

Association for Information Systems

AIS Electronic Library (AISeL)

Rising like a Phoenix: Emerging from the
Pandemic and Reshaping Human Endeavors
with Digital Technologies ICIS 2023

Digital Innovation, Transformation, and
Entrepreneurship

Dec 11th, 12:00 AM

The Role of Cajoling Strategies in Path Creation

Lena Hylving

Informatics, lenaandr@ifi.uio.no

Follow this and additional works at: <https://aisel.aisnet.org/icis2023>

Recommended Citation

Hylving, Lena, "The Role of Cajoling Strategies in Path Creation" (2023). *Rising like a Phoenix: Emerging from the Pandemic and Reshaping Human Endeavors with Digital Technologies ICIS 2023*. 21.

<https://aisel.aisnet.org/icis2023/diginnoventren/diginnoventren/21>

This material is brought to you by the International Conference on Information Systems (ICIS) at AIS Electronic Library (AISeL). It has been accepted for inclusion in Rising like a Phoenix: Emerging from the Pandemic and Reshaping Human Endeavors with Digital Technologies ICIS 2023 by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.

The Role of Cajoling Strategies in Path Creation

Completed Research Paper

Lena Hylving
University of Oslo
Halmstad University
Gaustadalléen 23B, 0373 Oslo
lenaandr@ifi.uio.no

Magnus Bergquist
Halmstad University
Kristian IV:s väg 3, 301 18 Halmstad
magnus.bergquist@hh.se

Abstract

Carving out new pathways can be challenging, particularly for established organizations resistant to change. Although research has identified the important role of peripheral entrepreneurs in path creation, identifying innovative ideas, and for being motivated to change the organization, less is known about what strategies peripheral entrepreneurs apply when moving ideas from the periphery to the center. This study examines how peripheral entrepreneurs, despite limited resources, effectively employed cajoling strategies over a 20-year span to instigate organizational change. Leveraging the rise in digitalization, these peripheral entrepreneurs utilized three distinct digital cajoling strategies: coaxing, enticing, and teasing to transform organizational structures, revamp work processes, and change established design regimes and traditional mindsets. We discuss the consequences of cajoling as it can be used for both good and bad purposes.

Keywords: Path creation, Digitalization, Cajoling strategies, Peripheral entrepreneurs

Introduction

One of the most important challenges for incumbent firms when transforming core businesses from product innovation to digital innovation is the development of path creation competence. Path creation in institutional settings is defined as the active shaping of activities and relations as organizations evolve over time (Garud et al., 2010) and “emphasizes human agency and the way that actors can and will mindfully deviate from what appears to be the common expectation (a traditionally reinforced pattern of action) in order to sample new experience, explore new forms of practice, and create new resources” (Boland et al., 2007, p. 634). The way these actors, most often employees, engage in path creation differ (Smets & Reihlen, 2012). Yet, by initiating entrepreneurial activities they can change the mindset of the organization (Shepherd et al., 2010) and shift the innovation trajectory (Henfridsson & Yoo, 2014) so that the organization can take the necessary steps towards digital transformation (Hinings et al., 2018). Therefore, identifying the potential for institutional entrepreneurship in path creation has become one of the most important managerial competences in today’s organizations (Arvidsson & Mønsted, 2018; Iansiti & Lakhani, 2020), especially among incumbent organizations that struggle to reconfigure their innovation paths, processes, and practices towards digitally enabled and service-oriented operations (Jadaan, 2020; Svahn et al., 2017).

Previous research has extensively reported on the necessity of path creation in digital innovation to fundamentally rebuild competence and strategy among incumbent organizations and prepare them to reap the benefits of digital innovation (Henfridsson et al., 2009; Henfridsson & Yoo, 2014; Hu et al., 2016). The literature emphasize the role of institutional entrepreneurs and how they are important actors for enabling path creation in organizations (Garud et al., 2002; Tumbas et al., 2018). Institutional entrepreneurs know the organization and have legitimacy to “leverage resources to create new institutions or to transform existing ones” (Maguire et al., 2004, p. 657).

However, being embedded in dominating organizational routines is a challenge for incumbents when trying to identify new paths for digital innovation (Hylving et al., 2012). Having well-established core processes and practices makes it difficult for incumbents to identify new ideas and create new paths because of the embeddedness in dominant innovation regimes. Previous research has identified strategies used by institutional entrepreneurs to extricate organizational embeddedness. For example, Henfridsson and Yoo (2014) found that institutional entrepreneurs put themselves in a state of liminality to disconnect from the dominant innovation regime when creating innovation trajectories. The boundary spanning literature has in a similar way pointed to the importance of boundary-spanning competence for the successful transformation of new ideas into novel information systems use (Levina & Vaast, 2005; Lindgren et al., 2008), and system development (Fisk et al., 2010). This research has pointed to the importance of discursive resources, such as the use of 'bilingual capacities' - to speak in line with both the established institutional discourse *and* the language required to bridge the existing arrangement with the new path (Levina & Vaast, 2005).

While successful path creation on the one hand seems to be dependent on entrepreneurs' ability to overcome constraints generated by their embeddedness in existing organizational processes and practices, success also requires the capacity to implement identified opportunities (Dorado, 2005). Research on institutional entrepreneurship in incumbent firms has shown that institutional entrepreneurs are likely to be at the center of the organization (Greenwood & Suddaby, 2006), while peripheral entrepreneurs are "remote from central organizational networks through which institutional prescriptions are enforced and therefore less caught by prevailing institutional arrangements" (Smets & Reihlen, 2012, p. 299). This implies that they are more likely to be exposed for new ideas, but also lack the institutional resources needed to impact the existing innovation regime. Peripheral entrepreneurs therefore need to develop strategies to affect the existing institutional order. This is particularly challenging for peripheral entrepreneurs who lack access to the resources needed to impact the organization.

To summarize, previous research has on the one hand identified that entrepreneurs who are at the center of the organization ("central elites") have access to path creation resources but their embeddedness in the organization makes it difficult to harness new ideas (Henfridsson & Yoo, 2014). On the other hand, research has identified the strategic role of institutional entrepreneurs in the periphery just because they are exposed to novel ideas and that such entrepreneurs are often motivated to act because of their peripheral role in the organization (Smets & Reihlen, 2012), but with little resources to push their ideas into the central processes in the organization. As noted by (Smets & Reihlen (2012), the path creation literature has identified strategies used by peripheral institutional entrepreneurs in maturing fields, such as the consultancy business. We lack detailed empirical insights into how peripheral institutional entrepreneurs in mature organizations identify resources needed for path creation, and how they strategically use these resources to move their ideas towards the organizational center.

In this research, we studied a group of institutional entrepreneurs in the periphery of organizational structures at an incumbent. By being in the periphery they were particularly well suited to explore new markets, developing new products, and creating new business models that were not directly related to the company's current operations. As peripheral entrepreneurs they had very good access to new ideas, but because they were far from the organizational center, they had limited access to formal decision-making processes. They lacked the social capital and access to resources needed as well as lacked insights into practices needed to impact the organization. Yet, this case shows how the peripheral entrepreneurs created innovation paths in the studied incumbent. Previous research has identified the multi-layered nature of path creation in digital innovation (Henfridsson & Yoo, 2009), but less is described of how peripheral entrepreneurs build path creation strategies and how resources enabled by continuous digitalization – as a result of previous path creation – can be used as a strategizing device to impact the organization's innovation path. We therefore ask: *What are the strategies used by peripheral entrepreneurs to influence path creation?*

To answer our question, we analyzed data from a period of 20 years of an incumbent firm in the automotive industry, *AutoInc*. In contrast to the innovation path that long dominated at AutoInc, a group of peripheral entrepreneurs, a user-centered team, developed a range of strategies around Human Machine Interaction (HMI) and user experience (UX) design¹ that gradually made its way toward the center of the organization

¹ We will use HMI and UX interchangeably as HMI turned into UX along the process.

to impact the way innovations were developed at AutoInc. The process gradually led to the transformation of parts of the R&D organization from a product- and technology-focused organization into innovating around the conceptualization of the car as a user experience. HMI/UX went from being a peripheral activity, done by a few individuals in isolation, to an activity that was gradually seen as strategically important for the future of the organization's offerings. The transition to this way of innovation included the formation of a new staff category, the HMI/UX specialists (HMI, HCI, UX, etc.), innovative use of digital material in product development, new ways of developing innovation processes in the creation of an innovation path.

During the analysis of the empirical data, which was done in a bottom-up way, we noticed that the practices found among the UX staff did not correspond with those described in previous path creation literature. They were lacking the resources that are typically associated with institutional entrepreneurs, such as acting as boundary spanners, knowing the well-established processes and professional language used (Levina & Vaast, 2005), and the knowledge and mandate to challenge institutional arrangements and processes (Henfridsson & Yoo, 2014). The coding process led to the identification of other types of strategies based on practices, such as coaxing, enticing, and teasing, to attract organizational members to the user-centered team's innovation journey. These practices were analyzed as ways to strategize the lack of implementation capacity through a group effort of interrelated strategic thinking, acting, and learning accomplishments (Bryson et al., 2020). The strategies were leveraged by the use of digital resources introduced by the user-centered team, or reconfigured by the team, to make people and organizational resources gravitate towards them.

Based on our analysis, we suggest the concept of *cajoling* to capture the type of strategizing activities identified among the user-centered team. Cajoling is "to persuade with flattery or gentle urging especially in the face of reluctance" (Merriam-Webster, 2023) and has been associated with practices that emerge during institutional change (Macpherson & Jones, 2008). Cajoling has been identified in political processes to "foster some degree of coordination among functions which, in turn, offers direction for the manager on what to accomplish" (Pammer et al., 2000, p. 310). The concept of cajoling can be viewed as a strategizing device used by organizational actors that, in this case, had very limited resources yet created new innovation paths. It is a way to mobilize resources by creating excitement around competencies and practices, and thus coax the organization into following a new innovation path. The study presented here provides a detailed account of how cajoling strategies contributed to the way a product-centric company changed the innovation path towards digital innovation and a user-centered logic as a result of institutional entrepreneurs' creative activities in the periphery.

The contributions of this study are threefold: First, the empirical case study provides a rich description of how cajoling strategies were used by peripheral entrepreneurs to influence an incumbent's journey to create new innovation paths by gradually including user and experience-centered design in the innovation process. Second, we add insights into the path creation literature on how institutional entrepreneurs can use attraction as a change agent to promote path creation toward digital innovation despite their (initial) lack of capacity to influence the dominant innovation regime. Third, we demonstrate how digital resources (Piccoli et al., 2022) were an inextricable and gradually expanding part of cajoling. The paper ends with a discussion of the value of cajoling for organizations. Although this empirical case shows a successful outcome from strategizing using cajoling, future research should focus on the risks with cajoling strategies.

Path Creation in Digital Innovation

The increased importance of digital innovation places high demands on incumbent organizations to evaluate and reconsider current innovation practices and explore novel innovation paths and change or broaden innovation trajectories. Path creation refers to how actors open locked-in processes to create possibilities for change and influence how new paths are created (Garud et al., 2010). Establishing new paths is essential (Garud & Karnøe, 2001) in the digital era, yet challenging (Hylving et al., 2012) as it involves contradictions (Henfridsson et al., 2009).

Path creation is often contrasted with path dependence, which explains past innovation as the result of remote occurrences on which local actors have little or no impact (Sydow et al., 2018). In contrast to the economic theory of rational choice and optimization, path dependency theory views innovations as occurrences emanating from small steps of change that can eventually open new possibilities (Thrane et al., 2010). However, path dependency theory has been criticized for not being able to explain the role of

entrepreneurs in innovation processes. While path dependency theory focuses on the role of structural change and the dependence of the history of the organization, path creation theory provides the opportunity to theorize the importance of organizations building on local conditions in innovation. Path creation conceptualizes “agency as being distributed and emergent through the interactions of actors and artefacts” (Garud & Karnøe, 2001, p. 761) and happens when institutional entrepreneurs diverge from set paths and create new ones (Henfridsson & Yoo, 2014). As noted by DiMaggio (1988), institutional entrepreneurs play a central role in organizations and need to be innovative to keep up with changing conditions as they can be the driving forces in challenging organizational routines and exploring venues for new ideas, approaches, and practices. Research on digital innovation has shown interest in exploring how emergent path creation strategies can be identified and supported (Henfridsson et al., 2009), yet limited research, to our knowledge, explain how the strategies emerge.

Three prominent strategies in the IS literature are discursive strategies (Munir & Phillips, 2005), boundary spanning activities (Levina & Vaast, 2005), and the conscious use of liminality practices to break away from existing innovation regimes and identify new ideas (Henfridsson & Yoo, 2014). These strategies explain what organizational actors, often called institutional entrepreneurs, do to influence the creation of new innovation paths.

Discursive strategy making is the reconfiguration of a technical artefact that can be achieved by embedding technology in existing practices, creating new roles around the practice, defining new institutional contexts around the technology/practice, and modifying existing institutions, thus transforming the meaning of and practice using a technology. Using the example of the Kodak camera, Munir and Phillips (2005) found that the production of new discourses was a vital strategy for repositioning both the camera as a technical artifact and its institutional context. Kodak developed an easy-to-use camera, but also innovated the social and cultural context for how and when to use cameras by developing discourses about more mundane everyday practices and situations involving the use of cameras by amateur photographers. Munir and Phillips (2005) identified four discursive practices used by Kodak to reposition the camera, producing texts that include interdiscursive references to existing institutions, producing texts that constitute new subject positions, producing texts that accrete to form a new discourse that constitutes new objects and concepts, and producing texts that influence existing discourses (Munir & Phillips, 2005, p. 1681). Munir and Phillips (2005) argue that language and text are crucial in path creation (see also Wang et al., 2021; Watson et al., 2019). As Munir and Philip’s study shows, discourses can be powerful tools for reconfiguring practices and repositioning an artefact. However, it is also obvious that discursive strategy-making requires that entrepreneurs control resources to create innovation paths. Discourses must be materialized and communicated to audiences, which requires that actors have access to institutional resources and management support.

Boundary spanning is another strategizing approach in which people, practices, and objects-in-use are configured to make up possibilities for connecting people and practices beyond organizational boundaries. In boundary spanning, a power relation exists between the boundary actants, which might be a person or technology, and the rest of the organization. For a boundary spanner-in-practice to succeed, it is necessary to have legitimacy and be active in more than one field of expertise. The legitimacy and multiple expertise of boundary spanners are essential to be able to join and bridge multiple practice fields. However, it also requires competence to share expertise by linking groups of people separated by location, hierarchy, or function, and to negotiate between them (Levina & Vaast, 2005). Consequently, innovation boundary spanners use their ability to negotiate and allocate resources to legitimize new practices and processes and enable path creation. Boundary objects-in-use can be defined as something that several people from different areas can relate to or have knowledge about and find useful in their work (Bowker & Star, 1994). Boundary objects-in-use can emerge over time and can become relevant in path creation processes (Levina & Vaast, 2005), while boundary spanning, as a concept, assume an insider position from which the entrepreneur develops strategies to span organizational boundaries inside the organization or the organization with the outside world.

Henfridsson and Yoo (2014) identified institutional entrepreneurs’ use of *liminality* to get into a somewhat outside position where they could create new paths. For example, reflective dissension was identified as a process “by which institutional entrepreneurs establish disagreement as they position themselves at the periphery of established practices to highlight the need for a new innovation trajectory” (Henfridsson & Yoo, 2014, p. 946). To deviate from well-established innovation paths, they needed to voluntarily and

consciously position themselves outside of established structures that they were aware of and therefore knew how to manage and diverge from, but still remain relevant to the organization.

Research on marginalized entrepreneurs (Simarasl et al., 2022) shows resemblance to peripheral entrepreneurship as both categories lack resources and legitimacy. However, whereas marginalization stems from constraints due to institutional bias, such as women's position in the family, religion, society, geography, and business marginalization (Simarasl et al., 2022), peripheral entrepreneurs are active in an organization but lack access to intra-organizational resources and pathways. There are evident similarities that need investigation, such as different ways “to skirt or evade soft and hard constraints” (Simarasl et al., 2022, p. 32), which can help entrepreneurs break through institutional barriers and create new innovation paths. Other strategies used by marginalized entrepreneurs are cooptation enablers, which can assist in gaining specific resources through associations with artifacts and individuals. However, these associations can backfire and strengthen the situation entrepreneurs seek to escape (Simarasl et al., 2022) and limit path creation.

As previous research has shown, different strategies can shape possibilities for organizational members to create new paths. However, the empirical situations described in most studies make it evident that successful organizational members in path creation is dependent on access to organizational resources or cooptation enablers to promote their visions, whether it is to detect how external innovation trajectories can be made relevant to the organization or how to adopt these as future directions within the organization (Henfridsson & Yoo 2014). Yet, little is said about how path creation strategies emerge in the periphery of a mature organization, where actors have a low degree of legitimacy, resources, and access to structures and processes. The peripheral entrepreneurs studied in this research are characterized by a lack of resources, networks and inter-organizational legitimacy, which creates a need for other types of emergent strategies to affect the organizations' innovation trajectory and create new innovation paths. To our knowledge, limited research reports on what strategies these actors in the periphery use to gain legitimacy and resources to create possibilities for, and carry out, transformation towards new trajectories and create innovation paths.

Research Design

The background of this research was the empirical observation in the ongoing study of AutoInc, a European car manufacturer, where it was puzzling how a group of actors in the periphery could change the organizations trajectory and create new innovation paths. The HMI (Human-Machine Interaction) and later the UX (User Experience) group of professionals at AutoInc had grown both in number and importance, and they gradually progressed from a peripheral role in the organization towards a central and strategic position and created new innovation paths along the way. Along with this progression, cars were redefined from products for physical transportation to enablers of user experience and digital services. A closer analysis showed that digital resources (Piccoli et al., 2022) were fundamentally connected to new digital innovation practices defined and communicated through a UX discourse, which influenced institutional change and was fundamental in new path creation. In contrast to previous research that identify layers of material, cognitive, and organizational structures (Henfridsson & Yoo, 2009), it became clear that digitalization, which emanated from practices introduced by the user-centered team, gradually reinforced each other, creating opportunities for new types of strategies and practices (Bryson et al., 2020; Greenwood et al., 2014).

Although we interviewed many different professions in various positions at AutoInc, we recurrently came back to the people developing user-centeredness in the R&D (Research and Development) division within the automotive manufacturer. As digitalization became more relevant for, and present in, the organization, it could be observed how the R&D division transformed and gradually focused more on developing digitalized experiences and mobility services connected to the physical product – the car.

Data collection

Active data collection began in early 2010 as an engaged scholarship endeavor (Van de Ven, 2018). Data has been gathered both continually and in retrospect. As the research question for this study emerged, we conducted complementary interviews to gather knowledge about events such as how and when decisions and strategic choices were made in the organization. Therefore, the research approach is best described as

a continual iteration between bottom-up and theoretically driven research (Charmaz, 2006) trying to lay an empirical puzzle (Alvesson & Sandberg, 2011; Day & Koivu, 2019). The empirical material consists of three main data categories:

Interviews. In total, 87 semi-structured interviews with people within AutoInc. were conducted between 2010 and 2020. The respondents have had different roles ranging from directors and strategists to developers and testers, mostly operating within or connected to the HMI/UX domain within the R&D organization. 64 of the interviewees had at some point worked with HMI/UX, but several of them had at the time of the interviews moved to other roles within AutoInc., both within and outside the R&D division.

Documentation. The authors have had access to documentation on the intranet, and it has been possible to look for relevant documentation continuously throughout the process. The documents were analyzed as devices for sensemaking through which the organizational members understood themselves (Weick, 1993). We organized the documents chronologically to identify how and when new roles, groups, departments, and strategies became legitimate rhetorical devices for describing the product definition, and how the organization supported this definition.

Participatory observations. The empirical input to this research includes participatory observation since one of the authors has been engaged in research with the organization since 2010. The same author also worked as an HMI engineer with AutoInc. between 2002 and 2007. The insider account has provided the research with valuable knowledge about circumstances hidden to an outsider and appreciated interactions between scholars and practitioners for improved awareness of institutional engagements (Burton-Jones et al., 2020). Participation has been crucial for understanding the context of decision-making and descriptions given in documents and interviews.

Data analysis

The analysis can be described as an iterative process comprising three steps: (1) collecting empirical data, (2) bottom-up thematic analysis, and (3) constant comparison of relevant theoretical concepts and frameworks (Urquhart et al., 2010). We started by structuring the empirical data in data displays (Miles & Huberman, 1994). This approach made it possible to analyze the transformation of the HMI/UX group, as well as the R&D division, and identify important entities and actions that assisted in transforming the organization, both in terms of activities and processes, and the respondents' reflections on events leading up to the change.

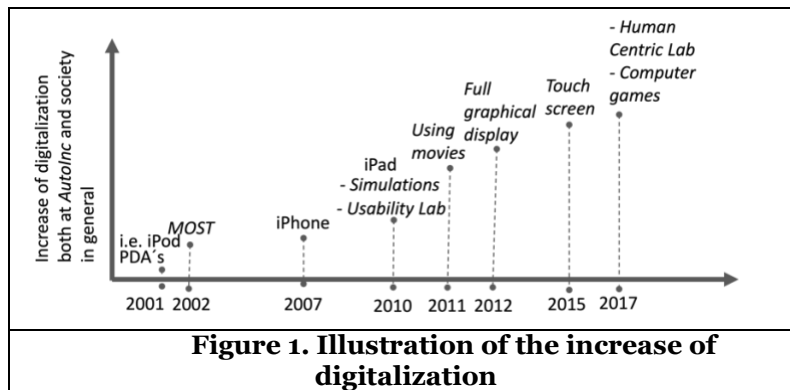
During the data analysis, we iterated between a bottom-up approach and using different theoretical concepts to problematize the empirical material (Alvesson & Sandberg, 2011) as different ways to make sense of the data. Examples are Hinings et al's., (2018) three types of institutional arrangements critical for digital transformation, and Henfridsson and Yoo's (2014) analysis of underlying mechanisms used by institutional entrepreneurs to create innovation paths. During this analysis phase, we noticed that several practices aimed at sharing, teaching, including and supporting different actors in the organization with digital means. We also identified how the HMI/UX group made their own resources available thru digital channels for others in ways that were attractive to central actors, without making counterclaims or forcing others to comply. The HMI/UX group created enticement around their offerings to make them attractive and invited the organization to try out new practices, tools, and resources in their home context, thereby reshaping institutional arrangements and creating new innovation paths at AutoInc.

Based on this awareness, we continued with thematic coding (Charmaz, 2006) to identify phenomena that indicated cajoling and how this way of strategizing moved the organization towards user experience and user-centered approaches to innovation. For example, the Usability Lab, a lab for experimenting with UX in cars, was first questioned, but gradually became an important resource for sharing and diffusing user-centered development and innovation competence to support the transformation among different groups within the R&D organization.

In parallel, we coded expressions of organizational change, such as the formation of new organizational groups, name changes, decisions, and expressions of new strategic directions during the studied period, to capture the gradual institutionalization of user-centered approaches and practices.

Given the large dataset, we applied segmentation to assess the overall quality of the data and facilitate the exploration of themes based on similarities, dissimilarities, and relationships between thematic elements

(Guest et al., 2012). As a final step, we applied data reduction techniques to summarize and create an overview (Namey et al., 2008). To visualize how the studied change emerged in its context, we present the findings as a story of the gradual development of UX in AutoInc's R&D department in conjunction with the increase of digitalization at AutoInc and in society in general. Figure 1 is an illustration of how the innovation path was created as digitalization as a resource for strategizing increased.



Findings at AutoInc

The AutoInc Case

In April 2000, two professionals with Human-Machine-Interface (HMI) background were hired at AutoInc within the R&D division, and a new discipline was introduced into the organization, namely User Interface Design (UID). However, the two HMI employees struggled to gain recognition within R&D because R&D's focus was on the physical product and technology rather than on the usage of the product. Although the two HMI workers did not position themselves in the periphery on purpose, their discipline, way of working, and mindset were considered alien to the rest of the R&D division. In early 2000, R&D mainly worked with functions that were bounded to a visible physical component that had to be tested for, for example, crashworthiness or heat and cold. In contrast, the HMI staff worked primarily with information presentation and entertainment features from a usefulness, usability, and cognition perspective. This was commonly considered a strange area to work with, and some engineers within R&D referred to HMI practices as *"something to do with the brain and psychology"* in a disparaged way.

The organization followed well-established arrangements dominated by a discourse based on the physicality of the car. Each car component was developed in isolation from other components; for example, one group focused solely on the GPS component and another on the radio. Engineers worked in homogenous groups with limited interaction and problem-solving with other groups. The involvement of HMI competence was limited, as one of the first HMI employees describes it:

"We basically got a design proposal from Design (Department) on how a (physical) button should look like and then we added symbols, and the hardware people did the function. That is how it worked in 2000."

This way of working was motivated by the overarching goal of enabling and securing stability and control in the development process, as the physicality of the components required both long development processes (creating new tools, etc.) and testing times (testing, for example, how the physical product could stand against dampness). This practice led to cohesion within groups and functions.

As different components in the car became increasingly digitized, and these components were connected and combined through new communication buses in the car, such as LAN (Local Area Network), CAN (Controller Area Network) and MOST (Media Oriented System Transport), cohesion began to erode. Tensions emerged between organizational groups working with digital resources and formal processes structured for physical components. It was also the start of a need for HMI competence, as the connected and combined components created a lot of information to be presented to the user of the car. With agony, the engineers were suddenly forced to have some contact with HMI engineers because new information had

to be presented to the driver of the car, such as tire pressure or if a lamp was broken. The HMI engineers expressed the relation as: *“We get to put the lipstick on the pig”* and were frustrated with not being a part of the innovation or the formal development process. They had no formal power, as they did not have any budget of their own, nor were they included in the formal organizational structure, but were in the periphery of the R&D division. As an increasing number of functions were introduced, a more complex situation emerged for well-established engineers as they had to start collaborating between the set organizational groups. For example:

“AutoInc’s first SUV was being developed (in early 2000 Authors comment), and a bunch of new infotainment functions were introduced. All these new functions put tremendous pressure on the user interface. A new thing introduced was the new control panel that should handle radio, CD, and telephone functions. Before that, radio, CD, and telephone had been separated, completely stand-alone components.”

Although it was difficult, the HMI group saw an opportunity to work as a mediator between different engineers who were responsible for functions tightly connected to specific hardware, for example, radio or GPS functions. HMI people slowly introduced new ways of doing, talking, and thinking. For one, they started to change from talking about a *function* to a *feature*. While a function was directly connected to one component, for example, the radio, a feature could be connected to many different functions. In an interview conducted in 2013, an HMI engineer reflects on how this change affected collaboration between groups in relation to their own role:

“Function owners can now write requirements for other function owners, and these requirements belong to different feature teams, for example, telephone or navigation, so the requirements exist early in the requirement specification process. It hasn’t been like that earlier. Before it popped up, lots of stuff that they (function owners) wanted to present, and then we (HMI people) had to figure it out somehow.”

The establishment of labs with shared digital resources for user-centered development

With the HMI group’s peripheral position in the organization and its processes, the HMI people worked in various ways to communicate the importance of focusing on the user when developing new solutions. An important step was taken with the initiative to create a lab for HMI activities, primarily usability tests. One of the goals of the Usability Lab was to create a forum with resources that people outside the HMI group could use to test ideas and functions – an open and inviting space for ideation and knowledge exchange. One HMI engineer explains in 2010:

“We need a place like this (a lab) to test things before we put them on the road (in the car). We can make quick loops, and we can test things in a safe way. And it works great! We have got all the technology installed, with eye-trackers and so on, so we can measure where people look when they use our HMI solutions, and we can change interfaces really quick. So, we use it a lot!”

Rumors about the new way of working with digital technologies, such as eye-trackers, coaxed different stakeholders from the R&D department to the Usability Lab to discuss and try out new concepts and conduct feasibility tests. They were enchanted by the possibilities it presented, and the HMI staff encouraged everyone to use the new resources. The digitally connected malleable infrastructure in the lab created entry points for disseminating and raising interest in user-centered processes to other parts of the organization. It enabled people unfamiliar with user-centered thinking to connect with people directly working with usability and HMI, but also to discuss a new way of working with other staff members trained in the older function-oriented way of thinking and working. The Usability Lab became an enabler of digital innovation with an infrastructure that encouraged mixing and matching new digital technology and old digitized components, all the time emphasizing how end-user input could be a resource for innovation. Yet, the primary goal of the lab was to do usability studies. One HMI engineer said in 2010 that *“we are doing much more testing than what we originally planned.”* and she continues: *“we invite people to test and let them test... or it can be that we take the initiative when we notice something that we want to highlight in a project. Because many don’t know much about it (HMI/UX) and that it exists (the lab).”*

As a next step, the Human Centric Lab was established and took user-centered approaches to a new level by not only focusing on usability studies but also having the human (not only the user) and human

experiences at the center of attention when developing new solutions. The Human Centric Lab offered tools for interacting with data and to visualize results, such as digitized measuring equipment, test opportunities with simulations, and digital prototype resources. The new lab became even more successful than the Usability Lab and established relations within the R&D division as well as with external stakeholders both within and outside AutoInc's organization. People came there to be inspired and coaxed about all the possibilities presented. While the R&D organization had a well-established, complex, and linear document-focused procedure to identify roles, steps, and requirements for structuring the innovation process, the HMI/UX team showed new ways to approach R&D that was less document-driven and more agile, using digitalization as an enabler for user-centered design with labs and test environments where staff could more easily prototype to test ideas and obtain results faster than before.

The R&D staff were inspired by all possibilities and new ways of thinking established by the UX team. The labs were inviting places to innovate by having fun, elaborating, and discussing ideas together. This was very different from the strict waterfall processes organized around "windows for change" every tenth week, which was the established approach in the R&D organization. The labs repurposed the R&D process while making it possible for other staff members to come and get inspired by the new way of working with innovation, connect with people with similar interests, show their prototypes, test, and try innovations together. The open, inviting, and sharing approach coaxed R&D members to feel that they were part of an innovation frontier. No one forced them to come but gently invited them, which increased their willingness to get involved. The excitement of being part of a new way of working, thinking, and experimenting together gradually emerged. With this approach of opening possibilities for others by gentle persuasion, the organization's dependency on access to HMI and UX resources and facilities grew, both in terms of digital tools and their knowledge of how to work with the end-user in mind.

The Usability Lab and Human Centric Lab evolved into shared resources that connected different development teams and external partners and worked as boundary objects that opened up new ways of working with digital technology with the end-user in mind. The labs allowed people unfamiliar with user-centered practices to learn-by-doing to better understand and appreciate the usefulness of HMI and UX principles in their innovation processes. This openness and the possibility of sharing resources and ideas gradually resulted in increased curiosity and appreciation of end-user focus from the rest of the R&D organization. This also changed the role of the HMI/UX team, whose competence became increasingly important in the R&D process as they had the overall methods for studying user behavior and understanding how end-users use the car. The function and component engineers and HMI/UX designers had complementary knowledge and skills, which were brought together through digitalization. Digitalization integrated functions into platforms. Different specializations could no longer only focus on their own function or component. Instead, they had to work together, and the labs became the shared resource with equipment for testing and evaluating, doing user studies, and developing new ideas to implement in the car. The labs, established by the UX team, provided tangible proof of concept and created internal visibility for a new way of innovating in a fast-paced digitalized world. These flexible and practical ways of working coaxed people to engage in and appreciate new ways of approaching digital innovation.

The usage of digital tools and multimedia for fast prototyping

The UX designers showed ways to decrease the time spent from idea to prototype when developing digital prototypes with agile loops, far from the established linear and document-heavy ways of working. This generated reactions from the organization and a manager responsible for "digital user experience" said in 2015:

"People say that I am shooting randomly from the hip, but I am thinking that hitting once or twice is better than never shooting at all."

While the UX team worked toward a vision of new seamless services for their customers, parts of the organization considered that they were moving too fast. Yet, they were enticed by how fast the UX designers could go from idea to solution. A manager at the UX team describes their way of working in 2013:

"We have this mantra that we will change this area [the experience of, and with, the car]. We will do the change, not by talking but by doing and showing. We are very proactive, one step ahead, showing the way."

Although the UX team had a peripheral position in the organization and did not have the authority to redefine established practices, they slowly got more recognition through their way of using agile methods and digital development tools. With more recognition, they received an increased mandate, both in terms of people and monetary resources. The UX team's way of promoting a work practice based on "doing and showing," revealed that user-centered methods and supporting digital tools could positively affect existing design practices and that this had relevance for the entire innovation process at R&D. In an interview one of the HMI designers stated in 2010:

"Yes, we are doing some progress working with simulations. Before, it was more like working with paper and figuring out hardware-related issues mostly. The interaction on the display was supposed to be solved in one way or another. There is a better understanding now that it is not that easy [to develop interfaces]."

Engineers who were very skeptical of HMI and UX design now became enticed about the end-user and how end-user input could be used in the innovation process: how quick prototypes could be developed and visualized based on end-user input and then tested on end-users before moving on to the next step. These new digital practices (e.g., surveys and simulation tools) generated data on end-user behavior, which were also valuable in the later stages of the innovation process. This contrasted with the traditional engineering approach to development and showed the limitation of professions that only had a narrow expertise in specific functions or components.

Digital visualization methods and tools acted as innovation beacons by showing how multimedia, films, and simulations could be useful ways to visualize and communicate ideas. It was increasingly perceived as exciting and revolutionary in innovation and development processes. AutoInc had a long tradition of working with documentation, such as Word files, Excel sheets, and simple databases, where errors and changes were logged and filed to structure R&D work. The work of documenting everything was described as complex, boring, and tedious by many engineers, as well as by UX designers working with the documents. The more the car was digitized with screens and interactive technologies, the more documentation was needed. As an example, the documentation for "Implementing complete HMI i.e., all menus (including actions on button presses), overlay on map (scale, compass, etc.) and all pop-ups." (SWRS - SoftWare Requirement Specification - for infotainment control module) was 2,210 pages in length in 2011. Although UX designers followed mandatory complex documentation processes, they also created new ways to specify and test functions and features that were more in line with the agile UX design approach:

"...in the past, you had to do these tests quite late because of the established processes, so you came up with a concept and then you put it into a real car and there were a lot of loose pieces in between. Now, you take out the (embedded) software (from the hardware) in the simulator and perform the tests. So, we have the time to make updates before we put it in a real car. ... We can do the test earlier in the process."

The use of simulations and other digital tools not only increased the development speed, but also reduced the need for complex and lengthy documentation that was tedious to keep updated and difficult to understand. More importantly, these simulations could be distributed in different networks and presented to people throughout the organization and suppliers who often misunderstood what was written in lengthy documents. The simulations and "user journeys" presented in short films attracted engineers throughout the R&D department and created interest in UX designers' ways of working and thinking about cars and their users. The simulations and visualizations conveyed a vision, not a detailed specification of how everything should work in detail, and thereby facilitated a user-centered design process guided by curiosity, attractiveness, and creativity. Although simulations had been used in traditional automotive engineering, such as crash tests and drivability from a technical perspective, digitalization in the shape of digital speedometers, navigation systems, audio solutions, and adaptive braking systems propelled the excitement of using simulations and visualizations in car development more generally, and in user-centered development specifically. The use of simulations to present user-centered innovations made top managers show a growing recognition of user-centered practices and tools. An interaction designer described the following:

"Something big was changing. When I started, it was only about safety and how to reduce distractions. But then we moved into something that focused more on the wow-feeling [for the user] and that it should be attractive to the user."

With more recognition from top managers and other stakeholders, engineers who previously did not use UX approaches, such as visualization tools, realized the effectiveness of moving pictures to present new

ideas and were now enticed to take part in the work of the UX team and increasingly utilize their knowledge and skills. In contrast to documenting endless requirements that never were fully finished as well as difficult to communicate to people not directly involved in creating the document, and often misunderstood, working with simulations was considered “fun.” An idea could be visualized so that other stakeholders could experience the idea and more easily become involved in the process of developing the idea. Gradually, the user-centered approach to design was considered more than just “*something to do with the brain and psychology.*” With new user interface simulation tools, such as the popular animation software Adobe Flash, developers outside the UX team could experience the advantages of different R&D processes. The enticement orbited around the visual, non-linear, and rapid development and understanding of the approach. The digital means used, such as simulations and movies, enabled the repurposing of practices for increasingly flexible and fast iterations for digital innovation. As a consequence, it drew attention to new ways of working and thinking about the car.

Changing the innovation venture with examples deriving from consumer electronics

The third identified practice was *teasing* to attract the organization to UX approaches. Here, it was not so many digital resources per se that the UX team used, but to tease the organization towards UX by establishing new discourses about what a car is, by appealing to external innovations in consumer electronics product segments. One way to create space for the UX team was to provide examples of successful products with forward-looking UX designs that could challenge dominating cognitive paradigms in the organization and offer alternative visions and ideas. Seminal breakthroughs outside AutoInc became powerful resources as teasers to awaken interest in UX. The existing way of approaching external innovations was to identify external threats within the same domain. Examples include how other car brands embedded their radio – either alone or as part of an infotainment module - or the size of the digital display that a competitor had in the center stack.

The UX team was inspired by consumer electronics and the gaming industry as an opportunity for the automotive industry, as these industries had a strong focus on the user of the artifact, not the artifact per se, and were organized to compete with companies specialized in digital innovation. In the 2000s, many innovative consumer electronics solutions entered the market and were highly appreciated by customers. New mobile phones were constantly introduced with the exponential growth of functionalities, such as embedded personal agendas, compasses, and notebooks, and fancy capabilities such as color displays. In 2007, the focus was set on the Apple iPhone, which could provide possibilities for personalization and customization in a simple manner. New inventions outside the automotive industry were presented by the UX team, not only as potential innovative ideas to implement in the car but also as ways to push forward the importance of user-centeredness:

“When suddenly anyone could run around with an iPhone, it’s not a technical nerd running around or a trend anymore, but rather ‘oh, they have sold 400 000 (iPhones) in Sweden, they (Apple) must do something right’, management started to see things in a new light.”

For UX designers at AutoInc, it became increasingly common to use breakthrough digital innovations from non-automotive-related organizations as examples of both inspirational technologies and threats. Teasing practices lured with inspiration and imagination, but also used examples to create a feeling that AutoInc risked becoming a laggard in the competition for future customers if they did not change mindsets and practices; in the world outside AutoInc, UX was the needed competitive edge for attracting customers, and sooner or later, it would also be the most important competence in the car industry.

Digital innovations were used to arouse curiosity and interest in how consumer electronics could be used to enhance the user experience in cars. Referring to new consumer electronics, such as Apple’s iPod, iPhone, and later the iPad, as technologies that could increase the attractiveness and usefulness of the car was at first challenging to the organization because it was associated with decreased driver safety and that consumer electronics were fundamentally different from technology used, and required, in the car. When the touch screen was introduced, the UX team played around with new ways of ideating and evaluating the technology. They used a user-centered approach and connected different new consumer technologies with car distinctiveness. This also generated opportunities to establish new forms of collaborations with external

stakeholders such as consumer electronics producers, application developers, and even furniture companies, which led to new ways of reasoning about innovation and development:

“We have always worked with traditional automotive suppliers, and they are used to getting direct and firm specifications. If we are to work with others [outside of the automotive industry], we need to cooperate more. Let’s say we want Spotify in the car, then we need to listen to them instead of only giving direct orders.”

The expansion of the Internet and the increase of different digital gadgets became a vehicle for the user-centered team to tease (both attracting and threatening) the R&D organization with user experience related topics that were relatable but challenging. An example of a suggested innovation was to integrate PDA’s (Personal Digital Assistants) into future cars. The ideas challenged the dominating culture evolving around safety. Consumer technologies, and thus, UX as a paradigm, could be criticized with the argument that it created driver distraction. However, it also generated interest and curiosity in new topics such as connectivity, standardization of ports, and the importance of increased screen resolution – all of which are prerequisites for usability and good user experience.

Soon after, more radical external collaborations went beyond how AutoInc’s R&D division previously developed new solutions. When specifying and constructing the Usability Lab, the UX team contacted non-automotive OEM suppliers to find the best suited driving simulation technology on the market to be used in the lab. The gaming industry was explored, and 11 different computer games were evaluated from a driving scenario and tracking perspective, including Gran Turismo and F1 Racing Simulation, since one of the requirements for the lab was enabling *“startup of scenarios possible for novices.”* This requirement was met with skepticism (computer games have little to do with driving a real car), but also attracted members outside the UX team to not only explore possibilities generated by games and consumer electronics but also to push the limits for what type of innovations could be done within R&D.

The game-based simulation in the Human Centric Lab became one of the most used resources because it created an awareness of taken-for-granted assumptions and, at the same time, teased the mind to reconsider assumptions and try out new things connected to distraction and safety. It showed that established practices were not necessarily the most efficient, relevant, or interesting when evaluating possible (digital) solutions. Teasing practices opened new ways of thinking without force. Instead, it made user-centered design seem attractive and an opportunity to try new and fun development tools, but also a threat if the organization was ignorant of the impact UX in consumer electronics could have on the car industry.

Discussion

Our research question *“What are the strategies used by peripheral entrepreneurs to influence path creation?”* addresses how peripheral entrepreneurs in mature organizations create and use digital resources to create new innovation paths. We identify *cajoling* as a specific type of strategy used to create a new innovation path and to strengthen the peripheral entrepreneurs’ ability to influence the main processes in the organization. The digital innovation literature shows how entrepreneurs associated with the central elite use for example grafting, bridging, and decoupling (Tumbas et al., 2018) to influence new ways of innovating; how boundary spanners enable innovation paths by negotiating between the new and the old (Levina & Vaast, 2005); and how institutional entrepreneurs develop strategies to actively diverge from known and well-established processes and structures, to apply the new set of practices to imagine new paths (Henfridsson and Yoo 2014). Common to these strategies is that they do not problematize lack of access to main processes, decision-making bodies, and thus lack of resources to influence the organization. Studies on peripheral entrepreneurship in path creation have mainly focused on peripheral entrepreneurs in emergent organizations, and we, therefore, lack insights into the specific path creation challenges for peripheral entrepreneurs in mature organizations such as incumbents in the automotive industry. This is unfortunate since, as noted in previous research (e.g. Smets & Reihlen, 2012), peripheral entrepreneurs are specifically well suited to spot new ideas due to their position in the organization where they are often exposed to new ideas outside the organization.

Being an institutional entrepreneur in the periphery of mature organizations thus creates specific types of challenges that affect the ability for path creation. Early theorization of path creation (in contrast to path dependency) identified that *“initial conditions’ are not given, ‘contingencies’ are emergent contexts for*

action, ‘self-reinforcing mechanisms’ are strategically manipulated, and ‘lock-in’ is but a temporary stabilization of paths in-the-making” (Garud et al., 2010, p. 760). Many of the studies that followed in the wake of path creation research focused, however, on emergent organizations, since this type of organization were more open-ended, and thus created opportunities to study the process of path creation (Smets & Reihlen, 2012). In contrast to emergent organizations, for peripheral entrepreneurs in mature organizations such as incumbent car manufacturers, ‘initial conditions’ are often rigid and difficult to affect, even if the entrepreneur is centrally placed with access to core processes and decision-making bodies. More so, contradictions often emerge when taking on digital innovation due to multi-layer design structures (Henfridsson et al., 2009). Maybe even more so for the peripheral entrepreneur as strategies developed by peripheral entrepreneurs in mature organizations must be adapted to cope with the problem of how to get from the periphery to the core.

In this study, we found two important ways how peripheral entrepreneurs strategize shortcomings created by their marginal position in the organization. The first deals with the strategy used to persuade the organization to take on the suggested new path. We name this type of strategy *cajoling*. The second deals with how the *gradual increase of digitalization*, promoted by the studied entrepreneurs and used as a means when cajoling, added opportunities for them to act upon the contingencies that continually materialized in digital technology. They used the increase of digitalization in product and process as a way to manage lock-ins and *make them* temporary, opening for the possibility to affect larger parts of the organization in new ways.

Cajoling can be explained as a strategy used when the actor has little power to influence a situation through formal or structural means. Cajoling is a way to use attraction as a change agent to impact an organization and create new innovation paths. We identified that cajoling in the studied organization consisted of three types of practices used by the UX team to increase the impact of UX methods, concepts, and ways of working in the way innovation was performed in the organization. These three types of practices were used to invoke resources, strengthen relations, and create legitimacy among decision-making bodies in the organization. Each practice used a specific set of digital resources in a particular way to increase the impact of team efforts, namely:

1. *Coaxing* leveraged digitally shared resources to reconfigure organizational structures.
2. *Enticing* involved the use of digital tools to repurpose work processes.
3. *Teasing* was the use of different discursive approaches to both lure towards the new and challenge the old as ways to establish a new mindset.

Each of the three cajoling practices show how *digitalization* became an important resource in peripheral entrepreneurs’ mobilization of agency and impact. Whereas coaxing and enticing directly involved digital artifacts, teasing as a practice involved digital resources that had not only discursive power but also introduced new types of functionalities and design methods to the conceptualization of the car. We identified that digitalization was particularly used by peripheral entrepreneurs to leverage alternative practices, repurpose established processes, and establish new discourses to destabilize the existing innovation regime. In the following sections, we discuss each cajoling strategy and how they were intrinsically part of digitalization in a way that differs from the emergent strategies identified in previous research on entrepreneurs’ path creation activities (e.g. Henfridsson et al., 2009; Henfridsson & Yoo, 2014). We identify three levels of cajoling: *structural*, *processual*, and *discursive*, each connected to one of the practices identified in the empirical study and discuss the role of digitalization for each of them.

Coaxing with digitally shared resources to reconfigure organizational structures

Coaxing as a cajoling strategy is here defined as *the gentle persuasion using digital resources*. In the studied case, digital means were used to reconfigure organizational structures in favor of UX methods and approaches. Peripheral entrepreneurs have limited access to people and resources beyond organizational boundaries, which has been defined as important for successful strategizing to attach new competencies to an activity (cf. Levina & Vaast, 2005). Previous research has identified boundary spanning as a dual competence to translate between organizational units in a legitimate way (Levina & Vaast, 2005). In cajoling, organizational actors practice coaxing to attract other organizational members. The strategy is a response to a lack of organizational status that can give organizational actors access to decision-making pathways. Similarly, cajoling connects groups of people who are separated by location, hierarchy, and function using digital infrastructures.

In the studied case, the peripheral entrepreneurs created shared resources in the form of tools, labs, and testbeds, and showed how other organizational members could make use of the shared digital resources to not only promote their own work but also collaborate in new ways in which the user of the product was the common focus. To earn their interest, the peripheral entrepreneurs connected to known functions and activities prioritized in the organization and coaxed others towards user-centered methods and processes as solutions that could enhance and innovate current working methods while solving inherent structural problems. This kind of sharing disseminated new types of resources for creating innovation paths while contributing to the organization at large, which made other actors view the resources as a positive and exciting contribution.

The long-term effect of coaxing was structural change, that is new innovation paths, as the new resources promoted by peripheral entrepreneurs over time developed into the type of boundary objects identified in previous research on organizational boundary spanning (e.g., Levina & Vaast, 2005).

Enticing with digital means to repurpose work processes

Enticing as a cajoling strategy is defined here as *offering desirable digital tools to attract actors*. Enticing refers to tempting someone to do something by offering something desirable with attractive features that will meet the receiver's needs. The digital tools and approaches, such as visualization, simulation and agile design methods offered to the R&D organization by the UX team, addressed a complex and tedious design process that had been developed during the analog era based on a document practice supporting waterfall design methods that had become very complex as the infrastructure between different functions was digitally connected and the car design involved more screens for interactive technologies and digital systems. The UX team offered a new work method based on visualization, interactive technologies and agile design thinking that let the R&D staff perform rapid prototyping and obtain results quickly. Although appearing as foreign to the organization in the beginning, the new methods and tools gradually grew in importance as an attractive alternative that would remove many of the problems experienced with document-based innovation processes and paved the way for UX methods and user-centered design in the organization. The UX team offered a desirable alternative to remove complex and time-consuming work tasks while simultaneously creating legitimacy for user-centered design.

In contrast to the institutional entrepreneurs creating new innovation trajectories by themselves studied by Henfridsson and Yoo (2014), this case shows how offering attractive alternatives entice stakeholders to join the path creation development. The digital means for visualization and interaction were used to repurpose the established work process in favor of UX design, which ultimately resulted in new innovation paths.

Teasing with digital alternatives to change the mindset

Teasing as a cajoling strategy is here defined as *the playful provocation of actors to grow alternative discourses*. As noted by Munir and Phillips (2005), it is relevant to “engage in discursive strategies to transform the ‘meaning’ embodied by particular technologies, by producing new *concepts, objects* and *subject positions*” (p. 1666). Discursive strategy making involves embedding new practices into existing practices and defining a new institutional context around the practice. Using teasing as a strategy brought external digital innovations as technological bearers of alternative discourses into the existing R&D practices by creating attractive scenarios around the new and innovative user-oriented design approaches “out there” and made them relevant for AutoInc by connecting everyday appliances such as mobile phones and personal technologies to the cognitive space of car design, and in that way suggesting that user centered design could be relevant to internal activities and systems of thought. For example, touch screens were presented as innovation leaps that could take the organization forward in evolution and override incremental innovation to replace the company at the absolute cutting edge of digital innovation. Instead of embedding it in existing practices, cajoling became a strategy to discursively rethink the existing foundation for design to open a new agenda for the car.

Kodak's use of discursive practices, as described by Munir and Phillips (2005), involved producing texts that included interdiscursive references to existing institutions. Teasing, as a cajoling strategy, took a different approach. Instead, it was about presenting a completely new discourse that was alien to the incumbent, and instead presenting it as both an attractive alternative that could open innovation paths and show the possibilities of these, and as a threat if the organization chose to ignore it. Thus, teasing

destabilized existing design regimes to make the new seem like a realistic, attractive, and needed new path. The UX team attracted colleagues by emphasizing their positive experiences of using smartphones and gaming platforms in their everyday lives, which they could easily relate to. This turned the digital artefacts into tangible evidence of the possibility of entering completely new paths, to make them see the opportunity to create a car design that expressed customers' hopes and desires based on user-centered design.

Concluding remarks

This study identifies cajoling as a specific kind of emergent strategy used to gain resources, legitimacy, and impact for ideas that can eventually develop into successful innovation trajectories. But cajoling can also assist in creating paths in the opposite direction and put organizations in danger. This need to be further explored and understood in the future.

We identified three significant types of cajoling practices used in the studied organization: coaxing, enticing, and teasing. The results of this study add important insights to previous research on path creation in the digital era as it shows new strategy practices in terms of cajoling and how digital means can help in the process.

This study also identified the crucial role of digitalization for cajoling both as a means for innovation within the organization where cajoling was a strategy to get access to existing infrastructures, but also as a material bearer of alternative visions brought in from the outside. In both cases, cajoling was used as a device to promote a user-centered design methodology and make it relevant to the R&D department. A closer analysis showed that digital resources (Piccoli et al., 2022) were in fundamental ways connected to digital innovation practices stemming from UX logic and that institutional change occurred because UX practices were digital (compared to previous practices) and therefore could interact on different levels with increasingly digitalized institutional arrangements. The increase in digitalization has changed the organizational forms, infrastructure, and the building blocks used for innovation (Hinings et al., 2018).

References

- Alvesson, M., & Sandberg, J. (2011). Generating research questions through problematization. *Academy of Management Review*, 36(2), 247–271. <https://doi.org/10.5465/amr.2011.59330882>
- Arvidsson, V., & Mønsted, T. (2018). Generating innovation potential: How digital entrepreneurs conceal, sequence, anchor, and propagate new technology. *Journal of Strategic Information Systems*, 27(4), 369–383. <https://doi.org/10.1016/j.jsis.2018.10.001>
- Boland, R. J., Lyytinen, K., & Yoo, Y. (2007). Wakes of innovation in project networks: The case of digital 3-D representations in architecture, engineering, and construction. *Organization Science*, 18(4), 631–647. <https://doi.org/10.1287/orsc.1070.0304>
- Bowker, G., & Star, S. L. (1994). Knowledge and infrastructure in international information management: Problems of classification and coding. In *Information acumen: The understanding and use of knowledge in modern business*, (pp. 187–216). Routledge.
- Bryson, J. M., Crosby, B. C., & Seo, D. (2020). Using a design approach to create collaborative governance. *Policy and Politics*, 48(1), 167–189. <https://doi.org/10.1332/030557319X15613696433190>
- Burton-Jones, A., Akhlaghpour, S., Ayre, S., Barde, P., Staib, A., & Sullivan, C. (2020). Changing the conversation on evaluating digital transformation in healthcare: Insights from an institutional analysis. *Information and Organization*, 30(1), 100255. <https://doi.org/10.1016/j.infoandorg.2019.100255>
- Charmaz, K. (2006). *Constructing Grounded Theory: A Practical Guide through Qualitative Analysis*. SAGE Publications.
- Day, C., & Koivu, K. L. (2019). Finding the Question: A Puzzle-Based Approach to the Logic of Discovery. *Journal of Political Science Education*, 15(3), 377–386. <https://doi.org/10.1080/15512169.2018.1493594>
- DiMaggio, P. (1988). Interest and agency in institutional theory. In *Research on Institutional Patterns: Environment and Culture*. Ballinger Publishing Co.
- Dorado, S. (2005). Institutional entrepreneurship, partaking, and convening. *Organization Studies*, 26(3), 385–414. <https://doi.org/10.1177/0170840605050873>

- Fisk, A., Berente, N., & Lyytinen, K. (2010). Boundary spanning competencies and information system development project success. *ICIS 2010 Proceedings - Thirty First International Conference on Information Systems*.
- Garud, R., Hardy, C., & Maguire, S. (2002). Institutional Entrepreneurship as Embedded Agency : An Introduction to the Special Issue. <https://doi.org/10.1177/0170840607078958>
- Garud, R., & Karnøe, P. (2001). *Path Dependence and Creation*. Lawrence Erlbaum Associates.
- Garud, R., Kumaraswamy, A., & Karnøe, P. (2010). Path dependence or path creation? *Journal of Management Studies*, 47(4), 760–774. <https://doi.org/10.1111/j.1467-6486.2009.00914.x>
- Greenwood, R., Hinings, C. R., & Whetten, D. (2014). Rethinking Institutions and Organizations. 6(November). <https://doi.org/10.1111/joms.12070>
- Guest, G., MacQueen, K. M., & Namey, E. E. (2012). *Applied Thematic Analysis*. SAGE Publications.
- Henfridsson, O., & Yoo, Y. (2014). The liminality of trajectory shifts in institutional entrepreneurship. *Organization Science*, 25(3), 932–950. <https://doi.org/10.1287/orsc.2013.0883>
- Henfridsson, O., Yoo, Y., & Svahn, F. (2009). Path Creation in Digital Innovation: A Multi-Layered Dialectics Perspective. *Sprouts: Working Papers on Information Systems*, 20(9).
- Hinings, B., Gegenhuber, T., & Greenwood, R. (2018). Digital innovation and transformation: An institutional perspective. *Information and Organization*, 28(1), 52–61. <https://doi.org/10.1016/j.infoandorg.2018.02.004>
- Hu, H., Huang, T., Zeng, Q., & Zhang, S. (2016). The role of institutional entrepreneurship in building digital ecosystem: A case study of Red Collar Group (RCG). *International Journal of Information Management*, 36(3), 496–499. <https://doi.org/10.1016/j.ijinfomgt.2015.12.004>
- Hylving, L., Henfridsson, O., & Selander, L. (2012). The Role of Dominant Design in a Product Developing Firm's Digital Innovation. *Journal of Information Technology Theory and Application*, 13(2), 5–21. <https://www.researchgate.net/publication/270780369>
- Iansiti, M., & Lakhani, K. R. (2020). From disruption to collision: The new competitive dynamics. *MIT Sloan Management Review*, 61(3), 34–39.
- Jadaan, T. (2020). *The Emergence of Digital Institutions*. University of Gothenburg.
- Levina, N., & Vaast, E. (2005). The Emergence of Boundary Spanning Competence in Practice : Implications for Implementation and Use of Information Systems. *Management Information Systems Quarterly*, 29(2), 335–363.
- Lindgren, R., Andersson, M., & Henfridsson, O. (2008). Multi-contextuality in boundary-spanning practices. *Information Systems Journal*, 18(6), 641–661. <https://doi.org/10.1111/j.1365-2575.2007.00245.x>
- Macpherson, A., & Jones, O. (2008). Object-mediated learning and strategic renewal in a mature organization. *Management Learning*, 39(2), 177–201. <https://doi.org/10.1177/1350507607087580>
- Maguire, S., Hardy, C., & Lawrence, T. B. (2004). Institutional entrepreneurship in emerging fields: HIV/AIDS treatment advocacy in Canada. *Academy of Management Journal*, 47(5), 657–679. <https://doi.org/10.2307/20159610>
- Merriam-Webster. (2023). *Cajole*. <https://www.merriam-webster.com/dictionary/cajole>
- Miles, M. B., & Huberman, M. A. (1994). *Qualitative Data Analysis: An Expanded Sourcebook (Second)*. SAGE Publications.
- Munir, K. A., & Phillips, N. (2005). The birth of the “Kodak moment”: Institutional entrepreneurship and the adoption of new technologies. *Organization Studies*, 26(11), 1665–1687. <https://doi.org/10.1177/0170840605056395>
- Namey, E., Guest, G., Thairu, L., & Johnson, L. (2008). Data Reduction Techniques for Large Qualitative Data Sets. In *Handbook for team-based qualitative research 2* (pp. 137–163). Rowman.
- Pammer, W., Lightle, J., & Watson, D. (2000). Fostering Cooperation in Counties : Governing by Cajole: Conversations with County Managers. *Public Administration Quarterly*, 24(3), 305–319.
- Piccoli, G., Rodriguez, J., & Gruver, V. (2022). Digital Strategic Initiatives and Digital Resources: Construct Definition and Future Research Directions. *Management Information Systems Quarterly*, 46(4), 2289–2316.
- Shepherd, D. A., Patzelt, H., & Haynie, J. M. (2010). Entrepreneurial Spirals : Culture Deviation-Amplifying Loops of an Entrepreneurial Mindset and Organization Culture. 59–82. <https://doi.org/10.1111/j.1540-6520.2009.00313.x>

- Simarasl, N., Jiang, D., Pandey, S., & Navis, C. (2022). Constrained but not contained: How marginalized entrepreneurs overcome institutional bias and mobilize resources. *Strategic Entrepreneurship Journal*, June, 1–36. <https://doi.org/10.1002/sej.1438>
- Smets, M., & Reihlen, M. (2012). Institutional entrepreneurship: A literature review and analysis of the maturing consulting field. In *Handbook of Research on Entrepreneurship in Professional Services* (pp. 297–317). <https://doi.org/10.4337/9781781009109.00028>
- Svahn, F., Mathiassen, L., & Lindgren, R. (2017). Embracing digital innovation in incumbent firms: How Volvo Cars managed competing concerns. *Management Information Systems Quarterly*, 41(1), 239–253. <https://doi.org/10.25300/MISQ/2017/41.1.12>
- Sydow, J., Windeler, A., Müller-Seitz, G., & Lange, K. (2018). Path constitution analysis. *Unconventional Methodology in Organization and Management Research*, 1(2), 255–276. <http://www.oxfordscholarship.com/view/10.1093/oso/9780198796978.001.0001/oso-9780198796978-chapter-13>
- Thrane, S., Blaabjerg, S., & Møller, R. H. (2010). Innovative path dependence : Making sense of product and service innovation in path dependent innovation processes. *Research Policy*, 39(7), 932–944. <https://doi.org/10.1016/j.respol.2010.04.003>
- Trittin-Ulbrich, H., & Böckel, A. (2022). Institutional entrepreneurship for responsible digital innovation: The case of corporate digital responsibility. *Creativity and Innovation Management*, 31(3), 447–459. <https://doi.org/10.1111/caim.12513>
- Tumbas, S., Berente, N., & vom Brocke, J. (2018). Digital innovation and institutional entrepreneurship: Chief Digital Officer perspectives of their emerging role. *Journal of Information Technology*, 33(3), 188–202. <https://doi.org/10.1057/s41265-018-0055-0>
- Urquhart, C., Lehmann, H., & Myers, M. D. (2010). Putting the “theory” back into grounded theory: Guidelines for grounded theory studies in information systems. *Information Systems Journal*, 20(4), 357–381. <https://doi.org/10.1111/j.1365-2575.2009.00328.x>
- Van de Ven, A. H. (2018). Academic-practitioner engaged scholarship. *Information and Organization*, 28(1), 37–43. <https://doi.org/10.1016/j.infoandorg.2018.02.002>
- Wang, T., Malik, S., & Wales, W. J. (2021). When entrepreneurial rhetoric meets strict regulations: Implications for the valuation of health science firms. *Strategic Entrepreneurship Journal*, 15(2), 209–230. <https://doi.org/10.1002/sej.1396>
- Watson, A., Dada, O. (Lola), Wright, O., & Perrigot, R. (2019). Entrepreneurial Orientation Rhetoric in Franchise Organizations: The Impact of National Culture. *Entrepreneurship: Theory and Practice*, 43(4), 751–772. <https://doi.org/10.1177/1042258717738519>
- Weick, K. E. (1993). The Collapse of Sensemaking in Organizations : The Mann Gulch Disaster. *Administrative Science Quarterly*, 38(4), 628–652.