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The scale-up process and the nascent board's *modus operandi*:
The role of attention and self-efficacy¹

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Abstract

This article presents the results of a processual case study examining a young scale-up's board of directors, focusing on board members' attention and self-efficacy. The results help us to better understand why the board's mode of operation sometimes leans towards discipline and sometimes towards cognition (or both), independently of the venture's life cycle. The study reveals that the intensity of treatment of cognitive vs. disciplinary issues is highly, but not exclusively, dependent on the entry of new investors and hence changes from stage to stage. The results confirm Knockaert et al.'s (2015) intuition of the importance of attention and self-efficacy bias. Unlike the findings of those authors, however, it appears that the primary objects of attention and self-efficacy change over time and as the result of the multiple directors' complex actions. This leads to dynamic changes in the board's operations over time.

Keywords: Entrepreneurial governance, attention, self-efficacy, scale-up

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1. Introduction

For many years, research on boards of directors focused on the study of large listed companies. Such studies focused exclusively on the disciplinary function of the board, explaining that its primary role was to regulate potential agency conflicts between directors and shareholders, or even between different categories of shareholders (Fama and Jensen, 1983; Daily et al., 2003). More recently, research on corporate governance has shown that, in young firms, the function assumed by governance mechanisms is likely to be more complex (Bessière et al., 2020; Bonnet et al., 2017; Burkhardt, 2018, 2016; Stévenot, 2007; Zahra et al., 2009; Wirtz, 2011; Wirtz et al., 2021). These firms must overcome a lack of resources, cognitive resources in particular, and must establish legitimacy in the eyes of their stakeholders. Beyond its traditional disciplinary function, the board is thus also likely to play, sometimes primarily, a service (Knockaert et al., 2015) or cognitive role (Forbes and Milliken, 1999; Wirtz, 2011) in young entrepreneurial firms. Some studies suggest that the board's dominant mode of operation (disciplinary and/or cognitive) is likely to be influenced by the company's stage of development. Governance may thus depend on the company's life cycle (Filatotchev and Wright, 2005; Hülsbeck et al., 2019; Wirtz, 2011; Lynall et al., 2003).

Regardless of the young company's stage of development, Knockaert et al. (2015) suggest that the primary cause of the board performing one function (e.g., cognitive) over another (e.g., disciplinary) is primarily related to certain psychological and behavioral characteristics of the board chair, as well as his or her interaction with the top management team. In particular, the characteristics of the board chair in terms of attention and perceived self-efficacy may explain the dominant mode of operation (cognitive or disciplinary). Such work is consistent with recent efforts to develop an integrated theoretical framework for governance, combining disciplinary, cognitive, and behavioral approaches (Charreaux, 2005; Charreaux and Wirtz, 2006). But it also gives more precise content to the behavioral dimension, by identifying the concrete nature of the most important biases (attention bias and self-efficacy bias) at work in the development of the board of the young entrepreneurial firm. The attention bias mobilized by Knockaert et al. (2015) thus involves acting in line with the particular issues that decision makers are focusing on at a given moment, without rationally studying the situation in all its complexity and taking into account all of its dimensions. According to Knockaert et al. (2015), this (narrow) focus on particular issues can have various origins, including the organization's specific context (environment), significant changes, and the structural position of the decision maker. Self-efficacy is the second bias mobilized by these authors. It stems from the decision maker's

perception that he or she is competent and efficient in a particular field. Human resources experts with extensive HRM experience, for example, are likely to be distinguished by a high degree of perceived HR self-efficacy. If these experts are board members, it is likely that they will contribute to the board's consideration of HR strategy issues, as they will feel competent and legitimate in this area.

Knockaert et al. (2015) obtain promising results, which corroborate the interest and relevance of the variables studied. However, their approach is relatively static, and surprisingly dismisses the question of developmental stages, as if the attention paid by the board chair to potential cognitive issues were solely linked to his or her position within the organization and invariable over time. In addition, their study reduces the expression of the board's will to that of its chair alone. However, the variable of attention, in particular, is actually likely to vary over time, in function of the arrival of new investors, among other things. Organizational processes are in fact complex, involve multiple actors at different levels, and take place in a changing environment.

The objective of the present research is therefore to better understand the dynamic change in the mode of operation of an entrepreneurial firm's board during the firm's development process. This mode of operation is understood through the main issues (cognitive and/or disciplinary) dealt with by the board. In other words, how do the self-efficacy and attention dynamics of directors, individually and collectively, influence the board's agenda in dealing with various cognitive and/or disciplinary issues?

To answer this question, we conducted an in-depth processual case study (Pettigrew, 1992; Langley, 1999), choosing a young high-tech scale-up founded by two Swiss engineers for our empirical field. The firm experienced strongly accelerating growth, both in terms of the increase in the number of employees (from 16 to 80) and in the number of products sold (multiplied by 25), over a period of four years. This change in scale, especially internationally, was notably due to several rounds of funding by private investors known as business angels (BAs) and by representatives of venture capital firms, referred to as venture capitalists (VCs).

Scale-ups are a particularly relevant field for the processual study of the development of entrepreneurial governance, as their growth is typically supported by several successive funding rounds. This makes it relatively simple to identify the different developmental stages and to implement an empirical «temporal bracketing» strategy (Langley, 1999; Khenissi and Wirtz, 2015).

To the best of our knowledge, our study is the first to analyze in detail the complex multi-year dynamics of the mode of operation (disciplinary vs. cognitive) of the board in a high-tech scale-

up. This mode of operation is analyzed in function of the attentional and self-efficacy dynamics of all directors. We show that the intensity of the respective treatment of cognitive and disciplinary issues (as measured by the number of occurrences of these issues in the actors' discourse) changes from one phase to another. Our research thus contributes to opening the «black box» of the internal operations of the board of a young entrepreneurial firm during its development. Our main result is to show, in line with Knockaert et al. (2015), that the variables of attention and self-efficacy do indeed influence the board's disciplinary and cognitive operations. However, in contrast to the results of Knockaert and her co-authors, it appears that attention and self-efficacy change in focus as a function of time and director mobility, which leads to dynamic changes in the board's operations. These changes occur in particular, but not exclusively, with the arrival of new shareholders at each funding round. Thus, and to cite only one particular example, the arrival of the first professional venture capitalist in the second funding round considerably reinforced the attention paid by the directors to disciplinary issues. This increased attention not only concerned the VC in question, but also the other members of the board, including the founders and business angels (see the number of occurrences of disciplinary issues reported by the interviewees). In addition, the initial VC brought a specific cognitive competence driven by the perception of his professional effectiveness.

This processual approach is original in two ways. First, it allows us to take an abductive approach to resolve an apparent contradiction in the entrepreneurial governance literature. A large section of this literature suggests that the boards of young entrepreneurial firms are dominated by an essentially cognitive mode of operation (Filatotchev and Wright, 2005; Wirtz, 2011), whereas recent research demonstrates the existence of equally important disciplinary issues in certain start-up companies (Lang and Wirtz, 2021). The processual analysis of our concrete case study combined with the different theoretical approaches shows that the two modes of functioning are indeed present throughout the process but at varying degrees according to the different stages of the process. Second, the processual approach enables us to better qualify the concrete nature of the different disciplinary and cognitive issues, whose purpose is variable and changing, in function of the changing nature of the board members' attention and self-efficacy.

The rest of the article is structured as follows. The first section presents a brief review of the literature concerning the mode of operation of the board in entrepreneurial firms, as well as the outline of a conceptual framework establishing a link between attention and self-efficacy, on the one hand, and the board's mode of operation, on the other. Section 2 justifies and explains

the processual method used in our research, while Section 3 reports our main results. Finally, Section 4 returns to the literature to put our results into perspective, before concluding.

2. Literature review and conceptual framework

2.1 Literature review

In terms of corporate governance, research has identified a certain number of specificities concerning the boards of young unlisted firms (Daily et al., 2002; Wirtz, 2011; Garg, 2013). The boards of these young entrepreneurial firms generally have a distinctive composition due to their ownership structure, which is very different from that of so-called managerial firms. Their capital is generally distributed among a limited number of shareholders, including, but not limited to, VCs (Daily et al., 2002) specialized in acquiring stakes in young growth companies. Agency conflicts therefore typically take a particular form in these high uncertainty firms because conflicts between principals (i.e., between different shareholders) are typically more significant than the classical agency conflict between a manager and a set of dispersed shareholders (Garg, 2013). Given the specific interests of the different equity investors, some VCs are keen to have a seat on the board (Garg, 2013; Lang and Wirtz, 2021). Furthermore, we note that beyond their function of managing agency conflicts (the board's disciplinary role), some entrepreneurial firms' boards assume the significant strategic function of resource provider (knowledge, skills, networks, etc.). An especially pronounced cognitive approach may even be a specific characteristic that distinguishes young, fast-growing entrepreneurial firms (Wirtz, 2011). Also, given their small size (and thus their reduced organizational complexity), the link between board actions and corporate performance appears to be more immediate in the context of young entrepreneurial firms (Daily et al., 2002) than in large, more complex organizations. The board's influence on performance is thus likely to operate through its contribution to strategic decision-making and resources (cognitive, networks, etc.), and its mode of operation is essential to fuel performance in general and growth in particular. However, recent literature on entrepreneurial governance shows that, far from being predetermined in advance by a deterministic life cycle, the board's operations can, depending on the case, oscillate between a highly disciplinary approach (Hülsbeck et al., 2019; Lang and Wirtz, 2021) and an essentially cognitive approach (Forbes and Milliken, 1999). The question then arises, for an individual firm, of the respective mix between the disciplinary and cognitive work undertaken by the board (Knockaert et al., 2015; Wirtz, 2011). This is the question that Knockaert et al. (2015) seek to answer in their seminal article, which investigates the impact of

two psychological characteristics of board chairs, namely attention and perceived self-efficacy. However, their study has at least two limitations. First, based on the assumption that the orientation of the board's work is dominated by its chair, they focus on this key actor and do not study the characteristics and behavior of other board members. Forbes and Milliken (1999), however, show that the collective dynamics of the group are essential for the board's contribution to the strategic process. Second, Knockaert et al. (2015) test their hypotheses by applying quantitative methods to snapshot data collected from a sample of 117 technology startups. Their results are therefore relatively static in nature and fail to truly capture the complex organizational processes driving the actions of the variables of interest. This makes it difficult to determine how the board operates in different situations based on the dynamic interaction of multiple actors throughout the growth process.

To better understand the board's modes of operation, we need a processual methodological approach (Pettigrew, 1992; Langley, 1999) able to take into account multiple actors in a changing environment. In particular, the situational focus of the actors' attention is likely to be affected by changes in the internal and external environment of the firm, which is engaged in a strong development and growth dynamic that must be fed by resources, both financial (raising questions regarding the protection of interests) and in terms of skills (raising cognitive issues). The question is to understand how the board situates itself, concretely and for what reasons, with regard to these issues in the different stages of development. Processual studies of young, growing technology start-ups show that, in addition to financial resources, the firms require specific skills from key strategic players in order to master the growth process, and that the absence of these skills is likely to slow growth and create tensions (Séville and Wirtz, 2010). However, this need for cognitive resources does not automatically imply that the board and its members feel obliged to provide them. Although in certain entrepreneurial firms they can and do compensate for the lack of specific skills within the entrepreneurial team (Wirtz, 2011), this is not always the case (Séville and Wirtz, 2010).

2.2 Conceptual framework

From a theoretical point of view, we analyze the temporal dynamics of the scale-up board's modes of operation, adopting an integrated approach to governance, as outlined by Charreaux (see in particular, Charreaux, 2005; Charreaux and Wirtz, 2006; Charreaux, 2008). Charreaux (2008) proposes a meta-model that is deliberately very broad, so as to accommodate any type of organization. He gives a structured presentation of governance, showing that its various mechanisms (including the board) can act as both disciplinary and cognitive levers. Behavioral

variables, on the other hand, do not act as a separate lever, but instead influence the way that the disciplinary and cognitive levers are implemented (Charreaux, 2005). This very broad meta-model can then be adapted to study different types of organizations (see Wirtz, 2017 for an example concerning specific organizations) and enriched by employing it in the empirical field. The meta-model is therefore an interpretive framework for the structured exploration of an organization's governance rather than a model for formulating hypotheses. It has a heuristic function and can be enriched by the empirical study of different types of concrete organizations. In particular, the initial meta-model is silent on the types of behavioral biases that are most relevant to understanding the functioning of a particular type of organization. In this respect, the work of Knockaert et al. (2015), which highlights the key role of attention and self-efficacy biases in understanding the concrete functioning of a young entrepreneurial firm's board, allows us to enrich Charreaux's (2008) framework to better study this particular type of firm (see Figure 1).

Knockaert et al. argue that attention and self-efficacy are the most important psychological characteristics in determining whether the board's operations address cognitive and/or disciplinary issues.

Knockaert et al. (2015) base their development of the concept of attention as applied to a young entrepreneurial firm's board on the «attention-based view» developed by Ocasio (1997). According to the latter, «What decision-makers do depend on what issues and answers they focus their attention on. » (p. 187) According to this approach, the focus of attention is linked to three interrelated dimensions: the actor's individual cognition; the particular situation in which the actor finds himself or herself at a given moment (situated attention); and the organizational structuring and distribution of decision-making power and the discretion of the various actors. It should be noted that the theoretical framework proposed by Ocasio stems from a fundamentally processual, multi-actor perspective. Knockaert et al. (2015) reduce the concept of attention to a single structural dimension for the purposes of their quantitative study based on a snapshot of data.

Our own qualitative study allows us to re-examine the attention of the board and its members from a multi-actor, processual perspective. According to the processual approach, the precise configuration of the analysis framework is likely to evolve over time from one phase to another. The development process can be broken down into phases, and the concrete content of the conceptual framework (specifying the actual cognitive and/or disciplinary issues the board is focusing on during a particular phase) needs to be adapted for each phase. In a scale-up, the different phases of the process are often marked by the conclusion of new funding rounds. In

this context it is likely that a new director, who may enter following the arrival of a new investor, will arrive with his or her own self-efficacy and will focus on potentially new (cognitive and/or disciplinary) issues. This is an example of an actor’s individual cognition (Ocasio, 1997) acting as a determinant of their attention to particular issues.

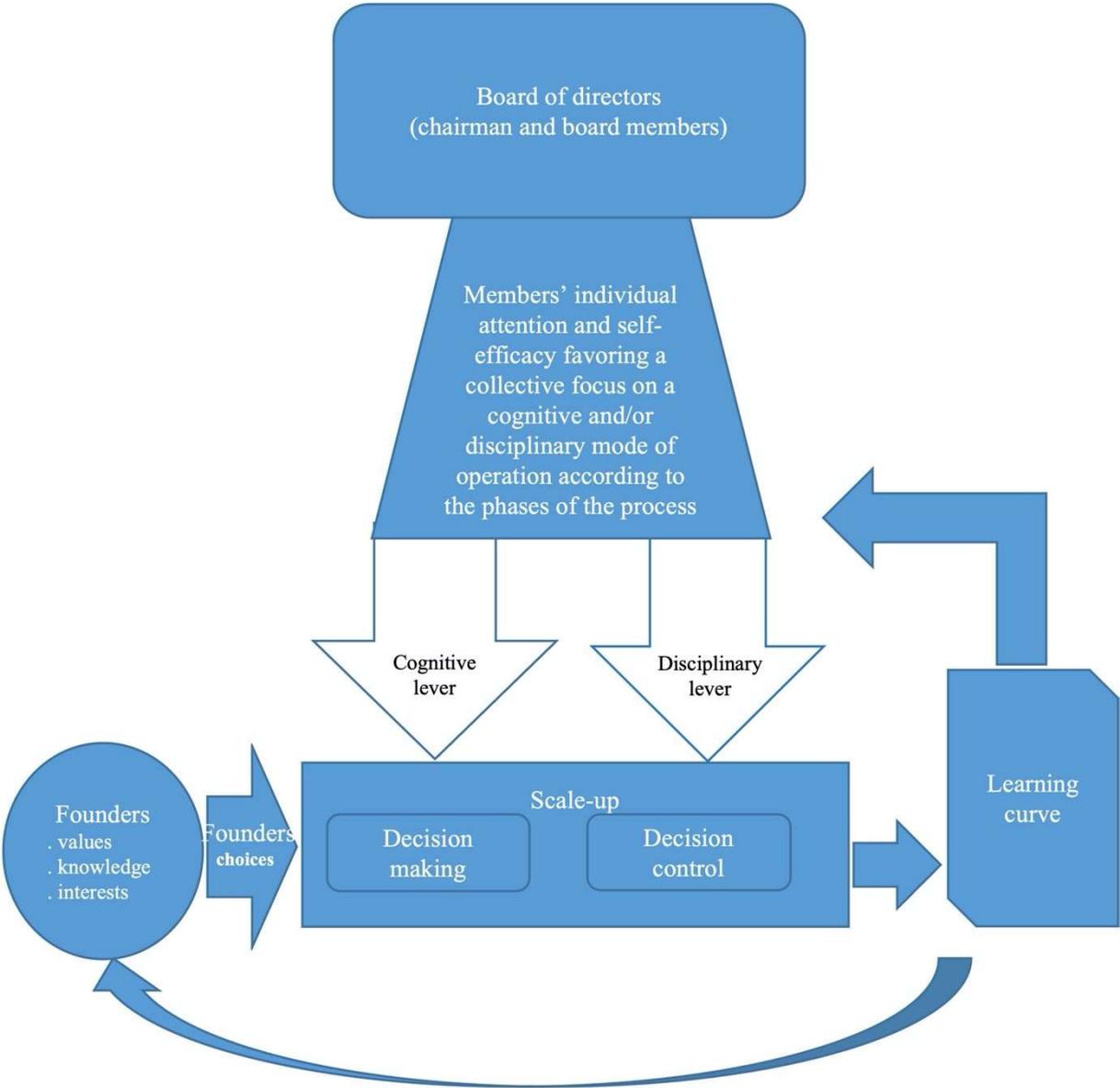
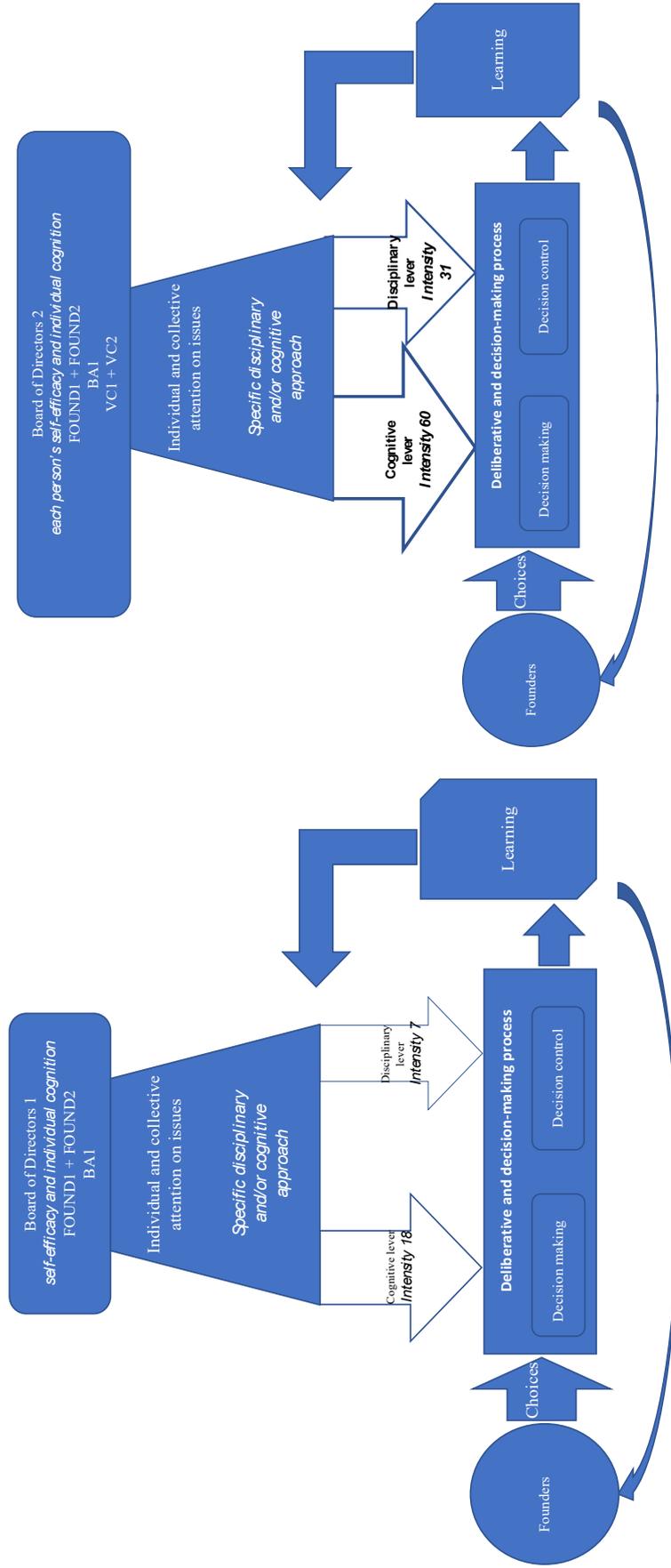


Figure 1 – adapted from Charreaux (2008; p.1851)

Thus, in line with Knockaert et al. (2015), we employ the concepts of attention and self-efficacy to better understand the direction and meaning these actors give to their contribution to the board's work, from a disciplinary and/or cognitive perspective. However, unlike these authors, we extend our study to all board members, and we postulate that the variables of the board's attention and self-efficacy change according to the different phases of the development process of the young scale-up. This is largely due to the reconfiguration of the board with the arrival, at various stages of development, of new directors, the particular interests they represent, and the strength of their perceived contribution. New investors who did not take part in the first funding round may arrive at an advanced stage of the process and claim a seat on the board. It is not uncommon for this arrival to crystallize attention (the investors' own and that of others) on potential conflicts of interest if the investment horizon of these new investors differs from that of the players already in place (Lang and Wirtz, 2022). This is an example of situated attention (Ocasio, 1997; Ocasio et al., 2018). It can also be assumed that these «newcomers» arrive with a perception of their command of certain topics (self-efficacy), linked to their previous experience (referred to as individual cognition by Ocasio, 1997). This self-efficacy, if strongly felt and displayed, is likely to focus not only the newcomer's attention, but also that of the existing directors. Analysis of our case study reveals that a potential newcomer's strong self-efficacy, if perceived as incompatible by the actors already in place, can lead to the rejection of the newcomer, illustrating the organizational dimension of attention (Ocasio, 1997), beyond its individual and situated dimensions.

Our study involves the in-depth examination of a scale-up, focusing on the dynamics of the evolution of the board's work over time. Our qualitative analysis of the interviews allows us to identify the precise purpose of the issues dealt with by the board (possible conflicts of interest, market strategy, HR strategy, etc.) and to qualify them according to their cognitive or disciplinary nature, for all directors, not only the chair. The board in this type of company is generally composed of representatives of different types of shareholders, including the founders, BAs, and VCs (Bonnet et al., 2017). The successive funding rounds, which reconfigure the ownership structure and the board, represent important changes for the scale-up. These organizational changes are likely to focus attention on particular points (situated dimension of attention). The entry of a professional VC, for example, in a later round, may well focus attention on agency conflicts, as the VC's investment horizon and objectives are likely to differ from those of other shareholders (founders, BAs), who entered earlier with different agendas (Lang and Wirtz, 2021). The points of attention may be disciplinary (experienced VCs will have specific experience in anticipating and managing conflicts of interest) and/or

cognitive (BAs who were previously successful entrepreneurs are likely to see themselves as particularly effective in managing the entrepreneurial process). Each new funding round represents a change of organizational context for the scale-up, with its own stakes, particularly in terms of interests (Bessière et al. 2020; Wirtz and Lang, 2021) and in terms of cognitive issues relating to the growth of the scale-up (Séville and Wirtz, 2010). This changing organizational context focuses attention on particular issues. The successive funding rounds (situated dimension) are thus related to the phases of a dynamic multi-actor process (Pettigrew, 1992) that is likely to lead to more or less significant reconfigurations of the board. The arrival of certain individuals (individual dimension) also influences the focus of attention of others. The board is thus a group composed of multiple actors (organizational dimension) who interact (Forbes and Milliken, 1999) in function of their individual behavioral biases (self-efficacy) under the constraint of a changing environment. Figure 2 represents an extract, limited to two phases for space reasons, of our processual model. It is a processual adaptation of the generic analysis framework (Figure 1) to the Bumblebee case. The intensity measures of the levers are taken from the results graph (see Figure 4 below).



Phase 1: Situated attention of the start-up

Phase 2: Situated attention on the complexification of agency relationships
Growth

Figure 2 – Phase 1 and 2 of the processual model
Source: The authors, adapted from Charreaux (2008)

3. Processual methodology

3.1 Epistemological positioning

The objective of our research is to better understand the beginnings and dynamic changes in the board's mode of operation (cognitive and/or disciplinary) during the development process of a young entrepreneurial firm. A large proportion of the literature dedicated to entrepreneurial governance (Forbes and Milliken, 1999; Wirtz, 2011; Zahra et al., 2009) assumes a predominantly cognitive mode of governance for start-ups, due to the high degree of uncertainty characterizing their environment. Following this line of reasoning, the youth of the firm would be the main determinant for the board's operations—the younger the firm, the more cognitive the mode of operation. However, recent research shows that the board *can* have a strong disciplinary dimension from the start-up stage, i.e., from very early in the firm's life cycle (Lang and Wirtz, 2022). In order to better understand the rationale underlying the mode of operation of young entrepreneurial firms' boards as well as possible changes over time, we thus conducted exploratory qualitative field research, based on an abductive approach (Dumez, 2012). Concretely, we applied a processual approach (Langley, 1999; Pettigrew, 1992) to our in-depth case study (Yin, 2009) of a scale-up firm that conducted several funding rounds with various equity investors. The funding process was accompanied by changes in the composition of the board. This type of scale-up is particularly interesting for studying our research question, insofar as each round triggers significant organizational change in the firm's ownership structure, thereby focusing the actors' (situated) attention on the specific issues (cognitive and/or disciplinary) linked to each new round. These issues potentially depend on the growth dynamics and requirements of the business model at the different stages of development (cognitive issues), as well as on the investors involved in the different funding rounds, the amounts invested, and their investment horizon, etc. (disciplinary issues). In addition, when new investors acquire a stake in the company in subsequent funding rounds, they are likely to demand a seat on the board, since their interests do not necessarily converge with those of previous investors on account of their different investment horizon (Lang and Wirtz, 2022). These new participants in the board's work may also bring their own perception of strategic issues, depending, among other things, on their self-efficacy and (individual) attention bias. From a methodological point of view, one of the advantages of analyzing a scale-up is that the development process can be divided into several stages, which are relatively easy to identify via, among other things, the various funding rounds (see Figure 3). This makes it possible to capture the temporal dynamics of the process in accordance with the empirical strategy of

«temporal bracketing» (Langley, 1999). Ann Langley describes different strategies for analyzing organizational processes, including temporal bracketing. This «involves dividing time into a reduced number of sub-periods, each characterized by its own dominant logic. As an interpretative support, this technique enables us to understand each sub-period and its results as influenced not only by a number of environmental and organizational variables, but also by the specific logic and dynamics of the previous period. (Khenissi et Wirtz, 2015) Following this breakdown by period, we were then able to proceed with a systematic double coding of the different verbatim transcripts according to (1) the stage of the scale-up process to which the transcript refers, making it possible to capture the situated dimension of the attention; and (2) concepts from the literature review regarding the board's mode of operation (cognitive or disciplinary) and its determinants (board members' attention and perceived self-efficacy). We note that the conceptual framework of the literature review is not designed to infer testable hypotheses, but to identify a set of concepts relevant to the structured and systematic analysis of qualitative empirical material. It involves comparing the theoretical concepts from the literature with the dynamics of the case itself, allowing for a better understanding of the way they are articulated and arranged over time, and suggesting possible explanations for other similar cases.

3.2 Case selection and chronological description

To address our research question, we identified the case of a high-tech entrepreneurial firm engaged in a scale-up process with several funding rounds over a five-year period, from 2015 to 2020. This provided us with sufficient variability in our chosen determinants (attention and self-efficacy) over a period of time (processual approach) at different stages of development (firm life cycle) with a variety of actors (founders, board members, senior management, managers). For confidentiality reasons, we have anonymized the case study, giving the firm the cover name *Bumblebee*.

A Swiss company founded by two EPFL engineers in 2014, Bumblebee builds drone-based technology solutions for the inspection and exploration of indoor, inaccessible, and confined spaces. With hundreds of customers in more than 50 countries in the energy production, oil and gas, chemical, maritime, infrastructure and utilities, and public safety sectors, Bumblebee has pioneered and continues to lead innovation in commercial indoor drones.

Heuristically, the work of Lynall et al. (2003) allows us to identify four successive phases for this case: the entrepreneurial phase, the collective phase, the formalization and control phase, and the structure development phase. We traced Bumblebee's history by considering its growth

in terms of the number of employees, the history of its board with the entry of new players, and the amounts obtained in the successive funding rounds (see Figure 1).

The two founders (FOUND1 and FOUND2) have known each other since childhood and studied together. One continued his studies with a PhD while the other started work as a strategy consultant. In December 2013, they decided to join forces to transform a patented prototype from founder 1's PhD thesis (FOUND1) into a technological innovation. They therefore created a limited company in September 2014. *«The first year, we managed to find 100,000 francs to make prototypes and to pay ourselves for a year. We had laid the foundations, and then we were sitting around a small office in an incubator saying, 'Well, now what?'* (Our translation from French). » (FOUND1; 2020.04.15)² They raised CHF 300,000 in their first seed round in 2014, which led to the arrival of the first business angel (BA1) in January 2015 and the creation of a one-tier board. We will refer to this as the entrepreneurial phase.

In February 2015, the company won an award in the form of a USD 1 million check that allowed it to hire new employees. In March 2016, after a USD 4 million series A funding round, a venture capitalist (VC1) and an observer (OBS1) joined the board. The first products were sold in 2016. This is the collective phase.

Between 2016 and 2018, the firm focused on sales strategy, on improving the initial product, and on creating a second-generation product. To do this, it conducted a second funding round of USD 11 million to finance the creation of the second product, leading to the arrival of a second venture capitalist (VC2) on the board in October 2018. This is the formalization and control phase.

In 2019, the founders brought in an expert in the same technological solutions (TMT4) with successful experience in scaling up a growing entrepreneurial firm to help them set up a new organizational structure and integrate the management team. This is the structure development phase.

By 2020, the company had raised more than USD 20 million and had 500 customers. But they were not yet profitable because they had decided to invest heavily in research and development. Their business model was focused on a high-end niche positioning with high growth potential. Bumblebee was growing rapidly. In 2018 it grew by 200% compared to 2017. In 2019, the company recorded growth in excess of 50%.

² « La première année, on a réussi à trouver 100'000 francs pour faire des prototypes et pour se payer à deux pendant une année. C'était fondateur et on se retrouve ensuite autour d'un petit bureau dans un incubateur à se dire : « Bon ben, maintenant quoi ? » (FOND1;15.04.2020)

Figure 3 presents the different dimensions of the processual dynamics for our case study.

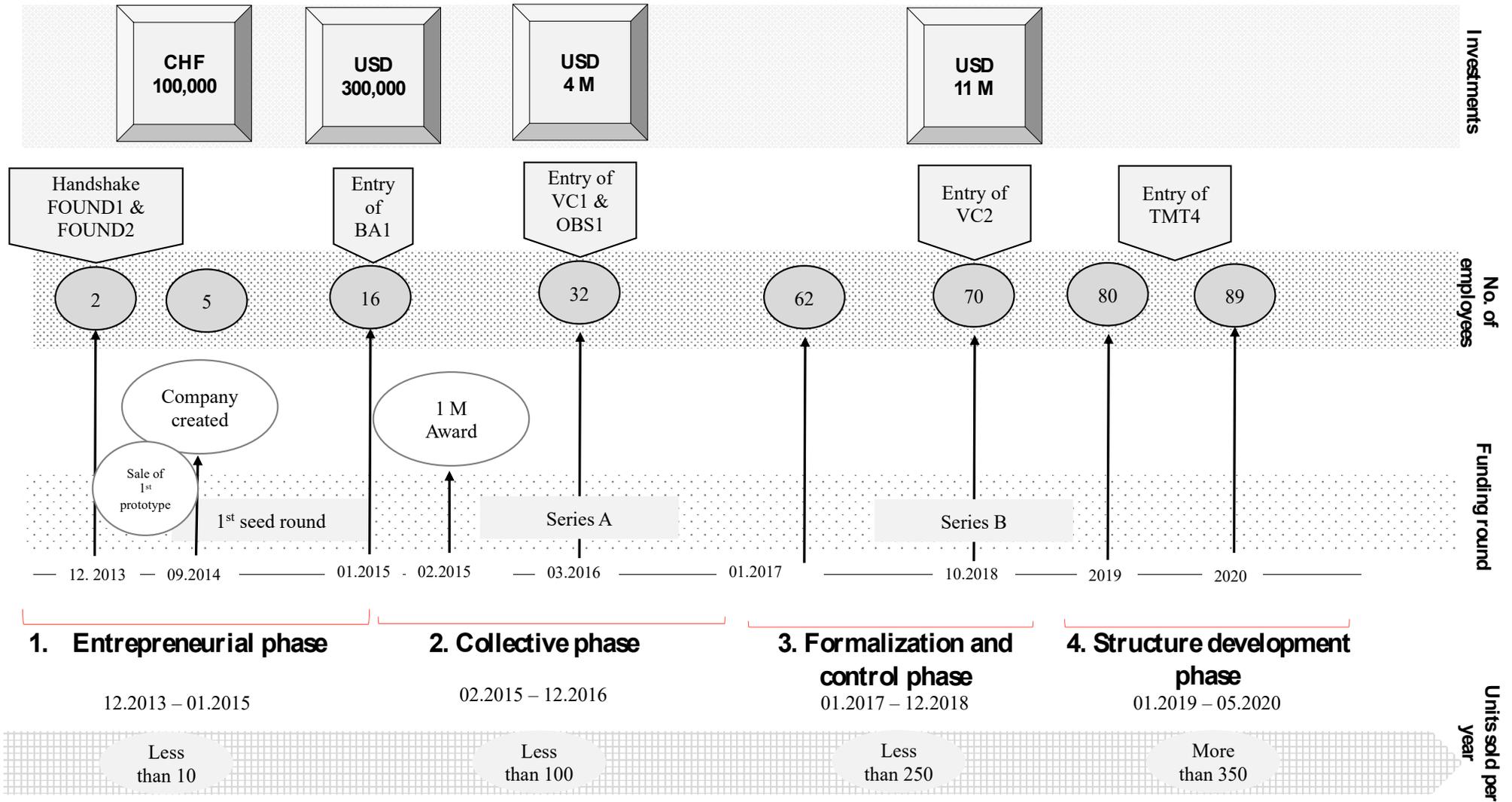


Figure 3 – Temporal bracketing of the process. Source: The authors, inspired by Langley, 1999

3.3 Data analysis

We conducted 11 interviews (nine in French and two in English) between March 25 and July 1, 2020 with the main actors in our case study, as presented in the next section. We used a semi-

Role	Interview	Date	Length	Language
Member of the top management team	TMT4	03.25.2020	1h05	French
Founder, Chairman of the Board, and member of the management team	FOUND1	04.15.2020	1h30	French
Observer, board member	OBS1	04.17.2020	1h13	French
Manager	TMT2	04.22.2020	1h00	French
Business angel, board member	BA1	04.23.2020	1h10	English
Venture capitalist, board member	VC2	04.24.2020	1h00	French
Venture capitalist, board member	VC1	04.30.2020	1h10	English
Member of the top management team	TMT3	05.22.2020	1h05	French
Founder, CEO, and Vice-Chairman of the board	FOUND2	05.28.2020	1h00	French
Manager	TMT5	06.25.2020	1h07	French
Member of the top management team	TMT1	07.01.2020	52 mins	French

structured interview guide as an observation instrument.

The interviews were recorded, typed up in full, and sent to the individual interviewees for approval. Table 1 summarizes each interviewee's role, the length of the interview, and the language used. Note that the extracts from the French interviews presented in the following sections of our article have been translated into English.

Three interviews were excluded from our final analysis: TMT2, TMT3, and TMT5. These interviewees could not provide sufficient information on the role of the board, as they were too far down the hierarchical line to have regular contact with it.

In the interviews, we looked for key events, key moments, and key decisions in the history of the firm and of the board (situated dimension) to explain what makes the board adopt a disciplinary and/or cognitive mode of operation.

We then created a data coding grid comprising: codes relating to our temporal bracketing (a code for each phase captures the situated dimension of attention); codes for the board's disciplinary or cognitive mode of operation; codes for perceived self-efficacy and the feeling of non-efficacy (individual dimension); and codes for individual attention biases (stemming from each person's own experience) and organizational attention biases, linked to the cognitive (contribution of knowledge and skills) or disciplinary (control and identification

of potential conflicts of interest) issues encountered during the firm's growth cycle. We also used codes for non-attentional biases by making a permanent link with the disciplinary or cognitive issues of our research question. The coding was performed by the first author under the control of the second author with several exchanges on the relevance of the chosen categories.

We analyzed all the verbatim transcripts using the qualitative analysis software MAXQDA and each transcript was double coded according to one of the four phases presented in Figure 1 (processual coding, allowing us to capture the situated dimension of attention) and according to the concepts (thematic coding: the board's operations, self-efficacy, individual and organizational attention). For example, the feeling of self-efficacy expressed by VC2 (thematic coding) necessarily falls into phase 3 and possibly into phase 4 if an indication of duration is mentioned (processual coding), given the VC's late arrival in the organization.

We extracted our data through the code relations browser that identifies the intersection of codes in a segment.

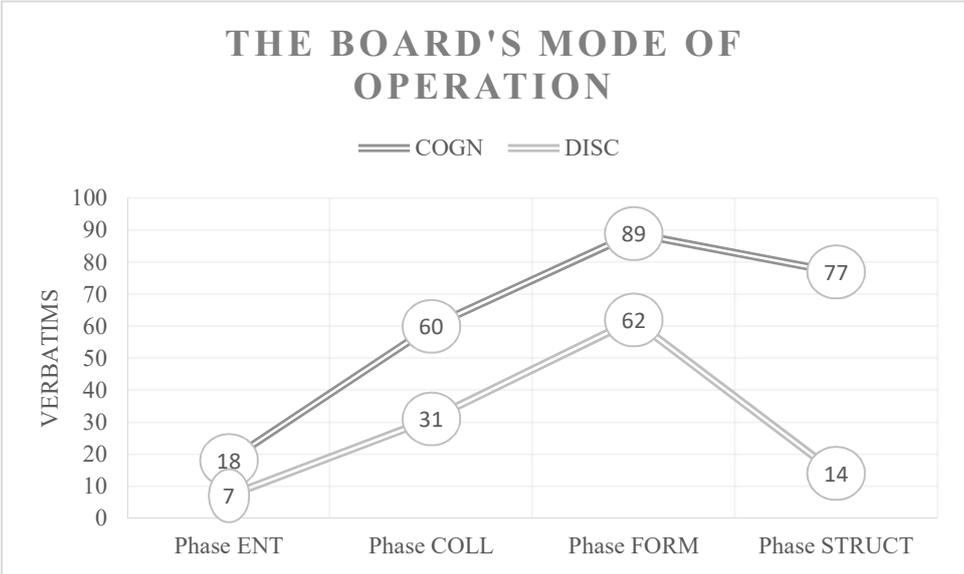
We now present our results, starting with a summary overview of the phenomenon studied (Figure 4), before explaining the results for each phase, highlighting the attention and self-efficacy of the various actors.

4. Results

Based on the narratives of board members and management, who describe the history of the firm and the history of the board through key moments, we observed an increase in the cognitive functioning of the board as new members were integrated into it, in connection with the firm's funding rounds and growth. The successive funding rounds brought new actors to the board, who, through their position and experience, sometimes paid particular attention to disciplinary issues and sometimes to cognitive issues. Disciplinary issues were present throughout the processual dynamics, and they increased strongly during phases 2 and 3. Proportionally, however, disciplinary issues are less represented in the actors' discourse, if we look at the number of occurrences in the transcripts, compared to cognitive issues. Attention to disciplinary issues was particularly high among external professional investors (including VCs), which illustrates the individual dimension of attention. But it was also communicated to the other members of the board. It first increased (phases 1 to 3) as the ownership structure became more diversified, which is consistent with the situated dimension of attention as the number of shareholders rises (Lang and Wirtz, 2021). Note that afterwards, during the last (structuring)

phase, the intensity of the attention focused on disciplinary issues decreased quite sharply in the case studied, which is somewhat surprising if we refer to the work on the governance life cycle (Wirtz, 2011) and partially contradicts the earlier case study by Bessière et al. (2020) on the temporal evolution of governance as a function of complex funding trajectories. We believe that this observation illustrates the genuine value of studying attention bias. Furthermore, the dynamics of strong growth encouraged board members to focus their attention on cognitive issues, because particular competences were required to manage the firm (Séville and Wirtz, 2010). This attention was reinforced by the perceived self-efficacy of some of the actors supporting the entrepreneurial process and managing the growth process.

Overall, we observed a peak in phase 3 (formalization), which corresponds to two elements: from a cognitive perspective, the formalization of a sales force for which the board, and more specifically OBS1, played the role of mentor and coach for the founders, and for FOUND2 in particular; and at the disciplinary level, the choice of a new investor, which led to the integration of VC2. Once the investor had been chosen, the board’s mode of operation remained highly cognitive, notably due to the discussions between the board and the founders on the implementation of a new management mode (holacracy) and as a result of the COVID-19 crisis, when a director was called upon to reassure the teams. The case studied thus provides



illustrations of concrete cognitive and disciplinary objects on which the administrators’

Figure 4 – general overview

attention was focused. On the cognitive level, mentoring in relation to the implementation of the sales force, as well as organizational work to develop holacracy, and even attempts at health crisis management, represent such objects, whose progress depends on the attention given to

them by board members. They involve organizational learning processes and are, therefore, essentially cognitive in nature. At the disciplinary level, the arrival of VC2 created a situation that focused attention on the problems of potentially divergent financial interests. This shows, concretely, how situated attention led the board to debate and act on these disciplinary issues.

The four phases are described one by one in the following sections.

4.1 The entrepreneurial phase

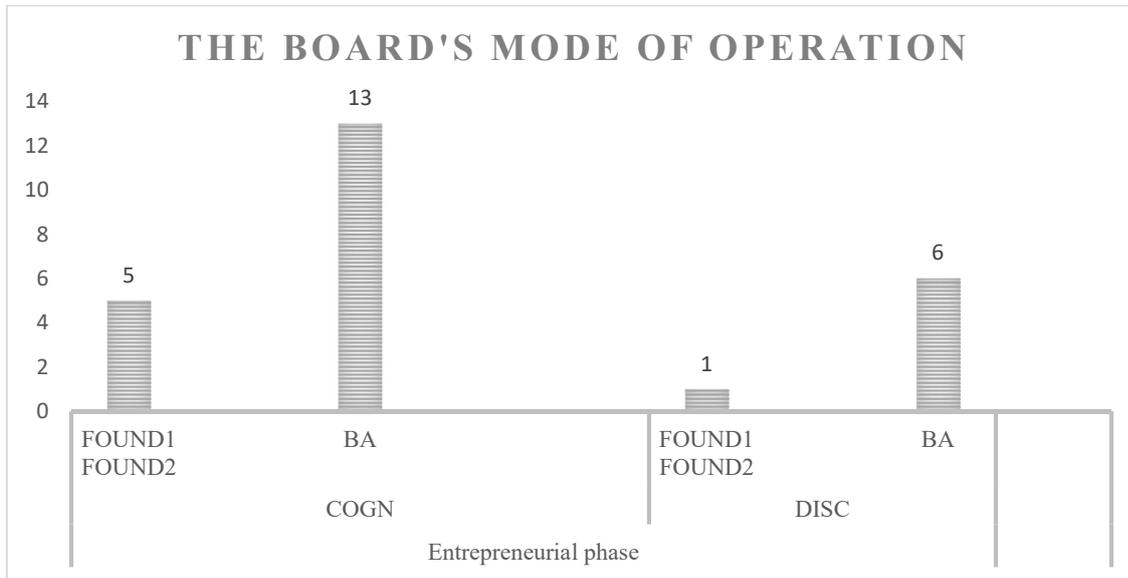


Figure 5 – Entrepreneurial phase

The entrepreneurial phase is marked by the formal creation of a board when BA1 arrived. When they had created the company, the two novice founders had appointed themselves chairman and vice-chairman without really knowing what this meant. «*Basically, I was appointed chairman when we didn't even really know what that meant. [FOUND2] and I said to each other, 'Well, OK, you're the CEO and I'm the Chairman.'*³ That way, we each have a bit of a role.» (FOUND1; 04.15.2020)⁴

When it was created, the board of directors thus comprised three members, FOUND1, FOUND2, and BA1, whose respective self-efficacy and individual attentional focus can be described as follows. FOUND1 is a co-founder, CTO of the firm, and chairman of the board. He holds an MSc in Robotics from EPFL and Harvard University and continued his studies with a PhD. While working on his PhD, he developed and patented new approaches for stabilizing flying robots in confined environments. He is an expert in all aspects of flying

³ Swiss company law requires a board of directors for limited companies (*sociétés anonymes*) comparable to that of French companies that do not opt for the two-tier system. Anglo-Saxon countries refer to this as a one-tier board. As in France, it is possible to separate or combine the functions of chairman of the board and chief executive officer (CEO). The Swiss code of best practice for corporate governance (see *economiesuisse*, 2016), whose recommendations are very similar to the standard codes found in most EU and OECD countries (Wirtz, 2005), and which was adopted at the beginning of the millennium, strongly recommends separation, but does not make it mandatory. As in France, the recommendations of the governance code are adopted according to the «comply or explain» principle (Wirtz, 2019). There is therefore theoretically no particular institutional contingency that would make this case very different from that of a comparable start-up in France.

⁴ «*Au fond, j'ai été nommé Président quand on ne savait même pas vraiment ce que ça voulait dire. Quand on était, [FOND2] et moi et qu'on s'était dit : « bon ben OK toi t'es CEO et moi je suis Président ». Comme ça, ça nous donne chacun un peu un truc*». (FOND1 ; 15.04.2020).

systems technology, including mechanical and electrical aspects and software engineering. His attentional focus is on technology, teamwork, consensual decision making, identifying founding values to create a strong corporate culture, empowering individuals, and choosing shareholders aligned with the company's values and strategy who behave like mentors rather than authority figures. *«Again, that [team spirit] has always spoken to me. Team spirit, I've seen it in action, let's say, whether it's in basketball or, in the end, everyone can see it when you do group projects or when you see labs that work. It's obvious that team spirit and the mindset of the people are complete game-changers. For me in any case (Our translation from French). »* (FOUND1; 04.15.2020)⁵. He feels effective in the technology of flying systems, in his ability to work in teams, and in his ability to understand people. He feels less effective in managing a company, in selling, in the process of scaling up a company, and in governance in general. He is described as a charismatic personality whom others are happy to follow, and he is consensus oriented (TMT3, TMT 5).

FOUND2 is co-founder, CEO of the firm, and vice-chairman of the Board. He graduated from EPFL with an MSc in Engineering. Before founding Bumblebee, he worked as a strategy consultant specializing in product launches in the life sciences industry. His attention is focused on *«how to bring a product to market and get out of this narrow, advanced engineering thing to see how it works when it happens in the real world. That led me to strategy consulting (Our translation from French).»*⁶ He is interested in market data, results, product launches and sales, and the decision-making processes that move the business forward. He feels effective in his ability to be entrepreneurial, to challenge himself, and to have the humility to reach out for help and expertise when needed. He feels ineffective in building a sales team and in the sales process. *«At the beginning, I had to recruit a sales team when I didn't even know what a salesperson was. I was an engineer myself, I always worked with technical people, and really didn't know the business. (Our translation from French)»*⁷. He feels ineffective in scaling-up a firm. *«We're clearly underqualified for our role and so we try to evolve ourselves, and to evolve our roles*

⁵ *Encore une fois, cela [l'esprit d'équipe] m'a toujours parlé. L'esprit d'équipe, je l'ai vu en marche, on va dire, que ce soit dans le basket ou enfin tout le monde le voit quand on fait des projets de groupe ou quand on voit des labos qui fonctionnent. C'est évident que l'esprit d'équipe et le mindset des gens changent complètement la donne. En tous cas, pour moi. »* (FOND1 ; 15.04.2020)

⁶ *« Comment on amène un produit sur le marché et sortir de ce truc un peu étroit que peut être l'ingénierie sur un sujet un peu poussé pour voir comment ça marche quand ça arrive dans le monde réel. Ça m'a dirigé vers le conseil en stratégie ».* (FOND 2 ; 28.05.2020)

⁷ *« Au début, j'ai dû me retrouver dans la position de recruter une équipe de vente alors que je ne savais même pas ce que c'était un vendeur. J'étais ingénieur moi-même, j'ai toujours travaillé avec des gens techniques et je ne connaissais vraiment pas le métier. »* (FOND 2 ; 28.05.2020)

*very, very frequently (Our translation from French).*⁸» He is described by the management team as rational and Cartesian in his approach as a consultant, and as a person who analyzes, challenges ideas, highlights strengths and weaknesses, and organizes ideas and problems quickly and clearly (TMT1, TMT3, TMT5).

BA1 is a business angel and has been a board member since January 2015. He holds a Bachelor's degree in engineering but has followed no other formal education. He has no business, accounting, finance, or HR degrees or qualifications and is instead self-taught. He has practical experience having previously founded a start-up that he went on to sell. *«My experience was hands-on building a startup.»* (BA1; 04.23.2020) He focuses his attention on and feels effective regarding the growth process of an entrepreneurial firm, describing the scaling process using the image of an initial hypothesis that turns into a value hypothesis and a growth hypothesis. He also focuses his attention on the agency conflicts that can arise between shareholders and founders. *«If the management decided they did not like the way it was all working out, if they walked, if the two founders walked, there is no business left... So, you run a... I am not sure what the right terminology is... game theory or anything.»* (BA1; 04.23.20) He also focuses on the employer's «duty of care» regarding the health of his employees. He feels ineffective in the sales process. *«I don't have any sales DNA. I am an engineer who can't sell.»* (BA1; 04.20.2020)

The two founders paid little attention to disciplinary governance issues in this transition from an informal duo (chairman/CTO and vice-chairman/CEO) to a more formal trio, despite the emergence of potential conflicts of interest linked to the arrival of an external investor (BA1). On the other hand, they were somewhat attentive to the cognitive role played by BA1 at the end of this first phase and the beginning of the collective phase. *«The first business angel to join us, when there were really only a few of us, gave us some advice in relation to the fact that salespeople don't work the same way as engineers, that you have to learn to understand them, that it's completely different. (Our translation from French) »* (FOUND1; 04.15.2020)⁹

The two founders' weak attention regarding the cognitive and disciplinary dimensions of a nascent board can be linked to their low sense of self-efficacy as entrepreneurs and «scalers».

⁸ *« Au début, j'ai dû me retrouver dans la position de recruter une équipe de vente alors que je ne savais même pas ce que c'était un vendeur. J'étais ingénieur moi-même, j'ai toujours travaillé avec des gens techniques et je ne connaissais vraiment pas le métier. »* Il se sent peu efficace face au scale-up d'une firme. *« On est clairement sous-qualifié pour notre poste et puis on essaie d'évoluer nous-même, d'évoluer nos rôles très très fréquemment. »* (FOND2 ; 20.05.2020)

⁹ *« Le premier business angel à nous rejoindre, quand on n'était vraiment que quelques-uns, nous avait donné quelques conseils par rapport au fait que les vendeurs ne fonctionnent pas de la même manière que les ingénieurs, qu'il faut apprendre à les comprendre, que c'est complètement différent. »* (FOND1 ; 15.4.2020)

« *We do the best we can, but we are clearly under-qualified for our position and so we try to evolve ourselves, and to evolve our roles very, very frequently (Our translation from French).* » (FOUND2; 05.28.2020)¹⁰

Our observations show that BA1 paid more attention to the particular relationship that developed at the beginning between the founders and himself, as the first external board member, clearly emphasizing the disciplinary issue, namely the delegation of decision-making power through a shareholders' agreement and the potential conflicts of interest at stake. «*In the case where you have got two founders, and one investor, you end up running a business that is still very much controlled by the founders. [...] You have these weird dynamics. [...] In a start-up you have a situation where, you know, essentially the founders have come with the business, the ideas, and the energy, but legally they have to put a board there which has to formally delegate the day-to-day management to two founders.*» (BA1; 04.23.2020) The formalization and operation of the control structure (the board of directors) was undertaken with reference to the contributions and interests of the different parties, in this case the two founders who still had a majority stake, and the BA. This was the situation at the first funding round, with contributions from each party, and the individual experience of BA1, who focused on the disciplinary issues of the control exercised by the board.

BA1's sense of self-efficacy in helping the founders to scale up the firm also focused his attention on the cognitive dimension of consulting. «*I can act as a startup coach, as a mentor to kind of help them isolate what the problem really is. [...] For example, how to scale up... Lots of the scaling up issues.* » (BA1; 04.23.2020)

In this first phase we thus observed the founders' lack of attention regarding the disciplinary dimension of their nascent board, which is linked to the fact that they had no governance experience at this stage of their company's development, in contrast to the experienced business angel, who also positioned himself as a coach and mentor to the novice founders.

4.2 The collective phase

The collective phase was marked by the arrival of two venture capitalists on the board, VC1 and OBS1, following the series A funding round.

¹⁰ « *On le fait au mieux, mais on est clairement sous-qualifiés pour notre poste et puis on essaie d'évoluer nous-même, d'évoluer nos rôles très très fréquemment.* » (FOND2 ; 28.05.2020).

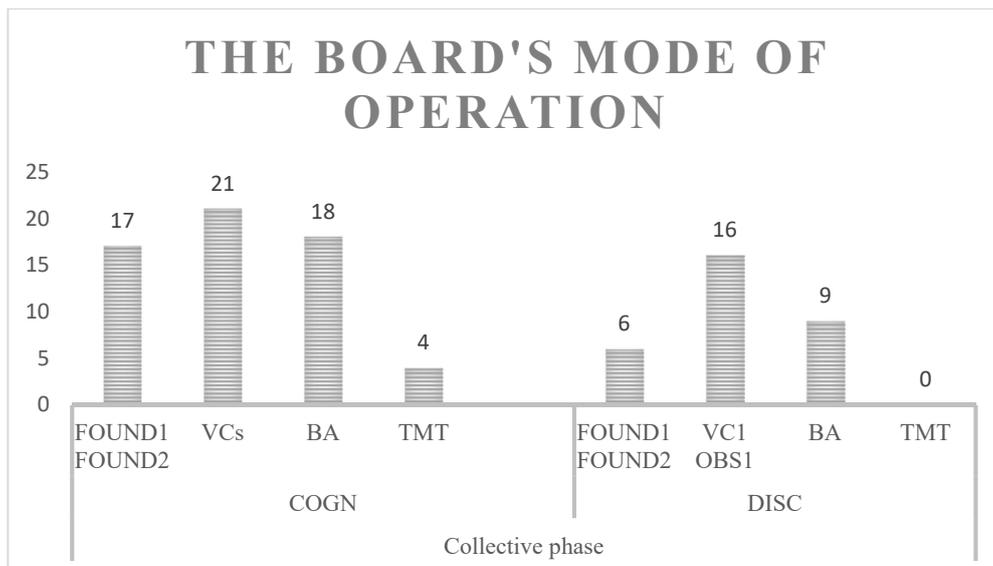


Figure 6 – collective phase

A cognitive focus continued to dominate within the board, and increased significantly due to the strong growth dynamic that the company was experiencing. This growth dynamic highlights the «liability of newness» (Stinchcomb, 1965) that the company had to deal with and that the board could alleviate by transferring cognitive resources to the entrepreneurial team. «*The board needed to be hands-on and not so much controlling at the seed stage, but they need the expertise because the founders don't have all the full set of expertise.*» (BA1; 04.23.2020)

Two new directors expanded the board, bringing their own self-efficacy and individual focus. VC1 is a venture capitalist, and has been a member of the board since March 2016. He has 25 years of experience as a high-tech investor in various companies in the US, Europe, and Asia. He has a strong background in finance with international experience and focuses his attention on growth, «*If you want to be a venture capitalist, I think you have to like growth.*» (VC1; 04.30.2020) He also focuses on people's potential and on his role as a partner in growth. «*Entrepreneurs are building businesses and you have to be excited by their journey. [...] We don't own business, we partner with entrepreneurs, right. So, I like forming partnerships, relationships. I like people and I always have that belief that people make great companies. So, we have to find the best people and give them the capital to get to the next level and share our experiences with them to help them get there.*» (VC1; 04.30.2020) He feels effective in risk management and risk taking, in finance, in crisis management, in his ability to bring the right leads by using his network, and in his knowledge of the scale-up process. «*We have seen the*

movie before, right, as opposed to the people that are watching the movie for the first time. If you have seen the movie before, you can tell people. » (VC1; 04.30.2020)

OBS1 has had a non-voting «observer» role on the board since March 2016 and works closely with VC1. He is an entrepreneur who co-founded a start-up that became a global leader in the high-tech sector. He led the growth from entrepreneurial firm to managerial firm, becoming a venture capitalist in 2016. *«I've done 'The good, the bad, and the ugly' of technology company management (Our translation from French). » (OBS1; 04.17.2020)¹¹* He has an engineering background and holds a master's degree in economics. He focuses on the organization of sales processes, on bringing in new talent (finance, sales, and software), on competition and building competitive differentiation, and on the conflicts of interest that can arise when new investors become involved. *«When they are approached by big strategic players who want to invest in the company, it's always very tempting to say, 'Oh yes, it's a big name. Let's bring them in.' But there are all sorts of dangers associated with that. That's when we had this 'strategic workshop' to review the strategy with them. And besides, the complementary points of view that we brought—VC1, him coming from the investment bank, and me, an entrepreneur—were useful and different (our translation from French). » (OBS1; 04.17.2020)¹²* He feels effective in scale-up processes, crisis management, high-tech products, building sales processes, and evaluating new talent.

Our study shows that a nascent board's attention to disciplinary issues is reinforced when professional venture capitalists join the board. BA1, VC1, and OBS1 mention the paradigm shift that took place within the board, where, as majority shareholders, they could, in the presence of divergent interests, outvote the founders or even part ways with them.

«We talked a lot about the board dynamics, but obviously it changes over time when there is the first VC and then the second VC. Intangibly the control changes somewhat. That's a very complicated transition really. We are basically working as a team even though in theory the investors could outvote the founders. » (BA1; 04.23.2020)

¹¹ *« J'ai fait tout le « good », le « bad » et le « ugly » du management des entreprises de technologie. » (OBS1 ; 17.4.2020)*

¹² *« Lorsqu'ils sont approchés par des « big strategic players » qui veulent investir dans la société, c'est toujours très tentant de dire : « Ah oui, c'est un big name. Il faut le faire venir ». Mais il y a toutes sortes de danger liés à cela. C'est là qu'on a eu ce « strategic workshop » pour revoir la stratégie avec eux. Et d'ailleurs les points de vue complémentaires qu'on a apportés VC1, lui venant de l'investissement bank, et moi, entrepreneur, étaient utiles et différents. » (OBS1 ; 17.4.2020)*

VC1 and OBS1 paid close attention to the potential agency conflicts that could arise between them and the novice founders, given the dynamic evolution of the structure of the parties' interests.

OBS1, in particular, focused closely on the potential conflicts that could emerge in the event of divergent interests between minority shareholder founders and majority shareholder investors who had the power to dismiss the founders if necessary for control purposes.

«If the board became a battlefield between [FOUND2] and [FOUND1] and the rest of the board members, [FOUND2] and [FOUND1] would say, 'You don't understand anything, that's not what we should do. We know and we are essential to the survival of the company, etc.' I'm speaking from experience here. That's exactly what a CEO I fired as chairman a few years ago told me. If it came to it, well yes, we have the power because we hold more than 50%. We could do it. But it has never come to that, because things are simply going very well between us and there's a very good understanding. (Our translation from French) » (OBS1;04.17.2020)¹³

The attention to disciplinary issues driven by the paradigm shift mentioned above was also communicated to the founders, who were attentive to the disciplinary dimension triggered by the funding rounds, which modified the shareholder structure to their disadvantage. FOUND1 and FOUND2 therefore focused on cognitive rather than disciplinary investors with similar views on the company's future development, avoiding investors whose high sense of self-efficacy in their field could potentially hinder good collaboration, and generate conflicts of interest and differences of opinion within the board. *«We rejected several offers because they arrived in an 'I know everything' mode. Of course, we don't pretend to know everything either, but we didn't want to have egos and conflicts with people who think they know everything and who want to change everything as soon as they arrive. [...] People who said, 'You know best, I'll give you all the advice I can, but I don't know your business as well as you do, and I don't know this industry as well as you do.' That was also something we were looking for (Our translation from French). » (FOUND1; 04.15.20)¹⁴*

¹³ *« Nous avons beaucoup parlé de la dynamique du conseil d'administration, mais il est évident qu'elle change au fil du temps lorsqu'il y a un premier VC, puis un deuxième VC. Intangiblement, le contrôle change quelque peu. C'est une transition très compliquée en fait. Nous travaillons essentiellement en équipe, même si, en théorie, les investisseurs peuvent mettre les fondateurs en minorité (notre traduction de l'anglais). » (BA1 ; 23.04.2020)*

¹⁴ *« On a éliminé quelques offres quand même parce qu'ils arrivaient en mode « je sais tout ». Nous, bien sûr qu'on ne veut pas non plus prétendre qu'on sait tout, mais on ne voulait pas non plus avoir des égos, des conflits avec des gens qui pensent tout savoir et qui veulent tout changer dès qu'ils arrivent. [...] « Ceux qui disent : « C'est vous qui savez le plus, moi je vais vous donner tous les conseils que je peux, mais je ne connais pas votre*

Despite this fundamental shift, the board's attention remained predominantly focused on cognitive topics. The self-efficacy of the majority shareholder investors in their chosen domains encouraged them to focus their attention on these particular domains, thereby filling the self-efficacy gap of the novice founders.

OBS1's perceived self-efficacy in the process of scaling up a sales team led him to focus his attention on this topic and to transfer his skills to FOUND2. *«I touched on a few of those moments when [FOUND2] was wondering how to organize his sales team. By country? By verticals? I've asked myself these questions many times in my life. And I've changed my mind at various points. (Our translation from French) »* (OBS1; 04.17.2020)¹⁵

On the other hand, VC1's sense of self-efficacy about his ability to turn the founders into global players made him focus on a rather cognitive role in his posture on the board, with the objective of adding value by transferring skills and know-how. *«So, one of the rules we have before going to invest in companies, we are going to join the board. And the reason for that is we don't want to be what is called 'transient investors.' We want to be helpful in growing the business and so we have an expression, 'You don't want to be dumb money.' We want to be the guy who makes a difference. When we invest, we want to make sure that we can add value to the company. We want to make sure that we get along with the entrepreneurs. »* (VC1; 04.30.2020)

Similarly, BA1's sense of perceived self-efficacy on the scale-up of an engineering team pushed him to pay particular attention to it to accompany FOUND1 in this transformation. *« [I also helped on] how would you scale up the engineering team and the product. [...] It also helps that I have been in the game, so they know it is...we are together in some ways. In looking from the engineering perspective, helping FOUND1 figure out what is important, what is not important. »* (BA1; 04.23.2020)

business aussi bien que vous, ni cette industrie aussi bien que vous. Ça c'était quand même aussi quelque chose qu'on cherchait. [...] » (FOND1 ; 15.04.20)

¹⁵ *« J'ai touché quelques-uns de ces moments quand [FOND2] s'est demandé comment organiser sa « sales team ». Par pays ? par verticaux ? Voilà je me suis posé ces questions plein de fois dans ma vie. Et j'ai changé selon les périodes. »* (OBS1 ; 17.4.2020)

In this collective phase, self-efficacy and attention firstly enabled a better understanding of how the board could help the company deal with the «liability of newness» in order to compensate for a deficit in the entrepreneurial team's cognitive resources.

«Again, it would obviously be wrong to say that the board doesn't contribute. Already... if they weren't there, FOUN2 and I would have imposter syndrome, probably very strongly, which would almost paralyze us. To have these experienced people giving us advice and then trusting us, it obviously has a huge impact. (Our translation from French) » (FOUND1; 04.15.2020)¹⁶

Secondly, we observe that, compared with the business angel and the founders, the venture capitalists were more clearly focused on disciplinary issues. By contributing their particular points of attention and a certain degree of self-efficacy in this area, they steered the board to collectively pay more attention to the issue of potential agency conflicts.

¹⁶ *« Encore une fois le board, ce serait évidemment faux de dire qu'il ne contribue pas. Déjà rien que... S'ils n'étaient pas là, on aurait le syndrome de l'imposteur avec FOND2, probablement très fort, qui pourrait nous paralyser presque. Avoir ces gens d'expérience qui nous donnent des conseils et ensuite qui nous font confiance, c'est évident que ça a un impact immense. » (FOND1 ; 15.04.2020)*

4.3 The formalization and control phase

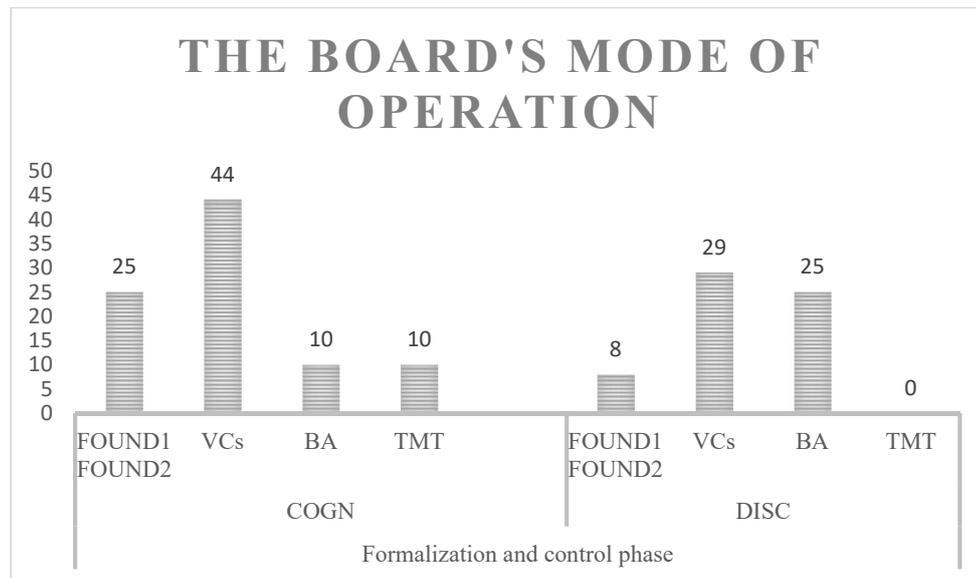


Figure 7 – Formalization and control phase

The formalization and control phase was marked by an attentional focus on issues relating to possible conflicts of interest, i.e. a disciplinary approach. This stemmed from the need to choose and integrate a new investor to finance the creation of a second product, which ultimately led to the integration of VC2 in October 2018. It was also marked by the VCs' intense focus on more cognitive themes relating to the strong acceleration in growth and the development of the company's competitive advantage.

This phase saw the arrival of a new director on the board, VC2. He is a venture capitalist and has been a member of the board since October 2018. He holds a bachelor's degree in economics and a master's degree in finance with a specialization in venture capital and private equity. He has strong experience in the international energy industry, specifically in power plants. With two other partners he co-founded a venture capital fund in Paris specializing in investments in energy infrastructure and energy technologies. He is currently a partner in a Swiss venture capital firm. He focuses his attention on monitoring results in terms of sales performance and employee satisfaction, on sales in general, and on the sales of the second product at the origin of his investment. His self-efficacy is reflected in his experience in supporting growth processes. *«I'm looking to pass along examples of similar situations that I've experienced in the past, in my career, how we solved the problem. On the one hand, it's my personal experience and on the other, it's the experience of my investment portfolio. (Our translation from French)*

» (VC2; 04.24.2020)¹⁷ His self-efficacy is also seen in his knowledge of power plants, where he contributes a network of contacts and benchmarking. *«What I transfer is what I see in other companies, why they took this step and not another. [...] It's my experience in the energy industry, with a certain network of contacts as well. [...] I'm also looking to introduce their sales team to new customers. (Our translation from French) »* (VC2; 04.24.2020)¹⁸

The management team also expanded in this period, with the arrival of a new top management team (TMT) member. Although he did not join the board, we interviewed him for triangulation purposes.

Numerous comments from BA1, VC1, OBS1, FOUND1, and FOUND2 show that an offer from an iconic investor, who was ultimately replaced by VC2, focused the board's entire attention for a period of time. There were diverging views. The offer was initially perceived as attractive by the two founders but risky by BA1, VC1, and OBS1, which finally led to the offer being rejected. *«When it came to accepting the investor or not, the board decided not to accept. I would say that it was perhaps the only time that the board really made a decision that wasn't, shall we say, what FOUND2 and I were suggesting. (Our translation from French) »* (FOUND1; 04.15.2020)¹⁹

In the previous phase, the founders had focused their attention on investors whose overly strong self-efficacy could have created potential conflicts. Nonetheless, the strong self-efficacy of this iconic investor, who came forward in phase 3, was initially positively received by the founders. On the other hand, the majority investors on the board perceived the self-efficacy of this potential new investor as a risk that could result in the investor seizing power and controlling the founders, thereby affecting the durability of the company and the board's operations. This created negative attention that led to the offer being rejected. *«We were approached by [the iconic investor] who wanted to invest in the company. Initially I was quite excited because I had only heard and read... [positive things]. But after two meetings and several exchanges on the proposal they made to us, I became much more circumspect. I felt that FOUND2 and*

¹⁷ *« Je cherche à leur passer des exemples de situations analogues que j'ai vécues dans le passé, dans ma carrière, comment on a résolu ce problème. D'un côté, c'est mon expérience personnelle et l'autre, c'est l'expérience de mon portefeuille d'investissement. »* (VC2 ; 24.04.2020)

¹⁸ *« Moi, ce que je transfère, c'est ce que je vois dans d'autres entreprises, pourquoi ils ont pris cette mesure et pas une autre. [...] C'est mon expérience dans ce secteur, de l'énergie, avec un certain réseau de contacts aussi. [...] Je cherche aussi à faire des introductions à leur équipe de vente à des nouveaux clients. »* (VC2 ; 24.04.2020)

¹⁹ *« Quand il s'agissait de prendre un investisseur ou de ne pas le prendre. Là, le board a décidé de ne pas le prendre, mais je dirai que c'était peut-être la seule fois où vraiment le board a pris une décision qui n'était pas, on va dire, ce que FOND2 et moi on suggérait. »* (FOND1 ; 15.4.2020)

FOUNDI were very tempted. [...] It was hard to refuse an investment from [name of investor]. We helped them a lot at that time, and VC1 also, to tell them, 'Well, no, we're not feeling it. You yourselves accept that there are question marks, even if it's [name of investor], no. You're the ones in the middle of the equation today. It's your baby and you have to be very confident that this guy is coming to help you, to support you, and not to say, «That's all there is to it, I'm the big guy» (Our translation from French). » (OBS1; 04.17.2020)

«We got an investor who wanted to invest. We had, as a board, we had to decide whether to take it or not and I said No. [...] Do we go with the bird in the hand, which I think is kind of unattractive or do we think we will get another one in the future that is going to be a lot better and the company will continue to perform. And that decision was the right one. [...] It is not like we have a crystal ball and know the answers. We just offer an alternative view. We took that decision, and this was the right decision for the company. » (VC1; 04.30.2020)

Excessive perceived self-efficacy from a board member can undermine the board's operations by generating a misalignment in terms of attention. The founders focused their attention on the cognitive contribution of this new investor and did not see the disciplinary issues related to its integration. The remaining board members focused their attention on potential future conflicts of interest, i.e., disciplinary attention, which led them to adopt an unfavorable position towards the investor.

Beyond this particular situation, which was the focus of considerable attention within the board, the self-efficacy of experienced investors such as BA1, VC1, and OBS1 in managing the change in scale of young high-tech companies allowed them to put their finger on problems that, if not addressed sufficiently early, could have jeopardized the company's development.

Thus, the board's attention was also focused on cognitive issues such as the human management of a fast-growing company. *«When you get to 20 or 30 people, you have to migrate from a two-tier structure where you have the founders and everybody else. You have to work more like a team. And that's where it becomes more complicated, and HR becomes a full-time kind of job. » (BA1; 04.23.2020)*

BA1 and VC1 particularly focused their attention on the duty to manage employees' health and the legal and regulatory aspects of employment contracts. Their previous experience and their

self-efficacy as board members allowed them to avoid problems relating to the non-payment of social security or the burn-out of certain employees.

«We have to share the responsibility to ensure that workers are well treated. We have to make sure the right policies and procedures are in place. We have to make sure there are competencies on that side of the house. I think it is really an important part. » (VC1; 04.30.2020)

Similarly, the board focused on bringing in experienced people who could help support the company's strong growth. *«We were very good at hardware, and we had to continue to be very good, so we had to bring in other profiles to further strengthen this competitive advantage. And then on sales, and particularly to construct sales channels. It was good to bring in people with a bit of experience, who had done it. These are the essential points. To structure ourselves in terms of HR and finance. [...] I always think that Google would never have become Google if Sergey Brin and Larry Page hadn't brought in Eric Schmidt early on. Eric Schmidt grew them, then handed over the reins to them, and then he left. So, we've been asking ourselves that question and it's something that we're following very closely all the time. (Our translation from French) » (OBS1; 04.17.2020)²⁰*

More specifically related to the product, another concern that focuses board members' attention is the development of more powerful software in order to increase the company's competitive advantage. *«It's more the capacity to create a pool of talent on the software that seems very important to me and where I have the feeling that we 'struggle' a bit. FOND2 recognizes this, I think, but half-heartedly (Our translation from French). » (OBS1; 04.17.2020)²¹*

«It's obvious that with their recommendations, with their advice, we will... 'Ah... We really need to have a product more uh..., beyond hardware, with a platform, with software, a product that we can sell with a solution, not just a drone.' All of that kind of stuff obviously comes from all

²⁰ *« Sur le hardware, on était très bon et il fallait continuer à être très bon, donc faire rentrer d'autres profils pour renforcer encore cet avantage compétitif. Et puis sur les ventes, et notamment sur la construction des « channel » de vente. Là c'était bien de faire rentrer des personnes avec un peu d'expérience, qui l'avaient fait. Ce sont les points essentiels. De se structurer en matière de RH, de finance. [...] J'ai toujours en tête que Google ne serait jamais devenu Google si Sergeï Brinn et Larry Page n'avaient pas fait venir Eric Schmidt très tôt dans le processus. Eric Schmidt les a fait grandir jusqu'au moment où il leur a laissé les rênes, et il est parti. Donc on s'est posé cette question et c'est quelque chose qu'on suit en permanence avec beaucoup d'attention. » (OBS1 ; 17.4.2020)*

²¹ *« C'est plutôt la capacité de créer un pool de talents sur la software qui me paraît très important et sur lequel j'ai le sentiment qu'on « struggle » un peu. FOND2 le reconnaît, je pense, à demi-mot. » (OBS1 ; 17.4.2020)*

these interactions with the board where we kind of present plans to them and they give us advice (Our translation from French). » (FOUND1; 04.15.2020)²²

We observed, therefore, that the VCs paid more cognitive attention to the many cognitive issues generated by the acceleration of growth in order to compensate for the lack of cognitive resources of the founders, who were new to managing this change of scale, and to guarantee the sustainability of the company.

In phase 3, we also observed a divergence in the attention paid to disciplinary issues between the founders on the one hand, and the investor-shareholders on the other, due to a difference in the parties' governance experience, which can be translated into a difference in their self-efficacy with regard to governance issues.

²² « *C'est évident que par leurs recommandations, par leurs conseils, on va... « Ah... Il faut vraiment qu'on ait un produit plus eh..., au-delà du hardware, avec une plateforme, avec du software, qu'on puisse vendre avec une solution, pas juste un drone ». Tout ce genre de choses, ça vient évidemment de toutes ces interactions avec le board où on leur présente un peu des plans, ils nous donnent des conseils.* » (FOND1 ; 15.4.2020)

4.4 The structure development phase

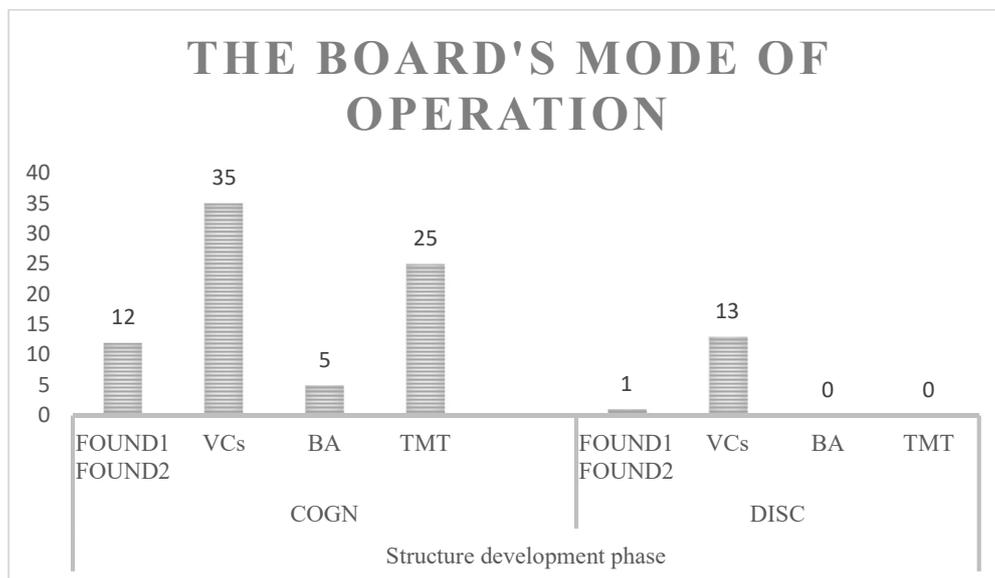


Figure 8 – Structure development phase

This last phase is marked by a focus of attention around three key events that crystallized the board's discussions into a rather cognitive logic. Their attention was grabbed by the integration of a new holacratic organizational structure allowing the founders to delegate the decision-making power that had remained centralized in their hands until then to the experts, the launch of a new generation product with more prominent software development, and the COVID-19 crisis.

This last phase also highlights the board's stronger attention towards members of the top management team (TMT). Interview excerpts, in particular from TMT1, the sales director, and TMT4, who was responsible for setting up the holacracy, show that the board paid more attention to them by inviting them to take part more regularly in board meetings. This focus on certain TMT members allowed the board to verify that the perceived level of efficiency of these members, who were in charge of strategic issues (the sale of the new product or the implementation of a new organizational method), was adequate to guarantee the sustainability of the company and the creation of value. For example, in the following excerpt, TMT4 explains the exchanges with the board on the implementation of a holacratic approach. The strategic position of the management team members in the company's structure and the issues they dealt

with illustrate the organizational dimension of attention. The board's readiness to listen and the exchanges it had with these people acted as a means to focus collective attention.

«On the other hand, when we explained to them that we wanted to go in a non-standard direction, there were interesting questions, interesting debates, but there was no particular resistance. [...] Typically in discussions... I defended the idea of trying to use holacracy. So, they asked questions. They challenged it, saying, 'Isn't this just a fad?' It's true that it's the kind of reaction we usually get to the idea. I've seen some bad press, but at the same time there are trials...and some board members have experience internally in the companies they represent, which is pretty interesting. [...] And then, of course, there were some reactions to the holacracy proposal. 'That's fine, do your experiments, but do it on a smaller scale. Don't do it directly at a company-wide level.' There was some reluctance like that. (Our translation from French) » (TMT4; 03.25.2020)²³

As the above excerpt shows, the implementation of holacracy focused attention within the board. Depending on the different board members' level of self-efficacy, this attention encouraged cognitive work within the board, allowing for the exchange of experience, and gave the founders the freedom to experiment. *«I was cautious, but I thought it could work at Bumblebee. [...] I was pretty positive because I know of one positive case, but it's only one case and the others were neutral with some difficulties or concerns, but neutral, nonetheless. (Our translation from French) » (VC2; 04.24.2020)²⁴*

Once introduced into the collective consciousness of the board, the holacratic approach became a regular focus, even for those who were not initially convinced of the approach and paid very little attention to it.

«As far as holacracy goes, I told you that I wasn't a big fan. But I let myself be convinced and now every two months, I talk about it either to the board or one-to-one with FOUND2. 'How is

²³ *« Mais par contre, quand on leur a expliqué qu'on voulait aller dans une direction non classique, il y a eu des questions intéressantes, des débats intéressants et il n'y a pas eu de résistance particulière. [...] Typiquement sur la discussion... moi j'ai défendu l'idée de tenter d'utiliser l'holocratie. Alors ils posent des questions. Ils challengent cela en disant : « est-ce que ce n'est pas juste une mode ? C'est vrai que c'est un peu la réaction qu'on a habituellement là-dessus. J'ai entendu des mauvaises presses et en même temps il y a des expériences... et certains membres du conseil d'administration qui ont des expériences en interne dans les entreprises qu'ils représentent, qui sont assez intéressantes. [...] Et puis, évidemment il y a eu certaines réactions sur la proposition d'holocratie. « C'est bien, faites vos expériences, mais faites-le à échelle réduite. Ne faites pas directement au niveau de l'entreprise. » Il y a eu certaines réticences de ce genre-là. » (TMT4 ; 25.03.2020)*

²⁴ *« J'étais prudent, mais je pensais que ça pouvait marcher chez Bumblebee. [...] Moi j'étais plutôt positif parce que je connais un cas positif, mais c'est un seul cas et les autres étaient neutres avec quelques soucis ou craintes, mais neutres. » (VC2, 24.4.2020)*

it going? How far have you got?’ And if we see that there’s too much drift, we have to show our authority as the immediate supervisor of the top two managers (Our translation from French). » (OBS1; 04.17.2020)²⁵

The launch of the second product with the software development also represented a major event for this young company and thus became another very significant point of attention within the board. *«Otherwise, another key moment was just before the launch of [name of new product], in preparation for the launch of the second-generation product. There we were all... Sales were up, but it wasn’t the growth we were expecting, especially given our investment. The second-generation product was a pretty big gamble. It was really essential for the sales of these new drones to take off. And with the launch of a new product, there’s always a big risk that it’s not sufficiently advanced from an industrial point of view, that it’s not sufficiently developed to put in your customers’ hands. So, there’s a risk of product returns, customer complaints, and a loss of image. I think the last few board meetings before this launch were all a bit heavy-going. We talked a lot about the tests we did. With the founders we went over the procedures they had put in place to support customers if something went wrong and all that. For me, that was a key moment. Fortunately, it went well afterwards (Our translation from French).* » (VC2; 04.24.2020)²⁶

The use of the term «key moment» (twice) suggests the existence of a strongly situated dimension of attention.

The VCs’ high sense of self-efficacy in launching a new product, driven by their experiences with other companies in their portfolio, therefore triggered both cognitive and disciplinary work in the board. Cognitive, through the exchange of experiences between the experienced investors and novice founders, and disciplinary, by verifying that the launch of the new product would not harm the investors.

²⁵ « Sur holacratie, je vous ai dit que je n’étais pas super fan. Je me suis laissé convaincre et maintenant tous les deux mois, j’en parle soit au board ou soit en one-to-one avec FOND2. « Comment ça se passe ? Où tu en es ? » Et si on voit qu’il y a une dérive trop importante, on doit faire preuve de notre autorité en tant que supérieur hiérarchique des deux top managers. » (OBS1 ; 17.4.2020).

²⁶ « Autrement, un autre moment-clé, c’est juste avant la lancée de [nom du nouveau produit], en préparation du lancement du produit deuxième génération. Là on était tous... Les ventes ont bien progressé, mais ce n’est pas la croissance qu’on a attendu, surtout par notre investissement. Le pari sur le produit deuxième génération était assez grand. C’était vraiment critique que les ventes de ces nouveaux drones décollent. Et avec le lancement d’un nouveau produit, on a toujours beaucoup de risque que ce n’est pas suffisamment évolué d’un point de vue industriel, pas suffisamment industrialisé pour les mettre dans les mains des clients. Donc là, on risque des retours des produits, des plaintes des clients et une perte d’image. Je pense que les derniers boards avant cette lancée, étaient tous un peu denses. On a beaucoup parlé des tests qu’on a faits. On a revu avec les fondateurs les procédures qu’ils ont mis en place pour soutenir les clients si quelque chose va mal et tout ça. Pour moi, c’était un moment-clé. Heureusement cela s’est bien passé après. » (VC2 ; 24.4.2020)

Finally, the extraordinary situation generated by the COVID-19 pandemic is a particularly good example of how an external crisis can monopolize attention. In our case, it led the entire board to take up the subject in a cognitive mode, providing another illustration of situated attention (see Ocasio, 1997).

«Specifically, on COVID-19, the first thing to do is to call a board meeting. Actually, before I did that, I was on the phone with FOUND1 and FOUND2 and said, ‘This is really bad. We are not kidding around here. [...] We need to take drastic actions immediately or your revenues are going to go through the floor, right.’ By the way, the other board members are also experienced and also shared that. OBS1 was right there with me. VC2 was right there with me, but I think the extent of the slowdown was really awful for FOUND1 and FOUND2 to conceptualize in the first couple of days. We had already made up our mind. » (VC1; 04.30.2020)

Their prior experience of managing serious economic crises, such as the bursting of the internet bubble in 2000 or the 2008 subprime crisis, enabled the investors to develop a sense of self-efficacy strong enough to pay direct attention and take immediate action to preserve the company’s financial health.

«I basically bring my 30 years of technology company management in different environments, in the US, in Asia, in Europe, which includes the ’98 crisis in Asia, 2000 in the US, 2008 in Europe and, as I told you, I think I’ve done ‘The good, the bad, and the ugly’. I’ve made acquisitions, redundancy plans, IPOs. I’ve hired people and fired people, including key players. That’s clearly what I bring to the table, and I know that the CEOs appreciate it, because they know that I have, in almost every situation, lived through similar times. (Our translation from French) » (OBS1; 04.17.2020)²⁷

The different events and their impact on performance nevertheless led to different levels of attention among the board members, with a long-term focus for FOUND1, FOUND2, and BA1 and a shorter-term focus for the VCs

²⁷ « J’apporte essentiellement mes trente ans de management de « technology company » dans différents environnements, aux US, en Asie, en Europe, qui a traversé la crise de 98 en Asie, celle de 2000 aux États-Unis, 2008 en Europe et je pense avoir fait, je vous l’ai dit, le « good », le « bad », le « ugly ». J’ai fait des acquisitions, des plans sociaux, des introductions en bourse. J’ai embauché des gens, j’ai viré des gens, des pivots. C’est clairement cela que j’apporte et ce que je sais être apprécié par les CEO car ils savent que j’ai, à quasiment toutes les situations, traversé des moments similaires. » (OBS1 ; 17.4.2020)

«There are the financial investors, VC2 and VC1 and OBSI, who are a little more focused on the short-term performance of the company and then there are the entrepreneurs, and another board member who has a longer-term view of the company. And certainly, in the first few meetings, there wasn't too much tension between these two points of view, but you do see different views. » (VC2; 04.24.2020)²⁸

It cannot be ruled out that this difference in investment horizon could lead to conflicts of interest if there were a reversal of the company's situation. There is therefore a latent agency conflict between the different types of shareholders that the VCs monitor closely.

In this phase, the attention and self-efficacy biases highlight how the cognitive and disciplinary approaches intertwined to allow the board to perform the cognitive role of transferring skills and experiences to support the novice entrepreneurs in scaling up the company, while also keeping an eye on the potential agency conflicts that could emerge within the board of directors, between the founder-directors and the shareholders, or even between the different categories of shareholders.

²⁸ *« Il y a des investisseurs financiers, VC2 et VC1 et OBSI, qui sont un peu plus ciblés sur la performance court-terme de l'entreprise et après il y a les entrepreneurs, et un autre membre du conseil qui a une vue plus long terme de l'entreprise. Et certainement dans les premières réunions, il n'y a pas trop de tension entre ces deux points de vue, mais on voit des vues différentes. » (VC2 ; 24.04.2020)*

5. Discussion and conclusion

Our research involves an in-depth, multi-year, processual analysis of the history of a young scale-up and its board of directors, focusing on the actors' attention and self-efficacy. This allows us to open the «black box» of a board of directors in the process of being constituted in order to better understand what makes it, in concrete terms and beyond its particular life-cycle stage, engage in a disciplinary and/or cognitive mode of operation. We also explored the concrete cognitive (market and sales strategy, growth management, organizational restructuring) and disciplinary (agency conflicts relating to the increasing numbers of shareholders and their different investment horizons) issues that focused the board's attention at different stages of the process. The causes of the varying attention to these issues are to be found at different levels, depending on the temporal and socio-economic context (situated dimension), the company's structure (organizational dimension), and board members' individual traits.

Following Knockaert et al. (2015), attention and self-efficacy do indeed make it possible to identify the factors that influence the board's disciplinary or cognitive mode of operation. Conversely, our study does not validate Knockaert et al.'s (2015) findings regarding the dominant influence of the psychological characteristics of the chair and the entrepreneur-director alone. The causes of the attention given to a particular cognitive issue (knowing how to manage growth, holacracy, etc.) or disciplinary issue (agency conflict between long-term and medium/short-term investors, etc.) are sometimes situational (health crisis, funding round), sometimes organizational (holacracy managed by a strategic player who regularly meets the board), and sometimes individual, depending on the self-efficacy of certain people (mentoring concerning growth management, crisis management, etc.).

The major contribution of our analysis is therefore to show that these two phenomena, one individual and the other collective, related to attention and the feeling of self-efficacy, come together to explain the variations in the board's cognitive and disciplinary operations. Governance research shows that the growth process requires specific skills (Wirtz, 2011) and that the board can, via a cognitive approach, facilitate the transfer of such skills to novice founders and, via a disciplinary approach, manage agency conflicts. The concepts of attention and self-efficacy help us to understand what encourages (or discourages), first individually and then collectively, board members to lean towards a more disciplinary or cognitive mode of operation.

In our case, the two types of issues received attention that evolved in parallel in the first three phases of the scale up (see Figure 4), despite the cognitive approach appearing to prevail overall. During the last phase, however, the attention paid to disciplinary issues weakened significantly. The individual postures of the actual and potential board members and the specific interactions that occurred between them gave a unique collective tone to each board, depending on the particular points on which they were focusing their attention at a given moment in time. One of the results of our research is thus to observe that the self-efficacy and attention of incumbent directors influences the evolution of the board's overall configuration in later phases of the process through, among other things, decisions about who is co-opted onto the board or not. More specifically, it would appear that self-efficacy that is too strongly displayed and that is perceived as incompatible with the collective in place will result in the individual not being co-opted onto the board, as this new member would be likely to harm the balance of the group. This reflects the organizational dimension of attention.

Our processual study also allows us to show that external events (situated dimension) push board members to draw on their past experiences to focus their attention «cognitively» on crisis management, for example in connection with the COVID-19 pandemic, or in a «disciplinary» manner when choosing a new investor.

We make several contributions to the entrepreneurial governance literature. Accordingly, our results lead us to qualify the argument made by a significant part of the literature, which considers that the mode of operation of young entrepreneurial firms is predominantly cognitive and that this is primarily due to their stage of development (Filatotchev and Wright, 2005; Hülsbeck et al., 2019; Wirtz, 2011; Lynall et al., 2003). We show, on the contrary, that it is a more complex process, in which the different development phases play an important role (situated dimension of the board's attention), but in which the context also interacts in a complex way with the individual cognitive characteristics of the different board members (experience, self-efficacy) and their own interests, as well as with the particular structure of the organization and its management and control bodies (organizational dimension of attention). Even early in the company's life cycle, this can then lead the board to address disciplinary issues. This allows us to overcome an apparent contradiction in the literature, where some studies suggest that entrepreneurial governance plays a primarily cognitive role, while other research also indicates a strongly disciplinary role for the nascent board in certain seed-stage firms (Lang and Wirtz, 2022). It is therefore more a question of the respective dosage.

We also contribute to studies, still limited in number, on the genesis of the board in young companies.

Bonnet et al. (2017) conducted one of the few processual studies on the birth of the board in a young technology start-up. The question that is explored in their article, however, is who, among the many initial investors, joins the board and for what reasons. The question of the mode of operation (cognitive vs. disciplinary) is also addressed, but the study is conducted over a relatively short time horizon, as it essentially focuses on the moment the board is created and on the initial start of its work, rather than on its temporal dynamics at the different stages of growth. The study by Lang and Wirtz (2021), on the other hand, uses a quantitative approach to study the evolution of start-up boards over several funding rounds, but it is solely focused, by design, on the disciplinary issues of the board's work. Some processual case studies (Bessière et al., 2020; Garg and Eisenhardt, 2017) also address the temporal dynamics of governance in entrepreneurial firms, but their research question differs from ours. Bessière et al. (2020), for instance, study the evolution of governance and its mode of operation in the context of complex funding trajectories, including crowdfunding actors with specific governance mechanisms. This last study, however, takes a very broad and systemic approach to governance, including mechanisms other than the board alone, and does not examine the board's operations in detail. Furthermore, it ignores attention and self-efficacy biases and concludes that the disciplinary functioning of governance increases systematically over time and with the arrival of VCs. However, the Bumblebee case shows that this increase in the disciplinary intensity of the board's exchanges is not necessarily systematic, and that it is dependent on different focuses of attention. The sharp decrease in the intensity of the disciplinary topics addressed in the actors' discourse that we observed in phase 4 is rather counter-intuitive, given the findings of existing studies (including in particular the case study in Bessière et al., 2020, and all works with a life-cycle type approach). In our case, the dynamics of attention in the three dimensions allow us to better understand what is happening. The iterations between the existing literature and this particular case, examined in depth, thus allow us to deepen our understanding of the temporal evolution of the board's operations, in accordance with abductive logic. The atypical evolution of the disciplinary intensity of the board's discussions compared with the findings of the existing literature, particularly on the governance life cycle, may potentially be explained by the theory of attention. Without contradicting the existing explanatory models, our study nonetheless allows us to refine them. The results of our study therefore allow us to refine Charreaux's (2008) meta-model, which we used as an interpretation grid, and to adapt it specifically to the case of a young scale-up. The

attention and self-efficacy biases identified in our interviewees' statements can be interpreted as specific behavioral determinants that drive some board members to press disciplinary and/or cognitive levers in the process of formulating, delivering, and controlling the growth of an entrepreneurial firm.

This study allowed us to better understand the dynamics of the actors who shape the operations of the board of a young entrepreneurial firm at different stages of its development and to go beyond simplistic representations of a disembodied life cycle. We show that beyond the contingencies linked to the life cycle, the dynamics of the actors' individual and collective attention play an important role in understanding the mode of operation concretely adopted at each moment of the process.

One limitation of the present research is its focus on a single scale-up case. A fruitful avenue for future research would be to compare the attention dynamics of board members in young entrepreneurial firms with different growth rates and trajectories. The aim would be to study multiple cases with different characteristics in terms of the various dimensions of attention. Situated attention, in particular, depends on specific contingencies, including those relating to economic and financial performance. The Bumblebee case has been a success story over the period studied and has not suffered any major setbacks. Some of the comments from our interviewees suggest that if there is any underperformance, the focus may shift to more disciplinary issues. But this remains to be seen. A particular challenge would be to study cases with difficult transitions.

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7. Methodological appendix

7.1 Questions used to structure the interview guide

- Can you describe your background and your role within Bumblebee?
- What is the organization's history?
- What key moments have there been?
- What is the history of the board of directors?
- What key events have there been?
- How was the board formed?
- How were the members «chosen»?
- What topics do you discuss on the board?

7.2 Double coding grid

Double coding grid	
Code	Description
Processual dynamics coding	
Temporal bracketing	
Phase 1 ENTREPRENEURIAL	Phase 1 - Entrepreneurial phase
Phase 2 COLLECTIVE	Phase 2 - Collective phase
Phase 3 FORM & CONTROL	Phase 3 - Formalization and control phase
Phase 4 STRUCT DEV	Phase 4 - Structure development phase
Thematic coding	
Attention, self-efficacy, and the cognitive/disciplinary role of the board	
NON-Self-efficacy	Non self-efficacy - Sense of a lack of self-efficacy
Self-efficacy_COGN	Self-Efficacy - Sense of self-efficacy - cognitive aspects
Self-Efficacy_DISC	Self-Efficacy - Sense of self-efficacy - disciplinary aspects
NON-ATT-DISC	NON_ATT - Lack of attention to disciplinary aspects
NON-ATT-COGN	NON_ATT - Lack of attention to cognitive aspects
ATT-ORG-DISC	ATT ORG - Organization's attention to cognitive aspects
ATT - ORG - COGN	ATT ORG - Organization's attention to disciplinary aspects
ATT-IND-DISC	ATT IND - Individual attention to disciplinary aspects
ATT - IND_COGN	ATT IND - Individual attention to cognitive aspects
Board COGN	BOARD COGN - The board's cognitive role
Board DISC	BOARD DISC - The board's disciplinary role

7.3 Internal documents used to complement the interviews

- Internal documents relating to the firm's history, key figures, the internal reorganization project (holacracy), etc.
- The company's articles of association
- Extract from the trade register