

Planned Luck: How Incubators Can Facilitate Serendipity for Nascent Entrepreneurs Through Fostering Network Embeddedness

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Abstract

Incubators often play an important role in facilitating networks for entrepreneurs. However, nascent entrepreneurs typically face high uncertainty and goal ambiguity, and which ties could provide the resources needed for achieving the respective goal is often unknown in advance. How do incubators facilitate entrepreneurs' network embeddedness in the context of such uncertainty? Using an explorative case-study approach, we studied an incubator in Kenya, an extreme setting from an uncertainty perspective. Our findings show how in high-uncertainty contexts, a social structure that allows for flexibility can provide the conditions under which unexpected discoveries are enabled, facilitating opportunity-inducing networks.

Keywords

qualitative, new ventures, transition/emerging market/developing economies, serendipity, incubator, Kenya, networks, uncertainty

Prior research has shown that incubators often play an important role in facilitating social networks for entrepreneurs, which can be essential for the success of entrepreneurial ventures (Amezcuca et al., 2013; Bergek & Norrman, 2008; Collinson & Gregson, 2003). These networks often provide tangible and intangible benefits such as legitimacy, knowledge, and funding (Bruneel et al., 2012; Brüderl & Preisendörfer, 1998). The literature so far has largely focused on understanding existing relationships with and between particular actors, such as suppliers, companies (e.g., Cooper et al., 2012), and universities (e.g., Rothaermel & Thursby, 2005). However, prior research tends to regard entrepreneurs as either passive actors determined by their network structure or heroic agents who are goal driven and planning their networking activities (Klyver

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et al., 2011; Porter & Woo, 2015; Stuart & Sorenson, 2007). This assumes entrepreneurs (or incubators) know which kind of ties they will need, which network outcomes are possible, and which objectives might emerge for them based on ongoing social interactions (Engel et al., 2017).

However, although specific training programs and targeted networks might be most effective in contexts in which entrepreneurs' goals are clearly understood, they are often unlikely to be effective for nascent entrepreneurs, who typically face high uncertainty and goal ambiguity (Engel et al., 2017). Frequently, not only are the probabilities of possible outcomes unknown, or what the goals of nascent enterprises are, but also *who* could provide the information or resources needed for achieving those goals (Alvarez & Barney, 2007; Engel et al., 2017; McMullen & Shepherd, 2006). Entrepreneurial action under such uncertainty is the equivalent of chasing an invisible moving target (Huang & Pearce, 2015), and networking processes in these contexts involve unpredictability and a constantly changing interactive environment. As a result, nascent entrepreneurs—in view of all this uncertainty—often do not know which specific network ties are best for them in the first place, thus, by implication, making creating—and facilitating—networks for nascent entrepreneurs hard for incubators. Although previous research has clearly established how traditional hub firms coordinate contributions of network members toward common goals, how incubators support members to develop their *own* networks and pursue their own business opportunities in contexts of uncertainty remains undertheorized (Eveleens et al., 2017; Giudici et al., 2018). What do incubators actually *do* to facilitate effective networks for nascent entrepreneurs given this uncertainty?

A useful lens in this respect is the theory of social embeddedness, which captures the role and importance of social networks for (entrepreneurial) action (Granovetter, 1995; McKeever et al., 2014; Uzzi, 1997). It enables a deeper understanding of how group membership can constrain or facilitate action (Portes & Sensenbrenner, 1993). In this article, we define social embeddedness as “the nature, depth, and extent of an individual’s ties into an environment, community or society” (McKeever et al., 2014, p. 222). Embeddedness contributes to enterprise development through access to benefits from the network structure (Dushnitsky & Shaver, 2009; Zane & DeCarolis, 2016), such as access to tangible resources (e.g., financial resources; Batjargal et al., 2013), learning benefits (Powell et al., 1996), emotional support (Shane, 2003), and enhanced status and legitimacy (Burt, 1997). However, (over-)embeddedness can also lead to a lack of novel or diverse information, lock-in in cohesive networks, or psychological pressure (di Falco & Bulte, 2011; Gedajlovic et al., 2013; Khavul et al., 2009; Khayesi & George, 2011), pointing to the importance of examining *how* nascent entrepreneurs are—and *become*—beneficially embedded (Hughes et al., 2007; Jack, 2005; McKeever et al., 2014). Hence, more carefully examining the emergence and underlying social undercurrents of these networks is necessary (Eveleens et al., 2017; Friederici, 2015; Giudici et al., 2018). Thus, our study’s research question asks how incubators facilitate network embeddedness in a context of high uncertainty.

The question is particularly interesting in the context of emerging economies, an extreme setting (Eisenhardt et al., 2016) from an uncertainty perspective. Incubators in emerging countries provide a sociospatial setting and structure in which opportunities are constructed in a high-uncertainty context: Nascent entrepreneurs are often at early stages of exploring their ideas (i.e., general uncertainty of goals and objectives), and an emerging economy is a particularly volatile setting to do so (e.g., unstable formal institutions with lack of information access; Batjargal et al., 2013). Thus, incubators in emerging economies are an intriguing extreme setting to explore our research question.

Given that an inductive approach is most suitable for exploring underlying social processes (Eisenhardt, 1989; Jack & Anderson, 2002; Sonenshein, 2014), we used an explorative case-study approach (Flick, 2009). As an extreme case (Eisenhardt et al., 2016), we selected an

incubator in Kenya, an emerging country with a rapidly evolving entrepreneurial environment but relatively weak formal institutions (UNDP, 2013), making networks even more important as a means of trustworthy coordination, access to resources, and reduction of transaction and other costs (Ahlstrom & Bruton, 2006; Batjargal et al., 2013; Dutt et al., 2016). The focal incubator in our study (for which we use the pseudonym T-Hub) has been at the core of facilitating the entrepreneurial ecosystem in Kenya. T-Hub provides a space in which entrepreneurs can access office facilities, business events, free internet access, mentors, entrepreneurial connections, and other support services to develop their ideas. Given that it has been understood as the context and mechanism by which to become embedded (Elfring & Hulsink, 2003; McKeever et al., 2014), we chose to focus on “community” rather than taking a more technical perspective on incubators.

We make two theoretical contributions. First, we build on and extend research exploring how entrepreneurial agency can help shape and is shaped by social structure (Hansen, 1995; Hite, 2003; McKeever et al., 2014) and capture how social embeddedness can be created and facilitated by incubators by balancing a nurturing social structure with enabling entrepreneurs’ agency in a context in which the entrepreneurs’ emerging needs are unpredictable (Engel et al., 2017). This approach helps unpack the process of “where social embeddedness comes from” (McKeever et al., 2014) and contributes to our understanding of how a structural social environment in which entrepreneurship takes place is nurtured (Borgatti & Foster, 2003), in the context of incubators. T-Hub “intuitively” developed conditions enabling unexpected encounters and related positive outcomes—serendipity—to emerge, where entrepreneurs meet and form connections even if the value of a potential relationship is yet unknown. Our research helps shift the conversation away from heroic, agency-driven networks, or the predominance of an existing network structure, toward a more dynamic interplay of both (Engel et al., 2017). Relatedly, it also contributes to our understanding of how networks may enable entrepreneurs to operate within their community, as well as how entrepreneurs both use and are being used by the local community (McKeever et al., 2015).

Second, we contribute to a deeper understanding of the role of incubator network leadership in the context of high uncertainty (Giudici et al., 2018). Community-Enabling Leadership emerged as an effective approach to enable other members of the incubator to lead and follow up on emergent encounters. T-Hub’s founding team facilitated the conditions for others to take on leadership roles within the community and provided platforms for them to take action, enabling them to realize their own ideas without centrally appropriating the gains. With its focus on value creation over value appropriation, Community-Enabling Leadership differs from leadership in traditional goal-driven networks (Khanna & Palepu, 1997; Provan & Kenis, 2008) and for-profit, company-driven innovation communities (e.g., Fleming & Waguespack, 2007) and focuses on creating conditions for open value creation in the context of uncertainty. We thus provide new insights into the linkages between social networks and leadership styles (Tasselli et al., 2015).

Overall, we capture how and why in high-uncertainty contexts a social structure that allows for flexibility can provide conditions under which unexpected discoveries are enabled and nurtured. Our perspective of serendipity as partially endogenous to what incubators can do to support entrepreneurial activities—through a process of social embeddedness—sheds light on the important role of (cultivating) serendipity in entrepreneurship (Dew, 2009; Engel et al., 2017).

Below, we first discuss the theoretical background of our study.

Theoretical Background

Incubators and Networks

Incubators, namely, organizations aiming to nurture early-stage entrepreneurs and start-up companies, provide a sociospatial structure in which opportunities are constructed for nascent entrepreneurs. Business incubation focuses on helping entrepreneurs start ventures, by providing direct and indirect support, including access to services and resources (Dutt et al., 2016; Sapsed et al., 2007). This helps new ventures tackle challenges they typically encounter, such as liability of newness and resource scarcity (Ayatse et al., 2017; Harper-Anderson & Lewis, 2018; Klingbeil & Semrau, 2017).

The view of many funders and government organizations that incubators can be effective vehicles for encouraging the development of new enterprises around a physical space has led to a rapid proliferation of incubators: Over the last 10 years, the International Business Innovation Association has doubled its membership base (over 2000 members in 2018). In sub-Saharan Africa alone, over 100 incubators have been established over the last few years (Friederici, 2015; Kelly, 2014). Incubators supposedly create resource-munificent environments (Castrogiovanni, 1991; Chandler & Hanks, 1994) that shield entrepreneurs from environmental selection (Amezcuca et al., 2013; Barnett et al., 1994; Scillitoe & Chakrabarti, 2010).

Whereas earlier generations of incubators were primarily concerned with providing physical spaces and one-on-one advice, later generations have increasingly augmented their approach by focusing on the facilitation of networks (Giudici et al., 2018; Harper-Anderson & Lewis, 2018; Rosiera et al., 2014). These networks supposedly help entrepreneurs overcome structural impediments and deficiencies, by developing social capital – the sum of the resources embedded within, and available through, the network (Amezcuca et al., 2013; Eveleens et al., 2017; Nahapiet & Ghoshal, 1998). The resources can be either tangible or intangible and increase legitimacy and knowledge (Bruneel et al., 2012; Collinson & Gregson, 2003; Rosiera et al., 2014). Networks united by a common interest, goal, or identity can form “communities of practice” (Wenger, 1998), innovation communities (Fleming & Waguespack, 2007), or social innovation communities (Toivonen, 2016), but loosely structured networks without a clear common goal tend to prevail in this context (Giudici et al., 2018). Furthermore, Scillitoe and Chakrabarti (2010) in their study of 42 new technology-based ventures in an incubator found that whereas technological know-how skills were enabled via networking interactions, direct counseling was effective for learning about buyer’s preferences.

However, although incubator networks provide benefits, prior research has identified a “dark side” as well. For example, by shielding its members from outside challenges, they potentially make startups less competitive, because they do not need to develop market readiness early on or develop related survival skills. Amezcuca (2010), using a panel dataset on 944 US business incubators, found incubated firms failed 10% sooner than nonincubated firms. Although the incubation helped stem an entrepreneur’s losses, in terms of sales and employment, it did not contribute to growth. In a similar vein, Schwartz (2013) found that incubated firms showed lower survival rates than nonincubated firms and, therefore, questioned whether incubation improved firm performance in the long run. Further, Khalid et al. (2012), in their study of a Malaysian incubator, found that whereas selection, monitoring, and business-assistance intensity significantly predicted outcomes such as profitability of the member company, resource munificence failed to show a positive relationship with member-company outcomes.

Thus, despite a surge—and corresponding increasing interest—in incubators, they often do not increase the success rate of enterprises (Amezcuca, 2010; Dutt et al., 2016; Friederici, 2015; Kauffman Foundation, 2015; Schwartz, 2009), and our collective knowledge of what incubators actually *do* to facilitate networks that are beneficial for nascent firms is severely limited (Eveleens

et al., 2017; Giudici et al., 2018). The literature on social embeddedness can help elucidate this issue.

Social Embeddedness and Uncertainty

Social embeddedness, as a theoretical lens, contributes to understanding the complex social processes and contexts through which entrepreneurial outcomes are achieved (Johannisson et al., 2002) and the nature and use of social ties within the broader context (McKeever et al., 2014; Uzzi, 1999). This is relevant regarding the extent of social embeddedness, as well as the nature of it, which shapes the ability of entrepreneurs to access resources and opportunities (Portes & Sensenbrenner, 1993). Thus, embeddedness can be understood as a two-way developmental process between structure and agent (Johannisson et al., 2002; Lyons et al., 2012; Polanyi, 1968), whereby knowledge and experience are accumulated within a particular sociospatial context (e.g., an incubator), and where social relationships that help entrepreneurs thrive are being established and sustained (McKeever et al., 2014; Zahra, 2007). Entrepreneurs, in turn, use their agency to explore and frame the social context (Fligstein, 2001). “Community” then provides the space, mechanism, and context for entrepreneurs to become embedded (Elfring & Hulsink, 2003; McKeever et al., 2014), and social capital is generated and maintained through the practices of embedding.

Social embeddedness has been examined in a variety of contexts: in terms of business sectors (e.g., Uzzi, 1997, 1999), gender (e.g., Louch, 2000), families (e.g., Aldrich & Cliff, 2003), and social class (e.g., Anderson & Miller, 2003). These studies, as well as studies in other contexts such as ethnicity, economic migration, and venture capital, show embeddedness shapes and may enable access to a variety of opportunities and resources, including information, resources, and emotional support (Ozcan & Eisenhardt, 2009; Schutjens & Stam, 2003), whereas over-embeddedness may constrain such access, for example, through cognitive and relational lock-in (Busch, 2014; Maurer & Ebers, 2006).

However, a key problem of prior research is that—implicitly or explicitly—it either assumes an over-reliance on a deterministic view of network structure or an agentic view that tacitly conceptualizes entrepreneurial networking as a goal-directed activity (Engel et al., 2017; Porter & Woo, 2015). This, in turn, assumes a context is risky (rather than uncertain) and that relatively clear (as opposed to ambiguous) goals are pertinent (Alvarez & Barney, 2007; Alvarez et al., 2013). In this view, entrepreneurs anticipate the possible outcomes of particular interactions (Hallen & Eisenhardt, 2012), assuming advance knowledge about who the target tie will be and what it could offer (Engel et al., 2017). Dealing with risk rather than uncertainty implies objectives for a respective action can be set in advance (Miller, 2007), and activities are coordinated around stable, known goals such as seeking resources or receiving investment (Hallen & Eisenhardt, 2012; Zott & Huy, 2007). By contrast, in settings of uncertainty, goals are emergent, and predicting which ties will be needed and what value they will create for the nascent entrepreneur may be impossible.

Whereas much of the business literature has assumed opportunities can be mapped out in advance (Brown, 2005), others have argued these opportunities are often emergent and serendipitous (Denrell et al., 2015; Mintzberg & Waters, 1985). Indeed, recent research has shown that given that the survival of enterprises often depends on their ability to tackle uncertainty (Ramus et al., 2017) and that early-stage entrepreneurs, in particular, often do not know which resources, partners, or co-founders they need, they tend to adapt frequently, and opportunity discovery is often a matter of serendipity rather than planning (Denrell et al., 2015; Liu & de Rond, 2016). We define serendipity as entrepreneurs “making discoveries, by accidents and sagacity, of things they were not in quest of” (Merton & Barber, 2004, p. 2). This definition implies serendipity is

not only an “accidental discovery” but is also related to being observant, building on the notion that discoveries are facilitated by controllable elements such as an open mind (Van Andel, 1994).

We know from the literature that early-stage entrepreneurs and their ventures tend to adapt frequently and that opportunity discovery is often a matter of serendipity rather than planning (Denrell et al., 2015; Liu & de Rond, 2016). This is particularly salient in emerging-market contexts, in which little expectation certainty is present (Busch & Barkema, 2019). However, apart from notable exceptions (e.g., Giudici et al., 2018), the literature has been surprisingly silent on how to handle such uncertainty and, importantly, how to create conditions for serendipity to happen, for instance, in the context of incubators. In fact, although serendipity has entered the academic debate (e.g., Kilduff & Tsai, 2003), it has typically been seen as an exogenous structural feature of spontaneous encounters (Casciaro et al., 2014; Feld, 1981; Shipilov et al., 2014), or even “error” or “uncertainty” that needs to be reduced, rather than as something that can be beneficially managed, for instance, in the context of incubators.

In view of all this, exploring entrepreneurial settings where structure interacts with the agency of individuals is important (McKeever et al., 2014; Stewart, 2003). Incubators in emerging markets provide a particularly fruitful setting because they potentially facilitate social structures/networks and, important to our research question, in a setting of high uncertainty. Hence, our key research question asks how incubators facilitate network embeddedness in the context of high uncertainty.

Methods

We adopted a qualitative approach, which was appropriate because our research objective was to understand social processes and relationships and *how* they unfold, rather than attempting to measure *how many* (Plowman et al., 2007; Pratt, 2009). The qualitative, single case-study approach also allowed us to capture these issues in context (Plowman et al., 2007). Our theory guided our efforts and questions and allowed us to explore how the data could answer these questions (Gartner & Birley, 2002).

Our research assumes multiple perceptions of the same reality may exist and that different researchers and different individuals being studied might embrace different views (Lincoln et al., 2011). This assumption informed our methods selection at every step of the process. We followed core studies (e.g., Khavul et al., 2009; Lingo & O'Mahony, 2010; Plowman et al., 2007) using established qualitative methodology to unpack network processes. We chose the African context because it is unique with regard to its economic and institutional challenges, making it a fertile context for research on uncertainty and entrepreneurial activity (Bruton et al., 2010). We selected Kenya as an empirical setting because it has been leading the region with respect to innovation and entrepreneurship while having relatively weak institutions. Thus, it is interesting and relevant for the exploration of network processes (Clarysse et al., 2014), because networks are particularly important in the context of high uncertainty, providing safety nets and reducing transaction costs (Ahlstrom & Bruton, 2006; Batjargal et al., 2013; Bruton et al., 2008).

Given that we were interested in how incubators can facilitate network embeddedness, our unit of analysis was the incubator. Our sampling procedure was the following: We aimed to find an “extreme case” (Eisenhardt et al., 2016) that would be operating in a challenging emerging-market context while being effective. We identified T-Hub as a pioneering and “best practice” incubator in sub-Saharan Africa, seen as facilitating the emergence of the regional tech ecosystem, and which, as a sign of its success, other incubators in the region have copied. It provides a space in which entrepreneurs receive access to office facilities, business events, free internet, and mentors. It has more than 2000 members, mostly tech entrepreneurs, students, hackers, developers, and investors. Over time, it has developed units that complement its service offerings to both

members and corporate partners, including T-Hub Research (generating relevant ICT research for both members and outside organizations), UX Lab (support in human-centered design; testing mobile applications with users), and T-Hub consulting (connecting members to projects with larger organizations). Of the different types of incubators (virtual, social, medical, corporate, seed accelerators, etc.), it is best categorized as a coworking space with added offline and online services (i.e., a “hybrid incubator” or “technology incubator”).

Following the understanding of “community” as the space, mechanism, and context for becoming embedded (Elfring & Hulsink, 2003; McKeever et al., 2014), we focused on the organization’s core members (Table 1) based in the T-Hub space as the “community.” Given their fluid structure and design, defining and demarcating the boundaries of incubators and their communities is inherently difficult. After reviewing the literature and discussions with experts in the field (e.g., incubator managers) and in academia, we decided to focus on those members who regularly (at least once a month) visited the space.

We covered the T-Hub community from T-Hub’s conception in 2009/2010 to April 2018, and our data-collection efforts took place for the duration of 51 months (between January 2014 and April 2018). We spent extensive time on the premises of T-Hub and member organizations and visited Nairobi three times for extended periods. Although we started our systematic study in 2014, both authors have been deeply immersed in the Kenyan entrepreneurial community since 2010, witnessing its evolution firsthand.

Table 1 details the general characteristics of T-Hub (i.e., general description and examples of outcomes), as well as of its members (i.e., different membership categories and examples of members).

Data Collection

We combined interviews, archival data, and observations. To get a better picture of the context, before the study, we conducted five interviews with experts, academics, and entrepreneurs. We then arranged 42 semistructured interviews with the management team, community managers, partners, and community members (all three types of membership; see below). We were purposeful in the selection of respondents (Pratt, 2009) and focused on those who either had a key role within the incubator (e.g., management team, community managers) or were key stakeholders who could inform us about it from their perspective (e.g., members).

Our sample was theoretical in the sense of having the characteristics that fit our needs and research question and included the relevant people within the incubator whom we could map a priori. Spending time in the incubator allowed us to identify additional respondents via snowball sampling and we chose new respondents based on what they could contribute to our emerging theory (Alvesson & Skoldberg, 2000; McKeever et al., 2015). We took care to interview individuals across the incubator and its different units, in order to be able to triangulate different viewpoints and detect underlying patterns (Flick, 2009). For the same reason, we also interviewed members of all three membership types. Each interview lasted between 30 and 90 min.

The semistructured interviews followed a topic guide that was theoretically sensitized by the literature. The initial topic guide included questions on the incubator (e.g., “How do you demarcate the boundaries of your community?”), networks (e.g., “Which contacts were important to you, at which point in time?”), and context (e.g., “Which peculiarities have you found in building relationships in this context?”). We prepared two versions with slightly different phrasing for the management team (a) and stakeholders, including members (b). The interviews were conducted in English. Although all respondents were fluent in English, we minimized potential “lost in translation” risks by restating questions or answers whenever in doubt or when we perceived ambiguity.

Table 1. Characteristics of T-Hub and Its Members.

General characteristics of T-Hub	Member characteristics
<p>Description</p> <p>Physical meeting space for tech entrepreneurs, developers, and researchers (more than 2000 to date). Access to free internet, events. Emerging services: T-Hub Research (supporting entrepreneurs and organizations with market research); UX Lab (support with human-centered design and testing mobile applications); T-Hub Consulting (connecting members to projects with external organizations); T-Hub programs.</p>	<p>Category 1: White member</p> <p>Lives in Kenya or abroad; interested in the tech community in general; comes every now and then to an event.</p> <p>Example: Brad is a US filmmaker, who works across sub-Saharan Africa. Whenever he is in Kenya, he and his team work out of T-Hub. They appreciate the infrastructure—in particular the strong wifi—and enjoy connecting with old friends especially at more informal gatherings.</p>
<p>Examples of outcomes</p> <p>“We have an estimate of 150 startups that have formed at the iHub.” (Community manager)</p> <p>“Starting from the [T-Hub], that’s how I met my two founders. Brilliant guys, very smart guys, smarter than I am, you know.” (Member)</p> <p>“I connected with my co-founders [at T-Hub]...I knew I had the platform to meet and connect with people. And so, I was very aggressive. I used to go in in events and give cards, and talk to people.” (Member)</p> <p>“They help me with the market. And it’s a place where I feel support, also for the emotional side of things.” (Member)</p> <p>“I [have] been here for several years...mostly for the co-working, but sometimes there’s also tangible value like meeting good companies. And learning.” (Member)</p>	<p>Category 2: Green member</p> <p>Often works on a concrete idea; tends to make use of the space, workshops, and events.</p> <p>Example: Brenda works on an idea to develop an online community for companies. It is early days, and she is trying to speak with as many people as possible to see if the idea makes sense. She goes to as many events as she can, and attends training programs to develop her skillset.</p>
	<p>Category 3: Red member</p> <p>Usually has been there for a longer period; usually later-stage.</p> <p>Example: Pete developed a social media consultancy, which helps companies develop a “fanbase.” Pete has a strong customer base already, and now uses T-Hub to host his own events and to meet potential new customers. He mostly spends time with other red members, as he feels that other members are quite literally “too green” for him.</p>

After the first round of interviews, we updated the topic guide to integrate insights from the first tranche, for example, related to serendipity. At the end of the study, we performed five follow-up interviews with experts and entrepreneurs to test our analysis and interpretation of the data.

We analyzed a variety of internal and external documents, including media reports and internal stakeholder mappings. In total, we screened 247 pages of internal documents and 1254 pages of publicly accessible materials (e.g., pan-African incubator report and media reports). We employed these documents for contextualization and the document corpus followed purposive sampling in which we focused on those documents that appeared relevant and were accessible (Flick, 2009; Yin, 2003). For example, when a respondent led us to consider the idea of space design for serendipity, we increasingly focused on documents that would help us understand how exactly this was facilitated. To minimize “objective separateness” between ourselves and those being researched and to enable “lived experience” at the research site (Guba & Lincoln, 1988), we included observations of meetings and events, including four internal member events (e.g., a pitch event), two team meetings, and two meetings between members and staff. To enhance transferability, we also conducted five interviews with incubator managers in Chile and South Africa that allowed us to understand which practices might be present in other settings as well. In all, we conducted 52 interviews.

Data Analysis

To deepen our understanding of the key issues and to detect underlying social processes, we used a coding process related to our research question (Flick, 2009). Our goal was to understand the underlying patterns in our data related to networks. To develop theoretical ideas while remaining true to our data, we went through multiple iterative steps and repeated this process once a relevant insight emerged. This study did not start as a study on social embeddedness, but as an observation of an incubator in an emerging-country context. But what emerged from several rounds of data collection and reiterative data analysis in relation to theory was a story about social embeddedness in the context of high uncertainty that allowed for the cultivation of serendipity.

Eisenhardt’s (1989) notion that the development of valid theory relies on its connection with empirical reality guided our analysis and we aimed to tell a story based on analyzing themes (Dutton & Dukerich, 1991). As a first step, we went through the interview transcript and identified the main themes and issues that appeared to evolve from each (Miles & Huberman, 1994). We followed the notion that a theme can be defined as a recurring topic of discussion capturing the central ideas of an interview (Dutton & Dukerich, 1991; Plowman et al., 2007). For example, many of the interviewees referred to the importance of serendipity and reflected on how it unfolded. We used open, *in vivo* coding, and iterated repeatedly (Locke, 2001). We initially searched for codes based on our initial interest around networks, while also allowing new categories and themes to emerge from the data (Plowman et al., 2007). To make sense of our findings, some of the emerging themes required us to return to the academic literature, in particular, research on social embeddedness and serendipity. We recoded our field notes and interviews that either challenged or supported our findings and we stopped once the reading did not lead to substantially new insights (Plowman et al., 2007).

We used axial, second-order coding to search for relationships between the codes and converted them into higher-order categories. Moving back and forth between the data and existing theory (e.g., on social embeddedness), we grounded those constructs that stayed close to the data but abstracted from the context (Gioia et al., 2013). We coded the themes, for example, *fostering an openness to the unexpected*. We then aggregated these themes into major categories that

represented conceptually coherent constructs (Plowman et al., 2007), for example, cultivating reframing. Following the logic of the Q-sort process (O'Reilly et al., 1991), we required them to be readable, general, discriminant, and nonredundant. Between the two co-authors, we agreed on the categories that fulfilled these criteria. We compared interviews with each other as well as with archival and observational data (Plowman et al., 2007). We sorted our data by theme and included some representative quotations from the raw data in Table 2. To improve validity and accuracy, we employed member checks (asking members and incubator managers if those findings corresponded to their experience). Based on these discussions, we revised and corrected details (Plowman et al., 2007), for example, related to the type of incubator partnership. We considered potential challenges, including ethical issues related to privacy, avoiding misrepresentations, and facilitating honest conversations. Our local embedding—both researchers have been active in the Kenyan incubator context for around 10 years—allowed for open communications. We clarified how the data would be used, and received informed consent from participants. We used anonymity to protect participants' privacy.

Figure 1 shows how we moved from first-order categories to aggregate dimensions.

We recognize the methodological limitations of a two-observer, single-case field study, including issues related to credibility and generalizability (Flick, 2009). However, we assume the rich details and insights can be used for further testing (Larson, 1992) to increase our understanding across settings (see section "Limitations and Further Research").

To contextualize our findings, below we briefly discuss the emergence of T-Hub and then dive deeper into the particular processes that emerged from our data.

Findings

T-Hub was conceived as a nexus point for the local tech community. Within a few years, it transformed from a local coworking space into a leading incubator in Africa. Even though in 2009 Kenya did not have a strong entrepreneurial environment, it did have pockets of local entrepreneurs, for example, around BarCamps, which were user-generated conferences focused primarily on technology. However, those conferences were usually ad hoc and often dispersed. T-Hub plugged into these pockets and offered a physical and digital space for these entrepreneurs and developers to meet.

To engage potential community members, the founding team used its pre-existing reputation, given that a well-known organization that the T-Hub co-founder set up "created an aspect of trust" (founding team member). The inner core of the T-Hub community ("members") consisted of entrepreneurs, designers, and developers working out of the space. Three types of memberships were differentiated: white, green, and red (Table 1). While T-Hub increasingly developed more structured support programs and services, the team recognized that given that many of its members were early-stage entrepreneurs, many of them would regularly "pivot" and radically change their ideas, needs, and business models. Knowing which problem they might have to solve in the end, which skills they might need, and which resources they might require was often impossible for members:

I thought I wanted to provide a service for people to get things done with better software. Now I met someone recently who deals with social issues, and [now] I want to change my business to do something with some [social] change, not just technology. But I need to know more about it, I don't understand it yet, and I need to meet more people in that area. (Community member)

Other members were not yet aware of what resources they would need in the future, which potential markets they might tackle, or which types of collaborators they might need. Thus, structured

Table 2. Representative Evidence.

First-order categories	Second-order themes	Aggregate dimensions
Legitimizing the unexpected	<p>Fostering an openness to the unexpected</p> <p>Team member: “We tell stories, we share that often, it’s unexpected.”</p> <p>Observation: Incubator team often encouraged community members to try new things, for example, as a reaction to market research that did not confirm the viability of a member’s product.</p>	Cultivating reframing
Encouraging openness to new information and encounters	<p>Community member: “We know here that there is no right or wrong answer, no one way or the other; things change, and here things change often, very often.”</p> <p>Observation: Conversations were often focused on how ideas and products could be changed or improved based on new information and opportunities.</p> <p>Selection and onboarding process focused on open-mindedness</p>	
Selecting people based on open mindset	<p>Team member: “The core value of openness has never been that only [specific] sorts of people are allowed in...Because that’s what a nexus point that really allows anyone from different background to connect [is].”</p> <p>Archival data (member application page): Communication toward potential new members focuses on “community members who want to teach and learn, who want to challenge and be challenged, and who want to collaborate with others.”</p>	
Encouraging new members to communicate with others	<p>Community manager: “I found a group of community members who... were not talking to each other. They were not sharing what they were doing and that was one of the main things that I really wanted to see happen. So, when I did the new intake of community members, I made it very clear that this is a community space.”</p> <p>Observation: New members are directly introduced to other members; low barriers to communicating with unknown others.</p>	

(Continued)

Table 2. Continued

First-order categories	Second-order themes	Aggregate dimensions
Highlighting similarities (e.g., similar journeys, experiences)	<p>Institutionalizing community trust</p> <p>Observation: Members were signaled that they were “in this together;” for example, by team members highlighting the similar journeys the entrepreneurs were on, and encouraging members to help each other.</p> <p>“They make it very clear that we are here not on our own, but also because we can collaborate with people who are here. It’s the difference to working from home.”</p>	Elevating commitment
Greeting community members when they come in	<p>Founding team member: “We have some practices here that make people feel that they can rely on each other, like new member initiations.”</p> <p>Observation: Development of rituals.</p> <p>Appealing to an enlightened self-interest</p>	
Members enabled to drive their own ideas	<p>Observation: Members were supported with regard to their own ideas, for example, the team would help with developing a new service idea, or members were encouraged to leverage their skillsets or projects (e.g., a web designer to run a web design course).</p> <p>Team member: “There’s tons of opportunities to do something... That thing that came to me... [for example was] ‘the community needs more empowered women in tech’”</p>	
Members celebrated for their ideas	<p>Community manager: “When a member does something great, we show that to the community. It gives them credibility, it gives them reputation, it helps people to know what they’re up to.”</p> <p>Observation: During our visits, several times individual entrepreneurs would be introduced as someone who “just launched a new product.” Which was highlighted in front of whoever was in the room at that time.</p>	

(Continued)

Table 2. Continued

First-order categories	Second-order themes	Aggregate dimensions
Creative seating arrangements	<p>Supporting flexible space design</p> <p>Team member: “Your chair might be next to a potential co-founder, or a person who is going to fund you for the next two years... It’s all one organic process.”</p> <p>Observation: Entrepreneurs at similar stages of development but potentially complementary skills seated next to each other.</p> <p>Observation: Easily accessible spaces (e.g., coffeeshop).</p> <p>Community member: “This place has been all about serendipity. You go to [name of coffee shop], and you meet people. Then, the next day, someone comes to you, and you do a project [together].”</p>	Agile platform design
Spaces designed for emerging interactions	<p>Supporting flexible event design</p>	
Diverse events such as “mixers”	<p>Observation: During our visits, there were multiple diverse events that focused on developing and financing emerging ideas.</p> <p>Community manager: “There are some events, for example, pitching competitions, that we arrange... a certain number of people will get investments, for example, Pivot East and things like that.”</p>	
Opportunities for meeting others in relaxed environment	<p>Community manager: “We had fireside chats where we get someone who is quite successful... we had Ban Ki-Moon coming in and John Sculley... sharing his story... and just people being able to connect with these people that they would never be able to connect with on a personal basis if they were by themselves.”</p> <p>Team member: “I also ran into someone who gave money to one of my projects... many times [it was] very unexpected but [I realize this was] important when I’m looking back now.”</p>	

(Continued)

Table 2. Continued

First-order categories	Second-order themes	Aggregate dimensions
Partnerships are constantly adjusted to member needs	<p>Developing adaptive partnerships</p> <p>Team member: “We made sure to introduce members to who they need. When I heard a member who needed something, I introduced him directly whenever I know [who could be of help].”</p> <p>Observation: Community managers during our time at T-Hub consistently attempted to develop partnerships based on (perceived) member needs.</p> <p>Team member: “They [partners] do certain types of training sessions, and then members have first priority to take part in those.... You have...like the CEO of Safaricom...and an ordinary person can hear their experience.”</p> <p>Observation: During our time at T-Hub, outside partners were asked to provide related trainings based on emerging needs, and were adjusted if members appeared to have new preferences.</p>	Elevating emerging opportunities
Continuous needs driven development of training partnerships	<p>Developing adaptive support programs</p> <p>Team member: “We do not push people into a specific direction. We allow them to try, to fail, to learn. To connect with people, to explore what’s possible. When you have lots of smart people in a room, that’s where unexpected things come up, that’s where innovations emerge...as an organization, the goal is to disseminate relevant information, and support startups, and the community. And the way you support the community is through the different initiatives.”</p> <p>Community manager: “We are always trying to figure out what the community needs in terms of gaps and in terms of skills, and fill those gaps...One of the main things that we’ve noticed is [lack of] business skills. So people in the community are strong in tech skills, but not very strong in business skills. So, [we do] workshops on business model development, lean canvas, or pitching to investors or being pitching-ready.”</p> <p>Observation: Programs were constantly adapted based on member suggestions (e.g., related to investments into emerging ideas).</p> <p>Founding team member: “We are always learning what people need, that helps us change programs to what can be most helpful at different times.”</p>	
Diverse sessions based on emerging member needs		
Constant improvements		

(Continued)

Table 2. Continued

First-order categories	Second-order themes	Aggregate dimensions
Community has priority	<p>Displaying a community-orientation</p> <p>Team member: “Here, it is community first. Everything else? Second.”</p> <p>Observation: Many conversations, both formal and informal, that we had with the core team often focused on the importance of meeting the needs of the community first, and that it would take precedence over particular collaborations (e.g., with companies that could help with funding but would alienate members).</p> <p>Team member: “Had it been someone else who had just lived in the [United] States for their whole entire life, and then came here and said, ‘Okay, I’m going to go and build an incubator,’ it would have been very different than someone who’s been in this context, and knows people in the area. And then builds it up, and then links external communities with that.”</p> <p>Observation: During our visits, the team appeared to always chat with locals, often sharing stories of local happenings beyond T-Hub.</p>	Community-enabling leadership
Leaders know the local context	<p>Adapting to community needs</p>	
Listening to member needs	<p>Observation: During our visit, community team members often asked members for feedback.</p>	
Active improvements based on community insights	<p>Founding team member: “This all started and is based on what the community here needs and wants. There is no other way to make it work.”</p> <p>Founding team member: “What we never, ever changed is [asking]... ‘are we experimenting, are we evolving?’ and I think that’s what helped us as time has gone by. Like, every year we do self-reflection, and ask: ‘How is this beneficial to the community?’ If you are going into a consulting firm, and go to consult the board—‘What brings us back to what we are meant to do?’ It is like, ‘go watch if we are benefiting the community.’”</p> <p>Observation: When older members shared that they had different needs than younger members, the leadership team pushed the creation of another area for them.</p>	

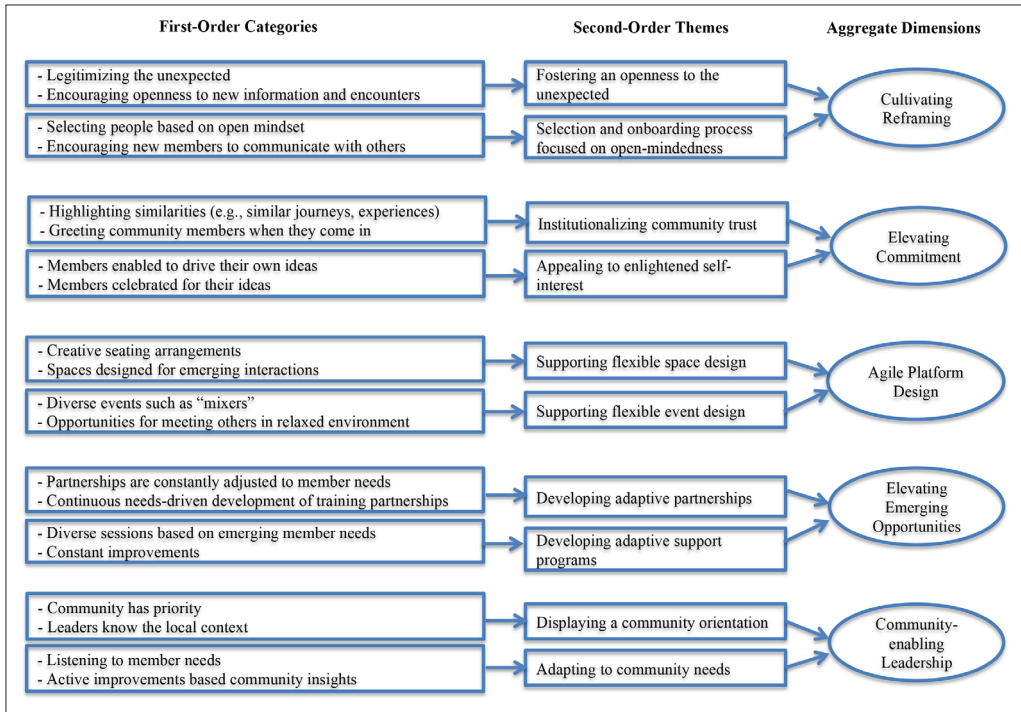


Figure 1. Data Structure.

support programs could only go so far, and T-Hub attempted to develop conditions “facilitating the (yet) unknown,” given the absence of any defined goals to work toward.¹ We might think community embeddedness is all about fostering a focus on the community, but T-Hub opted to leave enough breathing space for community members to explore what they needed to know and what resources they needed. This decision resonates with research showing the survival of enterprises depends on their ability to tackle uncertainty (Alvarez & Barney, 2007; McMullen & Shepherd, 2006), and that early-stage entrepreneurs often do not know yet which resources, partners, or co-founders they might need (Sarasvathy, 2008).

Figure 2 depicts the processes that emerged from our observations and interviews. We discuss those below.

Emerging Social Processes

A first (structural) condition we identified was Cultivating Reframing (also see Table 2).

Cultivating Reframing

To allow ideas to flow and get members to support each other, T-Hub’s founding team *fostered an openness to the unexpected*. We observed that the team legitimized unexpected information or ideas by telling stories of unexpected ideas that had flourished in the past, and by encouraging members to challenge assumptions and to try out new things (e.g., in response to unexpected market-research insights, or encountering a new person or opportunity). A team member explained that “we show them that it’s ok to not know it all—sometimes you figure it out when you randomly run into someone, and you think you knew it all along.”

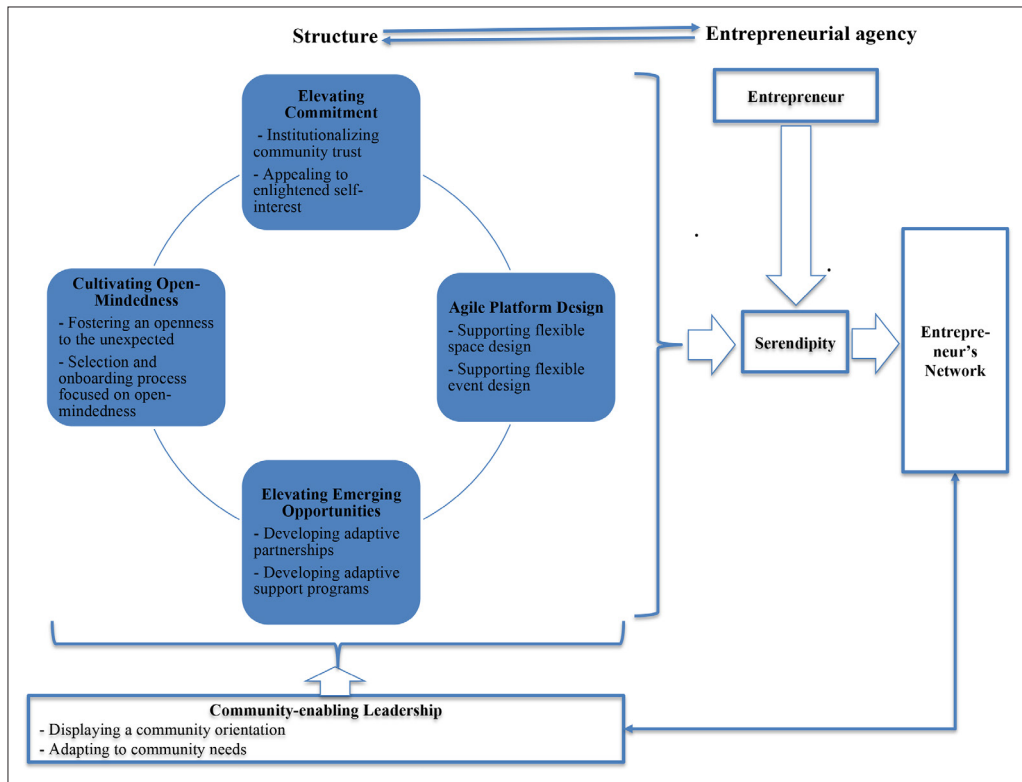


Figure 2. Fostering Network Embeddedness and the Conditions for Serendipity in the Context of Uncertainty.

This was particularly important for those members who were freelancers and for whom new encounters were often effective ways to find unexpected business development or expansion opportunities. The team encouraged an openness to new information and encounters based on the notion that there was “no right or wrong answer...things change” (team member).

The *selection and onboarding process* of new members was designed to recruit pro-active, open-minded, and diverse people, with a “core value of openness...that really allows anyone from different backgrounds to connect” (team member). This was embedded in different ways, for example, in the application materials, which included references to the importance of learning and challenging each other, and in onboarding (i.e., organizational socialization) measures such as encouraging new members to communicate with new people and to constantly question their assumptions.

This relates to findings in the framing literature, which explains that reality is socially constructed and thus can be reframed (Gray et al., 2015). “Framing” is about selecting some aspects of a perceived reality and making them more salient in a certain context, promoting a particular problem definition, interpretation, or recommendation (Entman, 1993). This is particularly salient in the entrepreneurial context, in which an entrepreneur’s key role is to create and convey ideas—essentially (re-)constructing reality, making sense of what is going on in a recursive way, both guiding perceptions and being guided by the perception of others, through social interaction (Goffman, 1974; Rauch & Ansari, 2020). Reframing is about looking at situations from a different perspective, enabling actors to understand reality from a different point of departure. By

fostering an openness to the unexpected and designing a *selection and on-boarding process focused on open-mindedness*, T-Hub encouraged its members to treat their perceptions (and their ideas) as open to interpretation and change and to interact with other members to explore, thus encouraging a social environment that cultivated reframing. We refer to Cultivating Reframing as “encouraging a social environment that stimulates selecting aspects of a perceived reality and adjusting them to new situations or interpretations.” Table 2 shows more evidence.

But how did T-Hub engage its members? A condition that emerged was Elevating Commitment.

Elevating Commitment

Given that T-Hub did not formulate an explicit, common goal for all the members of the community, trust (“a belief in the reliability of someone or something”) played a major role:

What do you do when you don’t have the same goal, when everyone has their own goal? You must have trust for each other, or it breaks down. (Senior advisor)

Leaders signaled to community members to trust others who were affiliated with the T-Hub community, for example, by highlighting that other entrepreneurs were on similar journeys, and supporting each other was beneficial. In addition, T-Hub fostered activities that brought people together and made it a shared experience, such as personally greeting everyone who entered the room. A founding team member distilled the approach by highlighting that “the community strengthens and grows organically only if we really let go as leaders and institutionalize trust and create that safety.” This approach included rituals such as new-member initiations.

Thus, trust developed across the community in a number of ways such as via rituals and joint experiences. The resulting feeling of belonging can facilitate an “echo” effect, allowing even people who have never met to feel close to each other when meeting for the first time, because they either know the same people or have mutual respect based on being part of the same group—a fundamental of well-functioning communities (Toivonen, 2016). We refer to this as institutionalizing (*community*) trust.

To keep its community alive and supportive—and given that financial incentives were scarce—T-Hub provided incentives for people to get involved with the community by *appealing to an enlightened self-interest*. The founding team developed a nurturing social structure that left room for members’ ideas, “realizing that there’s always gaps, and people who are willing to take initiative and go with it, and then have that expand” (founding team member).

The team left room in strategy documents and for implementation of services to emerge if a member was interested in pursuing it. A team member stated:

Everything sort of came out from the need. One or many people... realized that there’s a need, they are willing to go along, and do it. So, for [team member], originally that was research. For another person like [team member], that was having a UX Department....every stage has sort of come out from a need that was addressed...by people who had a vision and [idea] stake.

The team attempted to align the community’s needs with members’ projects as much as possible, in order to cater to members who needed incentives to get involved. For example, a member who was a web designer was asked to run a paid web-design course for other members, and members’ services were frequently highlighted to others. During our multiple stays at T-Hub, we were often introduced to community members who were particularly good at something (e.g., design), and we were told that should we ever have a problem in their respective domain, they could help us solve it.

Members were also celebrated for their own projects, and individual achievements, such as new product launches, were highlighted in front of people in the room or online. This attention helped people develop their own standing, legitimacy, and trust in each other's capabilities (source: observation). A community manager explained that "when a member does something great, we show that to the community. It gives them credibility...it helps people to know what they're up to."

Thus, T-Hub invited and facilitated entrepreneurs to actively engage in and even shape the social structure and in turn the nature of the social embeddedness. Rather than taking a social structure as given, they were part of a constantly evolving dynamic interaction between structure and agency (Li & Chen, 2009; McKeever et al., 2015). By appealing to an enlightened self-interest, a contribution to the social structure directly benefitted the entrepreneurs and made engaging in the social structure attractive.

Collectively, we refer to this condition as Elevating Commitment ("an enduring desire to maintain a valued relationship," Moorman et al., 1992) (in this case, the social structure), which is at the core of interpersonal cooperation and relationships (Korsgaard et al., 1995). This elevated commitment, combined with the cultivated reframing, allowed people to interact more openly with each other, and reinforced, in turn, community building and social embeddedness (own observation). A community member highlighted the widespread sentiment that "when someone is in T-Hub's community, I can be more open because we are part of the same system." This relates to research that has shown serendipity often is contingent on people being both open minded and sufficiently motivated to cooperate (Busch, 2020; Makri et al., 2014; Merton & Barber, 2004).

T-Hub complemented these approaches using physical spaces and events, a condition that we call Agile Platform Design.

Agile Platform Design

T-Hub *supported a flexible space design* enabling people to meet in informal and unforced ways. For example, the founding T-Hub team increasingly seated members at similar stages of development, but with different ideas and businesses, next to each other. A team member described the process as an organic one in which "your chair might be next to a potential co-founder, or a person who is going to fund you for the next two years...Or you meet someone who is taking this really interesting course around business modelling that you would need help with."

Spaces were designed for organically emerging interaction; for example, in a centrally positioned coffee shop, members could "bump into" each other. Members were prompted to form new bonds, and unplanned, serendipitous encounters became common and appreciated. For example, a community member who had been part of T-Hub from the beginning stated that "this place has been all about serendipity. You go to [name of coffee shop], and you meet people. Then, the next day, someone comes to you, and you do a project [together]."

In addition to this flexible space design (see Table 2 for more evidence), T-Hub also *supported a flexible event design*. It organized fireside chats with potentially relevant external people or events at which members were invited to meet each other and outside contacts in a relaxed environment. The purpose was for members to meet potential advisors (e.g., from universities), investors, or co-founders. Regular events, such as "mixers," where random groups of people including members and outside stakeholders met, were constantly improved and extended. A member illustrated the potential benefit, in his case, meeting his collaborator at one of the events: "I wasn't even thinking I needed one, but then we got to know each other, and I knew that this had been missing."

T-Hub was conceived as a semistructured setting that, in the words of a team member, was "not as structured to the extent that, if the top falls, then it's a domino effect. [Rather], it's a space

that allows people to be able to provide that value to each other,” often serendipitously. Thus, T-Hub used flexible space design and flexible event design to embrace uncertainty, agility, and flexibility (Reinecke & Ansari, 2015), which we capture as Agile Platform Design.

This builds on work and ad-hoc theorizing about office design, random coffee trials (in which people are randomly assigned to other people for coffee dates), and broader problem solving (von Hippel & von Krogh, 2016) that are related to serendipity and (conditions of) social embeddedness in incubators. Indeed, this combination of incubator-organized and entrepreneur-driven networking (Bøllingtoft, 2012; Ebbers, 2014; Schwartz & Hornych, 2010) frequently helped facilitate (serendipitous) encounters. A team member gave an example:

Serendipity [happened] when my friend...came into [T-Hub]...right next door to them...an early childhood development social enterprise... focused on sending direct SMS-es to mothers...exactly the type of work [he] does. So, now [he] is able to use the health software to implement it in their day-care centers. Would that have happened if my friend was not a member? Perhaps, at some networking session maybe the two...would have made that connection, but it is so much easier when you have that organization sitting right next door to you.

This flexible approach also manifested itself in how T-Hub elevated emerging opportunities.

Elevating Emerging Opportunities

In addition to facilitating interaction among and with members, T-Hub’s founding team started *developing adaptive partnerships*. Together with more formal partnerships opening up business opportunities for T-Hub and its members, T-Hub’s team tried to flexibly facilitate and adapt interactions with outside partners that served as a support system, depending on which member needs would arise, for example, with regard to training or market-entry opportunities. A founding team member illustrated how if a member realized she wanted to acquire more knowledge in areas such as technology or business, “that’s where the partners come in...we help with the introductions.” Companies such as Microsoft became partners that supported T-Hub and emerging ideas.

T-Hub also started *developing adaptive support programs*, for example, T-Hub Research:

There was an issue of “how would you provide some level of mentorship,” “how do you help them in their market research,” “how to help them in their user experience,”...that gave birth to what we call [T-Hub Research]...then, [we said], “Let’s complement [these services] with a user experience lab.”
So we approached companies that had been doing this for years. (Founding team member)

T-Hub began to offer more and more diverse training sessions on, such as, financial planning. However, the program development was based on a steep learning curve and was open to changing member needs, “where you have the ‘wants,’ and then you’re connecting it to somewhere, [like] ‘Okay, maybe this can be it’” (team member). This flexibility allowed serendipitous encounters to be leveraged.

Thus, T-Hub increasingly developed adaptive support partnerships and programs to offer value and opportunities to the community and its members. Our data show that many of the initial facilitation efforts were focused on responding to emerging needs, fostering unexpected and unplanned encounters, and providing major value to members beyond targeted facilitation efforts. T-Hub not only provided these conditions to facilitate unexpected encounters and bisociations, that is, serendipity, but also helped its members turn these random encounters into real opportunities.

For example, it developed an adjacent funding arm and other means that helped turn encounters or ideas into tangible projects or benefits. A team member described this focus on providing the conditions for (benefiting from) serendipity:

We do not push people into a specific direction. We allow them to try, to fail, to learn. To connect with people, to explore what's possible. When you have lots of smart people in a room, that's where unexpected things come up, that's where innovations emerge.

For example, a software application addressing local needs unexpectedly emerged out of interactions between members and core members invested in it (own observation). This dynamic approach resonates with recent work (Huang & Pearce, 2015) that has shown investors often believe that only by investing in companies with unknowable risks can they find the most promising ideas, acknowledging that often, serendipity rather than planning is crucial. Table 2 shows additional evidence.

Enabler: Community-Enabling Leadership

An important enabler of the above discussed social undercurrents—allowing members to be flexible in their social embeddedness—emerged: Community-Enabling Leadership (consisting of *displaying a community orientation* and *adapting to community needs*).

It emerged from observations and interviews that T-Hub's leadership team was *displaying a community orientation* (i.e., a focus on the local community). For example, many of our conversations with members of the T-Hub team centered around the notion that the team would rather forego a profitable partnership than disappoint members (e.g., with a partner that would alienate members due to not being aligned). A team member's comment illustrated this notion by stating, "Here, it is community first. Everything else? Second." This sentiment also manifested itself in other ways, for example, through an application process focusing on admitting those who were aligned with the community (see sections "Cultivating Reframing" and "Elevating Commitment"), trusting community members to help shape the social structure.

From the beginning, the leadership team was *adapting to community needs*. During our multiple stays, the team would often ask members for their insight and made improvements accordingly. For example, they introduced an area for more "mature" members after they had mentioned they had different needs than less mature members. A founding team member explained how the team practiced constant reflection on community needs and "never, ever changed [asking]... 'are we evolving?'" This also manifested in how the space was designed (see section "Agile Platform Design"), promoting opportunities to emerge organically "once the time was right" (founding team member), and resulting in valuable partnerships nurturing emerging ideas (see section "Elevating Emerging Opportunities").

Thus, community leaders *displayed a community orientation* and *adapted to community needs*. This focus on community enabled the above-mentioned conditions to emerge and facilitated platforms for members to take action based on their enlightened self-interest, and in turn, serendipitously emerging ideas, without centrally planning or appropriating the gains (Dhanaraj & Parkhe, 2006; Provan et al., 2007); that is, Community-Enabling Leadership emerged.

We define Community-Enabling Leadership as "providing a trusted platform for others to take action, enabling members (in a network) to explore and exploit emerging opportunities." Thus, Community-Enabling Leadership focused on creating conditions for the community—in the incubator—to create value through networks, in a setting where nascent entrepreneurs faced high uncertainty. This leadership style also facilitated a social structure that enabled entrepreneurs to change course based on their respective evolving needs and goals.

Emerging Theoretical Logic: Creating Conditions for Serendipity Through Social Embeddedness

Our findings show T-Hub created conditions for entrepreneurs to form potential relationships whose value for nascent ventures was (yet) unknown. Our qualitative analysis captured that rather than trying to optimize for prediction and control via programs assuming knowledge of what entrepreneurs needed from the community, in the face of uncertainty, the T-Hub team did the opposite: it embraced the idea that it would be unable to plan emerging opportunities and/or resource needs (Denrell et al., 2003; Huang & Pearce, 2015) and instead “planned for luck”; it developed a social structure allowing for flexibility, focused on Cultivating Reframing, Elevating Commitment, Agile Platform Design, and Elevating Opportunities. It thus facilitated and nurtured serendipitous encounters and ideas. This resonates with the insight that specific training and targeted networks are most productive in more mature markets (because best practices are more clearly understood; Amezcua et al., 2013), but that in contexts of higher uncertainty, social interaction and implied serendipity are crucial (Engel et al., 2017).

We know from the literature that serendipity is not about blind luck or pure randomness (Denrell et al., 2003; Dew, 2009), due to the nature of serendipity as a process: first, triggering the potential for entrepreneurs to discover a new direction (e.g., unexpected observation); then making a meaningful connection with something else, namely, a “bisociation” (e.g., between an observation and how it is linked to an emerging goal); and finally and crucially, following through. Serendipity happens when individuals see bridges (or “matching pairs”; Liu & de Rond, 2016), which tends to happen in one of three ways (Busch, 2020; Yaqub, 2018). (1) The solution for a known problem or challenge comes from an unexpected place; (2) an initial problem exists, but the person stumbles across a solution to an entirely different or previously unrecognized problem; and (3) no known problem exists, but the entrepreneur unexpectedly comes across a new opportunity or solves a previously unknown problem, meaning the problem and the solution unexpectedly arrive at the same time. The important insight here is that serendipity comes in different shapes and forms but is always about an unexpected encounter and about connecting potential problems and potential solutions as they emerge, rather than going from (preplanned) problem A to (preplanned) solution B in a linear way (Yaqub, 2018). Often, potential serendipity goes unnoticed if it occurs in environments that do not embrace it, which is particularly salient in the start-up context, in which ideas often evolve serendipitously (Dew, 2009).

The characteristics of nascent entrepreneurship, such as uncertainty that makes knowing what resources an entrepreneur will need at which point impossible (Engel et al., 2017), make structuring programs that directly fulfill members’ needs difficult for incubators. T-Hub facilitated serendipity via nurturing conditions that fostered potential encounters and bisociations (e.g., allocating spaces to diverse people at similar stages of development and/or with similar values) and helped turn those “coincidences” into opportunities (e.g., complementing them with adaptive programs or funding emerging ideas).

Figure 2 summarizes our findings and captures the four conditions that—paired with entrepreneurial agency—foster serendipity. These conditions contribute individually and in combination: cultivating reframing focuses on encouraging entrepreneurs to question their ideas and engage with new people and insights, a core necessity for serendipity (Merton & Barber, 2004), potentially leading to a reframing of understanding problems and solutions. Elevating Commitment fosters people’s motivation to cooperate: serendipity tends to be contingent on not only open-mindedness but also the inspiration and motivation to cooperate (Rauch & Ansari, 2020). Providing interactive digital and physical spaces (Agile Platform Design) facilitates serendipitous encounters for a diverse group of members with similar mindsets to “accidentally bump into each other” (von Hippel & von Krogh, 2016). Elevating Emerging Opportunities allows for an

environment where new ideas and suggestions can be easily accepted and implemented (e.g., funding opportunities for new ideas with unknowable risks; Huang & Pearce, 2015), turning discoveries into opportunities (Dew, 2009). This environment enables unexpected—and impossible to plan or predict—networks, and related benefits, to emerge. (Important feedback effects are indicated by arrows.) These conditions, in turn, are fostered by Community-Enabling Leadership, enabling others to have serendipitous ideas, without centrally appropriating the gains (Dhanaraj & Parkhe, 2006).

T-Hub's leadership team's explicit focus on the local community and its ability to actively listen enabled the above-mentioned conditions to emerge, for example, with regard to how the space was designed (Agile Platform Design) and how emerging opportunities were supported (Elevating Emerging Opportunities).

In sum, T-Hub facilitated a social structure that cultivated serendipity for nascent entrepreneurs to enable them to find out what they need to know, including what they need, in the first place, and from whom, as a precursor to acquiring such intangible and tangible resources from the community partners. This builds on the notion of social embeddedness as the interplay of (entrepreneurial) agency and structure (Jack & Anderson, 2002), as well as of serendipity as the unexpected encounters (and related outcomes) that arise from an individual's ability to act on environmental cues (Liu & de Rond, 2016). We define cultivating serendipity as “the deliberate effort to create conditions enabling so far unknown, potentially valuable relationships, and related benefits (and costs), to emerge.”

This led to various tangible outcomes for the entrepreneurs we interviewed. For example, they learned about new markets for their products, met the co-founder they did not know they needed, or ran into a major potential client. The social-support structure also helped them turn these opportunities into practice, for example, via funding of emergent ideas. These “conditions” were consistently adapted based on emerging insights and for the benefit of members, enabling them to tweak them better for effective social embeddedness (McKeever et al., 2014).

Discussion

We started with the question of how incubators facilitate network embeddedness for nascent entrepreneurs in the context of high uncertainty. The insights emerging from our qualitative analysis form the basis for two theoretical contributions.

Conditions for Serendipity via Beneficial Social Embeddedness in High-Uncertainty Contexts

Our findings show how an incubator facilitated conditions for beneficial network embeddedness in a high-uncertainty context. Although a traditional, primary goal of the incubator was to structure targeted support services such as training, networks, and resources (see Bøllingtoft & Ulhøi, 2005; Mian, 1997), many of the benefits for entrepreneurs in our study emerged unplanned and serendipitously. T-Hub “intuitively” developed conditions facilitating unexpected encounters—and in aggregate, unplanned networks—to emerge, where entrepreneurs met each other and formed connections even if the value of a potential relationship was previously unknown. Thus, the assumptions of much of the literature, namely, that entrepreneurs know a priori with whom to connect (e.g., Hallen & Eisenhardt, 2012), often do not apply in this context. Instead, it is about enabling an environment for previously disconnected actors to serendipitously connect with others without knowing the potential value of the respective relationship a priori.

Our findings show how T-Hub facilitated serendipity (contingent upon an entrepreneur's agency) by fostering entrepreneurs' ability and motivation to engage with new people and

insights (Cultivating Reframing and Elevating Commitment), facilitating serendipitous encounters (Agile Platform Design), and helping to realize emerging opportunities (Elevating Emerging Opportunities). Community-Enabling Leadership fosters these conditions, rather than trying to centrally influence (and over-structure programs and networks) or appropriate the gains, enabling new, serendipity-driven networks, based on the entrepreneur's emerging needs in a context of high uncertainty.

By identifying conditions for serendipity, we contribute new theory to the literature on social embeddedness on how incubators create a social structure allowing for flexibility in high-uncertainty contexts, in which knowing how the social structure "should" look is often impossible (Engel et al., 2017). This helps to unpack the nature of social embeddedness and the structural environments in which entrepreneurship takes place (Borgatti & Foster, 2003). We build on and extend research that has studied how entrepreneurial agency can help shape and is shaped by social structure (Hansen, 1995; Hite, 2003; McKeever et al., 2014) and contribute to a deeper understanding of how incubators facilitate a social structure that gives space to entrepreneurs' agency. We shift the conversation away from an all-defining network structure or, alternatively, heroic agency-driven networks (for an overview, see Eveleens et al., 2017), toward a social structure enabling a dynamic interplay of both in the context of uncertainty. The "embedded curation" becomes a means of facilitating a wider ecosystem process, going beyond research that has focused on the facilitation of specific goal-driven social networks (Dhanaraj & Parkhe, 2006; Hallen & Eisenhardt, 2012; Provan & Kenis, 2008; Xiao & Tsui, 2007). This was facilitated by imprinting the idea into nascent entrepreneurs that the perception of reality is socially constructed (Gray et al., 2015) and thus could be reframed.

Our work helps to unpack the origin of social embeddedness, and how embeddedness may enable the ability of entrepreneurs to operate within a community (McKeever et al., 2014, 2015). By showing how an incubator created conditions for the community that nurtured but did not force serendipity, and how this facilitated the co-creation of opportunity-inducing networks in the context of uncertainty, we also offer a fresh perspective on how entrepreneurs both use and are being used by the local community (McKeever et al., 2015). This is particularly relevant in the context of incubators, given that prior research has been ambiguous about the conditions under which network facilitation of incubators is actually effective. We contend that findings in earlier research that incubator networks are effective (e.g., Yang et al., 2009) or not effective (e.g., Schwartz, 2013) can be reconciled by using a perspective of social (over-) embeddedness—whether embeddedness is beneficial depends on the degree and complementarity of entrepreneurial needs and social structure.

However, a downside of the embeddedness that the incubator created—from the perspective of the incubator itself—was that the team would at times forego profitable partnerships rather than disappoint members, consistent with the logic of community-driven organizations (Busch & Barkema, 2019).

Although important in the incubator context, our findings are likely to be relevant for other settings as well, for example, for government training programs and in education. First, policy-makers tend to devise their (entrepreneurship or other) programs based on a centrally devised plan, trying to map out eventualities in advance. However, local community members are likely to know better what is needed and when. Thus, developing a support infrastructure that places the responsibility on locals and that involves them in the "social structuring" process (e.g., via similar events as discussed in our findings section), and nourishing effective community in which locals can be asked to share current needs, becomes important. In education, the fact that people "pivot" over time needs to be integrated so they do not focus too much on structured content and particular mentors (e.g., per subject area). Rather than seeing changes as a weakness of the student or entrepreneur, they can be embraced as a sign of intelligence based on new information—often serendipitously emerging (Busch, 2020).

Prior research in entrepreneurship and management has interpreted serendipity or “luck” as uncontrollable error or uncertainty that needs to be reduced (Brown, 2005). The new insights from our qualitative analysis help shift the conversation from a discussion of paradox (planned vs. emergent; luck vs. planning; Mintzberg et al., 1996; Sarasvathy, 2008) to a discussion of synthesis and “planned luck.” Rather than optimizing for prediction and control via structured programs (Rothaermel & Thursby, 2005), T-Hub’s leadership embraced the idea that it would not be able to determine potentially emerging opportunities, but focused on planning (socio-spatial) conditions for serendipity to happen instead (Austin et al., 2012).²

Given that how entrepreneurs are—and become—embedded affects their willingness and ability to draw on resources (Jack, 2005; McKeever et al., 2014), both for good and bad, (over-) embeddedness can lead to relational or cognitive lock-in (Kiggundu, 2002; Maurer & Ebers, 2006). The new insights from our qualitative analysis highlight the importance of enabling entrepreneurial agency to develop networks in a serendipitous way, rather than by acting as a broker with a selected partner, for instance. All this suggests an important role for leadership—to enable a process of embeddedness, facilitating beneficial, serendipitous encounters and network formation for nascent entrepreneurs—in the context of high uncertainty, leading to our second theoretical contribution.

Effective Network Leadership in Incubators

We build on and extend recent research on incubators and organizational sponsorship more broadly (Ayatse et al., 2017; Harper-Anderson & Lewis, 2018; Seidel et al., 2016), by providing new insights into which kind of network leadership is effective in an incubator context (Giudici et al., 2018). Community-Enabling Leadership emerged as an effective leadership style for empowering others to lead and exploit emerging, often serendipitous, encounters and networks. T-Hub’s founding team facilitated the conditions for others to take on leadership roles within the community. Given that the emerging leaders often had no formal authority (a common characteristic of communities and peer-to-peer-networks; Fleming & Waguespack, 2007), they relied on previous leaders (especially initial conveners) to legitimize them. Leaders provided platforms for others to take action, enabling members to realize their own ideas, without centrally appropriating the gains, through active listening.

The focus on community and adapting to changing community needs enabled the above-mentioned conditions to emerge and helped shape a social structure enabling flexibility and entrepreneurial agency that set the stage for serendipity to emerge. The “social skills” (Fligstein, 2001) of the team—the ability to induce cooperation in others in a context that they understood well—helped create the conditions that enabled serendipity to emerge. Although not the focus of this study, we observed the team’s ability to leverage individual reputation and the initial acceptance of the leadership team in order to establish the conditions. The central team neither aimed to appropriate accrued benefits (Dhanaraj & Parkhe, 2006), nor to capture and monetize every serendipitous encounter, and offered few restrictions with regard to developing them. This helped “democratize opportunities,” balancing rather than exacerbating power imbalances and interdependencies in relationships (Pfeffer & Salancik, 1978; Westphal et al., 2006), in turn enabling unexpected value to emerge without trying to specifically plan or to capture it.

This also helps resolve a challenge for incubators: Targeted support at a particular point in time is unlikely to be helpful, because ventures’ resource needs change and may be unknown; hence, serendipity-inducing approaches are necessary. Previous research, particularly guided by theories on resource munificence, tends to assume an increase in resources equals an increase in the probability of organizational success (Amezcuca et al., 2013). However, resource munificence is in the eye of the beholder. An important role of incubators might be instead to create conditions

for nascent entrepreneurs to access the right resources at the right time, even if neither the incubator nor nascent entrepreneurs know what the latter need.

Hence, Community-Enabling Leadership enables others to lead and follow up on emergent encounters. With its focus on value creation over value appropriation, it differs from leadership in traditional goal-driven innovation networks (Khanna & Palepu, 1997; Nambisan & Sawhney, 2011; Provan & Kenis, 2008) and company-driven innovation communities (Fleming & Waguespack, 2007), and instead focuses on creating conditions for open-value creation in the context of uncertainty. Hence, we bridge research on social embeddedness, social networks, and leadership styles (Tasselli et al., 2015).

In sum, we identify how incubators facilitate serendipity for nascent entrepreneurs through fostering social embeddedness. This is particularly salient in the context of high-uncertainty settings in which ideas often emerge serendipitously (Busch & Barkema, 2019), but is likely also relevant in more stable settings (to a different degree), as well as other areas, including entrepreneurship policies, venture capital, and franchising. We strongly encourage more research in this domain.

Limitations and Further Research

Our study has several limitations, and several fruitful areas are available for further research. First, a single case study in a particular context (emerging markets), although theoretically informative, faces questions of generalizability. However, “extreme cases” can elucidate particularly interesting insights (Eisenhardt et al., 2016). And, indeed, the notion of incubators as a potential breeding ground for serendipity has been shown to be important in different contexts (Giudici et al., 2018). Nascent entrepreneurship is, by definition, uncertain, and the higher uncertainty in the context of our study presumably aggravated this. Thus, based on our data, we suggest the insights emerging from our findings are both contextual (as an “extreme case,” see Eisenhardt et al., 2016; Flick, 2009) and can provide valuable ground for further testing (Larson, 1992) to increase our depth of understanding.

Second, whereas we focused on the incubator as the unit of analysis, looking at serendipity from a comparative perspective at the level of individual entrepreneurs could be interesting. Which entrepreneurs benefit more than others? Why?

Third, whereas our focus was on the process of embeddedness and how it facilitated serendipity for nascent entrepreneurs, elements of a “dark side” could be explored in similar settings, for example, leadership behavior related to “politicizing” situations, which, given that power in incubators is mostly distributed informally, concerns “who knows who and who is close to whom.” Further research could explore the interesting questions of how leadership plays out with regard to power struggles.

Fourth, the insights emerging from our study suggest more research is needed into traditional measures such as program success or entrepreneurial exit rates, which may not fully capture the role and efficacy of incubators, because an important role of an incubator may be to help entrepreneurs pivot, including encouraging them to close down and develop a new project, in or after the incubator period. Rather than counting those cases as failures, incubators might open entrepreneurial mindsets to serendipity, and to exit to pursue more interesting opportunities, some of which may arise from the connections made in the incubator. Further research could provide new, important insights into these issues.

Fifth, further research could shed new light on the role and implications of Community-Enabling Leadership and test them in different contexts. This research could explore questions such as under which conditions Community-Enabling Leadership enables and facilitates

communities and when it constrains and potentially overwhelms them. For example, not every environment consists of, or has the opportunity to recruit, proactive people.

Last but not least, further research could dig deeper into the role of serendipity. Given that individual factors such as sagacity play a major role (Dew, 2009), under what conditions does serendipity emerge for individual entrepreneurs? When does the process of cultivating serendipity distract rather than support? Future research could explore the influence of the specific political context of incubators and their networks, and how social undercurrents might play out differently (or to different degrees) than in more hierarchical settings.

Practical Implications

Our study has various important practical implications. First, to help foster entrepreneurial activity in the hope it might increase job growth, policymakers have an increased interest in network creation and supporting intermediaries such as incubators (Amezcuca et al., 2013). Our study contributes a number of new insights for what might be supported, namely, serendipity for nascent entrepreneurs, and, more interestingly, *how* this serendipity might be created, that is, which conditions support it. For example, although policymakers or funders might be inclined to pour resources into contexts and try to map everything out, they might be better served by identifying existing key local multipliers that might be able to convene and enable untargeted/serendipity-inducing networks and nurture emerging ideas of entrepreneurs. For instance, given that in the context of incubators, informal authority often substitutes for formal authority, giving local leaders a mandate by legitimizing them publicly can be effective.

Second, for incubators, accelerators, and venture capitalists, an important insight concerns the design of the support they can offer (Kauffman Foundation, 2015). Training programs that focus only on skills miss out on what might be at the core of an effective solution: developing a mindset that allows for making the best of serendipitous encounters. Supporting people in recognizing prompts and setting up environments enabling serendipity comes to the fore. Embracing serendipity not as a lack of managerial control but as a sign of a positive culture might help improve preparedness for the unexpected (Busch, 2020).

Third, as many of our findings illustrate, given that value often comes not from preplanned activities but serendipitously discovered opportunities, organizations might be served not by overfocusing on managing risk but by facilitating environments fostering serendipity, including translating these opportunities into concrete initiatives, for example, by helping to fund emerging ideas and by channeling ideas toward priority areas.

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Notes

1. As we discuss, facilitating and incentivizing the (yet) unknown is different from traditional risk-management approaches, which tend to try to predict, manage, and minimize risk (Diebold et al., 2010).
2. Research in the natural sciences has shown that we can increase the probability of unexpected encounters, for example, by increasing the amount of chemical interactions (McNally et al., 2011; Pirnot et al., 2013) or by introducing agent-based systems that support browsing the internet and access serendipitous information (Beale, 2007). This is based on the observation that serendipity is governed by probability and thus is manageable from a statistical perspective.

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