

Boundary Work in Corporate Venture Capital (CVC): How boundary work enables the strategic use of CVC to create and unlock value

Abstract. In this article, we build on and contribute to the literature on Corporate Venture Capital (CVC) through the lens of Boundary Work Theory. Analyzing interview data from several successful CVCs, we uncover boundary works (micro-strategies) taking place *at* and *through* organizational boundaries that enable collaboration amongst CVC stakeholders and balance competitive and collaborative forces within and across the organizational boundaries. CVCs are more complex than traditional institutional venture capitals (VCs) as they seek to maximize both strategic and financial returns. While extant research has shown that the strategic use of CVC creates value for the parent firm, none have explored how successful CVCs do this *at* and *through* the boundaries amongst different parties involved. We identify two overarching mechanisms, one *at* the boundaries that enable collaboration and the other *through* the boundaries that simultaneously bring certain CVC activities together whilst keeping others apart to enable collective action. Our findings portray a process model comprised of eleven micro-strategies that successful CVCs use to create and unlock value.

Keywords: Corporate Venture Capital, Boundary Work, Collaboration, Organizational Boundaries, Micro-Strategies, Strategic Corporate Venturing

Introduction

Corporate venture capital (CVC) as a subject of its own right is undertheorized (Souitaris and Zerbinati, 2014) and its daily functioning through which value is created and unlocked is uncharted (Zahra, Randerson and Fayolle, 2013). Defined as minority equity investments by established corporations in privately held entrepreneurial ventures (Röhm, 2018), CVCs have enticed considerable investment growth over the last five years¹ as well as an academic interest (Drover *et al.*, 2017; Röhm, 2018). The CVC triad comprises a corporate parent (CVC investing firm), a CVC unit, and an entrepreneurial venture (Tawiah and O'Connor Keefe, 2022). The parent firm establishes the CVC unit and interacts with many small venture companies searching for critical resources and

¹ From 2018-2019 global CVC-backed funding soared by 65% (to \$62.4 billion) and 142% (to \$169.3 billion) from 2020-2021 (CB Insights, 2022).

funding. Acting as an intermediary, CVC units invest, support, and monitor entrepreneurial ventures likely to help meet the strategic *and* financial goals of the parent firm while complementing the R&D and M&A business unit activities (Lerner, 2013).

Unlike VCs that form dyadic interactions with new ventures, CVC is more complex and involves managing inter and intra-organizational interactions, linking the internal organization of the parent (i.e., various business units), the CVC unit, and the external ecosystem of new ventures and investors (Biniari et al., 2015; Röhm, 2018; Kreiser et al., 2021; Tawiah and O'Connor Keefe, 2022). It is through these interactions *at* and *through* organizational boundaries that CVC can be used to achieve both strategic and financial objectives, i.e., creating and unlocking value. Although there are similarities between VCs and CVCs, that have led some scholars to consider transferring practices and theories from the VC model to the CVC (Hill *et al.*, 2009), while other scholars have explored and highlighted the differences in the investment processes of CVCs and VCs at a more granular level to describe how CVCs ‘do deals’ (Souitaris and Zerbinati, 2014). Joining this conversation, we argue that the extant theory, framed around collaborative work in VCs, is not well suited to fully explain CVC practices for two main reasons.

First, CVC units typically have a single, dominant, limited partner, who owns the unit and provides all the funds (the parent corporation). Instead, VCs typically raise funds from multiple, non-dominant, limited partners (Drover *et al.*, 2017). This means that entrepreneurial managers in a VC focus primarily on ‘collaborative’ works (working *at* boundaries), while a CVC requires a lot of ‘configurational’ work (working *through* boundaries) to balance various competitive and collaborative forces amongst multiple stakeholders within and across organizational boundaries. These forces emanate from the urge to win the fight for limited organizational resources, as well as the need for isolating from other projects and daily works within the organization, clear of usual criticism, to provide a safe nest for initial development stages. Second, the limited partner of CVC units (a corporation) typically seeks financial and strategic benefits. In contrast, the limited partners of VCs are investors who are typically interested only in financial returns. As a result, the nature of boundary works differs significantly: while configurational boundary works are primarily externally oriented (inter-organizational) in the latter (working for collaboration), in the former a lot of configurational boundary works take place within the organization (intra-organizational), tailored towards balancing competitive and collaborative forces.

Prior research has used configurational theory (e.g., Hill and Birkinshaw, 2008; Kreiser et al., 2021), institutional theory (e.g., Souitaris and Zerbinati, 2014), resource dependency theory (e.g., Garrett and Neubaum, 2013), or integrations of these perspectives (e.g., Biniari et al., 2015) to explain how venturing activities, configurations, and performance are influenced by seeking legitimacy and access to resources within internal and external boundaries across the organization. Boundary work incorporates social, symbolic, material or temporal boundaries, demarcations and distinctions shaping their context and activities (Langley *et al.*, 2019). To the best of our knowledge, boundary work theory has not been used in prior CVC research and thus provides an interesting lens to expand our conceptualization of the strategic use of CVC to understand how value is created and unlocked. Adopting a boundary work lens, we believe, enables us to develop a uniquely processual view of organizational life as “emergent and continually becoming, an orientation with significant potential for understanding novel forms of organizing, and for integrating agency, power dynamics, materiality, and temporality into the study of organizing” (Langley *et al.*, 2019, p.704). In this paper, hence, we ask: *How do successful CVCs use boundary work strategically to create and unlock value?*

To answer this question, we used a grounded theory approach (Strauss and Corbin, 1990). We collected primary (interviews) and secondary (interviews and archival material) data over three periods between 2017 and 2024. In the first phase (January 2017 –July 2018), we conducted and analyzed data from 12 hours of interviews, supplemented with secondary data from 301 pages of companies’ presentations, internal emails, websites, and news announcements. In the second phase (January 2020 to December 2023), we inductively analyzed another 36 secondary interviews (36 hours and approximately 1,000 pages of transcription) that were conducted by TDK Ventures² between January 2020 and February 2022. In the third phase (January 2024 – ongoing), we are conducting twelve more interviews with the highest level of theoretical sampling to reach data saturation (Strauss and Corbin, 1990).

We found two overarching boundary work mechanisms that enable the strategic use of CVC to create and unlock value. The first involves aligning boundaries to enable collaboration amongst various stakeholders that takes place *at the organizational boundaries* through the micro-strategies of ‘allying’, ‘mobilizing’, and ‘repairing’ boundaries. The second involves configuring patterns of collaboration and competition to enable differentiation and integration *through organizational*

² YouTube Corporate Venturing Insider Series #1-36 (TDK Ventures; Global 500, 2020)

boundaries. This overarching mechanism comprised of configuring temporal boundaries (‘temporal bracketing’), and spatial boundaries (‘spatial bracketing’), as well as the perceptions of different stakeholders with different goals from within and across the organizational boundaries.

Our article makes two important contributions. First, we show how boundary works by organizational actors at various organizational levels (Hill *et al.*, 2009; Souitaris, Zerbinati and Liu, 2012; Souitaris and Zerbinati, 2014) play a critical role in creating and unlocking value through the strategic use of CVC. Highlighting the micro-strategies that take place daily *at* and *through* organizational boundaries, complement the dominant top-down decision-making view adopted to explain the success of CVCs in creating and unlocking value (Dushnitsky and Lenox, 2006; Lin and Lee, 2011). Second, we contribute to the CVC literature by highlighting boundary work mechanisms that explain *how* the firm-level value accrued (Dushnitsky and Lenox, 2006; Lin and Lee, 2011) through complex CVC inter- and intra-organizational connections (Biniari *et al.*, 2015; Titus and Anderson, 2018; Tawiah and O’Connor Keefe, 2022)). While the extant scholarly works confirm that strategically pursued CVCs create firm-level value, we lack knowledge of *how* collaborative and competitive forces are balanced through daily works by organizational actors to create an environment that is needed for value to be unlocked and created. Using boundary work as a theoretical lens, we hence not only portray mechanisms and micro-strategies that link the strategic use of corporate venturing to firm-level value creation, but also illustrate—through our process model—the connection among these micro-strategies and the recursivity among various forms of boundary work in so doing. This in turn provides a response to calls by Zahra, Randerson and Fayolle (2013) and Covin and Miles (2007) asking to highlight these levels of granularity in CVC research, but also to the calls by Langley *et al.* (2019) asking for revealing recursivity among various forms of boundary work, as well as portraying the varied degrees of agentic, temporal, and spatial dynamics involved in boundary work.

Theoretical background

CVC and value creation

Corporate parents use CVC to support their corporate strategy by engaging in deliberate and purposeful actions that complement internal R&D (Lerner, 2013). By working with innovative startups, CVC provides a window on new technologies, learning, and knowledge by tapping into innovation from outside the organization (Dushnitsky and Lenox, 2005; Maula, Keil and Zahra,

2013). As a result, CVC creates value for the parent company by accruing both strategic benefits *and* financial investment returns (Ernst, Witt and Brachtendorf, 2005). Dushnitsky and Lenox (2006) found that CVC creates higher firm-level value, while Lin and Lee (2011) found that creating internal links with the portfolio of companies leads to new growth options. CVC involves complex inter- and intra-organizational collaborations where CVC units connect with the internal organization (e.g., the parent, R&D, M&A and other business units), and the ecosystem of new ventures and external investors while providing a conduit between the two internal and external worlds (Biniari et al., 2015; Röhm, 2018; Kreiser et al., 2021; Tawiah and O'Connor Keefe, 2022).

In contrast, venture capital (VC) investors generally pursue financial-only returns from their investments in young and innovative companies and engage in value-adding activities to exploit contingencies and opportunistically maximize their returns (Sapienza, 1992; Sørensen, 2007). There are substantial differences between VCs and CVCs. However, some scholars have focused on their similarities, by transferring processes and theories from the VC models to CVCs, such as compensation practices, autonomy structures, syndication mechanisms, staging routines, and specialization economics (Hill et al., 2009). Whilst, others have developed valuable insights by examining the differences in the investment process between CVCs and VCs and how they generate, screen, evaluate, approve, and monitor deals at a more granular level (Souitaris and Zerbinati, 2014). These scholars found that CVC activities are indeed much more complex than VCs since they require coordinating activities *across* and *between* organizational boundaries (Bleicher and Paul, 1987; Birkinshaw and Hill, 2005).

Like these CVC scholars (e.g., Souitaris and Zerbinati, 2014), we also contend that the existing theoretical framework, which primarily focuses on independent VCs, is insufficient for comprehensively elucidating the investment behaviours of CVCs and the collaboration mechanisms involved due to two primary reasons. Firstly, CVC units generally operate under the ownership and financial backing of a single dominant limited partner, which is typically the parent corporation providing all the necessary funds. Conversely, independent VCs often raise capital from multiple limited partners without a dominant entity. Secondly, the limited partner of CVC units, which is usually a corporation itself, pursues both financial and strategic advantages from their investments. In contrast, the limited partners of independent VCs are typically investors solely driven by financial returns, without the strategic considerations associated with corporate entities. Thus, despite the

similarities between VC and CVC, complex collaboration, and ensuing coordination mechanisms, as well as the importance of strategic value creation make up differences that underscore the importance of developing new theories for CVC activities as a separate field of research and practice.

Collaboration at the foci of CVC activities

Collaboration lies at the centre of CVC activities, and the interfaces between external startups, internal business units, R&D, and corporate parents. CVC's performance is dependent on coordinating and integrating collaborative activities within and between these various parties. Dushnitsky and Lenox (2006) found that overall CVC activities are related to firm-level performance that relies on coordination and collaboration among various organizational units. Analyzing performance at a more granular investment portfolio level, Lin and Lee (2011) found that the coordination between the internal organization and portfolio companies is key to creating value. Covin and Miles (2007) found that, despite the potential for creating superior performance, companies usually struggle to create and unlock value due to their inability to control competitive pressures, create synergies, and induce coherence among these collaborative units (see also, Zahra, Randerson and Fayolle, 2013).

CVCs get internal referrals or introductions to innovation outside the organization (Souitaris and Zerbinati, 2014) that enable rapid and informed action used to drive strategic initiatives to exploit opportunities and promote corporate venturing activities (Yu and Fang, 2023). Coordination with corporate parents has a strong influence on the CVC unit's performance and longevity to enable ongoing and frequent communication and access to resources (Sykes, 1986; Garrett and Covin, 2013), and to guarantee top executive's commitment to ensure long-term success (Bleicher and Paul, 1987; Birkinshaw and Hill, 2005).

Collaboration also plays an important role at the interface of startups and VC investors that links the internal and external environments (Souitaris and Zerbinati, 2014; Biniari et al., 2015; Kreiser et al., 2021). Collaboration is used to bring together groups of VCs and CVCs who invest in startups and enable startups to gain access to capital and complementary assets like product test sites, distribution channels, and expertise to grow (Chesbrough, 2002; Maula, Autio and Murray, 2005; Park and Steensma, 2012). Collaboration also reduces risks for investors, for example, through syndicates (Drover et al., 2017; Manigart et al., 2017) and helps CVC units settle conflicting goals (Kaplan and Strömberg, 2004). CVCs collaborate with the VCs to gain new insights into the required

competitive capabilities and access to deals (Hill et al., 2009; Röhm, 2018), as well as to improve their ability to identify ventures with a strong strategic fit (Yang, Narayanan and Zahra, 2009).

Different theories and explanations have been used to explain how and why effective collaboration and coordination need to happen between these two worlds. One school of thought, using institutional theory, explains why CVCs focus and align their investment practices towards either internal norms (integration) or an arm's-length VC orientation to explain variation in CVC organizational practices (Hill *et al.*, 2009; Souitaris and Zerbinati, 2014). Other institutional theorists view these beliefs as a logic or approach (Lounsbury, 2007) that shapes the legitimacy of CV programs and their access to resources (Hill and Birkinshaw, 2008; Maula, Autio and Murray, 2009; Souitaris, Zerbinati and Liu, 2012; Souitaris and Zerbinati, 2014). Other scholars explain how the variable performance of CVC is related to the internal consistency among elements of the CVC program's configuration (Hill and Birkinshaw, 2008). Others explain how CVC configurations are a function of the corporate parents' interpretation of the optimal balance between inter and intra-organizational beliefs and environmental norms (Ambos and Birkinshaw, 2010). Another school of thought takes a more holistic view of value creation stemming from the activities at and through the boundaries of the internal and external environments that need to be configured to match the strategic intents of various parties (Biniari *et al.*, 2015; Kreiser *et al.*, 2021). Despite our wealth of knowledge about the importance of collaboration in CVCs, we don't know a lot about the work that takes place *at* and *through* these internal and external boundaries that make collaboration possible in CVC activities. More specifically, we do not know how successful CVCs go about their daily organizational life to implement their strategies in achieving their financial and strategic goals. Boundary work theory, we believe, provides us with a powerful processual lens to study daily organizational life as emergent and continually becoming that helps us to uncover the working of internal and external interfaces *at* and *through* the boundaries in implementing CVC strategies (Langley *et al.*, 2019).

Boundaries and boundary work in corporate venturing

Boundaries are markers that differentiate between groups, and "they establish categories for people, objects, and activities" (Zietsma and Lawrence, 2010, p. 191). These boundaries can be a combination of physical, structural, social, mental, cognitive, and symbolic boundaries, and they can be flexible or rigid (Ashforth, Kreiner and Fugate, 2000; Lamont and Molnár, 2002; Comeau-Vallée and

Langley, 2020). Quick and Feldman (2014) propose two concepts of boundaries, one being a barrier that enforces separation and the other being a juncture that enables connection.

Despite the emphasis on collaboration, teamwork, and the need for breaking down boundaries in CVC research highlighted in the previous section, studies on collaborative efforts tapping into external innovation ecosystems within CVC activities have shown that rivalry among different groups continues to exist (Apesoa-Varano, E. C., & Varano, 2014; Rodriquez, 2015). These varied groups are motivated by diverging personal and group interests that they seek to protect or expand, leading to the maintenance of boundaries (Bucher *et al.*, 2016). Although collaborators may temporarily blur boundaries to achieve task objectives (Abbott, 1995; Apesoa-Varano, E. C., & Varano, 2014) or to maintain social relationships (Pouthier, 2017), past research shows that competition forces, hierarchical status distinctions among groups, and separating barriers can persist (Currie, Finn and Martin, 2010), hindering collaborative efforts in adopting external innovation in organizations in general, and in CVC activities more specifically to unlock value (Comeau-Vallée and Langley, 2020); in other words, successful collaborations in corporate venturing require “boundary work” (Gieryn, 1983).

Defined as “purposeful individual and collective effort to influence the social, symbolic, material, or temporal boundaries, demarcations, and distinctions affecting groups, occupations, and organizations” (Langley *et al.*, 2019, p.704), boundary work has attracted scholarly attention in organizational study research due to its potential for better explaining the dynamics of collaboration, inclusion, and exclusion in both intra-organizational and inter-organizational collaborations (Santos and Eisenhardt, 2005; Zietsma and Lawrence, 2010; Hazgui and Gendron, 2015; Azambuja and Islam, 2018). More generally, the concept of boundary work involves any attempt to establish, maintain, blur, or change boundaries (Gieryn, 1983; Ashforth, Kreiner and Fugate, 2000; Lamont and Molnár, 2002; Helfen, 2015). This implies that boundaries are not inherent, but instead arise from interactions that are influenced by the actions of institutions, organizations, and individuals (Abbott, 1995).

As a theoretical lens, boundary work has been used in three dominant modes in extant research (Langley *et al.*, 2019, p.706-7), namely “competitive boundary work” (or work for boundaries), “collaborative boundary work” (or work at boundaries), and “configurational boundary work” (or work through boundaries). Competitive boundary work involves utilizing boundaries to gain an

advantage over others, by acquiring resources or maintaining power, social position, and status for those who participate in it. This mode of boundary work includes but is not limited to, how organizations (in case of inter-organizational collaborations) or groups within organizations (in case of intra-organizational collaborations) use boundary work to legitimize the inclusion of members and exclusion of others (Santos and Eisenhardt, 2005; Mikes, 2011; Edlinger, 2015; Ashuri, T., & Bar-Ilan, 2016).

However, boundary work is used not only to demarcate but also to enable collaboration (Weber *et al.*, 2022). While boundaries are traditionally conceptualized as barriers, Quick and Feldman (2014) show how creating junctures, e.g., by translating across differences or decentering differences may empower groups to work together. They labelled these efforts as instances of ‘collaborative boundary work,’ which involves activities aimed at aligning boundaries to enable collaboration. Scholars in this group of studies examine how organizational actors productively align their differences through negotiating, embodying, or downplaying boundaries in inter-occupational teams (Bechky, 2006; Majchrzak, More and Faraj, 2011; Azambuja and Islam, 2018). Some scholars studied how formal roles and taken-for-granted boundaries, e.g., among occupational groups, are negotiated in everyday practices to enable collaboration (Apesoa-Varano, 2013; Rodriquez, 2015; Liberati, 2017). Others studied how actors embody boundaries by occupying specific positions within their very activities, practising collaborative boundary work through their being, and doing both within and between organizations (Yagi and Kleinberg, 2011; Azambuja and Islam, 2018; Soundararajan, Khan and Tarba, 2018). Majchrzak, More and Faraj (2011) studied cross-functional teams tasked with novel assignments and found that team members ‘transcend’ boundaries by focusing on the task at hand, rather than spending time debating their disagreements and explaining their differences, showing how co-workers downplay boundaries in collaboration to get things done.

A third mode of boundary work, i.e., configurational boundary work, focuses on “how patterns of differentiation and integration among sets of people within or around organizations may be reconfigured to ensure that certain activities are brought together within bounded temporal, physical, or symbolic spaces, whereas others are at least temporarily kept apart, for producing particular kinds of collective action” (Langley *et al.*, 2019, p. 707). Configurational boundary work is distinguished from other types of boundary work by three main characteristics. First, it involves individuals or groups acting from a distance to directly or indirectly influence boundaries that affect others, with the

agency being situated at a higher level (Kaplan and Strömberg, 2004). Second, it focuses on manipulating patterns of differentiation and integration among individuals or ideas within or around organizations and fields to bring certain activities together and keep others apart temporarily to enable effective collective action. Third, it places less emphasis on the boundaries themselves and more on creating and utilizing "spaces" that are bounded by physical, social, temporal, or symbolic boundaries to serve collective purposes through various forms of interaction (Langley *et al.*, 2019). For example, arranging boundaries happens when organizational actors perform activities to refocus interactions to do new things or to do the same things in a new way. This can happen through the creation of temporal or physical boundaries within an organization or an organizational field to enable thinking and acting outside the box and protect the emergence of new patterns of inclusion and exclusion that allow collective achievement that otherwise might not be possible. Zietsma and Lawrence's (2010) and Butcher and Langley's (2016) studies of the creation of bounded experimental spaces are prime examples of this mode of boundary work.

Despite the immensely useful processual lens boundary work offers in studying collaboration and coordination across the individual, group, and organizational levels of analysis, studies of CVC (and VCs, similarly) using this theoretical angle are sparse. Hill and Birkinshaw (2014) discovered that success is reliant on a unit's ability to create strong connections both internally (with senior executives and business unit managers) and externally (with independent VC funds). Additionally, as mentioned previously, direct relationships exist between VC and CVC firms. These connections enable access to favourable investment opportunities and facilitate the learning of investment practices (Hill *et al.*, 2009; Souitaris and Zerbini, 2014). Moreover, the resources of CVC firms can serve as a substitute for their lack of previous centrality, allowing them to gain central positions in VC syndicates swiftly (Keil, Maula and Wilson, 2010). In response to the call Basu, Phelps and Kotha (2011) to further study relational antecedents of the CVC investment relationship, Kim, Steensma and Park (2017) identified technological links as a significant dyadic antecedent, as well as their boundary conditions, by considering an incumbent firm's opportunistic propensities and social ties in conjunction. In doing so, their research complements prior studies that suggest technological links, through knowledge spillovers, are critical determinants of subsequent tie formation in the context of CVC (Phene and Tallman, 2014; Gutmann, Chochoiek and Chesbrough, 2023).

To summarize, research on CVC has the potential to enhance our comprehension of crucial matters in entrepreneurship and corporate strategy fields while also contributing to theories on corporate governance. This area of study, hence, can explore why major companies prefer to directly invest in external start-ups rather than authorizing their shareholders to do so independently, as well as how and why they should structure their corporate venturing activities. While CVC practices broaden the firm's range of knowledge-sourcing strategies, pushing beyond traditional boundaries (Gutmann, Chochoiek and Chesbrough, 2023), management scholars are increasingly delving into the micro-foundations of strategy and competitive advantage (Felin, Foss and Ployhart, 2015). Therefore, there is a need for more research to determine how firms' boundary activities are formed, and determine the individual-, group-, and organizational-level variables that undoubtedly play a critical role in these endeavours (Drover *et al.*, 2017). Given the importance of collaboration that takes place between and within the boundaries in CVCs, we believe that the notion of boundary work can contribute to the development of a uniquely processual view of inter and intra-organizational collaboration in CVCs as an ongoing, ever-changing, and evolving process in creating and unlocking organizational value. It can provide us with unique insights into the micro-foundations of strategy implementation (i.e., micro-strategies, for example, Titus and Anderson, 2018), and the management of innovation and technology as well as corporate strategy and governance. This in turn can result in changing the focus of management research from merely macro-level collaborative efforts to the micro-level strategies that are utilised at the boundaries of organisations to create value in CVC activities. Hence, in this article, we use this theoretical lens to uncover how CVCs create and unlock value in their implementation of strategies and ask the following question: *How do successful CVCs use boundary work to strategically create and unlock value?*

Research Design

I. Research context

FIGURE 1 demonstrates the structure of a typical CVC. Compared to institutionalized VCs, CVC structures are more complex as they need to interact across and between different organizational ecosystems and boundaries at different levels. Within the internal boundaries, the CVC unit interacts with and needs to create connections at different organizational levels (e.g., the corporate parent as well as across different business units and functions). The CVC unit also serves as a connecting link

to the external environment that includes startups, other CVCs, and/or VC investors. This connection may be direct or indirect through groups like syndicated partnerships.

INSERT FIGURE 1 ABOUT HERE

Successful CVCs strategically maximize both financial and strategic outcomes by harnessing interactions within and between organizations. Therefore, we operationalized our definition of successful CVCs as those who pursue and achieve a combination of predefined financial *and* strategic outcomes across multiple industries as active investors (see TABLE 1). We interviewed senior managers from Fortune 1000 or higher companies who have firsthand experience in progressing through various roles between 2017 and 2024. They provided us with strategic insights from their current positions, along with a broad range of experience in internal and external ecosystems. For instance, some of the informants had a background in venture capital before working in CVCs, while others worked exclusively within CVCs or moved into CVCs from one of the internal business units. It is quite common for individuals who work within an organization and possess an in-depth knowledge of their industry, business, and networks to become members of the CVC unit. Some people have a startup background before they join a CVC or venture capital firm. Therefore, our sample included this diverse range of experiences from various levels within the organizational boundaries (vertically), as well as across boundaries (horizontally) (FIGURE 1). We carefully selected informants who brought different combinations of the three internal, external and CVC unit perspectives equally.

II. Research approach and data collection methods

In this study, we use a grounded theory approach (Strauss and Corbin, 1990) to study how value is created and unlocked in successful CVCs. Our study consisted of three phases, during which we collected and analyzed data from both primary (interviews and observations) and secondary sources (interviews and archival material). The data was collected over a long period and through several timeframes. In the first phase (January-July 2018), we conducted 12 in-depth semi-structured interviews and analyzed the collected data using an inductive approach. We approached this phase with a blank canvas mindset, allowing the data to guide our analysis. During this phase, we conducted 12 hours of interviews and compiled 178 pages of transcription, which we supplemented with

secondary data from 301 pages of those companies' presentations, internal emails, websites, and news announcements that were made available to us. Before each interview, we researched and collected information about our target organization and selected them carefully to fall into our definition of a successful CVC. We used theoretical sampling to guide our next informant choice (Saunders, Lewis and Thornhill, 2012), which provided us with the flexibility to vary the conversation flow from one interview to another (Thornhill and Amit, 2001; Robson, 2011).

In the second phase (January 2020 – December 2023), we inductively analyzed another 36 secondary interviews (36 hours and approximately 1,000 pages of transcription) that were conducted by TDK Ventures³ between January 2020 and February 2022. These recorded interviews were conducted by a very senior manager who had unique access to other similar-level colleagues and was focused on how to use CVC strategically to enhance value. Given the difficulty of accessing such high-profile expertise, this provided us with a unique opportunity to observe and analyze the most experienced and senior managers in the industry discussing how they enable successful CVC across boundaries.

The third phase commenced in January 2024, where we went back and conducted another 12 semi-structured interviews with some of the previous informants from phases I and II to further explore and drill down into our conceptually developed ideas (see TABLE 1). With the highest level of theoretical sampling (Strauss and Corbin, 1990), these interviews enable us to reach the theoretical saturation needed for developing our substantiated process model.

INSERT TABLE 1 ABOUT HERE

III. Coding and analytical approach

Given the purpose of this study, we focused our analysis on the CVC unit activities within and across the organizational boundaries between the corporate parent, the CVC unit, and external environments where the data was coded following Gioia's method (Clark et al., 2010; Gioia et al., 2012; O'Reilly et al., 2012). We identified various micro-strategies that are used at, between and through the boundaries to enable collaboration and balance competing forces and tensions so that daily CVC activities take place. For each micro-strategy, we created first-order concepts. After critically evaluating the first-order concepts, we used an iterative process to identify the connections among

³ YouTube Corporate Venturing Insider Series #1-36 (TDK Ventures; Global 500, 2020)

these and developed our second-order themes using the constant comparison technique (Strauss and Corbin, 1990). Here, we abstracted the eleven second-order themes into the six aggregate dimensions depicted in our data structure in FIGURE 2. We used NVivo to analyze the qualitative data and followed the three-step grounded theory coding process of open coding, axial coding, and selective coding to develop our data structure (Strauss and Corbin, 1998; Gehman et al., 2018; Giudici, Reinmoeller and Ravasi, 2018). Delving into our first-order data categories and second-order themes, while iterating with the extant body of literature, brought forward insights that prompted us to take a closer look at some of the contextual properties under which the micro-strategies of boundary work were used (Strauss and Corbin, 1990). This enabled us to analytically separate our data into two overarching mechanisms (collaborative and configurational), which in turn equipped us to develop our process model that shows how these micro-strategies relationally play their roles in creating and unlocking value (FIGURE 3).

INSERT FIGURE 2 ABOUT HERE

Findings

In this section, we present our findings based on our first-order data categories, second-order themes, and aggregate dimensions (TABLE 2). To improve our data presentation, we analytically separated our data into two overarching mechanisms, namely collaborative boundary work and configurational boundary work. Despite the overlaps among these two categories of boundary work (micro-strategies), this analytical separation enabled us to better discuss the process model we have developed out of our data (FIGURE 3). While the collaborative boundary work takes place *at* the boundaries and by the people directly involved in CVC daily work, the configurational boundary work happens *through* the boundaries and by people who might work from outside the existing CVC boundaries (e.g., from the parent company's C-suite) to design or reorganize the activities of individuals and groups involved in CVC strategy implementation.

INSERT TABLE 2 ABOUT HERE

I. Collaborative boundary work: Activities aimed at aligning boundaries to enable collaboration

a. Aligning boundaries notwithstanding differences

This group of collaborative boundary work consists of aligning commonalities while trivializing differences among the cross-functional groups. We found three groups of practices (micro-strategies)

– i.e., *building bridges across CVC boundaries, developing/highlighting common grounds, and trivializing/embracing differences amongst groups* – are geared towards connecting various groups involved in the CVC activities by creating alignment at the boundaries between them so that collaboration takes place on a day-to-day basis.

One of the major issues that CVC units face is a lack of connectivity between groups across different business functions and different levels. Historically CVC units and programs have a poor track record of survival stemming from executive rotations, CVC misalignment with the long-term strategic vision of the parent, or lack of recognition at the board level where the CVC unit is perceived as non-core or as less important (e.g., compared to R&D function) [Inf42, Inf45, Inf48]. This is further exasperated by having to maintain complex connectivity, alignment, and collaboration between multiple organizational boundaries (i.e., CVC, R&D and other internal business units, and the corporate parent).

The first practice (micro-strategy) that addresses this tension used for building bridges across CVC boundaries entails socialising with and signalling a view to the executives that CVC is a core function to ensure that it is recognized at the board level and have the corporate parent's support. We found numerous instances in our data suggesting that CVC heads mix with other senior executives across the organization regularly to develop bidirectional communication channels and to create a common understanding of the importance of building a successful CVC for the company to build alliances at the top to gain the recognition needed:

Recognition at the board level of the importance of innovation partnering with startups and awareness that a new mindset and new skill sets are needed to understand and create the mainstream role corporate venturing plays in the innovation toolkit, particularly in addressing disruption or transformation...that's why it's part of our daily job as CVC heads to attend board meetings and events across the company to communicate these message in every occasion and through every possible way [Inf45].

In addition to attending board-level (or equivalent) meetings, the CVC head needs to obtain a mandate (buy-in) that is developed through relationships to build credibility and legitimacy through socializing with the other key executives. This also helps and gain their trust:

If someone wants to start a CVC for a company, [the first thing to do is] to get buy-in from a very high level (the CEO, CFO, strategy officer, chief innovation officer - if you have one- or R&D head or chief technology officer), and to do so you need to socialize with them to get their support. [Inf21].

While regular communication and socializing are used towards building and solidifying bridges and creating allies, other tactics like monthly events are used to create a safe environment for bouncing ideas and answering questions and criticism. One informant described how CVC heads host and run monthly events and innovation days that bring together, and share stories and successes with, different executives from across the organization. These communication events offer opportunities to interact with top executives within the organization, by providing a safe place (a forum) to address

questions (or even doubts), share updates on developments, build connections and bridges, and create allies to promote further engagement:

We roadshow our venture platform [CVC capability] around the organization to communicate, in addition to building relationships and partnerships with the technical community, how they can also benefit from CVC by showing them how we have successfully embraced a new technology [start-up] that turned into cost savings or revenue or new capability for Boeing...The more we showcase and communicate with our partners around our corporate teams, the better off we are. We don't let people interpret things in isolation and stay passive or worst case become obstructions. [Inf46].

These forums encourage and promote challenge, criticism, and two-way communications, between the CVC teams and other parties within the broader business that are used to connect with, gain buy-in and build trust [Inf27, Inf37, Inf49]. Another informant explained how they foster buy-in through the deliberate inclusion of non-voting members on their investment committee from outside the CVC unit to include them in the investment process and other CVC activities. Although they don't have an official role, they still have a voice that is valued and helps to build bridges and create allies for better collaboration among various partners involved:

Our investment committee includes my Silicon Valley team, my managing directors and me [CEO]. But for strategic deals, we also include other business groups' input, not as decision-makers (we are independent), [but because] we want to act as though we need their approval to create the 'right intimacy'. [Inf47].

In these cases of building bridges, the focus is on creating alignment between top executives. The CVC heads and team members regularly socialize with senior executives, present success stories, provide a safe forum for discussion on innovation days, and include input from executives outside the CVC unit in their committees. In the second practice, i.e., *developing/highlighting common grounds amongst groups*, the focus is placed on highlighting common grounds within and between the groups.

First, we found that education, skills, and work experience are used in combination to develop a common language. CVC team members need to engage with technical, scientific, engineering and R&D teams, people, businesses, and products/services from the internal business units, as well as entrepreneurs from the external startups (who can be a combination of business and technical units themselves). As an informant explained, they use the common language nurtured through focusing on shared skills and roles to highlight common grounds for further engagement and collaboration:

We have a program that functions well called the embedded engineering program where our principal engineers work with our startup companies. We help them put together a plan around what's an idea, an engineering idea, or a technical idea that they need some help with commercializing. We start by working on what we share in terms of skills, and the complementarities will follow. [Inf22].

Another informant explained the importance of nurturing this common language internally for better collaboration by treating corporate venturing as a 'professional sport'. To do this CVC heads try to create a recognition of CVC as a profession with a clear career path and provide training to socialize new members. By doing so CVC teams establish themselves as groups of professionals who

understand their roles within and without the CVC unit, as well as their counterparts' roles in the organization. So, by establishing CVC as a team of people with different professions, differences between the distinct functions play an important role in aligning the different groups across their boundaries because they rely on each other in a complementary way to accomplish their day-to-day CVC tasks. This becomes an important precursor for mobilizing organizational boundaries through day-to-day activities (explained later in 'b'):

What we've seen over the last three to four years is the professionalization of what we call the corporate venture business development function which is a parallel professional function to the investment side. The CVC team now provides strategic advice to the corporation. It also provides product marketing. Product management provides business development and engagement. It also provides some technical capability, and in some cases that may also provide a PMO [project management] capability. [Inf45].

Another informant described how they create a common language and understanding with members of other business units through acceptance as 'part of the team'. They use this privileged access to attend confidential strategy meetings, which the CVC team members then use to help identify common grounds for mutual benefit. For example, the CVC team members help identify possible external innovations as solutions to solve specific problems that arise in these strategic meetings to support their short, medium, and long-term strategies:

Each member of our [CVC] team develops a primary relationship with one of our business units and becomes essentially part of that business unit, not organizationally, but in terms of how we function. We attend their strategy meetings and speak to the senior management team members of those business units all the time. [Inf30].

In a similar, but instead outward-facing approach towards the external startup world, the CVC teams build a level of intimacy with startups to gain insights they otherwise would not have. For example, one informant described how they bring fresh ideas from outside their organization by building close relationships with startups and putting startup CEOs directly in contact with the corporate C-suite by inviting them to attend their committee meetings. The practice is used to inform the senior executives of the scale and pace of external change taking place and use this together with the startup CEOs to develop a common understanding and highlight common grounds of where opportunities for shared benefits lie for further collaboration:

We bring startup CEOs to speak to our investment committee and my CEO, CTO and CFO hear directly from the entrepreneurs, who bring fresh air from outside into our world and inform us of what's happening and how fast they're happening. This creates a level of intimacy and depth of relationships that builds upon what we have already developed with those CEOs through regular meetings and inviting them to visit us. [Inf37].

The third practice, *trivializing/embracing differences amongst groups*, is used to shift the focus towards the can-do side of the equation across boundaries by recognizing that although there are many differences intrinsically, these can be used productively or at least not counter-productively. One example of this was described by an informant who told us that because we live in such a connected world, innovation can come from just about anywhere. So, embracing differences and treating them

as strengths, instead of weaknesses, is an important ingredient in the process that enables CVCs to harness value. They explained how they use differences of diversity of thought to not only find but exploit opportunities to make valuable CVC investments:

Diversity of thought, gender, culture, and ethnicity brings benefits and investment returns. Using this diversity of thought from those people sitting around the table enhances our ability to make great investments. This allows us to look at the opportunity in a variety of formats, depending on what part of the world you're in and what area [sectors or technologies]. [Inf12].

In addition to embracing differences, another way in which CVC teams trivialize differences is through building or relying on a shared identity amongst the teams. One informant explained how she transformed her team members' mindset by creating a sense of belonging to a team and forming a new common entrepreneurial culture:

We had to create a new shared identity. Part of my role, in this 'entrepreneurial role' was to create an entrepreneurial culture. All the people on my team [investment team], through all these things we were doing personally and professionally, were being transformed into a new sense of [a shared entrepreneurial] identity. [Inf10].

What this informant did when she created the new team not only represented the common language of the new role (e.g., investing team) but also highlighted the cultural shift needed, changing their career path in the process.

In summary, these groups of micro-strategies (collaborative boundary work) are used across boundaries to align commonalities and trivialize differences among cross-functional groups. By 'building bridges amongst key people across boundaries' through daily socializing, creating formal and informal roles, and organizing innovations days, 'developing and highlighting common grounds amongst group members' by building on, and developing shared skills and languages, and 'trivializing and embracing differences among groups' through leveraging diversity and division of labour across functional teams, successful CVCs manage various groups involved in their CVC activities to align *at* the boundaries so that collaboration can take place on a day-to-day basis across boundaries.

b. Mobilizing boundaries through everyday interactions

This group of collaborative boundary work involves the practice of *forming and reforming boundaries* as part of everyday CVC activities. Enabled by allying practices (described in *a*), forming and reforming CVC activities create and/or modify the interfaces used to mobilize boundaries as part of everyday functions addressing major issues CVC units struggle with, i.e., sustaining a CVC program that can last more than five years, survive at least two CEO rotations, and adapt to external economic cycles [Inf42, Inf45].

One informant explained how CVC teams design interfaces that can connect functional teams through their day-to-day activities. They achieve this in their daily CVC routines by designing, modifying, or redesigning interfaces to ensure things work among these separated groups. For

example, they create and nurture effective internal communication channels (interfaces) with the internal business units and share what the CVC unit is doing while promoting proactive engagements between these groups. This process of forming and reforming takes place on an ongoing basis as priorities shift, e.g., with the change in the performance indicators of the business units, or an executive change:

One element of execution, probably the most important one, is internal communication ... so that it's very, very clear to all your business units about what this CVC is doing – who the different teams are, how they independently collaborate and how to engage with them, and how they can help me execute my KPIs [they all work together to accomplish a common task]. Also, the CVC must build relationships inside and outside, and when a new sheriff [e.g., CEO] comes into town. [Inf42].

This informant is highlighting how CVC teams develop their CVC investing approach by reforming boundaries between the CVC unit, the internal organizational and external ecosystem, and different organizational levels from the executive to operational on a day-to-day basis (keeping them connected and separated). Another informant explains how all these interfaces are created and used in action to make this end-to-end approach work:

We develop and institutionalize corporate venturing-specific operating platforms and legal structures that are purpose-built to support the venturing end-to-end investing processes together with agile governance and decision-making that is enabled by the professionalized range of specialist investment and portfolio development roles. Then people who are involved have the tools to pick and choose to get things done daily. [Inf45].

Another informant told us how they create connections by creating interfaces with different groups using negotiation as the means. This informant describes how they configure negotiating with the top executives, and how it is quite different from negotiating with startups. One inward-facing interface (forming internal boundaries) provides direction and purpose, while another outward-facing interface (forming external boundaries) aids and supports; taken together, they connect the circuit to enable day-to-day tasks to take place:

As CVC head, I negotiate with the top executives of Toyota to agree on what this CVC fund will look like – what and where will the strategic and financial value come from, and how will it all work? That is an LP [limited partner] type of negotiation. However, when we [the CVC team] work with startups we treat the negotiation very differently. Like customers, it's all about service and support. [Inf40].

An important boundary object derived from these negotiations, and used for further negotiation, is called an *investment thesis*. The investment thesis is derived through a process of meetings, discussions, and negotiations between and amongst groups to encapsulate strategic and financial imperatives of the various internal groups as an investment strategy with criteria (e.g., an early-stage revenue-generating technology company). It is an artefact that emerges from interactions with multiple internal groups (reforming internal boundaries) who then work together to execute the thesis to achieve their collective goals in collaboration with outside companies (reforming external boundaries):

A member of our CVC team runs meetings to develop an understanding of exactly what [the business units] are looking for, where their gaps are and where they would like us to look [used in the investment thesis]. It is with those marching orders that we go out into the market and look for early-stage companies whom we can form a mutually beneficial partnership with that will generate new sources of revenue for Stanley Blank and Decker or whose technologies we can utilize to make our operations way more efficient [according to the thesis criteria]. [Inf30].

In summary, enabled by ‘allying practices’, this group of micro-strategies (collaborative boundary work), namely ‘forming and reforming boundaries as part of everyday CVC activities’, create and/or modify the interfaces used to mobilize boundaries as part of everyday functions to address major issues CVC units face. In contrast to configurational boundary work that is discussed later, this group of practices happens *at* the boundaries and through direct engagement with CVC activities.

c. Repairing cracks created by mobilizing boundaries

This collaborative boundary practice, *repairing the cracks created from mobilizing boundaries for collaboration*, is conjoined with the practice of forming and reforming (in b.1). Forming and reforming mobilize boundaries and for effective collaboration to take place cracks need to be smoothed over through the practice (micro-strategies) of ‘repairing’. One of the main tensions this practice needs to address is to make sure there is an ongoing continuity (despite reformations) at the boundaries as they change to ensure CVC activities take place. One informant explained how she uses her position and agency as managing director at her company to act as the glue that fills in any cracks that appear in reforming boundaries amongst the groups involved in the CVC process so that they can continuously perform and sustain their end-to-end activities to run smoothly. She steps in wherever needed (e.g., running meetings or getting different teams from HR and finance to work together) by ‘personifying boundaries’ to plug any cracks that are formed from mobilizing boundaries:

As managing director and head of operations, I have to then glue things we intentionally separated. For example, I run partner meetings, sit in on our investment committee meetings to monitor the process, and make sure I understand what’s in our portfolio [of start-ups]. I can then interface HR with our portfolio development team and support our portfolio companies. I interface finance with the whole investment organization and run Group synes and Group team meetings to make sure everyone is informed of what’s happening. [Inf22].

Other informants explained how they operate as multidisciplinary *boundary-spanners* who use their different skills, experience, and background to smooth over any cracks that form in the boundaries when they are being activated/reformed. For example, an informant uses their qualifications and experience in engineering and business to talk to technical teams in their language and understand their challenges while being able to connect this with commercial outcomes to find solutions that defuse any tensions that may prevent working with startups:

There are three components to my background. One, experience is in aerospace and defence. Having a career focused on that world helps you understand and bridge connections to technology products and

services and the ultimate capabilities that big companies like Boeing need. Secondly, a technical background (and I'm certainly not advocating that every venture capital fund manager is a test engineer), but in an engineering-dominated sort of company like Boeing, it certainly doesn't hurt. It's good to talk with the engineering teams, or at least bring some street credibility if nothing else that gives you a framework to think like an engineer would inside the company and try to reach, a common language of how we can embrace [startups] from the outside without being disruptive or threatening to the world they operate inside. Lastly, I have an MBA and spent a lot of time in corporate strategy and business development roles. [Inf46].

Another informant echoed how they use specialized boundary spanners to enhance interfaces between the CVC units while using their multidisciplinary background and problem-solving abilities to smooth over the cracks that can occur in mobilizing boundaries:

We have a team of dedicated multiskilled and multidisciplinary individuals who are agile, adaptive network builders and problem solvers who can seamlessly work on different aspects of CVC activities. For example, they can move from deal sourcing to portfolio company investing and then to developing commercial relationships. [Inf49, p. 50].

In summary, conjoined with the practice of 'forming and reforming boundaries', the 'repairing' practice (micro-strategy) addresses the need for an ongoing continuity (despite continuous reformations) at the boundaries as they change to ensure collaborative CVC activities take place. By using their agency, people directly involved with collaborative works personify the boundaries or play boundary-spanning roles to enhance interfaces' functionality and smooth over the cracks. Like 'mobilizing boundaries' practices, this group of collaborative boundary work happens at the boundaries and by people directly involved within the CVC unit.

II. Configurational boundary work: Holding collaborative and competitive forces in equilibrium

d. Temporal bracketing

This group of configurational boundary work consists of manipulating patterns of interaction by reconfiguring temporal boundaries or developing and mobilizing temporal spaces that influence CVC interactions directly or indirectly. We found two groups of practices (micro-strategies) used in successful CVCs that we labelled 'temporal bracketing' – i.e., *configuring (vertical) temporal spaces that hold dissimilar timeframes together*, and *configuring (horizontal) temporal spaces that separate distinct timeframes*. The first uses vertical bracketing to hold together different temporal spaces with different durations, paces, or rhythms. For example, the CVC unit builds temporal spaces that can hold the different clock speeds of the corporate and startup worlds together (e.g., slow vs. fast). The other involves horizontal bracketing used to partition temporal patterns chronologically by reconfiguring boundaries (while they remain joined), e.g., using CVC as an experimental space for organizational transformation by enacting different change cycles.

As hinted before, balancing the exploration vs exploitation tension is a significant challenge for CVCs. They need to consider the corporate interests as well as the external and internal stakeholder

perspectives in navigating these tensions. While exploration is a future- and long-term-oriented approach that involves seeking out innovative ideas with the potential to disrupt the market and enhance the strategic and financial outcomes of the organization, exploitation is a short-term approach that focuses on capturing profits and reducing costs or losses while being risk-averse. The tension that underpins these two approaches is primarily temporal. This requires configuring and arranging spaces where two-dimensional vertical and horizontal temporal bracketing can be used to simultaneously separate and connect different stakeholders and timeframes.

To manage tensions among stakeholders and exploitation and exploration practices, one effective approach is to divide time into different horizons. These horizons can be used to coordinate exploratory activities by breaking time into different frames. By doing so, stakeholders can better align and coordinate their actions. An informant revealed a technique utilized by their executives to establish timelines that synchronize the natural pace of the innovation discovery cycle with the competitive requirements of internal businesses and the venture capital fund responsible for distributing resources. These timelines (horizons) work as vertical temporal brackets:

I look at investments from a corporate strategy point of view. The CTO's office tends to focus on 7-10 years (Horizon 3), the Business Units or M&A for 1-2 years (Horizon 1), and the Venture Fund for 5-7 years (Horizon 2). I [managing director] decide how we are going to allocate [resources] between these three different horizons. [Inf43].

The informant suggests that this method helps stakeholders manage their work more effectively, which was echoed by another interviewee:

You need to have the horizon focus more aligned with the startup than with a quarterly reporting [of the business unit] or public company [corporate], because CVC investing and building startups takes time, especially when the startup is very tech-driven. [Inf29].

As explained by this informant, this temporal bracketing through horizons allows the CVC unit to take different temporal orientations at different stages. Another effective way to vertically bracket or organize investments is by structuring them as project-like organizations. These enable them to operate semi-independently while remaining connected to their hosts with distinct boundaries:

There are two tracks. While we are going through the investment process. At the same time, the new venture companies engage with the corporates [through the CVC unit]. Both processes work independently like a project. The [CVCs] are involved with the startup, and in the screening [due diligence process with investors] and partnering with them [both CVC and Investors]. [Inf7].

In the process of making a deal through the CVC, another informant explained that they use vertical temporal bracketing to simultaneously hold two different timeframes of moving fast and slow together. This allows the startup to make quick decisions while giving the corporation enough time to avoid making mistakes. They also ensure not to move too slowly and miss out on the next big thing:

If you want to move very fast, then the structure of the terms of the deal that you get into needs to meet that level of speed...if you want to move slowly, then you can insert yourself into the start-up capital structure without slowing the start-up down...you can balance it out, so you don't miss the deal. You

also don't have to move so fast that the corporate doesn't feel comfortable, and you don't move so slowly that you miss the opportunity. [Inf12].

These boundary work practices of temporal bracketing help the CVC unit to work semi-independently while still connecting to its various stakeholders. As a result, it enables the CVC to better balance the more explorative nature of its work and the start-up world, with the more exploitative nature of the parent organisation and venture capital world. Hence, this first group of practices of vertical temporal bracketing enables CVC-based exploration practices to be balanced against exploitation practices. The second group of practices of horizontal temporal bracketing boundary work involves addressing the CVC-focused exploitation needs (e.g., reducing risks by 'wiring in' the CVC process) and balancing them against exploration practices. One example of this approach is the transformation of the CVC investment process over time, which occurs in a chronological and process-oriented manner. A key feature of this is that the configurational work of the CVC processes takes place while they are being used. These transformational events occur in distinct chronological periods or phases, which are bracketed by the horizontal temporal boundaries:

This begins with the start-up phase (0-3 years) where the CVC program is experimental and being tested while establishing legitimacy within the organization [e.g., through Allying boundaries]. Once established, this is transformed through the expansion phase (4-6 years) to demonstrate strategic value by institutionalizing an end-to-end investment platform [e.g., Mobilizing boundaries]. Finally, through the resilience phase (7-9+ years) configured to stay relevant or agile to ensure survival [e.g., Repairing boundaries]. [Inf49, p.53-54].

This provides distinct cycles of transformation with different temporal patterns throughout the transformation process. Another informant further explained how these transformational activities use configurational boundary work to enable collaboration and reconfiguration of the CVC as it progresses chronologically:

We created a high-performance strategic investment CVC program by developing an end-to-end investing approach. We integrated the investing teams with the partnering teams at both the executive and operational [corporate parent, R&D and other business units] levels so that it becomes institutionalized...If you are a start-up phase program or an expansion phase program, we look at each stage essentially treating them as start-ups that we grow until they are resilient. [Inf45].

Another application of horizontal bracketing, driven by exploitative purposive action, is to create experimental spaces that are used to compress temporal spaces to short-circuit risk and time for R&D and M&A functions. As one informant explained:

We use CVC as a space to experiment on a low-risk level that is much more useful than relying on organic R&D. We work with start-ups to investigate the much broader universe of technology and offerings in a particular space and experiment in the early stage before investing billions in R&D or M&A. [Inf33].

Another informant explained how they use these experimental spaces to quickly evaluate whether a startup may be the next big thing (e.g., a unicorn) that could be used to strategically turn

around or transform the corporate parent by making many small and low-cost bets to test viability or accelerate failure to identify non-viability (i.e., as a transformation accelerator):

We want to do innovation transformation by placing a series of small bets, we do pilots, and we do experiments that we call ‘speed boats’. Our strategy is to send out many speed boats that are small low-risk experimental investments in new ventures that are tethered to the mothership [parent] that we use to do innovation transformation and turn the oil tanker [parent] around. [Inf19].

In sum, through manipulating patterns of interaction and by reconfiguring temporal boundaries or developing and mobilizing temporal spaces that influence CVC interactions, ‘temporal bracketing’ enables CVC units to balance competitive and collaborative forces. This in turn enables the CVC unit to better balance the more explorative nature of its work and the start-up world, with the more exploitative nature of the parent organisation and VC world.

e. Spatial bracketing

This group of configurational boundary work is used to manipulate patterns of interaction by creating mediating spaces to keep collaborative and competitive forces in equilibrium – a key tension that, as highlighted before, CVC programs face from belonging to both the corporate parent’s internal environment and the external startup/VC world. This tension, on the one hand, is caused by the CVC perspective orientation towards the corporate parent structures and systems, resources and capabilities, and networks. Here, CVC units need to engage with different organizational levels (e.g., the corporate parent, R&D, business units, operations) and levels of agency (e.g., CEO, CTO, Head of R&D, etc.) to carry out their activities. We have labelled this ‘vertical spatial bracketing’, where both collaborative (within and amongst groups) and competitive forces (competing for resources for long-term vs short-term returns) underpin the tension. The CVC, on the other hand, must also orient their perspectives towards the startup/VC structures and systems, resources, capabilities, and networks. This type of spatial ‘horizontal’ bracketing takes place across organizational boundaries. Together, these two groups of practices (micro-strategies) of spatial bracketing – i.e., *shaping (vertical) mediating spaces within the organizational boundaries* and *shaping (horizontal) mediating spaces across organizational boundaries* – shape spaces that hold concurrent collaborative and competitive forces in equilibrium.

The first practice of vertical spatial bracketing is required to mediate different organizational levels (e.g., corporate parent, R&D, internal business units) and functions (e.g., HR, legal department, etc.) to enable collaboration while at the same time, each of these has competitive challenges that they pressured to address (e.g., strategic vs financial or short-term vs long-term goals, and access to shared and limited resources). Our informants referred to these competitive forces as ‘antibodies’ that resist collaboration for competitive reasons:

There is always going to be some level of existing business antibodies when you introduce something new, that doesn’t contribute to the quarter-to-quarter business performance that may be perceived as

being higher risk and that could potentially draw valuable assets away from the current business priorities. [Inf45].

The tension between collaboration and competition itself necessitates shaping boundaries to create mediating spaces for harmonizing the tension. For example, one source highlighted how they resolved this tension by using the outside agency from their CEO either directly or indirectly to reconfigure their investment committee (i.e., creating a mediating space). By reshaping the boundaries of this space, the CEO instigated adding viewpoints from different parts of the organization to turn this space into one that is both differentiated by its goal, yet integrated with the other parts of the organization:

Our CEO initiated changes to our Investment Committee which was essentially just the head of a business unit, usually with a very technical focus [e.g., engineering], into one that is very strategically focused [more competitive and differentiated]...Previously, it had 10 members [technically focused only from a business unit] and now four representing [a broader range for collaboration] from legal, finance, the VP of innovation and engineering and the SVP of strategy. [Inf28].

What this informant told us is how, through an intervention by the CEO, the mediating space is reshaped and used as a medium to balance competition and collaboration required to achieve the new objectives and strategic use of CVC. Another informant elaborated on this and told us how he had to reconfigure the agency from the CEO and CFO to the CTO and create a technical community (mediating space) that placed the engineers and R&D department across different levels (vertical bracketing) on a common footing needed to keep collaboration vs competitive forces in equilibrium to make CVC work:

...the antibodies that come out at the beginning when something looks different and threatening to R&D and the way of doing things. [Even though], the CVC unit has the support of the CEO and CFO, as we moved forward, the engineers hunkered down even more and became even more passive [resistant]. I realized that because we have middle layers and obstacles that you don't even know are there quietly working in the background, maybe not actively making things complicated, but they're certainly not making things easier. So, we had to convey that we're not doing CVC to fire engineers inside of Boeing (something they can be concerned with) or to steal R&D funding from their budgets. So, I created this technical community and asked them to join with the support of our CTO ... that gave them a sense of security, and a forum in which we could align interests. [Inf46].

What these informants are highlighting is how they shape mediating spaces (i.e., committees or special councils) by bracketing spaces (vertically) within the same organization used to harmonize the collaborative and competitive forces. Other informants explained how they use a second practice (horizontal spatial bracketing) as a micro-strategy to shape boundaries between and across organizations that help balance the competitive and collaborative forces. They create mediating spaces that syndicate partnerships by shaping the boundaries across different organizations (i.e., CVCs, VCs, and startups). These are used to ringfence and provide the startups with a safe and supportive environment where the syndicate can incubate the startups across inter and intra-organizational boundaries, but also feel the competitive pressures to perform well:

We include more than one corporate [CVC], even with similar business goals to the start-up syndicates, to make it much more attractive to financial VCs. We use this to create competition that gives power to the start-up which is good to get the corporations to work better with them and bring products faster to market. [Inf26].

Another informant told us how they use these spaces to separate themselves from the competitive tensions: By shaping these spaces they can balance the competitive and collaborative forces inside the mediating space to complement each other in ways they would not do on their own as separate units or organizations. Another feature of these arrangements is how the agency comes from outside and uses the arm's length connection to circumvent any antibody obstacles:

We bring corporations together in these syndicates who want to collaborate and invest in early-stage startups...We have the investing skills and a startup network. The corporate has the resources and market intelligence and knows if the technology will work...we provide the due diligence, look at deals, and talk to people with the investment management capability. We are constantly exchanging informally this deal flow of information. You can say it is more like a forum between us where we engage [with] our corporate partners to identify possible gaps, and they answer some of the key questions we have about the market, the exits, and the growth rates. Within these [syndicated] partnerships we work together with their top bosses; the CTO who assigns people from the innovation teams inside the corporation full-time to work on our team, the CEO, and the [startup] founder. [Inf7].

Although these arrangements are different from the previously mentioned ones (e.g., are more formalized, or the parents have different resources, and capabilities and perform different tasks, etc.), what is common is that these mediating spaces come about consequently from the need to address the tension between collaborative and competitive forces.

In sum, these spaces are used to provide the needed balance through a combination of both horizontal and vertical bracketing in different stages and with different levels of formality. Together, these practices (micro-strategies) of spatial bracketing shape spaces that enable the manipulation of the patterns of interaction and hold concurrent collaborative and competitive forces in equilibrium—a key tension that, as highlighted before, CVC programs face from belonging to both the corporate parent's internal environment and the external VC world.

f. Perceptual configuration

This type of configurational boundary work is used to manage the underlying perceptual tension of opportunities that stem from collaborating with the CVC vs the threat CVCs pose. These perceived opportunities and threats occur internally between the CVC program within the same organization (i.e., vertically), and across organizational boundaries between VCs and the CVC program and startups and the CVC program (i.e., horizontally). We found that CVCs manage this underlying tension by configuring socially constructed perceptual boundaries to hold collaborative and competitive forces in balance. We identified two practices (micro-strategies) used to hold these divergent perspectives together -- i.e., *managing perceptions within the organizational boundaries (vertically)* and *modifying perceptions of CVCs as an opportunity vs threat (horizontally)*.

The first addresses the perpetual tension that occurs within the organizational boundaries (i.e., vertically). It is used to manage people's perceptions of the CVC unit and program by balancing and holding collaborative and competitive forces together at the same time. For example, a common perception of CVC is whether it is seen as a strategic and financial tool (i.e., an opportunity) vs a costly and risky tool (i.e., a threat). One informant told us that they use their top executives to manage perceptions top-down. They do so by using their C-suite to modify social norms and practices by inserting members from their top executive team inside the startups the CVC has invested in. This helps them to modify their perceptions and understanding so that these executives take these back into their regular daily lives and can initiate and influence altering norms and practices from the top down:

...we bring our [corporate] executives in to work in our portfolio companies for three months to get real firsthand knowledge working in a startup that they take back [to their world]. This process has been slow but the plant [executives] have begun to plant seeds. Changing mindsets is such a big part of changing the culture. [Inf31].

What this informant explained is how their approach creates a cycle of planting new seeds (changing perceptions) in the minds and actions of these executives, who then in turn see the benefits from these and start planting seeds themselves. This process uses the outside influence from these executives (i.e., top-down) to hold together both collaboration and competitive forces inside the same organization. This requires creating two-way porous boundaries that allow knowledge to flow to and from the corporate parent through the CVC unit and internal organization. By setting the CVC unit up as a 'knowledge antenna' that collects valuable information that is fed back to executives who can in turn use it to plant new seeds that drive changes:

As a corporate [parent] you observe, but more importantly you must learn [about CVC and startups] because that learning may impact how you do your internal R&D or how you restructure your internal R&D team. So, the CVC unit needs to create the tentacles, which is all this connective tissue between two ends of the organisation and the portfolio companies (and maybe even startups you don't invest in but engage with), that allows knowledge to be funnelled from the outside to the top and then inside [top-down]. [Inf42].

The second practice we found occurs horizontally (i.e., across organizational boundaries) and is used to modify perceptions between two perspectives: the startups' perceptions of the CVC and the VCs' perceptions of the CVC. Modifying these perceptions of the CVC, while resolving the tension between the perceived opportunity vs threat, is used to hold collaboration and competition together. The first of the two perspectives involves perceptions of the CVC held by the startups. Here, CVCs utilize tools and channels to modify or create new perceptions of the CVC as a value-adding investor that outweighs any risks of misappropriation of their intellectual property (IP). One informant [Inf48] told us how they have developed a framework of understanding ("TDK Goodness") that prioritizes entrepreneurs over investors that they have placed into the public domain to convey their promise and commitment. They use the tools and channels within this framework to create or modify startup

perceptions that their CVC prioritizes their needs to help them grow to become successful. This framework acknowledges that each startup is unique while keeping the collaborative and competitive forces in equilibrium:

TDK Ventures exists to provide every startup we invest in with the tools they need to bring their visions to life. This includes financial resources and support, but we also bring a full measure of TDK Goodness to our portfolio companies to help accelerate their success. Depending on their needs, we provide early product validation, pilot programs, customer, channel, and ecosystem access, industry and outsourcing connections, market insights, materials, manufacturing, supply chain expertise, branding, and/or go-to-market mentorship. [TDK Ventures website].

Another perception held by startups is that CVCs are slow decision-makers. Since they are also very complex and require dealing with multiple organizational units, the startups often prefer to work with VCs instead. Also, VCs are less competitive and less likely to misappropriate IP because they are usually financial-only investors. According to one informant, CVCs are setting themselves up to resemble independent and autonomous units that are run by partners and operate like their VC counterparts. This configuration creates the perception that CVCs can provide the best of both worlds as value-adding investors that act like a VC in terms of speed and complexity:

BMW i Ventures is fully independent. Our decision-making process is like a typical institutional VC. We have partners and we meet every Monday morning. We move very quickly as we do not need any internal approval [from the corporate parent], which makes us like a traditional VC. [Inf34].

This configuration also balances the role of the CVC internally as a separate and independent entity from the internal organization, which helps balance collaborative and competitive forces. Other informants revealed how CVCs leverage their corporate brand, together with the reputation of other CVCs, to create the perception of a high-quality investor. By doing this, they signal to startups that, even when they are new CVCs, they are a value-adding investor. This enables them to enter competitive deals (i.e., where startups can easily choose) with a higher chance of success while facilitating collaboration with other co-investors:

We are a new entrant into the CVC space...we would pull in the Microsoft name [as a co-investor] whenever we wanted to win a competitive deal because it takes time to build a brand, and the investment market is insanely competitive...It's very obvious if you're taking money from Cisco that you don't have to explain why you need to be on the Cap Table. [Inf36].

There is a company in our portfolio that has developed an innovative liquid cooling solution -- using liquid in servers sounds counterintuitive. We invested in this company because we thought if it works, it's going to be a game changer. On their own, if they went to Amazon Web Services, who is one of our customers, and said we want to cool your servers with liquid they would not let them near their servers. But together, with us [Schneider Electric], they agreed to run a pilot project. Now we have a big order from them. [Inf21].

CVCs not only promote collaboration but also aim to mitigate perceived risks of misappropriation. For example, stealing startup ideas on behalf of the corporate entity, investing in competing businesses to the startup, using startups solely to learn about their technology, or as uncommitted investors. As active investors, CVCs balance collaborative and competitive forces by

taking observer roles or seats on the startup board (different from directorships with fiduciary responsibilities). CVCs use these roles to foster transparency and openness, thereby reducing perceived competitive threats:

At Stanley Ventures we mainly hold observer seats. I [President] get a business unit person [board observer] that we've put through our official board observer training to attend the board meetings...Sometimes they invite me as a guest. I have amazing connections in the early-stage VC community and the later-stage VC community so I can try to add value. [Inf30].

Like with startups, CVCs also bring complimentary resources and capabilities and provide an opportunity for the VCs to tap into these. From the VC's perspective, their perception of the CVC involves assessing whether they see the CVC as a value-adding, non-bureaucratic and committed co-investor. One informant explained how their CVC has developed a reputation as a reliable partner through a combination of being an active investor – who works with the startup and other co-investors at the board level – as well as working together with the same co-investors on multiple investments. This in turn has helped them build a community over time:

In most cases we have a good dialogue with our co-investors [VCs]...you work with a portfolio company, you work on a board and you work to overcome differences and if you go at it constructively...I think a good data point to prove this is that most of our co-investors, or many of them, have made multiple investments together and [we tend to invest] with the same investors. [Inf1].

However, CVCs can be perceived to be a threat to traditional venture capitalists because they prioritize strategic objectives over financial ones and are sometimes labelled as slow and bureaucratic. One of our sources explained how CVCs balance this tension by taking a lead role in investment rounds, particularly in industries they are familiar with and excel in. This not only signals their commitment to the other co-investors but forces CVCs to act in everyone's interests:

If it's an area where Bosch has the experience on our team, then we feel more comfortable leading. We are leading more rounds we are perceived to be stronger, and it's more recognized and appreciated if we lead and price rounds. [Inf26].

As the main investor, the CVC must play an active role and be accountable to the other VC co-investors. This requires transparency within the syndicate. Another approach used by CVCs is to imitate VCs by configuring and managing independent funds (like a Limited Partner). This sends a strong signal to both VCs and startups that the CVC cannot act opportunistically and needs to balance both the competitive forces (e.g., strategic vs financial returns) with collaborative forces that benefit all. The combination of their corporate reputation (e.g., Boeing), resources, capabilities, long-term commitment, and governance creates a perception of a committed, non-bureaucratic, and value-adding co-investor:

We cannot steal the IP or hold startups hostage or whatever because we control the investments. There may be some conflicts of interest [with Boeing], but we have that level of independence. We have a fiduciary obligation to all our LP's [investors] so we cannot act in their worst interests in our favour. [Inf46].

To summarize, these configurational boundary works are used to manage the underlying perceptual tension of opportunities that stem from collaborating with the CVC vs the threat CVCs pose. These perceived opportunities and threats occur internally between the CVC program within the same organization (i.e., vertically), and externally across organizational boundaries between the CVC program and VCs and startups (i.e., horizontally).

Discussion and conclusion

Our findings highlight eleven micro-strategies through which successful CVCs manage collaboration and balance competitive and collaborative forces within and across organizational boundaries. As FIGURE 3 shows, we found two overarching boundary work mechanisms that enable the strategic use of CVC to create and unlock value. The first involves aligning boundaries to enable collaboration amongst various stakeholders that takes place *at* the organizational boundaries through the micro-strategies of ‘allying’, ‘mobilizing’, and ‘repairing’ boundaries. As discussed in the findings, ‘allying’ (by building bridges with key people across CVC boundaries, trivializing/embracing differences amongst groups, and developing/highlighting common grounds amongst groups) enables ‘mobilizing’ to take place in forming and reforming the boundaries. Consequently, mobilizing’ transpires ‘repairing’ that guarantees the continuity of forming and reforming boundaries (through personifying boundaries and boundary-spanning activities). These practices (micro-strategies) together conduct collaboration within and across the organizational boundaries for the CVC to implement its strategic goals.

INSERT FIGURE 3 ABOUT HERE

The second overarching mechanism involves configuring patterns of collaboration *and* competition to enable differentiation and integration *through* organizational boundaries. This overarching mechanism comprised of configuring temporal boundaries (‘temporal bracketing’), and spatial boundaries (‘spatial bracketing’), as well as the perceptions of different stakeholders with different goals from within and across the organizational boundaries. While the first mechanism (collaborative boundary work) takes place *at* the boundaries and by the people directly involved in CVC daily work to get things done daily, the configurational boundary work happens *through* the boundaries and by people who work from outside the existing CVC boundaries (e.g., from the parent company’s C-suite) to design or reorganize the activities of individuals and groups involved in CVC strategy implementation. As a result, the second group of practices (micro-strategies)—whether by shaping mediating spaces within or across organizational boundaries, by configuring temporal boundaries that separate distinct timeframes and hold dissimilar timeframes together, or by managing perceptions within or across organizational boundaries—nurture an environment in which

competitive and collaborative forces are balanced and CVC strategy implementation can succeed (rather than getting it done). Together, these two mechanisms, we believe, enable the CVC to successfully achieve its financial *and* strategic goals.

Our article makes two important contributions. First, we show how boundary work by organizational actors between the multiple logics and practices (Hill *et al.*, 2009; Souitaris, Zerbinati and Liu, 2012; Souitaris and Zerbinati, 2014) play a critical role in creating and unlocking value. Prior research has used configurational theory (e.g., Hill and Birkinshaw, 2008; Kreiser *et al.*, 2021), institutional theory (e.g., Souitaris and Zerbinati, 2014), resource dependency theory (e.g., Garrett and Neubaum, 2013), or a combination of these perspectives (e.g., Biniari *et al.*, 2015) to explain how venturing activities, configurations, and performance are influenced by seeking legitimacy and access to resources within internal and external environments. We complement these scholarly works by showing how boundary works by organizational actors at various organizational levels play a critical role in the strategic use of CVC. Highlighting the micro-strategies that take place daily *at* and *through* organizational boundaries, complement the dominant top-down decision-making view adopted to explain the success of CVCs in creating and unlocking value (Dushnitsky and Lenox, 2006; Lin and Lee, 2011). As a result, we extend the VC literature (e.g., Wright and Robbie, 1998; Gompers and Lerner, 2004) by further documenting and explaining practices that are unique to CVCs, or how CVCs ‘do deals’ (Souitaris and Zerbinati, 2014).

Second, we contribute to the CVC literature by highlighting boundary work mechanisms that explain *how* firm-level values are accrued (Dushnitsky and Lenox, 2006; Lin and Lee, 2011) through complex CVC inter- and intra-organizational connections (Biniari *et al.*, 2015; Titus and Anderson, 2018; Tawiah and O’Connor Keefe, 2022). While the extant scholarly works confirm that strategically pursued CVCs create firm-level value, we lack knowledge of *how* collaborative and competitive forces are balanced through daily works by organizational actors to create an environment that is needed for value to be unlocked and created. Using boundary work as a theoretical lens, we not only portray mechanisms and micro-strategies that link the strategic use of corporate venturing to firm-level value creation but also illustrate —through our process model— the connection among these micro-strategies and the recursivity among various forms of boundary work in so doing. We applied the boundary work (Langley *et al.*, 2019) theoretical lens to CVC, which has not been used to demonstrate the micro-foundation of value creation in this context. Although there are similarities between VC and CVC practices, their differences help us to highlight the importance of collaboration. CVC activities are more complex than VC activities that involve collaborative work between autonomous and semi-autonomous entities, where a lot of work happens at the boundaries between the internal (corporate parent, R&D unit, and other business units) environment, the CVC unit, and external environment (VCs and other investors and startups). Extant research is scarce in

this area and, hence, our research sheds new light on our understanding of how CVC creates and unlocks value (e.g., Dushnitsky and Lenox, 2006; Lin and Lee, 2011). This in turn opens up new avenues for future research on a “glaring omission” between corporate venturing and value creation (Zahra, Randerson and Fayolle, 2013, p. 370). Accordingly, our findings provide a response to calls by Zahra, Randerson and Fayolle (2013) and Covin and Miles (2007) asking to highlight these levels of granularity in CVC research, and also to the calls by Langley *et al.* (2019) asking for portraying recursivity among various forms of boundary work, as well as the varied degrees of agency, temporal, and spatial dynamics involved in boundary work. //-----//

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Appendix

TABLE 1: Interviews and Interviewees

<i>Participant</i>	<i>Role</i>	<i>Organization</i>	<i>Interactions</i>	<i>Interview Duration (min)</i>	<i>Mode</i>	<i>Phase</i>
Inf1	Partner	Novo Seeds	1	60	Interview	1
Inf2	Principal	Novo Ventures	1	40	Interview	1
Inf3	CEO	NeRRe Therapeutics	1	60	Interview	1
Inf4	Innovation Manager	Diageo (Tech Ventures)	1/1	30	Interview, Email	1
Inf5	Director of Innovation	Diageo (Distill Ventures)	2/4	60/45	Interview, Email	1
Inf6	COO and Futures Director	Diageo (Distill Ventures)	1	120	Workshop	1
Inf7	CEO and Partner	ICOS Capital	1/1	60	Interview, Email	1
Inf8	CIO and Partner	ICOS Capital	1/1	60	Interview, Email	1
Inf9	CEO	Market Gravity	1	45	Interview	1
Inf10	CEO and Partner	Corporate Entrepreneurs	1/2	80	Interview, Email	1
Inf11	CEO	Hart Ventures	2/2	70/30	Interview, Email	1
Inf12	Managing Director	Volvo Financial Services Innovation Ventures	1	60	Interview*	1
Inf13	Program Executive	Small Business Innovation Research, NASA	1	60	Interview*	2
Inf14	Global Head of Innovation and Entrepreneurship	University of California System	1	60	Interview*	2
Inf15	CEO and Co-Founder / Managing Partner	RISE / SeaX	1	60	Interview*	2
Inf16	Snr Investment Manager	Applied Ventures	1	60	Interview*	2
Inf17	CEO and CIO	Sony Innovation Fund	1	60	Interview*	2
Inf18	Partner	Technology Companies Group Orrick	1	60	Interview*	2
Inf19	CEO	Mach49	1	60	Interview*	2
Inf20	Managing Partner	500 Global	1	60	Interview*	2
Inf21	SVP of Innovation	Schneider Electric	1	60	Interview*	2
Inf22	Managing Director / Head of Operations	Intel Capital	1	60	Interview*	2
Inf23	VP, Engineering and Head	Hypertherm Ventures	1	60	Interview*	2
Inf24	CEO and Founder / Editor-in-Chief	Global Corporate Venturing	1	60	Interview*	2
Inf25	SVP and Co-Head	Samsung Catalyst Fund	1	60	Interview*	2
Inf26	Investment Principal	Robert Bosch Venture Capital	1	60	Interview*	2
Inf27	Managing Director	Munich Re Ventures	1	60	Interview*	2
Inf28	Managing Partner	BP Ventures	1	60	Interview*	2
Inf29	Head of Ventures	ABB Technology Ventures	1	60	Interview*	2
Inf30	President	Stanley Ventures	1	60	Interview*	2
Inf31	Founder and President	National Grid Partners	1	60	Interview*	2
Inf32	Managing Director Asia Platform	Total Carbon Neutrality Ventures	1	60	Interview*	2
Inf33	Managing Director and CEO	Hitachi Ventures	1	60	Interview*	2
Inf34	Partner	BMW I Ventures	1	60	Interview*	2
Inf35	Business Development Principal	Amazon Alexa's Start-ups	1	60	Interview*	2
Inf36	General Partner	B Capital Group	1	60	Interview*	2
Inf37	Managing Director	Goodyear Ventures	1	60	Interview*	2
Inf38	Partner	IMEC.XPAND	1	60	Interview*	2
Inf39	Managing Partner	AirFinance	1	60	Interview*	2
Inf40	Founding Managing Director	Toyota Ventures	1	60	Interview*	2
Inf41	Managing Director	Pernod Ricard (Convivialité Ventures)	1	60	Interview*	2
Inf42	Professor	INSEAD	1	60	Interview*	2
Inf43	Managing Director	In Q Tel	1	60	Interview*	2
Inf44	Global Head	Qualcomm Ventures	1	60	Interview*	2
Inf45	Co-Founder	GCV Institute	1	60	Interview*	2
Inf46	Partner	Boeing Horizon X Fund	1	60	Interview*	2
Inf47	CEO	LG Technology Ventures	1	60	Interview*	2
Inf48	President	TDK Ventures	36	Included	Interviewer**	2
Inf49	Author	Freelancer		Included	Book	1
Total			65	2,920		

* = Interview from the second phase of interviews

** = Interviewer conducting the * interviews

Email = Follow-up or additional questions with the interviewee

TABLE 2: Themes, data categories, and representative quotations

Second-Order Themes and First-Order Data Categories	Representative Quotations
a. <i>Allying</i>	
<i>a.1 Building bridges with key people across CVC boundaries</i>	<p>a.1.1 The people that you are going to work with from the [internal] business unit side are going to be the same people that you will need to engage with once we invest in a start-up. So, I [CVC head] make sure we start building great relationships between our investment team and internal business units early in the process, even if we don't invest in the startup through regular interactions [e.g., meetings and introductions]. I call this upfront 'pre-plugging' [building bridges]. [Inf27].</p> <p>a.1.2. CVC heads [socialize] with the senior management teams through regular meetings or events that establish a sense of trust as advisors who can help them strategize (link the inside and outside worlds). [Inf49].</p>
<i>a.2 Developing/highlighting common grounds among groups</i>	<p>a.2.1. CVC heads create an evaluation capability for the marketplace used to identify possible investment targets...these efforts are tied to a deliberate strategic planning process...I have seen how CVC heads bring different groups together from inside their firm to take part in their planning process used to align their and our CVC objectives. [Inf18].</p> <p>a.2.2. Our corporate venturing programme design connects key players [business units and corporate parent] who need to work together [to carry out CVC activities] by creating an end-to-end CVC investing process that connects people from different teams, establishes a common language and aligns our interests, values, and roles. [Inf45].</p>
<i>a.3. Trivializing/embracing differences amongst groups</i>	<p>a.3.1. We have a dedicated internal PR Head whose role is to build relationships with our colleagues and other business units to promote the image of the CVC unit and tell good stories [and downplay differences]. [Inf42].</p> <p>a.3.2. I [CVC head] include diversity of thought from those people sitting around the table enhances our ability to make great investments that allow us to look at opportunities in a variety of formats, depending on what part of the world you're in and what area. [Inf12].</p>
b. <i>Mobilizing</i>	
<i>b.1. Forming and reforming boundaries</i>	<p>b.1.1. Our CTO runs a monthly technology council meeting for 50-60 of the top company innovators to share what they have learned in the manufacturing space that are incorporated into their processes [as new or modifying current] to make their operations more efficient [or adjust to emerging trends]. [Inf30].</p> <p>b.1.2. We [CVC teams] regularly meet with our colleagues [from the business units and corporate parent] to understand their key strategic challenges and spaces to ensure that we can integrate [make changes e.g., processes, roles, etc.] our internal businesses when we purchase and deploy that technology. [Inf41].</p>
c. <i>Repairing</i>	
<i>c.1. Repairing cracks from mobilizing boundaries for collaboration</i>	<p>c.1.1. I used my boss as my ally and a 'peer' [influential diplomat]...we worked together with five groups using cooperation [and influence] to leverage their resources in my project [that at the same time changed their processes]. [Inf10].</p> <p>c.1.2. I run partner meetings and sit in on our investment committee meetings to monitor the process...I can then interface HR with our portfolio development team...interface finance with the whole investment organization and run Group syncs and Group team meetings to make sure everyone is informed. [Inf22].</p>
d. <i>Temporal bracketing</i>	
<i>d.1. Configuring (vertical) temporal boundaries that hold dissimilar timeframes together</i>	<p>d.1.1. It's about having patience [and right metrics]. Being able to take time to invest in early-stage opportunities takes at least 10 years to become successful. So don't go into that crisis mode and look for results in two years [the corporate clock], because you are setting yourself for failure. We [CVC heads] manage expectations by creating metrics to bridge different timeframes. [Inf20].</p> <p>d.1.2. The CEO [holds different time frames together] invested in 20 to 30 new ventures, that he talks about as the outside edge of the pizza of potential winners for the future, that he is using for innovation transform of the corporation (where the current business is in the middle of the pizza) [from the outside-in]. [Inf9].</p>
<i>d.2. Configuring (horizontal) temporal boundaries that separate distinct timeframes (while holding them together)</i>	<p>d.2.1. We treat our portfolio companies [as projects]: each one is different, and each project has its own challenges along the way to becoming a company. The first is the startup phase. The next phase is when they build value (by achieving critical milestones). Finally, we have an exit phase. [Inf1].</p> <p>d.2.2. Investing from a corporate strategic point of view, I [as the CVC head] use the Horizon framework (my defining it, I'm sure other people define it differently): Horizon 1 (1-2 years), Horizon 2 (2-7 years) and Horizon 3 (7-10 years) that I use align multiple timeframes [between the c-suite, business units and CVC fund]. [Inf43].</p>

e. Spatial bracketing

*e.1. Shaping (vertical)
mediating spaces within
organizational boundaries*

e.1.1. ...once [the CVC] is seen as competing for resources with the existing business [i.e., R&D or BUs], it's always going to be an element about survival. The key is to set up the corporate venturing programme as an independent legal structure so that you have the flexibility, autonomy, and the institutionalization [i.e., to remain connected while separate] makes the CVC hard to kill. [Inf45].

e.1.2. [A space] to get consensus, our Investment Committee meetings, with the deal team (three [voting] partners or senior managing directors) plus the CFO (or delegate) and analysts...we have multiple voices around the table...as head of investment operations I attend all but I don't vote...voting requires a majority to pass (two of the three)...all meetings have minutes and committees usually remain consistent. [Inf22].

*e.2. Shaping (horizontal)
mediating spaces across
organizational boundaries*

e.2.1....we include more than one corporate [in a syndicate], even with a similar or very similar business goals to the startup [and each other] makes it much more attractive, especially to other VCs, because the risk of one of the corporates interfering with the startup's strategy is minimized [offset power relations with the other CVC]...this [is used to harmonize] the competition [forces] between the startup and the corporations to work better to bring start-up's products to market faster. [Inf26].

e.2.2. We created this 'collaborative corporate venturing' structure [a carve out mediating space or 'forum' for collaboration] with three corporate partners to experiment with and learn from CVC for early-stage investing...we always make sure we can balance any competing goals...with good chemistry to work together...in a good partnership that makes us [VC] money, brings them [CVC] new products quickly, and saves them a lot of money in time and hassle. [Inf7].

f. Perceptual configuration

*f.1. Managing perceptions
within organizational
boundaries (vertically)*

f.1.1. Embed corporate executives inside our portfolio companies to get real firsthand knowledge of what it is like working in a startup [entrepreneurial mindset]. They take this experience back with them and use this understanding to change the corporate perceptions to then change the culture. [Inf31].

f.1.2. The CVC unit creates 'connective tissue' or tentacles [i.e., forums, channels, meetings, etc.] that connect the CVC to all the functions it works with that allows knowledge [and information] to be funnelled used to change perceptions about the strategic value CVC adds. [Inf42].

*f.2. Modifying perceptions of
CVCs as an opportunity vs
threat (horizontally)*

f.2.1. Maintain startup perceptions about the CVC [CVC-startup] by demonstrating how they can add value to the startup through innovation days or communicating [multiple channels], etc. to entrepreneurs about how your CVC adds value ['TDK goodness'] – can be trusted, won't steal their IP, allow the startups to execute their own strategies, etc. [Inf48].

f.2.2. Manage the perceptions VCs have about CVCs [CVC-VC] by inserting highly reputable corporate CVCs on the Cap Table to attract further follow-on investment, signal endorsement and commitment to the startup, etc. [Inf2].

FIGURE 1: Typical structure of a CVC unit

UoA = Org units, groups

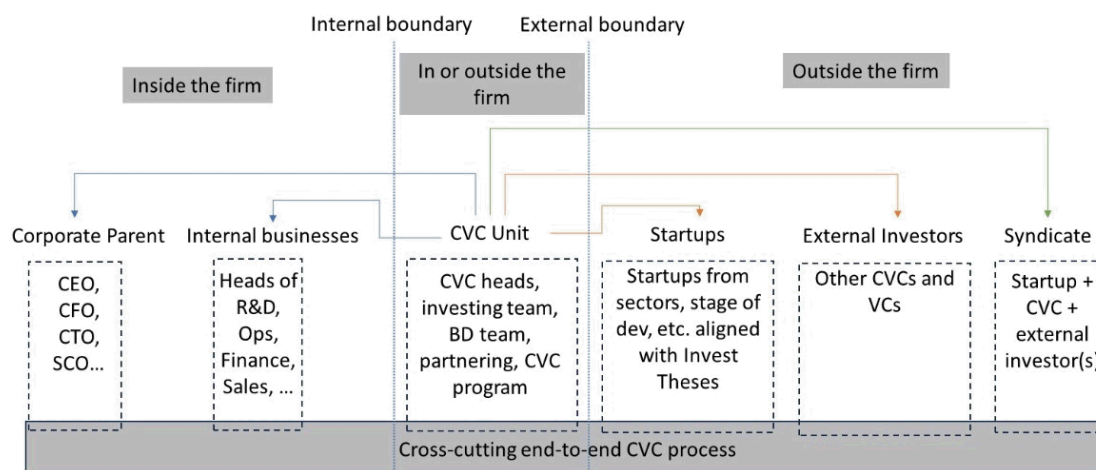


FIGURE 2: Data Structure

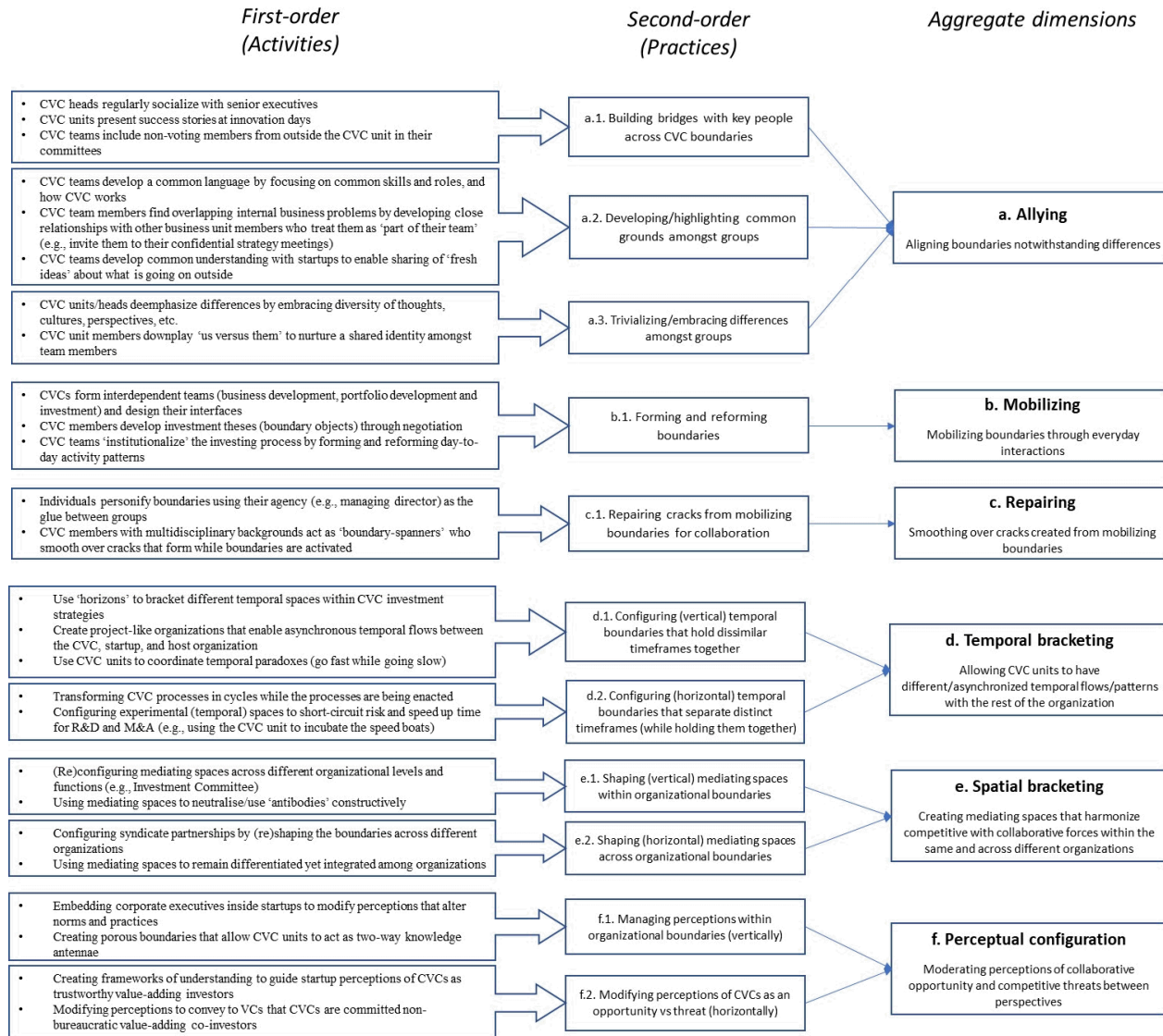


FIGURE 3: A process model of CVCs creating and unlocking value

