hive* into a *crowd*.

International & Managerial Implication

We suggest that companies managing an online co-creation community with commercial output should first anticipate transitions during the community's lifecycle to ensure the co-creation success. As different developmental changes may alter the community's characteristics, companies should react to them properly to maintain the community operability. A key task is to give a new *purpose* for the community to maintain its existence in each developmental phase. We further suggest that companies should appropriately attract and maintain *lead users* as the core members. This strategy will stimulate the co-creation activities and help attract other users and gain additional publicity.

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