Iterating an Innovation Model: Challenges and Opportunities in Adapting Accelerator Practices in Evolving Ecosystems

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Startup accelerators have expanded worldwide in recent years, fostering the development of technology startups and spreading Lean practices and Silicon Valley values to all corners of the globe. These accelerators clearly create value—for the teams whose development they foster, the products they create, and the larger ecosystems they build. But there are also a number of challenges arising from the model and how it is implemented in different contexts globally. Through fieldwork at accelerators in Singapore and Buenos Aires, I investigate the global expansion of this innovation model. In this paper, I discuss the most salient challenges and discuss potential opportunities emerging from these challenges, and how other methods and practices such as design thinking, intensive user research and flexible, bottom up-approaches can add value to the accelerator process. I also highlight mutually beneficial ways the EPIC community can become more involved in startups ecosystems.

INTRODUCTION

A combination of infrastructure developments, accessible platforms and easy to use tools has dramatically lowered the barriers to entry for technology startups in recent years. Alongside this, innovation models have spread the "know-how" of doing a startup, making the processes more accessible and uniform. Seed accelerators, incubators that foster technology startups, provide such soft infrastructure. They bring together cohorts of international startups to develop their teams and products and learn from and connect with others in the ecosystem in a limited-duration "bootcamp," based on Lean models of innovation (Ries 2011). The initial seed accelerator, Y Combinator, started in 2005 and has spawned innovative companies like DropBox, Airbnb, Reddit, and Code Academy. Since then, accelerators have been expanding globally, with an estimated 200+ in 33 countries now (Christiansen 2013). While the startups fostered through accelerators focus on developing innovative sociotechnical solutions, the accelerators in which they participate are, broadly put, critical sociotechnical systems themselves. At the same time as accelerators and the startups they foster seem to be exploding globally, discourse around digital innovation seems firmly centered around Silicon Valley's ecosystem and whether it "can be copied" through such, with many suggesting it cannot.

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The goal of this stream of research is to better understand accelerators as sociotechnical systems enabling innovation and to explore the impact they are making globally. What value is created through accelerators? What are the implications of this global expansion of the accelerator model and Lean? What matters about the place in which an innovation ecosystem is created? On a practical level, how are accelerators impacting the technology landscape- and how innovative are the results? I have been exploring these topics *in situ* through ethnography at two different international field sites-- an accelerator in Singapore and another in Buenos Aires— complemented by interviews with other accelerator participants (startups) and personnel globally, including North America, South America, Africa, Asia, and Australia. Accelerators clearly create value—for the teams whose development they foster, the products they create, and the larger ecosystems they build. But there are also a number of challenges arising from the model and how it is implemented in different contexts globally. I will highlight the most salient challenges and discuss potential opportunities emerging from these challenges, and how other methods such as design thinking, user research and bottom up-approaches can add value to the accelerator process. I also aim to bring to the fore a broader discussion about innovation and value creation in startups, and how we can both contribute to and learn from the startup scene.

BACKGROUND – ACCELERATORS AS SITES OF INNOVATION

Accelerators as Sociotechnical Systems

While the startups fostered through accelerators focus on developing sociotechnical solutions, the accelerators in which they participate are, broadly put, critical sociotechnical systems themselves. Accelerators function as a social system. They provide the soft infrastructure, the "know how" of doing a startup. They also help support a larger ecosystem, enabling connection and cross fertilization between entrepreneurs and mentors, angel investors and venture capital partners, universities, service providers, government, and other parties. We draw from the work of JFDI co-founder Mason (2014) in describing the role accelerators for startups (excluding other activities and functions in the larger ecosystem). An accelerator:

- fosters and selects startups in competitive process;
- stages a limited duration program: a "boot camp" for startups, typically 3 to 6 months;
- brings together cohorts of startups to develop teams and products;
- coaches, trains, and supports these teams
- supplies access to needed resources and initial seed funding
- provides guidance, metrics, milestones based on Lean models of innovation
- connect networks of mentors and investors with founders
- culminates with a "Demo Day" to present startups to investors

Definitions vary on some elements, with the main divides being in the following areas: collocation vs. partially remote; idea-based vs. team-based selection; local vs. global product market perspective; external mentoring vs. in-house partners; and private vs. public funding.

Within the accelerator programs themselves, Lean methodologies, based on Ries's works on *Lean Startup* (2010), form the core curricula and overall direction. The work centered on Lean Startup helped spur a startup mania around the globe; it was the first model put forth to describe startup creation as a science. This structure helped to fuel the propagation of accelerators globally, as there was finally a sort of soft infrastructure model to begin to support the development of technology startups on a larger scale.

Lean: Background & Practices

Much of the actual practice involved in accelerators is based on the Lean movement. The concept of Lean traces its roots back to Lean Production, a term coined in the 1990s at MIT to describe the Toyota Production System (TPS) (Holweg 2007). TPS is a socio-technical system that combines a distinct management philosophy and practices. According to the Toyota group that teaches these (Toyota 2014), it is based on four core principles: put the customer first; the most valuable resources are people; a focus on the workplace itself; and kaizen, meaning "good change" in Japanese, which Toyota uses in the context of "continuous improvement" as a philosophy. TPS describes itself as "a culture of problem solving at every level of the organization"; TPS skills are learned by doing, not by concept. Following from Lean Production, others have borrowed the term to emphasize a focus on reducing waste and continuous refinement, although the term is often confused with meaning small teams or low monetary cost.

Lean Startup, coined by Ries (2011), is a methodology emerging from Silicon Valley that focuses on two concepts: customer development (Blank and Dorf 2012) and continuous deployment. Using the Build-Measure-Learn framework, a startup can focus on reducing the time and labor involved in developing the product. The Minimum Viable Product (MVP) is the bare minimum product (or non-technology-based experiment) a team can build to use and test a number of assumptions. By testing this with early adopters, startups can continue to iterate, using Agile development practices such as Scrum or other Kanban (a signboard/scheduling system) principles to conduct short product development sprints. Thus, customer development processes help teams define the scope of the product, while Agile development allows teams to realize the product in a defined time frame. While the form of the product may change through Lean process, the motivation and overarching vision of the team should remain intact.

APPROACH – MULTI-SITED ETHNOGRAPHY

This work presented in this paper is part of a larger, multi-sited study of the global expansion of the seed accelerators currently in progress. This research includes ethnographic fieldwork at two international accelerators as well interviews with other participants and personnel from accelerators in every major geographic region. The work in this paper draws

primarily from in-depth fieldwork conducted at JFDI.Asia, a Singapore-based accelerator and NXTP Labs, a Buenos Aires-based one.

Both JFDI.Asia and NXTP Labs run for 100 days and are geared to guide startup teams from ideas to fruition of an investment-level product. Both have a highly competitive application process through which a handful of teams are chosen to form the cohort, and the accelerators connect these teams with a large community of over 150+ mentors and investors. They both offer pre-seed investment for an equity stake, which can vary per team.

JFDI is the longest-established seed accelerator in Southeast Asia. The program focuses on creating "mobile and digital products and services made in Asia, for Asia." It has run four programs with batches of startups since 2012. I observed the third batch, which took place September through December 2013. Applications have come from 58 different countries. The cohort of 10 teams I observed comprised individuals from Canada, France, Germany, India, Malaysia, the Philippines, Singapore, Taiwan, Thailand, the US, and Vietnam.

NXTP Labs was founded in 2011 by a group of 80 angel investors and is one of the three largest and best-known accelerator programs in Latin America. I observed its sixth edition, from March through June 2014. Much like JFDI, NXTP's program focuses on a regional area: the Latin American market. The 17 teams I followed throughout the program came from all over Latin America, as well as from the US and Europe. In addition to NXTP's co-located program, it also invests and fosters several startups that remain in their home locations around Latin America, rather than attending the program in person. There were an additional 8 teams in this situation.

I took a participant-observer approach, conducting extensive observations of the day-to-day activities of the startups throughout the program, such as weekly check-ins with each team, workshops, mentoring sessions, investor meetings, and pitch sessions and participating in certain activities, as well as larger, community-oriented events, like open houses, special events, and Demo Day. Detailed fieldnotes were taken throughout all of these activities and are augmented by informal and semi-structured interviews with the teams and accelerator personnel, consultations with the management, videos, photos, and other documents and digital artifacts produced over the course of the programs. Supplementing all of this are semi-structured interviews conducted with other accelerator personnel and participants from a range of other programs, based in North America, South America, Europe, Africa, Australia, and other parts of Asia.

THE ACCELERATOR MODEL: CHALLENGES AND OPPORTUNITIES

Accelerators clearly create value-- for the team, the product, and the ecosystem. They have been described many ways, such as factories, schools, or guilds (Miller and Bound 2011). Regardless of the metaphor used to describe them, they play a very important role for startups, especially in less-developed ecosystems. If we look at accelerators as Bourdieu (1986) looked at education, as institutions that reproduce the social order, we can begin to unpack their influence through the forms of capital that they provide. Bourdieu initially delineated three types of capital: economic, social, and cultural. Using this lens, we can see that accelerators are arbiters of all three: economic capital, through seed-funding; social capital, through the building and curation of networks of founders, mentors, investors,

service providers, and others involved in the startup community; and cultural capital, through the explicit and implicit propagation of certain values, norms, and beliefs.

But while accelerators definitely provide value- for the team, the product, and the ecosystem- they also face many challenges in fostering innovation. Exploring the development of technologies at accelerators on a social and processual level, I identify some of the challenges inherent in the current structure of accelerators, their Lean principles and practices, and the contexts in which they have become embedded globally. I draw on research conducted *in situ* at accelerator programs, examining the following three main challenges and discussing opportunities to iterate on the model to address them:

- Process: Lean and the Role of Metrics. The Lean principles embedded in accelerators impose a very metrics-driven focus. While this is powerful in many ways, it also neglects a more empathetic focus that enables understanding a broader context and possibilities and limits decision-making to a narrow focus, rather than exploring lateral alternatives.
- Product: Revolutionary or Evolutionary Innovation. While accelerators often say they focus on disrupting innovations, they are very much structurally suited to iterative development and building a user focus from early adopters. This can impact innovation, with teams either struggling to find a valid use for a new technology or bringing an established solution to a new market.
- Impact: Global Reach versus Local Value. Accelerators come from a very Silicon-Valley-oriented model with a focus on valuation. When translated to different contexts, this often remains the primary focus of teams, meaning that their products are often focused on being a global, scalable technology rather than focused on creating value for the local community—addressing local problems and needs.

Process Challenges and Opportunities: Lean and The Role of Metrics

Accelerators' value for the teams they foster is clear. The economic capital they provide lengthens the team's runway—that is, the time that they have to work on their idea without running into financial concerns. Accelerators on average provide $20,000-22,000 pre-seed funding, which is used primarily to fund living expenses for founders, who often have no other form of income. This allows the team to focus on building the product without worrying about their immediate financial well-being. In terms of social capital, the network that the accelerator builds around itself is crucial to the providing the teams with access to key decision makers, partners, and investors. The mentor and investor network is the core of the accelerator program itself, as it connects each team with a larger community of practice, wherein they learn new skills and garner advice on directions to take moving forward. Accelerators also provide certain cultural capital to the teams, particularly in the form of certain methodologies and ways of "being" in the startup world. They provide this cultural context for the teams through the explicit and implicit teaching of certain values and norms. On the more explicit end of the spectrum are qualities that are propagated through direct instruction and coaching. The use of Lean Startup practices, customer development

principles, and other forms of guidance and process impart specific cultural elements, such as experimentation, extraversion, accepting imperfection, and imputing confidence in their product. Implicitly, other values are imbued, such as taking risks, accepting failure, valuing openness, collaboration, and a flat hierarchy, being honest and resourceful, and having a sense of equity and a pay-it-forward mentality, etcetera. Accelerators try to institute much of this ethos through embedded processes and structures, with the aim of preparing teams to be culturally adept in the larger startup world.

But there are complications to this. The Lean methodology accelerators use is very much rooted in the scientific method. Thus, it relies on establishing a hypothesis *a priori*. In order to build, measure, and test their ideas, founders must focus on metrics to benchmark progress and make sense of data collected in the field. These metrics include things like acquisition (the percentage of views that result in conversion), activation (the percentage that starts using the product), and retention (the percentage of users that return to use the product or service again). These are all "good" metrics on which Lean focuses, although there are also "vanity metrics" that many argue against, like monthly or daily active users (Doshi 2013). These metrics play a large role in teams' decision-making process and shape their understanding of their product and its use.

The problem therein is that metrics are based on assumptions. Thus founders approach continuing development of their idea assuming they know and understand the complex system in which they are introducing the product. And with such complexity in the world, it's clear that the direction would not be linear. But the metrics focus on linear growth and projections to measure progress. And that leads to the biggest danger: over-simplification. Metrics don't expand one's matrices of thought around solving a particular problem or developing potential solutions. They only act as a scale to measure how successful or not one potential solution has been. And even at that, they are often not indicative of anything beyond a binary. That is to say- we may know that, yes, users returned. But we do not necessarily know why. Thus, this focus on scientific method leads to two challenges in terms of being innovative. First, it leads to exploring only one potential solution or idea at a time— either confirming the current product direction or invoking a pivot. And secondly, it only evaluates numerical criteria. It does not lead us to know in any depth the users themselves, the use of the product, the dynamic contexts surrounding its use, or the complex systems of which it becomes a part. These reasons present an opportunity for design thinking to play a larger role— to be combined with the use of Lean and its metrics to both explore and learn from the complexity of the world.

An Opportunity for Combining Lean and Design Thinking – Design thinking and Lean and their connections and potential conflicts have only recently begun to be explored. The two often seem at odds epistemologically-- in methods, data, and approaches. One is normative or "scientific", the other interpretive. One is metrics-driven, the other design-driven. Lean's cycle focuses on build-measure-learn (Ries 2011), while design thinking's cycle is: define, research, ideate, prototype, choose, implement, and learn (Simon 1996). And their focus on and treatment of the user are often very different. But there are synergies to be found in the two as well, and in particular, addressing the shortcomings of Lean's focus on metrics. Namely, that design thinking allows patterns to emerge first, before pursuing a

design direction. And, secondly, it actively focuses on the role of empathy and the dynamic context of the problem.

Design Thinking is rooted in combining the context of the problem and empathy—in many ways, not dissimilar from what Customer Development preaches. However, the philosophy and the approach are grounded. This grounded-theory approach provides a structure for patterns to emerge; it allows innovators to arrive at conclusions per observations *a posteriori*. Thus it sets the stage for alternatives to be examined and experimentation and metrics to be used in a valuable way. In a complex environment, this allows experiments to be more focused on producing order, which Anderson et al. suggest is key: "the system is now too complex for *a prior* [sic] comprehension and thus the product launch is itself an experiment about order or arbiter of order" (2013). In the accelerators I followed, despite the intense focus to build-measure-learn, several teams struggled and moved to pivot to an entirely new direction, rather than considering design alternatives. While determining if and when to pivot is a purpose in using Lean methods (failing faster), it seems that design thinking could not only help inform product development from the onset, reducing frustration and waste of time, but also enable learning of a different sort: identifying patterns to inform how to adapt the product, rather than abandoning a product based on metrics. And it could help in exploring other problems to address if a team does, in fact, pivot. Lean might be useful to focus on an *ansatz*, an intial estimate of the solution and combined with design thinking to then be a guide forward, with lateral exploration of alternatives and a focus on synthesizing the best parts of alternatives together.

Beyond the front-end structure of the cycle, design thinking is also powerful in terms of its focus on empathy throughout. While the Customer Development aspect of Lean emphasizes the need to empathize with potential customers, the purpose of experimentation is to collect data to make an informed decision based on metrics, so the focus on empathy gets lost somewhere in the process. Re-centering the process to focus on research data and artifacts that go beyond numerical data is vital to making better product decisions. This isn't to say that metrics should be abandoned. They certainly help quantify effect sizes and show certain measures for benchmarking progress— particularly as it relates to evaluating design alternative. But they also provide structural value in the sense that they keep teams accountable. Metrics driven processes are how accelerators currently address that need and keep teams focused. Balanced with elements of design thinking, they could create a structure for more innovative product development—by understanding the context better, evaluating multiple design alternatives, and garnering a deeper understanding of the user.

Combining elements of Lean and design thinking is not just a suggestion for accelerators; others have noted the potential synergies of these approaches (Müller and Thoring 2012). This is something for us to continue to explore as a community. Lean provides clearer business value while design thinking provides more product value. Together, they could be very useful in terms of thinking about how to provide value for both stakeholders and users at the same time. This also presents an opportunity for us to engage with the startup community and simultaneously learn from them.

Product Challenges and Opportunities: Revolutionary or Evolutionary Innovation

Accelerators also play a direct role in creating value for the product itself. Through the economic capital they provide, they take many financial concerns out of the equation for the initial product development. Teams can therefore afford to create a product that is free or freemium-oriented or is not immediately sustainable. This allows room for experimentation, for the idea to evolve and further solidify over the course of the accelerator program. Through the social networks they provide, accelerators also impact a products' early distribution. Through mentors' extended networks, teams can gain access to otherwise hard-to-reach decision makers and build a relationship. Some of these relationships are lifelines to the products as the teams try to convince themselves and investors of the potential use case of the product. And they also create value in terms of product direction through embedded practices, such as pitching. One of the key structures that the accelerators provide is the pitching framework they teach the teams. While pitching is widely seen as a communication tool to garner interest from investors, pitching also emerges as a tool enabling collaboration within the cohort and amongst the accelerators' network through feedback and iteration. And this ultimately impacts the way teams make strategic decisions about the product.

The main challenge for accelerators and organizations in the innovation business is that have a tendency to focus on innovation that provides revolutionary impact to the market—the sort of "disruptive innovation" discussed by Christensen et al. (2006). At the same time, accelerators emphasize the use of Lean processes, which focus on iterative, small feedback loops to refine ideas and their products, and learn from early adopters. This creates a sort of dichotomy of focus on revolution and evolution from the outset.

We can also think about this dichotomy in terms of Norman and Verganti's (2012) discussion of radical versus incremental innovation. By their definition, radical innovation is "a change of frame ('doing what we did not do before')," while incremental innovation is "improvements within a given frame of solutions ('doing better what we already do')." In practice, though, accelerators face the challenge of juggling both radical technology and practicality of the application of the technology. Teams that are in today's accelerators are often at either end of the revolutionary-evolutionary spectrum. In other words, they have difficulty striking a balance between having a strong, novel technology and an understanding of how it can be used; or, having a strong understanding of a market or specific problem, and being able to develop a strong, novel technology to address it.

Norman and Verganti argue that "radical innovation is surprisingly rare" and requires agents of "meaning or technology change." In their point of view, most innovation is incremental. As the discussion of Lean metrics illustrates, accelerators focus on iterative decision-making process that fosters incremental innovation. Lean advocates believe that Customer Development and Agile form a continuous, non-stop process. This raises an eye-brow for many entrepreneurs. When is enough Lean? There is no definitive answer; analysis paralysis is a term that is often invoked. This is where the challenge of "local maximum" arises. It seems that, rather than striving for disruptive innovation, startups –and anyone working in product development– should focus on where value can be added, which is much more in line with an evolutionary process. Accelerators as socio-technical systems cannot escape an incremental innovation approach; however an opportunity for a larger focus on and deeper role for user research also presents itself.

An Opportunity for User Research – Two teams in the JFDI program exhibited a revolutionary and an evolutionary approach to innovation. Scrollback developed a browser-based Javascript chat tool to replace Internet Relay Chat. Scrollback is back-ward compatible with the open protocol (IRC) of the past 20 years, which has not seen any major technology innovation through that period. The Scrollback team started with the technology and initially tried to bring on customers from universities, admission offices, online forums, other communities that presently used IRC. On the opposite end of the spectrum, Vault Dragon created operational procedures to bring urban storage to customers; the team started with a focus on the existing market for which they wanted to develop a technology. Both approached the problem at hand with experiments and metrics, modeling and replicating existing behaviors, and failed to understand their potential users this way. Both teams of young, technology savvy entrepreneurs lacked the tools and experience in conducting user research. The teams ultimately sought out the guidance they needed, then went out and did much more detailed research- enabling them continue moving forward with their innovations.

User research seems to be the missing element that can bridge the gap for teams whose starting point is a piece of technology or a market. While all startups come into an accelerator with at minimum a strong product idea, most have done little, if any, research into the context of the potential user. And in the accelerator, they do not do much of this either. Research is, rather, focused on validating the idea with early adopters, developing an MVP, and testing it, not learning about user needs. "Social proof" –what other people think is correct– is a major goal, rather than really understanding the user.

This is an issue rooted in the larger, Lean structure as well as the networks of accelerators. There is a lack of focus in Lean methods on doing any sort of in depth user research. Those elements are often boiled down to understanding whether and how early adopters use a product and are often conducted through tools such as crazyegg.com, analytics Heat Maps, and A/B testing tools, like optimizely.com and unbounce.com which is indicative of a sort of deskilling of labor in UX not unlike what Lombardi (2009) describes in relation to ethnographic work in the private sector. These are often supplemented by some interviews with actual users (early adopters) or cold calling potential would-be users. Doing and interpreting research with users is something generally left out of the teaching or guidance of accelerators. The networks of mentors accelerators curate typically come from business-oriented or technology-oriented backgrounds, not the realms of design, UX, or any sort of research, for that matter. There is a great opportunity in rallying efforts to improve the focus on user research in accelerators—and in the larger startup community in general. By becoming involved in our own local startup ecosystems, we can help teach and spread the skills we have as a community of researchers, creating value, but also learning from them as well.

Impact Challenges and Opportunities: Global Reach versus Local Value

Finally, accelerators create a great deal of value for the larger ecosystems in which they are embedded. The economic impact on the ecosystem can be seen in the venture capital cycle, where investors have pressure to deploy and can rely on a steady and predictable

number of companies in the pipeline. Socially, they bring the ecosystem together in a more solidified way by combing and connecting different networks and providing activities and events through with both bridging (loose connections) and bonding (tight connections) capital are formed. At the larger level, this creates a shared experience and identity within the larger ecosystem and fosters a network of trust. And, ultimately, this creates a stronger cultural identity within the ecosystem, propagating norms, such as "paying it forward." This is a sort of Silicon Valley cultural notion that experienced entrepreneurs should give back to the ecosystem—and this is at the root of the social construct of accelerators.

The propagation of accelerators around the globe also creates some challenges as they move into various global contexts with minimal reflection on how they should adapt. The concept of an accelerator, its canonical literature, and adoption of Lean methods and principles are all products of Silicon Valley. The terminologies and cultural views of this origin are imbued into the structures, practices, and approaches of accelerators, and this includes adoption of the venture capitalist business model and its underlying goals and objectives. While the accelerator provides value to the innovation teams by injecting economic capital, the accelerator also relies on (and expects) a return of capital via future liquidity event, commonly known as an "exit." This enables the accelerator to fund its future operations. An accelerator is a "hit" business; it makes many "small bets" with the goal of having at least one team among many become successful.

Therefore, by design, the goal of the accelerator operators is to foster an environment that produces large capital gains within a short time-frame. In practice, this translates into a culture within accelerators that promotes creation of globally-focused, scalable, and profitable businesses. Underlying this are some implicit assumptions: a) the maturity of local venture funding ecosystem is lacking; b) the cultural norms of conducting business in a local context are similar to Silicon Valley; and c) value created via global impact is more valuable than local impact. And this is fundamentally at odds with where the greatest potential impact for accelerators lies: the decentralization of technology production. Rather than functioning as worldwide scouts for the next big global, scalable technology product or pathways through which to take an existing technology to meet new markets, accelerators could have a much larger impact in creating value for different user groups— smaller, marginalized, or otherwise neglected groups. And it can do that by leveraging what it already has: teams with local knowledge from all over the globe.

An Opportunity for Bottom-Up Focus in Emerging Ecosystems— One of the major potential benefits of the global expansion of accelerators is that they can enable entrepreneurs in different regions to address problems that are local, that no one else could or would, address. Many co-founders' ideas are drawn from their experiences or something in their personal lives. Thus, many have a great understanding the context or problem space, enabling local knowledge to play a role in innovation, which Seely-Brown and Duguid (2002) have argued for. But the rigid structure of the accelerators and their very top-down approach creates issues– and sometimes leads a group to drop out altogether, meaning these great locally-innovative ideas might not come to fruition. One Vietnamese group of co-founders, CloudJay, dropped out of the JFDI program halfway through because they felt uncomfortable doing many of the things required of them, like cold-calling potential

customers. Other groups, such as Molome, a startup from Thailand, struggled because they tried to take the advice of too many different mentors. Their sense of hierarchy and deference to mentors made them feel like they should embrace everyone's feedback, rather than determining which advice was best for them. This led them to focus on a global, scalable idea rather than the domain they were interested in.

Accelerators should consider ways in which their very Silicon-Valley oriented cultural values can be promoted in a way that creates shared standards, while still being sensitive to different backgrounds and values. Rather than focusing on ways for participants to assimilate, accelerators can be more reflective about what values and activities are important and focus more on iterating the model and building these into practice. This requires both global accelerators and their startups to be more explicit about beliefs that are often transparent. An open dialogue about assumptions and values should be at the front end of an accelerator program, to help encourage a more bottom-up, rather than top-down approach.

All parties should keep an open mind throughout and look for ways to adapt methods and practices. Silicon Valley can certainly learn from the way things are done elsewhere. The confluence of cultures participating in global accelerators provides a rich site, rife with opportunity to learn. Accelerators serve as a kind of liminal space, an idea rooted in anthropological inquiry. Much like the rites of passage to adulthood in different cultures, founders are being inducted into a culture and going through their own unique challenges. Learning from one another's challenges creates a sense of communitas and also helps in adapting. Taking the long view, should these founders become successful, they would become tomorrow's mentors to younger local entrepreneurs. Over time this creates a startup ecosystem with its own adapted culture, just as Silicon Valley's culture evolved over the years organically. As a community, we can aid in this by getting involved locally in startup ecosystems- teaching, mentoring, and encouraging the use of local knowledge in innovation.

CONCLUSION

While accelerators (and Lean) may optimize for value creation, they face many challenges in truly fostering innovation. There is great potential there. In relation to the changing structures of "innovation", John Seely Brown says: "Knowledge is fundamentally changing from being contained within a corporation to being contained within ecosystems of partners." (2012) And the ecosystems that accelerators help create- and the teams and products they foster- are part of those changing structures. Yet, within accelerators –and much of the startup world in general– metrics take priority over understanding the complexity and dynamics of the problem space and trying several design alternatives. Both revolutionary and evolutionary innovations struggle to find where or how they might fit. And valuation and other Silicon Valley structural influences limit the impact of local teams creating value for a local, rather than global, audience. Current structures, processes, and a metrics-driven focus may impede innovation, but there is great potential in iterating the model itself to be more innovative. Mixing elements of Lean with more front-end design thinking, creating better instruction for doing research and building a community of mentors

who can help with that, and focusing on adapting the model to better fit the context are all opportunities to innovate the model. And the EPIC community can play a role in that.

At the root of this seems to be a lack of knowledge and understanding of design, user research, and a rigid, top-down approach to development processes. Education is clearly an important first step. To help accelerators see the value of these insights, we should engage in professional development of accelerator personnel and managers in a hands-on way. The design and research community can do outreach with the startup community in a variety of ways. Mentorship and educational roles are a good first step in this. This would not only create value for them— it would also be valuable to us. There is a lot we can learn from the startup community in general and by getting involved in our local ecosystems in particular. Startup founders are modern-day bricoleurs who also have a lot of knowledge they've gained through their experiences. There is great opportunity for us to learn from each other.

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NOTES

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