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Sanna Peltonen

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Changing Roles. Role theoretical approach to customer involvement in industrial service development

Sanna Peltonen^{a*}

^aDesign Centre MUOVA, VAMK University of Applied Sciences

*Corresponding author e-mail: sanna.peltonen@muova.fi

Abstract: Customer's role in value creation is in transition from passive buyers to active partners, which encourages companies to engage their customers in an ongoing dialogue. However, companies still have troubles in involving customers in the development activities. This in-depth case study in manufacturing company operating in b-to-b markets applies a role theoretical drama metaphor as a diagnostic framework to analyse the role distribution between a service provider and a customer in an actual service development setting. Results indicate that enhanced customer involvement activities challenge the role boundaries between the customer and the service provider. The company needs to open up their service development process to the customer and the customer needs to be ready to take a more active role in the process. The paper contributes by providing valuable information for both manufacturing companies and design consultancies to help in initiating and implementing customer participation in the service development process.

Keywords: Customer involvement, Manufacturing Company, Role change, Case study

1. Introduction

The customers' role in value creation has changed from passive buyers to active partners, which encourages companies to engage their customers in an active, explicit and ongoing dialogue of equals (Lagrosen, 2005; Prahalad & Ramaswamy, 2000). The recent literature in service management (e.g. Grönroos & Helle, 2010; Heinonen et al., 2010; Strandvik, Holmlund, & Edvardsson, 2012) goes even further by suggesting that the customer should be positioned in the center of the development. In the design field, Integrating customers and other stakeholders in design process has long been a central focus (Sanders & Stappers, 2008).

However, despite a widespread recognition in the literature, companies still fail to integrate the customer into the innovation process (Martin & Horne, 1995; Matthing, Kristensson, Gustafsson, &

Parasuraman, 2006; Olson & Bakke, 2001) and customers are mainly given a passive role: the service provider is expecting them to do little beyond buying and consuming offerings (Heinonen et al., 2010; Prahalad & Ramaswamy, 2000; Sanders & Stappers, 2008).

The adoption of collaborative approach in creating and implementing the offer requires modifications to the roles of the customer and the service provider either by adding or subtracting their tasks or rights (Broderick, 1998, 1999; Solomon, Surprenant, Czepiel, & Gutman, 1985; Turner, 1990; Williams & Anderson, 2005). Since a role bears a functional or representational relationship to other roles, change in one role means change in a system of roles (Turner, 1990).

This paper examines the role distribution and relationship between the service provider and the customer by applying drama metaphor to the service development project conducted in a b-to-b manufacturing company. Drama metaphor has been regarded as an appropriate framework for studying services because of its focus on relationships and interaction (Williams & Anderson, 2005). The findings indicate that the role distribution and the constitution of role change are distinct for different customer engagement types. Findings imply that direct customer involvement activities have the capability to challenge the role boundaries between the customer and the service provider.

This in-depth case study contributes to research in service management by focusing on service development which has not been widely studied. This paper also contributes to service design by using role theory in understanding relationships in service development process. From the managerial viewpoint, the paper contributes by providing valuable information for manufacturing companies and service design companies in initiating and implementing customer participation in the service development process.

2. Theoretical background

The role of the customer in the development of new offering has been studied widely in marketing and design (e.g. Alam, 2002; Ives & Olson, 1984; Kaulio, 1998; Kujala, 2002; Lengnick-Hall, 1996; Lusch & Nambisan, 2015; Nambisan, 2002; Sanders & Stappers, 2008; Visser, Stappers, van der Lugt, & Sanders, 2005). According to Kaulio (1998) customer involvement in product or service development denotes interaction between customers and a design process. This involvement may differ in how active customers' roles are, whether they influence decisions, or whether they even participate in the development work (Kujala, 2008).

Role theory is based on a drama metaphor, which sees services as drama presentations including roles and scripts (Goodwin, 1996) used in interaction between customers and service providers (Solomon et al., 1985). A role can be defined as a characteristic patterns of behavior and attitudes, constituting a strategy for coping in a recurrent set of situations (Turner, 1990). Roles describe the relative positions occurring in a given relationship: one person takes a focal position, and the other a counter position (Markham, Ward, Aiman-Smith, & Kingon, 2010). By playing roles, the individual participates in a social world (Berger & Luckmann, 1966). The drama metaphor has been suggested to offer a suitable framework for analyzing services because it captures the dynamics of the interaction that occur (Grove, Fisk, & Bitner, 1992) and directs the attention to actors rather than processes (Goodwin, 1996). Also service design has used drama metaphor for capturing the interactional and temporal dimensions of service (Wetter-Edman, 2014).

As the service encounters are becoming more participatory and less spectator-based, the role boundaries between the customer and the service providers are blurred (Broderick, 1998), and role behaviors become interdependent (Solomon et al., 1985). When services are developed or modified

to better address market needs, also the degree of interactivity in service provider-customer relationship may change significantly (Broderick, 1998).

Service research (Goodwin, 1996), theater (Williams & Anderson, 2005) and customer involvement literature (Damodaran, 1996; Kaulio, 1998; Kujala, 2008) have all identified two critical aspects in the customer's role; the collaboration level and the decision-making power. The collaborative dimension captures the extent to which the customer is participating in the creation of the offering (Alam, 2002; Ives & Olson, 1984; Marsden & Littler, 1996; Martin & Horne, 1995). In service innovation, Martin and Horne (1995) separate two constructs in customer participation: direct customer participation in the process, and indirect participation, in which the internal information about the customer is used.

The decision making power relates to the extent to which the customer actually possess the decision-making power (Ives & Olson, 1984; Kaulio, 1998). In service development, the customers' contribution may be limited to as a recipient of the offering, they may contribute by reacting to concepts prepared by the developers, or they may have an active role in developing and selecting different design solutions (Kaulio, 1998; Sanders & Stappers, 2008).

Role theory is previously applied mainly in studying service encounters and service performance (Broderick, 1998, 1999; Solomon et al., 1985). Service research has identified service development and service design as potential application areas of role theory (Broderick, 1998). However, Broderick (1999) argues that role change within new service development is only rarely acknowledged in practice. This is in line with Wetter-Edman (2014) who summarizes that service research typically focuses on the purchase and consumption of services whereas the development of new services, involving users and understanding context has been in the focus in design field.

Williams and Anderson (2005) encourage service providers to adopt a more collaborative approach in creating and implementing their offer. However, as suggested by Sanders (2008) it is difficult to move from one approach to another because the shift entails a significant cultural change. Service design has been found to support this change with its tools and methods (Ojasalo & Ojasalo, 2015; Wetter-Edman, 2011). This paper applies drama metaphor in the context of service development. The paper examines how the customer can be engaged in the service development and how the roles are distributed between service provider and the customer in the different customer engagement types.

2. Method

This study employs a case study approach to explore and analyze the roles in the service development. A case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context (Yin, 1981). The data for this study are collected using action research method (Avison, Lau, Myers, & Nielsen, 1999) in actual service development project lasting over 10 months.

2.1 Case description

This case study is based on the data from one company-specific service development project. The case company (Company hereafter) develops and manufactures machines and systems for the product manufacturing industry. The Company is located in Finland and operates worldwide. Analogously to its competitors, the Company has been seeking competitive advantage in technical excellence emphasizing the quality, effectiveness and capacity of its machines. In recent years, the Company has recognized the potential of design in service development. Therefore, the Company participated in a two-year long research project funded mainly by the Finnish Funding Agency for

Innovation (TEKES) and partly by companies. The Company was developing a digital configuration tool for negotiating with customers about suitable production systems. The development of this configuration tool constituted the context for the investigation.

In the project, Design research organization (RO) concentrated on strengthening the customer focus by providing expertise in customer oriented service development and concept design. The author worked in the RO and was assigned to a three-person research team, which consisted of an industrial designer, a customer researcher (the author), and a service designer.

2.2 Data collection and analysis

For increasing the reliability of the data, multiple data sources were used (Voss, Tsikriktsis, & Frohlich, 2002). The complete set of data consists of actual discussions in the development team meetings and customer involvement sessions. In addition, design documents and researcher notes were used for confirming the findings (see Table 1). The data were collected through participant observation (Anderson, 2008). The main informants from the Company were Project Leader and Sales Manager.

The author participated in the project as a researcher with the main responsibility to gather and analyze the demand and supply side information for the creation of design concepts and planning the customer involvement sessions. The author also made notes and audio recordings. Data was collected between January and October 2015. For confidentiality reasons the identities of the companies or informants are not revealed.

Table 1. Empirical data set for the study

Data source	Data type	Data content
Development team meetings	transcribed audio recordings (133 pages) of 4 meetings	company's perception of their role in relation to customers, current level of customer engagement in the service development
Design documents: Service concepts	three concepts created by RO	pursued customer experience, company's role in customer's business
Design documents: Customer experience journey	presentation of customer journey in service concepts created by RO	company's perception of their role in relation to customers, the aspired role of the company in customer's business
Customer involvement sessions; prototype testing and workshop	transcribed audio recordings (61 pages) of 2 sessions	customer's role in direct involvement sessions, role distribution between company and customer
Design documents: Toolkit for gathering customer experiences	session content and toolkit	customer engagement, role distribution
Notes from participant observation	author participated in the NSD meetings during January-October 2015	reconstruction of the case events

In the development process the customer was present indirectly and directly (see Table 2) in three different settings; (1) the customer was represented by sales representatives and (2) involved twice in a prototype testing. The customer also participated (3) in a workshop session planned for gathering customer experiences. The workshop session was facilitated by the RO and design toolkit was used for mapping customer point of view in investment process including different phases, information needs and customer experiences. The toolkit included both visual and textual elements such as use scenario cards, emotion cards and notes. The Service designer from RO was the main

facilitator, briefing the toolkit and helping the customer to accomplish the tasks. The author was assisting the facilitator by keeping record on selected pictures, asking questions if something remained unclear and writing notes. The customer involved in the process, operates in subcontracting and had a purchasing history with the Company. At the time of the project, the customer was also actively preparing for a new investment.

Table 2. Three Customer involvement settings

	Development team meetings	Prototype testing	Session for gathering customer experiences
Description	Two persons from sales organization of the Company is representing the customer	Customer is evaluating the prototype and sharing information regarding needs/requirements	Design toolkit was used for generating detailed customer knowledge
Engagement type	Indirect	Direct	Direct

The thematic analysis followed the systematic process proposed by Braun and Clarke (2006). In familiarizing oneself with the data, the author listened voice recordings and transcribed all parts of the recordings that seemed to have some relevance in understanding the roles played by the Company and the Customer. Transcriptions formed the data, which the author read through several times in order to become familiar with all aspects of the data (Braun & Clarke, 2006).

The author began the coding through a descriptive coding method (Saldaña, 2009) which was used without an intentional conceptual guideline other than roles determined by behavior. This is in line with Knight & Harland (2005, p. 282) who argue that roles can be analyzed in terms of the behavior related to the part the organization is playing. The questions “What is happening here? What is he doing?” guided the analysis. Data from both actors (Company and Customer) was analyzed separately (Saldaña, 2009). In addition, each of the three customer involvement settings were analyzed separately for identifying setting related role distribution.

The initial codes were collated into potential themes, which were evaluated against the components in the customer involvement - engagement level and decision making power (Williams & Anderson, 2005). Themes were named by using roles from the drama metaphor (director, lead actor and support cast) for making the role distribution visible in each customer involvement setting.

3. Findings

3.1 Company as Director - Customer as Support cast

In development team meetings, the sales personnel represented the customer and the development was mainly based on the existing knowledge cumulated in the dialogue with customers on their usage of current products and services. Sales managers shared actively customer knowledge to other development team members. New project specific customer data were not collected for the prototype or design concepts. The company seemed to have great confidence in their sales personnel and trusted them to provide all the information needed. Project Leader expressed this by talking about symbolic mandate that Sales Manager had received from the customer.

“I think you (Sales Manager) have the mandate from the customer, so you can represent him.” Project Leader

The starting point for the service development was the request from the customer. The Sales Manager referred to his discussions with the customer on several occasions during the development

process. When the development team had differing views on the preferred content, the Sales Manager searched from his e-mail the customer's original request.

"In the end we should supply the best solution for this customer request so it is the target. Let me find the original request from the customer, because now we might go to a little bit wrong direction, I am not sure." Sales Manager

Once the Sales Manager left the meeting room and called the customer in order to make sure which parameters are the most important ones. These parameters were later included into the prototype.

When represented by the Company, the customer can express his needs but the Company determines the final outcome. This power structure places the Customer as Support cast (Williams & Anderson, 2005). In analyzing the data, it became evident that the Customer has the possibility to elaborate his needs only when the Sales Manager found it necessary to ask for his opinion. In other words, the customer's role as Support cast seems to be only temporal and defined by the Company.

3.2 Company as Lead actor – Customer as Lead actor

The aim of the first prototype testing session was to get feedback from the customer. Project Leader was explaining the aim of the session to the customer as follows.

"The aim of this meeting is that we are now presenting the concept and would like to hear how it looks. Are we on the track? Is there essential information or is it helpful?" Project Leader

The prototype seemed to inspire and set a scope of discussion. The Customer was critically evaluating the structure and logic of the prototype. Especially in the second testing session, the customer was evaluating the data presented in the prototype, because he had identified the mismatch between the data and interests of the actual users.

'There are two themes. The one is for evaluating how we can improve the production. We need to have also another file, which I will present to the board. The board people, they do not care too much about production figures. They don't understand these figures.' Customer

When evaluating the prototype, the customer was taking a developer role by making suggestions how the design would better match to the requirements in the actual context of use. The customer was sharing very openly their business goals, strategies, internal processes and problems as well as pointing out several real world examples to visualize his idea of a useful structure and content. The customer was "an expert of his own business" as suggested by Visser et al. (2005).

Based on the data analysis, it seemed that the Customer was occupying not only the expert and potential user roles, but also a role of a colleague. Especially when the customer was talking about their ongoing investment case, he expected the Company to assist him in the case. This business case motivated the customer but also the Company to collaborate in service development.

"Now we need to get started. This is also a question of time and resources. Is there any person who could come to our factory and take those figures? It is important. If you can get somebody to help me, we can do this together." Customer

The Company was showing genuine interest in learning about customer business context. The Sales Manager and Project Leader were highly involved in the discussion, asking questions and commenting. In the Prototype testing session, the Company actually seemed to adopt a role of intelligence generator, and not a selling role, similar as in Flint (2002).

Customer needs were dominating the discussion in the prototype testing. The Customer had strong voice in discussion of the context, needs and expectations as well as the actual structure and content of the prototype. Customer was engaged in significant interaction and discussion. The active role of the customer makes him like a leading actor similar to Lead actor in Williams & Anderson (2005). The Company was occupying the role of colleague or partner. However, role distribution was only temporal and related to the prototype testing session. Afterwards, the expertise and authority returned to the Company.

3.3 Company as Support cast – Customer as Lead actor

The workshop for gathering customer experiences was organized at the same day with the prototype testing. The Company requested RO to focus on gathering information on potential use situation and user groups of the configuration tool. Main actors in this session were the customer (experienced production manager) and RO as facilitator of the session. Project Leader introduced the workshop as an exercise.

“We have presented the prototype from the perspective that we are selling and promoting our machines. You (RO) would also have this kind of, not like a role play but kind of exercise on what kind of help you (the customer) need in internal decision or discussion.” Project Leader

The Project Leader seems to consider the workshop for gathering customer experiences as a separate chapter within the prototype testing. RO had prepared a specific generative design toolkit (see Sanders, 2000) which directed and set the scope of discussion.

As the focus of the workshop was to understand the customer point of view, the Customer was occupying the central role in the session. The Company representatives (Project Leader and Sales Manager) were observing the workshop and making some comments and remarks. Informal comments seemed to support the relaxed atmosphere in the session.

However, as mentioned earlier, the session was regarded as an exercise, lasting only half an hour. Roles were temporal and they existed only in this session. This was also implied by the Project Leader when he summarized the workshop session.

“For us the aim was to understand, how we should present the data and to make sure that this fits to customer’s process. Only if we have good understanding, we can provide the best support, best visualization and the best data for different phases in customer process. Make things easy, easy for the buyer.” Project Leader

After the workshop, the Company redesigned the prototype and continued the service development on behalf of the Customer. The Customer who had participated in workshop session and provided valuable information for the service development, was placed to the role of a buyer. Nambisan (2002, p. 2001) described the role of a buyer as suggesting that the “emphasis is on customers as objects rather than as agents of value transformation”.

3.4 Summary of the findings

The findings of the study are summarized in Table 3. In general, the major difference in these three settings is about the distribution of expertise between the Company and the Customer and the changes in role boundaries.

Table 3. Summary of the findings

Role types	Company as Director - Customer as Support cast	Company as Lead actor – Customer as Lead actor	Company as Support cast – Customer as Lead actor
Engagement type	indirect	direct	direct
Role change	no change	Company: role expansion Customer: role expansion	Company: role subtraction Customer: role expansion
Ownership of expertise	Company	shared with Customer	Customer
Activities of the Company	Company determines how the customer need is met	Company is highly involved in the discussion, asking questions and commenting	Company have impact on other's experiences
Activities of the Customer	Customer can make requests to have certain needs met	Customer is engaged in significant interaction with company	Customer dominates the direction of discussion
Similar company roles in previous research	provider, seller, innovator, expert	intelligence generator, developer, colleague	observer
Similar customer roles in previous research	buyer, beneficiary (Kaulio, 1998; Lengnick-Hall, 1996; Nambisan, 2002)	user, colleague, co-creator (Alam & Perry, 2002; Lengnick-Hall, 1996; Nambisan, 2002)	partner, co-creator, expert (Sanders & Stappers, 2008; Visser et al., 2005)

4. Conclusions

This research investigated customer involvement in actual service development project in a manufacturing company operating in b-to-b markets. The research applied a role theoretical drama metaphor as a diagnostic framework for analyzing role distribution and the relationship between a service provider and a customer.

Both indirect and direct customer involvement was used in the project; indirect customer involvement in development team meetings, direct customer involvement in prototype testing and a workshop for gathering customer experiences. For the Company, indirect customer involvement was the typical way to involve a customer. Direct customer involvement was promoted and supported by the RO in order to provoke customer centered design and changes in typical roles between the Company and the Customer. Role distribution in these customer involvement settings was as follows.

- Indirect customer involvement: Company as Director - Customer as Support cast
- Direct customer involvement in a prototype testing: Company as Lead actor – Customer as Lead actor
- Direct customer involvement in a customer experience workshop: Company as Support cast – Customer as Lead actor

The findings of this in-depth case study indicate that both the role distribution between the company and the customer as well as the constitution of a role change is distinct in each customer involvement setting. Findings imply that direct customer involvement activities can challenge the existing role boundaries between a customer and a service provider. Adopting a more collaborative approach demands the service providers to open up their development process and customers to take more active role. This is in line with Williams et al. (2005) who suggest that if customers are engaged in service design, typical role boundaries need to change.

In this study, the customer involvement activities were organized as separate exercises and they provoked temporal changes in roles. The paper indicates a need to support companies in selecting

appropriate collaborative methods and in applying them in the service development process in order to create more permanent changes in roles. This is in line with De Lille (2014) who recognized that involving users is an on-going learning process for the company changing its mind-set and learning the necessary skills.

This single case study is based on the data collected from an actual service development project. The active participation in formulating the customer involvement activities and observing organizational roles within the project enabled the author to gain access to rich data which is not accessible otherwise. However, the role of the RO was excluded from the analysis, even though it might bring new knowledge about the role of design in supporting the role changes. Future research may also be directed to explore barriers and enablers in the role change. The findings could be materialized into design template or toolkit for supporting the role change activities. Further research could also investigate role distribution in different phases of design process.

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About the Authors:

Sanna Peltonen as a researcher has over 10 years' experience in studying and applying customer-oriented design in research and business. The research interests focus on customer engagement in service development. Peltonen is also a doctoral student in University of Vaasa.

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