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TESIS DOCTORAL/ DOCTORAL DISSERTATION

APRENDIENDO DE LOS MENTORES EN LAS ACELERADORAS:
DISCERNIENDO UN NUEVO CONJUNTO DE DINÁMICAS Y
ACTORES/ LEARNING FROM MENTORS AT ACCELERATORS:
DISCERNING A NEW SET OF DYNAMICS AND PLAYERS

EVA FRANCESCA VÁZQUEZ ORTIZ

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Abstract

Startup accelerators are amongst the most prevalent initiatives aiming to help entrepreneurs build and scale new ventures through training, mentoring and seed funding. Current literature defines accelerators as authentic learning experiences, fundamentally offering an education program reinforced by peer-to-peer and mentor-based learning. Yet it is unclear how this learning occurs at the accelerator and which experiences affect outcomes. While multiple learning experiences converge at startup accelerators, mentoring is their most salient and distinctive feature. Literature posits mentoring as a critical element driving an entrepreneur's learning, self-efficacy and fundraising. Literature has also found that factors such as the mentoring functions exerted by mentors, trust, relationship intensity and the startup's growth stage either influential on the mentee-mentor relationship dynamics or its outcomes. Nonetheless, little is known about the dynamics propelling founders' learning processes under the distinctive conditions within accelerators. This research investigates the startup founder's mentoring experiences at Gener8tor, a top-ranked accelerator in the United States that invests in high-growth ventures. Results confirmed mentoring as a critical learning experience influencing founders' decisions. Qualitative data show how an accelerator's compressed timeline urges founders to seek mentors with relevant expertise in immediate challenges facing startups when entering the program. Furthermore, unearthed new mentoring dynamics are only feasible when the accelerator uses a vast network of mentors rather than a dyadic approach. Thus, some of the most impactful mentors only form loose-tie relationships with founders, challenging the prevalent entrepreneurial mentoring definition. Among other novel findings, the accelerator managing directors were considered alpha mentors by

founders. The study concludes with potential implications for theory and practice on these topics.

Resumen

Las aceleradoras de startups se encuentran entre las iniciativas más utilizadas para ayudar a emprendedores a construir y escalar nuevas empresas a través de capacitación, mentoría y financiación semilla. Actualmente, la literatura define a las aceleradoras como auténticas experiencias de aprendizaje, ofreciendo fundamentalmente un programa educativo reforzado por el aprendizaje entre pares y mentoría (Miles et al., 2017). Sin embargo, no está claro cómo ocurre el aprendizaje en la aceleradora y qué experiencias afectan este resultado (Hallen et al., 2020). Si bien en las aceleradoras de startups convergen múltiples experiencias de aprendizaje, el componente de mentoría es su más prominente y distintiva característica. La literatura postula la mentoría como un elemento crítico para impulsar el aprendizaje y autoeficacia del emprendedor (St-Jean, Radu-Lefebvre, & Mathieu, 2018), así como la recaudación de capital de la empresa (Lefebvre & Redien-Collot, 2013). La literatura también ha descubierto que factores tales como las funciones ejercidas por los mentores (El Hallam & St-Jean, 2016), el nivel de confianza (St-Jean & Audet, 2009), la intensidad de la relación (Sijde & Weijman, 2013) y la etapa de crecimiento de la empresa (Deepali, Jain y Chaudhary, 2017), influyen en la dinámica de la relación entre el mentor y su aprendiz o en los resultados. No obstante, es limitado lo que se conoce sobre las dinámicas que estimulan los procesos de aprendizaje de los fundadores bajo las muy distintivas condiciones que se presentan dentro de las aceleradoras. Este estudio investiga las experiencias vividas por fundadores de empresas en los procesos de mentoría ofrecidos por Gener8tor, una aceleradora de primera categoría en los Estados Unidos que invierte en empresas de alto crecimiento. Los resultados de este estudio confirman que el componente de mentoría es una experiencia crítica de aprendizaje que influye en las decisiones de los

fundadores. Los datos cualitativos muestran cómo las limitaciones de tiempo impuestas por las aceleradoras instan a los fundadores a buscar mentores con el peritaje que demandan los desafíos inmediatos que enfrentan los startups al ingresar al programa. Además, devela nuevas dinámicas de mentoría únicamente viables cuando la aceleradora utiliza una amplia red de mentores en lugar de un enfoque diádico. En consecuencia, algunos de los mentores de mayor impacto sólo forman relaciones distantes con los fundadores, lo que desafía la preeminente definición de mentoría emprendedora. Entre otros hallazgos noveles, los gerenciales directivos de las aceleradoras son considerados como mentores alfa por los fundadores de los startups. El estudio concluye con implicaciones potenciales para la teoría y la práctica en estos temas.

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Dedication

My work and countless hours of research are dedicated to my biggest supporter and inspiration, my son Mario Iván.

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Chapter 1: Introduction

Empirical evidence resulting from several decades of academic research has shown the positive relationship between startup growth and regional economic development (Wise S. & Valliere, 2014). Consequently, platforms and programs to propel new venture creation have multiplied at a fast pace (Hallen, Bingham, & Cohen, 2014; Wise & Valliere, 2014). Startup accelerators are one of the most widespread platforms aiming to impel venture growth. Three key valuable elements distinguish accelerators from other entrepreneurial development platforms: an intense mentoring program, connectivity to a diverse network and the opportunity to gain legitimacy (Wise & Valliere 2014). Accelerators have also been described as an *authentic learning* experience (Miles, de Vries, Harrison, Bliemel, de Klerk, & Kasouf, (2017) and their schooling features have been positively related to startups' fundraising and number of employees (Gonzalez-Uribe & Leatherbee, 2018). Nevertheless, significant gaps in the literature persist as negligible research has explored the learning experiences offered by accelerators, particularly those prompting founders' learning and startup performance. Strong evidence from recent studies points to the role of mentoring as a key accelerator component for startup success (Hoffman & Radojevich-Kelley, 2012). The positive impact of mentoring has been well-documented by academic research, and recent studies on entrepreneurial mentoring pose interesting new paradigms. Incongruencies and disagreements on the best definition for entrepreneurial mentoring persist, while academic research strives to unearth the factors affecting outcomes from this learning experience. According to Swap, Leonard, Shields, & Abrams, (2001), critical skills and deep knowledge of content domain may be better transferred via apprenticeships or mentoring. Mentors are also a unique source of external knowledge that could

provide customized and contextualized content and expertise Furthermore, learning vicariously from mentors could compensate for the lack of congenital learning, and prevent new ventures from making fatal mistakes (Purcell & Scheyvens, 2015). Mentoring has also proven to affect entrepreneurs' innovative behavior (Abecassis-Moedas, Sguera, & Ettlé, 2016) and it is interconnected with outcomes at the startup level when applied towards career advancement at the individual level (Sijde & Weijman, 2013). This is particularly important as any mentoring dynamic that positively affects the development of founders can also propel positive outcomes at the startup level. Mentoring can also increase management knowledge (St-Jean & Audet, 2012), and provide access to relevant networks (Bisk, 2002; Swap et al., 2001), which have proven to be critical for a startup's performance (Eesley, & Wu, 2019).

Thus, learning is an expected outcome from mentoring. There is significant empirical evidence to theorize about the key role this dynamic plays in founders' learning and subsequent startup performance. Yet current literature fails to delve into and describe the dynamics and influencing factors on these proposed outcomes. The gap is even more dramatic when studying accelerators as entrepreneurial development platforms. The literature on this subject is at an early stage. Although academics recognize the value and potential impact of mentoring at accelerators, little is known about the dynamics propelling founders' learning processes under the very distinctive conditions fostered at these startup development platforms.

The positive relationship between startup development and economic growth has prompted the rapid proliferation of accelerators. Mentoring has been

proposed as a key design component for founders' learning and startup development. Understanding how mentoring may be propelling these outcomes, and how factors such as mentoring functions and startup life-cycle stages may play a role in such dynamics, poses an opportunity to further advance accelerators' impact and the development of more structured mentoring programs. This research delves into the experiences of founders from several cohorts of Gener8tor, a top-ranked accelerator with programs in Wisconsin, Minnesota and Ohio. Semi-structured interviews with founders and accelerator managing directors, coupled with observations and documentary analysis, served to analyze the mentoring dynamics and key players propelling founders' learning.

Qualitative data from this study shows that key learnings from mentoring are derived from the aggregate data and connections generated from a network of mentors, not necessarily from a close-tie dyadic relationship. This further validates Cohen, Bingham, & Hallen (2019), on the benefits of a concentrated consultation mentoring approach, a recently revealed mentoring dynamic at accelerators that exposes founders to dozens of mentors in a short period of time. This is precisely the mentoring approach at Gener8tor. Further analysis of the qualitative data revealed the founders' need for career-related mentoring and specific technical know-how to tackle immediate challenges. Demand for career-related mentoring functions such as the transfer of business knowledge and social capital were a constant for those companies in a growth stage. Early-stage startups presented a different set of challenges and needs.

After a thematic analysis, clear patterns depicted a new set of dynamics, not previously documented by the literature. Exposing founders to dozens of mentors prompted them to use unique mechanisms to gather the information and resources they needed. Some of the founders selected mentors based on their knowledge and access to other networks. This practice of rejecting mentors that were not as useful from the startup needs perspective was prompted by the urgency to present an investment-ready company to investors by the end of the program. This is not an unobserved behavior, as a decade ago entrepreneurship literature started to identify this shift in type of opportunistic relationships between mentors and mentees (van der Sijde & Weijmans, 2013).

The second most used mechanism to select mentors required founders to distinguish the *signal from the noise*. By using dozens of data points from mentors' feedback, founders were able to create a scatterplot and detect recurring patterns. Patterns resembled a *social proof* (Cohen et al., 2019a), yet this dynamic was not about selecting the best possible mentor, but the best content. Furthermore, these new dynamics elevated the importance of loose-tie relationships by proving their importance and relevant role in the learning process. No long-term, close-tie and trustful relationship needs to be developed for founders to benefit from mentors, particularly when they act as connectors or influencers within the business ecosystem. Thus, these dynamics are very different from the dyadic mentoring dynamic commonly described in academic studies. They also differ from the new *broad, intense and paced consultation* described by Hallen et al., (2020). Their model describes a series of interactions with different actors, not just mentors. The mentoring dynamics described in my study occur between founders and individuals

with clear expectations of acting like mentors who contribute to the startup development. My results challenge prevalent conceptions imbedded in other entrepreneurial mentoring definitions. Outcomes of this study also recommend that accelerators make significant efforts to build a vast network of mentors, an imperative resource to create these new dynamics. Hence, my study not only describes how founders learn from mentors at accelerators but reveals a new set of dynamics and new players completely overlooked by the literature.

Among other serendipitous findings, accelerator managing directors were considered the *alpha mentors* by founders. Interactions between directors and founders were the archetypical dyadic mentoring dynamic, a close-tie relationship, committed to periodic sessions. Yet these relationships may undermine some of the accepted mentoring definitions since managing directors in some cases are neither more experienced entrepreneurs nor experts in those industries more relevant to the startups.

Interactions with investors also play a critical role in the learning dynamics at accelerators. Aggregate feedback gained through multiple presentations resulted in improved pitches and important startup pivots. These new dynamics, rules and players pose new and interesting questions for academics as they explore the impact of accelerators and the best learning scenarios for founders and startups. Practical implications of my study further validate the relevance of a concentrated consultation mentoring approach and propose a new set of experiences such as learning from multiple mentors rather than from single dyadic close-tie relationships. Enough evidence exists to warrant revisiting prevalent entrepreneurial mentoring definitions and the role accelerators play as ecosystem catalysts and brokers.

I have structured this research as follows: First we navigate through the distinctive characteristics and theoretical foundations supporting accelerator designs and proliferation. Second, we explore the extant literature on experiential learning and its well-documented impact at the individual and organizational level. Third, we explore the key paradigms on entrepreneurial mentoring as a learning experience and the unanswered questions posed by the unique conditions presented by accelerators. Methods and results follow. We conclude by proposing a new set of mentoring dynamics and players that may be unique to startup accelerators, yet critical for founders' learning and startup development.

Capítulo 1: Introducción (Español)

La evidencia empírica que se desprende de varias décadas de investigación académica ha demostrado la relación positiva entre el crecimiento de los startups y el desarrollo económico regional (Wise S. & Valliere, 2014). Como consecuencia, las plataformas y los programas para impulsar la creación de nuevas empresas se han multiplicado a un ritmo acelerado (Hallen, Bingham y Cohen, 2014; Wise y Valliere, 2014). Las aceleradoras de startups se encuentran entre las iniciativas más utilizadas para apoyar el desarrollo de nuevas empresas. Tres valiosos elementos clave distinguen a los programas de aceleración de otras plataformas de desarrollo de emprendimientos: su intenso programa de mentoría, la posibilidad de conectar con una diversa red de contactos y la oportunidad de ganar legitimidad (Wise & Valliere 2014). Las aceleradoras también se han descrito como auténticas experiencias de aprendizaje (Miles, de Vries, Harrison, Bliemel, de Klerk, & Kasouf, (2017) y sus componentes de enseñanza se han relacionado positivamente con el logro de financiación y el número de empleados de los startups (Gonzalez-Uribe & Leatherbee, 2018). Sin embargo, persisten brechas significativas en la literatura, debido a que la investigación que ha explorado las experiencias de aprendizaje que ofrecen las aceleradoras es ínfima, en particular aquellas que impulsan el aprendizaje de los fundadores y el desempeño sus empresas. Evidencia contundente que emana de estudios recientes apunta al importante papel que juega la mentoría como componente clave en las aceleradoras para lograr el éxito de los startups (Hoffman & Radojevich-Kelley, 2012). El impacto positivo que tiene la mentoría ha sido bien documentado por investigación académica, y estudios recientes sobre la mentoría emprendedora plantean nuevos e interesantes paradigmas. Mientras persisten las incongruencias y los desacuerdos sobre la mejor definición para el concepto de

mentoría emprendedora, la investigación académica se esfuerza por descubrir los factores que afectan los resultados de esta experiencia de aprendizaje. De acuerdo con Swap, Leonard, Shields y Abrams, (2001), tanto habilidades críticas como un profundo dominio del contenido pueden transferirse mejor a través de mentoría. Los mentores también son una fuente externa única de conocimiento, que podría proporcionar contenido contextualizado y peritaje. Además, aprender de forma vicaria de mentores podría contrabalancear la falta de aprendizaje congénito y evitar que las nuevas empresas cometan errores fatales (Purcell & Scheyvens, 2015). También se ha demostrado que la mentoría afecta el comportamiento innovador de los emprendedores (Abecassis-Moedas, Sguera y Ettl, 2016) y está interconectada con los resultados obtenidos a nivel de la empresa, cuando se utiliza para avanzar la carrera profesional a nivel del individuo (Sijde y Weijman, 2013). Esto es particularmente importante ya que cualquier dinámica de mentoría que afecte positivamente el desarrollo de los fundadores también puede impulsar resultados positivos a nivel del startup. La mentoría también puede aumentar el conocimiento en gerencia de negocios (St-Jean & Audet, 2012) y brindar acceso a redes de contactos esenciales (Bisk, 2002; Swap et al., 2001), las cuales han demostrado ser críticas para el desempeño de un startup (Eesley, & Wu , 2019).

Por lo tanto, el aprendizaje es el producto que se espera de un proceso de mentoría. Existe amplia evidencia empírica para teorizar sobre el papel clave que juega esta dinámica en el aprendizaje de los fundadores y el posterior desempeño del startup. Sin embargo, la literatura actual no profundiza, ni describe la dinámica y los factores que influyen en los resultados que postula. La brecha es aún más dramática cuando se estudian las aceleradoras como plataformas de desarrollo de

emprendimientos. La literatura sobre este tema se encuentra en una etapa muy incipiente. Si bien los académicos reconocen el valor y el impacto potencial de la mentoría en las aceleradoras, se sabe poco sobre las dinámicas que impulsan los procesos de aprendizaje de los fundadores en las muy particulares condiciones que se fomentan en estas plataformas de desarrollo de startups.

La relación positiva entre el desarrollo de startups y el crecimiento económico ha impulsado la rápida proliferación de aceleradoras. La mentoría se ha propuesto como un componente clave en el diseño de las aceleradoras para lograr aprendizaje en los fundadores y el desarrollo de sus startups. Comprender cómo la mentoría puede estar estimulando estos resultados, y cómo factores tales como las funciones de mentoría que ejercen los mentores y las etapas del ciclo de vida de los startups pueden desempeñar un papel importante en dicha dinámica, plantea una oportunidad para avanzar aún más en el impacto de las aceleradoras y el desarrollo de programas de mentoría más estructurados. Esta investigación profundiza en las experiencias de los fundadores de varias cohortes de Gener8tor, una aceleradora de primer nivel con programas en Wisconsin, Minnesota y Ohio. Las entrevistas semiestructuradas con los fundadores y los gerenciales directivos, junto con observaciones y el análisis de documentación recopilada, sirvieron para analizar las dinámicas de mentoría y los actores clave que promueven el aprendizaje en los fundadores.

Los datos cualitativos de este estudio muestran que los aprendizajes clave, producto de la mentoría se derivan de los datos agregados y las múltiples conexiones generadas a través una red de mentores y no necesariamente de una estrecha

relación diádica. Esto valida aún más a Cohen, Bingham y Hallen (2019a), sobre los beneficios de un enfoque de mentoría de consulta concentrada, una dinámica de mentoría en aceleradoras que recientemente fue develada y que exponen a los fundadores a docenas de mentores en un corto período de tiempo. Este precisamente es el enfoque de mentoría de Gener8tor. Un análisis más profundo de los datos cualitativos reveló la necesidad de los fundadores por una mentoría enfocada en desarrollo profesional y conocimientos técnicos específicos, necesarios para abordar los desafíos inmediatos de la empresa. La demanda por mentoría enfocada en desarrollo profesional, así como la transferencia de conocimiento empresarial y capital social, fueron una constante para aquellas empresas en una etapa de crecimiento. Las nuevas empresas en etapa incipiente presentaban un diferente conjunto de desafíos y necesidades.

Después de un análisis temático, fueron evidentes los patrones que demostraban un nuevo conjunto de dinámicas, no documentadas previamente por la literatura académica. Exponer a los fundadores a docenas de mentores los impulsó a usar una serie de mecanismos particulares para recopilar la información y los recursos que necesitaban. Algunos de los fundadores seleccionaron mentores en función de sus conocimientos y acceso a otras redes de contactos. Esta práctica de rechazar aquellos mentores que no eran útiles para llenar las necesidades del startup fue instada por la urgencia de presentar una empresa atractiva y lista para el financiamiento de inversionistas al final del programa. Este comportamiento ya había sido observado anteriormente, ya que hace una década la literatura académica en el ámbito del emprendimiento comenzó a identificar este cambio de dirección hacia

relaciones oportunistas entre mentores y aprendices (van der Sijde & Weijmans, 2013).

El segundo mecanismo más utilizado para seleccionar mentores requiere que los fundadores distingan entre la señal y el ruido. Mediante el uso de docenas de puntos de datos derivados de los comentarios de los mentores, los fundadores pudieron crear un diagrama de dispersión y detectar los patrones más recurrentes. Los patrones generaron el equivalente a una validación social (Cohen et al., 2019a), no obstante, esta dinámica no se fundamentó en seleccionar el mejor mentor, sino el mejor contenido. Además, estas nuevas dinámicas elevaron la importancia de las relaciones distantes al demostrar su significativo rol en el proceso de aprendizaje. No es necesario desarrollar una relación a largo plazo, estrecha y de confianza para que los fundadores se beneficien de los mentores, particularmente cuando actúan como conectores o personas influyentes dentro del ecosistema empresarial. Por consiguiente, estas dinámicas son muy diferentes a la dinámica de mentoría diádica comúnmente descrita en la investigación académica. También difieren del nuevo paradigma de *consulta amplia, intensa y acelerada* descrita por Hallen et al., (2020); ya que este modelo describe una serie de interacciones con diferentes actores y no sólo mentores. Las dinámicas de mentoría descritas en mi estudio ocurren entre fundadores e individuos con expectativas claras de actuar como mentores y contribuir al desarrollo del startup. Mis resultados desafían los conceptos más predominantes en las definiciones de mentoría emprendedora. Los resultados de este estudio también recomiendan que las aceleradoras hagan esfuerzos significativos para construir una amplia red de mentores, un recurso imperativo para crear estas nuevas dinámicas. Por lo tanto, mi estudio no sólo describe cómo los fundadores aprenden

de los mentores en las aceleradoras, sino que revela un nuevo conjunto de dinámicas y nuevos actores completamente ignorados por la literatura.

Entre otros hallazgos fortuitos, los gerenciales directivos de las aceleradoras fueron considerados por los fundadores de los startups como mentores alfa. Las interacciones entre gerenciales y fundadores fueron la dinámica arquetípica de mentoría diádica, es decir, una relación estrecha, comprometida y basada en sesiones periódicas. Sin embargo, estas relaciones pueden socavar algunas de las definiciones de mentoría más aceptadas, ya que los gerenciales directivos en ciertos casos no eran ni empresarios más experimentados, ni expertos en las industrias más relevantes para las nuevas empresas.

Las interacciones con los inversionistas también juegan un papel fundamental en las dinámicas de aprendizaje en las aceleradoras. La información agregada de la retroalimentación obtenida a través de múltiples presentaciones a inversores, dieron como resultado mejores propuestas e importantes pivotes en los startups. Estas nuevas dinámicas, reglas y actores plantean nuevas e interesantes preguntas para los académicos que exploran el impacto de las aceleradoras y los mejores escenarios de aprendizaje para fundadores y sus nuevas empresas. Las implicaciones prácticas de mi estudio validan aún más la relevancia de un enfoque de mentoría de consulta concentrada y proponen un nuevo conjunto de experiencias, como aprender de múltiples mentores en lugar de una sola relación estrecha y diádica. Existe suficiente evidencia para justificar la revisión de las definiciones de mentoría actualmente

predominantes y el papel que desempeñan las aceleradoras como catalizadores e intermediarios del ecosistema.

He estructurado esta investigación de la siguiente manera: primero navegamos a través de las características distintivas y los fundamentos teóricos que respaldan los diseños y la proliferación de aceleradoras. En segundo lugar, exploramos la literatura existente sobre el aprendizaje experiencial y su bien documentado impacto a nivel del individuo y la organización. En tercer lugar, exploramos los paradigmas más importantes sobre la mentoría emprendedora como una experiencia de aprendizaje y las preguntas aun sin respuesta que plantean las singulares condiciones generadas en las aceleradoras. Luego se discuten los métodos y resultados. Concluimos proponiendo un nuevo conjunto de dinámicas de mentoría y actores que, aunque actualmente pudieran ser un fenómeno exclusivo de las aceleradoras, probaron ser fundamentales para el aprendizaje de los fundadores y el desarrollo de los startups.

Chapter 2: Literature Review

Accelerators

From Joseph Schumpeter (1934) to the most recent literature, researchers have sought to understand entrepreneurs and their impact on economic development. Today, an extensive amount of empirical work has been devoted to connecting entrepreneurial activity to economic growth and prosperity (Amat, O., Renart, M. A. & García, M. J., 2013; Hessels, J. & van Stel, A., 2011; Wong, P. K., Ho, Y. P., & Autio, E., 2005; Wennekers, S., & Thurik, R., 1999). The resulting literature has identified clear evidence of the impact of a startup's origin, its contribution to job creation, its creation of new industries as well as its introduction of innovative products and services to the market (Wise & Valliere, 2014). Initiatives to identify entrepreneurs and support the development of startups have been multiplying at a surprising pace (Hallen, et al., 2014; Wise & Valliere, 2014). In the last couple of decades, startup accelerators have been assisting entrepreneurs build and scale their new ventures through training, mentoring, and seed funding. Today, the prevalence of these fast-paced venture development programs has prompted researchers to study the *growing ecology* of these organizations (Politis et al., 2019). This type of entrepreneurial support platform was a phenomenon of the late 1990s according to Fishback, et al., (2007) and was designed to reduce failure rates among new ventures (Bisk, 2002; Wise & Valliere, 2014). The Foundry, in Menlo Park, California, was the first instance of a startup accelerator in 1998 (Fishback et al., 2007; Wise & Valliere, 2014), but it was not until 2005 that the most well-known platform, YCombinator, came into existence. Conceived by Paul Graham and his wife, Jessica Livingston, this startup accelerator continues to receive the most notoriety, and according to an empirical study (Hallen et al., 2014), it is one of the few

successful platforms. In 2006, another well-known startup accelerator was established: TechStars, in Boulder, Colorado. Together with YCombinator, these accelerators have been credited as the leaders of the current accelerator models (Wise & Valliere, 2014). Since 2006, accelerators have become a notable trend among entrepreneurial ecosystems. Today, more than 200 operate in the United States, and Europe has seen an equal explosion of these programs (Cánovas-Saiz et al., 2020). While many accelerators operate under a similar model and offer its cohorts funding, education, mentoring, and access to its network of professionals (Fishback et al., 2007; Hoffman & Radojevich-Kelley, 2012), current literature has dismantled the notion of homogeneity among platforms. Variations on the design of the learning components, the motivations of the accelerators' founders (Cohen et al., 2019b), and the ecosystems where they operate have come under the microscope as potential factors driving a consequential isomorphism (Chan, C. S. R., Patel, P. C., & Phan, P. H., 2020). According to Cohen et al., (2019a), until 2015, approximately 6,000 startups had participated in 650 accelerators, but these totals are only estimated numbers. Yet, these approximate figures demonstrate the significant establishment of accelerators within entrepreneurial ecosystems as well as the increasing interest in the research of understanding their designs, learning experiences, and outcomes. Differences in the structures and routines as well as the goals, explain the heterogeneity, which also affects the performance outcomes and the accelerator impact in the ecosystem (Chan et al., 2020). These variations impel researchers to define four distinctive types of accelerators: innovation, social, university and corporate (Cánovas-Saiz et al., 2020).

According to Hoffman & Kelley (2012), accelerators are a new breed of investment firms and stem from the funding gap left by angel investors and venture capitalists. Consequently, the new concept follows a well-known formula for venture capitalists that includes targeting companies with high-growth potential, talented founders, and big market opportunities. Selected startups are awarded seed capital ranging from \$17,000 to \$20,000 in exchange for a small amount of equity (Hoffman & Radojevich-Kelley, 2012; Wise & Valliere, 2014). After the initial three to six months of extensive training and mentoring, those startups that proved to have true potential for growth and survival obtained further investments (Fishback et al., 2007; Hoffman & Radojevich-Kelley, 2012).

“Three key elements underlie the value added by accelerators: mentorship and the ability to learn from others who are more experienced, connectivity to a powerful network that can be leveraged by the new firm, and brand enhancement and signaling of legitimacy (Wise & Valliere, 2014, p. 9).”

Literature has expanded the definition of accelerators calling them an authentic learning experience, or, as noted by Miles et al., (2017), a short entrepreneurship education program *reinforced by peer-to-peer and mentor-based learning* (p.814). Identifying accelerators as a learning experience was also determined by Leatherbee & Eesley (2014) who concluded that Startup Chile was having a distinctive effect on its cohorts that was unrelated to the standard metrics used to assess a startup's performance. According to their study, domestic entrepreneurs are learning from foreign entrepreneurs at accelerators, and this type

of learning is having an impact on domestic entrepreneurs' *opportunity discovery behaviors*. Remarkably, a more recent empirical study by Gonzales-Uribe and Leatherbee (2018) relates accelerator schooling features with a positive impact on a startup's capital fundraising as well as on the number of employees hired.

“Accelerators distinguish themselves from other early-stage financiers by their strong emphasis on entrepreneurship schooling, which is believed to provide ‘entrepreneurial capital’ to participants who are otherwise lacking it.” (p. 1592).

However, this study fails to identify the schooling features which may be influencing these outcomes the most, or in which manner. Nevertheless, subsequent empirical studies have confirmed that startups participating at accelerator programs have higher chances of raising capital from investors (Cánovas-Saiz et al., 2020; Shetty et al., 2020).

Indeed, learning is one of the expected outcomes from startups participating in an accelerator program. Recent literature attributes the acceleration of the startups' learning process to these short-term programs (Politis et al., 2019) as well as to the enhancement of their absorptive capacity (Polo García-Ochoa, et al., 2020). This totally redefines the role of accelerators and the key performance indicators utilized to measure their success. It also demands a more careful design and customization of their learning components as outcomes from the acceleration also affect the ecosystem hosting the program (Cánovas-Saiz et al., 2020). Since successful

accelerators are known to help startups raise more funds from investors (Chan et al., 2020), this creates an opportunity to bring more attention and investment deals to the ecosystem.

Differences in the design of the mentoring component of the accelerator may produce different outcomes. In their 2019 study, Cohen, Bingham, and Hallen demonstrated that both the intensive consultative learning period and the timetabling of such dynamics within the accelerator design had a significant effect on startup performance. Another study, by Eesley and Wu, 2019, attributed a venture's access to critical information for decision-making and performance to mentors' structurally diverse networks. Moreover, their study showed that mentors do have an important role as startups learn to adapt their strategies and exhibit a more solid idea pitch. The relevance of these earlier studies to our study responds to the compressed timeframe of the participants' seven-week learning experience. Thus, mentors only met between one and three times with mentees. Learning results were observed and measured at the end of the seven-week period.

Learning at accelerators seems to extend beyond the training and mentoring components. The literature has emphasized the relevance of collective learning for new ventures (Politis et al., 2019). In fact, entrepreneurial learning is not only circumscribed by experiments and experiences at the individual level. Interactions with the ecosystem supporting a venture is a key component of the entrepreneurial learning process as well. As founders interact with customers, potential partners, suppliers and mentors, external knowledge is poured into the pool of extant information and experiences shaping the development of the startup. Thus, an

accelerator's ability to attract and maintain a diverse and relevant network of resources works as a mechanism to expand access to key knowledge and impactful learning experiences for its startups.

An accelerator's relevance as an ecosystem catalyst adds a new transformational dimension to its role. New elements seem to be critical additions to its definition, and lack of consensus towards its scope are tangible literature gaps. Nevertheless, most recent developments have expanded the description of accelerators from *authentic learning experiences* characterized by components such as mentoring, training and seed money to, as noted by Chan et al., (2020) , "cohort-based, short-term programs that provide entrepreneurs with access to seed investment, connections, design, and sales support, education and mentoring in a fast-paced environment" (p.226). Each of these components can be tailored to create a learning experience relevant to a startup's needs as well as to the specific objectives of the accelerator. Yet even that seems to overlook newly unearthed factors that significantly influence not just the design of the accelerator but also the outcomes of the program at both the startup and accelerator level. The ecosystem surrounding the accelerator has been underestimated by research and probably by policy makers.

"Startup accelerators are fixed-term, cohort-based programs that provide mentorship, educational components and networking, culminating in a public pitch event or DEMO Day and motivated by their entrepreneurial ecosystem's stakeholder value creation." (Ghorashi & Asghari, 2019, p.11)

Certainly, the establishment of accelerators in today's entrepreneurial ecosystem has promoted the need for better understanding of their dynamics and effects on startups. A compacted time frame defies some of the current entrepreneurial mentoring theoretical assumptions by challenging the role of variables such as long-term relationships, trust (El Hallam & St-Jean, 2016; St-Jean & Audet, 2009) and intensity (Sijde & Weijman, 2013; Waters, McCabe, Kiellerup & Kiellerup, 2002) which have proven to affect outcomes for mentees in other scenarios. It is undeniable that learning at the founders' and startup levels is happening. However, it has been difficult to attribute these results to a specific learning experience. Differences in mentoring design have proven to affect a startup's performance (Cohen et al., 2019b), yet there is plenty of space to elucidate how learning occurs and what other learning experiences further support startups as they overcome liability of newness.

Entrepreneurial Learning

Knowledge Acquisition

A founder's stock knowledge has proven to affect the early performance of a startup. The literature defines congenital knowledge as the founder's knowledge prior to the conception of the startup (Huber, G. P., 1991). While congenital knowledge may be critical to identify an opportunity and launch a new venture, it becomes less useful as the company evolves (Cegarra-Navarro et al., 2015). Brigham and De Castro (2003) also posit that opportunity-identification could be enabled by an

individual's cognitive learning style, but this relationship may fade as the company grows. Thus, for startups to grow and thrive, constant knowledge acquisition is critical and cannot be dependent on the founder's ability to learn. The literature has identified three sources for knowledge acquisition: innate, grafted or borrowed from managers, employees and networks (Casillas, J. C., Barbero, J. L., Sapienza, H. J., 2015; de Clercq, D., Sapienza, H. J., Yavuz, R. I., & Zhou, L., 2012), and lastly, vicariously or by observing and imitating others. Knowledge acquisition can also be achieved by learning from experiences and searching for information (Huber, G. P. 1991). Thus, if a founder's own stock of knowledge won't provide the constant flow of information that a startup requires to succeed, acquiring knowledge from external sources is vital for venturing (Volberda, H. W., Foss, N. J., & Lyles, M. A, 2010). A startup must be exposed to different sources of knowledge and learning experiences. Knowledge acquisition happens through collaborations with formal and informal contacts (Friesl, M., 2012), thus access to different networks becomes an important source for startups.

Yet knowledge is not the same as learning, let alone actionable knowledge. Exploitation of an opportunity is not just a consequence of knowledge acquisition (Volberda et al., 2010). Moreover, a startup's performance is contingent on its unique arrangement of knowledge acquisition sources (Friesl, 2012). Learning is contingent on factors such as an individual's ability to absorb and integrate knowledge (Nieminen L. & Hytti, U., 2016) as well as the quality of the acquired knowledge. Just as an organization's congenital knowledge is inherited from its founder, absorptive capacity is initially transferred from the founder to the organization (Volberda et al., 2010). An organization's absorptive capacity enables it to identify opportunities and

act upon them (Jiménez-Barrionuevo, M. M., García-Morales, V. J., & Molina, L. M., 2011). Moreover, it can be constantly replenished and renewed by continuously adding new knowledge from external resources. Nevertheless, neither the multiple sources nor the constant acquisition of new knowledge will guarantee the successful exploitation of a potential business opportunity (Volberda et al., 2010). Entrepreneurs must learn, and act, to successfully develop a business.

Experiential Learning

Knowledge and learning have been empirically related to startup growth and survival (Brockman, B. K., 2013; Bruneel, J., Yli-Renko, H. & Clarysse, B., 2010; Deakins, D. & Freel, M., 1998; Menon, T. & Pfeffer, J., 2003; Peña, 2002; Sullivan, D. M. & Marvel, M. R., 2011). Research linking a founder's experience, knowledge, and level of education to a startup's performance is considerable (Brockman, 2013; Levinthal, D. A. & March, J. G. 1993; Peña, 2002). Unequivocally, learning as a process and knowledge as its byproduct (St-Jean & Audet, 2012) are inseparable from the entrepreneurial endeavor. But learning and knowledge are two different concepts (Honig, 2001) and knowledge alone won't guarantee action. Different experiences and processes are required to move from static knowledge to actionable knowledge (Cegarra-Navarro, J. G. & Wensley, A. K. P., 2009). Nonetheless, the accrued stock of founders' knowledge influences their ability to absorb new knowledge as well as to transform it into consequential actions within the startup (Cegarra-Navarro et al., 2015; Friesl, 2012) .

Some researchers argue that venturing itself is a learning experience (Franco,

M. & Haase, H., 2009; St-Jean & Audet, 2012). From an organizational learning perspective, the relevance of an entrepreneur's knowledge and learning experiences can transfer from the individuals to the organization. Franco and Haase, (2009) suggested that an individual's knowledge is intrinsically related to organizational learning, as knowledge from individuals is codified and transferred to the organization. This finding was also emphasized by Bell, S. J., Mengüç, B. & Widing, R. E. (2010), who believed organizational learning stems from the accrued learning of individuals. These individuals include not just the founders, but also the grafted learning acquired through hiring management staff and other employees (Casillas, 2015; de Clercq, D., Sapienza, H. J., Yavuz. R. I. & Zhou, L., 2012; Segelod, E., 2001). Secundo et al., (2017) posit entrepreneurial development as a continuous learning process and this constant knowledge acquisition manifests on three different levels: first at the founder's level, second at the firm level, and the third at the network level. All three levels contribute to the stock of knowledge of the startup, a key resource for its short- and long-term performance. Thus, entrepreneurial learning is a process with multiple actors that not only includes the congenital learning brought by the founders, but also includes employees and the broader ecosystem hosting the startup.

While congenital knowledge has been related to startup success, according to Nieminen, L. and Hytti, U., (2016) entrepreneurial learning is a social phenomenon where both informal and formal relationships play a significant role in the process. The literature further explains how congenital knowledge becomes irrelevant and inconsequential as the startup grows (Casillas, et al., 2015; Cegarra-Navarro, et al., 2015). Acquiring knowledge from external sources is both vital and inevitable for

startups aiming to scale and survive. Thus, entrepreneurial learning extends beyond the experience of learning by doing and should be constantly complemented by learning experiences involving suppliers, customers, mentors and peers (Casillas et al., 2015; de Clercq et al., 2012; Hallen et al., 2020; Kubberød & Ladegård, 2021; Nieminen & Hytti, 2016; Rupčić, 2019). Deakins & Freel (1998) posit that *the ability of entrepreneurs to maximize knowledge [p. 152]* and learning through decision-making and interactions with their networks is crucial for SMEs' development and growth. Sullivan and Marvel, (2011) provided empirical evidence of the positive impact that knowledge acquisition from Small Business Development Center (SBDC) counselors had on startups' performance. Cope (2005) further supports early foundational entrepreneurial learning perspectives describing them as dynamic, contextual and cumulative. Entrepreneurial learning is not just a dynamic process, it is also continuous (Secundo et al., 2017) due to all the external factors affecting a start-up's potential performance. This further emphasizes the need for constant knowledge acquisition from external sources and the lack of effectiveness of a founder's own stock of experiences as the startups move from one growing stage to the other.

In the entrepreneurship field, learning by individuals is as important as organizational learning. Some researchers argue that in young companies these two paradigms are intertwined (Haneberg, D. H., 2019; Rupčić, N., 2019). According to Cegarra-Navarro et al., (2015), startup performance depends on the transfer and transformation of congenital knowledge into organizational routines. Organizational learning theories have a respected trajectory explaining how organizations learn and how learning then influences performance. Most researchers would agree with

defining organizational learning as a change in the organization's knowledge that occurs as a function of experience, as noted by Argote and Miron-Spektor (2011). Learning can provide firms with strategic advantages (Levinthal, D. A. & March, J. G., 1993; Santos-Vijande, M. L., López-Sánchez, J. A. & Trespalacios, J. A., 2012) and the possibility of combining information to generate innovations (Jiménez-Jiménez, D. & Sanz-Valle, R., 2011). Learning and knowledge are also responsible for the adaptations of the organization's design and its interaction with the environment (Santos-Vijande López-Sánchez, & Trespalacios, 2012).

In the startup arena, organizational learning is fundamental in order to develop and capitalize on new business opportunities (Franco & Haase, 2009; St-Jean & Audet, 2012). Yet, while organizational learning is well understood in established and mature firms, the field still needs to further elucidate how learning occurs in new firms and how these learning dynamics may occur in startup accelerators (Politis et al., 2019).

Deakins and Freel (1998) posited that a significant part of entrepreneurial learning is experiential. For decades, the definition of experiential learning has not varied. Kolb, Kolb, & Lewin, (2005), still quote Kolb's seminal work (Kolb, 1984) to define the field: "ELT (Experiential Learning Theory) defines learning as 'the process whereby knowledge is created through the transformation of experience.' Knowledge results from the combination of grasping and transforming experience" (p.194). Thus, experiential learning is much more than a byproduct; the theoretical framework should focus on the process of transforming the learning experiences (Corbett, 2005). "Experiential Learning Theory can be considered a cognitive and situative learning

theory because individuals transform (using cognitive properties) their experiences (situative) into new knowledge (Corbett, 2005, p.4815). More importantly, it is a complex process where many forms of learning may interact. According to Kolb et al. (2005), it is a holistic framework that orients the many different ways of learning to one another. Thus, direct experiences are not the only criterion for learning and knowledge creation. Grounded in this theoretical framework, the process of transforming experiences into knowledge may consist of either observing others and reflecting on those observations, or by acting and experimenting. Consequently, experiential learning can happen through conversations with peers and mentors (Baker, Jensen, & Kolb, 2005), by imagining an event and potential consequences, or simply by observing others (Bandura, Ross, & Ross, 1963; Hoover, Giambatista & Belkin, 2012; Manz & Sims, 1981; Swap et al., 2001). It also implies that the outcomes of experiential learning are contingent on the type of learning experiences and the cognitive inventory of the entrepreneur.

Based on this paradigm, accelerators offer a plethora of opportunities to entrepreneurs for experiential learning. A recent study theorizes that accelerators are more than a learning experience but also an opportunity to accelerate the process of learning itself (Politis et al., 2019). It is evident that elements such as training, networking, and mentoring underscore the relevance of knowledge and learning in the accelerator formula. In fact, intensive mentoring and education over a short period of time are the main components of accelerator design (Cohen et al., 2019a). Miles et al. (2017) further expanded this paradigm by stating that all the elements of authentic learning could be found on an accelerator program. Miles suggested that accelerators could foster entrepreneurial competencies in startup founders, a

paradigm further supported by Politis et al., (2019). The bigger question, though, remains elusive. Can this type of accelerated learning influence startup development? According to recent empirical evidence, the answer is yes. Hallen et al., (2020) pose that broad, intensive and fast-paced consultation with multiple external resources is actually an effective and unique learning mechanism within accelerators. Most importantly, this new proposed theoretical learning model is responsible for the positive effects of accelerators in startups' development. Naulin and Moritz, (2022) attributed outcomes such as learning and performance and network building at the startup level to the value adding inputs of the accelerator. Some of those components making a distinctive contribution are mentoring and access to key networks, among others.

Peer-to-peer Learning

The research to develop further explanatory models for the learning process that founders go through as their startups grow is in its infancy. A recent study from Secundo et al., (2017) theorizes that entrepreneurs learn in each of their different startup growing stages. Some research also suggests looking at entrepreneurial learning as a social and collective process (Friesl, 2012; Politis et al., 2019). Therefore, entrepreneurial learning is not just about the process of transforming a founder's congenital knowledge into organizational knowledge. Startup executives, employees, mentors and even competitors must play an active and significant role in the process of replenishing the startup with new and varied knowledge (Cope, 2005). Peer-to-peer learning becomes more than relevant in the entrepreneurial learning conversation. Peer-to-peer learning for founders means acquiring knowledge from other founders and experienced entrepreneurs (Nieminen & Hytti, 2016). In the

accelerator arena it means learning from founders, and this consultation dynamic is encouraged at most of these platforms (Hallen et al., 2020). Indeed, it is increasingly becoming a noteworthy learning context as other researchers are now calling for the inclusion of entrepreneurial peer mentoring. A study by Kubberød et al., (2018) spearheaded the notion of this new potential sub-field. Research results show that mentees perceived strong psychological support from their peer mentors. Although one study is not enough to understand this potential new learning dynamic, it raises important questions about the impact of peer mentoring in the entrepreneurship arena.

How peer relationships are forged, nurtured and expanded should also be important factors when trying to elucidate how entrepreneurs learn. In this case it is also critical to know from whom they learn. Who they learn from and how to weigh learning experiences and knowledge determine the information that is used and imbedded in the organization. Aldrich and Yang, (2014) emphasize that entrepreneurs must learn the *know-how*, *know what* and *know who*. Who to learn from, especially when you are exposed to over a hundred potential mentors or when your network is expanding at a rapid pace, becomes a complex decision. Peer-to-peer learning has become a distinctive and defining element for accelerators.

As noted by Miles et al., 2017: “Likewise, co-location and the expectation of full-time commitment to the accelerator by the nascent entrepreneurs creates both a competitive and cooperative learning environment where there is learner peer-to-peer collaboration sometimes driven by the work culture of the accelerator (p.58).”

Continuing in this vein, Yu, 2020, notes on page 530: “However, one consistent observation is that accelerators seem to benefit entrepreneurs through non-pecuniary channels, such as mentorship, learning from peers, and credentialing. And to further underline the significance of peer-to-peer learning in accelerators, the 2019b study by Cohen et al. provided evidence of the critical role peer networking plays as a design element in accelerators. They noted: “By contrast, when accelerators fostered transparency, ventures helped each other and achieved higher levels of performance (p. 834).” Moreover, the research of Politis et al., (2019) identified *peer atmosphere* as one of the three important factors triggering experiential learning in accelerators. They noted: “Social aspirations emerge from observations of other teams’ development, and by comparing one’s own venture progress with others as a form of benchmarking process (p. 597).” The study also revealed collaborations among founders as the other interaction among peers that could trigger learning.

Having access to the details of other founders’ challenges also provides an opportunity for learning, especially when solutions may be sought and developed as a collective. Hence, founders learning from peers may not just graft knowledge or imitate other founders’ behaviors, they, as a group, may be creating a unique learning experience. In fact, the most recent study by Hallen et al., (2020) poses peer learning as an important source of consultation for founders. Among other findings, founders were learning from peers and some of that learning was impactful.

“Technical knowledge most frequently came from cohort peers who were often facing similar challenges. As a whole, such how-most knowledge improved understanding of action – outcome relationships that we would expect to be especially beneficial for first-time entrepreneurs (Hallen et al., 2020, (p.396).”

This consultation dynamic between founders could be called peer-to-peer mentoring. According to the literature, peer mentoring involves an inexperienced individual and a more knowledgeable peer, yet the dynamic could be achieved via a dyadic matching or by groups (Level, A. V. & Mach, M., 2005). Although this definition was not conceived within the entrepreneurial mentoring literature, it provides a reasonable framework to understand the observed learning experiences at accelerators. Regardless of whether founders are engaged in peer mentoring, at least we know they are learning from each other.

Peer-to-peer learning as a key experience for entrepreneurs has gone beyond the discussion of benefits at the founder’s level to further support the notion of fostering learning at the ecosystem level. Pugh et al., (2021) theorized about coactive vicarious learning driven by peer founders sharing their own experiences. Their study shows how the integrated learning model could not just foster learning and development at an individual level, but also at a regional level. Peer-to-peer learning is a core experience embedded in the social dimension of this model. Theories on community of practices also present peer-to-peer learning as an important learning activity. Both Pugh et al., (2021) and Nieminen and Hytti, (2016) show how this

framework integrated with entrepreneurial learning theories can shed light on the key role networks play in this venturing critical success factor.

Regardless of the nomenclature or sources of the theoretical frameworks, learning from peers plays an important role at accelerators and peers acting as mentors is not an implausible concept.

Learning from Networks

Startups are benefiting from collective learning, yet only emerging literature has begun to explain the construct (Politis et al., 2019) as well as the multiple players contributing to the process. In an entrepreneurial context, the boundaries between a founder's learning process and the startup's learning is fuzzy. For some researchers there is no boundary or distinction, yet the processes are intertwined (Haneberg, 2019). Founders learn from peers, from mentors, from customers and from suppliers, thus social relationships matter (Nieminen & Hytti, 2016). Lessons learned from the founder's social network are transferred to the startup. Moreover, grafting knowledge from these actors becomes increasingly important as the startup grows. In fact, the size (Aarstad, J., Haugland, S. A., & Greve, A. (2010); Wu, C-S. & Hsu, C-S, 2013) as well as the diversity of knowledge the networks provide to a founder matters even more for a growing startup (Jonsson, 2015). These external sources of knowledge reduce the cognitive constraints of the startup and fill the gaps within its internal resources (Rupčić, 2019). These actors are embedded in the startup ecosystem, thus the startup learning process cannot be decoupled from the social network of the ecosystem hosting the new venture (Politis et al., 2019). This further supports the

notion of entrepreneurial learning as contextual (Aarstad et al., 2010) and contingent on the competencies of the actors imbedded in the local and regional ecosystem (Nieminen & Hytti, 2016). By interacting with their networks, entrepreneurs are encouraged to reflect, learn from dialogues and find patterns in the knowledge received from a diversified pool of information (Rupčić, 2019). The literature has also reiterated the value of accessing a variety of knowledge inputs from external sources for innovation purposes (Obstfeld, 2005; Volberda et al., 2010). Thus, it is evident that startups obtain vital resources from networks (Jonsson, 2015; Wu & Hsu, 2013).

Accelerators as central brokers within the entrepreneurial ecosystem (Shetty et al., 2020), manage a large and diverse network. By introducing selected startups to their own network, accelerators bestow founders and their new ventures with trust (Vissa, 2012). Small firms' lack of such truthfulness and reputation outside of their own limited network are only a few of the constraints suffered from their liability of newness. Accelerators reduce such constraints by referring startups to mentors, investors and other actors in the ecosystem which signals a relationship between the accelerator and the startups. Referrals are actionable knowledge reflecting trust (McKevitt & Marshall, 2015), which has been identified as an important factor for a mentee's learning in a mentoring relationship (St-Jean & Audet, 2012). These referrals also facilitate startups' access to more information (Vissa, 2012). Thus, an accelerator's role as a network broker (Cohen et al., 2019), and its introduction of startups to the larger ecosystem reflects a trustworthy relationship between them while prompting startups' learning from networks.

As startups grow, networks are managed intentionally (Jonsson, 2015). Business challenges are known to be contingent on the startup life-cycle stage. Research has shown that experienced entrepreneurs manage their network very differently from novice founders. While novice founders may look for external resources in an explorative mode, experienced entrepreneurs search for the resources they need, establishing relationships that lead to relevant and valuable networks for their ventures (Aarstad et al., 2010) . Experienced entrepreneurs also manage larger networks, and connections are established based on the significance of the resources needed for the venture. When external resources are considered as valuable sources of relevant information, human capital theories may help explain an intentionally managed network. Human capital value increases significantly as it can provide unique solutions to firm specific problems (Crook, Todd, Combs, Woehr, & Ketchen, 2011). Since startups use external resources to compensate for internal knowledge and expertise voids, having access to a network with the critical resources necessary to tackle their challenges is consistent with larger firms' human capital valuation.

For startups, accessing a network with relevant knowledge is a critical learning experience. Access to social capital has also been related to startup performance (Aarstad et al., 2010; Fukugawa, 2017). A varied and large network has proven to supply relevant knowledge to startups facing multiple challenges as they grow. Intentionally managing their networks and selecting resources based on the value they will provide to startups is an important learning dynamic as well. Thus, learning from networks is not just a networking exercise, but a learning experience bounded by the size of the network, the relevance of their knowledge, and the ability of the

startups to know who to learn from. For both accelerators and startups, human capital management is a critical skill they need in order to thrive.

Entrepreneurial Mentoring

High quality entrepreneurial mentoring is a key accelerator component and an important factor driving startups' success (Cohen et al., 2019; Hoffman & Radojevich-Kelley, 2012; Polo García-Ochoa et al., 2020; Shetty et al., 2020). Goswami et al., (2018) further expanded on this theory by suggesting that an accelerator's capability to recruit the right mentors and align them according to a startup's needs is critical to the program's success. According to their study, accelerators' expertise on coordination, selection, and connection are all important managerial competencies to foster venture validation. A 2019 study by Eesley and Wu confirmed these results by empirically demonstrating the relevance and impact of providing startups with a certain type of mentor. This study underlined both the importance of mentors' diverse networks and their role as an impactful learning experience for entrepreneurs. While findings were not the result of an experiment in a startup accelerator; the learning experience, a MOOC course, exposed participants to the treatment for seven weeks. Mentoring also happened during the same time frame, and quantitative data showed the key role of mentors in startups' performance. Entrepreneurial mentoring as a research field is still evolving, yet empirical evidence continues to assign mentoring a key role for startup knowledge acquisition and subsequent capability to raise funds (Polo García-Ochoa et al., 2020).

Empirical evidence from the last two decades supports the benefits of mentoring in the entrepreneurship arena. Deakins and Freel's 1998 study on entrepreneurial learning and growth of SMEs stated that mentors can play an important role as supporters of early-stage entrepreneurs, especially if they encourage entrepreneurs to draw from experience. In 2001, Swap et al. theorized that critical skills and deep knowledge of content domain may be better transferred via apprenticeships or mentoring. More recently, St-Jean and Audet, (2012) posited that learning is the first-level outcome of mentoring and such learning is indeed more prevalent. Their study underlined that 62% of such learning is cognitive and 35.9% is affective. Their research surveyed novice entrepreneurs from the Fondation de l'entrepreneurship's mentoring program in Canada. Since this is not a startup acceleration program, the mentoring relationship does not abide by the same fast-tracked time frame. Mentors are also a unique source of external knowledge that could provide customized and contextualized content and expertise (Purcell & Scheyvens, 2015). The same study concluded that learning vicariously from mentors could compensate for the lack of congenital knowledge and prevent new ventures from making fatal mistakes. Mentoring entrepreneurs has also proven to affect their innovative behavior (Abecassis-Moedas et al., 2016), contribute to business skills and to the development of resilience while increasing legitimacy (Kubberød & Ladegård, 2021). Most recently, empirical evidence has also related mentoring positively with startups' incremental innovation (Del Sarto et al., 2022).

The literature on entrepreneurial mentoring may not be abundant but studies are consistent in attributing positive outcomes from mentoring at the individual and organizational level (Bisk, 2002; Borredon & Ingham, 2005; St-Jean & Audet, 2012;

Swap et al., 2001). Especially when talking about entrepreneurs, mentoring towards career advancement at the individual level is interconnected with outcomes at the startup level (Sijde & Weijman, 2013). The limited examination of the phenomena poses that learning from mentors allows for the transfer of both tacit and explicit knowledge (St-Jean & Audet, 2012). More recently, a quantitative study further corroborates that entrepreneurial mentoring can facilitate the transfer of tacit knowledge and the continued development of critical absorptive capacity (Polo García-Ochoa et al., 2020). This is a distinctive and valuable benefit, as tacit knowledge is difficult to obtain and may be a critical component of an organization's competitive advantage. According to Assenova, (2020, p. 1563) mentors can affect how much entrepreneurs learn by influencing both the types of knowledge they access and how they apply this knowledge. Mentors can also help an entrepreneur view challenges from a different perspective, increase management knowledge (St-Jean & Audet, 2012), and provide access to relevant networks (Bisk, 2002; Swap et al., 2001). A mentor's structurally diverse network has proven to be critical for a startup's performance according to Eesley and Wu (2019):

“Because the information and resources provided by a diverse mentor can aid an entrepreneur by offering new opportunities, highly adaptable approaches help entrepreneurs to seize the opportunity and effectively use the information. As a result, their startup presentation at the end of the class is superior to the startup presentations of students who use the high adaptability strategy but without a mentor with network diversity (p. 36).”

A mentor's network is also key for a startup's knowledge acquisition and creation. Access to both close- and loose-tie relationships provides startups with relevant knowledge (Polo García-Ochoa et al., 2020). Together with a startup's capacity to integrate this new knowledge, access to a mentor's network could define its future performance. Results from all these cited studies are the foundation of an evolving field, where mentors are at the forefront of a series of consequential learning experiences for a varied ecology of startups. As one of the defining elements of a startup accelerator program, mentoring is adapting to a new and evolving platform demanding an accelerated learning process and growth, never-before required by studied mentoring programs.

The literature on mentoring is abundant, and benefits from the interaction between mentor and mentee are empirically supported and explicit. Nonetheless, entrepreneurial mentoring is a recent paradigm, and its theoretical framework is immature. McKeivitt and Marshall (2015) noted that in early literature, entrepreneurial mentoring was defined as a voluntary relationship that focuses upon long-term goals and capabilities (p. 264). This early definition poses an immediate conflict with the mentoring programs designed by startup accelerators since long-term relationships may not necessarily be fostered or sustained in these short-period platforms, clearly driven by short-term goals. The definition is in continuous evolution, yet emphasis is placed not just on the relationship but also on the asymmetric relationship between mentors and mentees. "Generally speaking, however, entrepreneurial mentoring involves a support relationship between an experienced entrepreneur (the mentor), and a novice entrepreneur (the mentee), in order to foster the latter's personal development (St-Jean & Audet, 2012, p.122)."

The term *relationship* has survived as a generic concept, seldom bounded by a granular definition. Still, mentors are depicted as experienced entrepreneurs and mentoring outcomes are strictly contained at the individual level. Mentoring programs at accelerators challenge this prevalent but broad definition. At accelerators, mentoring learning opportunities are driven by managing directors, peers and a diverse network of external resources (Cohen et al., 2019b), and many of them won't fit the experienced entrepreneur construct. The authors of this study define mentoring within the context of startup accelerators, a new perspective within the broader mentoring research field:

“In this context, mentorship is defined as the provision of technical and business feedback, advice and social support. Mentorship is meant to help startups access advice and insights that can help propel their business forward and validate market acceptance or rejection of their product or service (p.1791).”

Cohen's definition, quoted above, eradicates the mentor-mentee relationship and the asymmetric dyadic approach of the previously conceptualized learning dynamic. It focuses on business feedback, advice and social support, all elements of the career-driven mentoring function, as defined by St-Jean, (2011), obviating all other mentoring functions from the equation. It further underlines the desired outcomes of the mentoring process at accelerators, exclusively focusing on business growth or market acceptance. Cohen's definition either overlooks the plausible effects of entrepreneurial mentoring at the founders' level or completely merges both

founder and startup as a unit. Thus, expected outcomes must be measured by a startup's performance. Cohen's mentoring definition deepens into a series of new factors driven by the specific realm of a startup accelerator. It suggests an open and unwritten space where dynamics are contingent on other variables, impossible to predict or elucidate within other mentoring programs.

Among other interesting definitions of mentoring at accelerators, Polo García-Ochoa et al., 2020 allude to a definition integrating a series of concepts from past definitions: "Mentoring is a learning and coaching process where a reciprocal relationship is built between mentor and startup while focusing on achievement." Interestingly, their definition characterizes mentors as experienced entrepreneurs or experts (p.112). A plethora of new variables and ideas emerge from this construct as well. Polo Garcia-Ochoa et al.'s 2020 definition keeps the startup as the mentee but adds coaching as a relevant function. Their definition further encompasses a dense and hard-fought debate differentiating mentors and coaches as distinct providers of feedback (McKevitt & Marshall, 2015; Politis et al., 2019). *Mentoring is coaching* could be contested by both fields from both theoretical and practical perspectives, decreasing the chances of either one prevailing as the most accepted definition.

Other new components of entrepreneurial mentoring at accelerators are less contested. Mentoring is a distinctive trait of accelerators, and the design of mentoring dynamics affects outcomes at the startup level (Cohen et al., 2019a). "Our data suggest that 89% of programs have formal external mentoring programs (Cohen et al., 2019b)." Although many incongruencies and variations plague the construct,

several facts, and a general consensus, support four major factors influencing the effects of entrepreneurial mentoring at accelerators.

- First, entrepreneurial mentoring outcomes are contingent on the startups and their absorptive capacity, or capability to integrate the knowledge gained from the learning opportunity (Cohen et al., 2019a; Polo García-Ochoa et al., 2020). Thus, even if the accelerator provides high quality mentorship, if it fails to select startups with the foundational knowledge and capability to capitalize on new knowledge, desired outcomes, such as validation and growth, may not be achieved.
- Second, entrepreneurial mentoring at accelerators is also affected by the ecosystem supporting the platform (Rupčić, 2019; Shetty et al., 2020). Both the pool of mentors and the quality of the knowledge startups will gain from interacting with experts, suppliers and other key actors. Outcomes rely completely on the quality of the inputs sourced by the ecosystem. Thus, not everybody is an effective and relevant mentor. Defining a mentor only as an experienced entrepreneur is a restricting idea. Furthermore, mentoring is contingent on the functions and behaviors brought to bear by the mentors. Recent definitions seem to favor career-development mentoring functions as relevant components of the mentoring dynamics at accelerators. Thus, there is an intriguing new proposition that could affect the composition of the group of mentors, and desired resources the accelerators expect them to provide.

- Third, entrepreneurial mentoring at accelerators is also affected by the design of the program and the dynamics fostered by the accelerators' time frame and expected outcomes. Recent studies have inclined the balance towards a concentrated consultation approach where startups are exposed to dozens of mentors in a short period of time (Cohen et al., 2019a; Cohen et al., 2019b). The implication of the fast-paced meet, greet and learning dynamic in this scenario forces founders to form loose-tie relationships. Yet, accessing multiple sources of knowledge aids in the development of critical data patterns reducing uncertainty or, as Cohen et al., (2019a) conceptualized it, social proof.
- Fourth, outcomes and dynamics of entrepreneurial mentoring at accelerators are affected by the startup life cycle-stage. Decades of mature literature clearly describe the multiple growth phases of new ventures (Strobl & Kronenberg, 2016). For startups, evolving from one stage into the other means facing different challenges and meeting the expectations of different stakeholders (Fisher & Lahiri, 2016). Hence each stage demands expertise and networks from a very different array of resources (Strobl & Kronenberg, 2016). Both the sources of knowledge and the type of content must evolve as well. Thus, both the mentors and the expertise sought by the startups during their early stages won't be the same as those sought during a growing phase. Mentoring outcomes and the dynamics will be contingent on the challenges and needs of the startups, and the ever-changing pool of variables that cannot be tackled by the same mentors.

This unique inflection point in the field of mentoring points to the integration of these four variables into the entrepreneurial mentoring definition, as well as adding to the study of the unique dynamics and actors propelling learning outcomes at the startup level.

Companies at different growth phases face different challenges and stimulation by different stakeholders' expectations. Furthermore, empirical evidence is unequivocal when asserting that mentoring functions should also be driven by the startups' particular needs (Deepali & Chaudhary, 2017; Kubberød & Ladegård, 2021). Entrepreneurial mentoring at accelerators is not a simple, static, monolithic dynamic, and its definitions should reflect the uniqueness and varied arrangement of variables playing a critical role in accelerators' design, development and outcomes. Who and when entrepreneurial mentoring occurs at accelerators matters; thus, it may be a distinctive subfield on its own.

Dyadic Mentoring Relationships

The literature and theoretical models on mentoring usually start from the traditional notion of a dyadic mentor-mentee relationship (Halvorson et al., 2015; Lee, 2019; Lefebvre & Redien-Collot, 2013; MacLaren, 2018). In general, the foundation of the construct itself is rooted in a dyadic relationship. Hence, regardless of the field of study, most mentoring definitions allude to this mentor-mentee relationship as a core element of the learning experience. In Halvorson et al. (2015), they state: "Historically, mentorship has been conceived of as a dyadic relationship between a senior mentor and an early-career investigator (p. 824)." Van der Sijde &

Weijmans (2013) went further, explaining the four stages of the mentor-mentee relationship. Their study poses some of the expected dynamics from this dyadic relationship. The phases clearly describe how dyadic relationship-building is critical for the mentorship to occur: “In the initiation phase the relationship between the entrepreneur and the mentor is established, in the cultivation phase the actual ‘mentoring activities’ take place in the dyadic relation of the mentor-entrepreneur (p.185).” Definitions restricted the mentoring activities to two individuals in a relationship, most of the time matched by third parties: companies, incubators, accelerators, schools, and other such organizations.

Empirical studies have circumscribed their methods on this traditional approach, gathering data from mentees experiencing dyadic relationships. Some examples of such studies are (Kuratko & Marvel, 2021; Lefebvre & Redien-Collot, 2013; St-Jean, 2012; St-Jean & Jacquemin, 2022; Williams et al., 2019). In fact, even though academics are starting to identify new mentoring dynamics as potentially more effective approaches to traditional dyadic relationships, a recent study still proposes the study of dyadic dynamics as a critical source of information. The study assumes mentoring starts with a relationship between two individuals, so the study proposes methodologies that include data from both the mentor and the mentee (Kubberød & Ladegård, 2021).

The concept of entrepreneurial mentoring is no different. Its definition was ingrained in the idea of a dyadic and vertical relationship. In the entrepreneurship field, one of the most quoted definitions of entrepreneurial mentoring is from St-Jean and Audet (2012). “Mentoring involves a support relationship between an

experienced entrepreneur (the mentor), and a novice entrepreneur (the mentee), in order to foster the latter's personal development (p,122)" Thus, when we talk about mentoring, we immediately think of an asymmetric relationship with an experienced individual, whose mission is to guide and support an apprentice. Models then assume mentors and mentees need to be paired, a troubling task for many programs as a great number of factors such as perceived similarity (St-Jean et al., 2018), trust (Sijde, Peter Van Der; Weijman, 2013; St-Jean & Jacquemin, 2022)and coachability (Kuratko et al., 2021) of the mentee are just a few of the variables that may influence the development and efficacy of the relationship.

Scholars have invested a lot of time researching dyadic mentoring and its impact on mentees. Results from a recent study show that the greater the asymmetry between the mentor and the mentee the more benefits the mentees will get (Assenova, 2020), which raises a more important question: What happens when such asymmetry does not exist? While literature has focused on novice entrepreneurs, there is a new stream of research elucidating what mentoring looks like for experienced founders and growing startups. The answer to the question has been that mentoring does not look the same and dynamics are different from traditional dyadic relationships. "Entrepreneurs' pre-entry knowledge and experience coming into an incubator could thus moderate the value of mentoring for learning during early-stage venture incubation (Assenova, 2020, p. 1564)." The author theorizes that more advanced, educated and experienced entrepreneurs would benefit less from mentoring. The study results are based on data gathered from dyadic mentoring dynamics. It even compares the impact between high-quality vs. low-quality mentors

and asks what mentoring dynamics might work better for advanced, educated entrepreneurs.

From developmental networks (Halvorson et al., 2015; Lee, 2019) to concentrated consultation (Cohen et al., 2019a; Hallen et al., 2020) and group mentoring (Williams et al., 2019), research has started to investigate new mentoring models and dynamics. Not all these new theoretical frameworks are within the entrepreneurial mentoring arena, which further confirms scholars' urgency and cognizance of this major lacuna. Furthermore, it represents a consensus among different study fields regarding the need for a deeper and more comprehensive theory.

These new theoretical frameworks claim that for certain individuals and circumstances, more than one mentor may be a better approach to guide the mentee. This is especially vital when one mentor cannot possibly meet the learning needs of the mentee. Certainly, this is the case for growing startups racing and competing for investors' attention and capital. "Developmental network theory suggests that these mentors should have complementary skills, providing a broader range of opportunities, expertise, and psychosocial support to enhance mentees' careers (Halvorson et al., 2015, p.824)." Extrapolating these results to the entrepreneurial mentoring arena, the more mentors supporting the entrepreneur, the more access to diverse expertise and resources. Hallen et al., (2020) validated this assumption by proposing a model of broad, intensive and paced consultation. According to the authors, this is a new learning mechanism, and mentoring is just one of the channels. Yet it depicts exactly what a developmental network is: a group of resources, some close-tie relationships, others loose-tie relationships but

complementary as a source of knowledge and support. “Accelerators are entrepreneurial programs that attempt to help ventures learn, often utilizing extensive consultation with mentors, program directors, customers, guest speakers, alumni, and peers (Hallen et al., 2020, p. 378).” Authors hesitate to delve into the debate about the differences between consultation and mentoring. Yet they do present a different model within accelerators that validate the efficacy of access to a network of resources and not just one dyadic mentoring relationship. This is almost identical to the model of developmental networks. “While the concept of traditional mentoring focuses on a dyadic relationship with a more experienced person within the same organization, developmental networks focus on a ‘constellation’ of developmental relationships, regardless of organizational boundaries (Lee, 2019, p. 106).” They are not the only scholars exploring the benefits of multiple resources. “Though the importance of a strong primary mentor remains salient, newer mentorship models encompass multiple mentors from which a mentee receives complementary guidance, skills, and advocacy (Halvorson et al., 2015, p. 824)”.

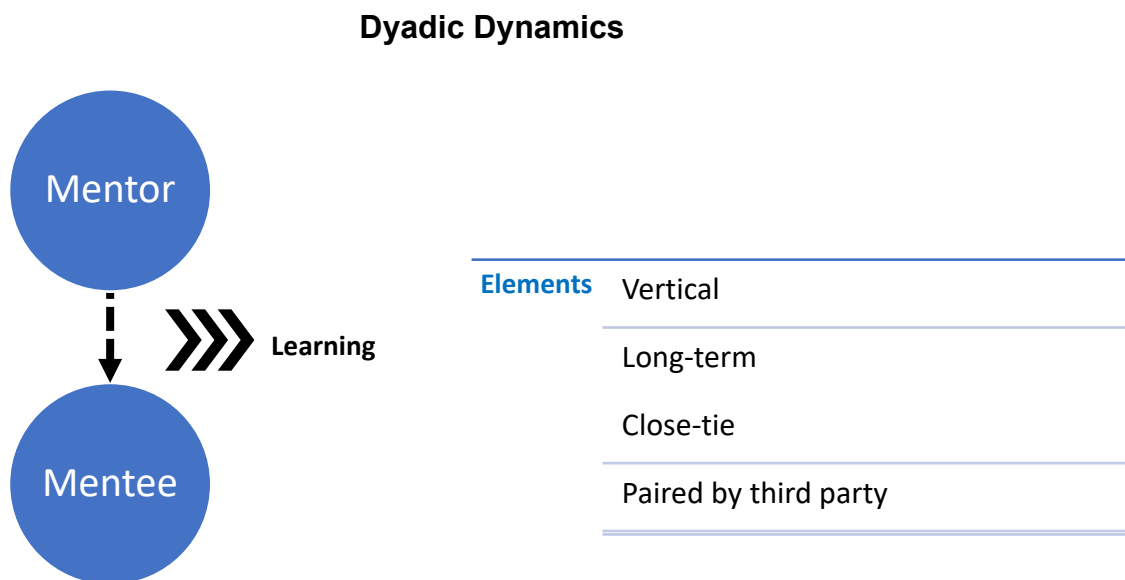
An additional interesting assumption of new theoretical models posits that none invalidate dyadic mentoring relationships, they merely suggest the inclusion of new approaches and models. In the case of Hallen et al., (2020), it is clear that the study looks at the phenomena from an organizational learning perspective, yet the model shows how a network of external resources benefits startups in those accelerators encouraging these dynamics.

“Also, unlike venture capitalists that typically assign a representative member to handle advising and interactions with each venture in which

they invest, accelerators often encourage consultation from many different types of parties beyond just internal program directors, including mentors, peer ventures, alumni, and industry experts (p.381).”

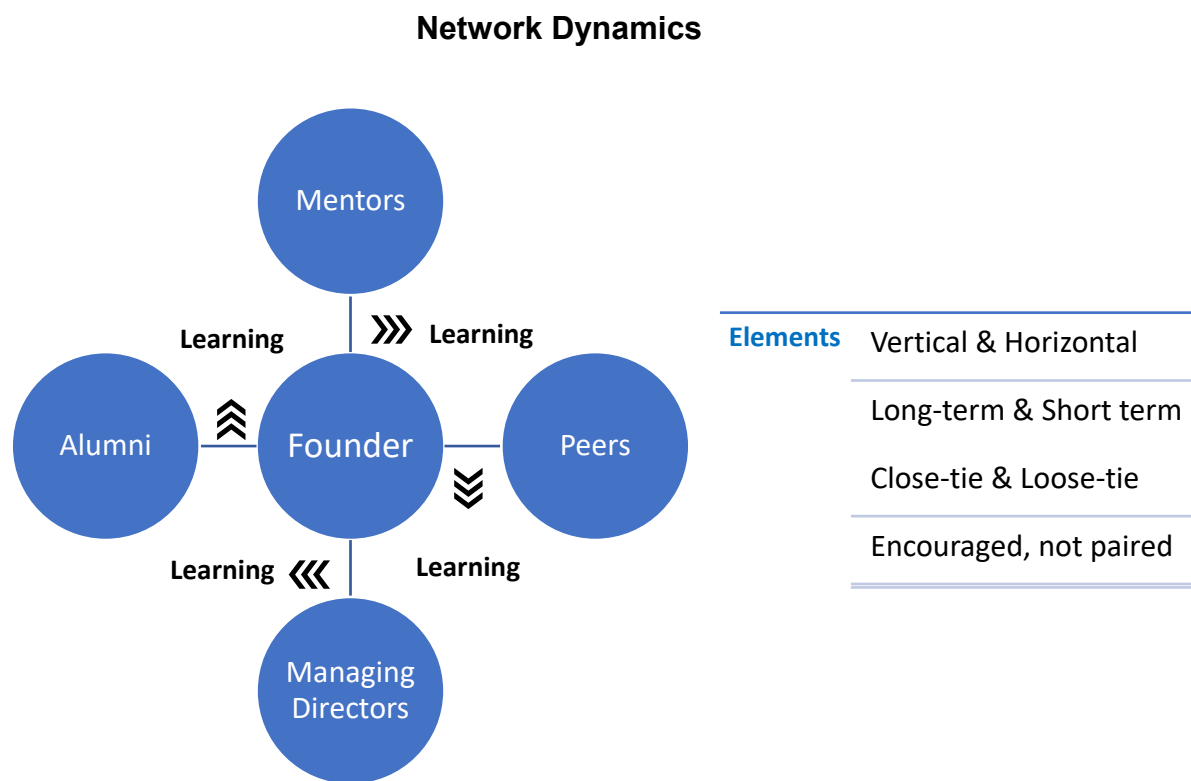
Figures 1 and 2 summarize the salient differences between the elements driving the dynamics in a dyadic mentoring relationship and a network approach.

Figure 1: Dyadic Dynamics and its elements.



Source: Author created

Figure 2: Network Dynamics and its elements.



Source: Author created

Thus, some accelerators rely on networks rather than on dyadic mentoring relationships to create richer learning experiences. The relevance of this practice is even more latent when outcomes also include the transfer of that network to the startup, which makes it its own (Battistella et al., 2017). Noteworthy is the fact that an extended and diverse network, just as a dyadic mentorship relationship, could be kept for the long term.

Finally, according to Lee, (2019) the concept of developmental networks proposes three attributes that resonate with the Hallen et al., (2020) broad, intensive and fast-paced consultation model. First, there are multiple actors engaged in the development of the mentee. Second, the network is diverse. And third, the network

is selected by the mentees, so it is egocentric, which means it responds to their needs.

Founders can learn from multiple mentors and emerging research is exploring this new approach. Accelerators are incorporating this approach into their designs and empirical data show that important learning is derived from these novel mentoring dynamics.

It is clear that entrepreneurs are learning from multiple sources and actors. New mentoring theories are proposing models that support the notion of multiple mentors as a more logical and resourceful pool of knowledge. Founders at accelerators are not just learning from a dyadic mentor-mentee relationship. The literature is starting to elucidate these new dynamics and while scholars aim to evolve these new theories, it is fair to conclude that entrepreneurs at accelerators are learning from multiple mentors. These evolving theoretical frameworks lead me to our first proposition.

P1 - Founders will learn from multiple mentors rather than a dyadic mentoring relationship.

Mentoring Functions

Mentoring at startup accelerators has proven to be a distinctive and consequential design component, where unique dynamics could signal innovative and improved practices. Evidently, how mentoring is delivered and who the mentors

are poses tremendous design differences (Cohen et al., 2019a). Since mentoring at startup accelerators has proven to positively affect startup performance, academic research on this specific learning experience has been increasing over the last decade. Yet, mentoring literature alone still has many subfields and phenomena that have been neglected (Kubberød & Ladegård, 2021). This explains why startup accelerators have been forced to explore and adopt different formulas while adapting to the unique demands of their cohorts. Although accelerators such as YCombinator prefer to rely on managing directors for their mentoring component, some other platforms provide intensive mentoring opportunities. The authors Cohen et al., (2019a) called this modality *concentrated consultation* and confirmed that having access to multiple mentors in a short period of time positively affects startups' performance. The authors attribute these outcomes to several factors, including the startups' enhanced capacity to process new knowledge, their access to *social proof* for their ideas, and the multiple sources of varied information without the need to derive it from their own experiments.

This novel theoretical framework was further tested by Polo García-Ochoa et al., (2020), who found that intensive mentoring affects performance by increasing startups' absorptive capacity, thus improving their ability to integrate new knowledge. This clearly leaves an important gap between accepted definitions of entrepreneurial mentoring and the current plethora of research based on dyadic mentor-mentee long term relationships. Mentoring dynamics under a concentrated consultation modality pose a different set of variables. This formula alone challenges foundational conceptions of entrepreneurial mentoring as a paradigm, as well as long-standing proclaimed best practices. First, mentors may not be just experienced entrepreneurs,

which challenges the core definition of entrepreneurial mentoring. Accelerators may tap into multiple internal and external resources to provide founders with the knowledge and contacts they need, and all these resources are commonly referred to as mentors (Cohen et al., 2019b). Mentors could be peers, accelerators' managing directors, investors, among other external resources. Second, interactions may foster loose-tie relationships, as some of these resources may offer a valuable piece of knowledge only once or serve as a network broker by connecting startups with needed contacts. Third, the value of mentoring is based on the amount of relevant information and acquired knowledge, not the mentor. This is probably the biggest shift for the paradigm, as the entrepreneurial mentoring learning dynamic may not be anchored in a relationship but in its outcomes. This also reveals an important gap in the literature on mentoring functions, as there is no theoretical framework to explain the mentoring functions effectively exerted at concentrated consultation mentoring dynamics.

My research will argue that the career mentoring function is the most prevalent and influential under the unique scenario of a startup accelerator. Ultimately high-growth startup challenges demand specific resources (McKevitt & Marshall, 2015) and the career related mentoring function encompasses the transfer of business knowledge and social capital, the very things provided by a concentrated mentoring dynamic. McKevitt and Marshall (2015) argue that mentoring is a source of referrals, yet the access to these contacts only requires weak ties. Furthermore, they theorize about the mismatch between the needs of high growth ventures and the resources that best mentoring practices could provide. That perspective is shared by Kubberød and Ladegård, 2021, who emphasized the lack of literature explaining the best match

between the learning needs of mentees and mentoring functions. Considering that those learning needs and the timeline to fulfill them may be quite different at an accelerator, there is still much research ground to explore.

A good mentoring relationship accompanied by a mentor's informational support and guidance could counterbalance professional skills that entrepreneurs may not have (El Hallam & St-Jean, 2016). Recent research by St-Jean and Jacquemin, (2022) demonstrates that mentoring can significantly reduce doubt, a feeling that could potentially impact an entrepreneur's motivation. Curiously, the authors also found that only career-related mentoring has an impact on entrepreneurs' level of doubt. Quite intriguing is the fact that, according to their data, entrepreneurs showing more doubt were paired with mentors that were not necessarily involved in an entrepreneurial career. Thus, mentors that could potentially reduce doubts in mentees may not necessarily have to be experienced entrepreneurs. Which begs an obvious question: Are experienced entrepreneurs the only plausible mentors capable of driving positive results for entrepreneurs? This question challenges extant literature. "Generally speaking, however, entrepreneurial mentoring is described as a form of support relationship between a novice entrepreneur (the mentee) and an experienced entrepreneur or manager (the mentor) (St-Jean & Audet, 2009, p. 149)."

According to St-Jean (2011), the functions exerted by mentors in an entrepreneurial context are different from those employed in a corporate scenario. His research identified three distinctive mentoring functions: psychological, career-related, and role model. "[...] entrepreneur mentors exercise nine different functions.

Four of these functions may be grouped together in the psychological functions category, four others compose the career-related functions category, and the last constitutes the role model function (p. 79)” These categories are not new. Extant literature began to determine the distinctive mentoring functions a few decades earlier. In fact, St-Jean (2011) started from the theory developed by Kram (1985) who posited the existence of two main mentors’ roles: the career-related function and the psychological function. His subsequent chronological analysis of extant literature emphasizes the prevalence of these two functions. Yet, some of these theoretical developments have differing results. While the career-related functions and the psychological functions have been related to entrepreneurs’ learning (El Hallam & St-Jean, 2016), a recent quantitative study found no relationship between career-related functions and the startups’ performance (Eesley & Wu, 2019). It is important to mention that these contradictory findings are the result of mentoring programs with different contexts and time frames. First of all, programs impacted startups at different life-cycle stages. Eesley’s study, referred to above, exposed participants to a seven-month course. This raises even more questions about the relevance of the time frame and life-cycle stage of the startups when mentoring entrepreneurs. None of the studies clearly describe the process of mentoring in depth; and potential nuances in both dynamics as potential new variables are unknown. Moreover, not many studies are focusing on the unique mentoring dynamics at accelerators, and considering the varied designs and methods employed by these platforms, it is clear that much remains unknown and open for new theoretical propositions.

Mentoring functions basically catalogue mentors’ behaviors and communication techniques exerted by mentors to facilitate the mentees’ learning.

According to Kubberød and Ladegård, (2021), mentoring functions bridge the relationship between the mentor's behavior and the mentees needs. In fact, they argue that mentoring effectiveness relies on the mentor's capacity to *maximize the fit* (p. 809) between these two variables. Interestingly, an equally novel study by Nabi, Walmsley and Akhtar (2021) proposes a different arrangement of mentoring functions, claiming that mentoring students during early university years is quite different from other entrepreneurial mentoring scenarios. This adaptation of the mentors' behaviors to fit the specific scenario of the mentees suggests two important points. Fit between the mentoring functions and the mentees' needs matters greatly, and new mentoring functions or increased emphasis on one function vs. another may simply be a response to the unique scenario where mentoring happens. Nabi et al. (2021) also highlights the mentees' need for specific business knowledge as it seems critical for them to understand the venturing process in detail. This function was catalogued as *advancing students' subject knowledge* (p. 1160). This is compatible with specific attributes of the career-related mentoring function, which focuses on the transmission of social capital and business knowledge (McKevitt & Marshall, 2015; St-Jean, 2011). To be more specific, St-Jean, (2011, p. 65 - 95) provides a clear description of the four functions encompassing the career-related mentoring behavior: (1) integration which refers to the mentor's network brokerage capability or connecting to key resources in the entrepreneurial ecosystem, (2) information support, which describes the mentors transfer of business knowledge and personal experiences, (3) confrontation, a function focusing on fostering reflection on the mentees as a source of new plausible and enhanced solutions, and lastly (4) the guide function, an interesting role involving the proposition of new solutions or aiding the mentees to understand the problem from a different perspective.

Two other mentoring functions have been identified and studied. While the role model function may be seen as a form of vicarious learning and inspiration, the psychological function is better described as emotional support. Based on St-Jean's theoretical framework the emotional support mentoring function encompasses: (1) the reflector function, which allows the mentor to serve as a mirror, provides a clear image of the status of the mentee's venturing journey; (2) reassurance helps mentees cope with stress and uncertainty; (3) motivation provides a source of resilience and self-confidence and (4) confidence is a conduit for the development of friendship.

While most of the psychological mentoring functions seem important for the founder's persistence, inspiration and resilience, these are needs that pertain to the personal realm. Yet, for small firms and high-growth ventures, the desired mentoring outcomes may be at the startup level (McKevitt & Marshall, 2015). Clearly, outcomes at the organizational level are also the desired performance expected by accelerators. Plus, if mentoring functions must be contingent on startups' needs, the goals of participants at accelerators are seldom presented as personal outcomes. Challenges by growing companies are business-specific and the only mentoring behaviors directly related to the transfer of knowledge or the introduction of relevant resources to fill those gaps are the career-related mentoring functions. Thus, this study proposes the following:

P2: Startups' most pressing challenges trigger the search for mentors with relevant experience and knowledge.

After all, mentoring functions should respond to the mentees' needs, hence prompting mentors to transfer specific information. In addition, the literature also leads us to propose:

P3: Startups which have launched in the market and are in a growing phase will be more likely to seek and benefit from career-related mentoring.

Knowledge and contacts are, beyond any doubt, career-related mentoring functions, expected outcomes, and, possibly, the prevalent mentoring purpose at accelerators. Ultimately, mentors would be adapting to the unique scenario posed by startup accelerators, where, according to recent research, new mentoring dynamics become essential.

Entrepreneurship & Social Networks

Social networks and access to social capital have been identified as critical components of the entrepreneurial activity (Pinho & Sampaio, 2013). Empirical studies link startups' performance and higher chances to overcome liability of newness to its ability to access larger and diverse networks (Aarstad et al., 2010; Aarstad, J., Pettersen, I. B., & Henriksen, K. E. 2016; Polo García-Ochoa et al., 2020; Vissa, 2012; Baum et al., 2000). The literature argues that startups' social networks may increase their legitimization, access to critical knowledge and visibility in the ecosystem. In fact, when startups' networks provide them with such visibility to investors, their opportunities to raise funds also improve (Aarstad et al., 2016).

The same principles apply to other organizations such as investors' firms. The literature has also explored the relationship between the quality and structure of venture capital firms with their ability to gain access to better deals. Empirical evidence revealed that the larger the social network of a firm the more access to potential deals (Alexy et al., 2012). The same study argued that VC firms' network structural characteristics also affect the resources investors can provide to the startups they invest in. Investors provide several critical resources to their investees. One of them is the funding they need to grow and survive. Yet, access to key contacts and networks as well as other investors is also an array of resources that venture capitalists devote to propel their portfolio of young firms (Naulin & Moritz, 2022).

To a great extent, this theoretical framework helps explain how social networks developed and nurtured by accelerators may impact startups' performance. Just as venture capital firms' access to better deals is contingent on the size and structure of their social network, accelerators' social capital resources may define their access to better potential participants. The quality, structure and extent of their networks may also affect their capability to provide startups with the resources they need to overcome their liability of newness. A recent study on accelerators confirms this relationship. According to Polo García-Ochoa et al., (2020), startups' access to networking opportunities while in the accelerator program factors into its future success. The study considers mentors, customers and other ecosystem stakeholders as part of the valuable networks that accelerators can leverage. Moreover, it disregards strong ties as the only relationship conducive to beneficial learning outcomes at the startup level. The true key ingredient, according to their research, is

the startup's absorptive capacity or its ability to integrate the knowledge gained from the network.

The latter is neither a novel conclusion nor a recent literature development. Linking access to network to entrepreneurial learning and absorptive capacity is a relationship other studies have elucidated. "Social network theories that stress the advantages of structural holes or gate-keepers, for example, tend to emphasize access to new information and overlook the individual accumulation of technical and social knowledge that make its application to innovation possible (Obstfeld, 2005, p. 107)." The new interesting literature development that further emphasizes the importance of networking opportunities as a core component of accelerators is the fact that these platforms can enhance their startups' absorptive capacity: "Accelerators which enable founders to have more frequent access to mentors, potential clients and stakeholders are enhancing their absorption capability as well as their probabilities to acquire financing (Polo García-Ochoa et al., 2020. p 118)."

From an entrepreneurial learning perspective, a relevant and high-quality network positively affects startups' access to knowledge. Entrepreneurial learning is contextual, and external sources of knowledge are known to influence startups' capability to innovate and stay competitive (Sarkar et al., 2001). Entrepreneurs learn by interacting with customers, mentors and investors (Aarstad et al., 2016). What they learn, according to Seet et al., (2018, p. 248), is that social capital is more important to accelerators' participants as a learning experience. Their study further explained the relationship between social capital and learning by highlighting its

relationship with access to key know-how. This know-how includes not just business and technical relevant competencies, but also the intelligence on how to engage with critical contacts and new networks. Click or tap here to enter text. All these theoretical assumptions were further validated by recent empirical evidence. According to Hallen et al., (2020), most of the learning at accelerators occurs via the founders' consultation with multiple actors in the ecosystem, a vast network that includes mentors, program directors, customers, investors and peers.

Thus, for founders, and, consequentially, their startups, having access to knowledge and expertise from external sources is critical for success. While this fact reiterates the importance of having a network of mentors, it also questions the validity of having just a single pool of mentors as the unique source of knowledge. If diversity, size and structure of the network affect the entrepreneurial learning outcomes and the chances of startup success, having a mechanism to enlarge, maintain and diversify a network of resources could be the most influential component of an accelerator.

Recent literature has begun to note the importance of embedding the entrepreneurial ecosystem hosting the accelerator as a key factor affecting both the startups and the accelerator's performance (Shetty et al., 2020). If the quality and size of networks affects startups' access to key knowledge, and the accelerator's ability to gather those external resources is directly linked to the ecosystem, these factors are intrinsically intertwined. This also places the accelerators as intermediaries between the startups in the program and the resources available in

the ecosystem (Cohen et al., 2019b). This has profound implications for the design of the accelerator, especially for those geographically located in early-stage ecosystems. The literature has begun to attribute differences in accelerators' performances to the characteristics of the ecosystem, as poor access to experts and investors may explain discrepancies between U.S.-based accelerators and those in emerging markets (Shetty et al., 2020). As ecosystem catalysts and intermediaries, accelerators have the task of identifying, engaging and connecting the resources to the startups (Goswami et al., 2018). This not only has implications for the accelerator's design of its networking activities, it also has implications for the development of the dynamics which foster key relationships. Novice entrepreneurs may have limited access to networks; yet when they have access to external knowledge, their inexperience poses delays for the adequate analysis of the information (Aarstad et al., 2016). Novice entrepreneurs also connect with multiple external resources in an explorative manner, which means that they are neither certain of the resources they may need, nor of the information they should be looking for. Thus, an accelerator's efficiency in attracting the best possible connections to its network could decrease the explorative mode of novice entrepreneurs.

The literature is unequivocal: social networks play a key role in both the entrepreneurial learning dynamics as well as in startups' development. Learning from external resources is critical for early-stage ventures. Startups are expected to have smaller networks and limited access to experts other than those comprising the founding team. Experienced entrepreneurs have proven to behave differently when it comes to network development and exploitation (Aarstad et al., 2016). They know the value of a dense network, they know where and who to connect with, and most

importantly they know how to create such partnerships. These dynamics have proven to provide experienced entrepreneurs with advantages. Thus, if an accelerator's goal is to support startups' development, providing them with access to a high-quality and large network can clearly improve the chances of a better performance. Moreover, those accelerators amassing relevant and impactful social networks are also enriching their ecosystems (Battistella et al., 2017) by attracting either better startups to the program or other key experts and potential investors (Ghorashi & Asghari, 2019). While mentoring has been recognized as the most influential learning experience at accelerators, in fact, none of the mentoring dynamics are feasible without access to a vibrant and knowledgeable pool of mentors. Moreover, these mentors also play a key role as a point of access to other valuable connections. Access to the right *who* is highly related to the quality and relevance of the knowledge available to startups (Seet et al., 2018).

Thus, deficiencies at the ecosystem level need to be overcome by accelerators aiming to support promising startups, and the only alternative is to purposely attract the best possible mentors and resources, even those not available in the local ecosystem. Access to such a sizeable, diverse and well-connected network will define startups' development through its access to much needed know-how.

Considering the importance of a rich network and the role mentors play in providing access to valuable connections leads to the following proposition:

P4: Founders will prefer mentors with access to a network of key resources for their startup development.

The accelerator as a network broker

The fundamental learning experiences provided by startup accelerators require these entrepreneurial development platforms to work as ecosystem catalysts (Ghorashi & Asghari, 2019; Goswami et al., 2018; Shetty et al., 2020). Some may even be designed to provide only this specific outcome. Gonzalez-Uribe and Leatherbee, (2018, p. 1566) referred to Startup Chile as an *ecosystem accelerator* further defining business accelerators as an institutional form of *entrepreneurial ecosystem*. Most of the startup accelerators' definitions allude to the networking opportunities offered to startup founders, but not until recently have researchers begun to include in their definition the relationship that exists between these platforms and the ecosystem. Networks and entrepreneurial learning theories underline the importance and positive impact of social capital on firms' performance (Fukugawa, 2017). Thus, clearly the access that network startup accelerators give founders through mentoring programs and other networking opportunities is relevant for their development.

A network's structure has been related to innovation outcomes. According to the literature, dense networks are those identity-based and close-tie relationships that facilitate knowledge transfer. These networks are also known for high cohesion (Jonsson, 2015). Dense networks are also said to provide redundant

information, thus are not novel nor as useful for creating the new combinations required to innovate (Obstfeld, 2005). Networks with structural holes, where connections are more distant, may provide the information-diversity that innovation demands, yet lack the cohesion to implement the actionability of the necessary novel solution. So, although both types of networks are critical as startups draw information needed to innovate, the accelerator's resources must also be marshaled in order to implement them. It is clear that startups need both types of networks to succeed. Yet, they may need these networks at very different stages of their life cycle. The literature supports the notion of entrepreneurial networks adapting over time as they respond to the specific challenges and needs of a young firm (Jonsson, 2015; Strobl & Kronenberg, 2016). At the very early stages of a firm, entrepreneurs depend more on their own dense close-tie networks but these cohesive networks become less useful as the company tackles challenges at a more mature stage (Jonsson, 2015). The challenges startups face as they move from one life-cycle stage to the next force them to transform their networks from dense identity-based to a sparser one; Jonsson, (2015) called this *network evolution*. Evolving their own networks is key to enhance a startup's information and resource needs as it grows. The literature describing this dynamic is limited (Jonsson, 2015). Accelerators' networking opportunities may be insufficient to support this dynamic.

Ghorashi & Asghari, (2019) theorize that one of the objectives of an accelerator is to create value for the ecosystem stakeholders, which includes mentors, corporations, universities and investors. Nevertheless, an accelerator's ability to propel startups' growth also depends on the resources provided by this same ecosystem. Thus, the relationship between the entrepreneurial ecosystem and the accelerator is reciprocal.

While startup accelerators need the knowledge and access to valuable connections from the ecosystem actors, the platform's capability to support growing startups further enriches the ecosystem. This *quid pro quo* dynamic is neither organic nor spontaneous. Accelerators must develop connection expertise and the capability to build and maintain the network of resources that will support its startups (Goswami et al., 2018). As these authors note: "The emerging data structure [. . .] highlights four kinds of expertise that allow accelerators to function as meso-level intermediaries between founders and regional entrepreneurial ecosystems: connection expertise, development expertise, coordination expertise and selection expertise (p.125)." They also define connection expertise as: the ability of the accelerator to connect the founders with the ecosystem. Thus, serving as a social network broker is a skill an accelerator must possess and nurture. The authors also underline the need for coordination expertise, which requires the accelerator to connect the founders with the appropriate mentor. As well, their 2018 study posits that these competencies were further enhanced by an accelerator's expertise in selection. Selecting the best possible startups and the mentors or resources with the needed knowledge is as critical as connecting and matching them. This suggests that even if any given regional ecosystem gathers a high-quality pool of resources, it is the accelerator's proficiency in managing its social network what drives its positive performance (Shetty et al., 2020).

Some definitions of startup accelerators overlook the fact that these platforms are organizations. As with any other organization, both its capabilities and knowledge are transferred from those leading and managing the operations. Thus, the accelerators' capabilities to engage, connect and further expand their network lies in

their founders and directors. This implies that founders and managers must act as network brokers at the ecosystem level (Cohen et al., 2019b). It also suggests that the social capital of the founders and managers is a critical resource to develop the accelerator's network, as noted by Jonsson, (2015):

“Social capital is the sum of its actual and potential resources that are embedded within, available through and derived from the network of relationships (internal or external) in which an individual or social unit is engaged. Social capital thus comprises both the network and the assets that may be mobilized through that network (p. 199).”

How managers build, nurture and expand their network and, consequently, the startup accelerator network, needs to become part of the conversation to elucidate how these platforms affect startup performance. Thus, the role of network brokers and deal makers (Cohen et al., 2019b) should not be overlooked. There are two types of network brokerage. The embedded brokerage involves enabling knowledge transfer among those close ties in a dense network. An unembedded brokerage connects distant resources in a sparse network. This means that network evolution will require that a broker go from an embedded to an unembedded brokerage. Regardless of the distance that the connections may pose, Quintane (2016) emphasizes there are two distinctive approaches for the analysis of brokerage dynamics. Brokerage can be studied from a *structural position* perspective and as an information exchange *process* (p.1343). The literature also theorizes about the strategies that brokers employ to manage the exchange of information (Obstfeld,

2005; Quintane, 2016). The *tertius gaudens* and the *tertius iungens* strategies are differentiated by the broker's role as facilitator. While the brokers employing a *tertius gaudens* strategy facilitate the connection and remain as the only conduit for information transfer, the *tertius iungens* strategy facilitates the transfer of information but relinquishes its role as conductor. Any of these brokerage orientations have implications for network development. Applied to the accelerators' networking opportunities, it is clear that these strategies may contribute to the design and dynamics fostered by the platforms. Obstfeld (2005) posits that the collaboration among *alters* (others) conducive to innovation can only be accomplished by a *tertius iungens* strategy. Collaborations should be fostered among both dense and sparse networks, posing an interesting challenge for the broker. Acting as a network broker, the founders and directors must value, understand and be capable of intentionally managing two types of networks. This further explains why startup accelerators must exhibit competencies in the selection, connection and coordination of resources (Goswami et al., 2018). As network brokers, managers and founders must nurture a network rich in diversity, both dense and sparse in terms of structure; most importantly, they must assume a *tertius iungens* brokerage approach to connect the network with its startups.

This network approach to explicate the significant role managers, directors and founders play in building a dense and diverse network leads this study to propose the following:

P5: Startup accelerator managers play a critical role in the development of a valuable and relevant network of mentors.

Startups' Life-Cycle Stages

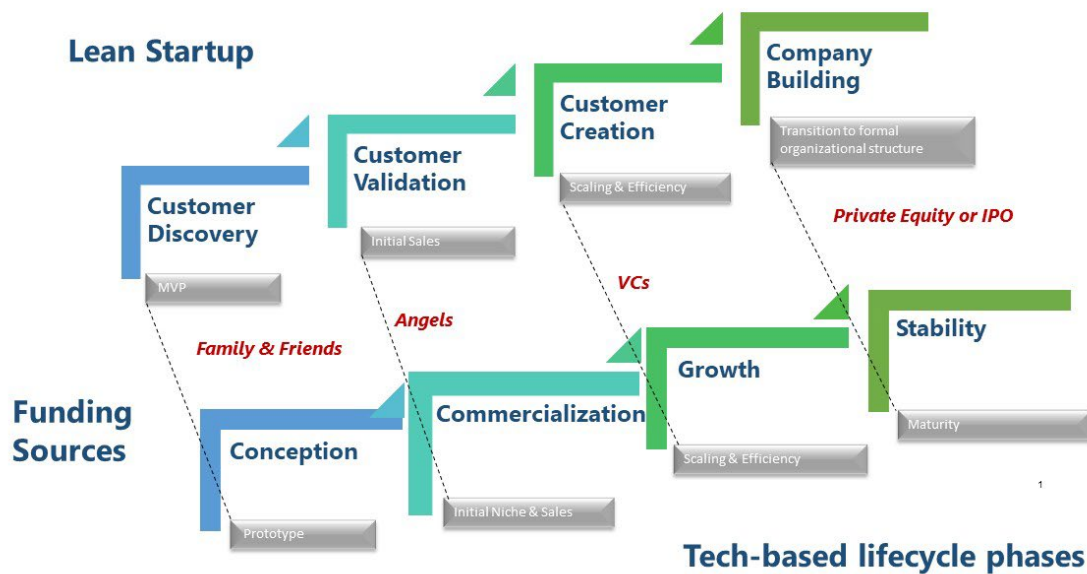
Grounded in the life-cycle approach, the different development stages of startups are defined by the distinguishable problems faced in each growth phase (Kaulio, 2003; Strobl & Kronenberg, 2016; Tzabbar & Margolis, 2017; Wu & Hsu, 2013). Fisher & Lahiri (2016) substantiated this observation by contrasting the types of resources pursued by startups in different life-cycle stages. In addition, different startup stakeholders seek and expect different legitimacy milestones from the organization. From this perspective, each startup's life-cycle stage encounters different legitimacy thresholds, hence the introduction of different problems and resolutions at each stage. The literature has many models depicting the growth stages of startups and the specific challenges entrepreneurs must overcome in order to conquer the next developing stage.

Seminal Lean Startup methodology further refined startup creation and growth into four phases (Overall & Wise, 2015). The phases are: 1) customer discovery; 2) customer validation; 3) customer creation; and 4) company building, with each phase presenting different discernible challenges and undertakings that must be completed prior to transitioning to the next stage (p 27). Following the Lean Startup method, during the customer discovery phase, entrepreneurs' primary activity is the completion of a minimum viable product (MVP) (Overall & Wise, 2015). During the second phase, customer validation, one of the most important challenges is finding a fit between the solution and a suitable market, which can only be confirmed by initial and considerable sales growth (Kaulio, 2003). Interestingly, once the new venture is validated through repeated sales and growth, the Lean Startup model stops using the startup nomenclature to describe the venture. At the third stage, customer creation,

the venture seeks scaling of the initial sales and efficiency. No matter which model or theory is used to define and explain a startup's life stages, amid semantic differences, all denote more or less the same factors per stage (Fisher & Lahiri, 2016). This is even more evident when problems faced by startups are simplified and converged. Theories that describe technology-based startups' life cycles emphasize the following four stages: conception, commercialization, growth, and stability (Wu & Hsu, 2013). According to this theoretical framework, the first stage is driven by technology-development and the creation of a prototype, which is very much comparable to the Lean Startups' MVP. The second phase is characterized by product realization and search for a niche market, a similar approach to Lean Startup's product market fit (Fisher & Lahiri, 2016), which also solicits pilot sales at this stage. The third stage is depicted by sales growth and efficiency pursuit, which leads into the last stage, maturity and stability. These four stages can easily be aligned with financing stages as the literature has also shown the connection between lifecycle stages and types of funding sources (Kaulio, 2003; Overall & Wise, 2015).

Figure 3 shows the similarities between the startup life-cycle stages' challenges posed by Lean Startup, and the tech-based theory and implications for fundraising strategies.

Figure 3: Life-Cycle Stages Comparison



Blank, S., (2003); C. Wu & Hsu, (2013); S. Wise & J. Overall, (2015)

Common terms used to describe startup funding stages are: seed, early stage, expansion, and later stage (Overall & Wise, 2015). The fundraising stages model is also relevant in explaining the different problems and challenges faced by startups at each stage. Seed funding is sought by startups in the very early stage, where a final product has not been completed. Thus, the main sources of financing for this stage are family, friends, or the founder (using their own savings). Once the startup has demonstrated sales, funding sources for this stage may include angel or venture capitalist (VC) investing. The scaling or expansion stage signals a significant increase in sales, which may lead to a more serious financing round with venture capital or corporate venture funds. A later growth stage in startups is financed by private equity, or, vastly preferred by startups, an IPO. What all these models clearly describe is the distinctive set of milestones a startup must achieve in order to graduate to the next growth stage. Each milestone will likely be supported by a specific group of capital

fundlers, each responding to different legitimacy thresholds. While only family and friends may risk capital in unvalidated business ideas, VCs will be interested in proven business opportunities with certain levels of actual sales and potential growth. Again, implications for mentoring rest on the fact that each milestone as well as each stakeholder will require, from both the founder and the startup, a very different set of competencies. Thus, relevant mentoring must respond to these critical resource demands. Accordingly, if learning outcomes at the founders' level aim to positively affect startup performance, I argue that there is no other potential formula for mentors to succeed.

The most distinctive factor between very early-stage startups and growing ventures is sales. During these very early stages, regardless of the model that is used, (customer discovery or conception), startups are working to develop a product while making no sales. Having a product and pilot sales are characteristics of the second phase. This logic may explain the simplified model in a study by Tzabbar and Margolis, (2017) that recognized only two distinct new venture phases: the startup phase and the growing phase. This simplified strategy was also discussed in a study by Fukugawa (2018). The author described early-stage entrepreneurs' challenges as being mostly related to opportunity identification and business plan refinements while the growth stage prompted these startups to push for customer acquisition.

Robert Sullivan (2000) invoked the lifecycle development approach to argue in favor of *just-in-time* mentoring as an important factor to address the unique startup challenges posed by each of its growing phases. The theory of providing mentoring contingent on a venture's age was also underlined by Bisk (2002). This

paradigm has developed over time, with some variations in its approach, nevertheless suggesting a plausible required *fit* between the mentoring functions and the life cycle phases of the businesses. According to Lefebvre and Redien-Collot (2013), different communication strategies deployed by mentors affect distinct entrepreneurial activities. While a more engaging communication strategy impacts a business launch phase, a provocative communicative action proves to be a better fit for the fundraising activity, clearly a much more advanced stage. The communication strategies portrayed by Lefebvre and Redien-Collot are closely related to the mentoring functions defined by St-Jean (2011), as these functions are executed through communicative actions. Indeed, in their quantitative study, St-Jean and Audet, (2012) confirm that methods exerted by mentors could predict learning outcomes at the mentee level.

“[...] cognitive learning occurs mainly through verbal exchanges, explanations, questioning, and through the mentor and mentee working together. This last learning process appears to be the most appropriate method for skill-based learning. Affective learning occurs through verbal exchanges, but distinguishes itself from cognitive learning in that mentor modeling, and encouragements directed to the mentee are significantly more important in the learning process (p.128).”

The significance of the authors' discoveries rests on the feasibility of adapting the mentoring functions to foster certain learning outcomes. Thus, a fit between a mentee's learning needs and the mentoring functions is attainable if the mentor has the ability and knowledge to do it. As St-Jean and Audet, (2012) also propose, the

mentors become a critical variable as their knowledge and competencies, including some personal traits, can determine the learning outcomes. A neutral result or a complete failure are plausible if the mentor does not have the knowledge sought by the mentee. This alone strongly suggests that, at a minimum, a mentor must possess certain knowledge relevant to the mentee in order to form a productive learning dynamic. A *fit* seems to be more than a logical and reasonable hypothesis but also a strong predictor of mentoring success.

New theoretical developments continue to support the notion of mentoring adaptation according to the lifecycle stage of ventures. “Preferences for two types of mentors suggested that potential entrepreneurs have different needs of mentorship support at different stages of an enterprise (Deepali & Chaudhary, 2017, p.106).” Interestingly, their study found that ventures in a growing phase preferred mentors with management experience, while early-stage ventures favored interaction with mentors coming from academia. This theory is supported by other studies explaining the plausible cognitive misfit between startup founders and the organization they aim to manage, as ventures demand very different skillsets and knowledge as they grow (Brigham & de Castro, 2003): “Cognitive misfit refers to the degree of mismatch between an individual’s preferred and dominant decision-making style and the style demands (structure) of the work context (p. 40).” Thus, startup growth lifecycles demand not only different resources and cognitive styles from their founders but must recognize that a misfit may lead to negative outcomes. It seems appropriate to deduce that any learning outcomes propelled by mentoring should, at a minimum adapt, to meet the startup’s changing demands. It could also be that the mentoring functions, as well as the content, may need to aim for a reduction of the misfit

between the founders' cognitive style and the startup's demands. Otherwise, outcomes at the startup level may not be attained.

A quite similar paradigm was revealed in the field of corporate accelerators, where the choice of mentors greatly depended on the type of outcomes sought by the sponsor. Corporate accelerators seeking to scale and strategically incorporate new technologies into their ventures assigned high-level managers to mentor startups. On the other hand, those corporate accelerators looking for startups' emergence and ecosystem development assigned experienced entrepreneurs and accepted startups in an earlier stage (Shankar & Shepherd, 2018). The relevance of matching mentors according to the needs of the ventures was further supported by Goswami et al. (2018). Their research confirmed that accelerators' expertise in fitting mentors' capabilities with entrepreneurs' needs is vital to attain success. Indeed, the idea that entrepreneurs need to learn new skills as ventures grow is well-established dogma within organizational learning theory (Purcell & Scheyvens, 2015). Not only do individuals need to learn as the organization grows, but the organization itself needs to learn in order to survive (Brockman, 2013). It is quite difficult to conceive of an entrepreneur's crucial learning experience through mentoring as a static, inflexible practice. In fact, extant literature supports the flexible just-in-time features of entrepreneurial mentoring; thus, mentoring effectiveness is contingent on its dynamism and on a good fit.

There is additional evidence revealing positive outcomes when there is a fit between startups' lifecycles and the experiences of those human resources supporting entrepreneurs. The latest study from Fukugawa (2018) reveals that due

to distinctive patterns in startups' growth stages, incubator managers' professional experiences in technological developments have a positive impact in some tech driven companies, but just in the very early stages. However, those same professional experiences may not affect startups at a growth stage. Interestingly, for incubator managers, their management skills seem to positively impact startups' development in various industry sectors, yet the impact seems related more to a startup's later growth stage. Results support the notion of startups needing a different set of resources, including specific knowledge at different growth stages. Incubator managers seem to be more relevant and impactful contingent on the fit between their skills and the specific knowledge demands posed by the startup growth stage. It is reasonable to assume that the same fit should exist at accelerators between mentors' skills and knowledge and their mentees' specific needs. Fukugawa's 2018 study also starts to highlight the type of knowledge a startup in a growth stage may need and seek, such as management skills. While the biotechnology industry didn't show the same effect as in other sectors, the evidence clearly raises a strong case for a positive relationship.

Thus, since variance in the challenges faced by startups are contingent on their life cycle stages (Fisher & Lahiri, 2016; Kaulio, 2003; S. Wu & Jung, 2008), mentoring functions should also be contingent on such growth phases' unique challenges. The literature not only supports this notion, but also posits a clear distinction between the relevance of transferring specific management skills at later growth stages. While industry-specific knowledge may help a startup at a very early stage, this won't have the same positive impact in a growing phase. Expanding into the mentoring field, the literature is unequivocal on distinguishing the career-related

mentoring function as the conduit for transferring management skills. While these skills may benefit founders in general, the early stage of startups is a phase defined by a period of exploration rather than selling a product. This is also a period plagued by doubts as proven by St-Jean and Jacquemin, (2022). Thus, I argue that at an early stage, startups may require less career-related mentoring, especially when compared with startups that are in a growing phase (Waters et al., 2002). These early-stage startups do not have a validated concept, so there is barely an operation to manage. At this development stage the founder may be more in need of encouragement, motivation and sense of self efficacy. "Affective learning occurs through verbal exchanges but distinguishes itself from cognitive learning in that mentor-modeling and encouragement directed to the mentee are significantly more important in the learning process (St-Jean & Audet, 2012, p.128)." The type of desired learning outcomes seem to be much more affective than cognitive, which evidently requires a different set of methods. To be theoretically precise, an early-stage startup will require mentors to exert a different, and perhaps more intense, mentoring function than those in a later growth stage. This leads me to posit the following proposition:

P6: Early-stage startups will seek to learn and obtain different resources from mentors than those startups in a growth stage.

Clearly supported by the literature, different startup life cycle stages will pose very distinctive challenges; thus, founders are driven to seek those resources needed to overcome such challenges. Any mentoring provided to startups would have to adapt to such demands in order to be effective. Furthermore, startups which have launched in the market and are in a growing phase will be more likely to seek and

benefit from career-related mentoring. These startups will need specific management skills, technical know-how, and most importantly, access to a varied network of relevant resources. This is only possible when mentors exert a career-related mentoring function.

Accelerators' Performance

Current literature discusses accelerator morphology, a clear recognition of the multiple components that could be customized in these platforms, and the potential influence these unique elements could have on outcomes (Chan et al., 2020). A startup accelerator's design is defined by the type of startups it selects, the experiences and vision of the founders, the intensity and resources of its mentoring program as well as the external network supporting it (Cohen et al., 2019b).

The multiple purposes and goals of startup accelerators depend on the founders' objective, yet outcomes are contingent on both internal factors and the ecosystem surrounding it (Polo García-Ochoa et al., 2020). Some researchers claim that there are three types of accelerators: deal-flow, corporate, and welfare (Shetty et al., 2020, p.156). Others recognize four distinctive categories: innovation, social, university and corporate (Cánovas-Saiz et al., 2020, p.219). Authors claim these categories represent the diverse set of goals and stakeholders sponsoring startup accelerators. Categorizing startup accelerators has implications for the study of the platforms and the assessment of their performance. Comparing performances of heterogeneous platforms may result in incorrect or false conclusions (Shetty et al.,

2020), thus perpetuating unbeneficial practices.

The literature on startup accelerators is still debating the best variables to measure success, yet most of the studies operationalize these platforms' performance in terms of the outcomes achieved by their portfolio of young ventures. In general, there is a consensus on the main purpose of any accelerator, which is to advance a startup's development (Polo García-Ochoa et al., 2020; Chan et al., 2020). The literature also mentions such goals as increasing startup attractiveness to investors (Cánovas-Saiz et al., 2020; Goswami et al., 2018), evidencing growth through an increased number of employees (Gonzalez-Uribe & Leatherbee, 2018) and creating startup activity at the ecosystem level (Shetty et al., 2020). In addition to the distinctions demarcated by the startup accelerator founders, platforms may focus on startups at very different life-cycle stages. Advancing nascent startups versus those on a high growth path posits a very different set of challenges for the accelerators. Companies at divergent growth stages will require different resources. Together with other internal variables at the accelerator level, these factors will lead to marked differences in outcomes (Chan et al., 2020; Shetty et al., 2020).

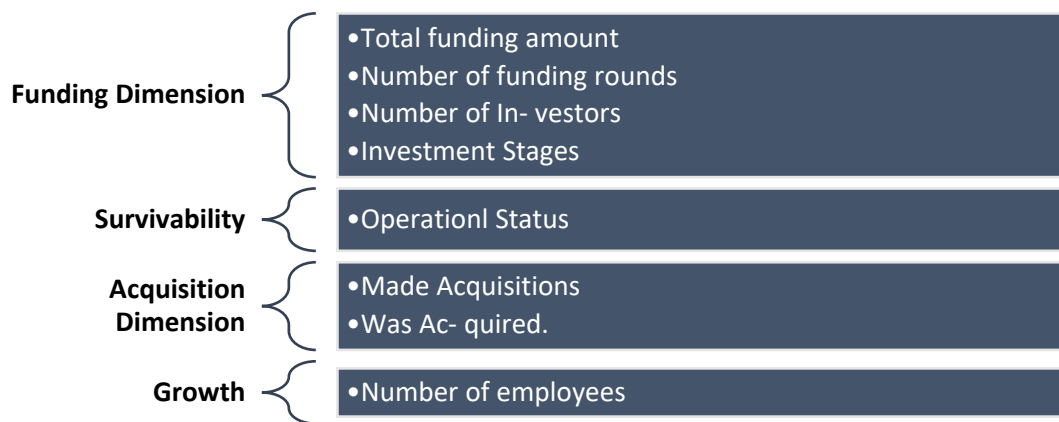
All these variables contribute to the understandable amalgam of performance indicators aiming to evaluate an accelerator's impact. Clearly, research would need to further explore unique performance indicators for distinctive platform categories while considering individual design differences when comparing equivalent accelerators. Comparing and assessing dissimilar startup accelerators may prove to be problematic. Regardless of the apparent discrepancy in nomenclature and performance indicators, research seems to assert that an accelerator's performance

should be presented as a two-fold outcome, both direct and indirect. Direct and intended impact on a startup's performance are the first and most researched outcomes. Most of the research focuses on the accelerator's portfolio of startups, measures the amount of capital raised from investors, and evaluates the young venture's growth as an organization. It is recognized that venture capital and growth are positively related, equating fundraising capability to increased chances of survival and scaling (Cánovas-Saiz et al., 2020). This variable is also the indicator publicly displayed by accelerators to signal their success as a platform. Most will advertise their portfolio fundraising achievements as well as the number of exits as indicators of their successful intervention as growth catalysts for the startups and the local ecosystem.

Startup Performance

One of the most recent studies evaluating accelerators' performance by assessing its portfolio of startups introduces a series of multidimensional measures to assess four indicators: funding dimensions, survivability, acquisition, and growth variables (Shetty et al., 2020, p.155). Each measure has a series of variables, presenting one of the more comprehensive lists of startup accelerators' performance indicators.

Figure 4: Multidimensional measures to measure startup accelerators' performance.



Source: Shetty et al., (2020)

Results from this study further explain the most influential factors in startup accelerator performance. The results confirm the positive relationship between the capital provided by startup accelerators and startups' chances of growth and survival; thus, inputs from these platforms yield results at the startup level. Yet, the most influential factor affecting accelerators' performance has nothing to do with intrinsic factors, rather with their ecosystems' capabilities and resources. While the literature has largely proposed the ecosystem itself as a plausible influence (Chan et al., 2020; Cohen et al., 2019b), this quantitative study confirms that an ecosystem can explain differences at both the startup and accelerator level. Shetty et al., (2020) explain the obvious connection between the ecosystem's capabilities and the human capital feeding the mentoring and networking components of the accelerators. Thus, the accelerator's hosting ecosystem matters, just as it matters for startups. Furthermore, research seems to suggest that startup accelerators and their hosting ecosystems have a symbiotic relationship. According to Goswami et al. (2018), startup accelerators' impact could also be measured at the ecosystem level; however, the

level of discrepancy around this assessment and the best possible indicators renders it uncertain. Indeed, decoupling impact caused by the accelerator at the ecosystem level from other factors is a daunting challenge, and effects may not be seen for years.

The success of a startup accelerators' portfolio of ventures is the most studied and viable indicator of these platforms' accomplishments. Indeed, the ecosystem capabilities and resources pose an unavoidable challenge as the main sources of human capital and external knowledge for startup accelerators. Yet, organizational elements still play an important role in the performance of accelerators. Gonzalez-Uribe and Leatherbee (2018) and Leatherbee and Eesley (2014) studied the impact of the Startup Chile accelerator and concluded that the schooling components of the platform were positively related to startup fundraising and number of employees. Shetty et al., (2020) confirmed that there were internal factors that could explain accelerators' performance in homogeneous ecosystem conditions. Thus, just as Cohen et al., (2019a) and Cohen et al. (2019b) established that differences in accelerators' design do matter when analyzing their outcomes, other academics have explored connections between core components of these platforms and startups' performance. Gonzalez-Uribe and Leatherbee (2018) related the unique learning experiences of accelerators to startup performance, but negligible empirical evidence has specifically associated the mentoring received by startups at accelerators with their subsequent performance (Hallen et al., 2014; Wise & Valliere, 2014). A growing number of studies on entrepreneurship theorize about the positive relationship of mentoring and startup performance, yet little research focuses on mentoring at accelerators. El Hallam and St-Jean (2016) posited that the complexity of finding a

correlation between mentoring benefits and organizations' performance means that some plausible effects may emerge in the future. This is true when startup performance is measured by its profit growth (Waters et al., 2002) or sales growth (Chandler & Lyon, 2009) as these measurements can indeed be problematic to assess accurately within three to six months or the duration of the accelerators. However, startup performance at accelerators is defined by variables that may be seen during or shortly after the end of the program. In fact, most of the latest studies on startup performance at accelerators does not use profit growth or sales growth as indicators but use changes in number of employees. Survivability has also been used as an indicator, yet the inclusion of other indicators is contingent on the type of accelerator being assessed.

Interestingly, team development emerged as an important aspect (Cánovas-Saiz et al., 2020) of startups' validation in the latest qualitative research by Goswami et al., (2018). Adding key team members, advisors, or employees could take place while startups benefited from the accelerator. Team development and characteristics have also been correlated to higher probabilities of getting VC funding (Franke, Gruber, Harhoff & Henkel, 2008) when developing investment-ready startups is an accelerator's emphasis (Pauwels et al., 2016). Since obtaining additional investments by Demo Day, which is the ultimate and anticipated outcome by accelerators' participants, we could argue that team development must happen prior to this event (Fishback et al., 2007; Hoffman & Radojevich-Kelley, 2012; Miles et al., 2017). Thus, there are feasible and desired outcomes at the startup level that can be accomplished during, or quickly after, the conclusion of the accelerator's program. Certainly, these outcomes can be measured and compared. Failure is also another form of validation

that could be gained during, or shortly after, an accelerator's program. This is an outcome that can result from interaction with key resources provided by the ecosystem (Goswami et al., 2018). Thus, accelerators' first order outcomes, such as (1) startup validation or survivability (success or failure), (2) number of employees, and (3) articulated interest from investors, should be displayed at DEMO Day or shortly thereafter. It is clearly viable to measure success at the startup level. A startup accelerator's success can and should be actively assessed during the program and shortly after. Undoubtedly, greater impact and outcomes may be seen months or years later. Number of exits, number and intensity of startup activity as well as startup valuation growth may be among the performance indicators that could take longer to prove a positive impact (Cánovas-Saiz et al., 2020).

Research Propositions

Just as with any other organizational learning dynamic, mentoring poses complexity and requires caution and serious considerations. Evidently, mentoring programs as learning experiences produce benefits for both founders and their startups. It also has been demonstrated that positive outcomes from mentoring are contingent on a series of factors including the functions exerted by mentors, their communication strategies, and a startup's life-cycle phase. Enough evidence has also shown that mentorship programs demand some formal planning and logistics. A formal mentoring program implies the direct intervention of the accelerator and a strict time frame for the relationship (Bisk, 2002). It was also found that an accelerator's expertise in the selection of the appropriate mentors and then matching them according to entrepreneurs' needs are crucial to drive performance (Goswami et al.,

2018). Thus, the literature has enough evidence to support the critical role of mentoring and learning on some important startup performance indicators. Recent studies underline the importance of *fit* when mentoring according to startups' lifecycle phases.

My study aims to further elucidate how mentoring and other potential unknown dynamics may play a significant role as startups benefit from accelerator learning experiences. Grounded in literature and the most recent empirical evidence, I summarize the propositions formulated by this qualitative study.

P1: Founders will learn from multiple mentors rather than a dyadic mentoring relationship.

P2: Startups' most pressing challenges trigger the search for mentors with relevant experience and knowledge.

P3: Startups which have launched in the market and are in a growing phase, will be more likely to seek and benefit from career-related mentoring.

P4: Founders will prefer mentors with access to a network of key resources for their startup development.

P5: Startup accelerator managers play a critical role in the development of a valuable and relevant network of mentors.

P6: Early-stage startups will seek to learn and obtain different resources from mentors than those startups in a growth stage.

Chapter 3: Methodology

A case study can be a powerful research methodology, and the most suitable one when research aims to produce an in-depth description of a phenomenon (Yin, 2017). This method is commonly used in management studies especially because it supports the thorough analysis of a case within its real-life context (Leoni, 2015, pp. 610–627).” It is also appropriate when extant literature about the phenomenon is scarce, and theory fails to provide a detailed explanation. Entrepreneurial mentoring research is in a very early stage (Kubberød et al., 2018). Furthermore, research about entrepreneurial mentoring occurring within startup accelerators is much less documented and understood. Early studies have started to emerge, but none offer a detailed description of the mentoring dynamics prompted by the unique conditions fostered at accelerators. The case study methodology selection was based on several factors. First, not all startup accelerators have a formal well-structured mentoring component, thus Gener8tor offers a critical case (Yin, 2017). This concierge accelerator’s design has a *concentrated consultation* mentoring approach (Cohen et al., 2019a). This specific approach was recently described by these authors as: [...] “a reinforcing set of design elements, such as arranging for ventures to meet with over 50 mentors,” (pp. 1781-1797). Results from their inductive, nested, multiple-case studies concluded that such dynamics led startups to higher performance. Therefore, the qualitative study successfully poses a new theoretical framework that explains the different accelerator design components, specifically the different mentoring dynamics employed by accelerators and their positive effects on startups. The authors propose both qualitative and quantitative research to identify other variables affecting startups’ performance. Yet, their study never went into a

granular description of the mentoring dynamics and the divergent demands this new approach may have for both startups and accelerators.

Gener8tor is among the top accelerators in United States, and it has over four different acceleration programs targeting startups in very different growth stages and geographical areas. The program poses the perfect scenario for a single case study, offering the possibility of gathering data from units at very different levels and from different scenarios. These specific conditions provided fertile ground to observe and describe this concentrated consultation dynamic from a startup's perspective. Thus, an inductive single-embedded case study where startups are the embedded units of analysis is an appropriate method to describe the founders' experiences and the impact of the described interaction with mentors at the startup level. Due to the multiple programs running at different geographical locations, this study was also able to corroborate data patterns with multiple managing directors, who further confirmed the observed mentoring dynamics as well as the role the accelerator played in fostering these dynamics.

The sample size of the embedded single case study was limited by the case selection itself. Gener8tor is a concierge accelerator, catering only to a selected group of five companies per cohort. This specific design component allows the platform to focus more resources on those selected companies. Yet, Gener8tor has expanded its portfolio of initiatives to support different industry verticals as well as companies at different growth stages. Indeed, this offers an opportunity to gather rich descriptive data from different sources. "Somewhat surprisingly, single cases can

enable the creation of more complicated theories than multiple cases, because single-case researchers can fit their theory exactly to the many details of a particular case (Mariotto et al., 2014, pp. 358–369).”

Construct Validity

Scant literature on entrepreneurial mentoring set hurdles to provide abundant examples to support the construct validity of the study. Nonetheless, examples of peer-reviewed case studies (Ahmad & Ingle, 2011; Cohen et al., 2019a; Flatten et al., 2011; Kubberød et al., 2018; Maritz et al., 2013) authenticate the validity of the phenomenon and propositions. Cohen et al., (2019a) used a multiple case study design to theorize about the different design core components of accelerators. The notion of *concentrated consultation* components where founders are exposed to over 50 mentors in a short period of time is well documented. Results from my study further support the theorized concept, the benefits derived from the dynamic, and the challenges described by founders in the study. Concentrated consultation in this study included the interaction founders had with accelerators’ managing directors and mentors. My study’s theoretical framework defines mentoring as a learning experience within the accelerator, so the single case study aims to richly describe this dynamic. The Kubberød et al., (2018) study supports the operational measure of mentoring as a learning experience. The single embedded case study analyzes “the learning process of each student, seen in retrospect, [which] evolves during the course timeline” by comparing observations across each embedded unit to “theorize on interesting dimensions of peer mentoring in entrepreneurship education (p.1029).” For the Kubberød et al., (2018) study, 19 students were interviewed, all of them

mentees. Correspondently, the conclusions of my study were formulated from the mentees' learning experience. In addition, my research was able to further confirm our initial observations with managing directors' interviews, which allowed us to generalize our theory from the individuals to the case itself, the accelerator.

A thick description and rich evidence are also key to amplifying construct validity. Multiple data points help triangulate the constructs and observations. My study triangulates the information by using data from interviews with founders, interviews with accelerators' managing directors and additional interviews with the founder of Gener8tor, who, according to data analyzed from initial interviews, were considered to play key roles in the mentoring dynamic. For confidentiality purposes the founder was labeled as one of the managing directors. A total of 18 interviews, coupled with archival data, articles and site observations, were conducted between 2019 and 2021.

External Validity

Our study aims to describe the *how* of mentoring dynamics at accelerators and how mentoring is manifested as a learning experience. In addition, the qualitative study design stems from well-grounded theoretical propositions (Yin, 2017). However, results from this embedded single case study may provide a new and interesting angle that could partially invalidate emerging theoretical propositions around entrepreneurial mentoring, most probably for accelerators with a mentoring component following a concentrated consultation design. Invalidation, in which case evidence may prove a previous theoretical notion false, could provide sufficient

grounds for generalization (Mariotto et al., 2014). Empirical evidence from my research, unearthed a new series of dynamics between mentors and mentees that challenge some of the theoretical conceptions of dyadic mentoring relationships. Moreover, while learning from mentors is documented, career-related mentoring functions were evident but not within the previously conceived dynamics of long-term relationships based on trust and perceived similarity, which are also prevalent theoretical concepts in the field. These constructs are not fully invalidated because the accelerators represent a completely different setting when compared to a dyadic mentee-mentor relationship in a long-term program. Indeed, some explanatory elements of the mentoring dynamics should be further examined.

Sample

This is an embedded single-case study. It draws data from a United States-based startup accelerator focused on high-growth startups. Gener8tor leads a family of concierge accelerators, including programs based in cities in four U.S. states: Milwaukee, Minneapolis, Madison, and Cincinnati. Gener8tor is an investor-led accelerator, ranked among the top 15 programs in the United States and it supports from 20 to 30 startups a year. This accelerator has developed several different platforms, each targeting startups in distinctive life cycle stages. The Brandery, based in Cincinnati, Ohio selects companies in a seed stage and leverages the branding, marketing and design expertise of the region. Gener8tor Studio in Madison, Wisconsin, selects individuals and teams interested in starting a high-growth venture from scratch. Gener8tor, its signature program, selects high-growth startups from different industries and regions. All of Gener8tor's platforms expose founders to a

Mentor Swarm where over 100 mentors are introduced over a two-week period during the first month of the program. This concentrated consultation dynamic (Cohen et al., 2019a) is core to the accelerator’s design. Mentors are neither assigned nor required to provide a specific number of mentoring sessions. Mentor-mentee relationships are managed by founders, who ultimately decide who, how and when to engage in the relationship. Founders are encouraged to select the best suitable mentors based on their specific needs, and to nurture their newly developed network of mentors through monthly reports.

Table 1 describes the acceleration platform that founders were exposed to and the life-cycle stage of their startups. Gener8tor has a group of concierge accelerators, and while all of them follow the same design, not all of them target startups in a growth stage.

Table 1: Description of Startups by Gener8tor Program & Life-Cycle Stage

Founder	Platform	Life-Cycle Stage	Location
Founder A	Gener8tor Studio	Early Stage	Madison, WI
Founder B	Gener8tor	Growth Stage	Madison, WI
Founder C	Gener8tor Studio	Early Stage	Madison, WI
Founder D	Gener8tor	Growth Stage	Madison, WI
Founder E	The Brandery	Early Stage	Cincinnati, OH
Founder F	Gener8tor	Early Stage	Madison, WI
Founder G	Gener8tor Studio	Early Stage	Madison, WI
Founder H	Gener8tor	Growth Stage	Minneapolis, MN

Founder I	Gener8tor	Growth Stage	Madison, WI
Founder J	Gener8tor Studio	Early Stage	Madison, WI
Founder K	Gener8tor	Growth Stage	Minneapolis, MN
Founder L	Brandery	Growth Stage	Cincinnati, OH

Source: Author Created

Data collection & analysis

Qualitative data were gathered through semi-structured interviews of 12 founders and six program managing directors; one co-founder was also included (See Appendices A and F for details of communications with the sample). Data from founders was acquired within nine months of graduating from the program, starting in August 2019. Semi-structured interviews were designed to assess startup founders' learning experiences with mentors at startup accelerators. Six basic questions were designed to start the conversation with the founders (See Appendix B):

(1) Please describe the most pressing challenges your startup had when you started on Gener8tor.

(2) What did you as a founder need the most from mentors?

(3) Which was the most impactful piece of mentoring you received from your mentors?

(4) Describe the impact mentoring had in your decisions or behavior as a founder and its outcomes

(5) Has the founder team succeeded in raising any interest from investors?

(6) How close is the company from an angel or venture capitalist investment deal?

The semi-structured interviews with managing directors were guided by a different set of questions and objectives. These additional interviews were designed to expand and confirm the information received from founders in the initial phase of the research. The following questions were used to start the conversation with managing directors (See Appendix E):

(1) How would you describe the accelerator's process and criteria used to identify, invite and nourish the relationship with your mentors?

(2) Does the accelerator provide any sort of guidance or training to its pool of mentors?

(3) How does the pool of mentors respond to the needs and challenges faced by the startups?

(4) What are the accelerator's expected outcomes from the interaction of mentors and startups?

(5) Are the startups instructed on best practices to capitalize on the mentorship component of the program?

These interviews were done between August 2021 and September 2021. All the interviews were designed to last from 30 to 45 minutes, and all were recorded, transcribed and coded using a thematic analysis. Transcription of all the interviews

provided 297 pages of content. The NVivo software platform was used to do iterative thematic coding to extract meanings, patterns and relationships from the data (See Appendices G and K for details).

Additional observations were taken on site and during the launch of Gener8tor Madison Cohort's Premier Night of 2019 as well as during additional visits during the Investor Swarm. Observations and data patterns were complemented by analyzing over 100 pages of archival data collected from two sources: startup applications (See Appendix C) to the accelerators, and startup progress reports (See Appendix D) submitted to the accelerator. A total of 22 documents, ranging in length from four to 12 pages, were provided by Gener8tor. Progress reports provided explicit information of critical connections with relevant networks made possible by mentors. Founders were also encouraged to celebrate and recognize mentors and investors that were critical to the recent achievements of the startup, so these monthly reports were key to corroborating the outcomes of the concentrated consultation and the newly formed network of mentors.

Chapter: 4: Findings and Analysis

Founders' challenges & learnings

Raising capital was the most pressing challenge for founders. It was also a clear learning goal. This finding is consistent with outcomes of a case study analysis, where 75% of the startups at top accelerators in the U.S. claimed funding was the founders' top challenge (Hoffman & Radojevich-Kelley, 2012). Hence, raising capital seems to be a common hurdle for founders at accelerators. Maintaining a positive cash flow and keeping growth pace through financing were major priorities for founders in those platforms targeting high growth startups. As Founder I explained, the real challenge seemed to be in acquiring the know-how to have the right content and the story telling skills to attract the investors. In his words: "How did you tell the story, and what changes we needed to work in the business to put us in the best position to fundraise, to be ready for fundraising, to have a compelling story for partners." Most of the founders were concerned about telling the right story to potential investors, even those with some experience raising capital from angels. Founder J described pitching to venture capitalists as a different art: "Maybe how to tell the story of raising capital. It's different than going out and getting customers. And I think that is something that even though I've done some of that in the past with, like, angel investors. It's a very different art." However, founders participating in the Gener8tor Studio platform faced different challenges. Their startups were in a very early stage, consequently their challenges were very different. The most salient one was related to validating their business ideas and creating the company. Yet, the creation of the company in itself posed different challenges to each of the founders. "So, the real challenge for me was actually finding or building a product based on the

research, or, in this case, be based on my skillset and my domain knowledge,” explained Founder A. Founder G presented the challenge of creating a new company viewed through another lens: “The thing that took the most time was actually filing it as a company and so, kind of the legal element of it.”

Table 2 provides details of founders’ most pressing challenge: fundraising. As presented in the table, these quotes explain the complexity of the challenge from different perspectives.

Table 2: Description of startups’ most pressing challenge: fundraising

Founder	Startup Challenges: Fundraising
Founder B	“Definitely have to be when we first started generator was definitely finances, we were basically out of money before we had generator.”
Founder K	“At the very start of a generator, once we knew we were in generator, probably be closing our largest potential customer, and then probably again today would be fundraising OK.”
	“I don't know if I would use the word issue because we're growing pretty well. Like even if we didn't get additional funding we would still be growing but additional funding allows us to grow faster.”
	“But if you don't have access to more fundraising a lot of times people associate fundraising with needing money to stay alive at the early stages but you start to hit an inflection point where fundraising is more for growth and that becomes more obvious at later stages Series B and beyond...”
Founder D	“...we weren't sure that we were going to raise money when we started generator and when we were done we were certain we were going to raise money.”

Founder E	"...my second was definitely funding. Having the money to be able to scale my business."
Founder F	"I would say funding is number one, but that really wasn't our only challenge, of course."
Founder H	"Okay, I would say the need to raise capital."
	"Maybe how to tell the story of raising capital. It's different than going out and getting customers. And I think that is something that even though I've done some of that in the past with, like angel investors. It's a very different art."
	"Fellow cohorts, even though they had raised some capital, I think we all are. That's a really hard one. It's a hard, hard thing to understand how to do that on top of everything else."
Founder I	"I think it was probably preparing for fundraising."
	"How did you tell the story and what changes we needed to work on in the business to put us in the best position to fundraise; to be ready for fundraising; to have a compelling story for partners."

Source: Author created

Apart from polishing an attractive pitch deck for investors and convincing them to commit capital for the next growth stage of their ventures, founders had a wide array of management challenges from marketing, sales plans, and strategic decisions to hiring the right human resources. Founder L explained: "We had a sit-down session with one of the mentors about Pinterest strategy, as well as just, like, where we should be putting our marketing dollars." Some of the challenges threatened the continued development of the venture. "And then I think number three would have been finding a competent co-founder that could bring on to manage other aspects of the business,

and I was able to figure that out,” explained founder E. Meanwhile, for founder F, the challenge was even more daunting: “Basically, lack of customers.”

Understanding founders’ challenges is a key step preceding the analysis of the mentoring dynamics and outcomes. This research’s first proposition argues that startups’ most pressing challenges trigger the search for mentors with relevant experience and knowledge. Thus, it is important to determine if the challenges posed by the founders have any relationship to the knowledge sought from mentors and the learnings obtained from the mentoring provided within the experience of the accelerator. Indeed, there was a clear pattern, and founders placed urgency in bridging their perceived gaps with the right sources of know-how.

Learning from Mentors

Without doubt, founders learned from their interactions with mentors. The thought-provoking aspect of this outcome became evident when we paired founders’ most pressing challenges with those lessons learned from mentors. There were two distinctive lessons that stood out as major outcomes from the interactions with mentors. The first was network expansion and the second was how to pitch to investors. The latter was expected considering that the ultimate goal of most startup accelerators is a portfolio of startups backed by investors. Raising capital from investors is also the number one challenge for most founders. Thus, at a minimum, it is clear that founders were able to fill the biggest gap they were aiming for: learning how to raise capital. Nevertheless, after analyzing our qualitative data, the first and most important reported learning outcome was pure serendipity. The vast majority of

the founders, 75%, claimed that getting connected to key resources was the single most important outcome they got from the Mentor Swarm. “I think the biggest impact that mentors have was connecting me to other people within the retail space,” explained Founder E when asked about the most important lessons learned from mentors. Having access to resources with the needed expertise or access to other key resources was the most beneficial outcome startups gained from interacting with the mentors they were exposed to through the Mentor Swarm. Moreover, it was not just the connections but the skills to create and nurture their own network.

“And just like, generally like how to, how to, like, maintain, like, a professional network. I think that improved a lot, you know, in terms of, like, sending updates and meeting with folks and things like that. So, I would say those are kind of the three big things that I took away from it.”
Founder B.

The unexpected results opened the door to ask founders and managing directors about several intriguing factors: Was the accelerator purposely teaching founders how to nurture a relevant network? How important was it to select mentors with dense and high-quality networks? These questions were explored by the accelerator’s managing directors.

We wanted to know if the program actually teaches the participants how to build the network or how to leverage the opportunity to connect with over a hundred mentors. Director 2 didn’t hesitate to respond: “Yes, Gener8tor is really good at that,

so after the Mentor Swarm there's a lot of sessions that we will have internally.” Director 6 further explained: “Yes, we do prepare them for Mentor Swarm and we do have outlines as well that we share with them prior to it, and we will also dedicate part of our one-on-one sessions to go into it, and again try to make sure that they optimize the time that they're sharing with these mentors.” Thus, founders were taught how to connect and maximize the opportunity to meet and talk to mentors. While no control was placed on whom to meet with, clear expectations were set for the way founders capitalized on the time spent with mentors.

The next interesting discovery was the role played by the accelerator in attracting the right mentors to the vast network offered to the founders. The accelerator managing directors were key to unearthing the details of this unexpected dynamic. Working as an ecosystem catalyst, identifying and attracting mentors with rich networks while encouraging founders to build and stay engaged, these networks of resources were purposely designed elements of the platform. This new exposed dynamic between the managing directors and the founders highlights two important aspects of the startups' learning journey. The first is that providing access to key human capital and information from external resources is an important task that the accelerator must accomplish to enrich the learning outcomes. Second, connecting the founders with a rich network is insufficient, but teaching them how to engage and prolong, those relationships suggests that the network itself could be much more impactful. Thus, the mentoring component of the accelerator should be seen as much more than just identifying the right mentors and matching them with the startups. In fact, Cohen et al., (2019a) provided empirical data to support that a concentrated consultation approach to mentoring, as practiced by Gener8tor's Mentor Swarm,

shortens the learning cycle. According to their study, founders exposed to tens of mentors perform better due to faster information processing. Just as described by Gener8tor's founders, finding patterns in the feedback provided by multiple mentors helps them distinguish the signal from the noise.

The novel element in this dynamic is the training given to the founders to build and maintain those relationships as part of their vast network of external resources. Gener8tor requires and trains founders to submit monthly reports. While the literature has identified these monthly reports as a mechanism to put pressure on the startups to show progress (Polo García-Ochoa et al., 2020), Gener8tor purposely uses them to help the startups develop and nurture their own network. The following is an image of the template provided to startups to keep investors and key resources informed of the progress of the company. The same template is followed by the startups to keep the accelerator updated on their development. (See Appendix D for template of Gener8tor monthly progress report)

Monthly Investor Update Template	
• Highlights:	○ What milestones or accomplishments are you most proud of?
• Lowlights:	○ What are the things you're most disappointed about?
• Product:	○ What has shipped and has the roadmap shifted?
• KPIs/Core Metrics:	○ How is the business / product performing?
• Business Development:	○ Did you close any notable deals / partnerships? What opportunities are in the pipeline?
• Hiring:	○ Were any key employees hired or fired? What positions are currently open? ○ If hiring, link to a job posting/description. ○ Include LinkedIn links of new hires.
• Financing:	○ How much cash is left in the bank? What is the current burn? When do you run out of cash?
• Press:	○ Any notable press mentions? ○ Include links.
• Help Wanted/Asks:	○ Where do you need the most help from your investors and advisors?
• Kudos:	○ Which investors and advisors went above and beyond to help the company? ○ Name them! People love seeing their name and others will be more motivated to help if they see the names and contributions of others (peer pressure).

Source: Gener8tor

Table 3 shows both sides of the learning dynamic. While entrepreneurs claim and value the benefit of expanding their network by adding key contacts, managing directors explain the accelerator's purposely designed component, and how monthly reports are meant to keep the network engaged and actively participating in the startups' development.

Table 3: Startups learned how to engage and manage a network of resources

Founders	Most valuable learning	Directors	Fostering Network Development
Founder B	“And just like, generally, like how to, like, maintain a professional network. I think that improved a lot, you know, in terms of, like, sending updates and meeting with folks and things like that.”	Director 1	“On the startup side, some of our coaching is around how do you handle these conversations and how do I position myself where I'm showing the values, and being honest about the faults and places where I need help. Where I can build a strong partnership with this individual rather than it being too transactional.”
Founder E	Well, connecting us to people in the food and beverage space, like, in retail that will be interested in supplying our product and having it on their shelves. I think the biggest impact that mentors have was connecting me to other people within the retail space.”		“So, like, sometimes within, like, their monthly update list a company might have plateaued for a year, then they'll figure something out and now they're growing, like, 20-30% every month. For, like, three or four months, and suddenly they're going to start getting all these emails from these different angel investors or VC funds that turned them down in the past, and say when you're raising your next round, like, I'd like to commit something to it. Good job!”
Founder G	“ Up from the mentors' forum, we got a lot of really interesting connections. And so basically, they would be like, hey! you should get in touch with this person or this person, and then you reach out to those people and have more interesting meetings.”		“I think I was so, we were pretty explicit about it, like, we want to, we want them to send it we try to get them to send it bi weekly when they're in program and then, once a month every month after. ”
Founder H	“And so, I was looking for people who could connect me with others in this marketplace. And so, if you're disciplined enough to do monthly or even semi-monthly updates. So, you're getting out, you	Director 5	“ Those folks are reading those updates every other week or every month most program and we have investors reach out all the time, who may have met them in the program weren't ready to invest right, then, but now

	<p>know, hey, here's what's going on with the company. That has been really critical. And so, having all those mentors that I send that out to the most critical thing for that group is they make introductions to us.</p>		<p>they've been able to track their growth over and given time and now they're reaching out to really start having a conversation about getting on their CAP table so that's from the investor's standpoint but it serves the same for the mentors."</p>
	<p>"So, I get an email, hey, I want you to meet (founder H) that unless you to take it from here. I bet. I've gotten, no exaggeration, probably 30 introductions."</p>		<p>"Yeah! I actually do think that we also help them grow their networks, as I said, it's not uncommon for some of these folks to go on and join these teams, all these people were introducing them to us or someone that we introduced them in the program introduces them."</p>
	<p>"You know, that's what you're looking for is those people willing to help you. And so, to me, that's one of the big values of the mentors is introductions."</p>		<p>"Introducing you to someone who's going to come onto your team to help push the company forward as well. We can make those initial introductions we can make thousands of initial introductions but after we make those introductions it's on the founders to maintain the relationships."</p>
Founder I	<p>"And I think those introductions like I've tried to get some of those introductions on my own and it's hard to get them to pay attention to you. So, having the ability to meet with those people with Gener8tor was really helpful."</p>	Director 2	<p>But once you've kind of made that determination, Gener8tor is really, really good at teaching people how to network and how to, you know, work with their mentors and kind of on the hook, and you know, continuing to stay engaged.</p>
Founder J	<p>So, she's been super helpful with, like, poking holes my ideas and also connected me with other investors.</p>		<p>"Those emails will just stop getting opened at some point, so I encourage people to, you know, basically start progress reports right around the time when connecting the dots of one-month progress reports to the next one is really telling a compelling story; because that's what's going to get</p>

			people fired up to either, you know, participate as mentors with you.”
Founder J	“So, I think that was the biggest thing, like, having a mentor. We had that connection who was able to give me connection so that people would be helpful. ”	Director 4	“Yes, we do as you mentioned, we have the training at the beginning, and that is meant to be how to process this event and meeting a lot of people and just generally managing the relationships that come with the program both that proactive and reactive part of it.
			Of startups that are updating us on their work, you know that's going to their whole mentor list so that's, I think, a pretty nationally proactive model of prolonged engagement, long past the accelerator’s completion, you know startups doing it, five years later.
		Director 6	Yes, we do prepare them for mentors’ swarm and we do have outlines as well that we share with them prior to it, and we will also dedicate part of our one-on-one sessions to go into it and again try to make sure that they optimize the time that they're sharing with these mentors.

Source: Author created

It is clear that continued learning from the ecosystem and continued adding resources to that network is presented as an important dynamic. Founders recognized them as the most important thing they learned, and the most important resources they built. Gener8tor also recognized that the external resources and information received by the startups are critical for the outcomes of their organizations. They also recognized their role as a *tertium iungens* (Obstfeld, 2005)

in the ecosystem and the value of startups extending that network beyond those *alters* (others) they are related to. Their job as connectors was consciously driven by the potential positive results at the startup level, and, indeed, consequential for the performance of the accelerator itself.

Founders also learned how to enhance their pitching skills. Over 80% of the founders at Gener8tor claimed that improving their pitches or learning how to navigate the intricacies of raising capital were the most important learnings from mentors. Founder I clearly summarized both areas: “You know, some of them were big and strategic like how much should we raise. Some of them were, like, more tactical; like, what should this specific slide in the slide deck look like. But you know, absolutely, we definitely made decisions like using the information that we got from those mentors’ conversations.” Lessons were applied, so, evidently mentors had an impact on the development of the startups.

Table 4 describes how the mentoring component of the accelerator helped founders overcome their most pressing challenge (previously described in **Table 2**).

Table 4: Evidence of learning on fund-raising at the accelerator

Founders	Learning from Mentors: How to pitch to investors
Founder A	“The whole Mentor Swarm experiences was very effective in, in, actually helping me as a founder formulating my pitch [...]”
	“The tools to design that chip, but then again it was during the mentoring session that I realized that, okay, even if I design that the fastest chip out there if people are not willing to pay money for it, then the company will fail.”

	<p>“You need to go to investors and tell them this is how you're going to sell your technology because it is going to make them X amount of money and return on their investment [...] and you need to give them the ROI figure you tell them, okay, you're going to pay me \$1,000 for this service a year and then by doing so, you're going to save \$2,000. So that's where, it kind of, like, that for me that transformation from just a technical background to someone who's actually a founder and looking at things in terms of dollar signs and in terms of both customers and investors, not just in terms of technology. That was the best thing I learned.”</p>
Founder B	<p>“I know that my, my, pitch improved a lot. My understanding of my business improved a lot.”</p>
Founder D	<p>“To take on investors and what that looked like. And I feel like I got a master's class and started finance so that was kind of nice.”</p>
	<p>“You know that ended up leading to <i>mentor X</i> who's one of our great mentors [...] and he's really well versed in social media and has been able to give us a lot of advice around our pitches and around how we should position our story and all of that kind of stuff.”</p>
Founder E	<p>“I wasn't a good presenter before but in going through the program, doing all the different investor pitches mentor meetings, I've really developed a way to really get across what I want to say, and to make it seem very, very attractive.”</p>
Founder F	<p>“From enough mentors that I can start to pick out signal from noise, meaning, you know, if two or three or four or five all say the same thing, then that's something that's a pretty obvious blind spot in my pitch.”</p>
Founder H	<p>“[...] one of the other benefits from mentoring is that you get very good at telling your two minute what we do.”</p>

Founder I	“Definitely learned about, like, fundraising trajectories. So how much to raise at different phases of the company and how to think about what’s reasonable and realistic for my type of company and the stage. “
	“You know some of them were big and strategic like how much should we raise. Some of them were, like, more tactical; like, what should this specific slide in the slide deck look like. But you know, absolutely, we definitely made decisions like using the information that we got from those mentors’ conversations.”
	“ And then I think the quality of the pitch, and the quality of our ability to speak of the business which was influenced by our mentor [...] Generator I think really helped us get through that process successfully.”

Source: Author created

Generat8r is what the literature calls an innovation accelerator, one of the most common accelerators in the United States and probably elsewhere as well (Cánovas-Saiz et al., 2020). The ultimate goal of this specific type of accelerator is to increase the chances of fundraising for its startups. Since accelerator founders’ motivations and objectives play a key role in the design of the platform, it makes sense for participating new ventures to be encouraged and prepared to be investor-appealing. Learning how to attract investors is not a unique feature of Gener8tor; in fact, empirical evidence has proven that learning to adapt startup pitches to investors’ preferred content is an expected outcome of accelerators (Cánovas-Saiz et al., 2020). Yet, the motivations, goals and even the design of the accelerator only define the content and resources offered to the startups. Accelerators cannot guarantee learning, much less an effective execution. Learning and the application of the transferred knowledge as well as the final execution of the strategies are endeavors

only accomplished by the startups. Hence, if knowledge was effectively transferred from mentors to founders, and later, lessons were incorporated into the routines of the organizations, there is still an evident lacuna in the understanding of exactly how learning happened, particularly when a concentrated consultation was employed as a mentoring dynamic. Moreover, there are many other learning opportunities within the three-month program. These components were also designed by the accelerator to provide startups with valuable resources. Thus, our research analyzes from which of these experiences startups are learning. We also ask if all were designed by the accelerator with intention. This research went deeper into the details on how startups are learning from these dynamics and from whom.

While it is quite obvious for all the players involved in Gener8tor that this is an investor-led accelerator, mentors are not trained to provide specific content to founders prior to their engagement. Most importantly, founders get to select with whom to work. This fact further expands the idea of an opportunistic approach to building a mentor-mentee relationship based on perceived benefits. After all, the startups learned and overcame their most pressing challenges during the program. Van der Sijde and Weijmans (2013) posed interesting questions in this area as their research showed that neither intensity nor content of the mentoring were related to the degree of collaboration between mentor-mentee after ending the mentor-relationship. “This implies that for a – business – relationship entrepreneurs might have an opportunistic approach: if a relationship can be financially or strategically beneficial an entrepreneur chooses to enter that relationship regardless of the mentoring experiences in the past (pp. 194-204).”

Their study’s methodology does not explain much about the mentor-mentee selection process, but it could be assumed that the studied entrepreneurial program assigned mentors to each mentee. The study also focused on the mentor-mentee relationship after the program, not during the mentoring process. Potential time constraints were not a factor.

Further examination of the data collected from Gener8tor’s startups revealed that over 50% of the founders used this opportunistic approach to select the mentors they would either target to meet or engage with in a closer relationship.

Table 5 provides qualitative evidence and clear data patterns supporting the notion of the opportunistic approach followed by founders when selecting mentors at the accelerator. Thus, benefits from mentoring precede other factors when selecting who to work with.

Table 5: Founders’ Rationale for Opportunistic Approach

Founder	Mentor Selection “Opportunistic Approach”
Founder A	“I selected them based on their background and the information that I received from them.”
Founder F	“[...] maybe a professor who specialized in some specific technical area that really matters to your startup [...]”
Founder G	“But there was another number of other mentors that were incredibly introspective analytical and who just, like, kind of listed out all the problems I would have and actually those mentors were the ones I valued more [...]”

Founder H	<p>“So, your job is to figure out who are the five or less that can really help my business.”</p> <p>“I’m looking for these kinds of companies or people who do this kind of thing. Who do you know, how can you help me?”</p>
Founder J	<p>“I was thinking, Okay, what's the biggest thing that I need right now.”</p>
Founder L	<p>“So, when I was talking to the mentors I specifically told them where our pain points are currently and then asked them if they had any expertise in any of those things.”</p>

Source: Author created

This is not a novel conclusion. The qualitative study by Aarstad et al. (2016) focused on an entrepreneur’s mindset and behavior regarding network management. The study found that experienced entrepreneurs know who to select from their networks and how to leverage the knowledge gain to further develop their new ventures. The same study also concluded that novice entrepreneurs knew the benefits of establishing new ties with external resources yet were not certain about the sort of resources they needed and were hesitant in selecting and integrating the knowledge transferred by the external resources. Aarstad et al. (2016) described this behavior as explorative. Contrary to this indecisive and stalling approach, experienced entrepreneurs exhibit an exploitative behavior by targeting specific resources and partnering with them without much exploration. Thus, having an opportunistic approach is expected from founders with more experience. My qualitative data revealed something very different, however. Both early-stage and mature companies with more experience exhibit the same opportunistic approach to selecting mentors from the network, which leads into an uncharted explanation. The accelerator was curating the network with the same opportunistic approach and was teaching its participating founders to build their networks according to the specific

needs of their ventures. Some directors were eager to explain their role as network brokers.

Table 6 offers a series of quotes retrieved from interviews with directors which clearly substantiate their preference for mentors that could help undertake specific areas or challenges. Moreover, they encouraged startups to connect with those resources and nurture the relationship. While there was not an imposed selection of the mentors, directors strongly encouraged startups to go after the mentors that would provide relevant resources.

Table 6: Preference for mentors that could help undertake specific areas or challenges

Director 1	<ul style="list-style-type: none">•“Based on a conversation I had with X mentor I just know it makes sense to get them in the room, together, then I’ll go out and just proactively try to make that connection...”
Director 2	<ul style="list-style-type: none">•“...the program managing director would say, you know, 'hey, who's helpful to you and then kind of give you tips and tricks on like exactly the cadence of follow ups, and like you know, what they've seen work for other companies, and just sort of like general business etiquette to keep people interested in you and treat their time with respect and all of those good things.”
Director 4	<ul style="list-style-type: none">•“We're looking at it if you're here, how can the people you're meeting be understood in the context of the things you need to do. And so, as we're working on, you know if we're looking at a margin issue or a customer issue or. hiring issue, how do we get the right person for that particular discussion.”

Source: Author created

There was also another factor that may have influenced the opportunistic approach employed for mentor selection. For most of the companies, challenges were in areas that could have only been addressed by one type of mentoring function: career-related. These founders were looking for management knowledge, technical know-how, sales strategies and fundraising. According to founders, their third and fourth most important learnings were technical know-how and customer acquisitions or sales. Thus, founders were deliberately and specifically looking for business knowledge and management expertise from mentors.

“The hardest part of the mentors is that you really are wanting about two or three things. And that's it. And you have to weed through literally, you know, dozens, maybe I think we had as many as 75 or so mentors that we met with.” Founder H

Furthermore, Founder F described the process of weeding out mentors as a necessary exercise: “Who are you looking for? I'm looking for these kinds of companies or people who do this kind of thing. Who do you know? How can you help me? That's when a mentor would prefer you do it that way, as opposed to them having to figure out your business.” The most illustrative quote of founders' expectations from mentors was provided by Founder D: “There are a couple of mentors that I think maybe weren't necessarily like a great fit for us as a company, but I think that they could easily be lifelong friends and potentially advisors.” Once again perceived benefits and fit with the startup needs was posed as an important mediator for mentor selection at the accelerator. As a factor, perceived benefits may not invalidate the role of other factors empirically tested, such as trust (St-Jean & Audet, 2009) and

perceived similarities (St-Jean, 2012) especially in cases where a closer relationship between the mentee and mentor is pursued. Yet it presents a new potential scenario where mentees select content and knowledge from a series of experts and not a close-tie mentor. Some founders stated that they didn't keep a close relationship with any of the mentors. Founder G, in fact, explained that the most impactful mentoring he received was from an individual that was too busy to commit to a formal mentor-mentee relationship: "I've tried to keep in touch. He's a pretty busy guy. But I send them, like, an email every month basically updating him and then I ran into him a few times." This fact raises even more interesting questions about the way founders are learning from the aggregate knowledge or specific expertise offered by a series of speed interactions with mentors and not from a dyadic mentor-mentee relationship. Thus, these qualitative data support **Proposition 2**, as startups' most pressing challenges were triggering the search for mentors with relevant experience and knowledge. Data patterns also show that there is strong evidence supporting **Proposition 1**, as founders were learning from multiple mentors rather than a dyadic mentoring relationship. This posed an interesting scenario where a network of relevant resources may be as, or more, valuable than a close-tie relationship with just one mentor. It also helps build a strong argument in favor of incorporating a diverse and ever-expanding network of external resources in the design of the accelerator. If learning from multiple mentors is more relevant and impactful, then the role of the accelerator as a network broker becomes indispensable.

Mentor Swarm Dynamics

The Mentor Swarm at Gener8tor is characterized by multiple events aiming to

expose founders to dozens of mentors over the course of two weeks. The accelerator has a pool of over 100 active mentors in each region who participate in these events. This list keeps growing with every cohort, and new mentors are selected for their expertise or extended networks. Recent literature relates this concentrated consultation design to startups performing significantly higher for several reasons (Cohen et al., 2019a). Among them is because this design forces founders to learn from multiple potential solutions prior to making decisions, which was evident in Founder F's response: "[...] they had conflicting opinions about where we should go next [...] And so, you know, we sort of averaged all of their thoughts together, and combined it in with our thinking [...]." While concentrated consultation may seem a simple exercise of aggregation of data, the process seems to comprise several different dynamics. First is the meeting and selection of mentors. "It'd be like a fishing trip, and you know, you're just catching fish because everyone's willing to help you," Founder H said as he explained his perspective and approach. All founders craved new knowledge in areas they had identified as critical for their businesses. Yet some acknowledged not knowing what, exactly, they should know at that stage. In this fast-paced environment, founders need to filter and carefully select specific content from mentors. Two specific dynamics became more common among founders: (a) selecting the pieces of information that were valuable to tackle startups' challenges and (b) listening to enough mentors to be able to distinguish the signal from the noise. The former is more of a *social proof* (Cohen et al., 2019a), where enough mentors coincide on one piece of information, thus building confidence in this new alternative solution. "You know, once we found signals that rose above the noise, then it affected our decisions," explained Founder F. Neither dynamic requires a long-term, trustful, intense mentor-mentee relationship. In fact, both dynamics are only possible under a

concentrated consultation design. Only an extended network of mentors could offer the diverse expertise an accelerator cohort could possibly need. Furthermore, to distinguish the signal from the noise requires a significant amount of divergent information to generate a recognizable pattern. Founder C depicted this prerequisite clearly: “I guess mentally sort of plotted on a scatter plot and try to understand the direction that most of my feedback was going.”

Some of the founders did not even maintain close-tie relationships with any of the mentors. Nonetheless, all claimed to have learned and benefited from the dynamic generated by dozens of interactions. Additional value was generated by those mentors that served as connectors and influencers within the business ecosystem, as clearly stated by Founder E: “I think the biggest impact that mentors have was connecting me to other people within the retail space [...]” This became a clear pattern that managing directors recognized as a result of Gener8tor’s general advice to keep all mentors informed on a monthly basis. Founder H described these monthly electronic interactions with those dozens of mentors as critical: “Having all those mentors that I send that [monthly reports] out was the most critical thing. That groups make introductions to us [...] no exaggeration, probably 30 introductions.” For this dynamic to be feasible and beneficial, an overflow of mentors with significant connections is also a requisite.

Mentors were important, certainly a critical source of external information and access to an expanded network, but there is a new set of dynamics enabling and generating insightful knowledge and guidance for startups. These novel dynamics are not found, or feasible, under a mentoring dyadic relationship, but are possible

under multiple relationships or interactions. Mentoring is a unique relationship built according to the mentee's needs (El Hallam & St-Jean, 2016). In an accelerator framework, those needs may be the urgency to grow and meet investors' expectations, which include both an accelerator's founding team and other venture capitalists. Those conditions propel new dynamics including depending on multiple mentors to deliver learning and access to networks. According to recent empirical evidence, group mentoring is preferred by entrepreneurs with startups in a more advanced growth stage (Deepali, Jain, & Chaudhary, 2017), which is also compatible with some Gener8tor's startups' life-cycle stages. Group mentoring is not the same as concentrated consultation; however, it explains the startups' need for multiple sources of knowledge and expertise. Important to acknowledge is that the vast majority of Gener8tor's companies raise capital either during or after the program. Those startups in an early stage didn't raise any capital, yet also recognized the positive returns of an extended network of mentors.

These key findings further validate **Proposition 1**: Founders will learn from multiple mentors rather than a dyadic mentoring relationship. It is quite evident that a vast network of mentors presents multiple benefits including access to an expanding network.

Learning from a diverse group of mentors poses a series of challenges to founders, and little attention has been devoted to this area. Some frustration and stress could be an initial result (Cohen et al., 2019a). Distinguishing the signal from the noise, or fishing for the right knowledge, requires founders to know what, exactly, they should be looking for. As explained by Founder H:

“So, your job is to figure out who are the five or less that can really help my business [...]. You know advice is coming at you right and left, and if you try to listen to everything everyone tells you, you’ll never do anything.”

This further supports the case for the strong relevance of the growth stage as a factor to fully capitalize on this dynamic. In Gener8tor, founders were not solo entrepreneurs; teams were in place, and some traction had been gained prior to the start of the accelerator. Only one startup had no formal sales, yet the company had a grant and a team of engineers working on a validated product. This startup closed a \$400,000 investment only two months after the completion of the program. This information was gathered from the application forms that startups submitted to Gener8tor as part of the selection process.

Startups from Brandery and Gener8tor Studio faced the same challenges. They interacted with over 50 mentors in a short period of time. For some, it was even more stressful as there were no startups to present, just business ideas. According to Founder J, the Mentor Swarm was introduced too soon in the process: “Literally, like a week after we had our idea, we were talking to people in the industry for two weeks [...] I think things just happened way to quickly, in my opinion.” This further supports the notion of a required fit between the startup life-cycle stage and the selected mentoring dynamic. A concentrated consultation approach may not be adequate for early-stage ventures.

Most research done on entrepreneurial mentoring has observed early-stage startups and dyadic mentor-mentee conditions. In addition, there is little empirical evidence from mentoring activities within accelerators. This matters because accelerators are different from other entrepreneurial support platforms. Certainly, they differ from formal mentoring programs where mentors are matched with founders, and are significantly dissimilar from corporate mentoring programs. First, accelerators are highly selective, and second, most of these programs measure their success by the amount of capital raised by the startup cohorts (Hoffman & Radojevich-Kelley, 2012). In fact, a previous case study analysis of five of the top accelerators in the U.S. found that the single most important selection criteria are the program's ability to have a significant impact on the selected startups (Hoffman & Radojevich-Kelley, 2012). Thus, selection is also an important element to consider in this mentoring dynamic, as not every founder may have the skills to capitalize on the accelerator's unique components under its limited time frame. "Relating to the second-order theme of founder knowledge, we saw the importance of selecting founders who have sufficient experience and knowledge around a potential business solution" (Goswami et al., 2018, pp. 117–150). This study proposed that accelerators' expertise in selecting founders and mentors with the right knowledge is key for its performance. Selecting the right startups at the right growth stage, led by a capable founder, are all critical components of an accelerator's design. Underestimating the role this selection process plays when assessing the mentoring dynamics and effects in startup performance is like undervaluing the role of gasoline for an engine's functioning.

These findings do not fully support **Proposition 6** of this study. Early-stage startups will seek to learn and obtain different resources from mentors than those startups in a growth stage. Nevertheless, qualitative data highlights the large number of differences between the challenges of employing an intensive consulting approach when designing mentoring for an accelerator targeting early-stage ventures and ventures in later stages. Outcomes may differ.

Selection of Mentors

When the literature refers to mentors' matching, most of the attention is given to the pairing of dyads (Assenova, 2020; Erasmus & Kapp, 1998; Lefebvre & Redien-Collot, 2013; St-Jean & Jacquemin, 2022), and the variables that may affect the dyadic relationship. Qualitative data from my study revealed that selecting and matching mentors at accelerators is more complex. The cycle starts with the accelerator's selection and expansion of its own network. According to Goswami et al., (2018), selecting the right mentors may not be the only critical ingredient. Building and continuously expanding a diverse network of resources is also key to the success of growing startups. This step is followed by informal training of both mentors and mentees, who receive information about each group in advance, as well as proper guidance on expected dynamics and outcomes.

“Yes, we do prepare them for Mentors' Swarm, and we do have outlines as well that we share with them prior to it, and we will also dedicate part of our one-on-one sessions to go into it, and again, try to make sure that

they optimize the time that they're sharing with these mentors.” Director

6

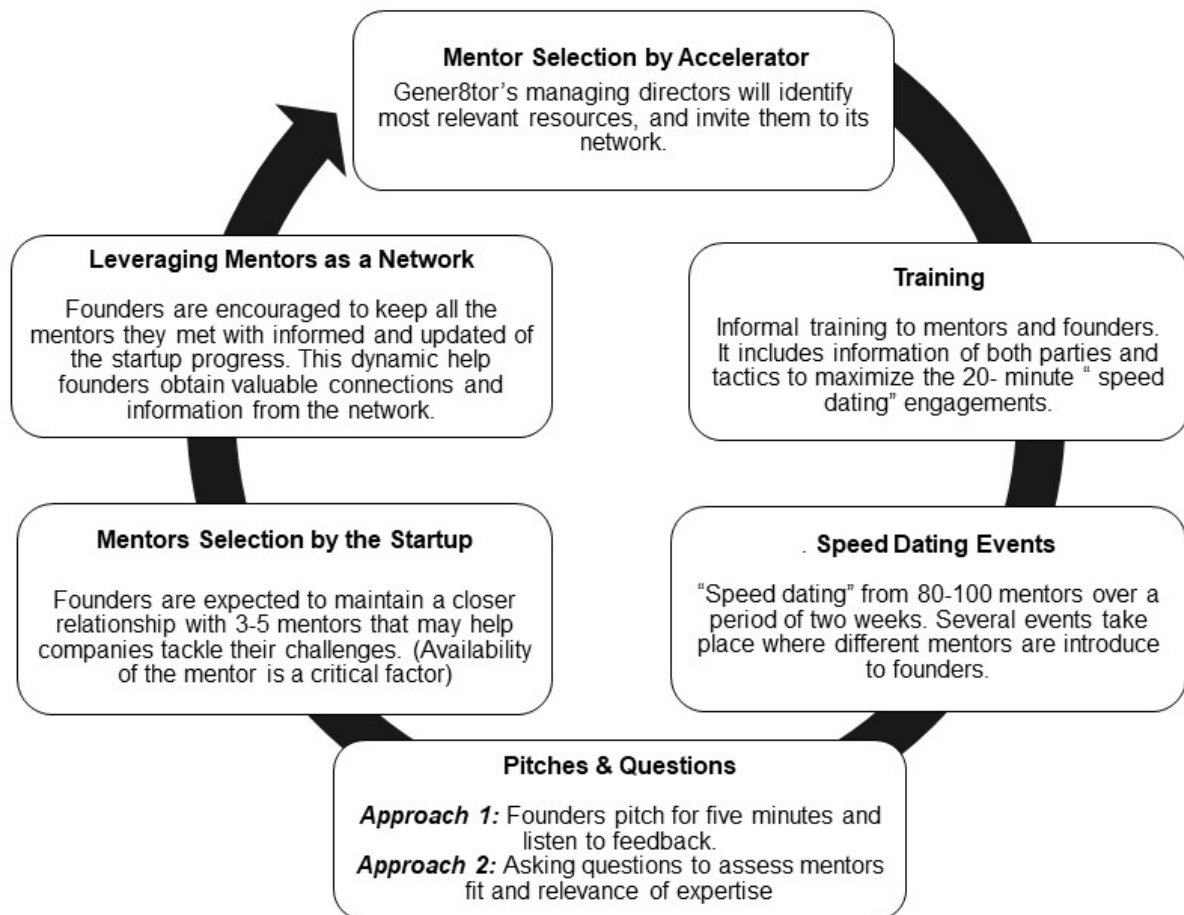
Mentor Swarm was designed to introduce founders to a vast and diverse network of mentors who may provide the expertise, knowledge and contacts the startups need to overcome growth hurdles and most pressing challenges. Eventually, a few close relationships emerge from the speed-interaction events. Nevertheless, startups are encouraged to keep as many mentors as possible in their own network by systematically informing these resources of their progress and needs. Once startups complete the 12-week acceleration program, and further scale, founders may be asked to return as mentors and connectors to a broader network.

“Each group is getting the necessary information that they need, as well. And from there, one of the big things I would say is keeping them updated so it's not only us keeping them updated on what the startups are doing, but we asked the startups to ask them, to refer to, as their *friends of the company* update list, so though the program they send those bi weekly out to their *friends of the company* and post program, we accept they send them out monthly.” Director 5

“So that's, not to say we don't, in the informal reactive part, try to go out and get to the resource that we think is best suited to them, but it is that benefit of reading the community, you know, in a two to three-week period and seeing what's there to sort of capture the net benefit of it.”

Director 4

Figure 5: The mentor selection process as described by founders and directors.



Source: Author created

Gener8tor, as a concierge accelerator, targets small cohorts of startups and exposes them to over 100 mentors in a short period of time. Similar to the intense and broad consultation approach described by Hallen et al. (2020), the accelerator fosters rapid interactions with multiple mentors, all of them completely aware of the expected mentoring dynamics and outcomes. Hence, different from these authors conceptual model, these are not just multiple external resources, these are individuals consciously participating in a mentor role and actively screening for best practices to contribute to the startups. Both mentors and founders go into the Mentor

Swarm, Gener8tor's name for its concentrated consultation sessions, instructed on best practices and rules of engagement. As Director 2 briefly commented: "So we prepare our mentors in the sense that they know that they're coming into a 15-minute conversation to meet companies."

Director 3 explained in detail how the accelerator prepares founders and mentors before the events.

"However, as we bring new mentors into the fold, that's absolutely something we do and it's not a formal sit down or criteria, it's more, you know, giving them basically an example, walking them through some of the typical conversations, making sure that they understand kind of the deliverables and ask of a mentor, and what that looks like, and how to get the most out of that 15 to 20-minute session with them. And then vice versa. You know, we do the same thing with our companies as they're getting ready for that Mentor Swarm. It's just prepping them on."

Gener8tor also guides the process of meeting and selecting mentors by providing these external resources with information about the startups in advance. Founders are also briefed about the potential attendees to the event, their expertise and potential fit with the startups' needs. This part of the process was described by Director 5.

"And then the startups get an overview of the mentors and their backgrounds, biographies, LinkedIn, and things of that sort, so they can

also get an idea of who the mentors are, and how can they really tailor the questions they're asking and the conversation.”

Thus, while there is no formal training on mentoring, guidance on expected dynamics and outcomes is provided to both mentors and mentees. Each party understands that the initial dyadic interaction should last no more than 20 minutes, allowing founders to present their companies or questions for five minutes, then allowing mentors to provide feedback for the following 15 minutes. “Basically, we give them about five minutes pitch about the company, the background, the idea, and then going to a feedback and answering questions session with them,” said Founder A. In summary, the matching with mentors is guided, not forced. As explained by Director 3, “We really have since adopted fully that Mentor Swarm model, just because we've seen that the organic relationships that are built out of that are so much more fruitful for the entrepreneurs, for the founders, and the companies.” More importantly, the dynamic of mentor selection is a two-fold dynamic as mentees have specific goals and processes to select their resources while mentors also have the tools and information to pre-screen and select those startups that may be more interesting for them. Mentors selecting startups is a whole new paradigm ready to be explored. Incorporating factors such as *potential impact* on the startups, and *personal interest in the industry or sector* to the selection criteria could also yield interesting new theoretical frameworks. This is another unexpected dynamic from the unique scenario posed by the concentrated consultation mentoring approach pursued by the Mentor Swarm. To build the network, both mentors and mentees must perceive value in their relationship.

“If the companies themselves are utilizing the mentor and the mentor feels recognized, the mentor feels helpful, and the mentors having fun. You know that's going to be the best retention strategy of all, so finding the right kind of companies that really want to learn, and you know, stay engaged with mentors is probably the best method that Gener8tor can use to maintain its mentorship network.” Director 2

A conversation focused on the startups' challenges or pain points is expected, as founders are instructed to find resources that could help them fill the knowledge gaps of their teams. From all the findings this is one of the most interesting, as the selection process is based on the startups' needs as the most weighted criterion. Founders are encouraged to select mentors opportunistically. The size of the mentor pool, together with the urgency of learning how to overcome a startup's most pressing challenges, encourages founders to select mentors with the specific knowledge or connections they need. This dynamic challenges extant literature frameworks proposing that trust and similarity are key factors for the development of an effective mentoring relationship. From the qualitative data, it is clear that being comfortable with the mentor was desired but it was not the main criterion guiding the selection. The paradigm is not new, as the literature explains the evolution of a startup's social network as a necessary development (Jonsson, 2015). Intentionally managing a network implies adapting it to the startup's knowledge and resource needs. Thus, the accelerator may be the catalyst for an accelerated evolution of a startup's network, otherwise inaccessible to them. The Mentor Swarm's concentrated consultation dynamic forces startups to seek specific knowledge and access to contacts, rather than long term relationships. In general, both managing directors and founders

expect to form a more lasting relationship with two or three mentors, yet learning does not depend exclusively on those few. Startup accelerators' capability to act as a catalyst for startups' social network expansion and evolution is a novel theory. Proposing this dynamic as a propeller of startups' learning may seem obvious but is explainable by theory.

Table 7: Mentor selection based on their relevance to startup challenges

Founder A	"I selected them based on their background, the interaction and the information that I received from them."
Founder C	"I ended up changing up how I approached it, and I started with asking them about their background, and getting to understand their background first for, you know, maybe two or three minutes. Just so I have an idea of how close they are to the issue that I'm trying to solve and what their background is, and that type of thing."
Founder F	"You know, we were able to meet with three to five different mentors that had some kind of experience in physical product design, and in the look and feel, and manufacturer ability who specialized in some specific technical area that really matters to your startup or a marketing person that specialized in marketing and that's really what you're looking for"
Founder H	"I was looking for people who could connect me with others in this marketplace. So your job is to figure out who are the five or less that can really help my business." "To me, that was what we knew we needed to be better at how we can engage users. And so I was floating that out when I'd meet with mentors. Here's my three big issues. I'm looking for advice on in this particular conversation."

Source: Author created

Founders not only selected mentors based on their knowledge and expertise, but on their capability to connect them with other valuable resources. In fact, mentor selection becomes a figurative term. Founders do select those that may become more active collaborators, but the selection is contingent on a mentor's availability

and reciprocal interest. More importantly, the selection is not as discriminatory since Gener8tor encourages all startup founders to keep all the mentors they met informed of their progress and needs. Thus, the concept of mentor selection does not explain the whole dynamic encouraged by the accelerator. While Mentor Swarm provides startups with access to urgently needed resources, which may be an expert or just his or her expertise, the complete dynamic aims to induce the development of a larger, active network of dozens of loose-tie relationships. A better descriptive and inclusive term could be *network selection*.

“If we can introduce them to people who, within their industry or with their domain knowledge or whatever it might be, who have the networks, where their stamp of approval on this startup is going to open up doors that wouldn't be available to anyone else, like, that's something that we really, really, really want to get them.” Director 1

The network-building dynamics created by the accelerator do not end with key introductions to relevant connections. It is transformed into a network expansion quest supported by a series of tactics dedicated to fostering an engaged community of resources. “It's definitely important to continue growing the mentor network as well, we see all the time, where there can potentially be mentor burnout where they're asked to do so many mentors swarms,” according to Director 5.

Director 3 also commented on this dynamic:

“In terms of keeping them engaged, I think this is a constant work in progress, but we're fortunate to continue to grow as an organization and so we're constantly running programs or have some offering for them, whether it be a conference, a DEMO Day, a Mentor Swarm and some way to engage them in that capacity. And then, I think, you know, pre- and kind of post covert it's getting them involved in more of the social aspects, so what are kind of the community engagement methods that we can use on an in-person basis.”

This ever-expanding network is initially identified and attracted to the accelerator by the managing directors, who, based on each cohort needs, invite the best possible resources to the Mentor Swarm. **Table 8** provides detailed qualitative data gathered from my interviews of the managing directors of Gener8tor. Five of the six interviewees clearly described the process of identifying potential mentors and not just including them as potential resources of a cohort, but also adding them to the vast and diverse network that serves these startups. Thus, mentor selection for startups at the accelerator becomes a race heavily influenced by the accelerator directors, who have already pre-selected and instructed mentors. The race objectives include the development of a few close-tie relationships with relevant resources, while seizing a larger and diverse network of loose-tie relationships is equally valuable due to its function as connectors and sources of knowledge.

Table 8: Gener8tor managing directors identifying, selecting and attracting mentors.

Director 1	" We're kind of like, in the off-season, building the network; expanding and trying to get to know people and bring them into the fold..."
Director 2	"When it came to building this network up here at the city, I was reaching out to people, you know, giving them the opportunity to use their expertise to assist the next generation of, you know, business creation and you know entrepreneurs."
Director 3	"We kind of rely heavily on the power of our network and the outside mentors that we do bring in. And then specific to kind of who that person is. The profile that person, I think it varies, but we want to make sure that we have diverse perspectives and diverse domain expertise so looking at it from the lens of what do we want to surround the founders with the earliest stages of building a company."
Director 4	"But we curate that network through our corporate group, through our investor network, through our alumni people..."
Director 5	"Yeah absolutely, so it's a very concierge approach where, for the most part we're reaching out to these mentors. Want to say hey_ we're running this program, we love your background, whatever their background of expertise is, and we think that our founders can benefit from, you know, what you have to offer and your insight and your your background and history."

Source: Author created

As Director 3 also noted:

"I think we do have a general kind of expected outcome that you know, a handful of it let's say we're introducing the companies to 80 to 100 of these people. I expect five to seven of them to continue the relationship on a weekly, monthly basis with the company's not only during the program but after the program as well, and so I'd say that's the ideal outcome is they get."

The mentor selection dynamics revealed by the qualitative data further validate and support four of our propositions:

P2: Startups most pressing challenges trigger the search for mentors with relevant experience and knowledge.

Indeed, the selection process is triggered by both the startups challenges and needs perceived by the accelerator managing directors as well as by the challenges faced by the founders. Thus, most of the selection is based on relevance of the mentors' expertise, knowledge and extended network.

P4: Founders will prefer mentors with access to a network of key resources for their startup development.

Evidently, one of the most important objectives of the Mentor Swarm is the selection of a broader network of potentially relevant resources. Relevant knowledge is not the only decisive criterion for the selection of the network; access to a richer and diverse network is also key as the startups evolve and expand their own network of resources. Thus, a preference for mentors with ample connections becomes a desired approach and outcome for Gener8tor's cohorts. The concept of preference may be challenged by the fact that the selection process, and consequently the preference for such mentors, starts at the accelerator level. Startups basically add as many resources as possible from the accelerator's curated network. Indeed, the accelerator also seeks to select mentors with access to other key connections and/or networks.

P5: Startup accelerator managers play a critical role in the development of a valuable and relevant network of mentors.

Qualitative data is unequivocal: the accelerator's managing directors are the precursors of the platform's ever-expanding and diverse network of resources. Each region cultivates and curates its own network. Nevertheless, the accelerator's network is the sum of all those regional clusters, eventually exploited by any of the startups once the resources are invited to the Mentor Swarm.

P1: Founders will learn from multiple mentors rather than a dyadic mentoring relationship.

The Mentor Swarm is the opposite of the traditional dyadic mentor-mentee relationship. In fact, both the dynamics and outcomes propelled by this concentrated consultation design are only feasible through the interaction of multiple mentors. This is even more palpable at Gener8tor where startups benefit as much from a curated network they can make their own in addition to a few close-tie relationships. Even the few close-tie relationships expected to arise from the speed-interaction dynamics with dozens of mentors represent an evident change of paradigm as matching each founder with one mentor couldn't be farther from the desired mentoring dynamics.

Mentor-Mentee Relationships

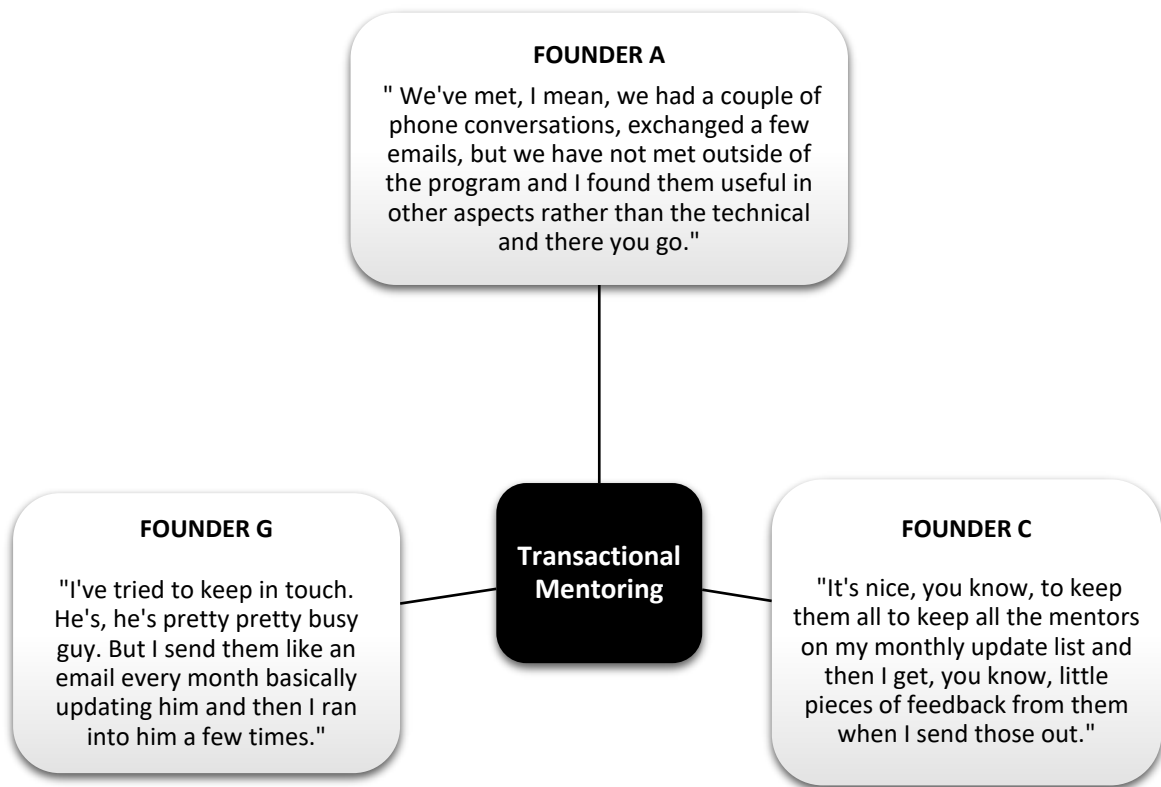
Most of the entrepreneurial mentorship definitions allude to the mentor-mentee relationship as a core construct of the dynamics between these two actors (Halvorson

et al., 2015; Lee, 2019; Lefebvre & Redien-Collot, 2013; MacLaren, 2018). Yet, *relationship* as a paradigm has not been comprehensively defined in terms of length or category. How close or loose the relationship is, is open to interpretation. My study identified two types of relationships derived from the Mentor Swarm dynamics. The first is purely transactional and is compatible with the fast-paced dozens of acquaintances, prompted by the accelerator's goal to introduce startups to its vast network. This mentor-mentee relationship is brief, founded in punctual and purposely driven meetings, and its outcomes could range from unexpected knowledge to precise and needed information. Transactional mentoring could also yield quick introductions to additional relevant resources. According to Director 1, the vast majority of the relationships fostered by the accelerator are transactional, but nevertheless as impactful and important as the small percentage of those that are considered close-tie, long-term relationships.

“I see it, is almost kind of like 90/10. So, if, like, we make 100 introductions, 90 of them might be transactional where it might be, like, I'll meet them for 30 minutes and I'll never see him again, but they changed my life because they gave me like this one little piece of information that I was missing or forced me to think about my business in a completely different way, I never would have seen otherwise.”

These transactional interactions have proven to be valuable as confirmed by founders who recognized the impact of the information and guidance received by those mentors who were not necessarily available to interact with the mentees more than once or few times.

Figure 6: Quotes substantiating transactional mentoring



Source: Author created

Literature on entrepreneurial mentoring is lacking, as can be seen from a clear description of these brief but valuable interactions at accelerators. Indeed, it is a learning experience that should not be underestimated as it can provide valuable knowledge, feedback and social capital to the mentees. Discounting these transactional relationships, where no further commitment is expected after a few minutes of interaction could clearly overlook the powerful influence of a network willing to provide valuable resources on an *ad hoc* basis. Perhaps this is the most flexible and customizable knowledge a startup could need to tackle the unpredictable

challenges it faces. One of my study's propositions argues that founders will learn from multiple mentors rather than from a dyadic mentoring relationship. Learning from multiple mentors does not necessarily mean that group mentoring is happening. Based on the gathered qualitative data, researchers should consider validating and further elucidating the knowledge derived from transactional mentoring between the mentee and multiple mentors, rather than the single dyadic mentor-mentee relationship. This is consistent with recent mentoring literature (Cohen et al., 2019b), advancing the development of a different entrepreneurial mentoring definition based on the unique interactions that startup accelerators are fostering. While my qualitative study supports this claim, as founders did learn from several mentors, it is important to classify the mentoring dynamics, since these varied from transactional to close-tie, long-term relationships. All are deemed as important and relevant for the startups as they capitalize on the accelerator as a program. Thus, learning from multiple mentors not only implies learning from different individuals but also learning from different sorts of mentoring dynamics.

A second mentor-mentee relationship clearly emerged from the qualitative data: there exist long-term dyadic relationships with periodic interactions, most of them extending beyond the accelerator program. This dichotomy was clearly expected by the accelerators' managing directors, who went beyond an anticipated ratio to fully explaining the contrast of these distinctive dynamics between mentors and mentees. Director 2 explained: "You know, some mentor relationships look like, a mentor sitting down with the company three times a week, other times a mentor relationship might just be like, hey I have a neighbor who you really should talk to you because they could be a potential customer." Director 3 went even further and

explained that this specific 90/10 ratio was the ideal outcome from the accelerator's mentoring program.

“I think we do have a general kind of expected outcome that you know, a handful of it let's say we're introducing the companies to 80 to 100 of these people. I expect five to seven of them to continue the relationship on a weekly, monthly basis with the company's not only during the program but after the program as well, and so I'd say that's the ideal outcome.”

Director 5 also explained the differences between these two types of mentoring dynamics at the accelerator: “There's some mentors that have longer relationships with one or two or all of the startups, versus others; and really that goes into the specific needs of each startup [...]. The unique thing about our programs is that none of our startups are at the same point.”

Indeed, some of these mentor-mentee relationships continued after the program concluded. These were the expected 10% of mentors the accelerator hoped could provide guidance for a longer period of time, based on a close-tie relationship. These interactions are compatible with most of the prevalent literature approaches to define entrepreneurial mentoring. For example, recently Polo García-Ochoa et al., (2020), defined mentoring as a *reciprocal relationship* between the startup and its mentor (page 112). Stemmed from Wright & Drori, (2018) proposed definition, Polo García-Ochoa et al., (2020) stated “Mentoring is a learning and coaching process where a reciprocal relationship is built between mentor and startup while focusing on

achievement (p. 112)." Considering the reciprocal relationship component of this definition, a required condition for mentoring, we must reflect on the subjectivity encompassed in both the selection of the mentor, and the development of the relationship. A mutually beneficial relationship means that there is a requirement for fit between the mentor as a resource and the specific need of the startup.

"So, mentors, they weren't necessarily specific to us. It's not that they didn't provide some value, not all of them did. Some of them did but, I mean, it's one of those things. It's more like a Russian roulette where you have a conversation, and then you see if there's anything that they could be helpful for." Founder L

Hence, having different types of relationships only responds to the fact that startups may need different resources, and some may be quick pieces of information and some others may require continued interactions.

The mentoring dynamics driven by close-tie relationships provided the founders with more frequent interactions, for longer periods of time. "He was really helpful, so we probably emailed each other every day for the rest of the accelerator program and then, you know, even more and continued that after the accelerator," said Founder C. These long-term relationships are not easy to achieve, and many variables seem to affect their viability and efficacy, which totally validates the plethora of studies alluding to the importance of trust, perceived similarity among the actors, quality and relevance of the knowledge, and the availability of the mentor to sustain such relationships. The interactions will also depend on the mentee's availability and

disposition to be transparent and communicative. It is sufficient to argue that dyadic mentor-mentee long-term relationships may not be the easiest and readily available source of knowledge and introduction to key resources. There is a clear case to support my proposition, as founders did learn from multiple mentors, yet the relationship with each of them varied from transactional to close-tie. The length of the interactions also varied, yet these mentoring relationships were equally impactful and meaningful for the mentees. We can even argue that these relationships were complementary. Thus, learning from multiple mentors at accelerators can enhance learning by providing a larger pool of knowledge in the case of those driven by transactional mentoring, readily available and unconditioned by the numerous variables affecting dyadic, long term mentoring relationships outcomes.

The Accelerator's Managing Directors as Mentors

Serendipitous discoveries added interesting elements to the mentoring dynamics at the accelerator. Qualitative data gathered in this study unearthed unique mentoring dynamics that bind to startup accelerators' distinctive frameworks, and the startups' pressing need to fill knowledge gaps. Clear patterns identify the accelerator manager as one of the two most important sources of knowledge, guidance and access to networks. In fact, the most salient mentoring relationship was formed between the accelerator managers and the startup founders. "And so again, if we're talking about Director 1 and Director 5, [they are] the Gener8tor employees that are kind of considered like the alpha mentors," explained Founder G. A true dyadic mentor-mentee relationship, where managers not only spend a minimum of two hours per week in one-on-one meetings, develops into a close-tie relationship expected to

endure the time frame of the program. This strong-tie relationship is equally forged and nurtured by the accelerator's directors as well.

Director 5 described this important network-building component of the accelerator.

“To the relationship building aspect of the accelerator programs as well, it's more than making these introductions, it's more than having these conversations to, you know, scale the business, but, we become friends, essentially, you know, I believe in you, I want to support you, not only in these three months, but I tell them all the time once you're in the program”.

Described as the alpha mentors, the accelerator's directors and founders clearly exert all the career-related mentoring functions as defined by extant literature. Mentoring career-related functions include: integration, information support, confrontation, and guide (St-Jean, 2011). Accelerator managers' most praised function is integration. This is described as the core career-related function of an entrepreneurial mentor, connecting founders to a relevant network for the future development of the startup (St-Jean, 2012). Managers also act as network brokers (Cohen et al., 2019b) focused on identifying, engaging and connecting founders with the best possible alters owning the precise knowledge required to advance the startup development. Founder J further exposed the director's brokerage role. “They were super helpful with everything. And if I needed a connection [...] They're always happy to make the introduction.”

Table 9: Directors acting as network brokers

Director 2	"You know, if I did have expertise in something, I could be that expert, more often than not, like you know, it was more like going into the network and finding the real right person to help the company in."
Director 5	"We can make those initial introductions, we can make thousands of initial introductions, but after we make those introductions it's on the founders to maintain the relationships."
Director 3	"They're (founders) a little risk adverse. And sometimes not willing to, you know, make those decisions on their own. And I think that's where we've done a good job of supplementing both internally as well as externally with mentors."
Director 1	"And like that can be extremely valuable especially it's a quantity game, like the more people, we can get talking to them about this stuff, I think, the more they get out of it. And then 10% of it so maybe 10 out of 100 will be those people who are like those grand slams where it goes really deep."

Source: Author created

These observed dynamics of network brokerage highlight the role of the accelerator as an ecosystem catalyst. Connecting startups with external resources is just one piece of the equation. Building, expanding and nurturing the network was another important task delegated to them.

Denominating the accelerator's directors and founders as alpha mentors of the program is not a minuscule revelation. This could incline the balance in favor of certain components and resources when designing startup accelerators. According to the vast majority of the founders, their contributions were *instrumental* (Founder E) for their startups, and this was one of the strongest and most evident patterns in the qualitative data. "Most of the mentorship that we got was really from the people that worked at Gener8tor," according to Founder B who couldn't be more vocal about the

critical guidance and support received from the platform's directors. Founder D further expanded this notion by describing a long-term and trustful relationship. "The staff has been phenomenal, and I know that it's a lifelong network, and you know, any time I have a problem, I feel really comfortable tapping that network whoever might make the most sense to make stuff happen."

Research has recently started to unearth the potential impact of accelerators' managers in the program's performance. Cohen et al., (2019b) explained that managing directors have a vast influence on an accelerator's design choices. Their backgrounds also determine the quality of the network and the ease of access to the ecosystem. Acting as an integrator and introducing startups to key external resources is known to be a critical learning experience (Polo García-Ochoa et al., 2020; St-Jean & Audet, 2009). Yet having access to the right network is as important. The size (Wu & Hsu, 2013), the quality, and the structure (Vissa, 2012) of a network are factors known to influence startup performance. And managing the network may be even more crucial than just having a long list of connections (Vissa, 2012). Therefore, accelerator managing directors are not just any kind of mentor, they are not just integrators, they are network brokers and startup network catalysts. Those are heavy loaded job descriptions, and very demanding endeavors.

Managing directors' impact on the accelerator is also highlighted by Wise and Valliere, (2014), who propose that managers with startup experience decrease the failure hazards in participating startups. The study also theorizes about the potential high-quality mentoring these experienced accelerator managers can provide. Yet, the

study didn't show empirical evidence of such benefits nor elucidate the dynamics leading to such outcomes.

Interestingly, some of the founders knew Gener8tor's directors didn't have startup experience; nevertheless, they considered them to be high quality mentors. In an entrepreneurial context, mentoring is the relationship between an experienced business person and a novice entrepreneur (Polo García-Ochoa et al., 2020; St-Jean & Audet, 2009). The director-founder relationship may contradict some of the accepted mentoring definitions as Gener8tor's directors aren't necessarily more experienced entrepreneurs than the startup founders, let alone more knowledgeable about each of the industries to which their startups belong. This new set of dynamics, rules and players poses new and interesting questions for academics as they explore the impact of accelerators and the best learning scenarios for practicing entrepreneurs. Accelerators may not only defy the previous incubation and entrepreneurial training program designs, but their unique set of learning experiences may defy other paradigms, such as entrepreneurial mentoring, by demanding the study of new key factors and depicting a new set of dynamics between founders, the accelerator managing directors and mentors.

Table 10 provides evidence of the mentoring dynamics between founders and directors of Gener8tor.

Table 10: Founders received mentoring from Gener8tor’s managing directors and founders

Founders	Founders consider Gener8tor’s directors, founders and managers their mentors.
Founder A	“Um, it was a very, very critical role. So yes, I do consider them to be part of the mentoring process, and I still see them as mentors.”
	“And the most important thing about their kind of mentorship with us with me is that they are willing to do anything to see you succeed. So, if I go to them and tell them. Okay. I want this introduction or I want you guys to look into this opportunity with this fund or with this company, they will find a way to do it. And I think as a startup company that’s just priceless.”
Founder B	“Most of most of the mentorship that we got was really from the like people that worked at generator...those were the people that helped us the most.”
Founder C	“...the managing director and the program manager... I developed a very good relationship, you know, I see them as_ you know, especially in our unique situation where we started the company in their program. I see them as, you know, almost like they helped me, you know, found the company.”
	“We still stay in touch, even though the program is over, and they’ve been really helpful... if I ever need to make some kind of connection or just need advice on how to navigate something they’re always available to talk and to help.”
	“You know, I saw that while I was going through the program with them as well that they were you know still helping out companies that were in their prior programs and cohorts.”
Founder D	“Absolutely. I still talk with lots of them on a regular basis I won’t say daily but like Director 1 and I text each other

	<p>weekly at least for updates both directions, to like how's generator doing and all that kind of stuff.”</p>
	<p>“So, like yeah the staff has been phenomenal and I know that it's a lifelong network and I know any time I have a problem I feel really comfortable tapping that network whoever might make the most sense to make stuff happen.”</p>
Founder E	<p>“Yeah. Um, so the program managers... Um, I actually didn't include them in those four mentors, but they are, in a sense.</p>
	<p>“...they are very instrumental. I mean, any connection I need to a certain VC firm that we didn't get to meet during our investor Tour more than happy to connect me with them, finding someone who doesn't know them, that could do a intro versus me just cold emailing, etc.”</p>
Founder F	<p>“And I've just been imagining mentors is outside generator, but you know now to kind of abuse our terminology. Yeah, absolutely, the entire generator staff functioned as a as a mentor or a bunch of mentors...”</p>
	<p>“...they're extremely high-quality mentors, because they've seen hundreds and hundreds of startups up close.”</p>
	<p>“And so all four of them lead by example. And that's, and I learned from them from their example. And yeah, so I just, I have nothing but really great things to say about all.”</p>
Founder G	<p>“If we could include Director and Director 1 as mentors, I would say those are probably the two closest within the Gener8tor program...And so I'm still pretty close to them, even after the program has ended, as far as kind of mentors that I has stayed in touch with.” And so again, if we're talking about Director 1 and Director, the Gener8tor employees that are kind of consider like the alpha mentors.”</p>

	<p>“They had a huge impact on kind of the company because I really only had the technology. They have an experience of like working with startups before. And so, they kind of helped me dictate or basically dictated like what my markets would look like.”</p>
Founder I	<p>“So, I would I would count Director 1 as a mentor for sure. I think I know he was the director of the program but just meeting with him weekly and stuff like I definitely would put him in that camp of a mentor and then other mentors.”</p>
	<p>“I definitely got lots of feedback from Director 1 about the story and how what some of the key points we should really highlight in the story so I thought that was helpful. Some tactical advice about how to prepare for and have conversations with potential investors...I think that was really helpful feedback ...”</p>
	<p>“Director 1 definitely was the person that we spent the most time with...We had more conversations with Director 1 because we were meeting with him twice a week.”</p>
Founder J	<p>“I think Director 1 was super helpful whatever questions I had was able to answer. He's pretty involved.”</p>
	<p>“They were super helpful with everything. And if I needed a connection... They're always happy to make the introduction.”</p>

Source: Author created

From the directors' perspective, the relationships they build with the founders and the guidance they provide are part of their role description. Qualitative data also shows Gener8tor's directors consider themselves as important mentoring resources. As mentors, managing directors clearly explained how they exerted all the four career-related mentoring functions: integration, information support, confrontation

and guide (St-Jean, 2011). **Table 11** presents qualitative data compiled from the interviews with managing directors.

Table 11: Evidence of Gener8tor’s managing directors exerting career-related functions

Career-related mentoring function			
Integration	Information Support	Confrontation	Guide
<p>"They have a list of 500 names and once you join the accelerator, you can pick and go through, and it automatically sends out an invite a calendar invite to that specific mentor and they will take the meeting."</p>	<p>"Gener8tor is a fantastic coach that way; they again like, the biggest challenges like, nobody can narrow down the list of available mentors to the ones that you want to work with, except for you as the founder. But once you've kind of made that determination Gener8tor is really, really good at teaching people how to network and how to you know work with their mentors."</p>	<p>" I see myself more and more as a coach. So, and I think I almost think of some of the meetings as like imagine watching video of yourself playing football, or like soccer or something like that, and your coach showing in front of the group and saying like you see what you did here like this is how I like this is what i'm talking about what this mistake you're making or like this is what was really good some of its that Or at least similar to it, and hopefully this isn't too convoluted in the metaphor makes sense, but I really do think that there is like a direct mentorship aspect to this thing."</p>	<p>I think the coaching really comes in from having done it time and time again, whether it be, you know, handling founder disputes handling you know cofounders breaking up teams breaking up. It's not necessarily saying that, you know, this is the way to handle it. It's giving them different options and helping coach them through some open ended options that maybe other companies or other founders have taken</p>
Director 6	Director 2	Director 1	Director 3

Source: Author created

Director 1 presented a detailed description of the guidance provided to founders.

“A ton of information for the companies to distill and part of the purpose of our meetings is to deconstruct it a little bit and say, like, what are the things that we can take away from this and what are the important things to focus on, and how does this affect how we're thinking about the business model of the product.”

Later, Director 1 concluded “So, I guess, maybe, you are like a chief mentor, maybe like the one who attaches to them first and trying to guide them through this process a little bit.” Directors spent at least two hours a week with each founder. They went over their pitch decks and further discussed their challenges and the resources they would need to tackle them. Director 5 rationalized his role in the accelerator: “If I could summarize my job in one way, it is you know, helping them focus on the right things at the right time and getting them the right resources.” And Director 6 stated: “[...] the managing directors of those programs, the alpha mentors, remain our strongest asset.” The concept of having directors as alpha mentors is a design option opted for by YCombinator. Techstars also matches each of the startups with a lead mentor, who helps founders navigate the plethora of information received from multiple mentors (Cohen et al., 2019b):

“A key difference amongst accelerators is who provides the formal, structured advice and feedback that forms the core of the program. Some programs employ a small team of internal advisors who provide direct advice to participating firms (we call these advisors, and they

include managing directors, partners and other closely affiliated experts) while others augment internal staff with external mentors (these may include program alumni, entrepreneurs, investors, lawyers and other loosely affiliated experts).” (p. 1791)

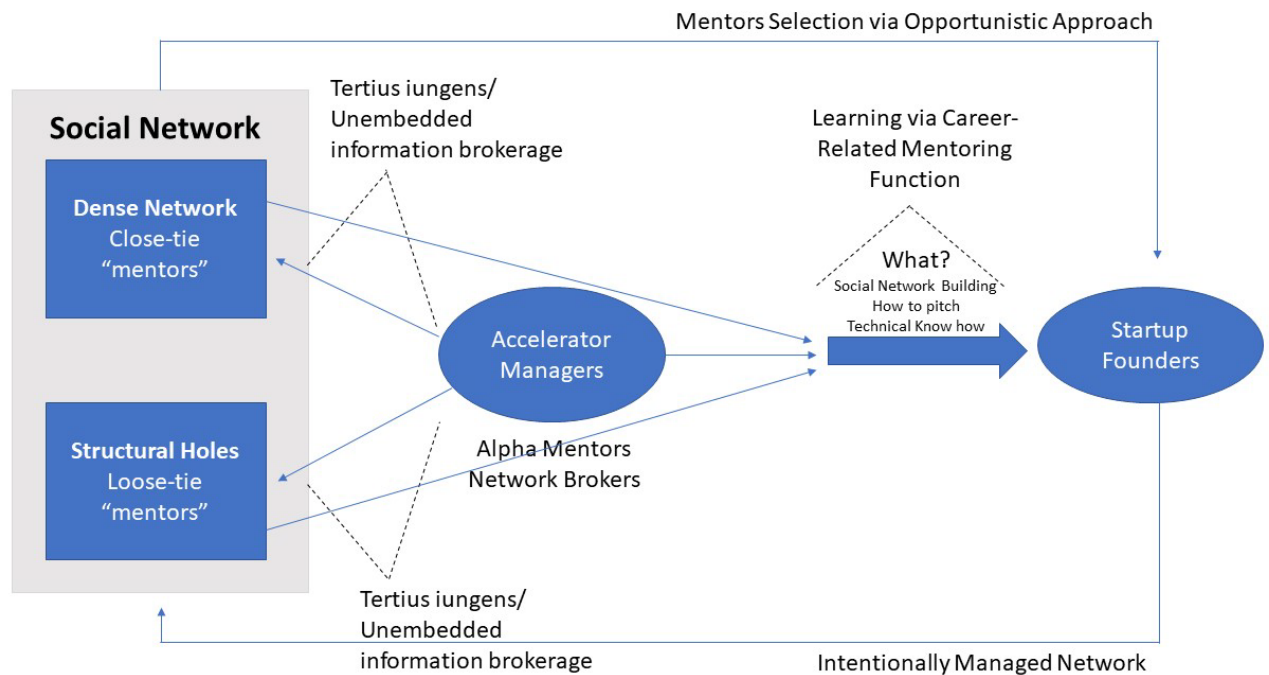
Both YCombinator and Techstars are the most successful startup accelerators in the United States, and likely, in the world. Like Gener8tor, these platforms rely on the central role and functions of managing directors to provide constant guidance to their cohorts. Enhancing the mentoring experience with external mentors, as a complementary learning experience, does not diminish the mentoring role of the managing directors; it augments the need for their intervention. Cohen et al., (2019b) define mentoring as a “provision of technical and business feedback, advice and social support (p.1791).” Managing directors’ responsibilities and actions embody this role by providing both career-related and psychological mentoring to startup founders. What has not been completely elucidated is the role managing directors play as network brokers, and how they intentionally manage the network to provide startups with the resources they need. Qualitative data shows that managing directors spend considerable time identifying and engaging potential mentors from the ecosystem while also teaching founders how to build and nurture their own network. “When it came to building this network up here at the city, I was reaching out to people, you know, giving them the opportunity to use their expertise to assist the next generation of business creation and entrepreneurs,” stated Director 2. This places a major responsibility on the managing director and emphasizes the importance of managing a vast network as a key function of the accelerator. Therefore, the managing director’s mentoring role is evident, but in this case, exerting the integration career-related function requires them to intentionally build and expand

a network for the accelerator. This is radically different from introducing startups to their personal networks, which is a new reason to call them alpha mentors. This new enhanced role further validates the third proposition of this study as startup accelerator managers do play a critical role in the development of a valuable and relevant network of mentors. However, this is not just in the development but also in its continued engagement and expansion. The role of network broker is central to the value proposition of the accelerator, which also demarcates its differentiation from other acceleration platforms.

Learning to develop a social network

Literature has denominated accelerators a new business school (Miles et al., 2017, p. 811–824). And one of the most interesting learning outcomes researchers are beginning to address is the development of the competencies to build social capital (Politis et al., 2019). Yet the dynamics and specific lessons learned at accelerator programs are not completely documented by Politis's study. Clear empirical evidence of such dynamics was recorded in my research. Previously, qualitative data gathered from both founders and managing directors clearly supported recent phenomena proposed by new theories as well as new dynamics completely overlooked by academia. Figure 7 summarizes some of the dynamics we have elucidated so far. From the opportunistic selection of mentors, the role of managing directors as network brokers and the two distinctive types of relationships founders develop with their mentors in just a few weeks.

Figure 7: Summary of the dynamics observed at Gener8tor



Source: Author created.

As a concierge accelerator, the program focuses most of its resources on five startups at a time. But these new ventures are as diverse as the network the accelerator needs to develop and engage in order to find the exact knowledge or social capital its cohort needs to overcome its most pressing challenges. This unique feature forces Gener8tor to nurture and constantly evolve its social network.

Entrepreneurship literature posits that networks' evolution is an organic demand from growing startups (Jonsson, 2015). Startups' challenges change as the young venture moves from one life-cycle stage to the next one, therefore their entrepreneurial network must change (Strobl & Kronenberg, 2016). It is theorized that a startup network evolves from a dense and identity based one to a sparse intentionally managed one (Jonsson, 2015). Structural holes in the ever-expanding network provide the heterogeneous knowledge startups need to fill the internal

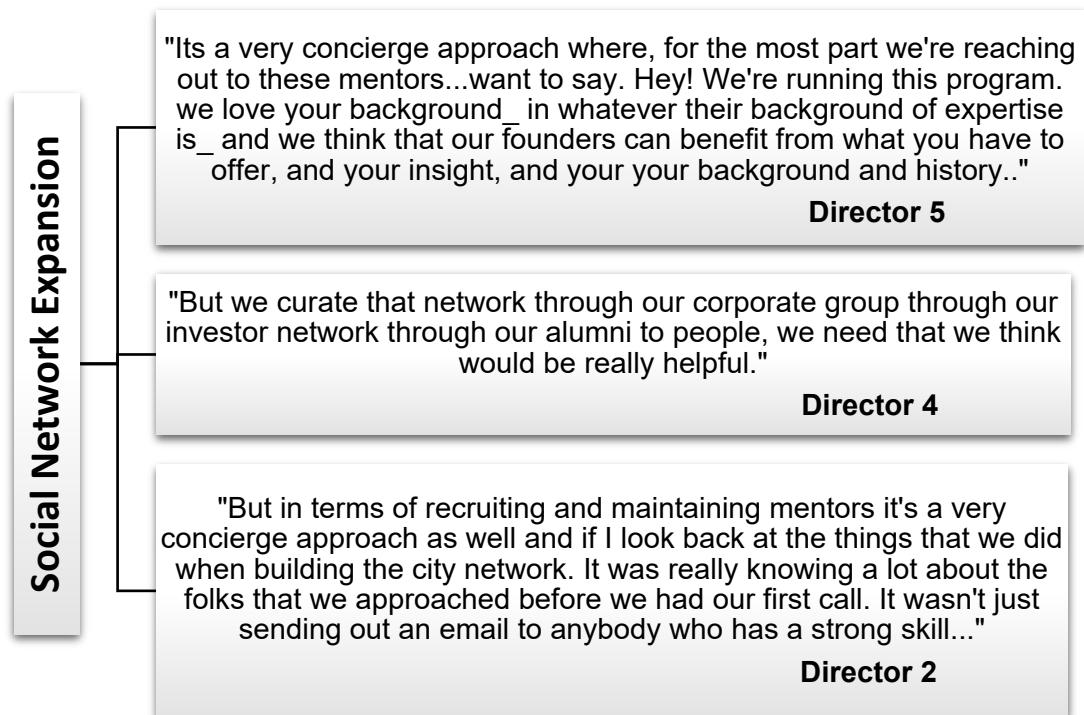
knowledge gaps. Mentoring needs change as well, thus it is logical to deduce that new knowledge will be required – information and expertise that may not be readily available in the firm’s extant network. Gener8tor provides access to that heterogenous collection of knowledge and expertise through their Mentor Swarms. While Gener8tor has a dense and close-tie network, an opportunistic approach is taken to connect with the resources each cohort demands.

“What did the companies need both now in our portfolio companies so from a domain expertise perspective, and a support perspective, what can we not provide that maybe our network can provide. What’s our network lacking? I think, is a big way we think through. How do we identify? Who should we identify?” Director 3

Director 3 explained both the motivation and mechanism for network expansion: “Maybe we’re a little bit more reactive, and if we don’t have someone to connect you with, [we] will find someone to connect you with, and I think that’s how we kind of start the relationship with those people.” Gener8tor’s managing directors embarked on a network expansion for each cohort, which provided the accelerator and the startups a rich, dense network but one with structural holes. Director 6 said: “So, my role is similar to other managing directors, in recruiting mentors [...] I think that you always need to focus on how best the mentors should or would be able to serve the cohort companies.”

Table 12 provides evidence of the managing director role on recruiting and expanding the social network of the accelerator.

Table 12: Directors recruiting and expanding social network



Source: Author created

But access to a diverse network is just the first step. Engaging and maintaining those resources in the startup's networks require a different know-how. Gener8tor's managing directors understand the value of keeping those resources engaged, and one of their most important endeavors is to transfer the know-how to build and intentionally manage a social network. There are two clear lessons strategically developed by the managing directors: the first is to engage and attract the resources, the second is how to actively retain them in the startup's social network.

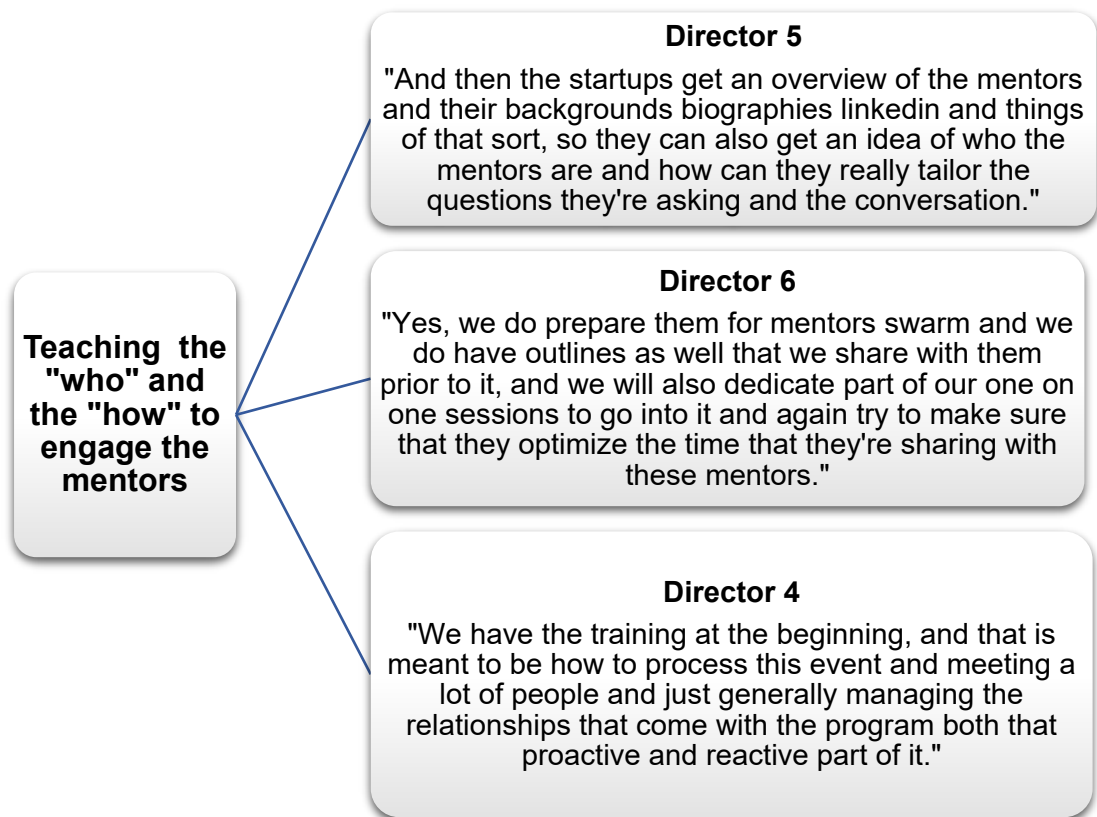
"On the startup side, some of our coaching is around, how do you handle these conversations, and how do I position myself where I'm showing the values and being honest about the faults and places where I need

help. Where I can build a strong partnership with this individual rather than it being too transactional. Director 1

Startup founders know who to engage during the Mentor Swarm because managing directors circulate mentor information prior to the events. Proactively providing cues to the founders about who could provide them with the knowledge of contacts they need, the accelerator acts as a curator of the startup potential social network. “Does the program actually teach the participants on how to build the network or had to maintain the net or leverage opportunity. Yes, Gener8tor really good at that so after the Mentor Swarm there's a lot of sessions that will have internally.” Director 2

Figure 8 presents the qualitative data gathered from interviews of managing directors, evidence of the role they play in teaching founders the *how to* to develop and nurture a network of relevant external resources.

Figure 8: Managing Directors teaching how to engage with mentors at Gener8tor



Source: Author created

From the founders' perspective, these lessons have proven to be valuable and consequential. "We now have a network database that we're sending ongoing communications to, so out of the, let's say 65 firms, they then introduced me to another 15 firms" Founder H.

Founder B identified the network-building skills as one of the most important knowledge skills she gained at Gener8tor. "And just like, generally, like, how to, like, maintain, like, professional network. I think that improved a lot, you know, in terms of, like, sending updates and meeting with folks and things like that. So, I would say those are kind of the three big things that I took away from it."

By asking startups to disseminate a predetermined monthly report among all its newly formed networks, Gener8tor not only kept its own social networks informed and engaged, it also transferred a valuable skill to the founders as they benefited from additional referrals to relevant resources and potential investors. “It's nice, you know, to keep them all, to keep all the mentors on my monthly update list and then I get, you know, little pieces of feedback from them when I send those out.” Founder C

Monthly progress reports are required by Gener8tor and founders must send them during and after the program ends. Since most of the founders, if not all, follow the template Gener8tor facilitates for such electronic communications, most monthly reports communicate the same type of information and in approximately the same sequence¹. Gener8tor strongly encourages each founder to create a list of contacts, including mentors, investors and their peers. These progress reports spring from a suggested format and outline.

“If you're disciplined enough to do monthly or even semi-monthly updates. So, you're getting out, you know... Hey, here's what's going on with the company! That has been really critical. And so, having all those mentors that I send that out, the most critical thing for that group is they make introductions to us, for us.” Founder H

¹ Data analyzed from startups monthly reports. Data kept confidential.

There were at least two immediate benefits from using monthly progress reports to keep the startup networks informed. The first one was to signal a pulse to let the network know your startup is alive and striving to grow. The second and most salient outcome was network active participation and expansion. As Director 1 stated:

“I think, for the founders, like, it's not even just updates, it's like when they're sending updates we don't want them to just have, like, shiny object updates that include a lot of paragraphs of exposition about, like, I'm doing X or Y, but, like, there's no numbers in it about, like, what matters. You know, user growth, user retention, how long are people spending with the product, like, whatever that might be, revenue. Whatever they're tracking is, like, their key performance indicators. If that's not included in there they're still getting the benefit of, like, having a pulse, but they're not really showing any tangible progress.”

Startup founders identified this tactic as highly effective and critical to continue benefitting from their intentionally built network of mentors. “And I don't know if they're, like, specifically mentoring us, but they're definitely, like, leveraging their networks to keep introducing us to more people. And so that's been helpful,” said Founder B. It is thought-provoking that many of the connections are loose-tie relationships with limited or no commitment to the founder. Nevertheless, these loose-tie mentors are relevant as a pool of knowledge and access to an extended network.

“It's a really powerful way to leverage. Basically, again that kind of, like, serendipity piece, that I talked about earlier. I mean, if you're sending out a progress report and you're asking, please be respectful of my confidential information but also say, like, do forward it to people that you think would be helpful. There have been mentors who have come on the scene, after the program is already over because some mentor of the company forwards in the progress report to somebody new who ends up also being very, very helpful to the company.” Director 2

Dyadic relationships are seldom needed for founders to learn exactly what they need from those with the expertise, or access to the right expert. The mentors are equally, or in some cases, more impactful by serving as network nodes and connecting startups with the right resource.

“I get, like, 10 or 12 a day now minimum, just from the beta, of startups that are updating us on their work. You know, that's going to their whole mentor list, so that's, I think, a pretty nationally proactive model of prolonged engagement; long past the accelerators completion, you know, startups doing it, five years later.” Director 4

Thus, **Proposition 5:** Startup accelerator managers play a critical role in the development of a valuable and relevant network of mentors, is not just validated but extended. Indeed, startup accelerator managers play a critical role in the development of a valuable and relevant network of mentors. Yet, their role goes beyond the mere introduction of connections, they also intervene in the development

of the right tactics to maintain and expand the startups' new developed network.

Managing Director as a Network Broker (*Tertius Iungens*)

“Again, it is just, I think the most important thing, other than the mentoring and the one-on-one that we have received during the program, was the access to the ecosystem, to the startup ecosystem in the Midwest” according to Founder A. The accelerator acts as an ecosystem catalyst, by fostering the connection between important actors and new ventures (Cohen et al., 2019b). Therefore, network brokerage dynamics are implicit as a plausible determinant of an accelerator's performance. Since an accelerator's performance is measured by its startup portfolio success, accelerators aiming to propel startup growth are intrinsically compelled to act as network brokers. Furthermore, this brokerage dynamic heightens the significance of an accelerator's social network size and engagement, as well as its capability to quickly expand and evolve contingent on the startups needs. Thus, this qualitative study found that an opportunistic approach to gather the required resources, while intentionally managing the network, are both critical factors for a startup's performance.

“And it's it goes to our ethos that we got to get you know, two, three years of growth in the six-month window. What can we do to try to expedite resources in the company to facilitate that outcome? And we process the questions through those lenses so it's a functional use of the network, not sort of like a network as a destination or like a network, is like an asset. I think [it] is maybe more, you didn't refer to it as a

destination, but as an asset. We probably should frame it more that way than we do.” Director 4

“They have a strong enough network, where they can help this company make it happen like three times faster just by getting them in the right rooms, with the right people with the right stamp of social proof for approval attached to it. Like if this person says this is worth paying attention to that it means a lot within an industry. And maybe enough, you know social leverage where they could with that stamp of approval help that company Inc a deal that they otherwise never would have been an option for them. If we can find somebody to do that, that that'd be amazing most of the time it's a combination of those things so.” Director 1

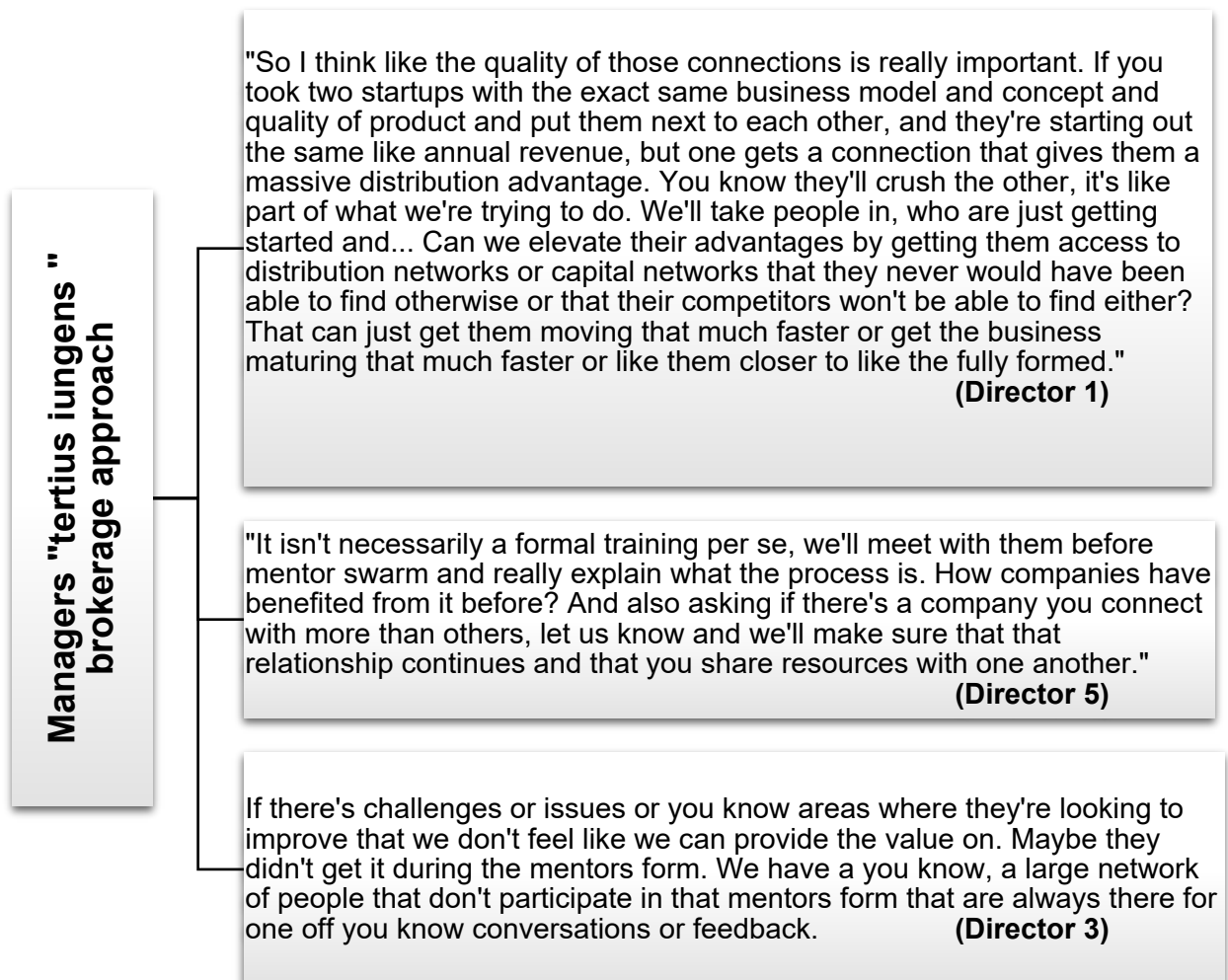
Thus, the network is an asset that needs to be properly managed and transferred to the cohort. The brokerage role impels managers to either leverage existing close-tie relationships owned by the accelerator or to cold call resources with the information or connections needed by the startups.

“So, it is important to continue building that network as well, and what I do personally is I attend a lot of conferences. I get out in the community and go to different events as well where there's people all around us that have great backgrounds and a lot of expertise as it relates to the different industries in which we're operating in.” Director 5

A clear *tertius iungens* orientation plays a significant role for the development of a rich and diverse pool of knowledge. Managers engage in an unembedded brokerage of knowledge, not a mentor-matching dynamic.

“Introducing you to someone who's going to come onto your team to help push the company forward as well. We can make those initial introductions we can make thousands of initial introductions but after we make those introductions it's on the founders to maintain the relationships. We cannot do that part for them so they have to actually go in and maintain those relationships.” Director 5

Figure 9: Quotes from Directors that present evidence of their brokerage role at the accelerator



Source: Author created

Mentors may not be in the accelerator's network, so managers are responsible for nurturing and expanding two different structures; a dense network of mentors already committed to Gener8tor's mission and dynamics, and a network with

structural holes, comprising new and unrelated individuals intentionally approached to fill the knowledge gaps of the dense network.

“If a person has a skill set that is worth us cold calling them because our company needs help, chances are their skill set is really rare, and really unique, you know, so giving them the opportunity to you know help influence the next generation of entrepreneurs, most people say yes to that.” Director 2

“The outside mentors that we do bring in, I think as an ecosystem we've evolved over the past couple years. I think in terms of identification we're looking for people that have maybe been through this process before from the seat of the founder, right; they've built a company, they've grown, they've scaled something they've been successful and maybe they failed and they've learned a lot from that.” Director 3

Gener8tor seems to have decided to find the best possible resources, even if they have to cold call experts and professionals unrelated to their network or platform. These structural holes are created on purpose, consciously designed to fill the gaps of knowledge in their extant network. Yet, Gener8tor's main interest is the development of the startups, so the network is built in function of the needs of these ventures. Founders also recognized the value of the newly formed network developed by Gener8tor, but also owned by the startup.

“Honestly view it as a once in a lifetime opportunity. And again, the network that I have built, the people that I have met. Regardless of how

this startup experience turns out; they will kind of stay with me basically for the rest of my professional life.” Founder A

Other Valuable Learning Experiences

Learning from Investors

The Mentor Swarm was an impactful learning experience yielding knowledge and a rich, deliberately connected network of resources. A network that also includes investors.

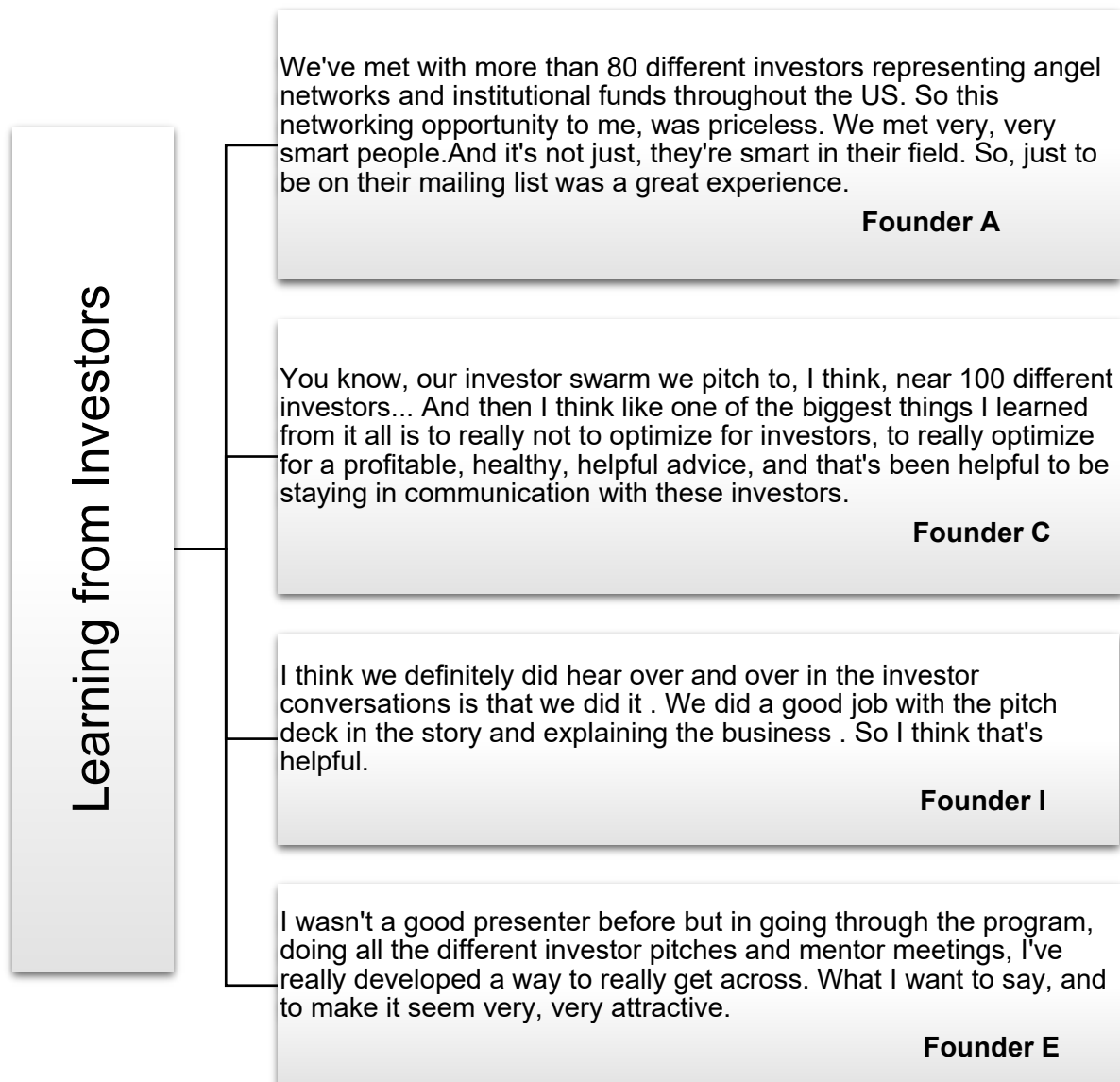
“One of the most harsh feedback I received during the mentoring swarm was from a venture capitalist who, when I was kind of giving him the pitch, and he said, okay, so what. So, what that you can actually connect to sell your networks 10 times faster. Some people are not, you know, not too keen on the speed. So that was like a *eureka* moment for me [...]” Founder A

Thus, investor feedback played another interesting role in the startups’ journey through Gener8tor. While some of the guests for the Mentor Swarm might be investors, Gener8tor guaranteed founders plenty of feedback through the Investor Swarm. Gener8tor used the exact same network approach it used with mentors to expose startups to a geographically diverse group of investors. The Investor Swarm is described by the founders as a *national road trip* (Founder G) where startups present to more than 70 investors from different cities. Founder G described the experience and its value as a network building opportunity:

“If we're in a city. We weren't in that city to meet with one person, we were in there for 20 and so getting all those meetings was a terrific experience. And it's just an efficient use of the investors' time where they could sit down for an hour and listen to hear five companies. And so, Investor Swarm was actually super valuable because I was able to expand my potential investor network was able to get really good feedback on the market, depending on the location and I was able to do it in such a small amount of time.”

Figure 10 below provides a sample of the qualitative data compiled during the interviews to startup founders.

Figure 10: Quotes from startup founders when asked about learning experiences at the accelerator



Source: Author created

A clear pattern emerged posing the Investor Swarm as a rich learning experience. Honest and constructive feedback was a clear benefit from the multiple pitch sessions founders delivered. According to the qualitative data gathered from interviews with the startup founders, learning was the result of a combination of clear patterns among the feedback and tough questions aiming to fill gaps in the pitch

presentations. The sheer luxury of repeatedly practicing at an accelerated pace with a group of experienced investors forced founders to incorporate new information, prepare for certain questions and build further confidence in their ability to pitch their ventures, as noted below by these founders:

“I think what was helpful was during Investor Swarm talking to investors on the coast, who had consumer product experience. They were surprisingly helpful and, like, connecting you to other early-stage investors.” Founder J.

“That was probably the single biggest thing that I got from it. Like, understanding how investors think what kind of information I need to have how to raise all of that kind of stuff right. So, like, master's level education in and started finance. It was a lot more than that, to you know, kind of adjacent things, are like, understanding what different stages of investors are looking for. Whether it's traction, or scale, or users, or whatever it is in being able to present that information to them and then also knowing the difference between West Coast, Midwest, and East Coast investors and all that kind of stuff and it all comes back to that kind of master's level education in startup finance so amazing.” Founder D

Yet, it seems that getting further connections from an already extended network of investors was the most important outcome of the process. “We now have a network of database that we're sending ongoing communications to, so out of the,

let's say 65 firms, they then introduced me to another 15 firms," said Founder H. Amplifying its extant network of investors resonated with the mentoring experience founders had at the early stages of the accelerator program.

"We've done an Investor Swarm with them, and I think the real value for us with Gener8tor isn't just through the program; I think it's going to be coming in the future for getting our seed round done. So, they've made a lot of introductions." Founder K

Once again Gener8tor acted as the network broker, identifying the investors from their extant pool of resources, and introducing the startup founders to as many relevant groups as possible.

The investor network was curated by Gener8tor, who coordinated several meetings in each location. The accelerator's ability to open so many doors in a concerted and systematic approach became a core competency: securing a unique high-value resource for the startups. Chances for startups to have access to that many investors in just a few weeks is, in the best-case scenario, improbable.

"Generator with their connections was able to access these meetings all across the country, and afterwards, I kind of realized how difficult it is actually getting somebody to commit to a meeting. Having it would have been entirely impossible for me as an individual to do that with as many investment groups in a shorter time Gener8tor was able to accomplish" said Founder G.

For the accelerator, the uniqueness of its network and the access it provides to the startups is a powerful source of competitive advantage for the participants.

“[...] if you took two startups with the exact same business model and concept and quality of product and put them next to each other and they're starting out the same like, annual revenue, but one gets a connection that gives them a massive distribution advantage; you know they'll crush the other. It's like part of what we're trying to do, we'll take people in who are just getting started and we elevate their advantages by getting them access to distribution networks or capital networks that they never would have been able to find otherwise or that their competitors won't be able to find either.” Director 1

Thus, learning from investors was an unquestionable outcome for Gener8tor startups. Learning from investors also meant building an extended network capable and motivated to further connect the startups with relevant resources. Knowledge came from resources beyond Gener8tor's own network, and these new connections were kept by the startups as their own.

“I think the most important thing other than the mentoring, and the one-on-one that we have received during the program, was the access to the ecosystem, to the startup ecosystem in the Midwest. That it's not just, it's not necessarily a learning thing, but it's a networking opportunity or networking effect that Gener8tor has built an ecosystem. That connects

to other founders, to startups, industry, corporate legal business, and investors.” Founder A

The propositions of our qualitative research did not explicitly encompass learning experiences propelled by investors, yet our data unearthed other valid sources of knowledge for the startups, including the Investor Swarm. Furthermore, the learning experiences forged by the Investor Swarm clearly strengthened two of the propositions. While **Proposition 5** states that startup accelerator managers play a critical role in the development of a valuable and relevant network of mentors; unquestionably, they also play a critical role in incorporating a considerable number of connections among investors. Thus, the brokerage role of the accelerator manager has proven to be vital as the startups build a pertinent network and learn how to nurture a network that won't only include mentors but also investors. Developing such a network of investors would have been unfeasible for the startups, much less attainable in a three-month period.

Proposition 1 is also worth revisiting as learning from investors further reinforces the idea of knowledge coming from multiple mentors as well as multiple other actors, rarely considered when studying the impact of an accelerator. Indeed, investors' value at an accelerator is defined by the capital they provide to further scale the selected ventures, yet the stark pitching exercise these startups repeatedly perform is triggering learning, among other significant outcomes.

Learning from peers

In 2018, Kubberød et al. spearheaded the notion of a new potential sub-field: entrepreneurial peer mentoring. Peer mentoring within the entrepreneurship field is considered neither a strong contributor to the learning process nor often proposed as a strategy to foster founders' development. Yet these authors theorized about the inescapable positive impact of peer mentoring in an entrepreneurial context due to its strong psychological function: "Analysis revealed that peer mentors fulfil three main coexisting roles: learning facilitator, supportive coach and familiar role model (p. 1027)." While peer mentoring has been studied in other learning scenarios, including entrepreneurship education, not much has been said or studied about the dynamics fostered by this unique approach, much less its efficacy and potential impact at the individual or startup level. As recently as 2020, Elliott et al. concluded: "This innovative, experiential, peer mentoring approach contributed to the development of a strong learning community of engineers, facilitating the growth of networks across engineering disciplines (p. 61)." Elliot's qualitative study drew data from women engineering and computer science students experimenting with peer mentoring. Thus, peer mentoring is not a random invention, it is instead a concept worth studying. While there is barely the beginning of a theory on this potential mentoring dynamic, these rare studies provide the appropriate context to report unexpected results from my qualitative data. Informal peer mentoring is occurring at Gener8tor and founders believed that these interactions were rich learning experiences. This has not been widely investigated by researchers, but some initial observations have been included in recent studies. Already highlighted by Cohen et al. (2019a), accelerators that encourage transparency among its founders foster peer interaction and learning. Learning from other founders was not an expected result

from my research, yet a strong data pattern emerged from the data collected from interviews. Founder C and Founder K were explicit about all the factors previously uncovered by recent literature, from the importance of exchanging information, to employing a network approach to continued learning from each other.

“Just being around other people going through that and hearing about their challenges and how they were thinking about solving them [...] and sometimes even just thinking about their idea and thinking about their challenges. You know, was a nice break from thinking about my own idea and own challenges. I think it was actually, you know, very stimulating, and would very much expand how I was thinking about my own problems and every, you know, every issue that's out there. I really enjoyed that aspect of it, and I still stay in touch with everybody, with the other founders in my cohort.” Founder C

“I think some of the benefits of Gener8tor are having a class cohort of other founders that you can talk to about whatever issues they're having. That's hugely valuable to have that peer group to be able to bounce ideas off of and talk through things. So, you know I found those things of value and I really liked the people that we had, we just haven't had a difficult moment where they've had to, kind of stick their neck out, and show their impact for us.” Founder K

From this description it is evident how a peer founder may be a source of inspiration, reflection and information. While this is not an intended mentoring dynamic, its outcomes are potentially categorizable as psychological mentoring

functions. Even more interesting is the fact that these founders built a close-tie relationship, one that exceeds the time boundaries of the program. Just as founders at the accelerator built a relevant network of resources with those mentors previously identified and introduced by the program, peer founders also became close-tie external resources. “We send each other updates or company updates, and we're like, hey, that's great. Hey, I saw this, I think I know somebody. We try to help each other,” said Founder H. Including peers in the mix of mentoring resources was clearly the accelerators' intention. Thus, as described by Cohen et al., (2019a), this core element of the accelerator could be designed to encourage transparency and information exchange, an approach aiming to propel learning. According to Director 4, this dynamic among peers is expected to be more impactful and relevant than other sources of mentoring during the program.

“And that's probably for them, you know, each of them, more valuable than any other mentorship at this point; just because it's been_ so here's one direct to consumer founder talking to another direct to consumer founder exchanging everything from, you know, ad rates to hiring decisions, to job descriptions, you know, like it's a full range of what they do together that you know, I don't know who's mentoring, whom at this point, and I think it's mutually beneficial.” Director 4

Mentoring each other is perhaps the most salient concept noted by this director, as the concept of *mutually beneficial* within the entrepreneurial mentoring definition has never been described as *reciprocated mentoring*. Considering the asymmetrical relationship enabled by the entrepreneurial mentoring definition, peer mentoring challenges the constructs of the field. Peers are considered equals, not

one more experienced than the other. That is to say: asymmetry is not considered a precondition for the relationship.

Entrepreneurial peer mentoring is an interesting potential new phenomenon, a lacuna to be explored. But peer-to-peer learning is not new, and is occurring at the accelerator, and it was not a serendipitous outcome for Gener8tor. By design, the extended network of external resources available for founders included peers, and this role was also given to former accelerator participants.

“I would say that the largest portion of those people are the ones that went through Gener8tor, and were alumni, and kind of filling in the gaps on that, most of their advice was around how to make the most out of Gener8tor. And in retrospect I think that maybe that was some of the most useful advice.” Founder D

This is an important fact corroborated by Director 2:

“I think that's a really great point, you know, the alumni very often end up being the most engaged mentors [...] I don't think that you'd find a single company in the portfolio who wasn't happy with their experience at Gener8tor, so oftentimes, you know, those founders are the ones who are most excited to get involved and get back.” Director 2

Thus, a clear pattern emerged as peer founders in the program, as well as

alumni, are indeed a valuable source of information, support, role modeling, and for many of the interviewed mentees, important mentors.

For this qualitative study, learning from peers was serendipity. Entrepreneurial peer mentoring is just a proposed typology, and research is just starting to unearth its potential role. Peer learning is a much understood and studied phenomenon, and clear benefits and dynamics have been drawn. Including peers in an accelerator's pool of resources is also a recent construct seen as a core element of a program's design, and thus is far from been described as a mentoring dynamic. Hence, a clear pattern in my data depicts a new dynamic, previously underestimated and understudied. Peers are a variable to consider when studying accelerators. "Meaning we all came in, not having an idea, and creating an idea. So, it was really nice to be around entrepreneurs pretty much the exact same phase and stages; you feeling the exact same thing. And then that's what I really enjoy the most, while being part of the accelerator (Founder J)." Variables such as trust and perceived similarity (St-Jean & Audet, 2012) have proven to influence a mentee's learning, and both variables are indirectly described by the founders. Clearly, mentoring is happening. I argue that it is time to go deeper into the development of a more exhaustive entrepreneurial mentoring theory, one that challenges extant boundaries and explores new dynamics and new actors. Startup accelerators pose a unique opportunity to understand all the sources of learning an entrepreneur can exploit and the benefits of strategically and purposely designing these learning experiences for founders. For Gener8tor, building a diverse network of resources is a key strategy to propel accelerated, relevant and timely learning for their startups. Indeed, mentoring can come from many sources, some of them even serendipitously.

Chapter: 5 Discussion & Conclusion

After analyzing all collected qualitative data, it is fair to claim that mentoring dynamics at accelerators pose a very different scenario when compared to programs based on dyadic relationships. New approaches to mentoring are unveiling a series of factors and new actors not appropriately considered as key resources for a founder's learning experiences. Results from this study confirmed mentoring as a critical learning experience influencing founders' decisions and startups' access to vital resources for their development. Furthermore, patterns in the data showed most startup founders seek only mentors whose expertise or connections are relevant to overcome immediate challenges faced by startups when entering the program. This opportunistic approach used by founders was manifested through two different mechanisms. Founders could leverage the feedback and opinions of multiple mentors to identify obvious patterns. This specific mechanism provides a social proof (Cohen, S., et al., 2019a) for those ideas constantly supported by mentors. Reiterated intelligence or guidance will create a clear pattern in the scatterplot derived from dozens of data points collected from mentors. The alternative was to be very specific about the startups' needs and only select the most suitable experts or knowledge.

Any of these mechanisms demand a large pool of mentors ready to quickly engage with startups. Already labelled as concentrated consultation by academics (Cohen, S., et al., 2019a), this new approach to mentoring requires a new set of skills from the accelerator. It is necessary to build, nurture and continuously expand a network of external resources. This is a critical but overlooked dynamic when studying accelerators and the learning experiences designed to support startups. Accelerators, especially those targeting growing startups, must consider the benefits

of a readily available pool of knowledge and connections sourced by a large, diverse and purposely structured network of mentors. This alone will not only require a new set of skills, but also the development of a new breed of directors, able to act as network brokers as well as alpha mentors.

Likewise, both mechanisms to gain knowledge from mentors demand only one type of mentoring function, the career-related. Interviews with founders demonstrated that startups' most pressing challenges were fundraising, sales growth and technical know-how. Thus, founders needed very specific information, precise knowledge, in most cases only possible to obtain through experts. These pressing needs encouraged founders to select the sought content and knowledge from multiple interactions with different mentors, rarely just from one source. Some of the most impactful mentors were loose-tie relationships who met only once or for several brief instances. Yet, both the information and resources obtained from them were vital for the startups. Short uncommitted interactions with mentors were never considered as valuable learning experiences in entrepreneurship mentoring literature. The dynamics between multiple mentors, some loose-tie and others close-tie, as complementary sources of vital knowledge do not fit extant definitions of entrepreneurial mentoring. The literature has barely started to name the phenomenon (Cohen, S., et al., 2019a), hence this study contributes to the development of new theory and the study of unnoticed dynamics and actors playing a significant role at accelerators.

One of the biggest benefits provided by mentors was their role as connectors to an extended network of resources, and to the business ecosystem in general.

While acting as connectors has been included among the mentoring career-related functions (St-Jean, 2011), not much is theorized about the relevance of leveraging a network of mentors. Certainly, managing and capitalizing on a network of mentors poses a series of different dynamics when compared to dyadic mentor-mentee relationships. Factors such as trust and perceived similarity may cease to matter in the satisfaction mentees derive from the mentoring process. They will still be mediators in those long-term close-tie dyadic mentoring dynamics, but those were only a small percentage of the relationships developed at Gener8tor.

These new elements demand a new theoretical framework and set of variables to fully depict the mentoring dynamics at those accelerators moving away from the idea of matching founders with just one mentor. Strong contradictions between previous literature, mentoring's core definition, and these new ways of acquiring valuable external knowledge from a group of mentors may require a more complex research question: Are these dynamics between startups and multiple mentors truly mentoring and, if not, why not? The vast pool of mentors is not serving in a coaching function, they are not acting as consultants, and they are willingly participating in a platform that selected them as mentors. According to directors, these mentors are not formally trained but are carefully informed on the expected role they need to play and the outcomes they want to achieve. They must share their knowledge, expertise and networks with the mentees. They will be kept on a list of contacts and receive monthly updates from those startups for which their expertise or networks are valuable. Mentors are invited to social gatherings other than Mentor Swarms and are expected to be members of an extended community nurtured and supported by Gener8tor. In their interactions with founders, they raise questions, they provide

feedback, they act as sounding boards, they bring new ideas, they connect their mentees with vital resources. They do not necessarily commit to a long-term, close-tie relationship. Therefore, time spent mentoring may not truly define the construct.

New definitions on entrepreneurial mentoring are avoiding the inclusion of a dyadic, committed relationship altogether (Cohen, S., et al., 2019b). After all, it is clear that the value of mentoring relies on the transfer of knowledge and resources. My study claims that intensive consulting is a valid mentoring approach where mentors provide valuable knowledge and access to vital resources through a series of new dynamics. While these dynamics were observed at Gener8tor, benefits from this new mentoring approach could be exploited by other entrepreneurial development platforms.

Serendipitous findings underline the role of Gener8tor's directors as alpha mentors. Directors developed close-tie relationships with founders and were also providing critical guidance. This mentoring dynamic responded to the dyadic archetypal mentor-mentee relationship, yet it also contradicts the definition of entrepreneurial mentoring. Founders were, in many cases, learning and benefiting from less experienced individuals. They also played a critical role as network brokers. An unambiguous *tertius iungens* (Obstfeld, 2005) brokerage approach as directors were facilitating the transfer of information between alters but relinquishing the role of conductor. Directors were not just connecting founders with resources in Gener8tor's dense network, but also cold calling new resources needed to fulfil the needs of the startup cohort. By identifying and connecting these isolated resources, directors were actively and intentionally managing a network with structural holes, yet

fitted to the startups needs. Managing both dense and sparse networks is a dynamic seldom described when analyzing accelerators. Nevertheless, it has proven to be vital to supply startups with access to mentors with important knowledge, expertise and access to social capital. Thus, the mentoring component of the accelerator was much more than the mere exchange of information and connections between mentors and founders; the whole dynamic was fueled by a series of other critical activities with the directors as the principal actors and catalysts.

The accelerators' selection expertise and startup growth stage are both proposed as fundamental factors within the mentoring dynamics. Accelerator selection expertise is related to the type of founders it opts to support through the platform. It also encompasses its ability to select the right mentors and resources for the acceleration program. Meanwhile, the startup growth stage will define the company's needs and its ability to leverage the resources provided by the accelerator. It was clear that early-stage startups differ in the types of challenges these companies face as they start the program. Based on the data collected by this study, growing companies not only confront a different array of obstacles, they also need a diversified network of resources to tackle those challenges. The time constraints of the accelerator push them to seek specific and relevant knowledge as well as access to particular social capital. Time is of the essence and intentionally managing a network of resources is imperative at this lifecycle stage. Early-stage startups are more concerned with defining their ventures and kickstarting their operations, endeavors that demand a very different set of resources and expertise.

Most of my research propositions were supported by the qualitative data that was collected.

P1: Startups' most pressing challenges trigger the search for mentors with relevant experience and knowledge.

Startups' most pressing challenges were related to their need to raise capital from investors together with a list of managerial challenges. Most of the challenges represented knowledge gaps and lack of access to the right resources. Thus, solutions were sought by selecting mentors with the needed expertise and social capital. Founders were opportunistically selecting mentors with the content, expertise and access to valuable networks. This opportunistic approach was encouraged and cultivated by the accelerator itself. Opportunistic selection of resources was also employed to expand the accelerator's network in order to fulfil the specific needs of the startups. An internationally managed and curated network was transferred from the accelerator to the startups. This network was later nurtured by the startups through monthly updates and periodic communications. Thus, mentors were selected based on the benefits they could provide for the development of the startups.

P2: Founders will prefer mentors with access to a network of key resources for their startup development.

Access to relevant networks is as appreciated and as valuable as knowledge and expertise. At both levels, the accelerator and the startups, mentors with access to key resources are intentionally selected for their access to such social capital.

Qualitative data gathered from interviews with both founders and directors confirmed the critical purpose of an ever-expanding network of mentors and other resources. Connecting with these mentors and gaining access to multiple other connections was the most important learning gain from the accelerator, according to founders. Managing that network was also praised as an important lesson learned from Gener8tor. Such is the importance of building rich social capital that the accelerator trains founders on strategies to keep the network informed and engaged. Thus, mentors with the right social capital are not just preferred but also cultivated and kept as loose-tie relationships within a much broader net of resources.

P3: Startup accelerator managers play a critical role in the development of a valuable and relevant network of mentors.

Accelerator managing directors play several critical roles. Acting as network brokers is one of them. Gener8tor has built a dense network of resources over the years, nevertheless expanding to different markets required directors to identify and recruit new resources. While managing the existing pool of mentors, investors, and other experts, directors also need to fulfil startups' needs by continuously looking for qualified experts and knowledgeable resources. A distinctive *tertius iungens* brokerage approach is employed to connect founders with adequate resources, thus mediating, but not controlling, access to the information.

Directors were also considered the alpha mentors of the accelerator by the founders. Unquestionably, they were mentoring founders, and their close-tie relationships resembled a typical dyadic mentor-mentee dynamic. Spending several

hours a week over the duration of the accelerator, this mentor-mentee relationship was expected to continue after the conclusion of the program. Hence, directors play a fundamental role as both mentors and network brokers. They are also responsible for nurturing and growing the pool of resources available for Mentor Swarms. These actors and their multiple roles at the accelerators have been overlooked and underestimated in extant literature.

P4: Early-stage startups will seek to learn and obtain different resources from mentors than those startups in a growth stage.

It is clear that early-stage startups face a different array of challenges when compared to growing ventures. Founders from novice startups were more concerned about validating their business opportunity than operating the business itself. There was no business yet, so their challenges were not around raising capital or access to industry experts. Nevertheless, growing companies were racing to gain attention from investors. They needed the capital and the knowledge to pitch to investors, access to the right social capital, and access to experts in specific managerial fields. Data showed that mature startups were eager and able to leverage the multiple interactions with mentors better than those at an early stage. There are many extant studies confirming the evolving list of challenges that startups face as they mature, so it was not serendipity. Early-stage startups do have different challenges; hence they seek different resources.

P5: Startups which have launched in the market and are in a growing phase will be more likely to seek and benefit from career-related mentoring.

According to St-Jean (2011), the career-related mentoring function includes *integration* or the capability to connect mentees to key resources; *information support*, which describes the mentor's ability to transfer valuable business knowledge; *confrontation*, concerning the tactics mentors employ to provoke reflection on the mentees; and *guidance*, which demands the proposition of new solutions or the invitation to analyze challenges from a different perspective. While this study cannot claim all mentors exerted all four functions while supporting startup founders, it was quite evident that the most employed functions were integration and information support. Those were also the most sought-after resources by founders who clearly stated their need for specific managerial expertise and access to key social capital. Qualitative data highlighted the need for know-how on pitching to investors as well as for timely business acumen. From sales and marketing to industry insights, startups in a growing stage were facing pains that demanded knowledge or access to the right resource with the sought-after information, nothing more. The career-related mentoring functions became the most valuable support for founders and the most needed resource for their startups.

P6: Founders will learn from multiple mentors rather than a dyadic mentoring relationship.

This study does not invalidate the important role played by a dyadic mentoring relationship, but clearly eradicates the idea of this dynamic as the ideal one for accelerators aiming to develop growing startups. Those close-tie relationships were observed between the accelerator managing directors and the founders and it proved to be valuable. Nevertheless, learning was not an exclusive outcome of this dynamic,

nor were the sources of most important lessons for some companies. Founders learned from a vast number of mentors who joined Gener8tor's Mentor Swarm. For a few weeks, founders were exposed to dozens of individuals who provided key knowledge, access to valuable social capital, confrontational feedback and general guidance. Thus, founders learned from multiple mentors, directors included. Gener8tor employs a concentrated consultation approach to mentoring, exposing founders to a vast network of resources for a limited amount of time. Its main idea is to introduce founders to as many mentors as possible. It is the founders' duty to find the most suitable resources, be they either knowledge or access to social capital.

Learning from multiple mentors through this concentrated consultation approach triggered a series of unexpected dynamics between founders and mentors not previously documented. First, founders were encouraged to opportunistically seek mentors that may have the specific resources sought by their startups. Two specific mechanisms were used by founders to gather the needed knowledge. Founders had to distinguish the signal from the noise as they analyzed dozens of opinions and data gathered from multiple mentors. They had to gain social proof or a reiterated indication from the scattered information to identify a validated path to proceed. The second approach was much simpler: just opt to request and select the specific knowledge that would aid the startup with its most pressing challenges. By selecting mentors with relevance to the startup's next development goals, startups engaged in a network evolution endeavor. Thus, mentor selection may not describe the dynamic, as the end-game for the founders was to build an ever-expanding network for their startups: that is, a network initially introduced by the accelerator but nurtured and capitalized on by the startups. Learning then, became a continuous

outcome as mentors sent feedback and made additional introductions, even as they kept loose-tie connections in the evolving network of the startup. Hence, mentoring comes from different sources, as does learning.

Conclusion

Accelerators are a distinctive startup development platform. A time-compressed agenda, featuring mentoring, access to a broader network and capital, is among the most important components of these platforms. Their distinctive configuration of learning experiences and their fast-paced schedules pose a unique array of mentoring dynamics, not found in other contexts. This study identified and explained not just the mentoring dynamics triggering learning among startup founders, but also the key players fostering and managing these experiences.

Among the most salient results from this research is the role played by accelerator managing directors. Referred to as the alpha mentors by the founders, these players are noticeably exerting mentoring functions through dyadic relationships. Meeting with founders a few hours per week during the acceleration program, their relationship with their mentees lasted beyond the timeframe of the accelerator. Moreover, the scope of the director's role includes network brokerage functions. Alpha mentors are also managing and growing a vast network of other mentors and resources. Their responsibility involves retaining a dense network and creating structural holes in the network by incorporating new and varied distant connections. Thus, we have a complex web of external resources tailored to the startups' needs and trained to support startups by providing expertise, knowledge

and access to their own social capital. Directors are not trivial players and they have been overlooked by both entrepreneurial mentoring and accelerator literature. In this new set of dynamics, they become a leading player.

With a new approach to mentoring, founders are forced to adopt a different set of dynamics to select and interact with mentors. Unlike dyadic mentoring relationships, selecting mentors from a vast network requires a different sort of mechanism. To start, a noticeable difference is exhibited in the selection criteria used by founders, who choose mentors with relevant information rather than selecting by the individual. This shift from a dyadic relationship into a more opportunistic approach aiming for a collection of specific knowledge and ability to further connect the startup with key resources demarcates a completely new dynamic. The accelerator is not matching mentors and mentees, it is not forcing any specific relationship. Yet, it is encouraging and training founders to be opportunistic in their selection and strategic in their development of an ever-expanding relevant network. Thus, rather than select a few mentors, instead build and nurture a whole network of them. Within extant literature on entrepreneurial mentoring, this dynamic is novel.

Two atypical methods are elaborated by founders to extract the most valuable content from these new dynamics. One is finding repetitive patterns or concentrated data points within the massive amount of feedback received from mentors. The second is to predetermine the most pressing challenges the startup is facing and opt out of irrelevant mentoring. Learning did occur and evidence from the relationship between learning, changes in behaviors, and the resulting elaborated network of resources was corroborated by qualitative data.

These new mentoring dynamics demand certain resources and new rules at the accelerator level. In order to capitalize on these new concentrated consultative sessions, where dozens of mentors meet and provide feedback in 20 minutes or less, accelerators must convene a significant number of individuals. In Gener8tor's case, with over a hundred volunteer mentors, this meant a group that had to evolve and grow as required by the portfolio of companies. Some of those volunteers are long-term contacts from the local entrepreneurial ecosystem, as confirmed by interviews with managing directors. Others were invited because of their capacity to connect founders with an extended network, and not necessarily for the subject matter content they could provide. Therefore, an extended network of a diverse group of mentors is fundamental to create the conditions for founders to distinguish the signal from the noise or find the specific piece of advice that would help them tackle the startups' most pressing challenges.

Serendipitous findings highlighted the role played by peer founders and investors in the learning journey of their startups. Peers contributed with reassurance, role modeling and as catalysts for reflection. This is sufficient to argue that peer mentoring could be an interesting angle to explore. While data were not sufficient to claim peer mentoring as an ongoing dynamic, there is sufficient evidence to claim that peer founders are overlooked players at accelerators.

Investors' feedback was also deemed as important for founders. Founders were keen to identify Gener8tor's Investor Swarm as a powerful learning tool. Presenting their business opportunities to multiple venture capitalists helped them

polish their presentations while building validation for their startups. Thus, founders learned how to adapt their pitches to different markets and types of investors. They also learned how to best position their startups and how to prepare for questions. A network approach is employed by Gener8tor to introduce founders to dozens of investors. As with mentors, access to an extended network of investors from different geographic areas offered valuable lessons and opportunities to expand their networks. Investors are also incorporated to the startups' evolving network of mentors and resources. Both mentors and investors are kept informed by startups of their progress through monthly reports, a strategy suggested by the accelerator to bind and nurture this newly formed network. This unpredicted learning source also presents an interesting case for additional studies and new practices at accelerators. Although investors were not considered mentors, some mentors were investors, and both were equally valuable as a source of guidance, knowledge and access to social capital.

Accelerators' schooling features are key drivers of learning. However, the way each learning experience is designed and deployed should consider a series of factors. Mentoring provides valuable guidance, but accelerators may need to follow a different set of rules to maximize time and resources, especially when their portfolio of startups includes growing ventures. Entrepreneurial literature concurs on the unique challenges startups face at different life-cycle stages. Certainly, what early-stage companies may need from an accelerator's learning experiences varies from those needs required by growing startups. These differences will demand specific mentoring functions and a plethora of expertise and experiences. Consequently, a dyadic mentoring dynamic will not be enough to provide such resources. In addition,

each company is unique, considering elements such as their industries, business models, and strategies. In order to truly create a customized learning experience for each of the startups, the concentrated consultation mentoring approach employed by Gener8tor proved to fill the multiple needs of their startups. From knowledge and expertise, to access to unique networks, introducing and transferring a vast network of mentors to the startups filled all their needs. Yet, a set of new dynamics, players and rules must be considered. Managing directors need to take a central role as alpha mentors and network brokers. An ever-expanding network needs to be intentionally managed, opportunistically enhanced, and strategically introduced to startups. Accelerators need to encourage and train startups to build and nurture this newly transferred network of mentors. Mentors must be guided and informed of the expected outcomes as players in this unique dynamic. They must be open and willing to share expertise, knowledge and social capital. No close-tie relationships are forced. Loose-tie relationships are considered equally valuable if the right resources are provided. Thus, at accelerators, learning from multiple mentors is more than advisable, it is a new powerful mentoring dynamic capable of providing key resources to growing startups, just when they need them the most.

Conclusión (Español)

Las aceleradoras son plataformas de desarrollo de startups muy particulares. Elementos como operar en un espacio de tiempo reducido, su programa de mentoría, además del acceso a una red amplia de contactos y capital, se encuentran entre los componentes más importantes de estas plataformas. Su configuración distintiva de experiencias de aprendizaje y su agenda acelerada plantean una variedad única de dinámicas de mentoría, que no se encuentran en otros contextos o plataformas. Este estudio identificó y explicó no sólo las dinámicas de mentoría que promueven el aprendizaje entre los fundadores de startups, sino también los actores clave que fomentan y gestionan estas experiencias.

Entre los resultados más sobresalientes de esta investigación se encuentra el destacado papel que juegan los gerenciales directivos de las aceleradoras. Conocidos como los mentores alfa por los fundadores, estos actores notablemente ejercen las funciones de un mentor a través de relaciones diádicas. Estos se reúnen con los fundadores varias horas por semana durante el programa de aceleración y la relación que sostienen con sus aprendices perdura más allá de la duración de la aceleradora. Además, el alcance de las funciones que ejercen los gerenciales directivos incluye el manejo de una extensa red de contactos. Los mentores alfa no sólo administran, sino que también hacen crecer una amplia red de mentores y recursos. Es su responsabilidad retener una densa red de contactos mientras crean huecos estructurales en dicha red mediante la incorporación de nuevas y variadas conexiones algo más distantes. Como resultado, se crea una compleja red de recursos externos que se adapta a las necesidades de los startups y que cuenta con la capacidad de

apoyar a las nuevas empresas brindándoles peritaje, conocimiento y acceso a su propio capital social. Los gerenciales directivos no tienen un rol trivial, no obstante, han sido pasados por alto tanto por la literatura en mentoría emprendedora como por los estudios de aceleradoras. En este nuevo conjunto de dinámicas dentro de las aceleradoras, el gerencial directivo se convierte en el actor principal.

Este nuevo enfoque hacia la mentoría, obliga a los fundadores a adoptar un conjunto diferente de dinámicas para seleccionar e interactuar con los mentores. A diferencia de las relaciones de mentoría diádicas, seleccionar mentores de una amplia red de contactos requiere otros tipos de mecanismos. Para comenzar, se exhibe una diferencia marcada en los criterios de selección utilizados por los fundadores, quienes eligen mentores que ofrecen información relevante en lugar de seleccionar el individuo. El cambio de una relación diádica a un enfoque más oportunista que tiene como objetivo aunar una colección de conocimientos específicos y la habilidad de conectar el startup con otros recursos clave, demarcan una dinámica completamente nueva. La aceleradora no para mentores y aprendices, y tampoco fuerza ninguna relación específica. Sin embargo, alienta y capacita a los fundadores para que sean oportunistas en su selección de mentores, y estratégicos en el desarrollo de una red de mentores en constante expansión. Por lo tanto, en lugar de seleccionar unos pocos mentores, se insta a que construyan y nutran toda una red de estos recursos. Dentro de la literatura existente sobre mentoría emprendedora, esta dinámica es novel.

Dos métodos atípicos son elaborados por los fundadores para extraer el contenido más valioso de estas nuevas dinámicas. Uno es encontrar patrones

repetitivos o una concentración en la distribución de los puntos de datos dentro de la enorme cantidad de comentarios recibidos de los mentores. El segundo es predeterminar los desafíos más apremiantes que enfrenta el startup y descartar mentorías irrelevantes con respecto a estos retos. Sin duda, hubo aprendizaje y la evidencia de la relación entre el aprendizaje, los cambios en los comportamientos y la subsiguiente creación de una red de recursos fue corroborada por datos cualitativos.

Estas nuevas dinámicas de mentoría exigen ciertos recursos y nuevas reglas a nivel del acelerador. Para capitalizar estas nuevas sesiones de consulta concentradas, donde docenas de mentores se reúnen y brindan retroalimentación en 20 minutos o menos, las aceleradoras deben convocar a un número significativo de individuos. En el caso de Gener8tor, que cuenta con más de cien mentores voluntarios, esto implicó tener un grupo que tuvo que evolucionar y crecer constantemente, según lo requería su portafolio de empresas. Algunos de esos voluntarios son contactos que han permanecido por mucho tiempo en el ecosistema empresarial local, como lo confirman las entrevistas con los directores generales. Otros fueron invitados por su capacidad para conectar a los fundadores con una red extendida de recursos, y no necesariamente por el contenido o peritaje que podían brindar. Por lo tanto, una amplia y diversa red de mentores es fundamental para crear las condiciones ideales para que los fundadores distingan la señal del ruido o identifiquen el contenido específico que los ayudará a enfrentar los desafíos más apremiantes de sus startups.

Hallazgos fortuitos destacaron el rol que juegan los colegas fundadores e inversionistas en la trayectoria de aprendizaje de las nuevas empresas. Los colegas fundadores o pares, aportaron seguridad, modelos a seguir y fueron catalizadores de reflexión. Esto es suficiente para argumentar que la mentoría entre pares podría ser un ángulo interesante para explorar. Si bien los datos no fueron suficientes para afirmar que la mentoría entre pares es una dinámica que ocurre en la actualidad, hay pruebas suficientes para afirmar que los colegas fundadores son actores que se han pasado por alto en las aceleradoras.

La retroalimentación de los inversionistas también fue considerada como un importante elemento para los fundadores. Estos fueron ávidos en identificar el “Investor Swarm” de Gener8tor como una poderosa herramienta de aprendizaje. Presentar sus oportunidades de emprendimiento a múltiples inversionistas de capital de riesgo les ayudó a pulir sus propuestas mientras validaban sus nuevas empresas. Como resultado, los fundadores aprendieron a adaptar sus presentaciones a diferentes mercados y tipos de inversionista. También aprendieron cómo posicionar mejor sus nuevas empresas y cómo prepararse para preguntas. Gener8tor utiliza un enfoque de red para también exponer a los fundadores a docenas de inversionistas. Al igual que con los mentores, el acceso a una red extendida de inversionistas de diferentes áreas geográficas ofreció valiosas lecciones y oportunidades para expandir sus propias redes de contactos. Los inversionistas son también incorporados a la creciente red de mentores y lista de recursos de los startups. Tanto los mentores como los inversionistas son informados por los startups sobre su progreso a través de informes mensuales, una estrategia sugerida por la aceleradora para vincular y nutrir su recién formada red de contactos. Esta inesperada fuente de aprendizaje

también presenta un caso interesante para posteriores estudios y nuevas prácticas en las aceleradoras. Si bien los inversionistas no eran considerados como mentores, algunos mentores eran inversionistas y ambos eran igualmente valiosos como fuente de guía, conocimiento y acceso a capital social.

Los componentes educativos de las aceleradoras son propulsores importantes de aprendizaje. Sin embargo, la forma en que se diseña y se implementa cada experiencia de aprendizaje debe considerar una serie de factores. La mentoría brinda una guía valiosa, pero es posible que las aceleradoras deban seguir un conjunto diferente de reglas para maximizar el tiempo y los recursos, especialmente cuando su cartera de startups incluya empresas en crecimiento. La literatura sobre emprendimiento coincide en los desafíos particulares que enfrentan los startups en las diferentes etapas de su ciclo de vida. Ciertamente, lo que estas empresas en su etapa incipiente pueden necesitar de las experiencias de aprendizaje en una aceleradora varía de las necesidades que presentan los startups en crecimiento. Estas diferencias exigirán del componente de mentoría funciones muy específicas, además de una plétora de conocimientos y peritaje. Por lo tanto, una dinámica de mentoría diádica no será suficiente para proporcionar dichos recursos. Además, cada empresa es única, si se consideran elementos como su industria, modelo de negocio y estrategia. Con el fin de verdaderamente crear una experiencia de aprendizaje personalizada para cada uno de los startups, el enfoque en mentoría de consulta concentrada empleado por Gener8tor demostró satisfacer las múltiples necesidades de las empresas. El conjunto, de conocimientos, peritaje y el acceso a una extraordinaria red de contactos, a través de la exposición y transferencia de un grupo amplio de mentores fue lo que logró satisfacer todas las necesidades de los startups.

No obstante, para ello se deben considerar un nuevo conjunto de dinámicas, actores y reglas. Los gerenciales directivos deben asumir un papel principal como mentores alfa y gestores de la red de contactos. Una red de contactos en constante evolución debe administrarse intencionalmente, expandirse de manera oportunista y presentarse estratégicamente a los startups. Las aceleradoras deben alentar y capacitar a las nuevas empresas para construir y nutrir esta recién transferida red. Como actores en esta particular dinámica, los mentores deben ser guiados e informados de los resultados esperados. Deben estar abiertos y dispuestos a compartir su peritaje, conocimientos y capital social. Las relaciones estrechas y de confianza no deben ser forzadas. Las relaciones más distantes se consideran igualmente valiosas si estas proporcionan los recursos necesarios. Así, en las aceleradoras aprender de múltiples mentores es más que recomendable, es una nueva potente dinámica de mentoría capaz de aportar recursos clave a los startups en crecimiento, justo cuando más los necesitan.

Implications for Research

Results from this study contribute to entrepreneurship literature in three different areas. First, the study delves into the mentoring dynamics developed at a top-ranked accelerator in the United States, exposing a new set of players overlooked by previous theoretical frameworks. These new dynamics are triggered by a new approach to entrepreneurial mentoring, recently named by academics as *concentrated consultation*. This new approach was an early attempt to raise awareness of a distinctive design feature of accelerators, not previously noted in

entrepreneurship literature. Thus, my study expands theory by revealing the granular details of a previously obscure model. Moreover, qualitative data bring to light managing directors as key players at accelerators, as well as their unique role as alpha mentors and network brokers, roles that were underestimated if not well understood by earlier accelerator literature.

Second, by explaining how these new mentoring dynamics occurred at the accelerator, its thought-provoking questions and propositions now demand more empirical testing and validation. Furthermore, in contrast to previous studies, most of my research sample consists of startups in a growth stage, whereas the majority of empirical evidence in entrepreneurial mentoring literature is derived from samples of early-stage ventures and dyadic mentorship dynamics. Thus, new data has expanded the notion of career-related mentoring functions as vital for accelerators aiming to support more mature startups. These startups face challenges that clearly differ from those faced at earlier stages, prompting them to demand specific knowledge and access to multiple other resources. Further empirical testing of a potential moderation effect of startup growth stages on the required mentoring functions exerted by mentors could enrich extant literature.

Third, serendipitous outcomes revealed that investors and peer founders were also important players at the accelerator. Both provided valuable guidance and feedback, deemed by founders as important within the accelerator's learning experiences. These could also indicate the need for additional research on entrepreneurial peer mentoring and investors' roles beyond that of capital bearers at accelerators.

Implications for Management

Startup accelerators are prevalent instruments to identify and support high potential startups. The design of these widespread entrepreneurial development platforms is characterized by a fast-paced agenda of 12 to 15 weeks, a limited number of startups, and learning experiences such as mentoring, networking opportunities and a DEMO Day. Yet, most have replicated the same design without further consideration of context and startups' characteristics. Empirical evidence has shown that accelerator's successes are not as replicable, and the early-stage literature still contains multiple lacunae. This study fills those gaps in the literature by elucidating new mentoring dynamics and key players propelling learning at accelerators. Implications for management include the need for a more thoughtful and tailored design of learning experiences; the notion of concentrated consultation as a more effective approach to mentoring; the key role of directors as alpha mentors and network brokers; and the vital role of a vast and diverse network of mentors and other resources to supply startups with relevant knowledge and social capital. From a management perspective, accelerators need to be designed and managed differently. An ever-expanding network of mentors seems to be fundamental, and directors need to be trained for brokerage duties.

The results from our study should have an impact on the design of other entrepreneurial mentoring programs targeting startups at a growth stage. This is crucial for ecosystems aiming to generate startup development and economic impact.

Limitations

Indeed, this study presents a series of limitations. First, the research sample is limited. Gener8tor is a concierge accelerator and only selects five companies in each of its programs. While rigorous selectivity has a positive impact on the amount of resources devoted to each startup, the number of cases reduced our ability to gather voluminous qualitative data. The accelerator is based in the United States. While it has offices in Madison, Milwaukee, Cincinnati and Minneapolis, the Midwest region presents a dissimilar entrepreneurial context for startups when compared with the East and West coast regions of the United States. Thus, the conclusions of this study may not be applicable to other ecosystems.

It is also very difficult to attribute a direct relationship between specific learning experiences and observed outcomes. This study aimed to investigate the mentoring dynamics and learning outcomes at the founder's level. Unexpected learning experiences fostered by multiple presentations to investors and mentoring from the Gener8tor managing directors made it very difficult to attribute learning to specific experiences. Nonetheless, learning was occurring, unique dynamics were discovered, and their positive results are supported by the data.

Limitations posed by the Covid-19 pandemic

The data-gathering phase for this embedded single case study started in September 2019 which was less than six months prior to the start of the global Covid-19 health crisis. Yet a total of 12 interviews were completed before March 2020. Most of the additional interviews were postponed or cancelled due to the uncertainty

created by Covid-related lockdowns. Some startups were hampered by the sudden changes and adjustments, in fact, a few of them were struck significantly. Both the accelerator and participant startups were forced to transition to virtual meetings, which seriously disrupted the original settings and mentoring dynamics that were observed prior to the pandemic. While meetings between founders and accelerator managers continued to be scheduled, startup founders were not allowed to work from Gener8tor's offices which also represented a very different scenario. According to the managing directors later interviewed, Gener8tor mimicked the Mentor Swarm by transitioning most of the meetings to a virtual setting, so results from this mentoring dynamic may not necessarily represent the same time constraints that-in person mentoring events posed before. Thus, the first limitation was that additional interviews from founders experiencing this new virtual reality could unearth very different dynamics not comparable to those revealed by previous interviews. Second, all the meetings with investors suffered the same fate, as lockdowns were compulsory across the United States. Thus, the second limitation was measuring startups' performance as defined by *interest from investors* under these unique circumstances, where uncertainty also meant more cautious investors. Comparing data pre- and post-pandemic seems unreliable.

To increase data points, I considered adding an additional case study. However, the reliability of this study could have been undercut by adding additional data still reflecting the consequences of a unique scenario. In summary, the setting, dynamics and general market conditions surrounding this single case study were disrupted by the pandemic. Additional research that might increase the number of data points was lost for the following reasons:

(1) The component of concentrated consulting mentoring is only possible when entrepreneurs are exposed to dozens of mentors in a short period of time. Prior to the pandemic this was possible via in-person events hosting over 50 mentors at a time. This dynamic was completely disrupted by social distancing rules.

(2) Startups were not benefiting from other critical dynamics that were only possible when working at Gener8tor's offices, such as spending significant time with the accelerator's managers and peers. In general, any data collected after the pandemic would provide information that, in theory, might be neither comparable to the compiled data nor replicated in future instances.

The study resumed its data gathering activities in September 2021. A total of six additional interviews with managing directors were completed. Clear patterns, saturation and triangulation of the study's preliminary findings were achieved. Archival data such as progress reports from startups, application forms and articles from digital magazines were gathered during the pandemic and would also contribute to the analysis and triangulation of data. A total of 18 interviews were completed. Over 10 hours of recorded material was transcribed.

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Appendix A: Letter to Founders

7/21/2019

Dear Gener8tor's Startup Founder,

Our organization recently endorsed the doctoral research of Eva Vázquez, doctorate candidate from IE Business School in Madrid, Spain. Her study aims to understand how some components of the Gener8tor's accelerator model influence startups. Results may help our platform design an enhanced set of resources for our selected participants and understand how accelerators in general may influence startups. To complete the study, Mrs. Vázquez needs to draw data from all 2019 cohorts of Gener8tor. Data gathering methods may include electronic surveys and interviews to founders, mentors and some other key constituencies of the entrepreneurial ecosystem. Yet, participation is completely voluntarily. All information obtained from you or any other participants will be kept under strict confidentiality. Interviews as well as surveys will be anonymous and neither the name of the interviewees or the companies will be share or publish. Surveys will be sent by email no later than 3 months after the completion of the program. Phone interviews will be coordinated with founders and mentors in accordance with their availability, and the conversation will be strictly kept under 30 minutes.

In the following weeks, you could either receive the electronic survey or a formal request for an interview. Mrs. Vázquez will personally follow up with a phone call to assess your interest in participating in the research.

Should you have any questions, do not hesitate in contacting us or Mrs. Vázquez.

Eva F. Vázquez Ortiz
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Appendix B: Questions to Founders



Learning at Accelerators: Mentoring functions and startup performance Research Instruments

Questions (Mentors)

1. Please describe the most pressing challenges your mentee's startup had when you started to mentor the company.
2. Would you describe it as a growing startup?
3. What did the company need the most from you as a mentor?
4. Which was the most impactful piece of mentoring you gave them?
5. How do you know your mentoring had a positive impact on the startup?

Questions (Founders)

1. Please describe the most pressing challenges your startup had when you started on Gener8tor.
2. What did you as founders needed the most from mentors?
3. What do you learn from mentors?
4. Which was the most impactful piece of mentoring you received from your mentors?
5. Describe the impact mentoring had in your decisions/ behavior as founder and its outcomes?
6. Has the founder team succeeded in raising any interest from investors? How close is the company from an angel or VC investment?

Appendix C: Gener8tor's Application Question

Email	
Date	
Overview	
Company Name	
What is the URL for your website/demo etc?	
Provide the URL to a ONE minute video of the founders talking about the company. We want the spontaneous elevator pitch. Don't memorize/read off a script/worry about editing (e.g. it can be filmed on a smartphone). We just want to hear you describe yourselves and the company.	
In one sentence, tell us what your company does:	
Who is the primary point of contact in the company (name):	
What is the main email address for the primary point of contact in the company (email):	
Team	
How many founders are there?	
How did you meet your co-founder(s)?	

What is your primary role in the company (what would/should it say on your business card)?	
Can you commit 100% to being part of the gener8tor program if chosen?	
Employees: Not including the founders, how many additional employees are there?	
Product	
In more detail, what does your company do or make? What's new, interesting or different about your business?	
Who are your competitors? What differentiates you? (Include URLs)	
What element of the business keeps you up at night?	
Why should we choose your company?	
History and Financials	
How does your company make money (or intend to make money)? Explain your business model.	
Do you currently generate revenue? If yes, how much revenue did you	

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generate in the last month?	
Please describe your current traction. For example, do you have any customers? If so, how many? Do you have other paid or unpaid pilots, a certain number of beta users or a strong pipeline?	
How much revenue have you made in the lifetime of the company?	
What is your monthly revenue growth rate?	
What is the total amount of cash invested to date in your company?	
How much of the above amount was from non-founders?	
How did you hear about gener8tor?	
Do you want gener8tor to share your application with Global Accelerator Network programs that might be a match to your company?	
References	
Please provide the contacts of several references for your company.	

Please upload any other files or videos you'd like us to review.	
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Appendix D: Monthly Investors Update Template

Monthly Investor Update Template

- **Highlights:**
 - What milestones or accomplishments are you most proud of?
- **Lowlights:**
 - What are the things you're most disappointed about?
- **Product:**
 - What has shipped and has the roadmap shifted?
- **KPIs/Core Metrics:**
 - How is the business / product performing?
- **Business Development:**
 - Did you close any notable deals / partnerships? What opportunities are in the pipeline?
- **Hiring:**
 - Were any key employees hired or fired? What positions are currently open?
 - If hiring, link to a job posting/description.
 - Include LinkedIn links of new hires.
- **Financing:**
 - How much cash is left in the bank? What is the current burn? When do you run out of cash?
- **Press:**
 - Any notable press mentions?
 - Include links.
- **Help Wanted/Asks:**
 - Where do you need the most help from your investors and advisors?
- **Kudos:**
 - Which investors and advisors went above and beyond to help the company?
 - Name them! People love seeing their name and others will be more motivated to help if they see the names and contributions of others (peer pressure).

Appendix E: Request for Interviews & Questions to Managing Directors

From: [Eva Vazquez Ortiz](#)
To: [\[REDACTED\]](#)
Subject: RE: Academic Research_Finishing my dissertation
Date: Tuesday, June 22, 2021 2:44:00 PM



Hope you had a great weekend. Below please find the questions I designed for the interviews. As I mentioned, I would just like to corroborate the plausible positive relationship between the dynamics and evolution of your pool of mentors and the learning outcomes of startups. My advisor thinks this would also help strengthen my research and its contribution to academic theory.

I'm available next week as well as the following if there is any chance I can interview you and some of Gener8tor's managers helping with the development or execution of the mentors swarms events.

1. How would you describe the accelerator's process and criteria used to identify, invite and nourish the relationship with your mentors?
2. Does the accelerator provide any sort of guidance or training to its pool of mentors?
3. How does the pool of mentors respond to the needs and challenges face by the startups?
4. What are the accelerator's expected outcomes from the interaction of mentors and startups?
5. Are the startups instructed on best practices to capitalize the mentorship component of the program?

I'm grateful for your continued support.

Eva F. Vazquez Ortiz
Director |
Center on Global Entrepreneurship & Family Business |
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Appendix F: Request for Interviews to Managing Directors

From: [Eva Vazquez Ortiz](#)
To: [REDACTED]
Subject: Details of the research & interviews
Date: Monday, September 13, 2021 11:50:00 PM

[REDACTED],

Below find some details that may help you explain the objectives of my academic research to Generat8's directors.

Our organization recently endorsed the doctoral research of Eva Vázquez, doctorate candidate from IE Business School in Madrid, Spain. Her study aims to understand how some components of the Generat8's accelerator model influence startups. Results may help our platform design an enhanced set of resources for our selected participants. To complete the study, Mrs. Vázquez needs to draw data from a small sample of our directors and managers. Data will mostly be collected by semi-structured interviews. Yet, participation is completely voluntarily. All information obtained from you or any other participants will be kept under strict confidentiality. Interviews will be anonymous and neither the name of the interviewees or the companies will be shared or published. Phone interviews will be coordinated with directors and managers in accordance with their availability, and the conversation will be strictly kept under 45 minutes.

Mrs. Vázquez, aims to collect all the data from interviews before the end of September.

Should you have any questions, do not hesitate in contacting Mrs. Vázquez via email evafvazquezortiz@student.ie.edu

With gratitude,

Eva F. Vazquez Ortiz

Director |

Center for Global Entrepreneurship & Family Business |

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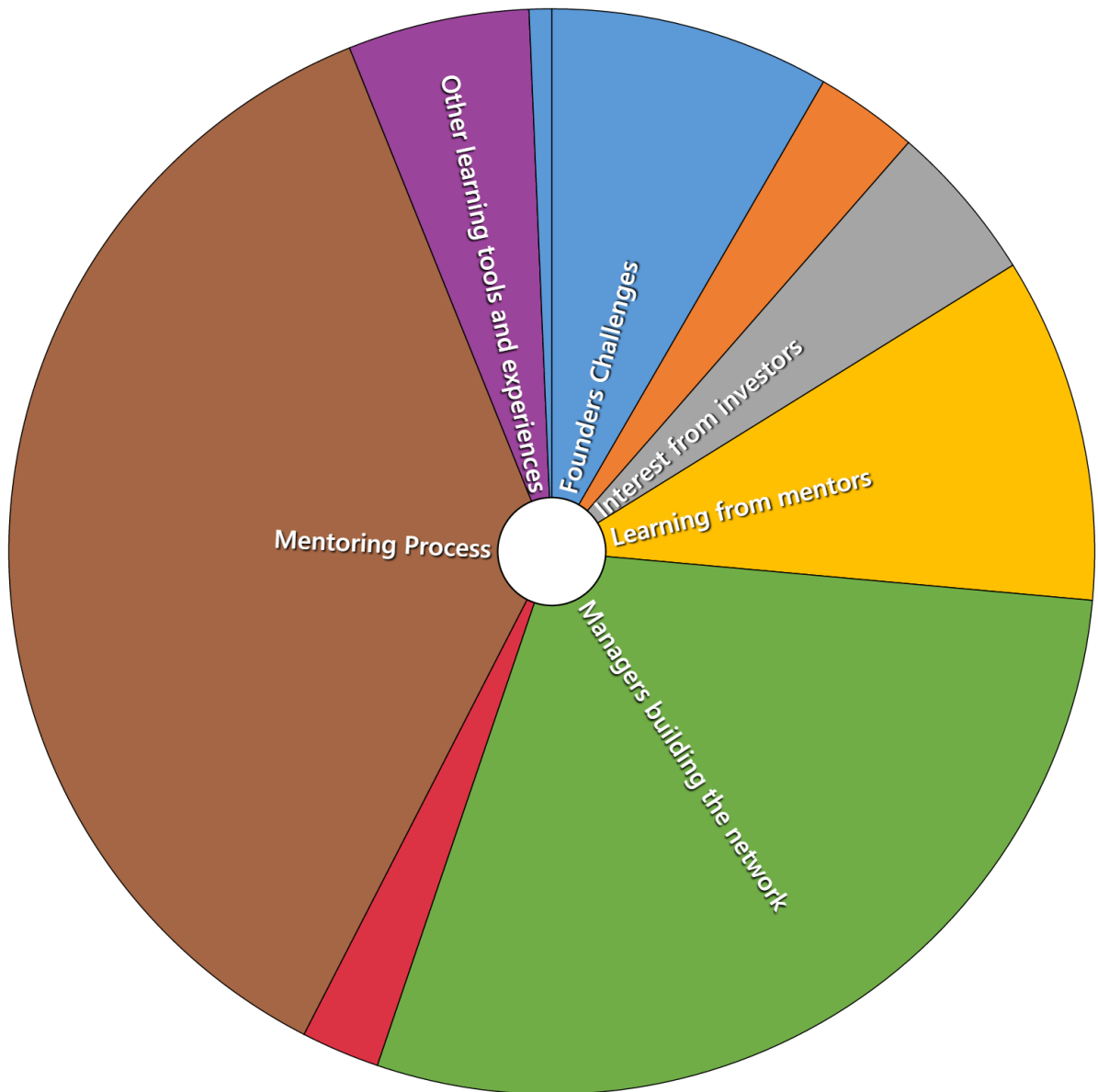
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Appendix G: Thematic Analysis/Salient topics (NVIVO)



Appendix: K: Thematic Analysis/ Patterns in the data

