Collective Innovation: The Role of the Pitch in Startup Ecosystems

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1. INNOVATION ECOSYSTEMS AND CHANGING ORGANIZATIONAL FORMS

Innovation is seen as paramount to the success of everything from new products to national economies to the betterment of society. But what is key to fostering innovation? Scholars have noted that there has been a fundamental shift in recent years from knowledge being contained within corporations and firms to being contained within an ecosystem of partners [Brown 2012]. There are a number of advantages to being in such ecosystems, including abundant human capital, culture of work, tacit knowledge, the close proximity of a workforce, government support, etcetera [DeFontenay 2001]. But little is known about the emergent collaboration between parties that occurs in these ecosystems and how it plays a role in innovation. A recent report on the Global Innovation Index highlights the collaborative "flow of ideas between innovation actors" within so-called *innovation ecosystems* as crucial our understanding of how to support innovation [INSEAD & WIPO, 2012]. While theory abounds, few empirical studies have actually examined the *flow of ideas* within these ecosystems. In this ethnographic study, I examine the organizational form of startup accelerators and their emergent practices. I highlight the act of *pitching* as a form of open collaboration and discuss its role in innovation.

2. A STUDY OF STARTUP ACCELERATORS

In recent years, a combination of infrastructure developments, accessible platforms, and easy to use tools have dramatically lowered the barriers to entry for technology startups globally. Alongside this, other structures have spread the necessary soft infrastructure, the "know-how" of doing a startup, making the processes more accessible and uniform to hackers and would-be founders all over. Seed accelerators, short-term incubators that foster high-tech startups, provide such soft infrastructure. They bring together cohorts of startups in various global locations, helping them develop their teams and products and learn from and connect with others in the ecosystem in a limited-duration "bootcamp" that emulates certain environments and practices that have emerged from Silicon Valley.

I conducted ethnographic research within an accelerator, JFDI.Asia, based in Singapore, to explore the activities and processes in which startups engage as they develop their technology product. Over the course of the fieldwork, I was struck by the intensive focus on the pitch within the accelerator and its multiplicity of roles in practice. Rather than being a mere rhetorical format for presenting information to potential investors, the pitch emerged as a *boundary object* [Star & Griesemer 1989] that played a central role in the collaborative design of the technology as a product. Boundary objects are plastic enough to adapt to constraints, but robust enough to have a common identity. They have different meanings to different parties, yet their structure is identifiable to multiple worlds, making them a means of translation. This is important because unlike closed innovation systems, there are multiple parties actively involved in the shaping of products within accelerators and their larger startup ecosystems. The format of accelerators is unique in this way. They emphasize an open, iterative creation process with input from a wide variety of actors in an ecosystem over a limited period of time. Using this lens of boundary objects, I highlight the pitch as a site of imagination for technology concept and design and an important medium for collaboration within the ecosystem.

3.   PITCHING AS COLLECTIVE IMAGINATION AND OPEN COLLABORATION

Pitching is an essential activity for technology entrepreneurs. The format and the act of pitching are a core focus for startups and their interlocutors: those who work with, may invest in, or potentially will use products from startups. With the current wave of technology startups in Silicon Valley and worldwide, pitching typically involves a brief oral presentation, often supplemented by slides that illustrate the product and business idea. At face value, the pitch itself is a rhetorical device that combines artifacts, actions, and actors. But in practice, the pitch becomes an object that goes beyond one on which to simply center discourse. It functions as a boundary object through which ideas and meanings can be imagined, translated, and reshaped among different parties: designer, developer, CEO, as well as mentors from different disciplines and domains, investors, customers (both real and potential), end users, media, service providers, and more. It is highly structured, yet fluid, so it can be easily adapted in the exploration and imagination of the product. And because it is easily translated, it serves as a medium through which open-ended collaboration can occur. This type of iterative, open-collaboration impacts product directions and strategic decisions in the near-term, which ultimately define the technological innovation. Here, I provide two examples of the pitch as an emergent practice enabling collective imagination and open collaboration.

3.1. The Pitch as a Site of Collective Imagination

Obatech's founders Remi and Ruey joined JFDI's program with the goal of developing a technological solution to eradicate fake drugs in Indonesia. While JFDI provides initial seed funding, mentoring, networks, and other resources, the startups they support must still be resourceful. They must function as modern-day bricoleurs, constructing and iterating their products using what tools and materials they can. For Obatech, the pitch became the primary site for exploring this vision and imagining potential solutions. The 4-month length of the program gave the team a chance to experiment. They tested their product vision through the structure of the pitch iteratively over time. At the beginning of the program, their focus was to create a "mobile-based validation platform connecting good pharma to patients in an emerging market." Over the first several weeks, the pair focused on this consumer-based solution, articulating this in their weekly pitch sessions with accelerator managers, mentors and other teams. But the consistent feedback they received in pitch sessions forced the founders to reconsider how this solution would work in reality. Still lacking the resources to develop a pilot study with a prototype, the team began exploring other possibilities, using their pitch as a site of imagination. Over the next several weeks, with feedback and insights of others in the ecosystem, they modified their pitch to envision a new solution that would help them reach their end goals. The ultimate outcome was an integrated solution that included: a patient-facing mobile application that helps patients with chronic disease "buy medicines more cheaply and take them regularly"; a back-end that enables doctors to monitor this; and data analytics to help pharmaceutical manufacturers.

At JFDI, the pitch helped the founders imagine a solution, extrapolating from their current situation to envision a future viable product. This collective imagination is only made possible by the open nature of startup environments like accelerators. In this environment, the pitch functioned as a tool for imagination and design, much as how illustrated books aided stone cutters in imagining the shapes of new constructions. Abraham Bosse's 17th century work on projective geometry explains how the geometry was not used as a form of reasoning, but rather as "a cognitive tool for imagining buildings that were yet unbuilt" [Mukerji 2014]. Likewise, Obatech used pitching as a tool for ideating by "trying on" different solutions with other partners in the ecosystem, articulating possible product visions to other social worlds and exploring, adapting, or reinforcing the founders' decisions.

3.2. Open Collaboration through the Pitch

Healint, another startup at JFDI, was formed by highly qualified and experienced team members in the healthcare field who aimed to adapt sensors in smartphones to collect meaningful data from

patients' everyday behaviors and use machine learning algorithms to help make healthcare predictive, not reactive. In short, they wanted to develop something revolutionary, what they described as Healthcare 2.0. In the near term, though, the team had to determine the best way to develop and test its technology for very specific uses. Developing prototypes was very time consuming, so they focused on pitching to different parties. They were able to translate their ideas to multiple stakeholders, such as patients, doctors, healthcare organizations, and insurance providers, and garner feedback from people in a variety of domains, creating a form of open collaboration on the eventual product. Healint's initial aim was to develop their product for a pharmaceutical company or medical device company to utilize the behavioral data. Two alumni startups from the JFDI program had also focused on healthcare technologies and had a lot of feedback on Healint's pitch. Among other critique and suggestions, they recommended the team explore their ideas specifically with physicians. To lend credibility to the pitch from both resource capital and institutional capital perspectives, the team needed to show their ability to convince neurosurgeons to get behind their vision. In doing this, they found a new product direction: physicians were actually interested in this as a prescriptive tool to monitor individual patients. Over the ensuing weeks of pitching to different audiences, the team began to see its technology best suited for preventative measures against epilepsy and stroke in individual patients. They pursued development of a product to monitor the daily actions of epilepsy patients through smartphone sensors, which would aid these patients' personal physicians in connecting data from their everyday lives to the patients' seizures. This focus was refined iteratively through pitching to test the validity of the idea before tailoring development in any one direction.

The pitch in this sense served as a collaboration tool much in the same ways Feurstein et al. [2008] describe "living lab" co-design activities: collaboration as critical and generative. As a structure for open critique, conflict, and feedback, the pitch sessions fostered open collaboration on a regular basis. Pitch sessions served as a space for all of the teams, the accelerator managers, mentors, and alumni of the program's previous batches to collectively ask questions, provide feedback, and suggest ideas. In these sessions, both individuals and the collective feedback had a direct impact on Healint's product direction. But the pitch also served as a collaboration medium in less formal scenarios: over a casual conversation and a cup of coffee with other founders or mentors or at networking events with investors, healthcare providers, or physicians. In this sense, collaboration also occurred through exchange and feedback within various sorts of communities of practice, much in the way Wenger [1998] describes boundary objects as entities allowing collaboration by linking communities.

4.   COLLECTIVE INNOVATION IN EVERYDAY PRACTICES

Pitching is often considered simply as a rhetorical structure for presenting to investors or others wherein the focus is typically the intention to sell an idea. In this view, the pitch is about taking the reality of the product or startup that is "out there" in existence, and presenting that in a concise format. But in reality, the pitch often plays a dynamic role in the continuing development of both. Emerging from our research, we find that within startup accelerators, the pitch serves as a flexible tool that is used in imagining new design solutions and collaborating with others in the larger ecosystem in a very open-ended way. In startup ecosystems, pitching serves an important role in these initial stages of conceptual design and testing out the idea of a product before (and also after) engaging in material design and development practices. Much as others have noted the agency of materials in the design process, and how they can serve as actants [Tholander et al. 2012], this research shows that the pitch serves as a practice that has a great deal of agency in the design and innovation. It forces a reconsideration of what processes, engagements, and phenomena might actually be considered as playing a role in innovation, particularly in open ecosystems. By considering the pitch's multiplicity of roles, we can begin to think more deeply about the collective innovation that occurs in everyday, quotidian practices, and how we might harness that as a more powerful force.

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