Everyday Digital Entrepreneurship: The Inception, Shifts, and Scaling of Future Shaping Practices

Research-in-Progress

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Abstract

Digitization has created extremely favourable conditions for digital innovation, initiating shifts in the organizing logic of products, services, and various aspects of organizational practices. Current literature has eagerly explored this digitally enabled diversification. However, it has paid little attention to the digitization of everyday practices and how forms of entrepreneurship emerge from such practices. In this paper we propose that digital technology instigates a new type of digital innovation – future-shaping practices, and will attempt to exemplify and explore the forces behind such newly emerging everyday practices. Our research draws on a multimethod research design based on four case studies that represent future shaping practices in transportation, healthcare, education, and sustainability. Drawing on document analysis and semi-structured interviews, we report on our research-in-progress that seeks to determine the generative mechanisms that enable the inception, shift, and scaling of future shaping practices.

Keywords: Case study/studies, Causality, Digital Entrepreneurship, Future shaping practices, Innovation, Narratives, Online communities, Peer-to-peer, User driven innovation, User empowerment.

Introduction

As consumers we have grown to understand the effects of Weiser's (1991) seminal vision of digital technologies that "weave themselves into the fabric of everyday life until they are indistinguishable from it" (p. 66). Cashless transactions, eLearning, and online medical consultations are just a few examples. For some they are more of a privilege, for others bewildering future, and for the majority – now a mundane reality. One way to appreciate this new reality would be in terms of its new radical digital innovations (Yoo et al. 2010). Another relevant view involves closer examination of the emerging practices' relationship to already established practices: the practice of making and receiving a payment, practice of teaching and learning, practice of giving and receiving medical help. Indeed, seeking a solid grasp on how new innovative practices emerge as a result of metamorphoses from previous practices would potentially pinpoint the moments when they incept, shift, and scale. This is what this research-in-progress is attempting to achieve.

For good reasons the organization has been the entity of interest in extant IS innovation and entrepreneurship research (Fichman 2004, Swanson 1994). Our current body of knowledge is therefore

tilted towards the institutional and commercial relationships with technology (Yoo 2010). However, in the wake of democratization of innovation (von Hippel 2005) and digital entrepreneurship (Davidson and Vaast 2010), users are increasingly participating in the innovation process. One central aspect of such participation is how it builds on everyday practices. While this intimacy with everyday life is recognized in institutional (Garud et al. 2007; Henfridsson and Yoo 2014) and social entrepreneurship (Alvord et al. 2004, Dacin et al. 2010), we know very little about how it plays out outside the traditional organizational realm.

This research-in-progress paper reports on a study with the intention to develop a new theoretical perspective on digitally enabled future shaping practices and their roots in mundane everyday routines and practices. The paper will therefore deal with the following research question: What processes enable the inception, shifts, and scaling of digitally enabled future shaping practices? The main research question can be further subdivided: How do everyday mundane practices generate future shaping practices? How do stages of inception, shifts and scaling interact and influence each other in the process of generating future shaping practices?

These research questions will be addressed through a multimethod case study. First, we conducted a comparative case study analysis through systematic collection and coding of case narratives based on document analysis. Each case was characterized according to the key events and various historic and social background factors that might have influenced the development trajectory of a future shaping practice. Data generated in the first step will be used to produce timelines. These will become a unit of analysis in Step 2, which will undertake the task of defining the generative and causal mechanisms, whilst cross comparing the cases for any similarities in the practice development patterns. Third, we will collect and code semi structured interview data as a method for honing the explanatory power of our process theory. By proposing such a multi-staged back-casting methodology we aim to achieve more relevant and robust findings.

This paper will proceed to explain the central to this research concept of future shaping practices and will map out its position in the current research landscape. Following this theoretical dissection we will then give a comprehensive account of the methodology and describe the research steps we have taken so far. We conclude this paper with an outlook on anticipated contributions and the next steps in realizing this research agenda.

Conceptual Basis

Everyday digital entrepreneurship refers to users' practice of seizing digitally enabled innovation opportunities discovered in their everyday life to build new business ventures. As we seek to appreciate the patterns of entrepreneurial interactions among everyday users-turned-digital entrepreneurs with technology and innovation opportunities, our conceptual basis will be grounded in the academic understanding of similar interactions among institutional digital entrepreneurs (Davidson and Vaast 2010, Henfridsson and Yoo 2014, and Maguire et al. 2004).

We define future shaping practices as practices derived from mundane and embedded exercises of everyday life, engendered by digitally empowered user(s) with an entrepreneurial vision to address the current needs in imaginative and innovative ways. Future shaping practices flourish as a result of rapidly growing user networks and communities of early practice advocates. Our definition of the term 'future shaping practice' promises three things. First, despite being in demand for addressing current user needs, it reshapes the market outline and eliminates the need for established practices. Second, by democratizing a product or a service it creates further innovation opportunities thus spawning and re-shaping future innovation trajectories. Finally, we propose that the historic and social background of the established practice influences future shaping practices. This dynamic relies on a "practice net" of mutual imbrications and deferrals between the practices (Nicolini 2009). It implies that "the effects produced in one practice are used as resource or signs for others" (p.1412).

Research Streams

The concept of future shaping practices consists of four core elements: practice-induced innovation, pastfuture tension, user empowerment, and community based commerce (see Table 1). Here, we strive to clarify these elements of the definition of future shaping practices in relation to the relevant IS research.

Table 1. Definition Building Blocks and Research Streams				
Research Stream	Definition	Theoretically Grounded in (example references)		
Practice-induced innovation	Innovation that has occurred as a result of an establishment of a new digitally mediated practice, which in turn was incepted as a result of an innovative use of digital technology whilst developing an innovation opportunity.	 Benson (1977) Bresman (2013) Czarniawska (2008) Leonardi (2011) 		
Past-future tension	Tension that results from ruptures in the trajectory of an established practice, caused by an inception of an innovative digitally mediated practice.	 Garud et al. (2010) Garud and Karnoe (2011) Henfridsson and Yoo (2014) MacKay and Chia (2013) 		
User empowerment	Distribution of power among everyday users to generate and diffuse innovation opportunities among peers and communities of everyday users, influencing the present and future innovation trajectories.	 Shah and Tripsas (2007) Raasch et al.(2008) Tuomi (2002) von Hippel (2005) 		
Community based commerce	Escalation of innovation opportunity in size and commercial value through a network of early adopters.	 Botsman (2010) Gloor (2006) Komninos (2002) Rheingold (2002) 		

Future shaping practices are characterized by *practice-induced innovation*. Moving beyond the product and service view of innovation, practice-induced innovation highlights the role of mundane activities for shaping new uses of digital technology. As a newly emerging type of innovation, it has become possible as a result of increasingly flexible technology that can be easily adopted by the users in order to best suit the flexibility of their constantly evolving needs and routines (Leonardi 2011). These flexibilities spawn practice induced innovation, and are in turn produced by action nets (Czarniawska 2008) and infrastructures of bidirectional relationships between human and material agencies and their past imbrications. Underlining the routine change, they are at the same time guided by social formations (Benson 1977, Bresman 2013) and external constrains and affordances that affect the future trajectory of practice innovation (Leonardi 2011).

In addition, future-shaping practices are shaped by the past-future tensions between what is established and what is currently emerging. Following from Henfridsson and Yoo's (2014) views on liminality of innovation trajectory shifts, future shaping practice at its embryonic stage will coexist in parallel and compete with existing embedded practices (Garud and Karnoe 2011). The transition from established to newly emerging practice is a result of human technology imbrications, but are equally affected by choices, chances, and various unintended consequences (MacKay and Chia 2013) and other exogenous shocks (Garud et al. 2010) outside of control of social actors involved in the inception, shift or scaling stages of practice development. These influences create innovation wakes (Boland et al 2007), which can in turn exponentially produce newer, more complex and turbulent landscapes of innovations. Understanding the path creation and path dependency between past and present events and actions (Garud et al. 2010) is essential to grasping the causal mechanisms behind the inception, shifts, and scaling of future shaping practices. Consider, the historical development that preceded the current organizing logic of innovation (Yoo et al. 2010). Innovation power was in the hands of producers, not consumers (Schumpeter 1934, Williams and Edge 1996). Mass production, where technological capabilities dictated the conditions for the next innovation, prevailed in the early and mid 20th century innovation scene. More recently however conditions facing the innovators are changing, but would be impossible without the historic and social background factors that beyond doubt created past future tensions.

Simultaneously with the advancements in technological capabilities, paradoxically its democratization was rising (von Hippel 2005). This tandem development placed tremendous power in the hands of users whose influence now spans much further than mere acceptance or up taking of every innovation introduced to the market. The concept of lead users and the value of an everyday user has been explored by von Hippel in distant 1986, and undeniably is valid more than ever, but contemporary IS research needs to go beyond this view and fill the intellectual void associated with the transformation of user everyday activities as a result of *user empowerment* through interaction with digital technology (Yoo 2010). To date studies of user innovation have explored the fields of sport related consumer goods and leisure activities and open source software development (Bogers et al. 2010), pointing at the apparent lack of coherent theory of user innovation. As we only begin to understand the dynamics of user innovation (Raasch et al. 2008) we begin to appreciate the social context in which many everyday innovations occur. Tuomi's (2002) view supported by Shah and Tripsas (2007) is that the sources and seedbeds of user innovation are usually the communities of users that reinvent emerging digital opportunities usually in an unintended manner.

User communities are an integral part of the organizing logic of distributed, user innovation (Harhoff et al. 2003, von Hippel 2007). Along with the user innovation paradigm shift we are experiencing a shift in the way our modern society reconsiders century old behaviours and practices of sharing, bartering, and transferring knowledge, products, favours within and among communities. This societal shift has received considerable amount of attention among academics and practitioners. The concepts of collaborative consumption (Botsman 2010), swarm mobs (Rheingold 2002), intelligent communities (Komninos 2002), and swarm creativity (Gloor 2006) all represent the heightened interest towards sharing economy. This shift has become possible due to digitization and the increasing flexibility of digital technology (Leonardi 2011, Yoo et al. 2010). By engaging in digitally fuelled social interactions users satisfy their needs in more suitable for them ways, moving two steps ahead of the 'middle man', high costs, and other peer to peer trade boundaries such as geographic. This not only redefines present and future innovation trajectories, but also market relations and even societal structures. Newly emerging activities, services and products conceived by the sharing economy convey a very prolific message, stressing the importance of understanding the concepts and behaviours related to the future shaping practices. Despite being positioned at the intersection of several strands of research our understanding of the role of user community in incepting, shifting and scaling an innovative way of doing things and satisfying daily needs is sparse.

Co-existing in a reinforcement manner, each characteristic and research stream is inevitably linked with each other, prompting the exploration of the entire chain of concepts embedded in the notion of future shaping practices. User empowerment creates transformations in the ways innovations are incepted and shifted, removing the need for some existing markets and replacing them with peer-to-peer trading and subsequent innovation fostering within and among the user communities. The emergence of user entrepreneurs in turn despite creating tensions and ruptures in innovation trajectories, stimulate the changes in practices that not only possess high generativity potential but the power to reshape the markets, society, and cultures. As such, they inevitably transcend the commonly accepted trajectories, moving innovation paths in many unpredictable and not yet studied directions.

Methods

Research Design and Case Selection

This research-in-progress is a multiple case study consisting of four cases: BlaBlaCar (sustaiability), HealthTap (healthcare), NearPod (education), and Waze (transportation). There were three reasons why these cases were selected for investigating future-shaping practices. First, in each of the cases, the digital innovation originates from the problem owner's own experience. Many innovations start with a user experiencing dissatisfaction when applying a particular everyday practice to solve a problem it is designed for. This study will attempt to highlight the importance of user empowerment through digital technology and the precise moment when an everyday practice is becoming ineffective. For instance, in the case of BlaBlaCar, an online avenue for searching and offering a ride, its fonder Frédéric Mazzella, only a Stanford student back then, was stranded trying to get home to French countryside on a Christmas Eve. Having no car and unable to find a train ticket, his vision for carpooling was born. Second, the innovation

is centered on a network of everyday users, that is, an enviroment in which future shaping practices are likely to emerge. Unlike the inception of a new practice its shift and scaling lies in the hands of wider audience and the extent of their dissatisfaction with the existing practice and the demand for a new practice. Focusing on cases that have become successful in the hands of users means this research can trace the innovation's key success factors, learn more about the role users play in scaling a future shaping practice, and most importantly shed light on the relationships between different stages of practice development. For example, in the case of Waze, a navigation app that is built and sustained by a community of users, drivers actively share their social signifiers and within their local Waze communities collectively engage in practices such as map editing and road reports sharing. Third, to enable the study of a complete evolution of the inception, shifts and scaling of future shaping practices, we selected cases that were "established newcomers". By selecting cases that made a journey from problem identification to conversion of the idea into commercial success the research will have enough depth to explore a plethora of data collection methods and offer meaningful findings to different groups of research audience.

The design of our multiple case study consists of three steps. First, systematic collection and coding of case study narratives, with emphasis on the case characteristics such us key events and factors that influenced the development trajectory of a future shaping practice. Second, analysis, conceptualization, and cross case comparison of causal mechanisms that might have contributed to the development of future shaping practices. Third, collection and coding of interview data that will explore the perspectives of the key figures involved in the development of a practice concept, thus sharpening the definitions of the causal mechanisms. By proposing a multi-staged methodology that will expand as the research gains momentum, we allow for elimination of any false hypotheses and gap-spotting in mid-range theory (Eisenhardt, 1989).

Data collection

We are using two methods for collecting the data. First, we systematically collected relevant documents, primarily web-based (Romano et al. 2003), such as articles in the established specialized publications for tech and business news, as well as mainstream news websites; archived documents, blogs and, news updates on companies' websites and social media channels. These were used to produce narratives that could be coded with accordance to Steps 1 and 2 in Table 2, becoming the basis of the multilayered indepth analysis. Second, we plan to conduct semi-structured interviews (Yin, 2003) with key influencers in each case study, defined as problem owners, company founders, or senior managerial figures.

Data Analysis

The analysis of the cases will be conducted in five steps, outlined in Table 2, with corresponding tasks and anticipated outputs. It might be noted that our data collection and data analysis is guided by the principles of critical realism (Mingers et al. 2013, Wynn and Williams 2013). This will help us to explore bidirectional causalities and interactions between the social actors, structures and conditions within which future shaping practices might be situated, enacted, and reinforced. The research intends to provide the findings that are both rigorous and relevant and will thus adopt methodological pluralism.

In Step 1, we conducted open coding that has gained some valuable insights into the future possibilities and merits of the proposed ideas. Three distinct categories, stages of practice development, emerged from the preliminary coding: inception, shift, and scaling. *Inception* launches with an unmet need and market gap spotting by an everyday troubled user. This user or what the researchers have labeled as 'the problem owner' possesses good education or a mixture of basic technological skills and entrepreneurial inspiration to concoct the idea. The *Shift* stage starts when an idea is turned into a website or a web app, and when business expertise and capital is acquired. It is difficult to establish a certain criteria as to when the *Scaling* stage commences, as *Shift* can last for a long period of time and both stages express similar qualities. The research anticipates to resolve the issue of definition boundaries, however preliminary analysis points towards the *Scaling* stage commencing when the initial idea gains considerable 'buzz' in the press, further skills and funding are acquired, usually to accelerate growth. Furthermore, one specific feature to *Scaling* are reports of extremely high metrics on user engagement, sign up rates, and website traffic.

In order to fully explore the issue of future shaping practices the research will descend into the remaining four stages that aim to produce timelines of events for each case, which would allow to trace any success

determinants that could have catalyzed the establishment and up taking of a newly emerging practice. Through the examination of key events and any contributing factors the research will investigate the presence and impacts of causal mechanisms, evaluate their explanatory power and trace any consistencies in patterns across the cases. In order to strengthen the findings the research intends to collect interview data.

Table 2. Steps, Tasks, and Outputs of Data Analysis			
Steps	Tasks	Outputs	
1. Open coding	a. Generate initial sets of codes from data	A set of mutually exclusive codes	
2. Coding key events	b. Identify and typify the key events in data	A timeline display of events for each case	
	c. Organize and display the identified events in a chronological sequence		
3. Identification and typifying of any determinants of success	a. Identify internal and external conditions that might have contributed to the successful creation and up taking of a future shaping practice	A set of success determinants and catalysts organized	
	b. Label and typify the determinants.	and presented according to their type	
	c. Map and display the determinants		
4. Retroduction of the explanatory mechanisms	a. Investigate the relationships between success determinants and key events in the timeline	A set of finalized causal mechanisms with definitions.	
	b. Identify and evaluate any emerging mechanisms according to their explanatory power		
	c. Provide concise definitions for the finalized mechanisms		
5. Data enrichment	a. Conduct interviews with top influencers discussing the existing findings	A refined and triangulated	
	b. Code and interpret interview data.	perspective on the causal mechanisms	
	c. Layer interview findings with existing findings.		
	d. Present any consistencies or discrepancies		

Conclusion: Anticipated Contribution and Further Steps

This research-in-progress intends to generate a process theory that will shed light on the generative and causal mechanisms accountable for the phenomenon of future shaping practices. Through examining the interplay between key events and success determinants we expect to facilitate the creation of a path dependency, drawing up a generic pattern for newly emerging and disruptive technology-enabled practices. More specifically, understanding the circumstances for the establishment of a future shaping practice; what operant and operand resources are required for a successful innovation; what patterns user behaviors from whilst interacting with newly emerging technology; and what affordances and constraints of market environments are essential to incubate innovative practices can all have positive impacts on enhancing the generativity of future innovations. Furthermore, we envision our findings to serve as a foundation for a unique and innovative foresight tool that will model user-technology relationships and innovation development trajectories.

The process model of everyday digital entrepreneurship and its future-shaping practices is anticipated as a contribution to both digital innovation research and practice-related IS research. We hope to generate interest towards the concept of future shaping practices for increasing its validity and applicability in the foreseeable future. Such validation would be valuable for organizations that seek to understand the

trajectories and key success ingredients to the establishment of a newly emerging technology. Lastly, we think that the coming findings will be important among any political agencies with digital agendas. The research findings can serve as a research backdrop, allowing political entities to leverage their decision making, legislation, and lobbying interests in order to maximize the impacts of digital agendas in influencing those areas of innovation that can have the maximum impact on the overall good of any local, national, and international communities.

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