Co-Design as Stabilized Network of Heterogeneous Actors

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Abstract

This paper investigates the emergence of co-design, as a particular form of value co-creation, through the interactions between organization, designers and customers in online communities. I address the topic following different theoretical perspectives, first the meta-organization perspective to frame the issue in the debate and then the Actor-Network Theory perspective, analysing the case of one of the most important online co-design community. The ANT gives the chance to consider both human and non-human actors, as the online co-design platform, and the heterogeneous network they create, describing co-design as successful story of process of translation whose phases of problematization, interessement, enrolment and mobilization generate the re-negotiation of traditional identities and roles of organization, designers and customers. Besides this study gives some interesting insights analysing a phenomenon related to meta-organization trough ANT, unpacking the relational ties and power dynamics beyond it.

Introduction

In the actual flourishing of co-creative initiatives and business model development entirely based on the concept of co-creation of value on-line, the traditional organizational boundaries are questioned. The Internet and Internet-enabled Technology are widespread means for knowledge creation and dissemination (Gulati, Puranam, & Tushman, 2012) so a diffuse claim is that the rules of the game are changing and new form of organizing are needed to cope with this issue; but at today a lot of open issues have to be addressed, especially about how to cope with this new relational ties between organization and other actors.

As we can find in literature co-creation can be defined as an activity that: "involves the joint creation of value by the firm and its network of various entities (such as customers, suppliers and distributors) termed here actors. Innovations are thus the outcomes of behaviors and interactions between individuals and organizations' (Perks et al., 2012, p. 935). This clearly underlines the importance of how to manage these different forms of interactions between individuals, such as customers and designers, and the organization.

The aim of this study is to give a contribution to the very first phase of the above process understanding which are these relational ties and how they work, in a specific empirical setting. The empirical case is initially framed in the organizational debate relying on meta-organizational perspective, maintaining a clear distinction with the ANT approach, due to the extremely different ontological and epistemological roots.

In our effort to follow the actor (Callon, 1986) we have chosen to start from Threadless, one of the more frequented and developed online co-design community, which can be viewed a non-human actor resulting from the punctualization (Callon, 1991) of the actor-network constituted by its relations with the designers, customers and other actors. The emergence of co-design can be considered as an innovation diffusion process and observed using the sociology of translation (Callon, 1986; Latour, 1987).

Theoretical background

The concept of value co-creation is actually widespread in the managerial literature and has been revisited and developed depending on the specific field of research. From the literature review of co-creation emerges a quite diffuse agreement on citing the studies of Prahalad and Ramaswamy (2000; 2004a; 2004b) as the main references. The central point is that customers and market are changing together and market is becoming a "forum" in which customers paly an active role in creating and competing for value (Prahalad & Ramaswamy, 2000).

The issue of co-creation has to be addressed by managers and organization implementing technologies and procedures that foster the process. The complexity of creating the conditions of co-creative environment, such as encouraging an active dialogue, mobilizing customers communities and co-creating personalized experiences can be reduced using Information Technologies and the Internet (Prahalad & Ramaswamy, 2000).

Even if ICT can enhance and create facilitating means for co-creation, another critical issue has to be addressed: the coordination and management of these relational ties that span out of the organizational boundaries. These relations are not managed through authority based on employment relationship and if we think at this network as a form of organization the parallelism with meta-organization is quite straightforward, in fact meta-organization can be defined as: "an organization whose agents are themselves legally autonomous and not linked through employment relationships. (…) but characterized by a system-level goal." (Gulati et al., 2012, p. 573). Following Gulati, Puranam, and Tushman (2012) defintion means also to

differentiate from previous definitions of meta-organization that, instead of relying on the legal autonomy and absence of employment realtionships, define it as "organization-of-organization" (Ahrne & Brunsson 2005; König et al. 2012) and from previous studies about the new forms of relations among enterprises created by ICT innovations (e.g. Jagdev & Thoben, 2001; Rossignoli 2009). This choice give more flexibility to this study given that the relational ties in co-design are always between firms and individuals (customers and designer).

The link between value co-creation of customers' communities and the virtual or online dimension emerges in the very early phase of co-creation literature, in particular with the work of Nambisan (2002) that dealt with the role of Virtual Customers Communities in relation with New Product Development. From this contribution the studies on online communities developed exponentially taking into consideration platform design and its impact of NPD (Nambisan, 2002; Füller et al., 2006; Nambisan & Baron, 2007).

In order to frame the issue it is also necessary to define the concept of co-design, as recently addressed by Sanders and Stappers (2008), which state that co-creation is "any act of collective creativity, i.e. creativity that is shared by two or more people."(p.6), and give a more narrow definition of co-design as "collective creativity as it is applied across the whole span of a design process" so the conceptual relation between the two concepts is that "co-design is a specific instance of co-creation" (p.6).

The process of co-design, as specific instance of co-creation (Sanders & Stappers, 2008), is characterized by an active dialogue about creative ideas; mobilizing customers' communities around design project and as consequence permitting the co-creation of personalized experiences around design. The online co-design platform can be considered as a meta-organization, made by the organization, that have created the online platform, customers and designers. These actors are not bounded by authority relations, such as employment relationship but they works together due to a system-level goal (Gulati et al., 2012) such as create, sell and buy a co-design product.

Empirical setting

Threadless born in 2000 as a little start-up based on a website of t-shirt designs' competitions, where designer simply submit their designs and are voted by the online community, then the best design is printed by the company and sold online. At the beginning of the website the

printing timing was once every some moths, depending on the sold-out of the previous contest and then in 2004 the printing was every weeks.

The co-creation of design "take place" in the forum in which both consumers and other designers can open discussions about their designs and gain suggestions in order to enhance their project before submitting them to the evaluation of the community. Here dialogue between users and designers develops and designers made their process of design transparent and accessible to the community.

Part of the observations were done directly on the website as participant and member of the community from 2010-2013. And a part from this long period of participation in the community, another period of more focused participant observation is done in October 2014 to December 2014.

Contribution: co-design as stabilized network of heterogeneous actors

The four main phases of translation process - problematization, interessement, enrolment and mobilization - are analysed and described trough the chosen case study. At the end co-design can be considered a successful story of translation and a black-boxed (Callon, 1987) or stabilized actor-network. The identities of designers, customers and design itself are questioned by the problematization addressed by Threadless, the negotiation among actors about identities is supported with the enrolment of allies in the actor-network, in particular customers and community members as customers' spokesmen. The final phases of an effective mobilization of the whole category of consumers by its representatives, which can take part into the negotiation and transaction (Callon, 1986), lead to the emergent co-design. The narration of this successful story of translation permits also to infer interesting insights about how to spot and manage heterogeneous relations in meta-organizations.

Co-design as the resulting actor-network of translation process

When we consider the t-shirts sold on Threadless we can think at co-design as a taken-for-granted object that emerges by a process of voting taken-for-granted different co-designs but then, after few months, a specific co-design can disappear and at the same time tens of new ones are emerged. What the ANT perspective permits is the opening of the co-design black box in order to understand the relational ties beyond it.

As in the case of knowledge, also co-design need a lot of work to emerge and consolidate in heterogeneous network and these heterogeneous materials resistance is overcome creating a solid albeit fleeting actor-network (Law, 1992). Following this perspective we can reason on design as part of the social, given that it takes part in the designers-customers relation that can lead to the co-design. As a text in a written communication, design mediates the relation among actors.

The problematization of co-design

The first step of translation process is problematization (Callon, 1986) and it is not straightforward in our case study to circumscribe the actors that problematize co-design. There are different interests in play starting from designers, which are interested in developing and selling their designs, customers that what to choose the designs they prefer and the online platform who earns its living by intermediating the previous relations. The observations on Threadless suggest that the website act to become indispensable in this network, which is another way to see the process of problematization (Callon, 1986). Threadless trough its e-commerce, online procedures to submit and rank designs, netiquette, forum, promotion on social network and communication has created the condition to problematize design and co-design and to becoming indispensable in the network.

Threadless, with its problematization, raises some questions: do designers have to work for manufacturing company? Do the design has to be imposed to customers? Do customers have to decide which design they prefer for their cloths? Why they don't relate directly with designers? Can design be co-developed by customers and designers?

The discussion about co-design starts with the definition of different actors and punctualized actor-networks (Callon, 1991) and their interests in the development of a strong actor-network that sustain and substantiate co-design.

The first actor is the designer: designer participates in Threadless in order to propose his design ideas and obtain consensus by community. If his design is high ranked at the end of the week, then he win a monetary prize and the chance to see his design printed and sold on the website e-commerce. His reward is, as said, a cash prize and a royalty on the t-shirts sold.

The community members are important actors that can be enrolled in the actor-network by designers. They can be customer or not but in any case they participate to the community answering to the suggestions' requests of designers and open dialogues with them in the

forum. The other fundamental action they can perform to modify the final actor-network is scoring the submitted co-designs.

The customers are another actors which aim is to find and buy t-shirt or other objects (long-sleeved shirt, hoodies, i-phone cases…) with the design they like and to buy them on the e-commerce. But if they don't subscribe on the website they can't be part of the online community.

The Threadless platform is as a matter of fact a complex actor-network sustained by a great variety of human and non-human actors such as developers, internet-service providers, managers, investors, money and so on. Given that complexity and the aims of this study we decided to consider it as a non-human actor applying the idea of punctualization (Callon, 1991) of the more complex actor-networks that constitute it.

Threadless attempt to lock allies: the interessement

At this point all the needed actors, in order to create a co-design, are present, what it is missing is the enrolment of allies in order to strengthen the actor-network around innovation (Lowe, 2000) or in our case, around co-design.

The more evident approach used by Threadless to enrol allies is the commercial modes of interessement, but as Alcouffe, Berland, and Levant (2008) show in their research, sometimes it is not strong enough. The commercial mode is evident, the cash reward and royalty for designers and the good price for customers are indeed incentive to participate in the network. But on the customers side the convenient price is not an incentive to participate in the forum and in the scoring of the design, so the other interessement mode is to promote the participation of the customers as a way to have the chance to buy product with the design they like.

Moreover Threadless work on giving to designer other interessement modes in particular it gives the chance to pre-submit the design to the community forum in order to create interest and dialogue on it and then to share the design or co-design on Social Media to obtain positive ratings.

As stated by Callon (1986): "To interest other actors is to build devices which can be placed between them and all other entities who want to define their identities otherwise. A interests

B by cutting or weakening all the links between B and the invisible (or at times quite visible) group of other entities C, D, E, etc. who may want to link themselves to B." (p.6)

In this sense the designer has to strengthen the links within a strong network of allied customers that support their design project. They need that customers define their identities in the participation into the creation of design; in such way those customers are less interested in creating links with others actors that can be other designers or cloths resellers.

The enrolment of community members

The interessement phase is not always followed by a successful story and the strengthen of network (Callon, 1986; Alcouffe et al., 2008), in this specific case, around the co-design project. Only when the interessement phase is successful the enrolment take place and then we can describe the negotiations and trials of strength that follow (Callon, 1986, Latour, 1987).

Another important aspect that can preclude the emergence of a co-designs is that each designer has to face a lot of anti-programs, namely the other co-design on the online platform, supported by network of counteractors (Latour, 1991; Alcouffe et al., 2008). Following this analysis of Threadless power mechanisms we can see that the enrolment is fundamental; without a sufficient numbers of community members that support the project the actor-network collapses at the end of the week and it's replaced by another project. So at the end we can see that the story of co-design is always an "happy-ending" story, but only after a "bloody" struggle of program and anti-program supported by different actor-networks.

The importance of negotiating here emerges and gives sense to co-design, in fact designers prefer to negotiate their project in order to obtain the strongest network of allies.

The mobilization of consumers and designers.

In Threadless it can be also observed the dynamic of mobilization of mass by the representation of a smaller number of spokesmen that take part in the negotiation and transaction (Callon, 1986) that lead to the emergent co-design.

As we can imagine the designer that joined Threadless are not the whole category of designers, the community members are not the whole category of customers and customers of Threadless are not the whole category of t-shirts consumers but indeed these whole populations are effectively mobilized by their representatives.

The successful story of a co-design project depends on this effectively mobilization made by the representatives of those groups in particular by the mobilization of customers made by the community members that act as spokesmen. The emergent co-design indeed don't represent the collaboration of all the customers to a design project, Threadless has created relations only with a limited number of designers, community members and customers that are only the representatives. Consumers are "all dispersed" and "not easily accessible" (Callon, 1986) so there is the need for Threadless to designate representatives, the community members, that act as spokesmen. After that mobilization can be done in the sense proposed by Callon (1986) when states that mobilization is obtained: "Through the designation of the successive spokesmen and the settlement of a series of equivalencies, all these actors are first displaced and then reassembled at a certain place at a particular time." (p. 14).

Customers are transformed into community members, which are transformed into suggestions' posts for designers in the forum, and their preferences are transformed into online votes attached to the submitted designs. The designer, their ideas and the process of dialogue and co-creation are transformed into an image file that can be easily subjected to reviews and voting by community members.

The final ranking is a set of numbers that can helps Threadless in decide which is the co-design to print. So at the end the successfully mobilization process results in a printed t-shirt that represents a successfully story of co-design.

So paraphrasing the final statement of Callon (1986) about "social and natural 'reality'" and attributing it to co-design that involves both social and natural "reality", we can say that co-design is "result of the generalized negotiation about the representativity of the spokesmen. If consensus is achieved, the margins of manoeuvre of each entity will then be tightly delimited." (p.15).

Final remarks

The existence of a co-design is the result of a continuous creation and re-creation of networks, but without a sufficiently strong enrolment of allies a specific co-design project and in more general term the co-design itself collapses. The enrolment of customers and their representatives, the community members, is a central part of the process but to achieve this aim there is the need of a problematization of co-design and interessement around it.

Even if ANT perspective has not the objective of generalization or production of normative prescriptions, some interesting hints can be derived from the description of a successful co-design story.

The mechanisms of power and the social dynamics that emerge form the analyses trough the sociology of translation approach can strengthen the comprehension about: how a strong actor-network can emerge and sustain co-design, which are the main human and non-human actors and which are their relations. The ANT perspective can give some useful hints also for scholars who research on the design of online platform and the meta-organization involved in it that enhances community participation.

In a research topic in which often co-creation, organization and other individuals are studied as theoretical constructs or processes observable as stand-alone objects, this study propose a different approach in which realty and social, material and semiotic can not be studied separately and co-design can exist only if the relations among both human and non-human actors are maintained in a constant state of making and re-making.

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