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## Solving for 'X'

Understanding New Venture Units

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### **Abstract**

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Innovation 'labs', 'garages' and 'X' units are proliferating in corporations across geographic and industry boundaries. However, semi-autonomous units poised to organize entrepreneurship within established corporations are not a novel phenomenon: such new venture units (NVUs) first appeared in the 1970s. Since then, they experienced multiple cycles of ebbing and flowing popularity and evolved considerably. Different generations of NVUs are products of their time and characterized by residual novelty. Prior research explores past generations of NVUs and typically takes the corporate venturing perspective as a starting point. This perspective presupposes a particular objective for these units: to add new business to and generate new revenue streams for their parent corporation. Less understood are contemporary NVUs, as well as whether and to what extent NVUs may, in fact, contribute to corporate entrepreneurship in other and novel ways. This thesis sets out to revisit and understand contemporary NVUs taking an organizational perspective, which examines the social stock of knowledge about current NVUs articulated in multimodal discourse. Drawing on novel theoretical and methodological ways of seeing, it explores what these units are and do, as well as what objectives they pursue. The findings suggest the following. First, NVUs do not, in fact, appear to be effective vehicles for creating and developing new ventures that survive within the parent corporation. Second, contemporary NVUs function as vehicles for corporate ideation that are tasked more explicitly than previous generations with exploratory activities, such as search, experimentation, and variation. Third, NVUs' distinct culture, processes, and modus operandi are ends in and of themselves: contemporary NVUs serve as test sites for novel ways of working and nurture entrepreneurial innovation processes throughout the organization. Finally, the findings suggest that these units are a means to legitimate large, established corporations in business environments that are increasingly dynamic and face disruption by entrepreneurial startups. The thesis contributes to a more nuanced understanding of NVUs as part of a larger organizational system in which they create value through more than new business and revenue streams. In highlighting the broader and more strategic role of contemporary NVUs, it also helps explain the recurrent interest in these units that is counterintuitive from the corporate venturing perspective. NVUs attract interest today not despite their shortcomings as vehicles for corporate venturing, but because they can accommodate a new entrepreneurial way of working, which enables and signals the transformation of the organization, and, in so doing, they catalyze a broader process of becoming an entrepreneurial and innovative corporation.

*Keywords:* Corporate Entrepreneurship; New Venture Units; Multimodal Analysis; Materiality/Visuality; Organizational Space

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*To my loving family*



# List of Papers

This thesis is based on the following papers, which are referred to in the text by their Roman numerals.

- I Lücke, G., **Basu, E.-M.**, Zander, I. (2019) Blessing or Blight? New Venture Units and the Survival of Internal New Ventures *A previous version of this paper was presented at the 79<sup>th</sup> Annual Meeting of the Academy of Management, Boston, United States, August 2019.*
- II **Basu, E.-M.** (2020) Typifications of Contemporary New Venture Units: An Exploratory Analysis of Visual Registers *A previous version of this paper was presented at the 80<sup>th</sup> Annual Meeting of the Academy of Management, Virtual, August 2020; abridged versions of this paper were presented at the 27<sup>th</sup> Innovation and Product Development Management Conference (IPDMC), online, June 2020 and the 40th Annual Babson College Entrepreneurship Research Conference (BCERC), online, June 2020.*
- III **Basu, E.-M.** (2021) Reading the Language of New Venture Unit Spaces in Visual Discourse: Ideas of Entrepreneurial Activity *A previous version of this paper was presented at the 81<sup>st</sup> Annual Meeting of the Academy of Management, Virtual, August 2021; earlier versions of this paper were also presented at the 'Language, Meaning and Organizing' Workshop at the 79<sup>th</sup> Annual Meeting of the Academy of Management, Boston, United States, August 2019 and the Virtual 36<sup>th</sup> EGOS Colloquium, Hamburg, Germany, July 2020.*
- IV **Basu, E.-M.**, Lücke, G., Hoff-Rudhult, M. (2019) Understanding Contemporary New Venture Units: A Multimodal Discourse Analysis *A previous version of this paper was presented at the 33<sup>rd</sup> Research in Entrepreneurship and Small Business (RENT) Conference, Berlin, Germany, November 2019.*



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# Abbreviations

Corporate Entrepreneurship	CE
Corporate Venture/ing	CV
Corporate Venture Capital	CVC
New Venture Department/Division	NVD
New Venture Unit	NVU
Proportional Hazards	PH
Research and Development	R&D



# Introduction

*New venture units* – or NVUs – are structurally separate organizational units within established corporations that provide a suitable environment for intrapreneurial activities (Burgelman, 1985).<sup>1</sup> Within the corporate structure, which is typically considered to be deeply at odds with entrepreneurial processes of innovation (Drucker, 1974, 1985; Galbraith, 1982), they are semi-autonomous parallel organizations (Kanter, 1985) that accommodate exploration and facilitate the development of new business opportunities through their distinct culture, routines, and processes (Burgelman, 1985; Fast, 1978; Galbraith, 1982; Kanter, 1985). They are, in other words, ‘entrepreneurial enclaves’ (Fast, 1978) in an organizational environment that is otherwise particularly adept at, and focused on, exploiting and managing its existing products, services, and businesses (Drucker, 1974, 1985; Kanter, 1985).

NVUs are a rather old phenomenon and have been discussed in the corporate entrepreneurship (CE) literature since the 1970s. The very idea that the pursuit of the ‘new’ needs to be organized outside of the mainstream organization of the parent corporation, which is focused on the ‘past’ does, in fact, harken back to the seminal work of Drucker and others, who advocated the separation of entrepreneurial efforts into separate organizational structures already in the 1970s (see, for example, Burgelman, 1985; Drucker, 1974, 1985; Fast, 1978; Galbraith, 1982; Kanter, 1985). Drucker (1974: 799, emphasis in the original) summarizes the underlying logic informing the establishment of semi-autonomous units tasked with innovation and entrepreneurship in established corporations as follows:

“The search for innovation needs to be organizationally separate and outside of the ongoing managerial business. Innovative organizations realize that one cannot simultaneously create the new and take care of what one already has. [...] Both tasks have to be done. But they are different. Innovative organizations, therefore, *put the new into separate organizational components concerned with the creation of the new.*”

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<sup>1</sup> In the literature, these units are referred to as new (business) venture units (Hisrich & Peters, 1984, 1986), new venture divisions (Burgelman, 1985), new venture departments (Fast, 1978), as well as internal corporate venturing units (Birkinshaw & Hill, 2005; Hill & Birkinshaw, 2008). To harmonize and simplify the plethora of terms used to refer to these units, in this thesis, I will refer to units that provide a structurally separate environment for internally-focused intrapreneurial activities within existing corporations as new venture units (NVUs).

Informed by this assertion, and the basic logic that the creation of the ‘new’ and management of the ‘existing’ need to be separated, over the past 50 years corporations have periodically turned to NVUs as one means to organize for corporate entrepreneurship. The resulting waves of waxing and waning NVU popularity are well-documented in the CE literature (see, for example, Battistini, Hacklin, & Baschera, 2013; Birkinshaw, van Basten Batenburg, & Murray, 2002; Burgelman & Välikangas, 2005; Chesbrough, 2000).

Today, NVUs are once again attracting increasing interest among corporations. Now referred to as innovation ‘garages’, ‘labs’, ‘centers’, ‘hubs’ and sometimes simply as ‘X’, NVUs are mushrooming in corporations across industry and country boundaries. The Swedish home appliance manufacturer Electrolux is one recent example of a company that decided to establish such a unit. Electrolux opened its ‘Innovation Factory’ in Italy in the fall of 2018, with the aim of accelerating innovation within the company from a product, as well as from a process perspective. Against this background, the ‘Innovation Factory’ is described as an inspirational and collaborative space in which experimentation and new collaborative models foster sharing and learning (Electrolux, 2018, 2020). In the same year, and espousing a similarly broad and ambitious vision, the Swedish bank SEB established its own innovation unit called ‘SEBx’. This unit is described as the bank’s ‘innovation studio’, which sets out to promote progress, break new ground, and initiate change.

These two Swedish companies are, by far, not the only examples. As per a systematic German study, 150 such units – about one-third more than in the previous year – did, for example, populate the German business landscape in 2018 (Capital, 2018b).<sup>2</sup> Of the 30 largest German companies in terms of market capitalization, which are listed on the German benchmark index DAX, two thirds maintained such an innovation ‘lab’, ‘garage’ or ‘X’ unit in the same year (Capital, 2018a). One example from the German context is the automobile manufacturer Porsche. Its ‘Digital Lab’ was established in the summer of 2016 and charged with wide-ranging tasks like “trend scouting and ideation to building IT prototypes and components” (Porsche AG, 2017). According to the company, this requires a creative approach that is not impeded by the distractions of the day-to-day business and is thus best accommodated in a separate innovation unit. Germany’s third largest energy supplier EnBW, which is frequently appointed best-in-class among German innovation labs, runs a host of different programs ranging from incubation to scale-up as part of its ‘Innovation Campus’ and states that this unit pursues

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<sup>2</sup> This study was conducted by a German management consulting firm in cooperation with one of the leading German business magazines, Capital, and the strategic management department at the University of Applied Sciences (HTW) in Berlin. A separate study by the same research group at HTW Berlin further finds that innovation labs are the most prevalent means to organize for innovation among the 1,000 most important German companies.

not only commercial objectives, such as the development of innovative business models, but also a more fundamental cultural transformation of the parent company (EnBW, 2020).

All these examples illustrate that corporations seem to be turning to NVUs as a promising means to organize for entrepreneurship in a corporate context once again. And yet, we know rather little about the NVUs that started to proliferate in the past five to ten years – a period during which many corporations have been recovering from the most recent financial crisis and faced changing, as well as increasingly dynamic business environments.

The primary reason for our lack of insight is that there simply is no systematic research that investigates and seeks to understand *contemporary* NVUs. Existing literature (see, for example, Birkinshaw & Hill, 2005; Birkinshaw et al., 2002; Burgelman, 1985; Burgelman & Välikangas, 2005; Chesbrough & Socolof, 2000; Fast, 1978) focuses on, and refers to, previous generations. The fact that research interest in the current wave of NVUs has yet to pick up, however, is curious. It is particularly curious, considering that scholars acknowledge that NVUs – their objectives, as well as what they are and do – are not stable and that, as prior work (Burgelman & Välikangas, 2005; Chesbrough, 2000) asserts, the character and mission of these units have evolved continuously and considerably between different waves of popularity. Put simply, NVUs are known to be products of their time. They pursue historically contingent strategically important ends for their corporate parents with means that are tailored to the specific historic context in which they originate. As a result, NVUs of different time periods do different things, and, they do things differently. With much of our existing scientific knowledge about NVUs referring to previous waves, insights into what NVUs are and do, as well as what objectives they fulfill, may no longer apply to today's innovation 'labs', 'garages', and 'X' units. Timely research into contemporary NVUs is needed.

Even beyond understanding what is characteristic for the current wave of NVUs and how they have evolved from previous generations, however, there is still a lot to be learnt about this phenomenon. While extant work acknowledges and chronicles that NVUs have come and gone since the 1970s, we still know rather little about why these units seem to be difficult to sustain on the one hand, and yet periodically considered fruitful ways to organize for corporate entrepreneurship on the other. Something about these units must be special for corporations to rekindle their interest in and keep coming back to them.

In prior work, the story typically goes like this: characteristically, a cycle of NVU popularity begins with enthusiasm for, and the proliferation of, these units, until significant challenges are encountered and NVUs are eventually terminated – oftentimes, before the benefits could even be realized (Burgelman & Välikangas, 2005; Chesbrough, 2000). Taking the observed cyclicity of NVUs as a starting point, prior work then typically focuses on explaining

the mixed and poor successes that each of these cycles have brought about and the short lived nature of these units (see Burgelman, 1985; Fast, 1979b; Hill & Birkinshaw, 2014; Kanter, North, Bernstein, & Williamson, 1990). The focus is, in other words, on diagnosing specific problems and shortcomings.

Birkinshaw and colleagues (2002: 14) perhaps best summarize why NVUs are thought to disappear: they are simply “first things to be killed off whenever high-level strategic changes are made or whenever problems arise.” In part, this has been attributed to a lack of commitment to these units and an ineffective integration into the corporate strategy-making process (Burgelman & Välikangas, 2005), and in part to a number of fundamental and enduring managerial challenges associated with the structural separation that is at the core of what NVUs are and do (e.g., Birkinshaw et al., 2002; Burgelman, 1985; Burgelman & Välikangas, 2005; Fast, 1978; Hill & Birkinshaw, 2014).<sup>3</sup> In essence, NVUs are described as a promising, albeit innately problematic, way to organize for corporate entrepreneurship. And yet, they keep coming back.

One explanation is that the mixed track records of, and learnings from, previous generations are not adequately considered by firms in their decisions to turn to NVUs once again (see, for example, Burgelman & Välikangas, 2005). We could, in other words, be observing incorrigible corporations doing the same thing over and over again, while expecting a different outcome, because they do not – or do not want to – know better.

However, another way of looking at the curious constant that is the cyclicity of NVUs since the 1970s is that we, as scholars, have simply missed something about these units. If they are known to be a problematic way to organize for corporate entrepreneurship, with a mixed track record in creating new business for their corporate parents, firms may turn to these units for other reasons. Put differently, our scholarly understanding of NVUs may, in fact, be rather limited; thus, there is still a lot to learn about these units – as a broader phenomenon and about the nature and objectives of its current iteration.

In this thesis, I take as a starting point the second line of thought. In light of the curious, lasting cyclicity of NVUs and the residual novelty inherent

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<sup>3</sup> Because they are structurally separate semi-autonomous units, NVUs are, for example, found to not only be cut off from knowledge and resource flows to and from the mainstream organization (Burgers, Jansen, Van den Bosch, & Volberda, 2009; Chen & Kannan-Narasimhan, 2015), but also to occupy a precarious position in the organization that makes them vulnerable to intraorganizational conflicts (Burgelman, 1983a; Fast, 1978, 1979b; Kanter et al., 1990). They are also commonly considered to be misfits (Birkinshaw et al., 2002; Burgelman, 1985; Fast, 1979a), due to their ‘peculiar identity’ (Fast, 1978), which is difficult to understand within the organization, and their oftentimes unclear, multiple and, at times, even incompatible objectives (Birkinshaw et al., 2002; Hill & Birkinshaw, 2008; Kanter et al., 1990). This is oftentimes exacerbated by a fluid identity, objectives, and way of working – which tend to be subject to shifts over the lifetime of a NVU (Burgelman & Välikangas, 2005; Fast, 1978, 1979a).

in each new wave, I revisit these units with the aim of advancing our scholarly understanding of the phenomenon and to ‘solve for X’, so to speak. With this objective in mind, I am especially interested in mapping the what, why, and how of NVUs in the corporate context. Given the resurgence of corporate interest in these units over the past five to ten years, one focal point in the thesis is understanding *contemporary* NVUs, how they are expected to contribute to CE, as well as whether and how this is different from previous waves. The findings of my work can hopefully feed back into the CE literature, lay the groundwork for systematic research into contemporary NVUs, and offer new insights into the nature of these units.

## Research Approach

The research approach I take in this thesis is very much reflective of the research process in my dissertation work. Both have in common prior work on NVUs in the corporate entrepreneurship literature as their starting point.

Within this literature, scholars focus on NVUs as “engines for driving the creation of value through new ideas” (Kanter et al., 1990: 415) and view these units predominantly as vehicles to advance the primary objective of generating new businesses for the firm by supporting the inception and development of internal new ventures (Battistini et al., 2013; Birkinshaw, 1997; Birkinshaw & Hill, 2005; Burgelman, 1983a, 1985; Hisrich & Peters, 1984). They are, in other words, viewed and studied primarily as vehicles for *corporate venturing* (CV) (Covin & Miles, 1999; Von Hippel, 1977).

Guided by the CV perspective, great emphasis is placed on understanding and explaining how, and under what conditions, NVUs can and do effectively promote the creation and development of new ventures that can add new business(es) to the firm. These new businesses, and the new revenue streams they create for the parent corporation, are thought to promote corporate growth (Hill & Birkinshaw, 2008; Kanter et al., 1990; Sharma & Chrisman, 1999).

The focus on NVUs as vehicles for CV in prior literature has enabled the development of robust findings and a consistent understanding of these units. In particular, it has enabled the accumulation of systematic knowledge about the characteristics of NVUs, as well as the benefits and challenges associated with these units, in the context of corporate venturing. Moreover, given the strong influence of the strategic management perspective in prior work, the common focus on advancing our understanding of how firms can make use of and manage NVUs effectively to bring about new businesses, which can be(come) sources of competitive advantages and growth for the firm, is not all that surprising.

Zeroing in on one particular aspect – corporate venturing – and a particular set of questions – namely, how, and under what conditions, NVUs can and do effectively promote the creation and development of new business for the firm

– may, however, also have ‘boxed’ NVU research into a common framework for conducting research on this phenomenon (Alvesson & Sandberg, 2014). By focusing on corporate venturing, prior work may, for example, be missing out on other important aspects of corporate entrepreneurship, such as strategic renewal (Zahra, 1993), the development of new administrative techniques, changes in organizational routines (Antoncic & Hisrich, 2003), as well as the development or acquisition of new capabilities that can be leveraged creatively to add value for shareholders (Zahra, 1995), which are discussed in the CE literature. Other than – or, along with – the creation of new businesses for their parent corporations, NVUs may, in fact, also be vehicles for one or more of these aspects of CE. Put simply, focusing our attention on NVUs as vehicles for corporate venturing and the creation of new ventures, risks limiting our understanding of NVUs to one dimension of corporate entrepreneurship – which in itself is innately multidimensional (Antoncic & Hisrich, 2003; Guth & Ginsberg, 1990; Kuratko, Hornsby, & Hayton, 2015; Sharma & Chrisman, 1999). Such ‘tunnel vision’ may, in turn, limit our knowledge of NVUs to “the kind of things we [as scholars] have been telling one another” about these units (Daft, 1980: 624) and to insights that lie within the scope of the literature’s prevailing assumptions and conceptual models (Alvesson & Sandberg, 2011, 2014; Packard, 2017). This may result in unexposed blind spots and partial views of a complex organizational phenomenon (Zahra & Newey, 2009).

There are, indeed, indications in the extant literature that NVUs promote objectives other than – and in addition to – the creation of new businesses for the parent corporation. Birkinshaw and colleagues (2002), for example, suggest that NVUs advance not only the creation of new business ideas and organizations within established corporations, but also instigate change processes and the development of broader business development capabilities within the parent corporation. A more recent ‘redo’ of Birkinshaw and colleagues’ study taking stock of CV activities (Battistini et al., 2013), similarly finds that objectives related to the creation of new businesses do, in fact, play an important role in the establishment of NVUs. At the same time, however, these authors also find that a sizeable share of the respondents in their sample mention the establishment of an entrepreneurial culture across the organization (38%) and talent retention and attraction (29%) as important objectives for NVUs. Such alternative contributions of NVUs to a broader corporate strategy agenda, although they are noted in the literature, are nevertheless neither picked up, nor seriously explored. Instead, even recent studies view NVUs as vehicles for CV and investigate how their particular approaches (Hill & Birkinshaw, 2014; Hill, Maula, Birkinshaw, & Murray, 2009) or strategic logic (Burgelman & Välikangas, 2005; Hill & Birkinshaw, 2008) affects their performance as a vehicle for the creation of new businesses within established corporations (see also Battistini et al., 2013; Birkinshaw & Hill, 2005).

Against this backdrop, I revisit NVUs, and try to understand what they are and do, using new methodological and conceptual ways of seeing. My research approach in this thesis is, in other words, to embark on what has been described as ‘box-breaking’ research (Alvesson & Sandberg, 2014), broaden our scholarly field of view and advance our scholarly understanding of NVUs with insights from new ways of seeing and studying this phenomenon.

More specifically, I turn to an organizational perspective, which presents itself as a fruitful starting point for broadening the scope of NVU research, for the majority of the work in this thesis. Surprisingly, even though NVUs are themselves organizational structures within a larger organization and have been described as ‘vehicles’ (Kanter et al., 1990) – or means for organizational ends – to date, there is no research seeking to understand these units as organizational phenomena in their own right, which are created by social actors and shaped by the context in which they are embedded. In this thesis, thus, I start to broaden our sights by viewing and studying NVUs as an organizational phenomenon. To be precise, in my research, I draw primarily on the interpretivist strand of organization theory that is rooted in the Weberian tradition. In keeping with this perspective, I focus on those intersubjectively shared and socially approved ideas and understandings about means and ends relationships, which corporations attach to NVUs – what and how they believe, or would like, them to be – as an entry point to ‘solve for X’. Thus, I tap into corporations’ social stock of knowledge about this phenomenon to advance our understanding of NVUs with a focus on the what, why, and how, as well as the function they fulfill in the corporate context.

## Analytical Framework

In keeping with the research approach of broadening our sights by introducing new ways of seeing NVUs just described, I employ two analytical frameworks in my work. I build on insights into NVUs discussed in the extant corporate entrepreneurship literature, on the one hand, and an interpretivist organizational perspective, on the other. More specifically, I take concepts and arguments that are discussed in the CE literature as a starting point. In order to revisit the question of what NVUs are and do, as well as what they are vehicles for, I then draw on the neighboring field of organization theory as a conceptual ‘new way of seeing’ NVUs (Bansal, Smith, & Vaara, 2018). Specifically, I focus on two aspects that can be used as windows onto social actors’ ideas and understandings of NVUs in particular: *communication* about these units and the materiality of NVU *spaces*. Both are carriers of social knowledge about this phenomenon that embody and instantiate what actors – that is, individuals and organizations – know or believe to be true about NVUs.

*Communication* through texts and discourse is a form of social interaction that is central to the construction and ongoing reproduction of social

phenomena, as well as the means-ends relationships, which social actors attach to them (Berger & Luckmann, 1967; Grant, Hardy, Oswick, & Putnam, 2004; Luckmann, 2006, 2008). It is permeated by objectivations that articulate a particular view of social phenomena in symbolic form, in how they are discussed and depicted. Physical environments, or *spaces*, in organizations and their material qualities and characteristics – or materiality – are other important aspects of the socio-material context of organizing. The material characteristics of a space embody the processes, activities, and relationships that are, or should be, organized in and are associated with it (Lawson, 2001; Panayiotou & Kafiris, 2011; Van Marrewijk & Yanow, 2010). The layout, furnishings, colors, and materials of a space do, in other words, embody the means-ends relationships associated with it in aesthetic and material form (Gagliardi, 2006). As such, they too are ‘thought things’ (Beyes & Holt, 2020; Lefebvre, 1991) that convey what kind of place it is believed to be. Systematic analyses of recurring patterns in corporate communication about, and the materiality of, NVUs can, in turn, offer insights into the means-ends relationships, or meanings, which corporations associate with these units.

In this thesis, I turn to discourse analysis as one methodological approach that can help uncover and map the social knowledge articulated in the use of language in different modes of communication – for example in words and images. It can advance our understanding of NVUs by offering insights into questions that typically cannot – or do not – get asked using traditional research methodologies (Bansal et al., 2018; Gartner & Birley, 2002) by allowing for the development of an interpretive grasp of the subjective meanings that corporations attach to these units (Burrell & Morgan, 1979; Weber, 1968).

Put simply, focusing on, and analysing recurring patterns in, communication about NVUs and the materiality of NVU spaces, is one way of introducing new ways of seeing NVUs. These new ways of seeing can offer insights into these units from a new and different perspective. In this thesis, they are used as a means to venture outside the box – that is, the perceptual sets and shared assumptions that pervade prior work on NVUs in the literature – and to explore “the kind of things we [as scholars of NVUs] have *not* been telling each other” about these units (Daft, 1980: 624, emphasis added).<sup>4</sup>

Fundamentally, then, this thesis is not so much about studying how, why, and under what conditions NVUs succeed in creating new business for the firm and fulfill their role as a vehicle for corporate venturing. In Papers II–IV, in particular, I depart from the functionalistic thinking, as well as from the

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<sup>4</sup> Importantly, these ways of seeing are not new to the field of business and management studies. They are established in the study of organizations, but new to the CE literature, which has been strongly influenced by the strategic management tradition – both conceptually and methodologically. Turning to new ways of seeing holds particular promise in entrepreneurship research, a field that has periodically been criticized for a lack of methodological diversity (Aldrich, 1992; Gartner & Birley, 2002; Suddaby, Bruton, & Si, 2015).

focus on corporate venturing, outcomes and entities, which are characteristic for prior work on NVUs (Hatch & Yanow, 2003; Packard, 2017; Suddaby et al., 2015); instead, I aim to develop a reflexive and interpretivist account of NVUs as an organizational phenomenon. In concluding this subsection, it should be stressed that I, like others before me (e.g., Holbrook, 2005), do not claim or expect to uncover the ‘Truth’ about NVUs in taking this approach. I aim to develop and make explicit an emergent interpretation of a practical understanding of what NVUs are and do (Holbrook, 2005; Packer, 1985) that can feed back into the literature and stimulate scholarly interest and debate.

## Structure of the Thesis

The thesis is structured as a compilation of four papers that explore different aspects of NVUs. Paper I, the first study conducted over the course of my dissertation work, is the starting point for Papers II–IV. In Paper I, my co-authors and I explore a central question, which has not been asked previously in the CE literature: *do NVUs help internal new ventures survive within the corporation?* Given the prevailing assumptions about, and conceptual models of, NVUs in prior research, where they are viewed as particularly necessary and effective vehicles for the development of new businesses for the firm, the lack of evidence that supports this assumption is rather surprising. To our knowledge, no one had yet asked – let alone empirically tested – the question *whether* NVUs are, in fact, effective at creating new business for the firm. Instead, others have typically accepted the shared and taken-for-granted assumption that they do, which is reproduced in a number of studies. Drawing on arguments outlining why NVUs might facilitate or harm the survival of internal new ventures, which are discussed in the CE literature, and a unique dataset of 86 new ventures, my co-authors and I address this gap in the literature in Paper I.

Based on the puzzling findings of Paper I, Papers II–IV broaden the search, venturing outside the box and exploring the meanings that corporations attach to NVUs in symbolic representations of these units on corporate websites. These cultural artifacts are used as windows onto corporations’ understanding of NVUs, where *understanding* is conceptualized as corporations’ situated and intersubjectively shared social stock of knowledge about, or view of, the world of NVUs – that is, how they believe it is and would like it to be (Gagliardi, 2006). *Understanding* in Papers II–IV is, in other words, akin to social knowledge.

Paper II is an exploratory study that focuses on the images used on these websites and asks *which meanings of NVUs are contained within the visual register of corporate websites introducing and presenting these units.* Drawing on Kress and Van Leeuwen’s (2006) seminal work on visual analysis, I inventory the visual language and identify recurrent patterns both

in what is typically depicted and how it is typically depicted to uncover central ideas that are associated with contemporary NVUs.

Paper III focuses on the notion of *entrepreneurial activity*, which is frequently invoked, yet seldom explained, in the context of contemporary NVUs. In this paper, I seek to develop an interpretive grasp of what firms actually mean, when they invoke the notion entrepreneurial activity through a theoretically grounded systematic analysis of a subset of visual representations of space on corporate websites. The research question guiding the analysis in this study is *what culturally-embedded understanding(s) of entrepreneurial activity, as a practice in the context of NVUs, is articulated in the spatial design of these units*. Space, here, is viewed as a conduit for social knowledge about the processes, activities, and relationships associated with these units.

Paper IV moves from visual to multimodal analysis and addresses the question *how contemporary NVUs are expected to contribute to CE*, with a particular focus on the what, why, and how, in a systematic analysis of both images and text. In particular, my co-authors and I are interested in understanding the corporate view of the strategic context in which these units are established, which objectives they are typically considered to be vehicles for and, within this broader theory of what NVUs are and do, what corporations consider to be an appropriate way of working for NVUs. Our aim is to advance a historically contingent view of NVUs that does not conflate different generations of NVUs, but instead takes seriously the idiosyncratic characteristics and contributions of the different generations of NVUs discussed in the literature, which have thus far been acknowledged, but largely remained a side note, in the literature. Figure 1 summarizes and provides an overview of the research questions of the individual papers that are the basis of this compilation thesis.

<b>Paper I</b>	<p style="text-align: center;">Quantitative study</p> <hr/> <p style="text-align: center;"><i>Do NVUs help internal new ventures survive within the corporation?</i></p>
<b>Paper II</b>	<p style="text-align: center;">Exploratory visual analysis</p> <hr/> <p style="text-align: center;"><i>Which meanings of NVUs are contained within the visual register of corporate websites introducing and presenting these units?</i></p>
<b>Paper III</b>	<p style="text-align: center;">Theoretically-grounded visual analysis</p> <hr/> <p style="text-align: center;"><i>What culturally-embedded understanding(s) of 'entrepreneurial activity', as a practice in the context of NVUs, is articulated in the spatial design of these units?</i></p>
<b>Paper IV</b>	<p style="text-align: center;">Multimodal analysis</p> <hr/> <p style="text-align: center;"><i>How are contemporary NVUs expected to contribute to corporate entrepreneurship?</i></p>

#### NEW WAYS OF SEEING NVUS

Figure 1. Overview of the papers and research questions

In the sections that follow, I provide an overview of the theoretical foundations, methodological approach and findings of these four papers. First, I take stock of what we know about NVUs and present an overview of prior research on this phenomenon in the corporate entrepreneurship literature. Moving from the insights generated using established ways of seeing in the CE literature, I proceed to outline the theoretical foundations of the new ways of seeing, which are central to this thesis and three of the papers on which it is based. In the methods section, I summarize the methodological approaches used in the papers and discuss, as well as critically reflect upon, the benefits and limitations of these approaches. The summary of the papers section provides a brief overview of the research approach and findings of the four papers. It is followed by a summary and discussion of the main findings, as well as their implications for the question what means-ends relationships corporations associate with these units. I conclude the dissertation summary with a discussion of the implications of these findings for the literature, as well as for practitioners in charge of establishing or managing these units.

# New Venture Units in the Literature

In this section, I review existing research on NVUs in the corporate entrepreneurship literature. In a first step, I situate NVUs in both today's increasingly diverse innovation landscape and in prior literature. These discussions focus on how NVUs are different from other, similar, contemporary ways to organize for innovation and entrepreneurship. I also expand on what I mean by NVUs in this thesis and how this view relates to how they have been viewed in prior work. The latter is especially important to move toward definitional clarity in a field in which definitional ambiguities have developed over time and muddied the waters as to the kinds of units that are being studied.

The remainder of this section then focuses on insights into NVUs that are discussed in prior work. In particular, I discuss prior work that treats NVUs as vehicles for CV and their arguments both for and against their effectiveness as vehicles for CV, as well as what we learn about the characteristics of different waves of NVUs if prior work is reviewed in its historical context.

## Situating New Venture Units

### What NVUs are (and what they are not)

Oftentimes, innovation 'labs', 'garages' and 'X' units co-exist with traditional research and development (R&D) units, which are focused primarily on technical innovations that build on, expand, and improve the firm's current product offering. They are also frequently complemented with other contemporary initiatives aimed at stimulating and managing innovation within corporations, such as open innovation platforms, corporate venture capital (CVC) investment arms or initiatives aimed at engaging with independent start-up companies, such as corporate start-up accelerators and incubators. Within these efforts to incorporate innovation and entrepreneurship, NVUs, however, are a distinct phenomenon. While they belong to the larger category of approaches to organizing for innovation and entrepreneurship, they occupy a distinct niche and can be distinguished from other initiatives in important ways.

First, and similar to R&D units, NVUs are an extreme case of organizing for entrepreneurship and innovation in existing corporations (Jolly & Kayama,

1990): they compartmentalize entrepreneurial efforts inside existing firms into a separate unit, rather than trying to effect wholesale changes and to make the organization as a whole more entrepreneurial or innovative. Accordingly, they are semi-autonomous units that accommodate innovation and entrepreneurship in established corporations, separate from, outside of, and parallel to, the operating or mainstream organization (Drucker, 1974, 1985; Galbraith, 1982). In particular, corporate NVUs are typically established and specifically designed to enable the pursuit of entrepreneurship and innovation in established corporations by creating a structurally separate environment that is different by design – an ‘other space’ (Hjorth, 2005), which provides the suitable culture, structures, and routines for entrepreneurial processes of innovation (Burgelman, 1985; Fast, 1978; Galbraith, 1982; Kanter, 1985). They are entrepreneurial enclaves – distinct, and structurally separate units enclosed within the foreign territory of the existing organizational structure of the parent corporation, which is – and remains – “generally not conducive to creating, recognizing or commercializing innovative new products” (Fast, 1978: 78).

At the same time, however, their mandate is generally broader than that of R&D units. They are charged not only with the creation and exploitation of new proprietary technology for the firm (see, for example, Håkanson & Nobel, 1993; Nobel & Birkinshaw, 1998), which is typically the domain of engineers and scientists in R&D units (Chesbrough, 2003), but also with the commercial side of innovation activities, or, new business development. They are, in other words, interdisciplinary units that bring together engineers, and business and marketing people (see, for example, Burgelman, 1983a, 1985; Kanter et al., 1990). What is more, rather than generating incremental improvements to existing products, services, or businesses, NVUs are typically focused on creating and developing entirely new products, services, processes, or business models (Burgelman, 1985) that “fall outside the scope of the current concept of strategy” (Burgelman, 1983b: 61). Put simply, they are tasked with more than the technological dimension of new product or service development. They also seek out opportunities that transcend the firm’s existing business – opportunities that are both new and different to the firm (Kanter et al., 1990).

Finally, corporate innovation ‘labs’, ‘garages’ and ‘X’ units commonly focus on promoting the inception, development and commercialization of *internal* ideas and provide an environment in which employees and intrapreneurs can work with opportunities identified *inside* the organization (Birkinshaw & Hill, 2005). They are primarily geared toward *intrapreneurial* efforts. Other popular contemporary initiatives such as open innovation, corporate venture capital investment arms, and start-up accelerators, as well as incubators, in contrast, are focused on sourcing *external* knowledge, ideas, and new businesses in order to expand the firm’s product and service

offerings, or, more broadly speaking, its business (Dushnitsky, 2008).<sup>5</sup> These initiatives do, in other words, pursue a strategy that can best be described as inorganic growth by leveraging new business opportunities that are discovered and or developed outside of the firm.

NVUs, in other words, are similar to, at times coexist, and sometimes overlap with other contemporary approaches to organizing for innovation and entrepreneurship. However, they are distinct with respect to their strategic logic, which focuses on opportunities that transcend the current business, are new to, different from, and originate primarily inside the firm.

## Toward definitional clarity

Organizational units accommodating entrepreneurial activity in established corporations were first discussed in the corporate entrepreneurship literature in the 1970s and 80s. Early work referred to these units as new venture divisions (Burgelman, 1983a, 1984, 1985) and departments (Fast, 1978, 1979b, 1979a; Kanter et al., 1990) – or, NVDs – as well as new (business) venture units – or, NVUs (Bart, 1988; Hisrich & Peters, 1984, 1986).

They were conceptualized as units created specifically to deal with the demands of the development of new product and business ideas and to facilitate the creation of new ventures and business for the firm in a separate organizational structure (Bart, 1988; Burgelman, 1983a, 1985; Fast, 1978). More specifically, these units were understood to provide an adequate “internal environment in which new business opportunities could be explored, incubated, turned into projects and provided with the opportunity to demonstrate economic viability” (Burgelman, 1985: 42). Characteristically, this environment was understood to have its own, distinct, less bureaucratic, and more flexible organizational climate, routines, and structure, as well as management practices (Bart, 1988; Fast, 1978; Galbraith, 1982; Kanter et al., 1990), which encourage creativity, experimentation and cross-disciplinary teamwork, while also tolerating failure and mistakes (Hisrich & Peters, 1986). The establishment of such de-bureaucratized parallel systems was deemed necessary to appropriately manage the “instability and uncertainty inherent in new business development” (Fast, 1978: 80) within existing, large corporations where efficiency-seeking dominates (Drucker, 1985) and “the

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<sup>5</sup> In particular, corporate start-up accelerators and incubators focus on nurturing start-up relationships and partnerships through the provision of support and funding at the early stage, typically in time-limited programs, while CVC investment arms seek to stimulate corporate growth through equity investments in promising external start-ups at a later stage (Battistini et al., 2013; Dushnitsky & Lenox, 2005; Kanbach & Stubner, 2016; Kohler, 2016; Shankar & Shepherd, 2018; Weiblen & Chesbrough, 2015). Open innovation initiatives seek to stimulate innovation, and enhance innovation processes, by purposively managing knowledge flows across organizational boundaries to source valuable ideas, which can originate both inside or outside the company (Chesbrough & Bogers, 2014; Chesbrough, 2003).

desire for or expectation of change is minimal” (Kanter, 1985: 48; see also Kanter et al., 1990; Kanter, Richardson, North, & Morgan, 1991b).

In sum, these authors viewed NVDs or NVUs as structurally separated units, which create a distinct environment – with its own culture, routines and structures – that is designed specifically to facilitate the creation and development of new products, services and business for the firm in order to pursue new business opportunities within the confines of the organization. They were, in other words, understood to be new business and venture development units.

As new venture departments, divisions and units disappeared in conjunction with the recession of the late 1980s, research interest faded. It was not until around the early 2000s that the resurgence of these units during the dot.com boom sparked renewed scholarly interest (Birkinshaw & Hill, 2005; Birkinshaw et al., 2002). Research during this period was in many ways a continuation of, but also a departure from, the works of Fast, Burgelman and their contemporaries. It can be viewed as a continuation of their work, insofar as it focuses broadly on separate organizational units designed to support the pursuit of new business opportunities in established corporations. In contrast to earlier work, however, research in the early 2000s no longer referred to these units as new venture departments, divisions, or units, but instead introduced the umbrella term corporate venture (CV) unit. This shift in terminology was not just an act of relabeling, but it also reflected a changing understanding and reconceptualization of what these units are and do.

Initially, CV units were understood to be very similar to the new venture departments, divisions and units described in the 1980s: they were described as units charged with *identifying, nurturing and developing* new business opportunities for their parent corporation (Birkinshaw, 1997, 2005). However, how CV units were understood to promote this objective during the early 2000s came to mark a significant departure from the previous understanding of NVDs and NVUs in the literature.

The authors who dominated research on these units at the time, suggested that CV units pursue new businesses for the firm through the *development of internal ideas, investments in external start-up businesses*, or both. Birkinshaw and Hill (2005: 247, emphasis added), for example, define CV units as “organizational unit[s] charged with *investing in and developing* new business ideas” – both internal and external – with the aim of identifying and developing new business(es) for the parent corporation (see also Hill & Birkinshaw, 2014). In their typology of strategy-organization configurations of CV units, these authors further discuss investments in new ventures as CV units’ primary approach to pursuing new business opportunities, their distinguishing feature and define CV units as “distinct organization unit[s] controlled by the parent firm that ha[ve] responsibility for *investing in* business opportunities that are new to the corporation” (Hill & Birkinshaw, 2008: 425, emphasis added). This focus on investments, and de-emphasis on business development, echoes earlier assertions (see Birkinshaw et al., 2002)

that the common element of CV units is their making active investments in start-up businesses. CV units, thus, are reconceptualized as corporate start-up

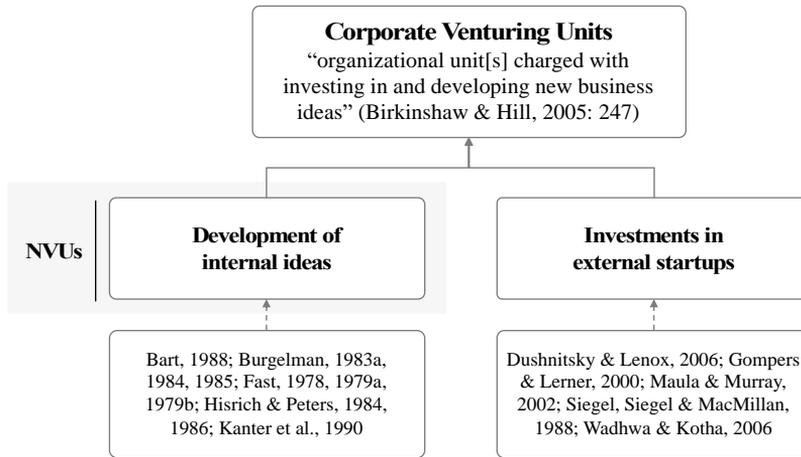


Figure 2. Types of activities subsumed under the umbrella term CV unit

investment units, rather than new business development units.

The term CV unit, in other words, is typically used to describe and subsume units that accommodate two types of activities, which are conceptually distinct: the *creation and development of internal ideas* and *investments in independent, external new ventures* (see, for example, Dushnitsky, 2008; Sharma & Chrisman, 1999).<sup>6</sup> Up until that point, these activities had been discussed in separate streams of literature – the former in the works of Fast (1978, 1979b, 1979a), Burgelman (1983a, 1984, 1985), Hisrich and Peters (1984, 1986) and Kanter (1985; 1990; 1991b), who focus on *internal* corporate venturing activities. The latter were discussed in literature focused on corporate venture capital investments, or, *external* corporate venturing activities that create new business for the firm through equity investments in independent start-up companies (see, for example, Dushnitsky & Lenox, 2006; Gompers & Lerner, 2000; Maula & Murray, 2002; Siegel, Siegel, & MacMillan, 1988; Wadhwa & Kotha, 2006). Birkinshaw and colleagues collapse internally and externally focused activities into the same umbrella

<sup>6</sup> The former has been distinguished from the latter, for example, in terms of the locus of opportunity and the origins of the original team. Investments in independent external new ventures typically seek to harness external entrepreneurial knowledge and businesses, by providing funding to, and making equity investments in, independent entrepreneurs with no prior connection to the firm (Gompers & Lerner, 2000; Wadhwa & Kotha, 2006). This has been described as a strategy for external innovation (Ernst, Witt, & Brachtendorf, 2005). The creation and development of internal ideas typically aim at and supports employees in bringing about new businesses within the existing organization (Antoncic & Hisrich, 2003; Dushnitsky, 2008) and entails the investigation of opportunities, the development of new products, services or business models, as well as business plans and managing the early commercialization phase (Fast, 1978).

term and conceive of NVUs merely as one form of CV unit – as internal CV units – rather than an activity that is fundamentally different from CVC investments and thus a related, yet distinct corporate entrepreneurship phenomenon. Figure 2 provides an overview of the two types of units comprised by the umbrella term corporate venture unit, as well as the previously separate academic literatures in which these corporate entrepreneurship initiatives were discussed in prior to the early 2000s.

On the one hand, this broader conceptualization has contributed to a better understanding of the underlying, systematic challenges of structurally separating newstream and mainstream activities and informed subsequent work on organizational ambidexterity, the optimal distance of structurally separate units and integration mechanisms (see, for example, Garrett Jr & Covin, 2015; Hill & Birkinshaw, 2014). On the other hand, it is problematic because these authors do not typically distinguish between internal and external CV units in their investigations and discussions of the idiosyncratic objectives, benefits, and challenges associated with these units. Instead, insights into the objectives and way of working in these units, as well as their role in the corporate context, are discussed at the aggregate level and based on data collected from internally focused development units, externally focused investment units and ‘hybrids’ (Birkinshaw & Hill, 2005; Birkinshaw et al., 2002; Hill & Birkinshaw, 2008).<sup>7</sup> What remains an open question is whether and to what extent the findings apply to the different sub-forms or sub-types of CV units – that is internally focused business development unit, externally focused investment units, or ‘hybrids’ pursuing a mix of both.<sup>8</sup> As a result, referring to these units using the broad umbrella term corporate venturing unit may, in fact, impede our understanding of these units.

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<sup>7</sup> Studies such as these, which develop insights into the determinants of ‘venture unit success’ from units engaging in conceptually different activities, for example, do not shed light on the idiosyncratic success factors, challenges, objectives and ways of working associated with the different activities. Put simply, while we learn about the problems and benefits that CV units have in common, if not differentiated further, differences remain unexplored and unarticulated.

<sup>8</sup> A somewhat separate issue in these studies of NVUs is the use of the term corporate venturing. It is understood as “the practice of establishing a separate corporate venture unit controlled by the parent firm and with the purpose of developing new business opportunities” (Hill et al., 2009: 3). This view of corporate venturing as synonymous with the establishment of a separate unit to support the creation and development of new business for the firm (see also Birkinshaw, 2005) is somewhat at odds with the customary understanding of corporate venturing in the literature. In contrast to the use in Birkinshaw and colleagues’ work, corporate venturing has been described in the literature as an established organization, creating or entering a new business (Antoncic & Hisrich, 2003; Covin & Miles, 1999). This particular type of entrepreneurial activity can, but does not have to, be organized in a separate, focused unit. Conflating both and equating the establishment of a separate unit for entrepreneurial activities inside existing corporations with corporate venturing further muddies the water and offers a limited perspective on how these units may contribute to corporate entrepreneurship. In particular, it excludes the possibility that these units may also contribute to strategic corporate entrepreneurship, that is the development of new capabilities and the transformation of the organization, relative to where it was before (Kuratko et al., 2015; Sharma & Chrisman, 1999).

Overall, the foregoing discussion of the evolution of the terminology and conceptualization of organizational units accommodating entrepreneurial activity in established corporations in the literature suggests that the scholarly definition and understanding have broadened over time to include not only units that focused on new business development within the firm, but also units that create new business for the firm through equity investments in external new businesses. These two activities, however, are conceptually different: they are associated with different motivations, objectives, and challenges and have been discussed in previously separate streams of literature. Conflating both muddies the water and reduces, rather than increases construct clarity.<sup>9</sup>

To advance our understanding of NVUs, as well as the what why and how firms associate with this particular type of unit, in this thesis, I strive for definitional clarity. The object of study in this thesis, and the papers it is based on, is *semi-autonomous, structurally separate units that are designed specifically to create an intra-organizational environment that accommodates the idiosyncratic demands of the development of new product and business ideas*. Drawing on the early, more narrow, terminology used to describe such units, I refer to these units as new venture units – or, NVUs. I choose this term to clearly situate my conceptual understanding of these units as units that are focused on supporting the exploration and pursuit of new business opportunities within the firm in the tradition of the work of Burgelman, Fast, Hisrich, and Peters. The corresponding term used to describe these units in the framework of Birkinshaw and colleagues would be internal corporate venture unit.

## NVUs as Vehicles for Internal Corporate Venturing

The previous subsections have explored what NVUs are and do, according to prior literature. They illustrated a significant shift in the activities that are associated with these units from the 1970s to the early 2000s. In contrast to differing conceptualizations of how these units pursue new business opportunities, and labels used to refer to them, the aim of entrepreneurial activity in these units – or what they are vehicles for – is generally agreed upon and has come to be taken for granted in the literature. They have been viewed consistently as vehicles for corporate venturing – that is, the creation

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<sup>9</sup> A case in point is subsequent research (see, for example, Battistini et al., 2013; Ernst et al., 2005) that uses the term CV and CVC unit interchangeably – even though Birkinshaw and colleagues clarify that CVC units are but one of the ‘forms’ or ‘types’ of CV units (Birkinshaw & Hill, 2005; Hill & Birkinshaw, 2008). Although they refer to their object of study as CV units, according to their definitions and the literature they cite, these authors do in fact typically study CVC units. Their findings and results, nevertheless, are presented as insights into CV units at the aggregate level. Whether and to what extent their findings apply to CV units or only the subset of externally focused investment units oftentimes remains unclear.

of or entry into a new business by an established corporation (Antoncic & Hisrich, 2003; Covin & Miles, 1999). Hence, these units are consistently understood to contribute to corporate survival and growth through the creation and development of new businesses, products, and services. Within this line of reasoning, products, services, and ventures created in and or accommodated by NVUs are typically expected to result in the creation of new business(es) within the corporation (Sharma & Chrisman, 1999), which can create new revenue streams and thus become sources of growth for the firm (Hill & Birkinshaw, 2008; Kanter et al., 1990). In essence, internal new ventures and internal corporate venturing are treated as central to NVUs' contribution to corporate survival and growth and the primary end for which they are a means.

Fundamentally, NVUs fulfill this objective by providing a tailor-made, temporary home for new business and product ideas, as well as new ventures during the early phases of development (Hill & Birkinshaw, 2008) – ranging from early-stage “‘idea[s]’ to embryonic ‘one-product’ business[es] to ‘multi-product’ new business[es]” (Burgelman, 1985: 40). New ventures placed in NVUs are nurtured, developed, and allowed to mature and grow within these units until they are ready to be (re-)integrated into the existing corporate structure as new product or service offerings within an existing business or fully-fledged new businesses. Put simply, NVUs nurture new ventures primarily for retention, rather than to generate financial returns through spin-offs.<sup>10</sup>

The internal survival of new businesses, products, and services created and developed in NVUs, in turn, is an important measure of their success as vehicles for corporate venturing. How effective NVUs are in supporting the development of new ventures that can be (re-)integrated into, and survive within, the existing corporate structure, however, remains an open question. While prior work discusses both benefits and perils associated with NVUs, which may turn them into either a blessing or a blight for the internal new ventures they accommodate, this question has thus far not been empirically tested. Next, I will provide a brief overview of the main benefits and challenges associated with NVUs in the literature.

## Benefits associated with NVUs

In the literature, three main benefits for the creation and development of new products, services, and businesses have been associated with NVUs and structural separation in particular. First, NVUs' distinct *modus operandi*, characterized by a more flexible and less bureaucratic organizational climate,

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<sup>10</sup> Spin-offs may, however, may be used to monetize, or retain a stake in, new ventures that show promise but are difficult to (re-)integrate because they are too unrelated to the firm's existing business, misaligned with the corporate strategy or for which it is difficult to find a logical home. Rather than a desired outcome, spin-offs, thus, can be viewed as a contingency plan for NVU ventures.

routines, structures, and management practices (Bart, 1988; Fast, 1978; Galbraith, 1982; Kanter et al., 1990), enables the exploratory processes associated with new business development (Dushnitsky & Birkinshaw, 2016; Hill & Birkinshaw, 2008; Hisrich & Peters, 1986). Separation from the existing organization allows for the creation of an ‘other space’ (Hjorth, 2005) with a culture that enables play, creativity, experimentation and tolerates failure, mistakes (Hisrich & Peters, 1986), as well as ambiguity and uncertainty (Hill & Birkinshaw, 2014; March, 1991). At the same time, separation also insulates new business development activities and ventures placed in NVUs from the dominant logic, norms, values, and management practices of the parent company that are at odds with these behaviors (Dess, Lumpkin, & McKee, 1999; Fast, 1978) and provides both with the necessary operational freedom (Burgelman & Välikangas, 2005; Garrett Jr & Covin, 2015). NVUs can, in other words, facilitate the trial-and-error processes and flexible decision-making that are central to the inception and development of new product, service and business ideas (Garrett Jr & Covin, 2015; Garud & Van de Ven, 1992; Kanter, 1989) and thus support the maturation and growth of new ventures, particularly in the early phases of new business development.

NVUs can further nurture the development of fledgling new ventures through a tailor-made support structure, which is designed to access and integrate knowledge and resources beyond traditional organizational boundaries and to direct managers’ undivided attention to the developmental needs of new ventures. As semi-autonomous units, NVUs can provide access to a wide variety of resources and knowledge, which are necessary inputs to the development of ideas and new ventures. More specifically, because they are structurally separate parallel-organizations, they can provide access to resources and knowledge that are readily available inside the firm, but also to those that need to be sourced from the outside (Birkinshaw & Hill, 2005; Block & MacMillan, 1993; Burgelman, 1985; Garrett Jr & Covin, 2015). Because they are dedicated business development units, NVUs are further populated by managers whose main responsibility is new business development. The new ventures placed in these units, in turn, are not side projects that need to compete for managers’ attention with their respective main responsibilities, but instead receive focused attention (Block & MacMillan, 1993; Fast, 1978).

Finally, NVUs can protect the new ventures they house from harmful corporate interference, such as organizational resistance to novel and uncertain ventures, insistence on the adherence to and or adoption of standard processes, extensive review processes and performance comparisons to existing businesses at early stages of development (Birkinshaw & Hill, 2005; Garud & Van de Ven, 1992; Hisrich & Peters, 1986; Miles & Covin, 2002; Sykes, 1986). Pressures to frequently and extensively communicate and justify the current state of development of a novel and uncertain new venture to different internal stakeholders, in particular, may divert attention away from

development to legitimation efforts and thus stymie the progress of new ventures. NVUs act as a firewall, mitigating these potentially harmful influences.

## Challenges associated with NVUs

While structural separation allows for the creation of an environment that facilitates the unimpeded inception and development of internal new ventures, it may also put the new ventures placed in NVUs at a systematic disadvantage. First, while NVUs ought to act as entrepreneurial enclaves that accommodate ideas and ventures that are new and different, their strategic logic may overemphasize exploration. As a result, they may focus on the creation and development of new ventures that are too new and different to be straightforwardly (re-)integrated into the existing corporate structure (Burgelman & Välikangas, 2005; Fast, 1979b; Hill & Birkinshaw, 2008, 2014). Put simply, NVUs with an overly exploratory strategic logic may end up housing and breeding misfits.

Second, new ventures placed in this parallel organization are intentionally isolated from the existing corporate structure. The very structural separation, which allows NVUs to act as an entrepreneurial enclave, nurture the development of new ventures through a tailor-made support structure and to minimize harmful distractions and interference, inherently also creates a boundary. This boundary constrains knowledge and resource flows between the NVU and the mainstream organization – both to and from the NVU (Burgers et al., 2009; Chen & Kannan-Narasimhan, 2015; Garrett Jr & Covin, 2015). Thus, the very benefit of structural separation, may thus also prove cumbersome for new ventures that do, in fact, build on the firms' existing knowledge and resources and would benefit from access to both. Structural separation may also be an obstacle for those new ventures that require sustained cross-boundary interactions to facilitate (re-)integration, for example, because they are closely related to, and aim for integration into, an existing business (Burgers et al., 2009; Covin & Miles, 2007; Thornhill & Amit, 2000).

Finally, because they themselves are often misfits, which are new and have a peculiar identity as neither a staff nor an operating unit (Fast, 1978), NVUs are vulnerable to intraorganizational turf wars, envy, and political conflicts (Burgelman, 1983a; Fast, 1978, 1979b, 1979a; Kanter et al., 1990; Miles & Covin, 2002). This, in turn, may expose the ventures placed into NVUs to resentment and resistance from the existing organization – by association – and reduce the willingness to adopt and (re-)integrate NVU ventures. NVUs may, in other words, hurt the internal survival chances of new ventures through a kind of 'halo-effect' that results in a negative, attitude-based bias against NVU ventures simply because they originated or were placed in the NVU. This negative effect that NVUs may have on new ventures' chances of

(re-)integration and internal survival is not unlike the ‘not invented here’ syndrome, where tribalism results in resistance to, and an unwillingness to adopt, external ideas (see, for example, Antons & Piller, 2015; Katz & Allen, 1982). While ideas housed by NVUs are not external per se, they do nevertheless mature and grow outside of the existing corporate structure and are new and different by nature. As a result, they may well be perceived as foreign by the receiving business units or managers and rejected or underutilized in spite of their idiosyncratic value (Antons & Piller, 2015). Resentment toward, as well as intraorganizational rivalry and conflicts with, the NVU are likely to amplify attitude-based biases toward new ventures that are perceived to be ‘foreign’.

### Blessing or blight?

Drawing on the contrasting effects of structural separation discussed in the literature, NVUs may both facilitate and impede the successful creation of new businesses and revenue streams for the parent corporation through new business development. On the one hand, this parallel organization creates a unique environment that can nurture and protect new ventures, particularly at the early stages of development. On the other hand, it can be problematic for new ventures that could benefit from inclusion in the mainstream organization, as well as for increasingly mature ventures, if they are allowed to ‘run wild’ and become too far removed from the firm’s core business to find a logical home, or if they are judged on the basis of their association with the NVU, rather than their individual value.

While scholars have focused on how organizations might balance separation and integration and studied how the benefits and challenges discussed here affect the performance, development and survival of the units themselves (see, for example, Birkinshaw et al., 2002; Burgelman, 1983a; Fast, 1978, 1979b, 1979a; Hill & Birkinshaw, 2008, 2014), the question of how these characteristics of NVUs affect the internal survival of the ventures they house remains unanswered. *Are NVUs a blessing or a blight for internal new ventures?* Moreover, are they indeed an effective vehicle for corporate venturing? This is the overarching question of the first of the papers in this dissertation.

### The Evolution of New Venture Units since the 1970s

Prior studies (see, for example, Birkinshaw & Hill, 2005; Birkinshaw et al., 2002; Burgelman & Välikangas, 2005; Chesbrough, 2000) have suggested that NVUs have gone through multiple cycles of waxing and waning popularity since the 1970s and pointed to the idiosyncratic characteristics of NVUs of these different time periods. And yet, these assertions typically

remain side notes: NVUs are ‘black boxed’ and studied as a homogenous and uniform phenomenon. Rich descriptions that explicitly focus on, and explore, the historically contingent responsibilities, tasks, and contributions of different iterations – or generations – of NVUs, as well as the strategic contexts within which they were established, are scarce. Given the interest of prior research in the usefulness of structural separation as a means to organize for innovation and corporate entrepreneurship, focusing on commonalities and disregarding the differences of NVUs in different time periods is not surprising.

At the same time, however, some scholars (see, for example, Burgelman & Välikangas, 2005; Chesbrough, 2000) explicitly acknowledge and assert that NVUs, as well as their character and mission, have evolved continuously and considerably since the 1970s. They are products of their time, which were established as part of a particular strategic rationale, incorporated different management practices, expected to fulfill different tasks and contributed to corporate entrepreneurship in different ways. What was considered an archetypical NVU in one time period, in turn, need not necessarily be considered suitable for the idiosyncratic context and challenges of a different time period. Put simply, different generations of NVUs are different.

Not understanding the different generations of NVUs as phenomena in their own right – as variations that are related, yet distinct – results in a limited, abstract and ahistorical understanding of what NVUs are and do, as well as what role they play in the broader context of corporate entrepreneurship. To fully understand social phenomena, such as NVUs, and the meanings social actors attach to them, they must be viewed as historically contingent and related to the period in which they originate (Mannheim, 1972). In what follows, I will thus revisit and put into a historical perspective prior work on NVUs.

## Previous generations of NVUs

In the literature (see, for example, Battistini et al., 2013; Birkinshaw et al., 2002; Dushnitsky, 2008; Hill & Birkinshaw, 2008; Hill et al., 2009), three broader waves of corporate venturing activity are typically identified. The first wave is consistently placed in the 1960s and 70s, the second in the 1980s and the third in the 1990s, peaking at the height of the dot-com boom. In each period, corporate venturing initiatives fell prey to market crises and crashes, most notably the market crash of 1987 and the burst of the dot-com bubble in the early 2000s (Birkinshaw et al., 2002; Dushnitsky, 2008). Overlaying these waves of broader corporate venturing activity reported in the literature with research that is focused specifically on NVUs, and comparing the different missions and characteristics of NVUs discussed in these studies, two distinct

generations of NVUs can be identified.<sup>11</sup> The central characteristics of first and second generation NVUs are summarized in Table 1.

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<sup>11</sup> It should be clarified that the co-existence of a cohort of NVUs during a particular period of time alone does not necessarily constitute a generation. Rather, it is the most basic stratum to determine a generation (Mannheim, 1972). A generation, in the sociological sense, is a qualitative unity that has its own, characteristic style of thought and action that results from historically contingent “patterns of experience, thought and expression” (Mannheim, 1972: 309). A generation of NVUs, in turn, cannot simply be determined by identifying different spans of years in which a number of units co-existed. It must also consider which of these units are a qualitative unity and characterized by a common identity, mission, and management practices. Hill et al. (2009), for example, suggest that the NVUs of the 1960s and 80s were one qualitative unity with common characteristics, the NVUs of the 1990s a second one. As a result, the *generations* discussed in this section do not correspond to the broader waves of corporate venturing activity identified in prior work.

Table 1. A summary of the characteristics of the first and second generation of NVUs

Overview over typical role and nature of NVUs	First Generation NVUs Vehicles for Diversification (1970s and 80s)	Second Generation NVUs Mimicking Venture Capitalists (Late 1990s/Dot-com era)
<b>Strategic context</b>	Management theory of diversification as source of superior business performance and growth	Favorable market environment rife with opportunities at the brink of a new economy
<b>Objectives</b>	Develop new and different, economically viable businesses to create revenue streams outside of the core business	Commercialize promising internal technologies and ventures to create new businesses for the firm
<b>Responsibilities</b>	<i>Business development</i> (shepherd development from idea to multi-product new business ready to be integrated into the firm's portfolio)	<i>Venture-capital-like investments</i> (adopt venture capitalist approach to venture financing and commercializing new technologies)
<b>Scope of tasks</b>	<i>Support the development of new ventures through:</i> <ul style="list-style-type: none"> <li>- Screening of environment</li> <li>- Idea generation and selection</li> <li>- Development of ideas (technical and commercial)</li> <li>- Development of business plans and strategies</li> <li>- Implementation and commercialization of new products</li> </ul>	<i>Support the development of new ventures through:</i> <ul style="list-style-type: none"> <li>- Thorough appraisals of performance &amp; potential</li> <li>- Providing managerial and technical assistance</li> <li>- Staged resource commitments</li> <li>- Disciplined exits</li> <li>- Building a portfolio of new ventures</li> </ul>
<b>Primary locus of opportunity</b>	Opportunities discovered and created inside the firm (internal ideas and new ventures)	Opportunities discovered and created inside the firm (internal ideas and new ventures)
<b>Contribution to Corporate Entrepreneurship</b>	<ul style="list-style-type: none"> <li>- Establishment of new business for the firm through the development of internal ideas and new ventures</li> <li>- Additional revenue streams</li> </ul>	<ul style="list-style-type: none"> <li>- Sources of growth for the firm</li> <li>- Strategic benefits (e.g. develop, explore or test the strategic and or market value of internal technologies)</li> <li>- Financial returns from exits</li> </ul>

The first generation of NVUs proliferated in the 1970s and 80s as vehicles for diversification. They are discussed in the work of Fast (1978, 1979b, 1979a),

Burgelman (1983a, 1984, 1985), Hisrich and Peters (1984, 1986), as well as in the studies published by the research group surrounding Kanter at Harvard Business School (Kanter, 1985; Kanter, 1989; Kanter et al., 1990; Kanter, North, Richardson, Ingols, & Zolner, 1991a; Kanter et al., 1991b).

First generation NVUs were typically established as part of a diversification strategy, which was viewed as a source of superior business performance at the time (see, for example, Berry, 1971; Prahalad & Bettis, 1986; Rumelt, 1982). NVUs were expected to contribute to these diversification efforts via the development of economically viable new businesses that were both new and different – i.e. venture outside of the current core business of the firm – and could be (re-)integrated into, or added onto, the firms existing business with the ultimate goal of adding new revenue streams to the firm (Burgelman, 1985; Fast, 1978; Kanter et al., 1990; Kanter et al., 1991b). To achieve this objective, NVUs fulfilled a wide range of business development tasks, ranging from opportunity identification through systematic analyses of the environment, to supporting idea creation and development, developing business plans and strategies and managing the early commercialization phase (Birkinshaw et al., 2002; Fast, 1978; Hisrich & Peters, 1986; Von Hippel, 1977).

The second generation of NVUs was inspired by the successes of independent VC investors at the time and entered the scene in the late 1990s. The units of the second generation were discussed primarily in the works of Birkinshaw and colleagues, but also by others (Chesbrough, 2000; Chesbrough & Socolof, 2000; Day, Mang, Richter, & Roberts, 2001). In contrast to the first generation of NVUs, which was established as part of a broader management theory, the second generation of NVUs was the product of a gold rush mentality at the brink of a new economy. NVUs were corporations' vehicle to jump onto the dot-com bandwagon and explore, develop, and commercialize promising new technologies to 'get in on the action' (Birkinshaw & Hill, 2005; Howcroft, 2001). Characteristic for this second generation of NVUs was their application of VC practices to the development of new ventures: they were charged with investing in internal ideas and new ventures to commercialize them.

In concrete terms, this meant that second generation NVUs took a systematic approach to identifying and selecting internal new ventures, sought to add value to NVU ventures through technical and managerial assistance, emphasized diligent monitoring and oversight, and made disciplined, staged resource commitments to new ventures that were based on thorough appraisals of their performance and potential (Birkinshaw, 2005; Birkinshaw & Hill, 2005; Birkinshaw et al., 2002; Chesbrough, 2000; Chesbrough & Socolof, 2000). With the primary aim being the commercialization of new technologies and the adoption of VC practices (Birkinshaw et al., 2002; Chesbrough, 2000; Chesbrough & Socolof, 2000; Hill et al., 2009), exits had become a viable alternative to generating future revenue streams for the firm: finding external

investors and spinning off an internal new venture or technology that showed promise, but could not be (re-)integrated into the existing corporate structure was one way to monetize and realize short-term returns on investments.<sup>12</sup>

In sum, both the first and second generation of NVUs were charged with corporate venturing and focused on the different steps and processes associated with the creation and addition of new businesses into the firm's overall business portfolio (Kuratko, Covin, & Hornsby, 2014; Narayanan, Yang, & Zahra, 2009; Sharma & Chrisman, 1999). The strategic context evolved from diversification being viewed as a source of superior business performance to that of a munificent business environment that was considered ripe with opportunity. In both cases, NVUs were vehicles to achieve the desired objectives. The management practices with which they facilitated the creation and development of internal new ventures evolved significantly from the first to the second generation: they developed from units that applied business development practices to units that applied venture capital practices and came to view, and treat, internal new ventures primarily as VC-like investments.

## What about contemporary NVUs?

Today, NVUs once again enjoy increasing popularity. Following the most recent financial crisis of 2008, corporations have gradually rediscovered innovation labs, garages, and centers, and they are now once again becoming integral parts of corporate innovation. Absent systematic analyses of the current NVU landscape or databases – similar to VentureXpert or VentureSource, which collect information about CVC investment units (Röhm, Merz, & Kuckertz, 2020) – providing an overview of these internally focused units, as well as problems with data access (Garrett Jr & Covin, 2015), it is difficult to assess exactly how popular these units are today. Examples, such as Germany, where two thirds of the 30 companies belonging to the German benchmark index DAX, maintained such a NVU in 2018 (Capital, 2018a) or Sweden, where industry leaders such as H&M, IKEA, Ericsson, Volvo, SEB, and Electrolux have spawned units dedicated to exploring and developing new business opportunities for their parent corporations, however,

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<sup>12</sup> It should nevertheless be emphasized that NVUs were still distinct from CVC units. Unlike CVC investments arms, their objective was ultimately *not* to make equity investments in new ventures to secure financial gains through lucrative exits, nor was it to achieve strategic objectives such as creating strategic options, gaining access to new technology, external R&D or new and different capabilities, leveraging synergies, or developing relationships with future partners and suppliers (Chesbrough, 2002; Dushnitsky, 2008; Hill & Birkinshaw, 2008). NVUs were expected to commercialize new technologies and ventures originating *within* the firm to create new businesses that can become sources of sustained growth for the firm (Hill & Birkinshaw, 2008). Within this broader strategic logic, an 'exit' is best understood as a contingency plan to salvage internal new ventures with a low chance of internal survival or potential for growth and to capture their value. It is not, however, the desired outcome.

do suggest that we are, in fact, witnessing another wave of rising interest in these units.

What we know rather little about is whether, and to what extent, contemporary NVUs' contribution to corporate entrepreneurship is a continuation of that of previous generations or has evolved, as well as which management practices and activities are central to their operations. Put simply, our understanding of the typical characteristics of contemporary NVUs is limited.

Seeing that previous generations have evolved continuously and considerably, one should expect contemporary NVUs to also be a product of our time, rather than merely a relic of previous generations. With the rise of entrepreneurial firms like Google or Apple, which continue to disrupt established market structures and business models (see, for example, Kuratko, 2009; Kuratko et al., 2014), and the advent of hypothesis-driven entrepreneurship, as well as an increasingly sophisticated entrepreneurial toolbox (see, for example, Blank, 2013; Ries, 2017), in particular, today's NVUs are likely to differ from their predecessors in the 1970s/80s and the dot-com era in important ways.

Understanding the particular role present-day corporate NVUs play in corporations' broader innovation strategies is more important than ever, particularly in an expanding landscape of innovation initiatives. In light of the proliferation of similar, yet distinct, corporate innovation initiatives, such as open innovation (Chesbrough & Bogers, 2014; Chesbrough, 2003), corporate start-up accelerators, and incubators, which are time-limited programs to which external start-up companies can apply (Kanbach & Stubner, 2016; Weiblen & Chesbrough, 2015), and CVC investment arms, which invest in external start-up companies and participate in the venture landscape (Battistini et al., 2013), clarity about the what, why, and how of NVUs is important to manage these units, as well as a corporate portfolio of innovation initiatives, effectively. A clear sense of contemporary NVUs, as well as whether they are viewed as hybrids, which combine elements of similar initiatives, as a catchall for all other efforts that do not have a logical home, or rather as specialized units that play a distinct role and complement other initiatives is vital to make deliberate and effective choices in establishing, designing and managing these units.

In sum, acknowledging the historically contingent nature of NVUs and developing a comprehensive understanding of the what, why, and how of the current generation of NVUs is important to generate relevant and timely insights into this phenomenon. As products of their time, contemporary NVUs might have their own, idiosyncratic benefits, work in different ways, and play a role that is – at least somewhat – new and different, and they might suffer from distinct afflictions. Learning about what this new generation of NVUs is about, as well as what is new and different, relative to previous generations does not, however, only hold potential for the academic community by

developing new insights that might raise new questions or offer new perspectives on long-standing questions, such as appropriate measures of performance for these units and determinants of their survival.

A historically contingent understanding of NVUs is also relevant and useful for practitioners. Managing NVUs appropriately requires an understanding of not only the fundamental and enduring challenges associated with structural separation that all generations of NVUs have in common. It also necessitates a clear understanding of the idiosyncratic, historically contingent role, approach, and objectives of, as well as the challenges and opportunities that are unique to, contemporary NVUs.

## Reflections on NVUs in the Literature

As is apparent from the review of the literature on NVUs in this section, prior work offers many important insights into the characteristics of, and managerial challenges associated with, NVUs, as well as how both affect the performance and survival of these units. Nonetheless, the discussion of NVUs in the literature could be expanded and enriched in two important respects.

First, prior work on NVUs focuses predominantly on mapping the characteristics of NVUs (Burgelman, 1985; Hisrich & Peters, 1986), identifying different types or configurations of NVUs (Fast, 1978; Hill & Birkinshaw, 2008), and the effects thereof on NVU performance. Particular emphasis is placed on identifying success factors and developing recommendations for how to overcome the innate managerial challenges of these units and manage them effectively within the corporate structure (Hisrich & Peters, 1986; Burgelman, 1983, 1985, Birkinshaw et al., 2002; Birkinshaw & Hill, 2005; Fast 1979). The use of theory in these studies is notably scarce. Instead, different authors typically focus on recurring questions, such as motivations for establishing NVUs, objectives firms report to pursue with these units, challenges they encounter, and different measures of success – typically, the survival and performance of NVUs. One exception is organizational ambidexterity, which has been suggested by Hill and Birkinshaw (2014) as a theoretical framework to explain how and why some NVUs survive and others do not. Put simply, our knowledge about NVUs to date is primarily empirically but not necessarily theoretically grounded, nor has it resulted in an indigenous theory of NVUs.<sup>13</sup>

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<sup>13</sup> A common theme in the literature is that empirical findings from earlier studies are typically accepted, built upon or extended – rather than critically engaged with or explained using a theoretical framework. That NVUs are primarily vehicles for internal corporate venturing, for example, has been proposed in the early work and since then become accepted and taken for granted as a fact in most of the subsequent work which I have reviewed and discussed here. At the same time, it has seldom – if ever – been questioned. Consequently, it is better understood as an assumption that has been firmly integrated into the perceptual set of scholars of NVUs. It

Second, NVU research is strongly influenced by the strategic management tradition and produces primarily positivistic and functionalistic explanations of its object of study, which often seek to generate knowledge that can be put to use and help solve practical problems (Burrell & Morgan, 1979). In the case of NVU research, studies seek to address the underlying problem of how established corporations can make use of NVUs to effectively organize for and ultimately manage innovation. Characteristic for this approach is a focus on outcomes, entities (Hatch & Yanow, 2003: 74), and explaining causalities between different social or organizational phenomena, which are conceived of as ontologically ‘real’ (Chia, 2003; Packard, 2017). Put simply, what NVUs are and do, is accepted as objectively real and not malleable – as ‘being’ and not ‘becoming’ (ibid.). One example would be the taken-for-granted assumption that ‘NVUs *are* vehicles for internal corporate venturing’. What is of interest, and needs to be understood, is how NVUs influence a particular outcome, that is, how NVU characteristics (as the independent variable) affect NVU performance, or, the creation of new ventures, businesses, and revenue streams for the firm (as the dependent variable). In keeping with this ontological stance, in prior research, NVUs are habitually viewed as a phenomenon that can be identified, studied, and measured using approaches that originate in the natural sciences, such as survey and questionnaire-based methods.

What is absent in the literature, however, is a critical reflection on and engagement with the object of study itself, which is an inherently social phenomenon that is in a constant state of ‘becoming’ and influenced by subjective perceptions and interpretations of social actors. That is, in viewing NVUs as a static entity that promotes or contributes to one particular objective, prior research focuses on one dominant understanding of, and rationale for, NVUs. In so doing, prior work risks side-lining the changing role and nature of these units and overlooking observations and explanations that are not aligned with prevailing assumptions and conceptual models (Alvesson & Sandberg, 2011, 2014; Packard, 2017). Put simply, in viewing NVUs as static entities that contribute to a static objective – CV, or the creation of new business for the firm – prior research imposes and focuses on a particular, taken-for-granted notion of the *how* and *why* of NVUs and zooms in on one particular means and ends relationship associated with NVUs.

While this particular way of seeing NVUs is necessary to generate useful knowledge with respect to the question of how effective NVUs are in advancing corporate venturing, it also omits other important responsibilities or functions that NVUs may have and continue to lie outside of what we, as scholars, have been telling each other about these units. Given the evolution of NVUs over the 50 years, since they first entered the scene, and the lack of

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is, nevertheless more so an empirically-grounded working theory of what NVUs are vehicles for, rather than a theoretically-grounded and empirically tested, robust fact.

empirical testing of core assumptions, in particular of the central assumption that they are effective vehicles for corporate venturing, this may lead to an overly narrow focus on a particular view of and rationale for, as well as insights into and understanding of this phenomenon. Hence, I suggest that it is important to move beyond the positivistic and functionalistic ways of seeing NVUs, which are typical for prior research on this phenomenon.

# An Organizational Perspective on NVUs

In an effort to advance a theoretically grounded understanding of NVUs in this thesis, I turn to organization theory as a framework that provides useful tools to make explicit, elucidate, and interpret what these units are and do, as well as what role they are thought to play in their parent corporation. In keeping with an organizational perspective, but in contrast to prior work on NVUs, I conceive of NVUs as an inherently *social* phenomenon.

As such, NVUs are created by social actors – specifically, organizations – in order to achieve objectives, which these actors perceive as appropriate, desirable, and meaningful. What NVUs are and do, in other words, is not merely an objective or static fact, but depends on social actors' intersubjectively shared, culturally and historically situated ideas, beliefs and understandings about, this particular organizational phenomenon. As a result, what NVUs are and do – or what social actors want them to be and do – is malleable: NVUs, as well as their function and nature are social constructs and, as such, constituted by social and communicative interaction and shaped by the context in which they are embedded. In the following sections, I will outline how integrating NVU research with theoretical perspectives from the study of organizations can advance our understanding of these units.

## One Approach in a Broad Tent

Organization theory is typically understood as the study of organizational phenomena at different levels of analysis (Tsoukas & Knudsen, 2003). It is a very broad tent that subsumes a number of different approaches originating in different disciplinary traditions, which, in turn, are based on a range of epistemological and ontological assumptions (see, for example, Burrell & Morgan, 1979; Chia, 2003; Donaldson, 2003; Hatch & Yanow, 2003; Willmott, 2003).

In this thesis, I focus on the *meaning* of NVUs as organizational phenomena. In the Weberian tradition, I conceive of *meaning(s)* as those *(inter-)subjective ideas, beliefs, and understandings about means and ends relationships, which social actors attach to social actions and phenomena* (Weber, 1968). These meanings or (inter-)subjective ideas, beliefs and understandings, in turn, orient the behavior of social actors. Within the broader field of organization theory, the study of meanings is the domain of

interpretive organizational sociology in the tradition of Weber (see, for example, Swedberg, 2003), which focuses on the role of culture in the emergence of organizational phenomena and disentangling its influence on organizing and organizations.

One central assumption within this strand of organization theory is that organizations and their constitutive parts, as well as the ongoing process of organizing, are not merely products of human agency or the individual, purely rational choices of social actors. Instead, they are shaped by and (re-)produce social structures – that is, the intersubjectively shared and socially accepted typified schemes, rules, and meanings of larger collectives in which social actors are situated or embedded (Emirbayer & Mische, 1998; Giddens, 2005). As a result, organizations are assumed to adopt – and reproduce – externally legitimated and socially accepted structures, processes, and actions to conform with the ceremonial demands and institutional pressures of their social environment (DiMaggio & Powell, 1983; Meyer & Rowan, 1977). The socially accepted and intersubjectively shared ideas, beliefs, and understandings, or *social knowledge* of a particular context, which constitutes and articulates these demands, in turn, is understood as a powerful force that both shapes and is instantiated – and thus observable – in organizational phenomena (Jones, Meyer, Jancsary, & Höllerer, 2017; Meyer, 2008).

Central to the emergence of intersubjectively shared and socially accepted ideas, beliefs and understandings is social interaction (Berger & Luckmann, 1967; Blumer, 1969; Schütz, 1971). Social knowledge, in other words, is socially generated. It is also in social interaction that it is reproduced and can be observed and analyzed. But social interaction can take on different forms. On the one hand, it can be direct and immediate – for example, when individuals engage in a particular task, be it as mundane as greeting each other or as complex as defining a strategy or negotiating a contract. In such direct and immediate interactions, social knowledge is enacted and observable in patterns of behavior. On the other hand, social interaction can also be indirect, mediated, and occur through cultural artifacts such as texts, images, or material objects, which are produced and used by social actors to articulate, convey, and share their knowledge about the world (Gagliardi, 1990, 2006; Luckmann, 2008).

In contrast to direct and immediate social interaction, artifacts instantiate social knowledge in symbolic form, using different sign systems or ‘languages’ to describe behaviors, choices, and actions. Cultural artifacts, in turn, externalize and objectivate social (inter-)action (Luckmann, 2008): they reproduce and are permeated by externally legitimated and socially accepted, intersubjectively shared ideas, beliefs, and understandings that gain the character of objectivity. Cultural artifacts can thus be viewed as material manifestations of social knowledge about social and organizational phenomena. As such, they are central to the construction and maintenance of meaning and can offer insights into the ideas, beliefs, and understandings,

which are associated with and thus inform organizational structures, processes, and actions (Berger & Luckmann, 1967; Dougherty & Kunda, 1990; Gagliardi, 2006; Jones et al., 2017; Meyer, Höllerer, Jancsary, & Van Leeuwen, 2013).

In the organization theory literature, two broader categories of cultural artifacts have attracted considerable attention. First, texts, that are inscribed on a physical medium, made accessible to others and draw on a variety of sign systems to store and communicate meaning (Phillips, Lawrence, & Hardy, 2004) as part of a broader communicative or discursive turn (Boxenbaum, Jones, Meyer, & Velikova, 2018; Corneliessen, Durand, Fiss, Lammers, & Vaara, 2015). Second, the spatial dimension of organizations, which organizes life, activities, and relationships in organizations and, at the same time, articulates within itself a primarily aesthetic and material cultural code (Gagliardi, 2006; Lawson, 2001; Van Marrewijk & Yanow, 2010). In the section that follow, I will elaborate on how both can be used as windows onto corporations' social knowledge about NVUs and offer insights into the meanings they attach to these units.

## Communication – A Conduit for Social Knowledge

Communication – that is, “social interaction that builds on speech, gestures, texts, discourses, and other means” (Corneliessen et al., 2015: 11) – is central to the social construction of organizational phenomena (Berger & Luckmann, 1967; Grant et al., 2004; Luckmann, 2006, 2008). Organizations and organizational phenomena are communicatively created and shaped (Phillips & Oswick, 2012) – that is, they are talked or communicated into being. In their seminal work, Berger and Luckmann (1967: 173) put it as follows: “language realizes a world, in the double sense of apprehending and producing it” through symbolic objectification and social interaction. In later work, Luckmann further emphasizes the centrality of communication to the construction of social reality, asserting that

“more or less obligatory ways of doing things, traditions and institutions are [...] constructed — and sedimented in a collective memory — in social, primarily, if not exclusively, communicative interaction. Once they have become established, they are again transmitted in communicative interaction.”  
(Luckmann, 2006; 2008: 281)

Within this line of reasoning, social knowledge and our views of the world, or distinct aspects thereof, are viewed as created through, and products of, exchanges between people. Communication, in other words, is a form of social (inter-)action that creates and maintains social patterns, (re-)produces meanings that are central to our social world and, in so doing, constructs

historically contingent and culturally specific social realities (Jorgensen & Phillips, 2002). Social knowledge and distinct views of the world, in turn, shape and inform social actions that are aligned with the more or less obligatory ways of doing things, traditions, and institutions, which are articulated and reproduced in communication. In so doing, communication has social consequences.

## Theoretical foundations

It is important to emphasize that communication is understood here solely as symbolic social interaction. It is viewed as one way through which social actors share their culturally embedded ideas, beliefs, and understandings about a particular phenomenon. To meaningfully interact in their social context, social actors draw on shared, typified symbolic instantiations of actors and acts, as well as shared frames of expression and interpretation (Meyer, 2008; Schütz, 1971, 1972). Thus, communication is understood as inherently situated and draws on actors' individual, as well as intersubjectively shared, social knowledge (Heracleous, 2004; Luckmann, 2006, 2008). This also means that communication articulates and reflects the intersubjectively shared ideas and beliefs about, as well as understandings of, social phenomena that are accepted in their social context in both the form and content of communication – that is *how* they communicate and *what* they do (not) communicate (Harmon, Green Jr, & Goodnight, 2015; Heracleous, 2004; Kress, 2009, 2012).

It is further assumed here that because communication is situated or culturally embedded, neither the form, nor the content of communication are necessarily or solely used purposively to influence stakeholders, reach a desired objective, or to gain strategic advantages. Hence, the form and content of communication are not understood as the product of social actors' agency or awareness. Rather, social actors *use* symbols that are socially accepted in, and align with the worldview of, their social context in ways that are socially accepted to make themselves understood. They do not, however, necessarily purposefully manage these symbols in an agentic manner to achieve a desired outcome.<sup>14</sup> Within this line of reasoning, communication can thus be used as

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<sup>14</sup> The purposive management of symbols and symbolic interaction, for example, “to transform the meaning of their actions and intentions in ways that enable them to manage complex stakeholder relationships and achieve competitive advantage” (Schnackenberg, Bundy, Coen, & Westphal, 2019: 375) is a separate field of research that focuses specifically on symbolic *management*. Of particular interest in this branch of literature is the use of rhetoric, narratives and framing to achieve particular outcomes, such as legitimating the actions of an organization (see, for example, Vaara & Tienari, 2008, 2011). Literature in another neighboring field, corporate communication (see, for example, Cornelissen, 2004), similarly focuses on the *strategic* use of communication to manage relationships to stakeholders, as well as the identity and reputation of the organization through effective use of all means of communication. In semiotics, the manipulation of symbols, as well as sign-makers' intentions in how and why they

a window onto the culturally embedded and intersubjectively shared understandings – that is, the underlying meaning structures – that delineate a phenomenon in question in a particular context (Gee & Handford, 2012; Kress, 2012; Meyer et al., 2013).

Put simply, in keeping with the communication as conduit metaphor, meaning and social knowledge are viewed here as constantly articulated, made tangible and manifest in both the form and content of communication (Kress, 2009; Kress 2012). These intersubjectively shared and socially accepted typified schemes, rules, and meanings of larger collectives in which social actors are situated or embedded can be observed in recurring patterns and regularities permeating communication of members of a collective.<sup>15</sup>

## Modes of communication

Typically, communication was understood as essentially synonymous with the written and spoken word, or what we commonly understand as ‘language’. As Kress (2009: 27) puts it, “‘language’ was all there was”. Communication, however, does not typically rely solely on words. Quite the opposite is true. Many genres of communication – such as newspaper articles, corporate annual reports and websites – are increasingly complex composites, which convey their message through words and images, as well as their layout and the choice of colors (Van Leeuwen, 2011). In other words, they oftentimes combine multiple, different sign systems – or, *modes* of communication – with distinct, idiosyncratic ways of storing and conveying meaning (Höllerer, Daudigeos, & Jancsary, 2017: 3) into a coherent, unified whole and are inherently *multimodal* (Idema, 2003; Pauwels, 2012; Van Leeuwen, 2011).<sup>16</sup>

At the same time as multimodality is an ever more important characteristic of communication, which is enabled by technological developments that afford the use and combination of multiple modes in texts (see, for example,

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use symbols, is also of interest. Within semiotic theory, however, they are the focus of critical approaches (see, for example, Höllerer, van Leeuwen, Jancsary, Meyer, Andersen, & Vaara, 2019).

<sup>15</sup> It should, however, be noted that this view of language and communication as a conduit for social knowledge has been criticized as a rather simplistic way of viewing and studying this particular form of social interaction (see, for example, Corneliessen et al., 2015). This is particularly true for studies that focus on the process of meaning *construction*, or how particular ideas come to be socially approved and shared, while others do not. At the same time, however, this conceptualization can, in fact, be very useful if the main interest of the researcher is to uncover or map the meaning structures underpinning an organizational phenomenon in a particular context at a particular point in time. That is, while it is a simplistic view for advanced studies of the process of social construction of social and organizational phenomena, the communication as conduit perspective is a useful first step particularly in fields in which meaning structures have not yet been studied or remain un(der)explored.

<sup>16</sup> Because the term language has come to be used almost exclusively to denote a particular sign system – namely, spoken and written words – scholars have adopted the term *mode* to more adequately describe the range of semiotic resources that communication can draw on.

Kress, 2003; Van Leeuwen, 2011), multimodality is also increasingly recognized as an essential feature of all human communication and meaning making (Idema, 2003). In fact, the use of multiple sign systems is not merely a byproduct of the technical possibilities of the 21<sup>st</sup> century that facilitate the use of images and creation of diagrams. Instead, multimodality is at the core of human communication: humans have always used gestures and facial expression – or nonverbal forms of communication – together with spoken words to convey a message in interactions with other human beings. Within this line of reasoning, conceiving of communication as multi- rather than monomodal merely moves beyond a hitherto overly simplistic conception of communication as dominated by, and limited to, words and acknowledges the inherent semiotic richness and complexity of communication.

Informed by the fundamental insight that ‘language’ is one of many modes that communication can draw upon, but neither the only nor the dominant or most important mode (Idema, 2003; Kress, 2012), organization theory scholars (see, for example, Bullinger, 2017; Hindmarsh & Llewellyn, 2018; Höllerer, Jancsary, & Grafström, 2018; Höllerer, Jancsary, Meyer, & Vettori, 2013; Jancsary, Meyer, Höllerer, & Boxenbaum, 2017; Meyer & Höllerer, 2016; Ray & Smith, 2012) have started to explore how meaning is created and reproduced in modes other than the spoken and written word, as well as in texts that combine multiple, different modes of communication in an organizational context. To date, the verbal and visual mode of communication, as well as multimodal texts that combine words and images, have attracted most of the scholarly attention. In keeping with the overarching aims of multimodality research (Idema, 2003; Pauwels, 2012), prior work has explored and elaborated not only the idiosyncratic meaning making potentials of different modes and advanced our understanding of how meaning is made and conveyed in different sign systems (see, for example, Havemo, 2018b, 2018a; Höllerer et al., 2013; Jancsary et al., 2017), but they have also sought to understand the cross-modal interplay of multiple modes and its effect on meaning making (see, for example, Boxenbaum, Daudigeos, Pillet, & Colombero, 2017; Höllerer et al., 2018). Because they are best understood and have received considerable attention in the field of organization theory, the verbal and visual modes are useful entry points for multimodal analyses in the context of CE and the aim of advancing our understanding of NVUs. In what follows, I will thus outline both insights into the idiosyncratic meaning making potentials of the verbal and visual modes, as well as the cross-modal interplay between both.

### **Idiosyncratic meaning making potentials**

Different modes of communication have idiosyncratic meaning making potentials and affordances: they are governed by different logics and can realize specific representational work (Jewitt, Kress, Ogborn, & Tsatsarelis, 2001; Kress, 2003). In the case of the verbal and visual mode, Kress (2003,

2012) argues that words work fundamentally from images and suggests that the ‘world told’ is different from the ‘world shown’.

The verbal mode is characterized by strong social regulation, where the use and combination of words to formulate sentences is governed by a set of rules and conventions delimiting syntactic, stylistic, and lexical choices. On the one hand, every language has both a vocabulary of words with common, accepted denotations as well as a grammar governing how a formally correct phrase or sentence is constructed. On the other hand, language use in a particular collective is also limited to dominant, socially acceptable ways of talking about a phenomenon (Foucault, 1972) – that is, to legitimate words and formulations. Because the verbal mode is strongly socially regulated, the array of possible meanings conveyed by, and to be inferred from, written and spoken words is limited (Van Leeuwen, 2005). Even in cases where words have multiple meanings – such as ‘man’, which can refer to both a male of the human species or the human species as such – the range of possible meanings can be reduced, and a particular interpretation specified, through each added element in a statement (Meyer, Jancsary, Höllerer, & Boxenbaum, 2018). As a result, words can be used to not only convey a subject matter precisely and unambiguously, but also specify intangible objects.

The verbal mode is also particularly suited for storytelling and narratives, as it conveys its subject matter sequentially and can add a temporal dimension through the use of different tenses (Meyer et al., 2018). More specifically, the verbal mode represents the world in a quasi-temporal manner that conforms to the logic of time (Kress, 2003, 2012). As such, it can specify actors and what they do, as well as a sequence of actions and thus communicate complex, abstract relationships. Precise and sequential verbal representations of actors and actions also make words particularly suitable to construct formal arguments that explain and legitimate the described actors and actions.

Images, or the visual mode, function quite differently. They are less socially regulated and understood immediately, rather than through deliberate or conscious analysis (Höllerer et al., 2013; Meyer et al., 2018). There is no common, agreed upon visual vocabulary or universal visual grammar that governs the communication in the visual mode: neither the use of particular elements and composition, nor the interpretation of the constitutive elements of images are governed by rules and conventions. What is more, images convey their subject matter in a holistic, (quasi-)spatial manner that is characterized by the simultaneity of different elements (Höllerer et al., 2017; Höllerer et al., 2013; Kress, 2003, 2012; Meyer et al., 2018). As a result, images are particularly rich in information and show what would take too much space in writing (Kress, 2012), which is perhaps most vividly captured by the adage ‘a picture is worth a thousand words’. Images depict the main subject matter – who or what we see – and its characteristics, as well as how different elements depicted in the image relate to one another, while also contextualizing the subject matter through additional information about the

setting – that is, where and in what conditions is the subject matter situated (Kress & Van Leeuwen, 2006).

This allows images to give concrete, material form to abstract ideas and phenomena, to convey complex messages efficiently and affords the instantiation of tacit, aesthetic, or embodied knowledge that is difficult to put into words or to legitimately verbalize (Meyer et al., 2018). The holistic and simultaneous manner of representation and absence of social regulation in images, however, also result in polysemy: their meaning remains fluid and open to interpretation (Barthes, 1977b: 39). Polysemy, in turn, allows images to subtly infiltrate discourse with ideas that are novel or not (yet) accepted (Höllerer et al., 2018) and to convey ambiguous messages that enable multiple interpretations by different audiences, for example, in contested issue fields (e.g., Davenport & Leitch, 2005; Meyer & Höllerer, 2010).

Fundamentally then, although they are oftentimes thought of as mere illustrations, or embellishments, of what is said with words, images can and do convey and reproduce meanings and social knowledge on their own. Like words, who or what images portray, as well as in what way, will be influenced by and reflect intersubjectively shared, socially accepted ideas about the subject matter they depict (Kress & Van Leeuwen, 2006; Meyer et al., 2013). I will discuss in more detail how the language of images can be ‘read’ in a separate methods section.

### **Cross-modal interplay**

While different modes have idiosyncratic ways of creating, storing and conveying ideas and meanings, some meanings in multimodal texts “emerge only through the combination of modes” (Höllerer et al., 2017: 5). This has led Van Leeuwen (2011: 549) to suggest that “many forms of contemporary communication cannot be understood unless both text and image are taken into consideration”. In other words, if we are to understand the ideas and understandings of social phenomena conveyed in multimodal texts, such as newspapers or corporate (annual) reports and websites, the ideas conveyed intra-modally in the different modes, as well as their interplay must be analyzed. Looking at images, or analyzing verbal descriptions in isolation will result in a partial understanding of the intersubjectively shared ideas and understandings of social phenomena that are the subject of a multimodal text (Meyer et al., 2013).

In particular, it has been suggested that the messages conveyed intra-modally by different modes in the same text can be concordant, make separate yet complementary claims that convey a unified message jointly, or even be at odds with one another and convey contradictory messages (Barthes, 1977b; Kress & Van Leeuwen, 2006; Van Leeuwen, 2011). In the case of concordant messages, the ideas and understandings conveyed intra-modally strengthen a single message, by clarifying or reinforcing what is conveyed in the other mode (Barthes, 1977b; Van Leeuwen, 2011). One example would be a caption

accompanying an image, which clarifies how the image is supposed to be interpreted and reduces the polysemy of the image. Such captions, in other words, are a way to control the range of possible interpretations of an image. In the literature (Barthes, 1977b; Van Leeuwen, 2011), this has been referred to as anchoring. An image, on the other hand, can also be used to illustrate and clarify an abstract idea by imbuing it with concrete, material form, for example, by depicting a concrete example of an abstract category in an image (for example, a ford mustang as a representation of a ‘sports car’, or a flow-chart as an illustration of a structured process).

In the case of complementary messages, ideas and understandings that are conveyed intra-modally are incomplete and remain fragments that cannot be fully understood without the other (Barthes, 1977b; Van Leeuwen, 2011). Examples are comic strips, or advertisements and news reports that use words and images to relay parts of a single message. In contrast to visual illustrations of text or captions limiting the interpretation of a polysemous image, complementary messages conveyed by different modes produce a single coherent message at a higher level, such as a coherent story or anecdote.

A study exploring the messages conveyed by sexual health promotion material, however, points to an even more complex interplay of verbal and visual text that goes beyond simply conveying the same or different, yet complementary messages. Jewitt and Oyama (2004) show, that the visual and verbal elements of the same text can and do – intentionally or not – send inconsistent or, at times, even contradictory messages. In the case of sexual health promotion materials analyzed for the study, for example, images “contradict and work against spoken or written messages” (Jewitt & Oyama, 2004: 28). More specifically, images “signified meanings which, in words, would have been unacceptable to many professionals and young people” (ibid.:18). They transported messages that could not be verbalized

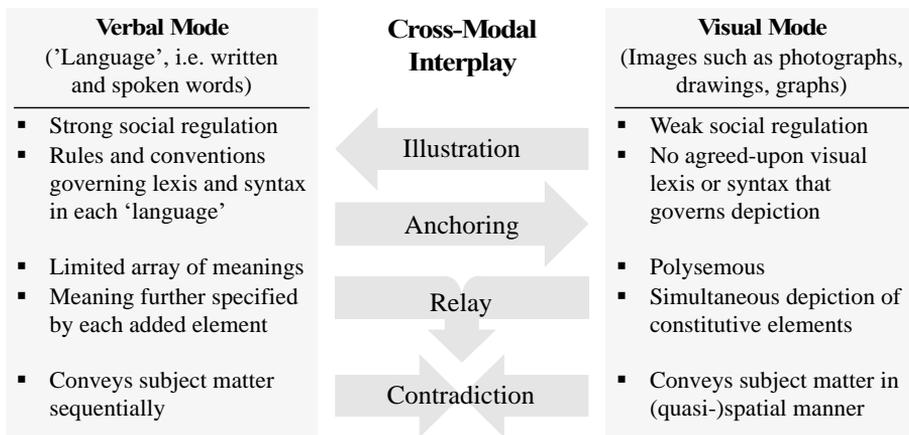


Figure 3. Overview of the idiosyncratic meaning making potentials of the verbal and visual mode, as well as variants of the cross-modal interplay

legitimately. Thus, messages conveyed intra-modally in different elements of a multimodal text may, in fact, be used to subvert or weaken claims made in another. Drawing on the example of sexual health promotion materials and the polysemy of images, it is further conceivable that images, in particular, are a likely conduit for subversive and novel ideas, as well as for ideas that are not socially acceptable. Figure 3 summarizes both the representational work that the verbal and visual mode can accomplish in isolation, as well as how both can interact in a multimodal ensemble.

In light of the different and complex interrelations between ideas conveyed intra-modally in the different modes of a multimodal ensemble, cross-modal analysis is essential to arriving at a complete understanding of multimodal texts. As researchers, we must consider the possibility that the messages conveyed in and by different modes are not only elaborated, elucidated, and complemented, but may be contradicted, subverted, or even “completely reversed in combination with other elements” in multimodal texts (Pauwels, 2012: 256). This is particularly important when analyzing multimodal texts as instantiations of intersubjectively shared, and socially accepted ideas and understandings about social, organizational, or entrepreneurial phenomena. Not examining the cross-modal interplay results in a partial understanding of the message conveyed by the text and risks omitting potentially hidden meanings.

## Communication and NVUs

How can this way of seeing contribute to corporate entrepreneurship research and enrich the scholarly discussion of NVUs? To begin with, communication can serve as a window onto the intersubjectively shared and socially accepted ideas, beliefs, and understandings of – or, social knowledge about – NVUs as an organizational phenomenon within a given collective. Recurring patterns and themes in texts that corporations share about these units, for example, can offer insights into their understanding of and ideas about NVUs, as well as which means-ends relationships they attribute to these units. Analyses of recurring patterns and ideas that are invoked frequently across different corporations in texts about NVUs, in turn, can offer insights into shared social knowledge about NVUs at the field-level. In so doing, communication can shed light onto social knowledge, as well as implicit ideal-typical characteristics ascribed to and associated with NVUs. As cultural artifacts, texts can offer insights into corporations’ perspective and offer a window onto corporate knowledge about the world of NVUs – that is, how corporations believe it is and would like it to be (Gagliardi, 2006; Hindmarsh & Llewellyn, 2018).

Focusing not solely on verbal descriptions but explicitly also exploring images and the cross-modal interplay between both words and images in corporate communication is important in two ways. First, analyzing images,

as well as the ideas and understandings communicated in the visual mode, can offer insights into those parts of social knowledge that are predominantly available in non-verbal form (Jones et al., 2017). Second, for a phenomenon like NVUs, which has evolved continuously and considerably since the 1970s (Burgelman & Välikangas, 2005; Chesbrough, 2000), images are likely to yield insights into ideas about these units that have been revised or updated over time. For the current generation of NVUs, in particular, some updated ideas, beliefs, and understandings about these units are likely to still be new and in flux, rather than settled or mature. Because they are still new, what the current wave of NVUs is and does may not be adequately described and articulated with words – firms might not have the vocabulary to do so. Here, images function as ‘bridging devices’ that make the invisible visible and *show* ideas and understandings about these units that cannot yet be described with words (Jones et al., 2017). In sum, examining ideas about NVUs conveyed in the visual mode can offer insights into those ideas that are new, not yet settled and thus cannot be put into words, about a phenomenon that is in a constant state of becoming and characterized by, what I have referred to previously as, residual novelty.

Beyond the identification of new ideas, visual analysis can also serve as a window onto ideas and understandings that are subversive or controversial to, or not (yet) socially accepted by, one or more audiences who may read a text. Because they cannot be verbalized legitimately or adequately, such ideas may – irrespective of how novel they are – be left out in verbal descriptions and/or moved into images. In images, which are polysemous and more immediately understood, they may fly under the radar or remain ambiguous. In short, analyzing images can offer nuanced insights into ideas communicated in a mode that is less socially regulated, has the capacity to convey ideas that fly under the radar, and typically receive scant scholarly attention.

Finally, and perhaps most importantly, the visual is empirically relevant for contemporary organizations. As the visual is increasingly ubiquitous in and around organizations (Quattrone, Ronzani, Jancsary, & Höllerer, 2021), also analyzing the meanings conveyed in and by images is important to develop a comprehensive understanding of the current corporate stock of knowledge about NVUs. Particularly in the modern media age, in which multimodal texts are becoming ever more important both within and outside of organizations, it is crucial to acknowledge the idiosyncratic meaning making potentials of different modes of communication and to explicitly focus on the representational work they realize (Kress, 2003, 2012). Exclusively monomodal analyses of meanings in a multimodal world will inevitably result in a partial understanding of the social and organizational phenomena that are described, discussed, explained, and justified in multimodal texts.

Because ‘language’ is so dominant in prior research and different fields of research have had varying exposure to visual and multimodal analyses, the move toward ‘strong’ multimodal research, which focuses more explicitly on

multimodal texts and the cross-model interplay between different elements, nevertheless, oftentimes involves the study of other modes as an in-between step. NVU research, for example, is dominated by traditional research methods that rely heavily on verbal expressions and categorizations. Here, insights about how images – as a new and different mode – are used in communication about NVUs are non-existent. In light of this, how images are used, as well as which meanings and social knowledge about NVUs are contained within images, need to be explored in a first step. Only in a second step can cross-modal analyses offer useful insights into the full range of ideas, understandings, and meanings attached to NVUs.

## Spaces – Tools for Thought and Action

Texts are one type of cultural artifact that stores and communicates meaning. Here, ideas and understandings about social and organizational phenomena are (re-)produced in descriptions and depictions of actors and actions associated with a phenomenon. Another important dimension of social and organizational phenomena, which instantiates intersubjectively shared and socially accepted ideas and understandings about them, is their materiality – that is, their material qualities and characteristics.

The material dimension of organizations constrains, enables and is enacted by social actors. In so doing, it concurrently constitutes and shapes organizations (Barad, 2003; Carlile, Nicolini, Langley, & Tsoukas, 2013; Orlikowski, 2007). Organizational *spaces* – that is, the built environments populated by material objects, arrangements, and members of the organization – are one important aspect of the material dimension of organizing and organizations.

Like other material features of organizations, space is conceived of as both *organized* and *organizing* at once (see, for example, Beyes & Holt, 2020; Stephenson, Kuismin, Putnam, & Sivunen, 2020).<sup>17</sup> Space is understood to be *organized* insofar as it is designed and created by social actors. By virtue of being designed and created by social actors, physical structures and built environments in organizations serve as tools of thought and action. They are ‘thought things’ that embody and spatially articulate organizational facts and relations (Beyes & Holt, 2020), as well as the culturally embedded, situated ideas and understandings of their creators as to what a particular space is and does – or should be and do (Lefebvre, 1991; Stephenson et al., 2020). Although they appear to be relatively stable and neutral, spaces are thus

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<sup>17</sup> This understanding of space as simultaneously *organized* and *organizing* is analogous to the understanding of texts and discourse as social products that are part of an ongoing process of social construction. From this perspective, both texts and spaces are at once constituted by and constitutive of intersubjectively shared ideas and understandings of social and organizational phenomena. Like text, space is thus both a reflection and formative of ideas and understandings of organizations and organizing (see Corneliessen et al., 2015; Stephenson et al., 2020).

inherently social products. As French philosopher and sociologist Lefebvre (1991: 31, emphasis added) puts it: “every society – and hence every mode of production with its subvariants [...] – *produces* a space, *its own space*.”

Each of these spaces, in turn, has a particular spatial code, that fixes the vocabulary, primary signs, and syntagmatic relations, which define how a space is understood, produced, and lived in (Lefebvre, 1991: 48). In simple terms, each space has a characteristic spatial ‘language’ or code that defines what it is and does in material and aesthetic form, infuses it with meaning and articulates what kind of place it is (Gagliardi, 2006; Lawson, 2001). This ‘language’ is instantiated in the *design* of an organizational space, which is observable in the material characteristics of a space.

More specifically, the design of organizational spaces is a material manifestation of – or conduit for – conceptualizations of space that is deployed in space. As such, it embodies the understandings of the mode of production that managers and designers associate with a space and instantiates their ideas and understandings of a space – what they envision it to be and do – through a distinct spatial language: a particular layout, as well as the choice and arrangement of material objects enclosing and inhabiting it (Lawson, 2001; Panayiotou & Kafiris, 2011; Van Marrewijk & Yanow, 2010). Together, these design features create particular pathways of action, set out to emplace people and objects in the environment and seek to elicit particular meanings and emotions in a way that reflects these actors’ understandings of the social activities that a space should organize (Berg & Kreiner, 1990; Dale & Burrell, 2008; Davis, 1984; Elsbach & Pratt, 2007; Gagliardi, 1990; Hatch, 1987; Hofbauer, 2000; Lawson, 2001; Orlikowski, 1992; Panayiotou & Kafiris, 2011; Stephenson et al., 2020; Van Marrewijk & Yanow, 2010). Thus, the design of organizational spaces sets out to enable processes, activities and relationships that are considered to be desirable in a space – and to constrain those that are not. In so doing, it attempts to organize life, according to prevailing, culturally embedded, and intersubjectively shared conceptualizations of what a particular space is and does. The design of organizational spaces, and their observable material characteristics, thus articulate and instantiate the practical uses and symbolic meanings that managers and designers associate with a space.

In sum, the language of a space, as expressed in its design, embodies managers’ and designers’ understandings of the rationality – that is, the processes, activities, and relationships – immanent to production in a particular organizational space. The design of organizational spaces, in other words, is itself a form of discourse and articulates what a space is understood to be and do – or, ought to be and do – in a primarily material and aesthetic spatial code. In the case of NVUs, it articulates the kind of processes,

activities, and relationships that should be organized in and by this particular organizational unit.<sup>18</sup>

Analyses of the typical spatial design of NVUs, and its material characteristics, can offer insights into managers' and designers' ideas about and understandings of these units – their conceptions of what they are and do (or should be and do). The design of NVUs' built environments, and the resulting particular language of NVU spaces can be used as a window onto one group of social actors' conceptual understanding of the processes, activities and relationships that are immanent to the practical uses and symbolic meanings of NVUs. In other words, analyzing the typical spatial language of NVUs can offer insights into the processes, activities, and relationships that are considered to be typical for, and thus essential to, these units. It offers a window onto ideas about how this particular kind of space tries to organize life in a way that is aligned with the particular mode of production of these units and the organizational ends they should promote.

## Dimensions and configurations of space

Processes, activities, and relationships that are associated with a space are instantiated in the instrumentality, aesthetics, and symbolism of the material

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<sup>18</sup> The design and material characteristics of a space embody managers' and designers' ideas about the kind of activities, processes and relationships that ought to be organized in and by a space. What a space is and does, however, ultimately depends on how it is perceived, interpreted, and enacted by its inhabitants in their everyday lives (Beyes & Holt, 2020; Lefebvre, 1991; Stephenson et al., 2020). As a result, the 'real' meaning of a space is fluid and (re-)produced ongoingly on the ground in a dialectical process in which the affordances and symbolism built into the design of an organizational space are interpreted, enacted and appropriated by the members of the organization inhabiting it. Thus, design is, in fact, not merely a material manifestation of, but rather a mediator between, conceptualizations of space and their realization in everyday life that is deployed in space (Lefebvre, 1991). What a space is and does is the result of an ongoing interplay between material objects, arrangements and what they can do and project, on the one hand, and members of the organization inhabiting a space and what they do with, as well as how they perceive, them on the other. As a result, how a space is used is oftentimes different from how managers and designers had initially conceived of the space – or how they intended for it to be used – and the meaning of space constituted and enacted through the dynamic interplay of conceived, perceived, and lived space (Stephenson et al., 2020).

The fundamental fluidity and emergent nature of the 'real' meaning of space notwithstanding, in this thesis, I choose to focus on the design of NVUs and their material characteristics as a conduit for managers' and designers' ideas and understandings of what this particular space is and does. That is, in keeping with the view of texts and communication outlined in the previous section and my interest in conceptualizations of and meanings associated with NVUs, I use space as a window onto the social knowledge about these units that is reproduced in this particular kind of discourse. This view of spatial language as a conduit for social knowledge, while it can be criticized as simplistic or traditional from the vantage point of the processual turn in research on organizational spaces (see, for example, Stephenson et al., 2020), is a useful starting point for exploring the spatial dimension of a phenomenon where space has thus far not been studied at all. That is, however, not to say that it is, or should be, the end point.

characteristics of its design (Elsbach & Bechky, 2007; Rafaeli & Vilnai-Yavetz, 2004; Vilnai-Yavetz, Rafaeli, & Yaacov, 2005). That is to say that not only the possibilities for action, or affordances (Leonardi, 2011), built into, but also the sensory experience elicited by, and the meanings attached to, the material characteristics of a space articulate ideas and understandings of what kind of place it is believed or intended to be. A nuanced analysis of the multi-dimensional effects of different design elements thus is essential to understanding the meanings articulated in the material characteristics of a space.

While there is a wide range of elements that can and do constitute a space, three such elements have been discussed more in depth in the literature: the layout of a space; the furniture populating its interior; and the ambient surroundings, specifically the role of colors and materials. For these design elements, prior work has developed important insights into how they organize space, as well as what effects they have on life, activities, and relationships in a space. Seeing that we have a relatively strong scholarly understanding of these design elements, they lend themselves to theoretically grounded analyses of the language of space in the context of NVUs. In what follows, I will thus provide a brief overview of these three spatial design elements and how they organize space.

**Layout.** The layout of a physical environment refers to its floorplan. It is a relatively permanent feature of a physical environment that is created through the use of physical barriers, such as walls. Extreme cases of layouts would be open-plan offices with few physical barriers creating enclosures, on the one hand, and closed offices with many physical barriers creating enclosures on the other. Fundamentally, barriers mediate the relative openness of an office layout, the distance between individuals or groups and movement. In so doing, barriers shape the extent of interaction and communication. Open-plan offices, for example, are thought to provide increased opportunities for social interaction, communication and spontaneous contact among members of the organization by reducing the physical distance and barriers separating individuals (Davis, 1984; Elsbach & Pratt, 2007; Hatch, 1987; Kim & De Dear, 2013).

However, barriers do not only separate people. They also provide the psychological and architectural privacy needed for uninterrupted and focused work on complex or non-routine, cognitive work tasks, as well as for intimate or confidential social interactions (Elsbach & Pratt, 2007; Hatch, 1987; Kim & De Dear, 2013; Myerson & Bichard, 2010; Stone & English, 1998; Sundstrom, Burt, & Kamp, 1980; Sundstrom, Herbert, & Brown, 1982). Evidence from recent studies (Bernstein & Turban, 2018; Bernstein & Waber, 2019) contradicts the common belief that the absence of barriers in office environments stimulates social interaction: these authors find that open-plan offices do not stimulate face-to-face interaction; instead, they trigger social withdrawal and prompt the inhabitants to choose other forms of interaction,

such as email, as more private alternatives. Paradoxically, then, barriers may actually be vital for productive office environments, as they provide the privacy necessary for meaningful social interaction and complex cognitive work.

Finally, while the layout affords different behaviors and activities, the presence and absence of barriers also elicit sensory experiences and has a symbolic dimension. The absence of barriers leads to increased levels of stimulation through exposure to visual and acoustic cues and reduces individual control over when and with whom to engage in social interaction. This, in turn, may result in distractions and induces stress, which creates an atmosphere that reduces individuals' ability to focus and may be particularly detrimental to knowledge-work tasks (Lee & Brand, 2005; Myerson & Bichard, 2010; Sundstrom et al., 1980). At the same time, barriers and enclosures also symbolize power-structures in the office environment. The presence of enclosures and private spaces – such as the proverbial 'corner office' – creates status differences (Hatch, 1990; Sundstrom et al., 1980). The absence thereof, on the other hand, symbolizes a “breakdown of barriers and silos” (Myerson & Bichard, 2010: 60) and serves as a material manifestation of a non-hierarchical office environment and culture (Elsbach & Bechky, 2007; Hatch, 1990).

**Furniture.** As opposed to layouts, furniture is a less permanent feature of organizational spaces that can be moved and exchanged with relative ease. Specific pieces of furniture can facilitate distinct work processes. Whiteboards, for example, afford the externalization, sharing and storing of ideas and in so doing, enable groupwork and collaborative creative processes (Elsbach & Bechky, 2007; Goldschmidt & Smolkov, 2006). Storage, such as bookshelves, sideboards, or cabinets, affords tasks that require continuity and access to physical resources like books, documentation of work progress and past projects, or models and prototypes. They enable, for example, iterative problem-solving or development processes that unfold over a period of time.

Furniture arrangements can be used to fulfill a function that is similar to walls: they can create permeable, semi-permanent, or flexible partitions in an office layout. Seat or worktable groupings enclosed by bookshelves, for example, can create designated meeting or work group areas. In so doing, they too can mediate the distance and separation of individuals and groups, as well as different work processes within a work environment. They do not, however, typically offer the same degree of architectural or psychological privacy as permanent barriers, simply because they can partition but never fully enclose and shield off different areas in an open-plan office. Furniture arrangements that create designated, permanent work spaces – such as a table, a bookshelf, and document storage – can provide individuals with a dedicated environment for individual work processes that can be customized to meet the needs of different work tasks, as well as personalized to assert the distinct identity of

individuals through physical markers (e.g., photos, plants, or other decoration) (Davis, 1984; Elsbach, 2003; Elsbach & Pratt, 2007; Lee & Brand, 2005).

As a means to create boundaries between individuals, groups, and work processes, furniture can thus not only mediate the degree of distance and separation in the office environment, but also situate individuals and groups in personal, professional, and social categories. In so doing, it can define and symbolize the distinct roles and responsibilities of members organized in and by the space (Elsbach, 2003, 2004; Elsbach & Bechky, 2007).

However, furniture does not only fulfill a function or afford particular actions and behaviors, it also has inherent visual features, such as style, color, and texture, which elicit sensory experiences. Visually complex furniture arrangements, combining many pieces of furniture with one atypical or many different styles, for example, can create environments that are perceived as exciting, provide intellectual and cognitive stimulation and are conducive to creative behavior (Goldschmidt & Smolkov, 2006; McCoy & Evans, 2002). Less visually complex furniture arrangements with familiar and or homogenous styles, in contrast, reduce distractions and create more calming and pleasant surroundings, with fewer visual stimuli and enable focused work (Ceylan, Dul, & Aytac, 2008; Elsbach & Bechky, 2007; Vilnai-Yavetz et al., 2005).

***Ambient surroundings.*** The colors and materials used in an organizational space are features of both permanent structural elements, such as walls and floors, and those that are more flexible (i.e., furniture). Colors and materials elicit both physiological and psychological responses in the inhabitants of a space. Vivid and warm colors, such as red and yellow, are considered to be energetic and stimulating, whereas cool and neutral colors are considered to be less stimulating and thus have a calming effect, reduce stress, and create a private atmosphere necessary for focused work (Ceylan et al., 2008; Elsbach & Bechky, 2007; Sassoon, 1990; Stone & English, 1998). By virtue of being stimulating to the mind, vivid, warm colors are typically conceived of as facilitators of creative behavior (McCoy & Evans, 2002).

Similar to colors, different materials are associated with distinct responses. Natural materials act as visual and tactile reminders of nature and organic processes of becoming and development. In so doing, they enable creative processes. The rigidity and permanence of man-made composite materials, such as concrete, glass, metal and plastic, in contrast, are thought to inhibit creativity (Elsbach & Bechky, 2007; Elsbach & Pratt, 2007; McCoy & Evans, 2002).

Overall, colors and materials can interact with the effects of the layout and furnishings of the physical environment. They can enhance or undermine them (Elsbach & Bechky, 2007; Elsbach & Pratt, 2007) and thus further clarify the behaviors and activities associated with a space. Colors and materials, for example, can be used to introduce visual complexity into spaces with familiar furnishings. They can also be used to specify and signal the intended character

of a space, or a partition of a space. Vivid colors and natural materials, for example, may be used to create a meeting area for creative work. Neutral and cool colors and or composite materials, on the other hand, can be used to create calm environments that facilitate focused knowledge-work. At the same time, however, it is also conceivable that the choice of colors and materials is disconnected from, or even at odds with, the choice of the other design elements. In such cases, where the ambient surroundings are not in synch with the layout or the furnishings of the space, it is conceivable that colors and materials are selected deliberately to signal the desired character, the ‘x-ness’ of the space, rather than to enhance the effects of the other design elements.

As the foregoing discussion suggests, mapping the language of an organizational space requires detailed analyses of different design elements. Not unlike multimodal texts, organizational spaces are cultural artifacts that articulate ideas about the processes, activities, and relationships that are organized in, and associated with, them using different elements. To arrive at a full understanding of the meaning of a space – that is, what kind of place it is understood to be) – differentiated analyses of its constitutive elements, as well as their affordances, aesthetics, and symbolism are necessary.

## The materiality of NVU spaces

Space matters. It shapes life inside organizations by enabling processes, activities and relationships, and by eliciting meanings and emotions that are considered to be desirable in a space – while constraining and repressing others that are not. Spatial design, the dominant pathways of action it sets out to create, the meanings and emotions it seeks to elicit, as well as how it attempts to emplace people can offer insights into conceptualizations of a space. It can thus shed light on the rationality, processes, activities and relationships that are considered to be essential to a space and the kind of place it is understood to be.

As semi-autonomous organizational units, NVUs inevitably have a material and spatial dimension. Like other units in corporations, they typically occupy office space and, at times, even a building that is designated as the ‘garage’ or ‘lab’ space. Since they are oftentimes described as misfits (Birkinshaw et al., 2002; Burgelman, 1985; Fast, 1979a) with a peculiar identity (Fast, 1978), as entrepreneurial enclaves (ibid.) and other spaces (Hjorth, 2005), we should expect these spaces to articulate within their material characteristics a particular aesthetic and material spatial code that captures their rationality.

Although the particular spatial design of NVUs – the typical ‘language’ of NVU spaces – can be viewed as an important carrier of meanings and serve as a window onto the activities and behaviors that are associated with these units, prior work on NVUs has paid very limited attention to these spaces – neither what they, or their designs, look like nor how they are used. For

example, we do not know what the typical spatial design of NVUs suggests about the rationality associated with these spaces. Which processes, activities, and relationships do the spatial designs of these units enable and thus associate closely with what they are and do?

The literature on the dimensions of organizational spaces and the configurations of spatial arrangements, as well as their effects on activities and behaviors, reviewed in the previous section can be used to remedy this shortcoming. In particular, it can be used as an analytical framework that informs theoretically grounded analyses of the spatial language of NVU, for example, in depictions of NVU spaces. More specifically, analyzing depictions of space in the context of NVUs for their typical layout, furnishings and ambient surroundings can offer useful insights into what NVU spaces are believed to look like, or what corporations want these spaces to look like.

Particularly interesting is what corporations mean when they refer to NVUs as spaces that enable ‘entrepreneurial activity’. This vaguely defined umbrella term encompasses a multitude of different tasks and activities, ranging from environmental search to the creation and refinement of novel ideas, as well as their implementation and commercialization (Ahuja & Lampert, 2001; Hsieh, Nickerson, & Zenger, 2007; Kanter, 1985; Kanter et al., 1991a; Scott & Bruce, 1994; Stevenson & Jarillo, 1990; Von Hippel, 1977). And yet, corporations seldom explain in more detail their understanding of the notion of entrepreneurial activity. An analysis of the materiality of NVU spaces can offer insights into the processes, activities and relationships that these units ought to organize, as well as clarify what kind, or aspects, of entrepreneurial activity they are associated with and considered being vehicles for. If they are to be places for the full range of ‘entrepreneurial activity’, for example, one would expect multifaceted spaces with diverse layouts, furnishings, and ambient surroundings accommodating a range of different tasks to be typical for NVUs. If, on the other hand, they are viewed as spaces that should specialize in one or more aspects of entrepreneurial activity, one would expect a narrower and more specific spatial language.

# Methods

In this section, I provide an overview of, and discuss, the methodological approaches employed in the papers of this thesis. Consistent with the underlying theme of moving from traditional ways of seeing NVUs in the corporate entrepreneurship literature to new ways of seeing, the methodological approaches in the papers evolve, depending on the particular questions addressed in each paper.

In Paper I, we set out to investigate whether NVUs are effective vehicles for corporate venturing, that is for adding new businesses and revenue streams to the firm. That such units are effective vehicles for corporate venturing is one of the central assumptions in the literature, which has come to be taken for granted, and yet – to our knowledge – never been tested empirically. We examine the applicability of this assumption by investigating the effect of placement in an NVU on the subsequent survival of new ventures within the parent corporation. To operationalize this targeted question about placement in NVUs and the subsequent survival of new ventures, we employ a quantitative research design.

Papers II–IV have a different objective and thus also a fundamentally different research design. Here, rather than seeking to test or validate a specific, assumed relationship, my co-authors and I seek to open the ‘black box’ of NVUs as an organizational phenomenon and provide a deeper understanding of the key themes and properties of these units that are articulated in corporate discourse about NVUs. Such questions, which aim at advancing our understanding of the phenomenon, call for a qualitative research design. In keeping with the interest in mapping the intersubjectively shared and socially approved ideas, beliefs and understandings of these units, Papers II–IV thus all employ a discourse analytical approach. At the same time, however, the questions asked in these papers differ with respect to their scope and the aspects of NVUs they examine. As a result, the concrete research designs and analyses differ and move from exploratory to theoretically grounded.

In light of the two-pronged methodological approach, the remainder of this section is divided into two major subsections. I begin by outlining and discussing the quantitative approach employed in Paper I. This is followed by a discussion of the core elements of a discourse analytical approach, the introduction of a concrete framework for discourse analysis in the visual mode

and in multimodal texts, as well as an overview of how these frameworks have been implemented in Papers II–IV.

## Measuring the Effect of NVUs on the New Ventures they Accommodate – A Quantitative Approach

### Sampling

Paper I draws on survey data that contains detailed information about the nature and fate of 90 internal new ventures introduced in 37 Swedish corporations. To be included in the sample, new ventures had to represent autonomous initiatives of employees that were novel, innovative, did not naturally fit into the firm’s strategy, and had to have moved from what Burgelman (1983a: 226) refers to as the “conceptual” to the venture stage – that is, entered a stage in which serious and regular efforts were directed at developing the new venture (for a full description of the data collection see Czernich, 2004).<sup>19</sup>

As information about internal new ventures is not typically publicly available (Garrett Jr & Covin, 2015), the data were collected using a snowball sampling strategy. Ventures to be included in the sample were identified using more and less formalized searches for intrapreneurs using resources such as the alumni network of the Executive Education Program at the Stockholm School of Economics, the network of the Royal Swedish Academy of Engineering Sciences (IVA), and articles in the Swedish business press. These efforts were carried out by a team of researchers in two waves, with the first wave taking place in 2000 and 2001, and the second wave in 2014. Of the 90 observations, four internal new ventures were removed from the sample, because they were developed in companies that were considerably smaller than all other firms in the sample and would not adequately reflect the large-firm corporate structures and dynamics discussed in the NVU literature.

### Data collection

Data were collected from key informants with detailed knowledge of the nature of the new products or services, as well as how the venture developed within the parent corporation. These key informants were typically the inventors or entrepreneurs who had conceived of the new venture as well as, in very few cases, the manager who took over the management of the new

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<sup>19</sup> Not included were ventures introduced through independent entrepreneurial efforts (i.e., ventures not introduced within established corporations), as well as those that had been acquired from outside sources or represented close imitations of already existing technical solutions.

venture. Irrespective of their formal role in the organization, all key informants were or had been actively involved in, and worked with, the venture on a day-to-day basis.

The 128-item questionnaire that is the basis of Paper I was completed during face-to-face meetings that proceeded in two stages. First, to reduce potential problems of hindsight bias and selected recall that are associated with retrospective data (Allison, 2010; Golden, 1992), the research team conducted 45 to 90 minute long interviews with the respondents. These interviews explored the background and history of the new business venture in-depth, including the time of its establishment, current stage of development, and any particular features and events associated with the new venture. This detailed discussion of the new ventures' history fulfilled the dual purpose of ensuring that the key informant did, in fact, possess detailed knowledge about the new venture and its development and that of prompting or activating the respondents' memory prior to completing the questionnaire. In the second stage, the key informants filled out the survey in the presence of one or two members of the research team. Completing the questionnaires in such a controlled setting in direct connection with the initial interview ensured that the key informants were, in fact, the ones responding to the survey.

## Statistical method

How new venture placement in a NVU affects survival within the parent corporation was tested by means of survival analysis, which is also known as event-history analysis in the social sciences (Allison, 2010). Survival or event-history analysis refers to a group of statistical methods that estimate the time until an event of interest – that is, a qualitative change from one discrete state to another – occurs (Allison, 2010; Kleinbaum & Klein, 2012). The event of interest is typically a negative one, such as failure, death or – in our case – the termination of a new venture.

Survival analysis estimates the effect of one or more independent variables on the survival time of the individuals in a sample, based on information about the occurrence and timing of events (Allison, 2010; Kleinbaum & Klein, 2012). This effect can be measured using either a survivor function, which focuses on the event not occurring, or a hazard function  $h(t)$ , which focuses on the event occurring and estimates the probability that an event occurs, given that it has not already occurred at time  $t$ . While both mathematical expressions can be used, survival analyses are typically modelled using a hazard function and estimate the hazard rate (Allison, 2010; Blossfeld, Hamerle, & Mayer, 1989; Kleinbaum & Klein, 2012). We employ a hazard function and estimate the probability that an internal new venture is terminated – or the hazard ratio of internal new venture termination – in Paper I.

Within the broader group of statistical methods, we employ a Cox proportional hazards (PH) model. This model is the most frequently used

approach for analyzing event-history data, as it offers robust estimates in a variety of data situations and uses information about survival times, as well as censoring (Allison, 2010; Blossfeld et al., 1989; Cox, 1972; Kleinbaum & Klein, 2012). In the Cox PH model, the hazard rate is estimated as the product of the baseline hazard  $h_0(t)$  and additional explanatory variables  $X = (X_1, X_2, \dots, X_p)$ , or covariates, which are not time-dependent. The hazard ratio  $\widehat{HR}$  is calculated as the hazard rate of a ‘treatment’ group relative to the hazard rate of a ‘non-treatment’ group (Allison, 2010; Kleinbaum & Klein, 2012).<sup>20</sup> In other words, it does offer insights into the idiosyncratic effect of different explanatory variables on the probability that an event occurs, specifically, the incremental change in the hazard rate associated with a one-unit change in the explanatory variable (Blossfeld et al., 1989). A hazard ratio of greater than one indicates a higher probability that an event will occur, while a hazard ratio of smaller than one indicates a lower probability that an event will occur.

A typical example would be a clinical study, estimating the effect of a treatment on the survival of patients in the sample, where some patients do receive the treatment and others do not. In our case, the ‘treatment’ is placement in a NVU, and we estimate the effect of this dichotomous independent variable (1 if a new venture was placed in an NVU and 0 if new venture was not placed in an NVU) on the survival of new ventures within the parent corporation.<sup>21</sup>

In our analyses, we also controlled for other variables that have been discussed in the literature as potentially affecting the survival of internal new ventures within the host corporation: *internal new venture relatedness*, *internal new venture novelty*, *internal new venture performance*, *competition for resources*, and *corporate size*. For an in-depth discussion of the effects of these variables on new venture survival hypothesized in the literature, see Paper I. The statistical tests also included a set of *firm dummies*.

We defined the survival of an internal new venture within the firm as the retention of a new venture at the time of data collection. As we are interested in the survival of internal new ventures *within* the firm, in this study termination includes both new ventures that were formally discontinued and those that had been spun off at the time of data collection. Thus, what is referred to in Paper I as ‘termination’ is perhaps more accurately understood as ‘non-survival’ within the firm.

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<sup>20</sup> The Cox PH Model is expressed as follows in mathematical terms:  $h(t, X) = h_0(t)e^{\sum_{i=1}^p \beta_i X_i}$ . The hazard ratio is expressed as  $\widehat{HR} = \frac{\widehat{h}(t, X^*)}{\widehat{h}(t, X)}$  (see, for example, Kleinbaum & Klein, 2012).

<sup>21</sup> An alternative statistical model that could potentially be used to analyze such data would be a logistic regression analysis with a dichotomous dependent variable: survival and non-survival. Because logistic regression models do not consider information such as survival times or the censoring of the data, however, these models are likely to result in less precise estimates (Allison, 2010; Kleinbaum & Klein, 2012). Put simply, while logistic regression models can be used to estimate the likelihood of survival vis-à-vis non-survival, they are less suited for estimating the effect of an independent variable on survival *times*.

The age of a new venture is the timespan between the year in which new venture champions started investing serious and regular effort in the new venture and the year in which it was terminated or spun off. For those new ventures that were still alive at the time of data collection, the ending year was the year of data collection. However, we do not know the exact survival time for those ventures that were still alive at the time of data collection beyond this point in time. Consequently, our data are right-censored, meaning that we have no information other than that the event of interest (i.e., termination or spin-off) had not yet occurred when the data was collected for the surviving new ventures. The Cox PH model, however, accounts for right-censored data by considering the probabilities only for those observations for which the event occurred (Kleinbaum & Klein, 2012).

### Sample characteristics

The final sample, after the removal of the four ventures that originated in companies that were significantly smaller than the others, consisted of 86 internal new ventures introduced by 33 corporations, which were active in various industries, ranging from IT and telecommunications to automotive vehicles, pharmaceuticals, steel, pulp and paper, and electrotechnical equipment, and had average sales of USD 12.4 billion (median USD 6.8 billion).

At the time of the data collection, 38 of the 86 new ventures in the final sample were still retained, and thus surviving within the parent corporation. Forty-eight ventures had either been terminated or spun off. The age, or survival time, of the new ventures ranged from 1 to 29 years. The median age was 6.5 years and 70% of the ventures in the sample survived within the corporation for 10 years or less. Of the new ventures, 29 had been placed in a NVU, whereas the remaining new ventures were developed within the mainstream organization. In robustness tests, we explored the effects of excluding cases of especially long survival times in the parent corporation.

Beyond testing for the relationship between placement in a NVU and survival within the parent corporation, we explored whether and to what extent new ventures that were placed in NVUs differed systematically from those that were not. In particular, we investigated whether they were significantly more or less novel and different, as well as whether they experienced a more or less munificent intraorganizational environment than their non-NVU peers. To get an understanding of the characteristics of the two groups of ventures in the sample ('placed in NVU' and 'not placed in NVU'), we compared the differences in means for the degree of *internal relatedness*, *external novelty*, *internal threat*, and *internal resistance* using T-tests. We found no significant differences in means for any of the four variables that we tested (see Paper I for the exact values). This suggested that in these important respects, new ventures placed in NVUs did not differ systematically from those that were

not. It is thus reasonable to assume that the results of our statistical analyses using the Cox PH model are unlikely to be driven by the co-variables modelling venture characteristics, but by the main explanatory variable NVU.

## Understanding NVUs – A Discourse Analytical Approach

### A brief introduction to discourse analysis

Discourse analysis encompasses a variety of different approaches, which have in common a social constructivist ontology and a focus on analyzing patterns in *language use* – that is, *what* is communicated and *how* it is communicated (Jørgensen & Phillips, 2002). These approaches differ in their understanding of ‘discourse’ and in their particular interests.

Some approaches, such as discursive psychology and conversational analysis, focus on small ‘d’ discourse, or communication in everyday interaction at the micro-level. Others, such as discourse theoretical analysis, focus on big ‘D’ Discourses that exist at the societal level and permeate communication at the meso- and microlevel (Alvesson & Kärreman, 2011; Carpentier & De Cleen, 2007; Jørgensen & Phillips, 2002). An additional point of divergence is the relative focus on the role of discourse in the ongoing construction of social reality versus discourse as an instantiation of, or conduit for, social reality in which social knowledge and meanings associated with a particular worldview are reproduced and can be observed (Jørgensen & Phillips, 2002).

In Papers II–IV, we draw on two established discourse analytical approaches for verbal and visual text, which view texts as manifestations of actors’ social stock of knowledge and set out to shed light on the discursive dimension of social and cultural phenomena by examining language use (Foucault, 1973; Kress, 2012; Kress & Van Leeuwen, 2006). Along the continuum of discourse analytical approaches, the methodological approach employed in Papers II–IV can thus be situated in the discourse as instantiation of social reality camp.

More specifically, we combine the semiotic analysis of images (Barthes, 1977a; Höllerer et al., 2019; Jewitt & Oyama, 2004; Kress, 2012; Kress & Van Leeuwen, 2006; Van Leeuwen, 2005, 2011) and elements of discourse analysis in the tradition of Foucault (Angermüller, 2014; Arribas-Ayllon & Walkerdine, 2017; Cheek, 2008; Foucault, 1972, 1973; Springer & Clinton, 2015) into a multimodal discourse analysis of the empirical material aiming to uncover recurrent and central ideas about NVUs articulated in multimodal texts (Jørgensen & Phillips, 2002). In essence, we are focusing on central ideas – or nodal points – in the corporate discourse about NVUs around which other

ideas are ordered (Carpentier, 2017; Jørgensen & Phillips, 2002). These ideas are the basis of the social order and at the center of the corporate knowledge about NVUs, or, in other words, instantiations of key themes and properties of NVUs that are articulated in corporate discourse about these units.

### ‘Doing’ visual and multimodal discourse analysis

In keeping with the dual focus of multimodality research on exploring how meaning is (re-)produced both in other modes of communication and in multimodal ensembles, the analyses of images and both words and images in Papers II–IV require two analytical frameworks: first, a framework guiding how to ‘do discourse analysis’ in the visual mode, and second, a framework guiding the multimodal analysis of texts. Both are discussed in this section.

#### **A framework for analyzing visual discourse**

Like other modes of communication, images are composed of fundamental functional components, or metafunctions, which make up visual structures and imply particular interpretations and meanings (Halliday, 1970; Jewitt & Oyama, 2004; Kress & Van Leeuwen, 2006). These functional components, in turn, can be analyzed to uncover the interpretations, meanings, and world view that are typical for the visual discourse about a phenomenon of interest in a particular context. By analyzing these visual structures, one can catch a glimpse of the underlying meaning structures.

In this thesis summary, and the papers on which it is based, I focus on two of the three metafunctions: the *ideational* (Papers II–IV) and the *interpersonal* (Paper II) metafunction. The *ideational* metafunction refers to the subject matter of an image, which represents the people and things depicted in and by an image, as well as the actions and or processes in which they are involved. It creates the ‘world’ of the image and can be analyzed for patterns of representation. The *interpersonal* metafunction creates a social relation between what is depicted in the image and the viewer through stylistic means such as contact, distance, and point of view which construct an embodied perspective and relation. This perspective suggests how the viewer should interact with, or relate to, the depicted and can be analyzed for patterns of interaction.

***Ideational metafunction.*** The subject matter of images can be analyzed for two main components: the represented participants or the people and (in)animate objects depicted in an image and the relations between the represented participants – that is, whether they are depicted as doing something to or for each other or rather in terms of their essence (Jancsary et al., 2017; Jewitt & Oyama, 2004; Kress & Van Leeuwen, 2006). Images in which the represented participants engage in some (inter-)action are narrative images, which depict and offer insights into the ‘goings-on’ of the world of the image through the use of vectors – invisible lines formed by participants –

that are the visual equivalent of action verbs (Kress & Van Leeuwen, 2006). Beyond depicting an (inter-)action, narrative images also depict the circumstances and the setting in which the depicted (inter-)action takes place and thus contextualize the narrative. Images without vectors connecting the represented participants are conceptual in nature and communicate more abstract ideas and visually classify, analyze or define the represented participants (Jewitt & Oyama, 2004).

People, objects, and (inter-)actions that feature very prominently in images are designed to attract the attention of the viewer and designate the relative importance of elements depicted in and by an image (Kress & Van Leeuwen, 2006). Salient elements are central to the subject matter of the image, while inconspicuous elements typically depict marginal ideas (ibid.). Mapping the salient elements in an image and analyzing recurring patterns of salient elements across a corpus of images can offer insights into the actors, actions and objects that are commonly associated with, and central to, a visual discourse. The two main components of the ideational metafunction and their different manifestations, which are described in the literature, can be used as a coding scheme for systematic analyses of both individual images and visual discourse. In the case of NVUs, a systematic analysis of the ideational metafunction can offer insights into the typical actors, actions, and (in-)animate objects that are central to the corporate understanding of the world of NVUs.

***Interpersonal metafunction.*** The social relations between the depicted and the viewer, implied by the use of stylistic elements in an image (Jewitt & Oyama, 2004; Kress & Van Leeuwen, 2006; Pauwels, 2012), can be analyzed for three main components: contact, social distance, and point of view. Contact between the depicted and the viewer is established through eye-contact. A represented participant looking directly at the viewer, such as the famous Uncle Sam poster calling for Americans to enlist in the army, creates an imaginary relation and a sense of involvement between the represented participant(s) and the viewer (Jancsary et al., 2017; Kress & Van Leeuwen, 2006). Absent eye-contact, a sense of detachment is created: the subject matter is presented as an item of information and an object for inspection to be examined by the viewer (Jewitt & Oyama, 2004; Kress & Van Leeuwen, 2006).

Social distance is realized through the extent to which the represented participant's body is visible (Bell & Milic, 2002) and ranges from close-up images creating an intimate relationship between the depicted and the viewer (Jewitt & Oyama, 2004; Kress & Van Leeuwen, 2006), to mid-shots keeping the viewer at an 'arms-length' distance and long-shots, which depict the subject matter as out of reach and highlight its 'otherness' (Jancsary et al., 2017; Jewitt & Oyama, 2004; Kress & Van Leeuwen, 2006). The smaller the embodied distance between the represented participants and the viewer, the closer the suggested relationship and extent to which the viewer is prompted

to identify with the depicted subject matter. The greater the distance, the further removed the viewer should feel from the depicted subject matter.

The point of view refers to the position of the viewer, relative to the depicted subject matter and is created through the use of angles. The vertical angle, in particular, articulates the implied power-relation between the viewer and the depicted. Looking down on the represented participant puts the viewer in a position of symbolic power, looking up to the represented participant, in a subordinate position (Jancsary et al., 2017; Jewitt & Oyama, 2004; Kress & Van Leeuwen, 2006). At eye-level, both are equals.

Analyzing the interpersonal metafunction for these elements can offer insights into the patterns of interaction that are established in, and typical for, a visual discourse and offers insights into recurrent, central embodied perspectives. The results of these analyses can offer insights into, for example, whether images are typically positioned as calls to action, seeking to draw the viewer into the depicted world, or as pieces of information, offering a glimpse into the depicted phenomenon and the typical actors and actions associated with it. The former would point to overt attempts at convincing or persuading the viewer of an idea, or to identify with and become part of the world of the image; the latter would point to efforts to inform the viewer and articulate ideas about the actors and actions associated with the phenomenon of interest.

Another aspect of the interpersonal metafunction, which is conceptually somewhat different from the embodied perspective created by contact, distance and point of view, is *modality*. Unlike the other three stylistic means, which imply a distinct relationship between the viewer and the depicted, modality conveys the commitment or attitude of the image producer with regards to the depicted subject matter, as well as how the subject matter ought to be received by the viewer – that is, whether it is intended, and should be received as, truth, fact, fiction, suggestion, or interpretation (Jørgensen & Phillips, 2002). In images, modality is articulated through the facticity of the depiction, i.e. “*as how true*” or real the subject matter of an image is presented (Kress & Van Leeuwen, 2006; Van Leeuwen, 2005: 160, emphasis in the original) and realized through cues like color, contextualization, the level of detail and lighting conditions. These cues form a continuum, ranging from naturalistic images like photographs, to abstract images like diagrams, graphs, or drawings.

At one end of this continuum are naturalistic images, such as photographs, which are rich in detail and bestow concrete, material form onto the subject matter. They present their subject matter “as if we saw it in reality” (Kress & Van Leeuwen, 2006; Van Leeuwen, 2005: 168) and, in so doing, endow the depicted with credibility and present, or seek to establish, what they depict as truth or fact. Photographs, in particular, have a special credibility because they present themselves to the viewer as records of reality and conceal that they have been worked on, chosen, or constructed according to societal norms through their truth-like representation (Barthes, 1977a). This, in turn, allows

photographs to “pass of as merely denoted a message which is in reality heavily connoted” (Barthes, 1977a: 21). Photographs, in other words, are uniquely suited to cloak second-order messages, which are encoded in compositional and stylistic choices, in a seemingly objective record of analogical perfection. Abstract images, at the other end of the continuum, have low modality. They typically depict the subject matter devoid of context, with few details, highlighting its deeper essence rather than concrete, or specific instantiations (Kress & Van Leeuwen, 2006; Van Leeuwen, 2005).

Modality can offer insights into the degree to which images set out to establish their subject matter as fact or truth or remain fiction in the visual discourse about a given phenomenon. In so doing, it indicates what is considered true in a particular context or community (Kress & Van Leeuwen, 2006). Truth-like images depicting interchangeable, de-contextualized subject matters, however, can also be used to present, disguise, or establish ideas and interpretations as facts – to pass of as ‘truth’ what is actually merely an idea or a claim. In so doing, truth-like images can be used to articulate a theory, rather than to present facts, about a phenomenon and try to establish ideas and interpretations as truth on the basis of the credibility embodied in the facticity of the representation (Jørgensen & Phillips, 2002; Machin & Van Leeuwen, 2007). Overall, an analysis of modality can offer insights into how images in a visual discourse are used and what objectives they aim to accomplish.

### **A framework for analyzing multimodal discourse**

Pauwels (2011b, 2012) proposes a general and comprehensive framework for analyzing multimodal texts, which is specifically aimed at websites as cultural expressions. He proposes a step-wise approach that moves from “fairly easy-to- quantify and code data, to more interpretative analysis focused on [...] unravelling their intended and even unintended meanings” (Pauwels, 2012: 252), as well as from intra-modal analysis (i.e., separate analyses of the different modes of the multimodal text) to an analysis of the cross-modal interplay between the different modes. The latter abides by Barthes’ (1977a) assertion that understanding multimodal ensembles, as well as how the elements of different modes complement or interact with one another, requires first an exhaustive study of the different modes and their idiosyncratic language use.

*Choosing a method for intra-modal analyses.* Left open within this framework, and to be decided for each research project, are the concrete methods for a systematic intra-modal analysis of visual and verbal elements in a multimodal text. Given our interest in the intersubjectively shared ideas, beliefs, and understandings that make up corporate knowledge about NVUs, in paper IV, we integrate Pauwels’ broad approach to multimodal analysis with the framework for visual analysis outlined in the previous section. For the analysis of verbal elements, we draw on discourse analysis in the tradition of Foucault, which sets out to make evident systems of thought and knowledge

that operate beneath the surface and delimit what can and cannot be thought or said about a phenomenon in question (Foucault, 1972, 1973). In the Foucauldian tradition, discourses are understood as hegemonic practices (Mills, 1997), frameworks, and logics of reasoning that create object and subject positions, govern what can and cannot be said, and emerge in what is or is not said in texts. These ideas, frameworks, and logics of reasoning are instantiated in recurring patterns of language use – in *what* is said and *how* it is said.<sup>22</sup>

As Foucault actively resisted to commit to, or prescribe, a concrete method for inquiry, discourse analysis in this tradition typically uses conventional data collection techniques (Cheek, 2008) and is applicable ‘wherever there is meaning’ (Parker 1992: 1 in Arribas-Ayllon & Walkerdine, 2017). In practice, these recurring ideas can be uncovered by collecting recurring words, phrases, statements and claims and critically examining “‘*how*’ and ‘*why*’ [these] particular words, phrases, statements, claims” (Springer & Clinton, 2015: 88, emphasis in the original) or utterances are made and not others, without assuming unity and sovereignty of the speakers (Angermuller, 2014; Foucault, 1972, 1973). This does not, however, mean that the veracity of the text should be questioned: critical engagement with the utterances made aims at analyzing their constitutive function as statements of a discourse only (Angermuller, 2014). Not questioned are the truthfulness of the textual sources, as well as whether or not the pre-construct is accepted or refused by actors. Instead, utterances, statements and claims made in texts are considered parts of a hegemonic discourse, irrespective of the actors’ stances.

***Analyzing the cross-modal interplay.*** The cross-modal interplay between the elements of different modes combined into a multimodal text can be analyzed at the level of the individual text or at the level of discourse (Pauwels, 2012). At the level of the individual text, one can analyze how the formal composition of the texts – that is, the placement of words and images relative to their content – shapes the meaning created by the multimodal ensemble as a whole. Here, the focus is on whether, and to what extent, the placement of words and images relative to their content reinforces, undermines, or contributes to a common message of the text. Such micro-level analyses can offer insights, for example, into how ideas and understandings that are instantiated intra-modally play out in an individual text.

At the level of discourse, one can analyze how dominant ideas conveyed, and patterns of language use, in the different modes relate to one another – that is, whether they overlap, diverge, support, or undermine each other. Such macro-level analyses can offer more nuanced insights into the meaning structures in multimodal discourse about a phenomenon, as well as

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<sup>22</sup> One does not, necessarily, have to agree with the hegemonic practice. To debate it, however, is almost impossible – therefore, they will be invoked by and materialize in verbal text.

intersubjectively shared ideas and socially approved understandings that constitute social knowledge at the field-level.

## Empirical material

In line with my view of texts as carriers of social knowledge, I take an archaeological approach and systematically analyze pre-existing multimodal texts using the analytical frameworks outlined in the previous section to reconstruct the socially constructed meanings they embody (Höllerer et al., 2019; Meyer et al., 2013). Pre-existing texts are an especially valuable resource for this type of research, for they are ‘naturally occurring’ and reflect ideas contained in existing discourse, rather than researchers’ choices to capture aspects that are analytically interesting to them (Hindmarsh & Llewellyn, 2018; Jancsary et al., 2017; LeBaron, Jarzabkowski, Pratt, & Fetzer, 2018). As a form of cultural memory, they can offer insights into the research subjects’ intersubjectively shared, social knowledge about phenomena such as NVUs and allow the researcher to capture and incorporate their voices and perspectives (Ray & Smith, 2012). For Papers II–IV, thus, I turned to pre-existing multimodal texts, containing both words and images, which describe NVUs as a window onto firms’ intersubjectively shared, culturally embedded, situated social know-ledge about these units.

To analyze the ideas and understandings associated with contemporary NVUs, I focused on a particular genre of communication in the corporate world: corporate websites. This genre is inherently multimodal and combines elements from different modes, including – but not limited to – images and verbal descriptions (Idema, 2003; Meyer et al., 2018). Like (annual) reports, corporate websites typically provide an overview of corporate activities, communicate corporate visions, and share commitments to important issues, such as corporate social responsibility and innovation, with different audiences (Esrock & Leichty, 2000; Pauwels, 2005, 2011a, 2012). As such, corporate websites are made to convey a particular message (Pauwels, 2011b). They are, in short, culturally-embedded self-representations of corporate perspectives on various issues, which are conveyed to external audiences on behalf of the organization and reflect claims, statements, and positions that are – at the very least – sanctioned by the organization (Pauwels, 2011a).<sup>23</sup>

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<sup>23</sup> It should be noted here that an organization can be more or less involved in the construction of the message conveyed on a corporate website: members of the organization can be actively involved in the creation of visual and verbal content, but also more passively select texts and images created by different actors (e.g., consultants or stock image galleries) or merely order, review and approve content from a different actor. Notwithstanding by whom the content was created, however, what is placed on a corporate website and broadcasted to a variety of internal and external audiences is an important messaging channel for the organization and will thus, at the very least, be examined with respect to whether (or not) it appropriately represents the views of the organization and approved if the message conveyed is considered appropriate.

## **Sampling and collection of empirical material**

The empirical material for Papers II–IV was collected systematically using a purposive sampling strategy (see, for example, Kerlinger, 1986; Patton, 1990). The aim of this sampling strategy was to collect multimodal texts from corporate websites of companies that are likely to yield substantive insights into corporate NVUs in a European context. Accordingly, I focused on identifying large, established companies headquartered in north-western Europe, which was the overall geographic focus of this thesis,<sup>24</sup> and maintained a NVU that was easily identified by terminology such as innovation ‘garage’, ‘lab’, or ‘center’ and provided an environment in which employees can create and develop new ventures.

To identify firms that met these criteria, I used the Fortune Global 500 ranking from 2017 and the German DAX30 index as sampling frames. The Fortune Global 500 ranking lists the 500 largest corporations in the world measured by the total revenue. The DAX 30 index lists the 30 largest stock-market-traded companies in Germany by market capitalization. From these two lists, I generated an initial sample of 100 firms. The companies in this initial sample were active in a wide range of industries, such as automotive, banking, financial services, chemicals, pharmaceuticals to retailing, utilities and telecommunications. Of the 100 companies, 41 were headquartered in Germany; 24 in the UK; 14 in Switzerland; 14 in the Netherlands; three in Sweden; and one each in Denmark, Norway, Luxemburg, and Belgium.

For each of these 100 companies, I then conducted a systematic search for NVUs that provided an environment in which employees can create and develop new ventures. To this end, I manually searched their corporate signature websites and official documents available on these websites (e.g., annual reports, press releases, blog posts) for information about innovation initiatives. In order to ensure that no NVUs were omitted, I conducted an additional web search for keywords like ‘innovation’, ‘new ventures’, ‘(innovation) garage’, ‘(innovation) lab’, and ‘(innovation) center’ in combination with the company name. In total, 84 of the 100 companies in the initial sample maintained some kind of dedicated innovation initiative.

For each identified innovation initiative, I reviewed the available descriptions to assess whether the initiative did, in fact, meet the criteria for a NVU. Excluded were companies with dedicated innovation initiatives that exclusively made equity investments in privately-held entrepreneurial ventures that were independent from the investing corporation (Dushnitsky, 2008). Also excluded were units labelled innovation ‘lab’ or ‘center’, if they were traditional R&D units, which focused primarily on technological innovation within the core business of the company; if they were independent

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<sup>24</sup> Here, north-western Europe refers to German-speaking countries (Germany, Austria, Switzerland), the Nordic countries (Sweden, Denmark, Finland, and Norway), the Benelux union (Belgium, the Netherlands, Luxembourg), and the United Kingdom.

entities maintained by a group of companies; or if they referred to initiatives focused primarily on arranging temporary or sporadic community engagement events, such as idea fairs or hackathons. This step produced a final sample of 31 companies, which were headquartered in north-western Europe and maintained a NVU that met the criteria for inclusion. One company was removed from the sample as the NVU was established in the same year as the empirical material was collected. All other companies had established the NVU at least two years prior to the collection of the empirical material, suggesting that all of these units were operational and not in a ‘start-up’ phase. The oldest NVU in the sample had been in operation for 11 years when the empirical material was collected.

For the remaining 30 companies, all available multimodal texts describing, presenting, or introducing the respective NVUs were collected from corporate signature websites and websites specific to the NVU, if they had a clear affiliation with the parent company (for example, if a link to the website was provided or the name of the corporate parent was part of the website URL). This included, for example, the landing page for a unit and sections with labels such as ‘about us’, ‘who we are’, ‘what we do’, and ‘what is [unit]’ – labels under which the different units’ activities, role, and way of working were described and presented both in written text and with images.<sup>25</sup>

The empirical material was collected initially in early 2018 and generated a corpus of multimodal texts consisting of 464 images and about 48,000 words in total. However, I also regularly followed up on the content of the websites and collected additional images from the companies in the sample whenever the websites were updated. Over the course of the one and a half years, during which I tracked the contents of the websites of the 30 companies, five companies added new images to the online presence of their NVU, and an additional 111 images were collected by mid 2019.

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<sup>25</sup> No empirical material was collected, if secondary data (e.g., news articles or videos generated by a web search) showed that an NVU existed, but it was not mentioned on corporate websites (neither in content nor available documents) or only presented on a separate website with no apparent connection to the parent, as this indicated that the units were fully autonomous, without clear links to the parent company.

## An overview of the structure of the empirical material

In total, the empirical material encompasses 575 images and about 48,000 words. In line with their specific research designs, Papers II–IV do, however, make use of and focus on different parts of this corpus of multimodal texts (see Table 2 for an overview).

Table 2. Overview of the empirical material and how it is used in Papers II–IV

	<b>Companies</b>	<b>Corpus of Images</b>	<b>Corpus of Words</b>	<b>Collected in</b>
Paper II <i>Visual Analysis</i>	30	464 (on average 15,5 images/company)	-	Early 2018
Paper III <i>Visual Analysis</i>	30	575 (on average 19 images/company)	-	Early 2018 – Mid 2019
Paper IV <i>Multimodal Analysis</i>	10	230 (on average 23 images/company)	~ 20,000 (on average 2,000 words/company)	Early 2018
Total	30	575 (on average 19 images/company)	~ 48,000 (on average 1,600 words/company)	Early 2018 –Mid 2019

Papers II and IV build on the same, initial corpus of texts, consisting of 464 words and ca. 48,000 words. In Paper II, I explore the visual registers – that is, patterns in the use of visual language – that are characteristic of the NVU discourse on corporate websites in the initial set of 464 images. In Paper IV, my co-authors and I analyze ideas and understandings about NVUs communicated in both words and images in a subset of 10 companies. To understand how the what, why and how of contemporary NVUs are articulated in words and images, we selected the ten companies with the most images from the initial sample. We opted for this strategy to ensure that we had a sufficiently large corpus of images and verbal descriptions to support in-depth analyses of both. The resulting corpus of multimodal texts analyzed in Paper IV encompasses 230 of the 464 images and about 20,000 of the 48,000 words collected in early 2018. In Paper III, I conduct a theoretically grounded analysis of depictions of space in the complete set of 575 images collected in 2018 and 2019.

Of the 30 companies from which the empirical material was collected, 19 were headquartered in German-speaking countries, six in the U.K., three in the Benelux region, and two in the Nordic countries. The thirty companies were active in a variety of industries, including aerospace and aviation, automotive production, logistics, chemicals, pharmaceuticals, retail, software, utilities, tele-communications, and banking and financial services. Six of the thirty companies were active in the banking and financial services and three in the telecommunications industry. The industries that make extensive use of

images are the banking and financial services industry (91 of 464 images in Paper II and 54 of 230 images in Paper IV), telecommunications (57 of 464 images in Paper II and 31 of 230 images in Paper IV), and the automotive industry (43 of 464 images in Paper II and 43 of 230 images in Paper IV). Together, they account for 41% of all 464 images analyzed for Paper II and 55% of all 230 images analyzed for Paper IV. While they do represent a significant share of the visual discourse, however, these industries are still very diverse. Thus, the findings of the analyses will offer insights into ideas about NVUs that are shared across industry-boundaries, rather than industry-specific ideas.

## Analytical procedures

In keeping with the aim of identifying intersubjectively shared and socially approved ideas and understandings about NVUs, Papers II–IV focus on identifying *field-level* patterns in the visual and multimodal discourse about NVUs on corporate websites. More specifically, since there is no prior research exploring visual or verbal representations of NVUs in corporate communication, the focus in all three papers was on exploring and mapping meaning structures that are articulated in the empirical material. Rather than trying to understand the idiosyncratic, particular applications, or local translations of shared ideas and understandings of these units, I sought to map and understand the common, shared ideas and understandings that large corporations articulate about this phenomenon at the level of discourse – what they understand and depict as typical and characteristic for these units.

### **Paper II – Exploratory analysis of visual registers**

In Paper II, I explore the meanings contained in the visual register of corporate websites introducing and presenting these units by mapping patterns of representation in the ideational and interpersonal metafunctions of the 464 images analyzed. First, I mapped the presence and absence of elements and subject matters depicted in the ideational metafunction for all images, using descriptive terms capturing who or what was displayed in the image for each category (Kress & Van Leeuwen, 2006).<sup>26</sup> In this step of the coding process, I focused on the most salient elements displayed in and by the images – that is, the people, objects, and (inter-)actions that featured very prominently in them.

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<sup>26</sup> For the ideational metafunction, *represented participants* were coded as [people], [material objects], [nature] using descriptive labels to capture in more detail who or what was depicted in the image. *Relations* were coded as [narrative] or [conceptual], depending on whether or not a vector connecting the represented participants could be identified. For images depicting narrative processes, the depicted [process], as well as the circumstances ([setting], [means]) where these were discernible, were coded, using descriptive labels. For conceptual images, the kind of process ([classificational], [analytical], or [symbolic]) was coded, again using descriptive labels to describe what was being classified, analyzed, or defined in and by the image.

To capture the subject matter depicted by an image in its richness, I also coded multiple represented participants depicted in one image where applicable. One example would be a group of people interacting with a material object in an image, where both of these elements are placed in the foreground. Converging descriptive labels within the different categories were later merged.

In a second step, I focused on the interpersonal metafunction and coded the stylistic features of the image – contact, distance, point of view, and modality – for each image.<sup>27</sup> Modality was coded for all images, labelling them either naturalistic (i.e., photographs) or abstract (i.e., infographics or diagrams). The dimensions of contact, distance, and point of view were coded only for naturalistic images (387 of 464 images), where they could be assessed consistently and reasonably well. Figure 4 exemplifies the coding of an image for the ideational and interpersonal metafunction.

Following the systematic coding of all images, I computed the frequencies of the different elements depicted in the ideational metafunction, as well as the different manifestations of the interpersonal metafunction. These frequencies were used to gauge the relative importance of different elements and topics, as well as embodied positions, across images – that is, to map the most salient, typical subject matters and embodied positions in the discourse.

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<sup>27</sup> *Contact* was coded [strong] if the represented participant looked directly at the viewer, [weak] if no eye-contact was established, and [no contact] for images that did not depict any people or if people were only partially visible, as this element critically depends on the gaze of a person. *Distance* was coded [intimate] if it was a close-up shot of the represented participant depicted in the image, [interpersonal] for a mid-shot, and [impersonal] for a long-shot. The *point of view* was coded as [viewer power] if the subject matter of the image was depicted from a high angle, [equal] if it was depicted at eye-level, and [represented participant power] if it was depicted from a low angle.



This image is used under license from shutterstock.com

	<i>Represented Participants</i>			<i>Relations</i>	
	<i>People</i>	<i>Material Objects</i>	<i>Nature</i>	<i>Narrative</i>	<i>Conceptual</i>
<i>Ideational Metafunction</i>	Diverse group of people	Post-It notes, Glass whiteboard	-	Verbal communication	-
<i>Interpersonal Metafunction</i>	<i>Contact</i>	<i>Distance</i>	<i>Point of view</i>	<i>Modality</i>	
	Weak contact	Interpersonal	Equal	naturalistic	

Figure 4. An illustration of how images were coded

To get a better understanding of the context in which different subject matters were depicted and who was engaged in different processes, the co-occurrences of different represented participants and relations were also calculated.

The most salient – or frequent – elements in each of the coding categories of the ideational metafunction were selected as focal points in the imagery – in categories with more than five unique elements (i.e., material objects and conceptual processes), those were the five most frequent elements; in categories with less than five unique elements (i.e., people and narrative processes), those were the three most frequent elements. I also calculated the typical instantiations of the interpersonal metafunction for each of the focal points identified in the ideational metafunction, to get a sense of how viewers typically ought to relate to these, as well as which of these were depicted as ‘facts’ in the NVU imagery analyzed here.

In a final step, all images depicting the focal points in the visual discourse and the typical embodied position were collected for an in-depth analysis of the subject matter they depicted. In this step, I did, in other words, move from deconstructing the images into their constitutive parts and mapping the salient elements, and more generally the visual register, of images used in visual discourse about NVUs to a qualitative analysis of the content of the images. As part of this analysis, I identified themes and typical images, by comparing and contrasting the subject matters depicted in images. More specifically, I revisited and analyzed images depicting people and groups of people, material objects – furniture and post-its and whiteboards, in particular – as well as

images depicting verbal communication, intellectual work, and nonverbal interaction.

In my qualitative analysis of these images, I sought to identify common themes in the depictions, such as the characteristics of depictions of verbal communication in groups: did these images offer detailed information or cues clarifying the purpose of the interaction? How specific or generic was the depiction? What was the typical setting in which it took place? Another example would be depictions in which post-it notes and whiteboards feature prominently: Were these tools depicted in use, or not? If so, how were they typically used? For each of the identified themes, I further explored how they are typically presented to the viewer – as pieces of an exhibition, information, or as instances for identification?

### **Paper III – Theoretically grounded visual analysis**

In Paper III, I first coded the ideational and interpersonal metafunction for the additional 111 images as described above and calculated the relative frequency of the different elements. Like in Paper II, portrayals of space, as well as images in which furniture featured prominently were particularly salient in the visual discourse. Guided by this initial observation, I then selected all images in which space and the physical environment featured prominently – or depictions of space – for further analyses. This step generated a subset of 178 of all 575 images, which were collected for further in-depth analyses.

In contrast to Paper II, in which I inductively identified themes originating from subject matters that were depicted recurrently in the visual discourse, in this paper, I conducted a theoretically grounded analysis of the ideational metafunction. In concrete terms this means that I used the dimensions and configurations of space discussed previously as sensitizing concepts – a point of departure or reference from which to study the empirical material (Blumer, 1954; Charmaz, 2000). These dimensions and configurations of space were sensitizing concepts, rather than static, definitive coding categories, insofar as they acted as a guiding roadmap without dominating the empirical study. Layout, for example, was coded as open plan or enclosure where applicable. Where the depicted layout did not fit into either one of these two extremes discussed in the literature, however, a new category ‘semi-public spaces’ was created. Images could, similarly, be coded as ‘visually complex’ if the furniture or ambient surroundings alone created an environment rife with visual cues, but also if visual complexity resulted from the interplay of different elements.

Similar to Paper II, the different design elements discussed in the organizational spaces literature – layout, furniture and ambient surroundings – were coded separately for each image. Thus, the same image, depicting an open-plan office furnished with eclectic, colorful and atypical furniture creating meeting areas could be coded for its open plan layout, visual

complexity and meeting areas. I chose this approach to capture the depicted subject matter in its richness and complexity and to be able to identify configurations of spatial design features that are typical for and dominate the language of space in the visual discourse, rather than in identifying archetypical images of space.

To identify field-level patterns in the use of the language of space in the visual discourse about NVUs, I then identified recurring, typical design configurations based on the relative salience of the different design features in the image set. Analogous to Paper II, this analytical step offered more targeted insights into the *field-level* use of spatial vocabulary that is central to visual discourse about contemporary NVUs. Identifying these patterns offers insights into the spatial design configurations that are considered to be typical for NVUs. Theoretical insights into the pathways for action and the organizing potential of these design configuration from prior literature, in turn, offers insights into what this means for the types of activity that are associated with, and considered appropriate for, contemporary NVUs.

#### **Paper IV – Multimodal analysis**

In Paper IV, my co-authors and I analyzed both verbal and visual elements in an analysis that implemented the framework for multimodal analysis outlined earlier. We started by coding the verbal elements in the corpus of multimodal texts selected for this study. Coding here, however, did not refer to identifying and sorting statements into conceptual categories, but rather to collecting and producing a body of relevant statements for further, detailed analyses of recurring patterns in language use (Potter & Wetherell, 1987), with a particular focus on meanings and implications that are invoked by both what is said and how it is said (Parker, 1992).

To identify statements that were relevant to the research question how contemporary NVUs should contribute to corporate entrepreneurship, we used a set of four sensitizing questions. We used this reading strategy as a means to let the text speak for itself and ideas about NVUs in the text to emerge, as well as to mitigate the influence of the researchers' opinions and preconceived ideas about NVUs on identifying relevant statements (Gadamer, 2004). Restricting the collection of relevant statements to a narrow set of questions that were closely linked to the main research question also ensured that our analyses were focused on the main subject matter – or aspects of the discourse – that were of interest for this study. Throughout the coding phase, we collected all relevant statements that addressed the questions: (i) why does the NVU exist? (ii) what are the objectives of the NVU? (iii) what is the NVU supposed to do? and (iv) how is it supposed to fulfil its tasks/purpose? The coding was conducted independently by two of the co-authors for each of the multimodal texts in the sample. Upon completion of the coding phase, the resulting bodies of statements were compared and disagreements over the relevance of the statements, as well as preliminary interpretations of the

implications invoked by the statements, discussed until an agreement was reached to include or exclude the statement in question.

In the second phase, we compared the statements coded for the four different questions to identify commonalities and differences in the accounts (Potter & Wetherell, 1987) and grouped together similar statements – making similar claims or using similar language – to identify patterns in both how and what the statements said about NVUs.<sup>28</sup> We first focused on statements made within the same text to identify building blocks of, or ideas comprised by, individual corporate knowledge about the world of NVUs. We then compared the resulting building blocks across texts and firms to identify recurring patterns in what is and can be written about NVUs. The themes that developed during this step captured the rationale and strategic context, as well as the responsibilities and tasks to be fulfilled by NVUs. The interpretations of, as well as the themes identified in, the body of statements were discussed by the research team until agreement was reached. We also made sure to maintain our focus on “what lies behind what is said” to disclose what is enclosed in the statements (Gadamer, 2004: 363) throughout the analysis of the statements, by continuously asking how and why particular words, phrases, statements, or claims were made and not others. Because the themes were primarily identified in the statements collected during the first coding step, we also frequently revisited the empirical material to refine and correct our understanding of the statements and reach a more complete interpretive account (Packer, 1985).

For the analysis of visual elements in the empirical material, my co-authors and I first identified and collected all images containing the focal points in the 220 images contained in the subset of empirical material that was analyzed for this study. For this purpose, we revisited the extensive and systematic coding of the ideational metafunction conducted for Paper II and calculated the relative frequencies for the 220 images analyzed in Paper IV. Analogous to Paper II, we collected all images containing focal points, which were defined for this study as elements depicted in  $\geq 5\%$  of all images, for further analyses. Using this strategy, we did, in other words, collect a body of relevant ‘visual statements’ for an in-depth analysis of ideas articulated in these images.

Two of the co-authors then conducted an in-depth analysis of all images containing these focal points, asking what we were seeing, why particular

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<sup>28</sup> We did, for example, group together statements that referenced future developments and invoked an orientation toward the future using formulations such as ‘ensuring the future of our business today’, ‘steward [the company’s] future’, ‘imagine and design the markets and technologies of the future’, ‘our way of shaping the future’, ‘an environment [...] to create new technologies for the business of tomorrow’ and ‘create [the company] beyond tomorrow’. These statements positioned the respective NVUs as a response to, and a means to prepare for, anticipated, yet ‘imagined’ future developments (see, for example, Beckert, 2013). Put simply, these references to the ‘future’ and ‘tomorrow’ invoked imagined futures – expectations about future developments and their impact that have yet to materialize – as the strategic context for contemporary NVUs and positioned these units as a hedging strategy.

elements were depicted and not others, as well as what message they conveyed. For each image, the two co-authors conducting the analysis discussed their ‘reading’ or interpretation of the image until a consensus was reached and categorized images based on their common interpretation of the depicted subject matter into inductively developed categories. Because images are polysemous and oftentimes characterized by rich and complex representations that ‘say more than a thousand words’ images were sorted into more than one category where applicable (e.g., where more than one element was particularly salient) (see also Höllerer et al., 2013). Compared to the analysis in Paper II, this analysis of the images was more fine-grained and aimed at identifying sub-categories and differences within broader themes in the ideational metafunction. For example, where the initial coding of the images in Paper II classified the (inter-)action depicted in an image simply as ‘verbal communication’, the in-depth analysis by the research team in Paper IV explicitly considered the kind of communication depicted, its characteristics and its distinguishing features.

For the analysis of the cross-modal interplay, we focused on the level of discourse and analyzed how the recurring ideas conveyed and the patterns of language use in the different modes relate to one another. In practice, this meant that the research team compared the themes identified during the intra-modal analyses of the verbal and visual elements in the empirical material and focused on identifying overlaps, similarities, and differences. Of particular interest were the presences and absences in the respective intra-modal discourses – that is, whether some things were told but not shown and vice versa.

## Reflections on the methodology

### **‘Doing’ discourse analysis in different modes of communication**

Visual and multimodal analyses of texts are powerful tools that can offer insights into the discourse about a phenomenon in a social context, as well as into the shared ideas and understandings articulated in the discourse. During the analysis of multimodal texts, however, I faced a number of challenges.

**Reading images.** First, although the approach to visual analysis proposed by Kress and Van Leeuwen (2006) offers a comprehensive framework, which acknowledges that images cannot simply be analyzed as if they were linguistic texts (Jørgensen & Phillips, 2002) and can guide systematic analyses of images, images are inherently and inescapably polysemous (Barthes, 1977b). This fluidity of meaning raises the question whether and to what extent interpretations of images and the subject matter they depict are arbitrary (see, for example, Forceville, 1999). In the visual analyses conducted in Papers II–IV, I employed three strategies to ensure that the analyses were not simply a reflection of the interpretations, which I imposed onto the images.

The first of these three strategies was the rather simple and somewhat mechanical coding of the ideational and interpersonal metafunctions for each image using descriptive terms to record what was depicted in and by each image, as well as how it was depicted (see also Höllerer et al., 2018; Jancsary et al., 2017). Using this systematic coding of the manifest elements of images, I first mapped the constitutive parts of the visual discourse about NVUs without trying to interpret their meaning. I then calculated the relative frequencies of the depicted elements and collected images representing salient subject matters from the corpus of images for further, in-depth, analyses. I employed this process as one way to ensure that images that were central in the discourse, and not images which stood out to me as the researcher, were selected.

While it cannot achieve ‘objectivity’, starting with a systematic analysis of all images, as well as being as diligent and comprehensive as possible in deconstructing and labeling all visible component parts constituting the images, was very helpful. Doing this systematic analysis forced me to approach the images in the empirical material in a matter-of-fact way and to consider all the details depicted in and by the images, rather than going with my first or overall impression of what an image was trying to convey. Using the relative frequencies of depicted elements as indications of salient subject matters in the corpus of images, likewise, helped me manage the influence of my own first impressions. Put simply, deconstructing the images and the visual discourse into their respective component parts, helped reduce the influence of my first impressions and arbitrary interpretations by pushing me to engage in deliberate and conscious analyses of both before moving on to interpretation. I experienced this approach as a helpful tool to disentangle analysis and interpretation, particularly when working with a mode of communication that is known to be understood more immediately and evade conscious analysis.

The second strategy was to conduct the in-depth analyses of the depicted subject matter for Paper IV in a team of researchers. In practice this meant that we spread out printouts of all images containing salient subject matters on a table, went through all of the images and, for each of them, tried to describe what we saw in a few words on sticky notes. Images depicting similar subject matters were then sorted together into clusters. Whenever we disagreed about what we saw or which images were similar, which was the case for a handful of images, we discussed our reasoning and interpretations until we settled on a shared interpretation. If no agreement could be reached, or we could not find any similarities between an image and the emerging categories, we ‘tabled’ the image and revisited it at the end of the process to see if our interpretation changed, based on the other images that we had seen, and/or if the image fits with one of the categories or other images that could not be categorized earlier. Discussing our interpretations of the depicted subject matter until a consensus was reached reduced the subjectivity of interpretations (see also Höllerer et

al., 2013). The third strategy, employed in Paper III, was to conduct a theoretically grounded analysis of a particular aspect of the visual discourse – depictions of space and spatial design. Using theoretically derived categories as sensitizing concepts offers a framework that can guide systematic analyses of visual discourse, while also allowing for new insights to emerge and the researcher to develop informed interpretations (Greckhamer & Cilesiz, 2014).

However, it should be noted that interpretive analyses of a corpus of texts, and language use in these texts, are at the heart of discourse analysis. For these interpretive analyses, researchers' expert knowledge of the field is, in fact, a strength rather than a weakness, as it allows them to draw on their knowledge about the phenomenon and social codes in developing their interpretations. This, in turn, lends support to their interpretations of the ideas, understandings, and meanings conveyed by an image (Jaipal-Jamani, 2014). In our case, this meant that the research team's knowledge of corporate entrepreneurship, prior literature on NVUs, and prior research on these units supported informed interpretations of ideas, beliefs, and understandings of NVUs conveyed in and by the images. In sum, striking a balance between rigorous analysis and informed interpretations is not trivial, but an inevitable challenge for discourse analytical approaches. Standardized processes, for example, although they can enhance the validity and reliability of the findings in the eyes of a positivistic reader, as well as overly structured or mechanical approaches, are typically not considered suitable. Instead, rigor and validity should be strengthened by other means, such as describing in-depth the analytical procedures employed during data analysis, selecting and using appropriate frameworks to guide the analysis, and substantiating interpretations and knowledge claims with evidence from the empirical material (Greckhamer & Cilesiz, 2014).

Papers II–IV, use the strategies outlined above to develop informed interpretations and mitigate the risk of developing arbitrary interpretations. Nonetheless, diligently implementing strategies to ensure the rigor and validity of analyses is just one side of the coin. The other is substantiating the rigor and validity of analyses with in-depth descriptions of these analytical procedures, as well as evidence from the empirical material. This, however, is oftentimes easier said than done – especially in paper format, where one typically has to make do with very limited space. In my dissertation work, I dealt with this challenge by using the papers and the thesis summary as complements. In the papers, I tried to be as concise as possible and focused on explaining the most critical parts of the analysis.<sup>29</sup> I used the thesis summary as a kind of methods repository, in which I explain in much more detail the analytical steps, as well as the different measures taken to reduce subjectivity and offer insights into the thought process behind these measures.

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<sup>29</sup> I also explored other options, the most promising of which is to make more extensive use of the visual mode in my own writings and use illustrations to provide an overview of the analytical procedures as a means to be concise and exhaustive at the same time.

*Substantiating interpretations.* For copyright reasons, substantiating interpretations and knowledge claims based on a corpus of pre-existing images in an academic article, as in papers II–IV, with visual ‘evidence’ from the original empirical material poses a particular challenge. Simply put, picking and presenting images from the empirical material is not possible without explicit consent of the holder of the copyrights. As attaining the rights to reproduction from the owners of the empirical material has proven to be difficult in prior published work, and is especially so when working with online content where the producer and or owner holding the copyrights is difficult to identify, one strategy has been to illustrate the findings using stock images that resemble the typical images in the empirical material and their characteristics as closely as possible (see, for example, Jancsary et al., 2017).<sup>30</sup> In papers II–IV, we have followed this approach and use images selected from shutterstock.com to substantiate our interpretations and knowledge claims about NVUs.

The selection process proceeded as follows. First, we collected exemplary images for our findings from the empirical material. As the main author of papers II–IV, I then carefully selected a set of images from shutterstock.com that could replace the copyrighted, original exemplary images on the basis of how closely the stock images resemble the typical images in the empirical material and their defining features. Throughout this process, I used the descriptive terms from the coding of the images to narrow the search.<sup>31</sup> I then discussed the ‘fit’ of the resulting selection of stock images with the typical images in the empirical material with my co-authors, who also had intimate knowledge of the material, to determine whether the exemplary images I selected were, in fact, representative of the empirical material and our findings. If we agreed that a stock image was a close representation of the images, the license for the image was acquired and the image included in the paper.

Because our analyses were hermeneutic in nature and images are inherently polysemous, we could not rely on traditional means of assessing the reliability and validity of our findings and, for example, calculate a formal intercoder reliability score (see, for example, Holbrook, 2005). Instead, the reliability and validity of our findings is supported by consistently going back to the object of study and iterating between general overviews and close readings of the empirical material in a hermeneutic circle to refine and correct our

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<sup>30</sup> An alternative approach to illustrating findings in the literature is to use a single image that represents the main findings (Höllner et al., 2018) or very few images (Havemo, 2018b, 2018a) that illustrate different archetypes or changes over time in the visual discourse. Seeing that my co-authors and I focused on identifying field-level patterns and mapping typical images in the visual discourse, neither of these options seemed suitable for the papers in this thesis.

<sup>31</sup> Throughout the selection of exemplary images, I also went back and compared stock images to typical images in the empirical material. While I compared the stock image candidates to images in the empirical material that were emblematic of the findings, I also went back to the larger collection of images making up a theme to see if they too were represented satisfactorily.

understanding of the world described and shown in the multimodal discourse analyzed here (Gadamer, 2004; Holbrook, 2005; Packer, 1985). We tried, in other words, to engage in an ongoing dialogue with the texts and to remain open to new possibilities by continuously challenging our own interpretations. Two things were particularly helpful in this process. First, as Papers II–IV build upon one another but focus on different aspects, I – as the main author – was forced to go back, re-engage with the empirical material and look at it through a different lens, in addition to being confronted with my own interpretations repeatedly. Second, working together in a team with different backgrounds for Paper IV was immensely useful. Our diverse perspectives and ‘fore-structures’ helped us to stay open to insights and interpretations that were not only confirming our established positions, simply because we all had somewhat different positions (e.g., in discussions of what a statement tried to convey or an image depicted) based on our distinct background and knowledge.

*Combining analyses of words and images.* Analyzing images and words in the same study poses the challenge of selecting appropriate analytical procedures for two modes of communication, which have inherently different meaning making potentials and simply work differently. The core challenge in Paper IV was to analyze verbal descriptions, which are strongly socially regulated and where meaning is relatively fixed, and images, which are polysemous and where meaning is relatively fluid.

Whereas verbal descriptions could be interrogated using sensitizing questions to identify statements about particular aspects of the main research question, images could not. Coding images by asking particular questions, such as ‘why does the NVU exist?’ or ‘what is the NVU supposed to do’ invites the researcher to impose their view of what claims the image makes in reference to the question, rather than reading the image for what it depicts. Paradoxically, then, using sensitizing questions for analyzing images does not mitigate the influence of researchers’ opinions and preconceived ideas about NVUs on identifying relevant statements, nor does it let the image speak for itself. It does, in fact, have the opposite effect and is not suitable for image analysis.

We thus consciously decided to conduct more open and inductive analyses of the interpretations invoked by the images, which were then considered in relation to the aspects of the main research question captured by the sensitizing questions. In sum, adapting our analyses to the mode of communication and conducting what can be described as two different kinds of analysis was necessary in order to acknowledge and honor the fundamental differences in how words and images convey meaning, and to move beyond analyses of images as if they were linguistic texts.

## Drawing on Foucault

As discussed previously, in our analysis of verbal descriptions, we draw on discourse analysis in the tradition of Foucault. Drawing on this methodological approach, which has had a significant impact on discourse analytical approaches more generally (Greckhamer & Cilesiz, 2014; Jørgensen & Phillips, 2002), brings with it its own challenges. Any reference to or claim of ‘doing’ discourse analysis in the tradition of Foucault, for example, invokes a set of expectations in the audience. One typical expectation raised by invoking Foucault is that the analysis will explicitly consider the notion of power, how power suppresses and produces discourses, as well as how competing discourses shape, form, and transform the subject (Springer & Clinton, 2015; Zimmerman, 2012).

This viewpoint, however, reduces Foucault’s legacy to his genealogical work, in which he focused on the relationship of power and knowledge, and disregards the work during his earlier ‘archaeological’ phase, which includes among others *The Archeology of Knowledge* (Foucault, 1972) and *The Order of Things: An Archaeology of the Human Sciences* (Foucault, 1973). In this earlier phase, he focused on identifying sets of statements that are accepted as meaningful and true in a particular period (Andersen, 2003: 30ff.; Jørgensen & Phillips, 2002; Springer & Clinton, 2015). There are, in other words, two major aspects to the legacy of Foucault: identifying historically contingent sets of statements that make up a discursive formation delimiting what can – and cannot – be said and thought about a phenomenon in question, on the one hand, and understanding how these dominant, hegemonic ideas and understandings were constituted and controlled by power, on the other.

Our analysis of the verbal elements in the multimodal analysis aims at understanding the corporate view of the worlds of contemporary NVUs – that is, what can and cannot be said, and thus constitutes intersubjectively shared social knowledge, about these units today. We are thus interested in the ideas and understandings that constitute this world view, rather than how it was produced or is controlled by power, and we draw on the analytical strategy employed in Foucault’s archaeological work. As such, our focus is more so on identifying dominant ideas in the discourse, rather than exploring different, competing ideas and how they shape the notion of a NVU. Consequently, the results of our analysis are presented in terms of the dominant, hegemonic ideas that delimit what can be said about NVUs.

However, that does not mean that we are not ‘doing’ discourse analysis in the tradition of Foucault. Rather, we are drawing on his earlier research in which ideas about power had not yet become the focal point. Finally, while it is beyond the scope of this thesis, which is primarily focused on mapping intersubjectively shared and socially approved ideas, beliefs, and understandings of NVUs, explicitly engaging with the notion of power, different discourses, and competing ideas articulated in the empirical material

would, nevertheless, be an interesting topic worth further exploration in future studies.

### **Working with online content**

In concluding this section, I would like to briefly comment on the use of online content and the opportunities and challenges that come with it. Online content, although hitherto underutilized in organizational analysis, is a rich resource for researchers, which should be considered as an increasingly pervasive genre of communication where culturally embedded symbolic social interaction takes place (Pauwels, 2005). Like other genres of communication, corporations use websites as a medium on which they provide an overview of their activities, as well as their culturally embedded aspirations and desires (Esrock & Leichty, 2000; Pauwels, 2005). As such, websites offer a window onto the corporate view of the world.

Working with online content, however, poses two main challenges: it is oftentimes unclear who the producer of the content is and corporate websites do not follow a formal, generic structure. The former is a question of the context of production and raises the issue of whose voice is speaking on or through the website, as well as whether and to what extent what is written and shown on a corporate website does, in fact, reflect the corporate view of the world. As I have previously suggested, whatever is placed onto, and remains on, a corporate website represents an organization, the identity it claims for itself, and its positions to important issues to different audiences (Esrock & Leichty, 2000). In function, they are similar to more established genres of corporate communication, such as corporate (annual) reports, or even logos. Calling into question the basic significance, value or 'truthfulness' of online content seldom leads to a productive discussion (see also Pauwels, 2005).

Given the focus of the studies in this thesis on identifying patterns of language use in the verbal and visual discourse on corporate websites presenting NVUs, the questions of authorship and the context, as well as the process, of production are interesting, but beyond the scope of the thesis. I am interested in the connotations of – i.e., the second-order meanings encoded in – the images, but not necessarily in how these connotations were constructed and why. Because content on corporate websites, at the very least, is sanctioned as an appropriate representation of the firm's view of the world, it is reasonable to assume that the use of images and words on these websites reflects the corporate discourse, ideas, and understandings surrounding NVUs. What is placed on the corporate website, in other words, does constitute and reflect the corporate discourse in this genre of communication. Who created the content, and with what intentions, are interesting questions but merely tangential to identifying patterns of language use in this discourse. Here, the product, rather than the process of production, is in focus.

That is not to say, however, that exploring how, by whom, and with what intentions the verbal descriptions and images are created or selected is not

worth further investigation in future studies. Although it is outside of the scope of this thesis, future studies could explore the extent to which marketing or branding interests, public relations consultants and popular management publications influence the representation of NVUs on corporate websites.

Lastly, websites oftentimes do not follow a uniform or standard structure. Absent conventions governing what should be discussed on corporate websites, and how it should be discussed, corporate websites vary in the breadth, depth, focus, and layout of their descriptions and depictions. While the resulting limited comparability of the websites does not affect the analysis of discourse about NVUs on corporate websites, these aspects could be explored further in in-depth case-studies comparing and contrasting the structural aspects of these websites (see, for example, Pauwels, 2012). It should also be noted that my aim was initially to analyze corporate discourse about NVUs in more formal genres of communication, specifically in corporate annual reports. Surprisingly, however, NVUs were virtually absent in annual reports and instead discussed and presented almost exclusively on corporate websites. Future research may want to try to complement insights into NVU discourse on corporate websites with other genres of communication.

# Summary of the Papers

## Paper I – Blessing or Blight? NVUs and the Survival of Internal New Ventures

This paper takes as a starting point extant work on NVUs in the corporate entrepreneurship literature. In particular, we review and expound contrasting arguments that speak to the effectiveness of NVUs in supporting internal new ventures and sustaining long-term growth of the corporation. On the one hand, NVUs are argued to be able to enable exploration, nourish internal new ventures with a tailor-made support structure, and protect them from potentially harmful interference from the corporate mainstream. On the other hand, they may overemphasize their exploratory strategic logic, constrain potentially useful knowledge and resource flows, and expose internal new ventures to resentment and resistance in the organization by association.

With both benefits and perils being associated with NVUs, and no prior empirical investigations of how these dynamics play out in the literature, the question of whether or not NVUs are a blessing or a blight for the internal new ventures they house remains open. Thus, drawing on a survey of 90 internal new ventures introduced in 37 Swedish corporations, in this paper we investigate the effect of placement of internal new ventures in a NVU on their subsequent survival within the parent corporation. Using a Cox proportional hazards model as our statistical method, we calculate the hazard ratio of internal ‘non-survival’ to test how placement in a NVU affects the survival time of internal new ventures within the host corporation in our sample (Allison, 2010; Kleinbaum & Klein, 2012). Placement in a *new venture unit* is our main independent variable for the statistical analyses. For the purpose of this study, we define internal ‘non-survival’ as termination and spin-off. In our analyses, we control for a set of variables, which have been discussed to affect the survival of internal new ventures in the parent corporation (*internal new venture relatedness, internal new venture novelty, internal new venture performance, competition for resources, and corporate size*) and also include *firm dummies*.

For our control variables, we find that *internal new venture relatedness, internal new venture novelty, and corporate size* have significantly negative effects on the hazard rate. This, in turn, suggests that the venture specific characteristics relatedness and external novelty, as well as corporate size (measured as sales of the parent corporation), facilitate the survival of internal

new ventures within their parent corporations. *Internal new venture performance* is positively related to *internal new venture relatedness*, but negatively related to *new venture unit*, suggesting that ventures that can draw on corporate knowledge and resources are perceived to perform better, while those that are placed in a NVU are perceived to perform less well. The NVUs in our sample are positively correlated with *internal new venture novelty*, which suggests that internal ventures placed in NVUs are associated with higher degrees of novelty and uncertainty, and *corporate size*, suggesting that NVUs tend to be more common in larger corporations with more *competition for resources*.

In our main analysis, we find that the main independent variable *new venture unit* is positively related to the hazard rate and significant at the 5 percent level. Placement in a NVU, thus, has a statistically significant negative effect on the survival of internal new ventures within the parent corporation. Our analysis further suggests that placement in a NVU leads to a more than twofold increase in the risk of termination or spin-off (hazard ratio = 2.148). In further analyses, we explore whether there is a systematic difference between NVU and non NVU-ventures that could explain this result. However, using T-tests to determine differences in means between the two groups, we did not find any statistically significant differences with respect to internal relatedness and external novelty. NVU ventures, in other words, were not significantly more new or different than their non-NVU counterparts. We also did not find any significant difference in experienced levels of internal threat to or internal resistance between the NVU and other parts of the parent corporation.

Based on these results, we conclude that, contrary to the common arguments in the literature that NVUs offer a developmental and supportive space for fledgling internal new ventures within often harsh corporate environments, NVUs in fact do not facilitate internal new venture survival within the firm. On the contrary, NVU ventures tend to survive shorter times within the parent corporation and placement in a NVU more than doubles the risk of termination or spin-off compared to non-NVU ventures. Seeing that venture-specific findings do not seem to explain our findings, we conclude that NVUs are a ‘blight’, rather than a ‘blessing’ for internal new ventures. We argue that our findings point to the inherent and enduring organizational challenges associated with the creation of a specialized unit or ‘other space’ (Hjorth, 2005) that acts as an entrepreneurial enclave (Fast, 1978) within the firm. In particular, NVUs may turn out to be a ‘blight’ because they create additional hurdles for internal new ventures, such as the complex knowledge boundary that is associated with specialized units (Carlile, 2004), the need to select internal new ventures into and out of NVUs (Birkinshaw & Hill, 2005), as well as a lack of legitimacy (Fast, 1978; Suchman, 1995) and increased resentment (Burgers et al., 2009; Fast, 1979a) by association with the ‘misfit’ that is the NVU itself.

## Paper II – Typifications of Contemporary NVUs: An Exploratory Analysis of Visual Registers

Informed by the findings of Paper I, which stand in contrast to assertions in the literature that NVUs are effective vehicles for new business creation and development, in this paper I problematize and move beyond the framework for researching NVUs that dominates the literature. The starting point in this paper is a critical reflection on both the theoretical and methodological choices of prior research on NVUs (e.g., Battistini et al., 2013; Birkinshaw, 1997; Birkinshaw & Hill, 2005; Burgelman, 1985; Fast, 1978), which are dominated by the corporate venturing perspective and methods that rely heavily on verbal expressions and categorizations. While this way of seeing NVUs has produced a coherent and clear understanding of NVUs as a means for corporate venturing, it risks (re-)producing an understanding of these units that is limited to, and omit additional meanings and roles assigned to, NVUs that lie outside of the scope of corporate venturing perspective and traditional research methods.

To move beyond the conceptual focus on corporate venturing and the reliance on traditional research methods in the literature, I introduce visual analysis as a new way of seeing NVUs that can widen the scope and serve as a first step toward developing an understanding of the range of meanings NVUs may have – aside from and beyond corporate venturing. Visual analysis focuses on images and visual artifacts as one form of communication that is central “for the construction, maintenance, and transformation of meaning” (Meyer et al., 2013: 491). Rooted within discursive perspectives, which draw on the notion that social phenomena, and the shared understandings delineating the boundaries within which people can meaningfully (inter-)act, are brought into being and maintained through communication and discourse (Berger & Luckmann, 1967; Foucault, 1973; Luckmann, 2008; Meyer, 2008; Schütz, 1971), the analysis of visuals can also offer insights into corporations’ social knowledge about NVUs (Meyer et al., 2013). Social knowledge, here, refers to firms’ intersubjectively shared, situated, and culturally embedded ideas, assumptions, understandings, and beliefs about these units. In particular, visual analysis can offer insights into those understandings of NVUs that “cannot be counted or even verbalized” (Daft, 1980: 622) and are instead embodied in visual depictions of NVUs (Meyer et al., 2013; Ray & Smith, 2012).

In this first exploratory study of the social knowledge about NVUs contained in visual communication about these units, I focus on mapping the typical visual language – or *registers* (Jancsary et al., 2017) – used to depict these units in one genre of communication, corporate websites. More specifically, I map *typifications* in the visual discourse about these units. These typifications are images that are used recurrently to depict NVUs. What is depicted in these typical images, as well as how it is depicted, articulates

situated, intersubjectively shared understandings of and assumptions about NVUs in the corporate context (Gee & Handford, 2012; Kress, 2009, 2012). They constitute what Schütz (1971, 1972) refers to ‘*Ausdrucks-*’ and ‘*Deutungsschemata*’ – frames of expression and interpretation – which social actors draw on to meaningfully (inter-)act within the specific social context in which they are embedded (Berger & Luckmann, 1967; Meyer, 2008; Schütz, 1972). As such, typifications reproduce, and offer a window onto, prevalent ideas that corporations have about, and meanings they associate with, NVUs.

The empirical material analyzed for this study contains 464 images used to present and introduce these units on the websites of 30 large, European corporations. In this set of images, I analyze the *meanings of NVUs contained within the visual register of corporate websites introducing and presenting these units*, using the framework for visual analysis and analytical procedures discussed in-depth in the methods section of this thesis summary (see also Jancsary et al., 2017; Jewitt & Oyama, 2004; Kress & Van Leeuwen, 2006).

My analyses suggest that the habitat – or environment – of NVUs and what life inside these environments is like, rather than ventures and outputs, are central to the visual discourse. Portrayed as central to the environment of NVUs are people, engaging in collaborative and entrepreneurial work processes using tools typically associated with start-up methodology, as well as the materiality of the physical environment in which they work. Surprisingly absent in the images analyzed are depictions of ‘outputs’ such as sketches, models, mock-ups or prototypes of products, as well as depictions of finished products, which are being developed and produced in and by NVUs.

Overall, the typical depictions in the visual discourse appear to put front and center the characteristic features of the NVU as a work-space and the particular work processes and environments incorporated and accommodated by NVUs. This, in turn, suggests a somewhat novel and evolved understanding of NVUs as vehicles to incorporate ideas of what it means to be or become *innovative* and *entrepreneurial*, which are thought to be conducive to innovation but foreign to their corporate parents. The visual discourse, in other words, articulates an understanding of NVUs as vehicles for the transformation of the organization, its culture and way of working, by adopting particular work processes and environments, which enable entrepreneurial activity and the development of a new entrepreneurial capability within the organization (Kuratko et al., 2015; Lichtenthaler, 2016; Penrose, 1995), rather than as vehicles for internal corporate venturing as such.

The stylistic elements of the images further suggest that the images are constructed or selected specifically to showcase the NVU as a particular environment, and outline the character and workings of this ‘other space’. Putting on display these ideas of a modern, entrepreneurial organization in the context of a microcosm like the NVU may also serve to establish the

innovative-ness and entrepreneurial-ness of the firm vis-à-vis prospective employees that may otherwise not be drawn to large corporations. Attracting and retaining entrepreneurial talent has previously been discussed in the literature as an important function of NVUs, but typically remains a side-note (Hisrich & Peters, 1986; Kanter et al., 1990; Leifer, O'Connor, & Rice, 2001). Given the centrality of the working conditions and way of working associated with NVUs in the visual discourse, however, this may have become increasingly important in today's NVUs and warrant further investigation.

### Paper III – Reading the Language of NVU Spaces in Visual Discourse: Ideas of Entrepreneurial Activity

In this paper, I investigate ideas of entrepreneurial activity that are embodied in depictions of space in the visual discourse surrounding NVUs. This more focused analysis of the spatial dimension is informed by two observations. The first one is the salience of physical environments in the visual discourse, which I observed in Paper II. The second is that firms recurrently assert that NVUs, and their physical environments in particular, are enablers of entrepreneurial activity in their respective innovation 'labs', 'garages' or 'X' units when describing what these units are and do. The physical environment of these units is frequently and expressly invoked as central to firms' understanding of what today's NVUs are and do (see also Paper IV). Yet, what we know rather little about is what firms actually mean when they invoke the notion *entrepreneurial activity* in the context of NVUs. To advance our understanding of entrepreneurial activity as a practice in NVUs, as well as what processes, activities, and relationships with a common purpose are considered to be meaningful for 'doing entrepreneurship' or 'entrepreneurial activity', I turn to spatial designs. Spatial designs are thought things, which embody – and are thus a conduit for – culturally embedded, situated ideas, beliefs and understandings of what a space is and does (Beyes & Holt, 2020; Lefebvre, 1991; Stephenson et al., 2020). Building on this view, in this study, I analyze the language of space, or spatial designs depicted as typical for NVUs in visual discourse as a conduit for culturally-embedded understanding(s) of entrepreneurial activity in the context of NVUs.

The first conceptual point of departure in this paper is the notion of *entrepreneurial activity*. Although it is oftentimes conflated with creativity (Scott & Bruce, 1994), it is actually a multi-stage problem-solving process (Hsieh et al., 2007; Stevenson & Jarillo, 1990), which encompasses a set of interrelated yet distinct processes, activities, and relationships (see Figure 5 for an overview). Entrepreneurial activity, in other words, is a non-trivial umbrella term that refers to a variety of tasks that are essential to the identification and pursuit of new business opportunities. These tasks range

from environmental search to the creation and refinement of novel ideas – that is, the development of new products, services or processes – as well as their

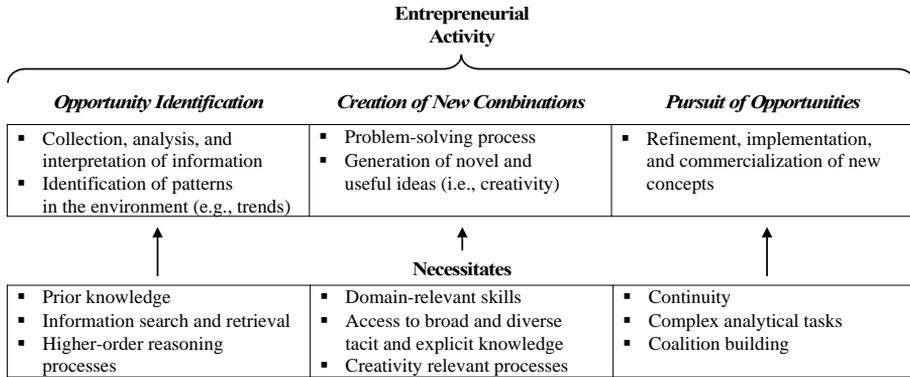


Figure 5. An overview of the tasks and activities comprised by the umbrella term 'entrepreneurial activity'

implementation and commercialization in a new business (Ahuja & Lampert, 2001; Kanter, 1985; Kanter et al., 1991a; Scott & Bruce, 1994; Von Hippel, 1977).

Which of these tasks are considered to be essential and meaningful to doing entrepreneurship is context-dependent and belongs to social groups, which define and share *their* common understanding of this practice (Smets, Morris, & Greenwood, 2012; Zietsma & Lawrence, 2010). Put differently, different actors in different contexts may have different understandings of what entrepreneurial activity as a practice entails and thus consider different sets of processes, activities, and relationships to be meaningful and essential to doing entrepreneurship or *entrepreneurship*. The aim of this study is to map firms' understanding of *entrepreneurship* in the context of NVUs by analyzing the conceptualizations of how these spaces should organize entrepreneurial activity, which are embodied in spatial designs.

A second conceptual point of departure is the built environment – or *space* – of NVUs, which is one manifestation of the activities that are associated with, and thus ought to be enabled by, these units. Space in organizations has long been acknowledged to be an inherently material and social phenomenon (see, for example, Gagliardi, 2006; Hatch, 1990; Van Marrewijk & Yanow, 2010). Space and its material characteristics – layout, materials, furnishings and colors – are non-trivial aspects of the (socio-)material context of organizing (Barad, 2003; Carlile et al., 2013; Orlikowski, 2007). They organize life, activities, and relationships (Lawson, 2001) by creating particular pathways of action, which enable activities and behaviors that are desirable, constrain others that are not, and are enacted ongoingly by those

inhabiting a physical environment (Davis, 1984; Gagliardi, 1990; Hatch, 1987; Orlikowski, 1992).

The material characteristics of a space, however, are not solely performative and articulate within themselves a 'language of space', which embodies cultural meanings, modes of organization and work processes that are considered to be central to a space in material form (Gagliardi, 2006; Hofbauer, 2000; Lawson, 2001; Van Marrewijk & Yanow, 2010). Analyzing the typical layout, furnishings, materials, and colors associated with NVUs, in turn, can offer insights into the processes, activities and relationships that are considered to be essential and meaningful to entrepreneuring in the context of NVUs.

In this study, I analyze a set of 178 images depicting office environments associated with NVUs collected from the websites of 30 large, established corporations in north-western Europe. In my analysis, I use the dimensions of the language of space discussed in the literature as sensitizing concepts and identify recurring, typical design configurations based on the relative salience of the different design features in the image set. One expectation for spatial designs of NVUs is that multifaceted environments, accommodating a range of processes, activities, and relationships would be characteristic for these units, if they are viewed as breeding grounds for all entrepreneurial activity.

My analysis results in a number of interesting observations. First, open-plan layouts creating spaces for co-working, furniture arranged to create various dedicated meeting spaces, as well as enclosures that protect and elevate group productivity are particularly salient in the images analyzed. They portray NVUs as *communal spaces* designed primarily to facilitate communication, collaboration, networking, and knowledge-sharing between individuals, as well as group productivity, which are central to the generation of novel and useful ideas, refining these concepts for new products, services, or business models and building the coalitions needed to bring them into being.

The portrayal of NVUs as communal spaces, designed to enable communication and social interaction between people, nevertheless, comes at a cost: dedicated spaces for focused and continuous work on analytical and design tasks – such as developing, defining, and describing a concept; developing specifications; drawing a design; building a prototype; writing code or testing functionality; and revising prior solutions, based on the results of these tests – are underrepresented in the images. Individual work stations are overwhelmingly depicted as temporary work desks, with limited storage and little to no architectural or psychological privacy that would enable the crafting of new combinations. Storage, which would enable continued access to work in progress (i.e., physical items such as mock-ups, models, prototypes), is equally underrepresented. Put simply, there is little space to think and tinker.

Overall, my analyses suggest that NVUs are associated with, and their design geared towards, those aspects of entrepreneurial activity that benefit

from social interaction. They are not necessarily associated with those processes and activities that do not necessitate, and may even be hampered by, social interaction. In essence, they are not viewed as multifaceted spaces that accommodate a broad range of tasks; rather, they instantiate a narrower view of entrepreneurial activity as a primarily creative and social process to which knowledge exchange, conceptual work, play and serendipitous encounters are central.

## Paper IV – Understanding Contemporary NVUs: A Multimodal Discourse Analysis

In this paper, my co-authors and I go multimodal and seek to develop an understanding of corporate knowledge about contemporary NVUs articulated in both visual depictions and verbal descriptions. The starting point for this paper is an explicit acknowledgment and engagement with the historically contingent nature of findings of prior research on NVUs, which offers insights into the first and second generations of NVUs. Seeing that NVUs have evolved consistently and considerably between generations and are products of their time (Burgelman & Välikangas, 2005; Chesbrough, 2000), insights into NVUs of the 1970s and 1980s and the late 1990s may – or may not – apply to the NVUs that are proliferating among large corporations today.

Prior work on NVUs offers a number of important insights into the first and second generation of NVUs. First, both previous generations of NVUs were charged with corporate venturing and focused on the different steps and processes associated with the creation and addition of new businesses into the firm's overall business portfolio (Kuratko et al., 2014; Narayanan et al., 2009; Sharma & Chrisman, 1999). Second, *how* first and second generation NVUs approached this task changed significantly. Where first generation NVUs (1970s and 80s) approached the task of creating new businesses for the firm through business development (Burgelman, 1985; Fast, 1978; Hill et al., 2009; Kanter et al., 1991b), second generation NVUs (late 1990s) adopted a VC approach to venture financing in commercializing new technologies and managing internal new ventures (Birkinshaw et al., 2002; Chesbrough, 2000; Hill et al., 2009).

Following the demise of the second generation of NVUs, which coincided with the burst of the dot-com bubble, research interest in these units waned. Although there appears to have been a third wave of NVUs, we know rather little about the role and responsibilities of these new units, as well as how these NVUs approach the tasks they are charged with. In this study, we thus explore how contemporary – third-generation – NVUs are expected to contribute to corporate entrepreneurship and focus on the what, why, and how of these units. Building on the conceptual foundations outlined in this thesis,

my co-authors and I turn to the verbal and visual elements in a corpus of multimodal texts collected from corporate websites describing, presenting, and introducing NVUs as a window onto corporations' social stock of knowledge about these units. More specifically, to address our research question in this study, we analyze the multimodal discourse on these websites for a subset of ten large, established corporations with NVUs headquartered in north-western Europe. The resulting empirical material analyzed for this study encompasses 230 images and about 20,000 words.

Table 3. A summary of the what, why, and how associated with contemporary NVUs

<b>Contemporary NVUs: Supporting the Transformation of the Organization (Post financial crisis 2008)</b>	
<b>Overview over typical role and nature of NVUs</b>	Increasingly dynamic business environments
<b>Strategic context</b>	
<b>Objectives</b>	Create preconditions for successful innovation
<b>Responsibilities</b>	<i>Educate</i>
<b>Scope of tasks</b>	<i>Enable</i>
<b>Primary locus of opportunity</b>	<i>Generate</i>
<b>Contribution to Corp. Entrepreneurship</b>	

<p><i>Cultivate a new innovation culture, skills and capabilities in the firm by:</i></p> <ul style="list-style-type: none"> <li>- Disseminating entrepreneurial skills, practices, and culture in forums for learning and exchange (e.g., training sessions, workshops)</li> <li>- Managing and facilitating the use of new, modern innovation practices, processes, and frameworks</li> </ul>	<p><i>Create an environment conducive to entrepreneurial activities within the NVU by:</i></p> <ul style="list-style-type: none"> <li>- Incorporating a start-up-like way of working (systematic processes like design thinking and lean startup, collaborative practices, entrepreneurial mindset/culture)</li> <li>- Providing a physical infrastructure (design and location) that supports entrepreneurial activities</li> </ul>	<p><i>Support the creation and development of market-ready concepts for new products and businesses through:</i></p> <ul style="list-style-type: none"> <li>- Environmental search (screening trends)</li> <li>- Idea generation, development, testing, and validation</li> <li>- Creation of prototypes, minimum viable products, business cases for future products, services, or business models</li> </ul>
<p>Opportunities discovered, created, or developed inside the firm (typically in an open process that involves external partners)</p>	<p><i>Transformation of the organization relative to where it was before by</i></p> <ul style="list-style-type: none"> <li>- Nurturing entrepreneurial innovation processes, skills, and capabilities</li> <li>- Creating validated concepts for future products and services</li> </ul>	

The main findings of the what, why, and how associated with contemporary NVUs are summarized in Table 3. Overall, our analysis of verbal and visual elements on corporate websites presenting and introducing NVUs suggests that contemporary NVUs are viewed as a means to strengthen a firm's basis of competition in increasingly dynamic business environments. To do so, they are expected not only to explore and create new business opportunities for the firm, but also to create the preconditions for successful innovation. Today's NVUs appear to also be focused on the early stages of the innovation process. Both are significant departures from their predecessors, which were more narrowly focused on corporate venturing and charged with managing not only ideation, but also their execution, implementation, and commercialization in a new business (Birkinshaw et al., 2002; Burgelman, 1985).

Where prior generations were focused on the creation of new businesses, today's NVUs are thus expressly also associated with and deemed responsible for the cultivation of entrepreneurial skills, values, and culture inside the organization by disseminating, incorporating, and facilitating a particular, start-up-like way of working through knowledge exchange and the NVUs' design. This suggests that they are expected to contribute to corporate entrepreneurship by transforming the organization – its processes, skills, and capabilities – relative to where it was before (Kuratko et al., 2015). They can thus be understood as catalysts for “internal processes of development” (Penrose, 1995: 1).

We also suggest that, whereas prior generations were supposed to generate new, multi-product businesses that could be transferred back and (re-)integrated into the firm's operating system (Burgelman, 1985), or to add value to new businesses and grow them further (Birkinshaw et al., 2002), contemporary NVUs are expected to produce feasible, marketable, or market-ready concepts that are commercialized outside of the NVU. Thus, they are viewed as sources for validated, promising ideas that have not yet reached a successful outcome but can potentially be implemented and commercialized by the parent corporation, rather than finished, commercial products and businesses. They are, in other words, associated with the fuzzy front end of innovation.

Finally, our analyses also point to a curious homogeneity in the discourse and images. The visual language in the corpus of texts is surprisingly similar for companies that are active in a number of different industries and countries. It is dominated by imagery that is not anchored in the context of any particular NVU and could be used interchangeably. This, in turn, suggests that the discourse is not permeated by distinct, local ideas about the role and nature of contemporary, but rather a general theory of what these creatures are and what they should look like and be (Machin & Van Leeuwen, 2007).

# Findings and Discussion

My aim in this thesis is to revisit and advance our understanding of new venture units – a means to organize for entrepreneurship in large, established corporations and to develop timely insights into the current generation of NVUs. The research is guided by an underlying tension in the corporate entrepreneurship literature on NVUs. At the core of this tension is the research framework dominating prior work on NVUs, which consistently conceives of these units as vehicles for corporate venturing. The focus of this framework on NVUs as a means to one particular end is at odds with other observations in the extant literature, such as the evolving nature of NVUs, indications that these units may be vehicles for more and other ends, as well as the inherently multidimensionality of corporate entrepreneurship, which encompasses but is not limited to corporate venturing. By introducing new ways of seeing from the neighboring field of organization theory, I have sought to broaden our sights, venture outside of the conceptual and methodological ‘box’ of prior research on NVUs, and enrich the scholarly debate surrounding the phenomenon.

This concluding section builds on and synthesizes the results of the four papers at the core of this thesis and discusses how these findings advance our scholarly understanding of NVUs. In particular, I explore the implications of the main findings for the means-ends relationships corporations associate with NVUs and how this understanding relates to the dominant view in the literature. This discussion is followed by a broader theoretical reflection on the findings in relation to the field of CE more generally, as well as research on NVUs more specifically, and on aspects that managers in charge of innovation efforts or heading NVUs in large corporations should be mindful of. In closing this final section, I discuss the limitations of the research and expound directions for future research that have been evoked during my work on the thesis.

## Main Findings

### NVUs and corporate venturing

In the extant literature, NVUs are primarily associated with corporate venturing, or the creation of new business(es) within a corporation that can

become sources of growth for the firm by creating and adding new revenue streams (Hill & Birkinshaw, 2008; Kanter et al., 1990; Sharma & Chrisman, 1999). The findings of this thesis, however, cast doubt on the completeness of the dominant conceptualization of NVUs as vehicles for corporate venturing in the corporate entrepreneurship literature. Two main insights, in particular, raise this question: first, the ineffectiveness of NVUs in creating and developing new ventures that survive within the parent corporation, and second, the much broader understanding of what NVUs are and do, which is articulated in the corporate discourse about these units.

### **The (in-)effectiveness of NVUs in promoting corporate venturing**

As shown in Paper I, placement in a NVU has a significant negative effect on the subsequent survival of internal new ventures within the parent corporation. Venture-specific characteristics do not explain the lower internal survival chances of ventures placed in NVUs. Rather, being placed in a NVU appears to put internal new ventures on a path that results in a spin-off, at best, and termination, at worst. In other words, NVUs appear to be a pathway out of the corporation for ventures placed within these units. (Re-)Integration into and subsequent internal survival within the parent corporation appears to be more of an exception – not the rule.

One must thus ask whether, and to what extent, these units do, in fact, contribute to the objective of creating and adding new revenue streams for their parent corporation, with which they are habitually associated in the literature. Spin-offs, although they are a way to monetize and realize returns on investments into internal new ventures that cannot readily be (re-)integrated into the corporate structure, do, nevertheless typically represent an *exit* from the new venture (see, for example, Hill & Birkinshaw, 2014). This exit can be full, if the new venture is spun off into a wholly independent entity (i.e., a separate business), or partial, if the parent corporation retains a majority or minority stake in the new venture organization. As such, spin-offs may contribute to the corporate bottom line in the form of short-term, or potential future, financial returns. They do not, however, typically become sources of continued growth by adding *new revenue streams* to the parent corporation, nor are they creating new business(es) *within* the corporation. The results of our analyses in Paper I thus suggest that NVUs are not necessarily the effective vehicle for CV they are described as in the literature.<sup>32</sup>

It is possible that the challenges associated with NVUs discussed in the literature simply outweigh the benefits of structural separation. It is further conceivable that firms have yet to work out how to effectively manage

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<sup>32</sup> A more provocative take would be that NVUs, in fact, are very effective vehicles for corporate venturing – if weeding out unpromising ventures at an early stage is the point of these units, that is. NVUs, in other words, may be used as selection, rather than creation units, to implement a lean approach to corporate entrepreneurship.

structurally separate CE units (see also Burgelman & Välikangas, 2005). In either case, an aspiring intrapreneur offered the opportunity to pursue an idea further in an innovation ‘garage’ or ‘lab’ may want to carefully consider and weigh the benefits and drawbacks of developing the new venture within the corporate mainstream versus pursuing it further in a NVU.

Another possibility would be that prior work does not capture and conceptualize the challenges associated with structural separation to a sufficient extent. More specifically, structural separation may not only limit the flow of knowledge and resources to and from the NVU (Burgers et al., 2009; Chen & Kannan-Narasimhan, 2015; Garrett Jr & Covin, 2015); expose the new ventures it should protect to intraorganizational turf wars, envy, political conflicts and tribalism (Burgelman, 1983a; Fast, 1978, 1979b, 1979a; Kanter et al., 1990; Katz & Allen, 1982; Miles & Covin, 2002); or risk an overemphasis on exploration (Burgelman & Välikangas, 2005; Fast, 1979b; Hill & Birkinshaw, 2008, 2014). It may also result in an organizational problem that is more fundamental than previously considered in the CE literature.

Structural separation, for example, is likely to create a boundary rife with syntactic, semantic, and pragmatic challenges (Carlile, 2004), which to a significant extent diminish the chances of successful (re-)integration and the subsequent internal survival of new ventures that are placed in a NVU – irrespective of the challenges known to, and discussed in, the corporate entrepreneurship literature. That is to say that NVUs may not only bear the burden of a structurally separate entrepreneurship unit, which is typically the ‘new kid on the block’ with a peculiar identity in the parent corporation. They may also be faced with the innate challenges of specialized units. Put simply, as structurally separated units dedicated to accommodating entrepreneurial activities within established corporations, NVUs, like other specialized units, develop distinct knowledge invested in practice, as well as their own language and culture. This, in turn, makes boundary crossing between the NVU and the parent corporation inherently problematic for new ventures that have developed within, and according to the logic of, the NVU. Consequently, they may simply not be readily understood outside of the specialized world of the NVU, and more explicit boundary management, as well as the development of boundary-crossing capabilities may be necessary prerequisites for increasing the effectiveness of NVUs as vehicles for corporate venturing (Carlile, 2004).

In sum, a focus on the challenges of NVUs discussed in the CE literature may have overlooked other, more fundamental organizational problems associated with the creation of a specialized entrepreneurship unit, which could explain why NVUs do not appear to be particularly effective vehicles for CV and remain difficult to manage. Building on our insights from Paper I, it may be worth revisiting the relatively old idea that the structural separation of entrepreneurial efforts within established corporations is inherently

problematic.<sup>33</sup> In particular, explicitly conceptualizing the dilemma of differentiation as a non-trivial organizational problem and focusing on the challenges of specialization, multiplicity, and the complexity resulting from specialized units with their own knowledge, languages, cultures and logics co-existing within organizations may be a fruitful path forward.

### **A new, broader understanding of NVUs**

In the context of Papers II–IV, however, it appears that the findings reported in Paper I may not necessarily point toward the inherent ineptness of NVUs in fulfilling their purpose of promoting corporate venturing. Instead, the purpose ascribed to NVUs in the corporate entrepreneurship literature may simply not – or no longer – fully capture the corporate understanding of these units. The results of the analyses of the multimodal discourse about NVUs in Papers II–IV suggest that corporations, contrary to the dominant conceptualization of these units in the CE literature, neither primarily nor solely view NVUs as vehicles for corporate venturing.

*Primacy of process over output.* The salience of the habitat that is the NVU, and life inside these units, in combination with the curious absence of depictions of ventures and venturing in the visual discourse, appear to emphasize the centrality of *how* entrepreneur-*ing* and innovat-*ing* occur in NVUs, rather than what the outcomes of these processes are. This focus on working conditions and work processes in the multimodal discourse, in turn, appears to articulate a new understanding of NVUs as vehicles for incorporating new ways of working into the parent corporation in a structurally separate unit. Structural separation, here, still fulfills an important function: it enables the compartmentalization of novel spatial arrangements, work processes, and practices into an entrepreneurial enclave in which they can be tried out and accommodated within a corporation without disrupting the ongoing day-to-day operations of the existing business and its functions.

This conception of NVUs, which is articulated in the images on corporate websites, also reverberates in verbal descriptions of what these units are and do. In such descriptions, the generation of market-ready concepts and ideas for new products, services, and businesses is but one of three responsibilities attributed to these units. Beyond exploring and creating new business opportunities, NVUs are consistently described as units that create the preconditions for successful innovation both within and beyond the NVU. They are expected to *enable* entrepreneurial activity within the NVU by creating a suitable environment – encompassing space, processes, and culture

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<sup>33</sup> This insight was already put forth in the early work, which considered organizational designs for innovation and entrepreneurship. It was then referred to as the differentiation/transfer dilemma (Galbraith, 1982). While the tension between separation and (re-)integration has continued to permeate research on NVUs and attracted some attention in the more recent literature (see, for example, Hill & Birkinshaw, 2014), how corporations can effectively manage this dilemma nevertheless remains an open question to this day.

– on the one hand, and to *cultivate* a new innovative culture, skills, and capabilities throughout the parent corporation in formal and informal training sessions, as well as by managing and facilitating new ways of working, on the other (see Paper IV).

This suggests that contemporary NVUs are no longer solely understood by corporations as vehicles to generate new business for the firm. Given the relative salience of NVU spaces, processes and culture and absence of ventures and tangible outputs in the corporate discourse, contemporary NVUs appear to be increasingly understood as vehicles for the development, adoption and incorporation of new administrative techniques and innovation capabilities that can be leveraged in and by the parent corporation to create lasting value for its shareholders (Antoncic & Hisrich, 2003; Lichtenthaler, 2016; Zahra, 1995). Today's NVUs, in other words, are tasked with the additional responsibilities of nurturing a new innovative capability, transforming the organization – its processes, skills and capabilities – relative to where it was before (Kuratko et al., 2015) and catalyzing “internal processes of development” (Penrose, 1995: 1). The findings of the studies in this thesis indeed suggest that the mandate of contemporary NVUs is broader and more strategic, or transformational, than creating and adding new revenue streams to the firm.

***Focus on the fuzzy front end.*** The corporate venturing perspective also suggests that NVUs have the mandate to generate *new businesses* within the firm. This understanding is most explicitly articulated in the work of Burgelman (1985: 40), who argues that NVUs accommodate the development of new ventures from “from ‘idea’ to embryonic ‘one-product’ business to ‘multi-product’ new business ready to be integrated in the operating system of the corporation”. They are, in other words, understood in the literature to accommodate the identification of new business opportunities, as well as the pursuit thereof through the generation of new business ideas and the implementation and commercialization of these concepts in new businesses (Ahuja & Lampert, 2001; Fast, 1978; Kanter et al., 1991b). However, the corporate discourse surrounding NVUs analyzed here does not mirror this view of NVUs as vehicles for the full range of new business development activities.

Verbal descriptions of NVUs are permeated by recurrent references to *ideas* and feasible, ‘market-ready’ *concepts*, which are developed in the NVU, but handed over and commercialized outside of the NVU. The visual discourse overall, and spatial design configurations in the visual discourse in particular, are similarly dominated by elements that support the creative process of ideation. The most prominent of these elements are social interaction, as a creativity-relevant process in which ideas for new products, services, and business models are created and developed collaboratively, spaces that enable collaborative creative work through their design, as well as flexible tools for sharing and developing ideas collectively, such as whiteboards and post-it

notes. Elements enabling the implementation and commercialization of solutions, as well as the complex cognitive work involved both in opportunity identification and the strategic work necessary to move from concept to new business (Ardichvili, Cardozo, & Ray, 2003; Fast, 1978; Jarzabkowski, Burke, & Spee, 2015), in contrast, are largely absent in the visual discourse. Equally absent are depictions of finished or commercial products. Put differently, both the implementation and commercialization of new business ideas, as well as the outputs generated in and by NVUs, play a subordinate role in the corporate discourse surrounding NVUs.

The scope of tasks associated with contemporary NVUs thus appears to be significantly more focused on exploration than that of previous generations of NVUs. In contrast to their predecessors, contemporary NVUs are tasked with opportunity identification and the generation, development, and refinement of ideas in test- and validation-cycles until feasible and interesting concepts are reached. This, in turn, suggests that contemporary NVUs are viewed not as vehicles for the full range of entrepreneurial activities, but rather for the early stages of entrepreneurial activities within the corporation – as vehicles for the fuzzy front end. Hence, it appears that contemporary NVUs are perceived as a vehicle not necessarily for corporate venturing, but rather for corporate *ideation*. That is to say that, the focus on ideas, concepts, and creativity-relevant processes in the multimodal discourse surrounding these units positions them as idea labs, which are focused on the identification and generation of new business opportunities for the firm. Less central to the corporate understanding of contemporary NVUs are the implementation, execution, or scaling up of ideas once they have been conceived and validated.

In contrast to earlier views of NVUs as vehicles for the generation of *new businesses* within the firm, they appear to be tasked today with the generation of new business *opportunities* and *options* for new businesses – novel ideas or solutions that may eventually turn into commercial products or services – of which those with a potentially favorable outcome are selected and pursued further outside of the NVU (Gunther McGrath, 1997). To generate these, they are tasked primarily with exploratory activities, such as search, experimentation, and variation (March, 1991). It seems, in other words, as though new business ideas are one of the core challenges that large, established corporations seek to overcome with their NVUs and, as a result, the main output (the ‘ends’) to be produced in and by NVUs (the ‘means’).

### **From vehicles for corporate venturing to a more strategic role**

Overall, these findings suggest that contemporary NVUs contribute to corporate entrepreneurship in other, more novel and nuanced, ways than prior research suggests. Rather than solely viewing them as vehicles for corporate venturing, corporations appear to view and understand contemporary NVUs as vehicles to help companies *become* more entrepreneurial and innovative and to enable the type of entrepreneurial activity that is considered essential

for the successful creation of new products, services, and businesses for the company. This is a departure from prior conceptions of NVUs as vehicles primarily for venturing, entrepreneurial *new ventures*, and innovation in the literature. Put simply, strategic corporate entrepreneurship, such as corporate renewal and the dynamic reconfiguration of innovation processes, appears to be an increasingly important impetus for contemporary new venture units.

Such a shift in the role corporations ascribe to NVUs, as well as how they expect these units to contribute to corporate entrepreneurship, may also help explain why corporations are once again turning to these units. It is plausible that corporations are currently rediscovering NVUs, but not for their effectiveness in generating new business for the firm. In fact, quite the opposite may be true: NVUs may be garnering interest today *in spite of* their ineffectiveness in generating new business(es) within, and adding new revenue streams to, the parent corporation. As structurally separate units within their parent corporations, they are instead viewed as suitable, contained test-sites for novel ways of working that have the potential to transform the whole organization relative to where it was before by nurturing entrepreneurial innovation processes, skills and capabilities and by leveraging them to develop ideas and options for future products and services. Being an entrepreneurial enclave – a different thought world (Fiol, 1995) or other space (Hjorth, 2005) – with a distinct culture, processes and its own *modus operandi*, in other words, may no longer merely be a means to the end of corporate venturing but an end in and of itself.

But that is not to say that NVUs are no longer separate organizational components concerned with the creation of the new (Drucker, 1974). Rather, the understanding of ‘the new’ that is created by the current iteration of these units has changed: it is less tangible, more strategic and focused on *how* corporations can create novelty, innovation, and growth, rather than which concrete novel products, services or business they create; how effective NVUs are in doing so; as well as how their effectiveness can be improved.

Drawing on the organizational literature provides us with the tools to put this observation into conceptual terms. In light of the centrality of interactions between people, work processes, working conditions, as well as how entrepreneuring occurs in the multimodal discourse, contemporary NVUs resemble what has been described in the literature as *interstitial spaces* (Furnari, 2014). Such interstitial spaces facilitate collective experimentation, as well as the emergence and adoption of new practices, through institutional diversity and by bringing together actors with different backgrounds in unscripted, occasional, time-limited, and informal interactions during which less is at stake.

From this vantage point, the ‘otherness’ of the entrepreneurial enclaves that are NVUs serves to create an environment that allows corporate employees to ‘break free’ from established scripts, reflect on how they think, and be exposed to diverse beliefs. Put simply, key features of NVUs as interstitial spaces allow

corporate employees to collectively try out new activities and ideas. Central aspects associated with NVUs, such as social interactions in workshops or generic meetings, where the purpose of the interaction remains vague, or the facilitation of innovation processes, which we observe as recurrent themes in the empirical material (Papers II–IV) may, in fact, fulfill an important purpose. They may serve as interaction rituals that provide stability and order to novel ways of working in the NVU and support their constitution into a new practice (Furnari, 2014). In so doing, NVUs contribute to and catalyze the process of *becoming* entrepreneurial and innovative in established corporations.

## Traces of collective rationality in the NVU discourse

An overarching theme that emerged in the analyses of the multimodal corporate discourse about NVUs is the salience of generic and interchangeable language in both verbal descriptions and visual depictions. Images typically depict their subject matters devoid of context and present viewers with indistinct and generic, rather than specific and concrete, examples of spaces, practices and processes associated with NVUs. In images where processes, or ‘goings-on’, in the NVU are depicted, they typically remain merely implied and vague.

Depictions of social interaction, for example, typically focus on how people interact, but offer little insight into the subject of their interaction. Depictions of tools associated with creative processes and the start-up world, similarly, show them ‘in use’, but not in the context of concrete start-up frameworks and processes, such as the business model or value proposition canvas. Viewers are shown that they are in use, but not how they are being used or contribute to entrepreneurial activity in NVUs. They are, in other words, used as tokens that *invoke* collaborative or start-up processes, without specifying further how these processes fit into the world of NVUs. In sum, although such photographs typically depict their subject matter in analogical perfection (Barthes, 1977a; Kress & Van Leeuwen, 2006; Van Leeuwen, 2005), they nevertheless visualize abstract ideas and concepts about the working conditions and life inside NVUs (Havemo, 2018b; Machin & Van Leeuwen, 2007).

But, the images are not only curiously indistinct and generic, they are also surprisingly similar across industry and country boundaries. This suggests that the visual discourse reproduces a universally accepted, shared visual language that articulates and embodies a general theory of the typical characteristics of contemporary NVUs as a broader corporate entrepreneurship phenomenon – what kind of beasts they are believed to be, what they are believed to do, and what they should look like, so to speak (Machin & Van Leeuwen, 2007).

This salience of generic, interchangeable language also pervades verbal elements in the multimodal texts analyzed in the context of this thesis. Here, descriptions of how NVUs work recurrently invoke common ideas, such as collaborative practices, ‘state-of-the-art’ innovation processes and tools, an

entrepreneurial culture, and features associated with a suitable physical environment. They do not, however, usually specify or further articulate local interpretations of these elements, nor in what way these elements fit into the concrete approach of each individual NVU or capitalize on the strengths of the different firms (Anthony, 2012). This results in a verbal discourse that is dominated by a set of constitutive parts, which incorporate shared ideas and understandings of what should go into a NVU, but falls short of explaining how they are weaved together into a coherent whole in each individual NVU.

In addition, verbal descriptions typically position NVUs as measures to hedge against imagined futures that consider present empirical information about trends, technological and market developments “to create a convincing ‘story’ of the future development” (Beckert, 2013: 224). As with descriptions of how NVUs work, these statements, however, do not refer to any concrete performance shortfalls below aspiration levels, or negative effects of current approaches to innovation, as reasons for establishing NVUs. Instead, motivations for NVUs typically invoke a vague, general perceived mismatch between traditional corporate approaches to innovation and contemporary market and industry environments. They are expressly not positioned as a response to current or past performance shortfalls – such as insufficient growth, sales, or profits – that would trigger a search for alternatives of action as part of what has been referred to as problemistic search (Cyert & March, 1963).

The ubiquity of common, recurring elements in the verbal and visual language used to describe NVUs suggests that the discourse reproduces a dominant set of culturally embedded and intersubjectively shared ideas and understandings about NVUs that outline more or less obligatory aspects associated with the current iteration of these units (Gee & Handford, 2012; Jørgensen & Phillips, 2002; Kress, 2012; Meyer et al., 2013). Local interpretations of these shared ideas and understandings, as well as distinct and specific local examples of how the typical characteristics of NVUs contribute to the objectives of NVUs in different industries, however, are largely absent in the multimodal discourse. This, in turn, raises the question to what extent, the design and role of NVUs described in the multimodal discourse reflects corporations’ individual perspectives on how to best organize for corporate entrepreneurship, or is adopted primarily for ceremonial or symbolic purposes instead.

That corporations use generic, interchangeable language and invoke a common understanding of how to organize for innovation in modern business environments when describing NVUs, establishes the organization as appropriate, rational, or modern (Meyer & Rowan, 1977). Rather than pointing toward the presence of a universally efficient way to organize for corporate entrepreneurship, however, this suggests that NVUs in their current form may first and foremost be a *legitimate* way to organize for entrepreneurship and innovation in large corporations today (Suchman, 1995).

This brings to mind collective rationality and institutional isomorphism (e.g., DiMaggio & Powell, 1983), and two related ideas – management trends and innovation theatre – as interesting perspectives, which have so far attracted little attention in the scholarly discussion of the *raison d'être* of historical and contemporary NVUs.

### **Collective rationality and institutional isomorphism**

What organizations do, and the structures they put into place, will reflect not only the most efficient way to organize for a particular objective. Especially when goals are ambiguous, and the means of attaining them are unclear (DiMaggio & Powell, 1983), organizations will also adhere to and incorporate prevalent, socially approved, and intersubjectively shared ideas of ‘how things should be done’ (Suddaby, Elsbach, Greenwood, Meyer, & Zilber, 2010)<sup>34</sup> that reflect, for example, “the latest expert thinking or [best practices] with the most prestige” (Meyer & Rowan, 1977: 351). Such prevalent and socially approved ways of doing or organizing things, legitimate organizational actions and structures to internal and external audiences (Meyer & Rowan, 1977) and establish the rationality of the organization, including its structures and actions, by adhering to a collective rationality.

Socially approved and shared ideas of how things should be done are adopted by organizations through three main processes. The first process is mimesis, meaning that organizations borrow from, copy, or model themselves after other organizations, which they perceive as successful or legitimate. Normative pressures to adopt prevalent models of how things should be done, from an increasingly professionalized and interconnected workforce, are the second mechanism through which they may enter, and be adopted by, organizations. The imposition of standard operating procedures, rules, and structures through powerful actors is the third mechanism (DiMaggio & Powell, 1983). As these mechanisms beget the diffusion of organizational structures and actions that are legitimate according to a shared collective rationality, the hallmarks of the resulting organizational structures are ubiquity and homogenization, or *isomorphism* (ibid.). Put simply, adoption for legitimacy will result in organizational structures and actions that look strikingly similar across firms.

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<sup>34</sup> These ideas of ‘how things should be done’ are thus best understood as higher-order constraints on organizational behavior. They comprise highly rationalized, intersubjectively shared and socially constructed systems of rules, norms, and beliefs (Hoffman, 1999), scripts and classifications (DiMaggio & Powell, 1991: 15), which define and perpetuate shared ideas of appropriate organizational structures and actions (Bromley & Powell, 2012; Friedland & Alford, 1991; Jepperson, 1991; Meyer & Rowan, 1977; Scott, 2001; Suddaby et al., 2010; Thornton & Ocasio, 2008). These systems of rules, norms, and beliefs limit the range of possible actions and structures organizations can resort to (DiMaggio & Powell, 1991) and will, particularly under conditions of uncertainty of means and ends, shape organizational structures and actions.

In light of this discussion, the curious similarity and genericness of the characteristics articulated as central to contemporary NVUs, as well as how these units are described and depicted across firm, industry, and geographic boundaries, suggests the presence of isomorphic pressures. More specifically, the salience of interchangeable and generic verbal and visual language observed in the empirical material can be viewed as an instantiation of isomorphic processes in discourse. By adhering to and reproducing shared, socially approved ideas and understandings of what NVUs are and do, the firms in the sample may, for example, simply have imitated other firms or practices that are perceived as especially innovative – because they produce more innovative products and services than others, or because they are praised as innovative by different, relevant audiences (e.g., BCG’s annual ranking of the world’s most innovative companies). One particular company that comes to mind is Google, which is regularly praised for its office culture and spaces that are typically considered to be uniquely suited to promote innovation.

Incorporating or adhering to language associated with models that have been touted as particularly successful at innovating (Kuratko et al., 2014), in turn, establishes large corporations as sensible actors that know how to organize for innovation in contemporary business environments. It further suggests that these units may be attracting interest again as a result of isomorphic processes. Accordingly, the renewed interest in NVUs may reflect a desire to legitimate the parent corporation and demonstrate that it organizes innovation the way it should be done in the 21<sup>st</sup> century.

However, the adoption of organizational structures for primarily ceremonial reasons – to legitimate the organization – need not necessarily improve performance, as strategies that are rational for some organizations are not necessarily rational for large numbers of organizations (DiMaggio & Powell, 1983; Meyer & Rowan, 1977). Best practices are, after all, not one-size-fits-all but context-dependent, difficult to reproduce, and may have very different effects in different geographic and industry areas (Alvesson & Spicer, 2018: 160ff.). Moreover, doing what everybody else does, does not necessarily produce novelty or promote innovation. Neither the isomorphic descriptions of NVUs observed in the discursive realm, nor the similarity of the structures and actions of NVUs they imply, need necessarily be the most efficient way of communicating about, as well as organizing for, innovation and entrepreneurship. This may be particularly relevant for the firms studied here, which are active in a wide variety of industries ranging from heavy industry to traditional manufacturing and service industries: reasonably, these sectors face idiosyncratic challenges, which may not be addressed appropriately with a one-size-fits-all solution. Simply having a NVU, or presenting it in a way that checks all the boxes, in other words, may not suffice to generate positive outcomes.

## **Contemporary NVUs as a management trend**

Building on the foregoing discussion, it is further worth noting that the discourse echoes scientific and popular management knowledge constructed and disseminated by management scholars, business schools, consultants and books or journals oriented toward management (Engwall & Kipping, 2004), as well as management ‘gurus’, “who simultaneously commentate upon management while acting to shape, and to reshape, the forms and practices of management” (Collins, 2000: 5). The companies studied here, for example, appear to have accepted the idea that the corporate approach to innovation is out-of-date, no longer appropriate and needs to be transformed, irrespective of whether or not the company is facing idiosyncratic challenges such as declining sales, market shares, or the like that would call for a resolution by introducing or adopting a new, different way of working.

This idea of a mismatch between the corporate approach to innovation and modern, dynamic business environments is not only frequently invoked by management scholars and gurus alike (Blank, 2013, 2019; Kuratko, 2009; Ries, 2017), but also typically used to infer a need for corporations to change in the face of a new, entrepreneurial imperative. To succeed in the ‘new reality’ of current business environments, corporations are typically advised to adopt entrepreneurial processes of innovation, such as the lean start-up, and at times explicitly the ‘start-up way’ (see, for example, Blank, 2013: 72; Kuratko, 2009: 421; Ries, 2017: 22, 34, 38). Within this line of reasoning, establishing a NVU is a legitimate way of responding to changing environments – one that checks all the proverbial boxes and shows that the organization is in sync with the latest management tools and processes.

The corporate discourse about NVUs, and the approach to organizing for innovation and entrepreneurship it suggests, appear to draw on this contemporary management knowledge. That is to say that the corporations in the sample invoke and reproduce the language and ideas associated with a rational, progressive management technique, which is popularized as the latest and best strategy for successful innovation today by different knowledge intermediaries. The popularity of NVUs, as well as the role and characteristics they are associated with, may thus be propelled by the current management fashion (Abrahamson, 1996). While this is not problematic per se, employing the latest tools alone may not be enough to be or become alert to new business opportunities (Alvesson & Spicer, 2018; Drucker, 1998).

Interestingly, the concept of a management ‘fad’ had already been introduced into the scholarly discussion about NVUs by Fast (1978: 81), who observed that the widespread adoption and popularity of NVUs in the 1970s and the surrounding attention in business journals and magazines had reached the point of “almost becoming a fad”. The idea that NVUs may be the product of a recurring management fashion, however, has not received much attention

since. In light of the findings of this thesis, it may, in fact, be worth considering and exploring further and more explicitly in future research.

### **Contemporary NVUs as innovation theatre**

By adopting organizational structures and practices in response to isomorphic pressures, corporations may end up engaging in what has been coined ‘innovation theater’ (Blank, 2019). That is to say that companies may – more or less strategically – draw on dominant ideas in the discourse about how to organize for innovation and entrepreneurship with the primary purpose of signaling or demonstrating the innovativeness of the company to internal and external stakeholders, rather than to engage in substantive attempts to be – or become – more innovative. As part of this innovation theater, they might purposefully say and show elements which are associated with a viable strategy for successful innovation today – for example, collaborative practices, a suitable physical environment, the use of tools associated start-up processes and frameworks, and an entrepreneurial culture. The adoption of innovation activities and the creation of working conditions that are generally considered to be suitable for innovative activities alone, however, is insufficient. Absent outputs, such ceremonial adoption may result in no more than innovation theater that makes large companies, employees, and executives alike, *feel* like they are innovating, but does not actually produce innovation (Blank, 2019). Interestingly, this seems to be exactly what I find in the empirical material: an overwhelming focus on process and *how* NVUs fulfill their task, with barely any verbal or visual references to concrete outputs they produce, conveyed primarily through generic and interchangeable words and images.

In light of the dominance of depictions of process and what I have referred to elsewhere in this thesis as the ‘habitat’ of NVUs, one can speculate that the NVUs analyzed here are more akin to showrooms in – and with – which corporations prove to themselves and others that they can also do innovation the modern way. Not unlike corporate social responsibility activities, contemporary NVUs thus may be used as an instrument to not only legitimize, but also market the firm (Maignan & Ralston, 2002). To create a lasting and positive impact on the parent corporation, such ‘window dressing’, however, should be followed up by substantive efforts to implement the strategy in a way that is useful for and meets the individual challenges of each firm.

### **Putting the what, why, and how of NVUs in perspective**

The findings presented and discussed in this section offer two main insights into NVUs. First, these units appear to be associated with a broader and somewhat different role within corporations today: they are expected to contribute to corporate entrepreneurship through the reconfiguration of innovation processes, rather than the creation of new businesses and revenue

streams for the firm alone. Put simply, more so than previous generations, contemporary NVUs are associated with “*internal processes of development*” (Penrose, 1995: 1, emphasis in the original) and the transformation of the organization relative to where it was before (Kuratko et al., 2015) by incorporating and cultivating entrepreneurial processes, skills, and capabilities within established corporations. As such, contemporary NVUs are expected to contribute to sustained corporate growth not necessarily – or not primarily – by generating tangible outputs that result in an increase in the ‘amount of’ businesses and revenues for the parent firm, as the CV perspective suggests. Instead, they are more so understood and portrayed as interstitial spaces, which are expected to contribute to sustained corporate growth by moving large, established corporations *in the direction* of an increase in sales or profits generated from new ventures and businesses by catalyzing a process of *becoming* more entrepreneurial and innovative. In light of this shift and expansion of the means-ends relationship associated with NVUs today, the corporate venturing perspective appears less relevant or insufficient to study NVUs.

The broader and somewhat different role of NVUs further indicates that transforming the organization – its structures, processes, and cultures – relative to where it was before is perceived as an increasingly important requisite to competing successfully in changing business environments (Kuratko et al., 2015) in which the “*ability to continually innovate* – to engage in an ongoing process of entrepreneurial action – has become the source of competitive advantage” (Kuratko, 2009: 421, emphasis added) and sustained growth. Not individual new ventures, but ongoing entrepreneurial action appear to be viewed as the foundation of growth today and NVUs are one vehicle for it.

Thus, going forward, CE scholars may want to continue to revisit a seemingly ‘settled’ debate, break with taken-for-granted perceptual sets, and move past the CV perspective. Viewing NVUs as vehicles for the reconfiguration of innovation processes, and asking new questions about them, is one promising way to generate timely and nuanced insights into what these units are and do.

And second, isomorphic processes and mimesis appear to play an important role in the context of NVUs. That is to say that firms may once again become interested in these units, even in spite of various signals of their ineffectiveness in promoting CV and the enduring managerial challenges they are fraught with discussed in the CE literature, because they are considered to be a *legitimate* way of organizing for innovation and entrepreneurship in corporations. As such, NVUs may be, or have become, understood as a means to signal to different audiences that large corporations adhere and operate according to accepted models of, and strategies for, corporate innovation, irrespective of whether and to what extent these strategies do, in fact, have a positive effect on corporate performance and growth (Meyer & Rowan, 1977).

To date, institutional theory and the influence of socially accepted ideas of 'how innovation should be done' have not been pondered in the context of NVUs. In light of the findings of this thesis, however, they may be fruitful lines of inquiry. Social fitness is as much of an organizational resource as economic fitness (DiMaggio & Powell, 1983) and may be an important driver of waves of NVU popularity, as well as what the what and how of these units in different eras.

## Contributions

This thesis enriches the scholarly discussion of NVUs by revisiting taken-for-granted assumptions about these units in the CE literature, integrating prior work in the CE field with theoretical perspectives from the neighboring field of organization theory, and by applying a methodological approach that is new to the study of NVUs. At its core, my work adds to the literature by exploring new ways of seeing these units and conducting what has been referred to as ‘box-breaking’ research (Alvesson & Sandberg, 2014). The insights generated using this approach, as well as their implications in the context of prior research on NVUs, open up new questions for research on a phenomenon that has faded somewhat into the background of the corporate entrepreneurship literature and may spur renewed research interest in the role and functioning of these units. Through my work, I hope to reinvigorate the scholarly debate about NVUs – what they are, do, and how they fit into corporate strategy.

In particular, I have sought to advance our scholarly understanding of NVUs by critically engaging with, revisiting the assumptions of, and moving beyond the corporate venturing perspective. A dominant and shared theoretical framework, such as that of the established NVU literature, is important for the development of a field of research (Sumpter, Greenberg, & Kim, 2019): it creates a safe environment in an ambiguous research world (Alvesson & Sandberg, 2014) and facilitates the exchange of ideas, as well as the advancement of knowledge in a scholarly community (Suddaby, 2010). It may, however, also constrain innovation and new ideas and lead to insights which, although empirically and theoretically robust, are disconnected from practice (Sumpter et al., 2019). It may also lead to insights that are legitimate according to the shared ideas and understandings of the scholarly community in the field of corporate entrepreneurship, but not necessarily advance our knowledge about the phenomenon in a productive way (Alvesson, Gabriel, & Paulsen, 2017; Alvesson & Sandberg, 2014).

One fruitful strategy to break with perceptual sets and assumptions that dominate a scholarly debate, is theoretical integration across intra- and interdisciplinary boundaries (Shaw, Tangirala, Vissa, & Rodell, 2018). Such theoretical integration can help explain observations that cannot be explained with existing theory and, at the same time, also generate new insights that may have eluded researchers in the field (*ibid.*).

This thesis offers two examples of such theoretical integration between the neighboring fields of corporate entrepreneurship and organization theory. The first is the introduction of ideas about the role of meanings in organizing, as well as the discursive and material dimensions of organizations, to the study of NVUs. This perspective not only informs the methodological approach in Papers II–IV, but also generates new insights into the empirical phenomenon. The second example is the explicit consideration of collective rationality and isomorphic pressures in the context of NVUs. Overall, I hope to have

demonstrated the value of a more explicit and extensive engagement with theories of organization to understand and explain corporate entrepreneurship phenomena – a context in which organization theory and entrepreneurship intersect and in which an indigenous theory is yet to develop.

The thesis also contributes to the corporate entrepreneurship literature through insights from a more exploratory and qualitative research design (Bansal et al., 2018). In contrast to prior work on NVUs, which typically studies these units through the rear-view mirror of quantitative data and retrospective accounts, an interpretive approach can offer more forward-looking insights “through the windshield” and the perspective of the research subjects (Packard, 2017: 542). As a result, it can offer insights into ongoing processes of organizing as they unfold, the goals that individual and organizational actors seek to pursue with them, as well as how the actors understand these processes of organizing and organizational structures. The novel methodological approach introduced in this thesis, in particular, demonstrates how multimodal discourse can be used as a window onto corporations’ understanding of NVUs – what they are, do, and how they contribute to corporate entrepreneurship.

Finally, the findings in this thesis, generated through both theoretical integration and the introduction of an approach to studying these units that is new to CE, feed back into the scholarly debate about NVUs. Most notably, the insights cast some doubt on the primacy and usefulness of the CV perspective in explaining and understanding contemporary NVUs. As noted earlier, one central mandate of the current iteration of NVUs appears to be to build and propagate the ability to develop new and different products, services, business models, and businesses within the corporation. It is no longer, or at least, not primarily about the new businesses themselves. For the scholarly debate surrounding NVUs, this means that venturing beyond the traditional CV perspective may be a promising way forward.

Going back to earlier work it may, for example, be worth digging deeper into the development of new administrative techniques, changes in organizational routines (Antoncic & Hisrich, 2003), as well as the creation or acquisition of new capabilities that can be creatively leveraged to add value for shareholders (Zahra, 1995), as central aspects of the NVU phenomenon. Seeing that these concepts have been addressed in other streams of business and management research, an interesting path for future NVU research may be a more explicit engagement and theoretical integration with literature on organizational change, transformation, and capabilities, as well as the ways in which organizations try to effect these changes.

Although these aspects have resurfaced in the literature from time to time (see, for example, Kanter et al., 1990), they have typically been treated as side-notes to, or by-products of, corporate venturing. Taking them seriously could contribute to a better understanding of NVUs and be central to insights that

are not only perceived as rigorous, according to the assumptions and perspectives of prior literature, but also relevant to contemporary NVUs.

## Managerial Implications

In light of the evolved and broader understanding of what NVUs are, do, and how they ought to contribute to corporate entrepreneurship, which is articulated in the corporate discourse about these units, managers of NVUs and of a firm's broader innovation efforts may want to revisit, and be mindful of, how they gauge the performance and effectiveness of the current iteration of these units. In NVUs, where greater emphasis is placed on catalyzing a process of becoming entrepreneurial and innovative, performance measures that are geared towards the effectiveness of these units in generating outputs, such as new ventures, businesses and revenue streams for the firm, may be misaligned. Measures like sales, revenues, or profits generated by NVU ventures, which focus on tangible contributions to the corporate bottom line, in particular, may not adequately capture a NVU's effectiveness in advancing corporate strategy. Misaligned performance measures may raise doubts about the effectiveness of these units in advancing corporate objectives, diminish support within the organization, and ultimately lead to the shutdown of these units before their effects on internal processes have been given the chance to materialize.

A unit that is focused on internal processes of development, which transform the organization and move it in the direction of increases in sales or profits generated from new ventures may, instead, be assessed more appropriately with softer measures that capture and value process improvements and capability development. It could, for example, be useful to measure the effectiveness of NVUs in promoting the *innovative-ness* and *entrepreneurial-ness* of the firm, in terms of employees reached, entrepreneurial processes facilitated, as well as market insights or ideas generated. Either way, following up the discourse of transformation and becoming innovative and entrepreneurial with measures capturing these objectives would be important to encourage innovation, manage these units effectively (Kanter, 1985) – in alignment with the concrete outcomes that the firm seeks to realize with an NVU, that is – and prevent the premature demise of contemporary NVUs because they seemingly do not 'deliver' on the objectives they have been mandated to pursue.

Seeing that much of the corporate discourse is focused on the stage, the actors, and on following the right script of how innovation and entrepreneurial activity should be done in NVUs, managers may also want to make sure that the model of innovation implemented in and championed by NVUs translates into substantive changes and actions that have the desired effect on corporate performance. That is, even though large corporations are confronted with

assertions from various idea carriers that successful innovation requires the creation of a particular entrepreneurial environment, one should bear in mind that the use of state-of-the-art tools and frameworks, as well as adopting the latest innovation management tools to create an elusive entrepreneurial culture, alone will not automatically effect improved innovative performance (DiMaggio & Powell, 1983; Drucker, 1998; Meyer & Rowan, 1977).

Two aspects should be kept in mind here. First, implementing popular and legitimate approaches to innovation and entrepreneurship does not merely entail the passive and faithful adoption of best practices. As has been pointed out in the literature (Sahlin & Wedlin, 2008), imitation also entails the adaptation and translation of shared ideas to different local contexts and their idiosyncratic circumstances. In other words, firms do not only have the leeway to create their own versions of how innovation should be done, but may actually *need to* adapt popular models and the means they suggest to their context in order to achieve the same desired outcomes.<sup>35</sup> Even though managers are typically asserted that the corporate approach to innovation is outdated and inappropriate (see, for example, Blank, 2013, 2019; Kuratko, 2009; Ries, 2017), they should thus nevertheless recognize their agency in shaping and creating approaches to innovation, which not only meet the demands of ‘the entrepreneurial imperative’ of the 21<sup>st</sup> century, but are also appropriate for their particular context. This includes taking care to not unreflectively adopt and incorporate perceived best practices associated with the start-up way into their way of working to signal to internal and external stakeholders that they are doing innovation the right way.<sup>36</sup> The ‘right’ way to organize for innovation depends on the context and idiosyncratic characteristics of each firm.

Second, ceremonial adoption to legitimate the firm’s actions vis-à-vis different audiences may result in a disconnect – or decoupling – between a firm’s formally stated objectives and procedures, on the one hand, and its actual practices, on the other to signal social fitness, while at the same time also meeting the actual needs of production (Bromley & Powell, 2012; Meyer & Rowan, 1977). If large corporations truly struggle with bringing about innovation that can add new sources of revenue streams to the firm and secure

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<sup>35</sup> One example is the popular ‘agile’ approach to product development, which is also invoked by a number of the companies in the sample. Like other startup tools and frameworks, the ‘agile’ management approach originates in the world of software development and its adoption in other contexts, particularly if vital enablers for the implementation of agile management practices are not in place, may not be trivial (Conforto, Salum, Amaral, Da Silva, & De Almeida, 2014).

<sup>36</sup> Particularly large organizations, who are leaders in their respective industries, may benefit from breaking the mold and establishing their own interpretations of models of innovation as viable approaches, even in the discursive realm. By using more distinct and concrete verbal and visual language to describe NVUs, which articulates their individual interpretations of these shared ideas and understandings and clarifies how they have been implemented in, and contribute to the objectives of their NVUs, they can move beyond discursively legitimizing their actions and actually take an active role in the construction of social knowledge about NVUs.

sustained growth, engaging in ceremonial adoption of popular innovation management models to signal that the organization is aware of how innovation should be done, may be problematic in two ways. Decoupling is both difficult to sustain and creates a ‘legitimacy façade’, which engenders tolerance for deviating from, or defying, norms and rules within the organization (Boxenbaum & Jonsson, 2017). In so doing, the ceremonial adoption of innovation structures, processes, and practices, risks delaying or even undermining the effectiveness of efforts to transform the organization. Put simply, continuing business as usual while paying lip service to state-of-the-art innovation structures, processes, and practices may undermine the very process of becoming entrepreneurial and innovative, while also making the organization less effective at bringing about innovation. For these reasons, ensuring that NVUs are more than innovation theatre is important. This can be done, for example, by engaging with shared understandings and translating them into a distinct, local approach to creating and organizing for innovation that is well-adjusted to the firm’s local context, idiosyncratic needs, and capitalizes on its idiosyncratic strengths (e.g., knowledge and resources). Other approaches would be to actively work to anchor new ways of working in the organization and ensure that entrepreneurial processes are implemented and followed through, for example, by consistently following up idea workshops or meetings in which plans are drafted – and pursuing the resulting concepts and plans further – to make sure that they are more than instances of performative entrepreneuring.

Lastly, managers should be aware of, and carefully construct, the messages they want to convey in *all* modes of communication – including the visual mode. Visual artefacts are inescapably entwined and implicated in the constitution of organizational phenomena and meanings (Quattrone et al., 2021). Although one might still think of images as mere ornaments that fill up websites or other documents, they are not. They do, in fact, have organizing properties that cannot, and should not, be underestimated. In particular, images should not be overlooked as sites of ongoing meaning (re-)production that instantiate shared knowledge in and around organizations.

As an important means of communication in their own right, more attention may have to be directed toward images, as well as what and how they communicate. While sophisticated, stock-image-like photographs may signal professionalism, decontextualized images depicting their subject matter in an interchangeable, generic manner offer little insight into concrete, idiosyncratic interpretations of what a NVU is, does, as well as how it ought to contribute to corporate entrepreneurship. To signal to different audiences that the NVU is a serious effort and that the firm has grappled with implementing popular ideas about how innovation should be done, managers may thus want to revisit the visual language on their websites representing NVUs.

It would be useful, for example, to balance generic images with more concrete ones (e.g., narrative images in which the setting is more clearly

distinguishable), to communicate clear(er) ideas of what NVUs are and do, while also demonstrating that generic ideas have, in fact, been implemented into the actual practice of these units (i.e., that they are coupled and ‘walking the talk’). Clearly defining and articulating the what, why, and how of NVUs in all modes of communication is particularly important in the context of NVUs. Being deliberate about the means and ends to be pursued in and by NVUs is one way to avoid the negative impact unclear objectives and peculiar identities of these units have had on their survival in the past. Images are no exception.

It would also be useful to utilize the knowledge that words and images both contribute to the overall message of a multimodal text, albeit in different ways, to create cohesive and tightly integrated multimodal texts in which both words and images clearly convey the firm’s message – both on their own and in concert. One fairly simple example is the use of captions: they could help limit the range of possible interpretations of images, more tightly integrate the visual and verbal elements in multimodal texts on webpages and thus increase clarity. Lastly, to effectively and clearly define and articulate ideas in multimodal texts about NVUs, corporations may want to capitalize more on the meaning-making potential of abstract visuals. Infographics and visualizations of processes, such as flow-charts, are useful means to capture the essential features of NVUs, as well as their unique approaches and ways of working, and might be used more extensively to convey these aspects of NVUs in multimodal texts.

## Limitations and Future Research

As with any research, this thesis has a number of limitations that must be kept in mind. Overall, the aim of the thesis was to move beyond the dominant theoretical perspective through which NVUs are typically studied and prevalent assumptions about these units in the CE literature in order to expand our understanding of NVUs. Consequently, the studies in this thesis are deliberate departures from old ways of seeing and employ a predominantly exploratory research design. While such a change of perspective can contribute to our understanding of contemporary NVUs and stimulate academic discussion and discourse about these units by raising new questions, it cannot provide conclusive answers as to what these units are and do – nor was it intended to.

The research design of the qualitative studies, which are the core of this thesis, brings with it a number of limitations, which I would like to address further (the limitations of the quantitative study are discussed in Paper I). First, I have focused on the use of verbal and visual language in the discourse to identify shared ideas and understandings about NVUs at the field-level. For this purpose, together with my co-authors, I have focused on identifying

commonalities, themes and typical representations across firms. While it was an important first step to mapping the discourse and shared ideas about NVUs, this design does not readily accommodate the identification of sub-categories or different types of NVUs at a more granular level. It would thus be interesting to focus more explicitly on *differences* in how NVUs are understood and presented in future research, for example, in a comparative case study.

Second, and related to the previous point, the qualitative studies in this thesis have a cross-sectional design, which provides a snapshot of intersubjectively shared and socially approved ideas and understandings about NVUs reproduced in corporate discourse. I have not been able to address or examine how these ideas are shaped or evolve over time. To delve into the question of how shared ideas about NVUs are constructed, as well as how they evolve, future studies may want to adopt a more longitudinal design, track the development of NVU websites over a longer period of time, and analyze if and how the verbal and visual language change. Interesting questions to consider in such a design, for example, would be if and how firms move from the current, more generic verbal and visual language to more concrete and differentiated representations, as well as if and to what extent shared ideas are adapted and translated into their local contexts.

Third, Papers II–IV analyze discourse in one genre of communication: corporate websites. Ideas and understandings about NVUs may be different, and articulated differently, in other genres of communication. Therefore, it would be important to conduct more, similar studies that use different materials to analyze what and how corporations communicate about NVUs. One option would be more formal documents, such as corporate annual reports, although the collection of empirical material for this thesis revealed that, thus far, NVUs have not been discussed much in this genre of corporate communication.

Fourth, as with any discourse analytical study, the findings of Papers II–IV do not only offer insights into language-use in a particular genre of communication but are also context-specific – in this case: large, established corporations headquartered in north-western Europe. In the interpretivist tradition, the papers provide an in-depth analysis of the corporate discourse about NVUs and how corporations in this context believe the world of NVUs is or would like it to be. Future work may want to further extend and enrich our understanding of the corporate view of what NVUs are, do, and how they contribute to CE by studying other geographic contexts and companies of different sizes.

Fifth, the qualitative studies in this thesis focus on the discursive realm. They capture ideas and theories about NVUs that are articulated and reproduced in communication. They do not, however, offer insights into the day-to-day reality of these units. As a result, no conclusive answers to the question of whether and to what extent the communication merely serves to

establish the legitimacy of the parent corporation, as well as how tightly or loosely coupled the espoused formal structures and practices are to the day-to-day realities of the NVUs, can be provided. To address these questions, future research may want to study these units on-site, for example, through participant observation and interviews capturing corporate managers' perception of the strategic context, objectives, and roles of contemporary NVUs. An explicit comparison of insights from such primary data with ideas and understandings articulated in discourse would, although fraught with problems of data access, be fruitful.

Finally, the research conducted in the context of this thesis has also evoked a number of additional questions that may be worth exploring further in future research. A first question is why NVUs are discussed almost exclusively on corporate websites and curiously absent in more formal corporate documents, particularly in annual reports. During the collection of the empirical material, I discovered that only one of the NVUs in the sample was mentioned in the parent corporation's annual report and, even in that case, only a small paragraph was devoted to the unit. It would be interesting to explore further what the presence of NVUs in a more informal, and the absence in a more formal, genre of corporate communication says about the relative strategic importance of NVUs. Does it suggest that they are primarily a signaling tool, or are they nevertheless initiatives that are central to corporate (innovation) strategy?

A second question is whether evolving depictions and descriptions in a genre of communication are indicative of a changing mission and or an adaptation of popular models to organize for innovation and entrepreneurship to a local context. Over the course of the collection of the empirical material, I noticed that the content of the websites changed quite significantly in a few cases. Three of the companies stand out in particular. Among these companies, the number of images used to present their NVUs increased significantly, to the extent that images became more prominent than text over the course of data collection. However, they did not only make more extensive use of visual language over time, but they also changed what the images depicted. Interestingly, based on my preliminary observations, it seems that over time the emphasis in the images shifted toward processual aspects and put more emphasis on people, how they work together, and what work in the NVU looks like. While an in-depth analysis of how the depictions evolve is beyond the scope of this thesis, these preliminary observations do, nevertheless, suggest that it would be interesting to dig deeper and explore the interplay between changes in multimodal discourse, ideas, and understandings about NVUs and/or how changes in NVUs might be reflected on corporate websites.

Finally, while I have touched upon absences in the multimodal discourse, the focus of my dissertation work was to map and study what is visible and voiced. What is invisible and left unsaid – that is, absences in multimodal

discourse and the negative spaces they create – however, also enable meaning-making in and around organizations (Quattrone et al., 2021). Building on this idea, it would be interesting to explicitly focus on negative spaces in the multimodal discourse surrounding NVUs and explore what fictions, visions, and imaginaries emerge in and through them.

# Conclusions

Venturing outside the conceptual and methodological box of prior research in this thesis has offered new insights into both NVUs as a broader phenomenon and the ideas, beliefs, and understandings corporations hold about these units today. To summarize the insights from this thesis, and what the meaning of ‘X’ is, it is worth going back to the very beginning.

The understanding of NVUs articulated in the empirical material analyzed in my dissertation work aligns with prior conceptions of these units insofar as they are, and continue to be, viewed as specialized environments, entrepreneurial enclaves, and other spaces that create the preconditions for *entrepreneurship* in established corporations. Today, a start-up-like culture and place, as well as modern innovation processes associated with the start-up world (such as the lean-startup, design thinking, and the customer development process) are viewed as essential features of NVUs that facilitate and create a suitable environment for ‘doing entrepreneurship’ in a corporate environment.

What they are considered to be vehicles for, however, appears to either be fundamentally broader than prior work has led us to believe, or at least to have changed for the current generation of NVUs. Unlike the first and second generations of NVUs, which were described in the literature as closely tied to internal corporate venturing, as well as the exploration and pursuit of new business opportunities, today’s NVUs appear to be understood as vehicles for more and other things instead. In particular, NVUs appear to be understood as vehicles for internal processes of development that help their parent corporations *become* more entrepreneurial and innovative by accommodating, establishing, and disseminating new ways of ‘doing entrepreneurship’ in a corporate environment.

In addition to catalyzing the transformation of the organization relative to where it was before, these units also appear to be vehicles for signaling to diverse audiences the appropriateness of firms’ approaches to organizing for innovation and entrepreneurship. Put differently, they are also a means for firms to showcase that they know about, and adhere to, accepted and popular ideas of how innovation should be done. Both of these ends have been indicated but not yet seriously explored in prior literature. Considering the findings of this thesis, there may be more important ends that firms pursue with NVUs than we, as scholars, have discussed in the past and which should

be points of departure for future research, rather than side notes in a literature that has focused on corporate venturing.

Thinking back to the meanings of – or the intersubjective means-ends relationships associated with – NVUs, perhaps the main conclusion to be drawn from this dissertation is that firms do, in fact, associate more ends with NVUs than have previously been considered. At the same time, there seems to be agreement and continuity in the means with which these ends are pursued: specialized, dedicated entrepreneurial environments, which provide a suitable culture, structures, and routines for entrepreneurial processes of innovation. What such an environment looks like in concrete terms is historically contingent. Figure 6 offers a visual summary of this main

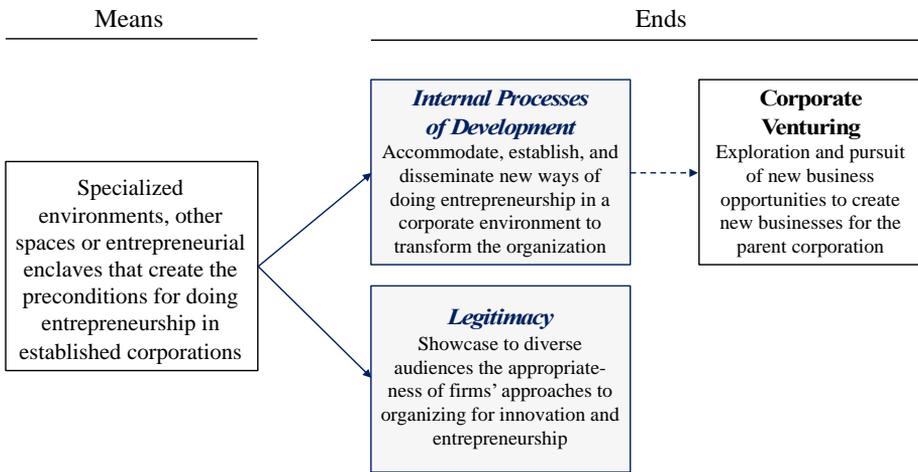


Figure 6. Summary of the means-ends relationships associated with NVUs conclusion.

In terms of solving for ‘X’ and the what, why, and how of NVUs, the conclusion of this dissertation can be summarized as follows. *What* NVUs are, their essence, is stable: they are entrepreneurial enclaves or other spaces in a corporate context. The reasons *why* firms opt for NVUs can be manifold and range from corporate venturing to internal processes of development and legitimacy. *How* NVUs fulfill their objective varies over time and the concrete features of their internal environments are oriented toward what are believed to be contemporary best practices.

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## DOCTORAL THESES

Department of Business Studies, Uppsala University

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