

Mass Collaboration in Software Product Development Between Developers and Users: Champion as Emergent Role

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Abstract: In this paper we investigate the role of champions in processes of mass collaboration in software product development. The case is Get Satisfaction, a company and social media platform for engaging end users and customers in product development activities. We employ a mixed methods approach, combining social network analysis (SNA) and interaction analysis (IA). We found that when scaling up, a new hybrid user group, champions, emerged. Champion is a role given end-users who make large contributions in the community. When this happens the end-user is appointed by Get Satisfaction and gains privileges.

Keywords; Interaction analysis, Mass collaboration, Mutual development, Social media platform, Social network analysis

1. Introduction

We present a case study of mass collaboration (Tapscott & Williams, 2008; Cress, 2013) in an online community named Get Satisfaction (GS), where the main findings unravel a complex phenomenon of mass collaboration involving different type of actors who has stake in software product development (Andersen & Mørch, 2016), in particular ends users (customers), professional developers and champions. Our previous work has defined this process as mutual development (Andersen & Mørch, 2009) where we first studied this in small group collaboration setting. We found that when scaling up, a new hybrid user group, champions, emerged. Champions are end users who has since been appointed and promoted by GS. Champions are given specialized privileges and may become part time employees in GS and paid for their support to the community. We have collected empirical data in this community, and present one excerpt below. The methods we use for analyzing the empirical data are interaction analysis and social network analysis in combination.

1.1 Cultures of Participation

The major objective of cultures of participation (Fischer, 2009; Jenkins, 2006) is to foster a culture in which people have the opportunity to actively participate and be

content creators (Fischer, 2009). Examples are Wikipedia where users participate by writing short articles on a topic they are domain experts, Threadless (threadless.com) where users can create and design their own t-shirts, and Pinterest where users contribute with pictures and pin others users' images.

An ordinary end user (a customer) of a software product is normally not interested (nor have the time) to think about the design and modification of it, and users would under most conditions prefer to be consumers. In a culture of participation, the stereotypical user-developer dichotomy has been challenged, and intermediate roles have been proposed and studied. Arguable the first among them is prosumer (Toffler, 1980 (a portmanteau of the two words producer and consumer). Related terms are lead users (Von Hippel, 2005), super user (Åsand & Mørch, 2006), local developer (Nardi, 1993), gatekeeper (Mackay, 1990), and boundary spanner (Volkoff et al., 2002). Three types of actors take part in the case we report from: end users, champions and developers. Champions have a dedicated role similar to that of super user, local developer and gatekeeper and in many situations take on a bridge building role in the GS community, based on two sets of skills: they know the product well and they know what are the pressing issues for the end users (Andersen & Mørch, 2016).

1.2 The Case

Get Satisfaction as a company was established in 2007 and has more than 63.000 online communities using their tools, and boasting 9.600,000 visitors a month. It resembles a social media technology by engaging a broad range of end users and lowering the threshold to making contributions with easy to-use tools. The support community at Get Satisfaction is organized around question/answer (discussion) forum, where anyone who is registered can start a new discussion thread or topic and tag it with one of the system's four different categories: 1) ask a question, 2) share an idea, 3) report a problem and 4) give praise. Table 1 gives an overview of the statistics of the participation in GS, illustrating that there is a mass of participants contributing with postings of the four categories in the online community.

Overview	March 2013
Topics posted	19,747
Participants (all)	269,280
Champions	47
Employees	50
End-users	269,183

Table 1. Overview of participants and their posting in discussion threads in Get Satisfaction.

Get Satisfaction is one example of a culture where most users participate because they choose to because they can contribute with improved solutions and find answers to problems occurring locally with the GS software. Champions are one of three user categories and they emerge out of customers, and are appointed as such by GS em-

ployees, after having demonstrated extraordinary skills with the GS software. In the next section methods used for analyzing these masses of data is explained.

2. Methods

We employed a mixed methods approach for data collection and analysis (combining social network analysis and interaction analysis). This allowed us to analyze the empirical data on two different levels; a) macro level (SNA) giving us an overview of all the empirical data and b) the micro level (interaction analysis) providing detailed explanations of selected parts of the empirical data. By using a mixed methods approach and combining SNA and IA we get a fuller understanding of the phenomena being studied than either method by itself could deliver.

2.1 Social Network Analysis: Macro View on the Data

As a quantitative approach for studying large online communities, social network analysis (SNA) provides a set of methods for analyzing the relational aspects of social structures (Scott, 2001). In a social network representation one needs to take into account two types of entities: nodes and links. Nodes are the equivalent of social actors (but not limited to actors) and links are the equivalent of the relationship between actors.

By using SNA for analyzing the empirical data we obtain a macro overview, or the “climate”, of the empirical data we collected in GS (Table 1). This can help to answer questions such as who are the most active participants in a large community, who communicate with whom, what subgroups exists and how are they connected, who are the powerful actors, and in what sense are they powerful, and so on. After having used SNA to compute the social structures we can in the next round zoom-in on the details, according to more specific aims (e.g. how is social structure influencing action; what are talked about in conversations, etc.). Doing this interaction analysis is needed.

2.2 Interaction Analysis: Providing a Micro View on the Data

Interaction analysis (IA) is an interdisciplinary method for the empirical investigation of interaction of human beings with each other and with objects in their environments (Jordan & Henderson, 1995). This method was used to analyze the content of the messages in the GS community. We thematically coded the interaction data (textual conversations) obtained from the network data selection by a combined top-down and bottom-up strategy. Bottom-up as iterative classification (grouping data into named categories in several rounds) and top-down informed by our theoretical perspective (mutual development) and our research questions. On that basis we identified the most interesting discussions.

3. Empirical Findings

We can for space reasons only show an example, related to the emergent role of champion and how they are characterized as such. First, the network data providing an overview and then the interaction data will be presented to go into more detail.

3.1 Network Data

In Figure 1 the boxes represent all of the different discussion threads in the online community and the nodes represent the champions. The size of the boxes and nodes reflects the degree centrality. Degree centrality is an SNA measure for calculating the most active discussion threads and the bigger node or box the more active participant or activity in the discussion thread.

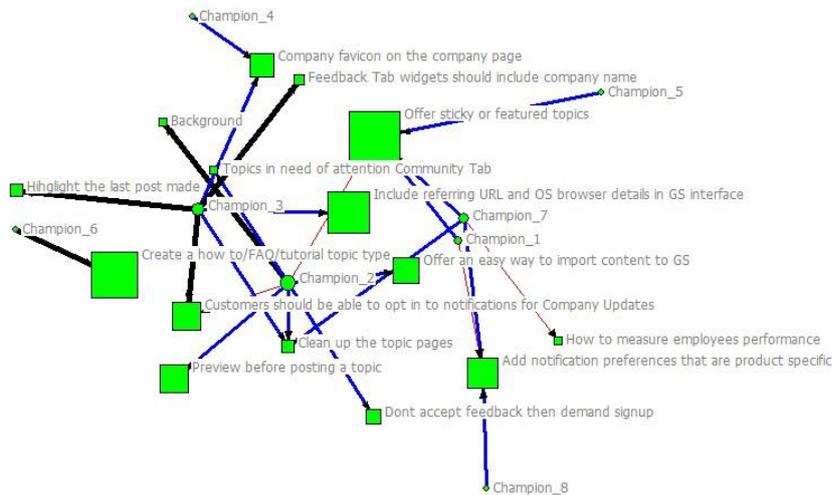


Fig. 1. Sociogram of champions (nodes) and which discussion threads they participate in (boxes). The size of the nodes and boxes reflects the degree centrality.

What we can interpret from Figure 1 is that champions participate in the most active and largest discussion threads, where there are most activity going on, but why this is the case we need interaction data to tell us more about.

3.2 Interaction Data

Context: The participants' discussion centers on various aspects of improvement to the products, the GS tools in our case. We focus on end user (customer) participation and development and the role of champions as mediators between users and developers. As shown below.

Data extract 1: The extract is from “Share an idea” thread called “sticky or featured topics,” which in its full length contains 57 postings by 44 participants. The extract shows the beginning of the thread. “Sticky” is a term assigned threads judged important, appearing before the others in Internet forums.

Post	Participant	Message
1	End user 125	Offer sticky or featured topics
2	Developer 5	HI, Sherrie You can make a reply "sticky" but we don't currently have a mechanism for making a post sticky. If you're a company rep you can use the "Company Update" topic type to post that topic on your company home page, which might partially solve the issue for you. Can you describe your need a bit more?
3	End user 125	I am a company rep in GS and we got this question from our users a couple of times. They see a post (be it a question or an idea shared), and they suggest making the thread/post sticky. And I just wanted to see if there is a way in GS to do so. Thanks for your reply. I will look into your suggestion.
4	Champion 1	Just got a similar request from one of our users. http://getsatisfaction.com/izea/topic...
5	Champion 7	I've shared this with the product team - I'm working on pulling together a community-manager focused release to help get some of these ideas and bugs all bundled together for maximum awesomeness. Stay tuned. ;)
6	End user 131	Any progress on sticky topics?
7	Champion 7	We're getting closer, but it's a tough change! I'll update over here once we've rolled it out.
8	Champion 2	I do think there is room for a "sticky" if we just arrange things a little and have them on the left side bar or the right side bar maybe in a smaller text. FAQ would be ideal. I did a very quick and rough example here but you get my drift lol [picture of example]

Summary of findings: Champions take on the role of mediating between end-users (customers) and the company’s professional developers. According to Get Satisfaction, “champion” is a role given end-users who make large contributions in the community, such as responding to questions and filling an informal leadership role (getsatisfaction.com). When this happens, the end-user gets a badge around his/her name, implying that this person has managed to become a champion. A champion needs to speak two “languages,” the language of end-users (domain-specific, customer-oriented) and the language of professional developers (technical, software-oriented). The dynamics of transitioning from end-user to champion may also go the other way. A champion may decide to end the relationship with Get Satisfaction and thereby return to being a regular end-user.

The mediation activity of champions according to our data is that they are characterized by being anchored twice: a) Champions are partly paid by the company (GS), which implies a commitment to this company (e.g. brand advocates), which may cause some of their contributions to be biased, and b) champions started out as ordinary end users, representing a customer organization like a lead user (Von Hippel, 2005) or a super user (Mørch, Hansen & Ludvigsen, 2007). Therefore, we cannot say that the innovations proposed by the participants in our study were entirely motivated by customer needs; it is better thought of as a compromise between two worlds: the needs of the developers and the needs of the customers.

4. General Discussion and Conclusion

The space provided prevents us from giving more than one empirical extract from our case study of mass collaboration (involving a crowd of participant) in software development from the perspective of mutual development (involving different types of actors with type of power relations). The main finding from this case study is four identifying patterns in this community of customer-initiated software product development (Andersen & Mørch, 2016). We highlighted the role of the champions, which we found from analyzing the empirical data. We used a mixed methods approach combining social network analysis and interaction analysis. We illustrate the pattern by the sociogram in Figure 1 and by data extract.

Champions emerged in previous work as mediators and translators (Mackay, 1990; Volkoff et al. 2002; Åsand & Mørch, 2006). We also found that champions were crucial for mutual development. Mutual development means there are two centers of development: locally at the customer site and globally in the software house (Andersen & Mørch, 2009). Negotiations are required in multiple situations (assessing relevance of customer proposals; translating terminology; dealing with property rights). The latter becomes an issue if a proposal is non-trivial and accepted by the company to be incorporated as a feature in a future release of the product and made available to all customers. It requires contracts for proper handling (Andersen & Mørch, 2013).

We believe Get Satisfaction is an example of a “want to participate” culture. The “want to” participate phenomena is characterized by users participating by their own free choice and own initiative, rather than being forced or demanded to participate. Get Satisfaction resembles a culture of participation in lines with Fischer’s notion “fostering a culture where people have the opportunity to actively participate and be content creators” (Fischer, 2009).

5. Directions for Further Work

“Twenty years from now we will look back at this period of the early twenty first century as a critical turning point in economical and social history. We will understand that we entered a new age, one based on new principles, worldviews and business models where the nature of the game was changed” (Tapscoott & Williams, 2008).

Mass collaboration in mutual product development and the emerging role of champions are examples of such a new model of mass collaboration involving different stakeholders in an intricate and productive way. However, researching on mass collaboration entails masses of data –and appropriate methods to analyze this are needed. In further work it would be interesting to continue to use a mixed methods approach combining SNA and IA, and advancing it. Direction for further research is also to ask what motivates the different participants to contribute and spending much of their time to improve products belonging to a company that may profit from it. Why do these users want to put in free time, most of which are unpaid and may gain more benefits to the GS company?

6. References

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