Non-customers as initiators of radical innovation

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Customers who initiate innovation is a topic frequently discussed in the marketing literature. However, the literature largely ignores non-customers – individuals or firms not using products in the category – as potential initiators of innovation in general and of radical innovation in particular. We argue that non-customers have high knowledge of their own needs, but their knowledge of technology is insufficient to self-generate an innovation. By approaching a potential supplier with a high knowledge of technology but an insufficient knowledge of the need, a unique dyad is created, characterized by a bilateral knowledge gap that stimulates increased learning and co-creation of a potentially radical innovation. We use an historical approach to examine the technological and social antecedents and consequences of three innovations initiated by non-customers: air-conditioning, the pill, and the jeep. We contend that non-customers can initiate innovations that may potentially change industries, create new markets, and have long-term social and economic effects.

1. Introduction

Customers who initiate innovation is a topic frequently discussed in the marketing literature. However, the literature largely ignores non-customers as potential initiators of innovation in general, and of radical innovation in particular. If non-customers can initiate innovation, then in ignoring them firms might completely miss opportunities to develop important and perhaps radical innovations. Such missed opportunities can have grave consequences, because (1) firms invest billions of dollars every year on R&D and on developing radical innovation in particular (European Commission, 2014; Financial Times, 2014; Wall Street Journal, 2013), and allocating R&D expenditures effectively is critical; and (2) if non-customers can initiate radical innovation but are erroneously ignored by firms, then the entire business network of firms and its management may be critically flawed. The tremendous amounts of money put into market surveys may render the investment in them suboptimal. Firms might miss out on radical innovations that would enable technological leapfrogging, establishing themselves as market leaders and generating new markets for them.

We define non-customers as individuals or firms that constitute the target market of the innovation, but (1) are not using products in the category (that is, if they use substitutes at all, they are ones from other categories), (2) are not previous customers of the firm that generated the innovation for them in that category, and (3) do not possess sufficient technological knowledge to develop the innovation without the help of experts. Accordingly, we define a non-customer-initiated innovation as a specific new product that the non-customer needed, and where this need was conveyed to a potential supplier. Such an initiation may occur when the non-customer and potential supplier interact and the non-customer conveys a need to the supplier, either explicitly asking for help, or implicitly conveying a latent need (for example by conducting a work routine that reveals a need) (Lynn, Morone, & Paulson, 1996). Finally, we define radical innovation as an innovation based on a technology that substantially differs from the technology of existing products, and that provides superior benefits to (future) customers compared with existing products (Chandy & Tellis, 1998).

Radical innovations change existing markets, generate new markets, and change habits and perceptions (Christensen, Anthony, & Roth, 2004; Christensen & Bower, 1996; Garcia & Calantone, 2002). As such, they are likely to have a considerable effect on customers, industries, and even society. The purpose of this study is to answer the following research question: Can non-customers initiate radical innovation? To answer this question, we use an historical approach (see Golder, Shacham, & Mitra, 2009; Hargadon & Douglas, 2001; Rosenzweig, Tellis, & Mazursky, 2015). We examine three historical innovations by studying their detailed history and their technological and social antecedents and consequences. We subsequently estimate how radical they actually were through assessing their longitudinal effects. These three innovations represent industries, end-customers, technologies, and periods that differ from one another. These differences control for idiosyncratic effects, and provide – with necessary caution – a preliminary base for potential generalization to other industries, customers, technologies, and periods (Lynn et al., 1996). For each innovation, we focus on a single dyadic relationship during the relationship.

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formation, in what eventually became a business network (Håkansson & Ford, 2002; Vargo & Lusch, 2008).

The paper is organized as follows: first, we present the research gap and offer a theoretical framework for explaining how non-customers can initiate the co-creation of radical innovation. We then describe three historical innovations, with the circumstances of their emergence and the consequences of their introduction. Next, we analyze our findings. The final section discusses the contributions, findings, and limitations, and suggests opportunities for future research.

2. Theoretical framework

The marketing literature advocates that to generate innovation, firms should focus on customers (e.g., Narver, Slater, & MacLachlan, 2004; Urban & Hauser, 2004) and co-create the innovations with them (Jalkala & Salminen, 2010; Kohtamäki, Partanen, & Möller, 2013). However, the literature largely neglects opportunities to co-create innovations with non-customers, and radical innovation in particular. Indeed, the studies of Christensen and colleagues (e.g., Christensen, 1997; Christensen & Bower, 1996) suggest that focusing on potential customers can lead to radical or disruptive innovation. However, these studies relate to customers of substitutes in the category (versus non-customers). More importantly, these studies focus on the suppliers as the initiators of the innovation.

But can the non-customers be the initiators of radical innovation? Can co-creating with non-customers produce radical innovation? The literature does not address these questions, and the following theoretical framework intends to bridge this gap in the literature. We offer a theoretical framework for the co-creation of radical innovation by non-customers – as initiators – and their potential suppliers. We present the framework in Fig. 1, and elaborate upon it next.

2.1. The initiation of a dyadic relationship between non-customers and potential suppliers

Consider the case where a firm or an individual realizes a need, and no available product meets this need. If this firm or individual has insufficient technological knowledge to develop a product themselves, they can approach a potential supplier that may possess the required knowledge (Edvardsson, Holmlund, & Strandvik, 2008) (Fig. 1, step 1). The potential supplier has its own customers, and has insufficient knowledge of the need expressed by the non-customer. Once an interaction between the non-customer and potential supplier is established, the potential supplier realizes its insufficient knowledge of the need, but high knowledge of the technology, and considers reciprocating with the non-customer.

Agreement of the potential supplier to develop the needed innovation (Fig. 1, step 2) is contingent upon two critical issues. First, given its low knowledge of the need, the potential supplier must consider the ability of the non-customer to mobilize the required knowledge about

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Fig. 1. Non-customers as initiators of radical innovation.
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