Contributing and socialization – biaxial segmentation for users generating content

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Abstract: User generated content is a valuable resource voluntarily provided by a growing number of users. As online and traditional businesses increasingly harness this resource the need for a strategic way to manage users has become apparent.

In this paper, we seek to establish a model that applies prior research insights regarding user behaviour to user generated content. Therefore, we develop a strategic segmentation of users who contribute content. Using a biaxial model put forward by Kozinets for the segmentation of consumers and an ordinal scale model by Li and Bernoff, we propose a model to grasp both the degree of social involvement and the intensity of content contribution by users.

1 Introduction

Since the inception of the Internet, its use has largely been limited to the passive reception of available content until the advent of prominent, participatory platforms like Wikipedia, YouTube, and Facebook, which have allowed online users to build content resources collectively. A substantial number of websites and services are emerging that draw considerable value from user generated content. They are becoming an economic phenomenon greatly affecting the design of contemporary business models and the online media landscape as a whole, as well as traditional media and marketing [WV07].

Given the astounding growth of user generated content, businesses have begun exploring how to best benefit from their development and ways to exploit possible competitive advantages. In spite of these efforts, the dynamics of user content are still poorly understood, which has deterred businesses from taking advantage of its potential economic possibilities.

For those businesses that already engage active online users, they find themselves in a

race to secure their users' patronage before the competition. For instance, there are several online movie review communities in the United States, where users make contributions ranging broadly in nature and quality [Oz01]. The economically successful movie community is one that best caters to the demands of its users through the products and services it provides.

Furthermore, traditional businesses are discovering the value of users who do not necessarily file formal complaints but actively introduce new ideas through online formats, as can be seen in the case of the online community myStarbucksIdea. To the same end, less well-known businesses like the airline JetBlue have started comparable programs. It is foreseeable in the near future that both Starbucks and JetBlue will face competitors to the online idea platform and have to formalize their commitment from their online users. Therefore we need to develop diversified strategies to attract and deal with the participating online users.

Practitioners and researchers are now trying to understand the broader implications of user generated media content and how to facilitate the contribution of user content. In response to these concerns, this paper will put forward a segmentation model of users who contribute content to online communities.

Our analysis is structured as follows: First, we examine existing user segmentations for online communities. Next, we identify the most useful segmentation models and update them in order to apply them for user generated content. In conclusion, we consider the implications of our segmentation model for theory and management.

2 Theoretical background

We define online communities as a group of users who communicate, interact and develop relationships in a technology-supported environment [LVL02].

User generated content (UGC) is defined by the OECD through three criteria [WV07]: First, the work has to be made accessible to a group of users (e.g. an online community). Secondly, the editor has to make a creative effort to produce the work or make adaptations from existing material. Finally, the development of UGC has to take place predominantly outside of the creator's professional realm.

Online communities do not necessarily automatically imply the creation of UGC; such is the case with instant messaging communities. Nonetheless, UGC is central to the structure of most online communities, as previously established definitions propose [HA99]: "Virtual communities are computer-mediated spaces where there is a potential for an integration of content and communication with an emphasis on member-generated content." We therefore define communities of UGC as online communities in which UGC plays a significant role. The importance of online communities of UGC is exemplified by data. The sites that fall into this category (Wikipedia, MySpace, Piczo, YouTube and Bebo) exhibit a considerably higher frequency of general usage and repeat visits than other sites ranked in the top 50 sites in the United Kingdom [WV07].

2.1 User segmentation as a utility

Innovation management proposes a well-researched user segmentation for the integration of a segment of so called "lead users" into the development of new services and products [Hi86]. As lead users nowadays also contribute information to online communities, they can be identified and more easily integrated into the innovation processes [BB08].

Innovation management is mainly interested in the expectations and ideas of certain users. A growing number of online repositories of lexical articles, product reviews and bookmarks rely heavily on the quality of UGC. Therefore, numerous researchers have analyzed the characteristics and differences of the contributions made by various user groups. For example, Stein and Hess have examined high quality, featured articles in the German language section of the online encyclopaedia Wikipedia. They created a system to gauge the quality of an editor's work and then assessed the relationship between the editor of the article and the article's proficiency [SH07].

The abovementioned segmentation analyses user groups after user contributions. In order to sufficiently address user groups and in advance of the long-term establishment of a given online community we need to find a suitable user segmentation that will facilitate the design of online-communities.

2.2 Early segmentations: Goal-directed and experimental or Passionates, Pragmatics, and Phobics

An early approach in categorizing user types was put forward by Hoffmann and Novak. They distinguished two kinds of user motivation: goal-directed and experiential [HN96]. The dichotomous model is based upon an opposing conceptualisation of extrinsic and intrinsic user motivation. According to this model, intrinsically motivated users find reward for their online action in experiential usage like diversion and relaxation. Whereas extrinsically motivated users make use of the Internet with a specific goal in mind such as gathering information. This model has been disputed on the basis that users are usually compelled by both experiential and goal-directed motives [KW99].

Subsequently, Rodgers and Cannon further scrutinized these motivations (as well as the actual usage of online media), concluding that there are three clusters of web users: "Passionates", who are motivated by experiential motives, "Pragmatics", who are goal-directed, as seen in the above model and "Phobics", who rarely use online communication and, if so, strictly for goal-directed purposes [Sh02].

2.3 Two factor model by Kozinets

For the specific purpose of online communities of consumption, Kozinets has defined a typology of user groups. Kozinets defines communities of consumption as: "groupings [that] are implicitly and explicitly structured around consumption and marketing interests" [Ko99]. For this purpose, Kozinets describes two central measures that affect

the “formation of lasting identification” with the community: the intensity of relationship within community and the centrality of consumption to the user.

When an Internet user first visits an online community he or she will predominantly browse for information and will be unlikely to have affiliations with many other users. However, as the user visits the community more frequently and becomes acquainted with how it works, he or she will potentially begin to engage in discussion topics and eventually develop stronger ties within the community. Depending on one’s status within the community, users make use of different communication tools. Thus, Kozinets defines the social ties within the community as a factor of primary importance [Ko99]. The second significant factor in the case of consumption communities is how high of a priority the consumption activity is to the user. The more central the consumption activity is to the user’s self-image, the more he or she will value the community. The self-centrality of consumption is not independent of one’s social ties.

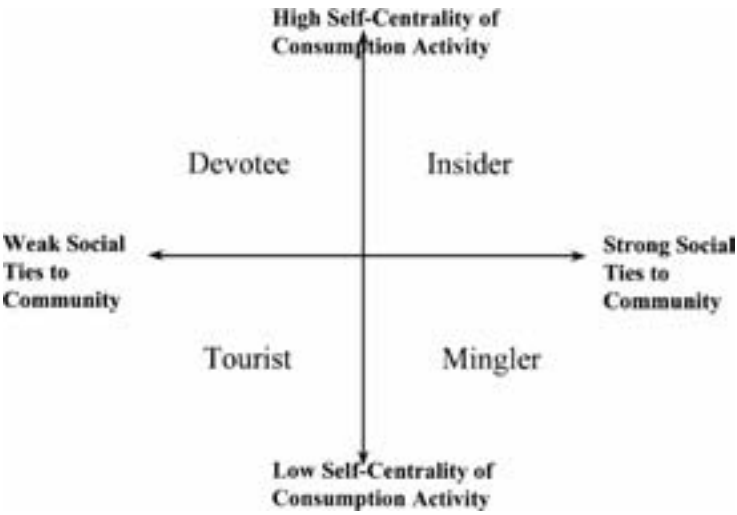

Illustration 1: User typology for communities of consumption [Ko99]

Illustration 1 shows four segments of users on two axes. The intensity of relationship is represented by the horizontal axis and the centrality of consumption is represented by the vertical axis.

Kozinets typology has been studied in various research projects. The main advantage of such a simplified model is that it can be applied to several cases and researchers are able to develop a body of in depth knowledge about the properties of the user segments. For instance, researchers in the field of customer integration have adopted this Kozinets scheme to identify lead users for product development in several cases [FK06, Fu04].

The abovementioned segmentation is especially useful in the field of customer integration because it specifically targets communities of consumption. However, for our interest in user action within online communities, we propose an adaptation of this

Kozinets model, altering its focus on consumption to the generation of user content.

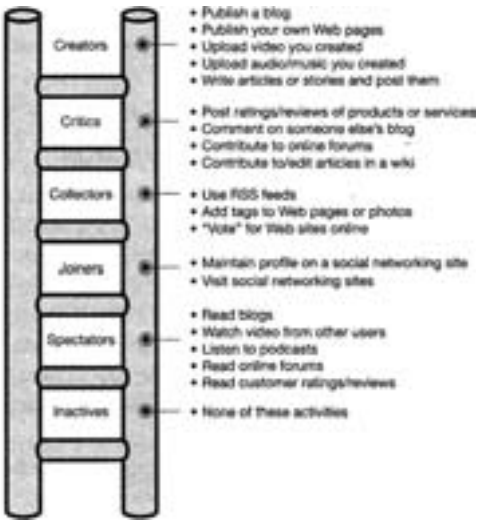

Illustration 2: User typology for UGC [LB08]

Li and Bernoff classify users according to their involvement in content generation on a profile ladder. "Each step on the ladder represents a group of consumers more involved [...] than the previous step." [LB08]. The top rung of the ladder is occupied by the group called the Creators, who publish blogs, have their own websites, upload self-created videos and audio or write articles and stories. Below the Creator is the Critic, who posts ratings and reviews of products or services, comments on blog posts, contributes to or edits online forums and Wikipedia articles. The user group third from the top is comprised of Collectors, who use RSS feeds, add tags to websites or photo collections or vote for websites. The Joiners maintain a profile on a social networking site and also visit these sites. The Spectators are passive contributors who read blogs, watch videos from other users, listen to podcasts, and read forums and online ratings. Lastly, the Inactives do not take part in any of the activities mentioned above [LB08]. For each user segment, Li and Bernoff developed strategies to build and maintain appropriate relationships according to a given organisation's objectives.

It is reasonable to assume that social affiliations grow along with the general online activity level of a user, though there is not necessarily an increase in content generation commensurate with an increase in user's social affiliations. [SGV04]. Additionally, users may write many articles or reviews without maintaining a close network or, inversely, may have many affiliations without contributing content.

3 User group model for content generation

As we endeavour to adapt a proven model of segmentation for communities of content generation, we have chosen the above biaxial model by Kozinets, which has been used

by many other research projects with successful results, although we update the consumption activity in Kozinets' model to suit our needs.

The first factor in Kozinets' model is the centrality of consumption activity. Since our work is focused on the generation of user content, we propose the accordant measure for consumption activity as: content generation. We have seen that the distribution of content generation is not even among the users of online communities [LB08]. A number of studies identify ample differences among the users who show different levels of content contribution. The measurement of UGC can be complicated, since the same content may be featured on multiple sites, registered users may be inactive or have duplicate accounts and the distinction between user-created and other content is difficult to discern [WV07]. However, researchers mainly employ straightforward methods of measurement such as the number of edits on articles [SH07], number of bookmarks [BK08] or number of ideas contributed to a given competition.

The second factor presented by Kozinets is the intensity of social relationships that a user has. This measure is analogous to the relational capital as conveyed by research on social capital. Because the research on social capital has informed much of the understanding of online communities, the intensity of social relationships should be understood as forming a part of the notion of social capital. Social capital is generally defined as a non monetary form of capital that provides an individual access to valuable resources like jobs or information [Pu95]. For this reason, social capital can foster the development of new knowledge [NG98]. Social capital is also represented structurally and facilitates the agency of actors within this structure.

Social capital has three dimensions that can be clearly distinguished. The structural dimension of social capital can be described as the ties that connect actors within a given network. Here, we can examine more closely the configuration, hierarchy, and density of the network. Also, there is the relational dimension or "relational embeddedness" [NG98], which refers to the nature of the relation between one actor and another, within a given network. It can describe how much influence users have upon others, if they share a friendship or mutual respect for one another and what history binds them together. Lastly, the cognitive dimension points to shared cognitive resources used in deriving meaning and making interpretations among the group.

Researchers often utilize simplified models of social capital whereas an affiliation between users is defined by a documented action (e.g. having reciprocal email communication) on a dichotomous scale (connected / not connected). Even these models allow for the calculation of social capital and measures like centrality and their linkage to other attributes like knowledge contribution [WF05].

User generated content is defined by the fact that multiple users work on content together [WV07]. Research in the field of social capital demonstrates that people who possess many ties to others also have access to more sources of information, more ideas and more help in general [Pu95]. Therefore, UGC that springs forth from an environment of a broader network of communication can be of significantly higher quality than work derived from scarce communication sources [TW03]. Exemplifying

this notion are the frequently edited featured articles on Wikipedia and, or ideas for innovations that are improved by collective effort in online communities.

Now shifting focus from communities of consumption towards communities of content generation such as Wikipedia, Amazon and Threadless, we combine both models, identifying content generation as the principal factor, which is equivalent to the centrality of consumption activity from Illustration 1. Illustration 3 shows the user typology for communities of UGC.

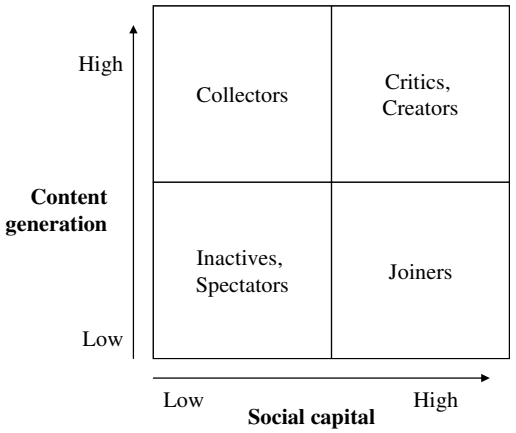

Illustration 3: Proposed adopted user typology for communities of UGC

Li and Bernoff make a distinction between Inactives and Spectators with regards to content generation. Yet, both groups are described as not actively contributing content to online communities or exhibiting social ties in online communities. Therefore, we argue that from the perspective of content generation and social capital, the two categories can be seen in a single, shared group. The Joiner profile is described as visiting social communities and only maintaining a profile there. However the OECD definition calls for a combined effort to create UGC. So, we find considerable social capital and low content generation for the Joiners, characterising them as being of high social capital and weak contributors of content.

Collectors contribute to content repositories through voting and tagging and thereby generating value in online communities. They do not explicitly maintain social affiliations online and can be seen as active contributors of content while still having low social capital. Finally, Li and Bernoff differentiate between Critics and Creators, but the less active group, the Critics, still contributes regularly to online forums and wikis. Both groups hold high social capital through their active role in online communities and because of this, we combine the two groups in the field of high content generation and social capital.

For our purposes, this combined model is an improvement upon Kozinets' model as it has been adapted to the field of UGC, offering more clarity by indicating the implicit components of social capital that Li and Bernoff included in their mono-axial model of

content generation.

4 Towards operationalisation

Future research will have to operationalise this model in order to properly situate authors on the matrix. However, the operationalisation of social capital on a single scale poses a challenge because it is understood to consist of multiple dimensions [NG98] and lacks a commonly agreed upon definition (Glaeser 2002). Nevertheless, current research has established a system of measuring social capital [DS05].

In this paper, we propose three dimensions of social capital for consideration. Firstly, structural capital describes the position of an actor within a given network. To determine the networks configuration, the corresponding network tie between two actors must be defined. For instance, we can assume the existence of a connection between two actors when they have demonstrated reciprocal communication in the past (e.g. question and answer) via comments or email. In this case, the necessary data could be derived from logfile analysis. Additionally, graph theory offers several means of measuring structural capital, such as centrality, betweenness, closeness or eigenvector centrality. Wasko and Faraj equate structural capital with the degree of centrality of individuals in a network [WF05].

Secondly, relational capital describes the intensity of relations between various actors. This intensity can be seen in things such as mutually shared values, trust, and perceived reciprocity; all of which are underlying measures that can be assessed by Likert scale questionnaires. Lastly, cognitive capital is determined at an individual level and can be equated with an individual's level of expertise in regards to the online community that they are member of. Depending on the scope of application, expertise can be self-rated or assumed to correlate with the period of membership within an online community.

An assessment of the different measures of social capital and the combination of structural, relational and cognitive dimensions is beyond the scope of this paper. Many authors argue that social capital should not be subsumed under a single form of measurement because this would undermine the explanatory power of the underlying constructs [FKS07]. Still, Mathwick, Wiertz et al. successfully combine three comparable measures (voluntarism, reciprocity, and social trust) into a latent social capital construct by building the linear sum of their three constituents [MWD08]. This approach could serve as a preliminary step towards operationalisation of the social capital measure.

In contrast, content contribution can be measured by defining a criterion for content and tallying the corresponding contributions. In the case of messages on bulletin boards, for example, each message must be sorted into categories to distinguish between knowledge contributions and questions or a simple expression of gratitude such as: "Thanks!" If certain content types such as vote or idea are predefined, their total numbers can be made use of.

5 Conclusion

The ever-increasing flow of information on the Internet poses an enormous challenge to researchers trying to identify and apply super ordinate structures to understand online communication. In this paper we introduced a preliminary model of user segments that is applicable to various communities of UGC.

Concerning theory, there is, at present, no unifying model that depicts the core differences of user groups in respect to UGC. From a theoretical perspective, our model serves as a point of departure for further research and improved comparison between new insights that are gained. For instance, research on the motivation of users in the case of Amazon.com reviews has shown that extrinsically motivated users write significantly more reviews than others. Yet, the reviews of these users are generally rated as less helpful. According to our model these users should display lower levels of social capital, which remains to be proven.

With regard to managerial application, the segmentation of user groups has been a subject of concern since long before the emergence of online communities. Our user model provides a first step in the development of a managerial tool for online communities in order to enhance the amount of UGC by allocating services to user groups.

We focused on a basic model with two factors. This constraint allowed us to apply the model to a broad range of online communities and helped to narrow the focus of our analysis. Admittedly, we had to exclude important criteria such as motivation and demographic attributes, which are too multifaceted and complex for a two dimensional model.

In future research we will operationalise the factors of content generation and social capital and examine the depicted user groups for motivational sources and attitudes. At that time we can begin to develop strategies to directly address the motivation of each user group in an effective manner.

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