

Contents lists available at [ScienceDirect](#)

International Journal of Innovation Studies

journal homepage: <http://www.keaipublishing.com/en/journals/international-journal-of-innovation-studies>



Out-of-sync in managerial attention: Temporal and repertory mismatches between the headquarters and subsidiary

Armi Temmes^a, Liisa Välikangas^{a, b, *}

^a Department of Management Studies, School of Business, Aalto University, P.O. Box 21230, FIN-00076 AALTO, Finland

^b Department of Management and Organization, Hanken School of Economics, P.O.Box 479, 00101 Helsinki, Finland

ARTICLE INFO

Article history:

Received 8 January 2019

Accepted 15 April 2019

Available online 23 July 2019

Keywords:

Attention
Attention-based view
Decision making
Headquarters
Strategy
Subsidiary

ABSTRACT

We advance the attention-based view by presenting empirical evidence that the attention of headquarters and subsidiary managers in a multi-business organization is, at times, out of sync. Based on empirical material that allows us to differentiate between what is attended to and what is ignored by management, we analyze the focus of managerial attention, environmental and subsidiary stimuli, and actions taken in the decision-making process over 15 years, during a period of strategic transformation. We suggest that attentional mismatches occur not only between strategic issues but also between what are considered relevant responses or actions to be taken at any particular time. We analyze the origins of the attentional mismatches and explore ways to avoid such nonalignment in strategic decision making.

© 2019 Publishing Services by Elsevier B.V. on behalf of KeAi Communications Co., Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

1. Introduction

Management attention has been considered to influence organizational behavior since the studies of [Simon \(1947\)](#) and [March and Simon \(1958\)](#). It is known to be an antecedent of managerial action, including decision making and strategy formation ([Bouquet & Birkinshaw, 2011](#); [Ocasio, 1997, 2011](#)). We study strategy formation over time at an industrial company. During the period studied (1993–2007), the company went through a major transformation from a mining-based diversified conglomerate in Finland to an international stainless steel firm.

The transformation involved major strategic decisions. Our revelatory case of managerial attention under strategic decision-making focuses on the attention-based view (ABV) first summarized by [Ocasio \(1997\)](#). ABV builds on the assumption that “what decision-makers do depends on what issues and answers they focus their attention to” ([Ocasio, 1997](#), p. 188), which makes it an appropriate lens for studying strategic decision-making. Attention is inevitably selective ([Greve, 2008](#); [March & Simon, 1958](#); [Simon, 1947](#)), to the point that inattention ([McMullen, Shepherd, & Patzelt, 2009](#)) or blindness ([Knudsen, 2011](#)) may accompany strategic decision-making.

[Ocasio \(2011\)](#) refines his original definition of attention in organizations by describing the top-down and bottom-up processes of attention shaping and proposing that the attentional perspective, which is shaped by top-down processes based on schemas and goals, is especially influential in shaping strategic adaptation to change. The stimuli for bottom-up processes of attention include environmental changes ([Cho & Hambrick, 2006](#); [Hoffman & Ocasio, 2001](#); [Nigam & Ocasio,](#)

* Corresponding author. Department of Management Studies, School of Business, Aalto University, P.O. Box 21230, FIN-00076 AALTO, Finland.

E-mail addresses: armi.temmes@aalto.fi (A. Temmes), liisa.valikangas@aalto.fi (L. Välikangas).

2010; Rerup, 2009), the voice and weight of subsidiaries (Bouquet & Birkinshaw, 2008), and intentional processes, such as issue selling (Dutton & Ashford, 1993) and corporate intelligence work (Kunns, 2009; McMullen et al., 2009).

Although top-down attention shapes strategy, it also remains inertial by drawing management attention to the stimuli, which are aligned with the top management team's (TMT's) perspective (e.g., Johnson, 1988). This hampers the ability of organizations to attend to different environmental stimuli in a high-velocity business environment. However, the TMT attentional perspective is not stable, as the attention shaped by bottom-up stimuli has been found to lead to changes in top-down attention through various sense-making activities in organizations (Nigam & Ocasio, 2010), such as grassroots changes based on a new institutional logic (p. 838).

The challenges of integrating attention between the various parts of a company across the chain of command, across cognitive patterns, and across business units have also been investigated (Joseph & Wilson, 2017; Rerup, 2009; Ridge, Johnson, Hill, & Bolton, 2017). Bouquet and Birkinshaw (2008) and Dutton and Ashford (1993) investigate the intentional, internal directing of attention and show that the attention pattern of the headquarters (HQ) can be changed, for example, through voice and issue selling.

Temporal issues have been touched upon in discussions on sequential attention (Greve, 2008) and CEO attention and innovation outcomes (Yadav, Prabhu, & Chandy, 2007), as well as in analyses of organizational channels (Joseph & Ocasio, 2012).

However, the processes and origins of a mismatch of attention between the HQ and its subsidiaries have gained little researcher attention (Joseph & Wilson, 2017), despite acknowledgement that it is a significant issue (Bouquet & Birkinshaw, 2008). We build on this base of research by asking in our study: (1) What are the attention patterns of the HQ and subsidiaries over time? (2) How do these attention patterns affect one another and strategic decision-making?

We base our analysis on a careful operationalization of top-down-shaped attention (attentional perspective) and bottom-up-shaped attention (attention to internal and external stimuli), thus contributing to the literature by describing their interactions, which are mentioned as a gap in attention research by Ocasio (2011). Further, we study the HQ–subsidiary relationship, as called for by Joseph and Ocasio (2012). We develop a methodology to document the changing attention patterns in the HQ and a subsidiary over time in a multi-business organization. The study contributes to the growing attention literature by empirically showing temporal mismatches between the attentional patterns of the HQ and its subsidiary as anticipated by Joseph and Ocasio (2012). In addition, we discuss mismatches between the available actions regarding attention between the HQ and its subsidiary.

2. Theoretical background

2.1. The attention-based view

Ocasio (1997) defines management attention as the “noticing, encoding, interpreting and focusing of time and effort by organizational decision-makers on both (a) issues: the available repertory of categories for making sense of the environment; problems, opportunities and threats; and (b) answers: the available repertory of action alternatives: proposals, routines, projects, programs and procedures” (p. 189). The outcomes of attentional processing and decision making in Ocasio's model are organizational moves or actions stemming from decision opportunities (Joseph & Ocasio, 2012).

The literature has focused on different aspects of attention. Various authors have refined the construct of attention to differentiate its various aspects (e.g., Bouquet & Birkinshaw, 2008; Ocasio, 2011; Rerup, 2009). Next, we discuss the literature on attention most relevant to this study: the mechanisms for the shaping of attention; the distribution of attention in multi-business firms over time, in particular, between the HQ and its subsidiaries; and the outcomes of attention in decision making.

2.2. The shaping of attention in multi-business companies: top-down and bottom-up

Ocasio (2011) elaborates the mechanisms for shaping management attention based on developments in the literature on cognitive sciences and concludes: “Attention is shaped by both top-down (i.e., schema-driven) and bottom-up (i.e., stimulus-driven) processes” (p. 1286). The various sources of top-down and bottom-up shaping of attention reviewed by Ocasio (2011) are summarized in Fig. 1.

The attention of managers is allocated by goals and targets negotiated by coalitions or set by the owners or top management (Cyert & March, 1992). The governance structures of companies shape goal setting and, consequently, the attention of managers (Buyl, Boone, & Matthyssens, 2013; Cho & Hambrick, 2006; Joseph & Ocasio, 2012; Tuggle, Sirmon, Reutzler, & Bierman, 2010). The enhancing impact of CEO and TMT attention on major changes and innovation has been documented by Yadav et al. (2007), Eggers and Kaplan (2009), and Li, Maggitti, Smith, Tesluk, and Katila (2013), among others.

Attention is also shaped by experience—reinforced learning triggered by the outcomes of prior choices (Gavetti & Levinthal, 2000; Levinthal & Rerup, 2006)—which is considered especially useful for operational managers (Ocasio, 2011). Experience-shaped attention has been found to be influenced by the early history of the company (e.g., Boeker, 1989), demographic factors (Cho & Hambrick, 2006), structural channels (Joseph & Ocasio, 2012; Ocasio & Joseph, 2008), and the logic of action (Kaplan, 2011; Prahalad, 2004; Thornton & Ocasio, 1999), as well as the company's relative competitive position (Blettner, He, Hu, & Bettis, 2014). Experience is often considered to lead to increasing inertia; yet, a broad selection of routines

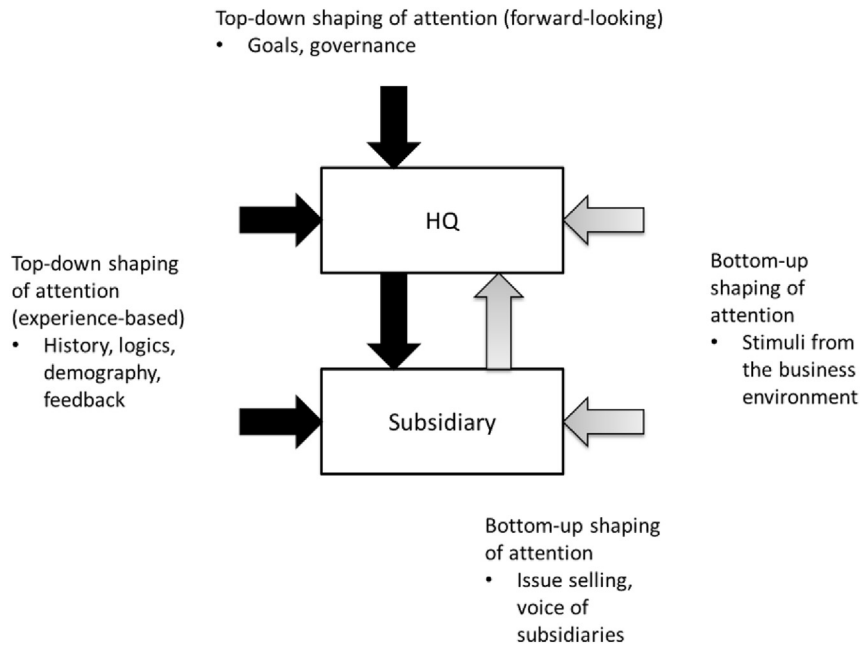


Fig. 1. Top-down and bottom-up shaping of attention in a multi-business company (Ocasio, 2011).

developed through experience has also been found to improve the ability to attend and react to new and unexpected stimuli in the organization's environment (Dane, 2013; Laureiro-Martinez, Brusoni, Tata, & Zollo, 2014; Levinthal & Rerup, 2006).

The stimuli for bottom-up processes of attention include environmental changes and events, which may threaten the performance of the company if no action is taken (Cho & Hambrick, 2006; Hoffman & Ocasio, 2001; Nigam & Ocasio, 2010; Rerup, 2009). The members of an organization are also known to intentionally create stimuli for top management attention through issue selling by middle managers (Dutton & Ashford, 1993; Plourde, Parker, & Schaan, 2014), corporate intelligence work (Kunnas, 2009; McMullen et al., 2009), and using the voice of a subsidiary in a multinational company (Bouquet & Birkinshaw, 2008).

Interestingly, management research on attention has emphasized top-down processes of attention shaping and the TMT attentional perspective (Ocasio, 2011), even though effective attention to environmental stimuli has often been mentioned as the basis for strategic adaptation to changing conditions (e.g., Hambrick, 1982; Johnson, 1988; Quinn, 1980). Further, it has been suggested that strong stimuli modify the belief systems of managers (Grinyer & Spender, 1979; Nigam & Ocasio, 2010). Heterophilous interorganizational relationships (Maula, Keil, & Zahra, 2013) and the saliency of past environmental stimuli, such as attacks on the organization (McMullen et al., 2009), have been shown to shift decision-maker attention to stimuli in the business environment, whereas, for example, success-induced overconfidence (Rerup, 2009) may reduce the attention to environmental stimuli.

2.3. Distribution of attention in multi-business companies: a source of attentional mismatch

Attention is structurally distributed (Ocasio, 1997), which means that the various procedural and organizational channels, as well as communication practices (Ocasio, Laamanen, & Vaara, 2018), of companies affect the attention of individual managers. Frontline managers at subsidiaries are often assumed to be the first to recognize the signals of change in their own businesses (Burgelman, 1991; Cho & Hambrick, 2006; Dutton & Ashford, 1993; Joseph & Ocasio, 2012; Joseph & Wilson, 2017; Rerup, 2009). It is known to be challenging to bring emerging issues to the top management agenda (Kunnas, 2009). Issue selling is one such process, which is proposed to be more effective when carried out together with a solution (response), although this may require more time, which may lead to delays in information conveyance to HQ managers (Dutton & Ashford, 1993).

There are emerging findings, beginning with Joseph and Ocasio's (2012) study of General Electric, that attention patterns vary within multi-business companies. Different managers and units in companies allocate their attention to different issues, which has been called attentional specialization. Specialization allows managers to better notice cues and interpret them meaningfully (Joseph & Wilson, 2017). Wilson and Joseph (2015) in their study of a multi-business company (Motorola) find attentional benefits from specialized units, although they may compromise search depth. Joseph and Wilson (2017) underline the attention-directing effects of organizational structures and call for attentional integration between units. Different

organizations have different scales of attention, allowing them to observe either short- or long-term processes (Bansal, Kim, & Wood, 2017).

Subsidiaries also compete for the (positive) attention of HQ managers (Bouquet & Birkinshaw, 2008). Bouquet and Birkinshaw (2008, p. 595) suggest that “headquarters priorities can be influenced from the bottom up,” so the stimulus provided by the voice of subsidiaries showing both initiative and adherence to common goals can improve their strategic position and allow them to gain resources. On the other hand, the HQ has a good position for directing the varying perceptions of issues that arise in the company (Joseph & Wilson, 2017).

Consistency in management attention within an organization has been found to be necessary for effective recognition of cues from the business environment (Rerup, 2009) and for strategic adaptation (Joseph & Ocasio, 2012). Joseph and Ocasio (2012) propose that collective vertical interactions between the HQ and its subsidiaries through cross-level channels, which combine different hierarchical levels of an organization and multiple functions, have an important role in the alignment of attention. However, Joseph and Ocasio (2012) also found periods in which the governance system did not allow for the coordination of corporate and business-unit attention to issues and responses, despite the channels participating and representing their agendas. Such a lack of temporal coupling of the cross-level channels contributes to the challenges of consistency in attention (Joseph & Ocasio, 2012). Joseph and Wilson (2017) also point to tensions between multi-business units complicating yet constructing attentional integration.

Outcomes of attentional processes: What is attended to and how does it lead to action?

Ocasio (2011) defines attentional selection as the outcome of attentional processes. Attentional selection can be influenced by external stimuli, as noted earlier, which leads to an important empirical question examined in this study: Which (of the many) stimuli are attended to by decision makers? Hoffman and Ocasio (2001) find that external events are (more likely to be) attended to when strong claims are made about the accountability and contestation of the identity and image of the industry in question. Barreto and Patient (2013) propose that the distance from the locus of a shock and a manager's perception of the company's relevant response capabilities affects whether the manager attends to the issue as an opportunity or threat. Analogously, issue selling is more successful when proponents are able to establish the legitimacy of the issue and instill a sense of responsibility in decision makers (Dutton, Ashford, O'Neill, & Lawrence, 2001). A strong emphasis on top-down processes of attention, such as induced strategy (e.g., Burgelman, 1991) or dominant logic (Prahalad, 2004), are often not helpful for detecting signs of discontinuous change (Shepherd, McMullen, & Ocasio, 2016; Tripsas & Gavetti, 2000). When top-down processes of attention dominate, strategic change does not fully follow environmental changes, but, rather, lags behind—a phenomenon that has been called “strategic drift” (Johnson, 1988). This delay or initial inattention is one potential mechanism of temporal mismatch in attention across the different channels and businesses in an organization and between company strategy and ongoing environmental change.

When are stimuli simply ignored? According to Knudsen (2011), such bypassing or blindness is created by different forms of inattentiveness. Knudsen uses the term “blindness” for “the restriction of the information available” (2011, p. 965). It is noteworthy that Knudsen's blindness is about “not seeing,” whereas Ocasio's “attention” means interpreting and acting. One additional possible reason for inattention is the tendency of decision makers to attend to one goal at a time (Cyert & March, 1992; Greve, 2008). Only when performance meets the prioritized goal do decision makers direct their attention to the next goal (Greve, 2008) or shift the relative balance of their energies while attending to competing goals (D'Adderio, 2014).

How does attention lead to action? According to the ABV of firms, organizational moves are the action steps of attentional processing (Ocasio, 1997). This is reflected in numerous quotations in the attention literature, starting with the classic: “What decision-makers do depends on what issues and answers they focus their attention to” (Ocasio, 1997, p. 188). However, attention reflected in management rhetoric does not always lead to action, as is acknowledged by multiple authors (e.g., Brunsson, 1989), for example: “there may be a lot of communication about ... issues in a firm's annual reports, but this symbolic emphasis does not reflect the day-to-day action of top executives” (Bouquet & Birkinshaw, 2011, p. 244). Few empirical studies connect attention directly to organizational moves (exceptions being Bouquet & Birkinshaw, 2011; Joseph & Ocasio, 2012; Laamanen & Wallin, 2009). Through the identification of such opportunities for organizational moves and an analysis of their related reasoning, we differentiate between attention that is manifested in consequent organizational moves and management rhetoric that may not lead to action. Following Cohen, March, and Olsen (1972), we call opportunities for organizational moves “decision opportunities.”

3. Methodology

3.1. The operationalization of attention

Following Ocasio's (2011) observations, we considered the following aspects relevant for our study of top-down and bottom-up attention in a multi-business company: the top-down processes of attentional perspective, namely the general management mindset (Ocasio, 2011); reasoning behind organizational moves (Ocasio, 1997); and attention of top management to subsidiaries (Bouquet & Birkinshaw, 2008). Of the bottom-up processes, we studied attention (Hoffman & Ocasio, 2001; Nigam & Ocasio, 2010) and inattention (Knudsen, 2011; McMullen et al., 2009) to external events. Our operationalization of these aspects of attention is summarized in Table 1.

In the literature, the attentional perspective has been analyzed using textual analyses and word counts of company publications, annual reports, and letters to shareholders (Cho & Hambrick, 2006; Ocasio, 2011), which suggests the general

Table 1
The literature-based operationalization of attention.

Aspect of attention	Visible in
Attentional perspective that leads to organizational moves (Ocasio, 2011)	Reasoning of resource allocation decisions in corporate publications (issues, answers, goals)
Attentional perspective showing the general management mindset (Ocasio, 2011)	General statements of the strengths, weaknesses and goals of the company in corporate publications (Cho & Hambrick, 2006; Ocasio, 2011)
Attention to events (Hoffman & Ocasio, 2001; Nigam & Ocasio, 2010)	Statements of external events considered salient to the company in corporate publications and in interviews with managers (Rerup, 2009)
Headquarters attention toward subsidiaries (Bouquet & Birkinshaw, 2008)	HQ Statements of recognition in corporate publications, interview statements of managers on relative and supportive attention, actual resource allocation in a subsidiary context (Bouquet & Birkinshaw, 2008)
Inattention to events (Knudsen, 2011; McMullen et al., 2009)	Statements on alternatives not considered in corporate publications, statements in interviews about alternatives, which “should have been considered” by the top management (McMullen et al., 2009)

mindset of company managers (Bouquet & Birkinshaw, 2011). The attentional perspective is also connected to actual organizational moves (Ocasio, 1997), but this aspect has received little attention in the literature. Therefore, resource-allocation decision opportunities have been seen to reflect the attentional perspective of managers (see also Joseph & Ocasio, 2012, p. 654), which is linked to decision making and the formation of strategy. The public reasoning concerning major resource-allocation decisions by companies typically contains references to the issue at hand, in addition to a description of the response or action of choice. In many cases, the statements of reasoning in our empirical data are expressed by individual managers, which allows differentiation of the attention of HQ managers from that of subsidiary managers.

The (positive) attention paid by HQ to subsidiaries is operationalized by Bouquet and Birkinshaw (2008) as subconstructs of relative attention (the perceived attention compared with other subsidiaries), supportive attention (shown in improved access to best practices, technologies, or career opportunities within the corporation), and visible attention (explicit recognition). Explicit recognition is visible in corporate publications. Relative and supportive forms of attention are more closely related to subsidiary managers' emotions and often are not visible in publications. Many times, however, these feelings were expressed in the interviews we conducted with subsidiary managers, in statements such as “Management had other interests than stainless. They wanted to develop copper [or] zinc.” The results should be treated with caution, as the interviews may suffer from post-hoc bias, although this is partly mediated by the use of other contemporary sources.

Extant studies on managerial attention to external events has mostly been based on field-level data and frequently use the trade press as an indicator of attention (Hoffman, 1999; Hoffman & Ocasio, 2001; Nigam & Ocasio, 2010). Exceptions include Rerup (2009) and Laamanen and Wallin (2009), who use multiple sources of data (interviews, documents, and observation) for making inferences regarding how managers pay attention to different issues. Our data show that threats are also discussed in corporate publications through statements that note growing global overcapacity and increasing demands in the financial market, such as “Capacity increases in South Africa and Asia increase uncertainty of market development” and “One of [the company's] challenges is size. ... Another reason why [the company] might get overlooked is the complexity of the company.” Early publications exemplify a concern with raw-material availability: “Our self-sufficiency in raw materials has dropped over the years with the closing of the mine essential to rectify the situation.”

Finally, the measurement of inattention is especially challenging because the range of issues not attended to is almost unlimited. However, various strategies can be used to limit the speculation. McMullen et al. (2009) analyze issues (possible threats to the business) that were attended to by middle managers but not by the TMT. In historical studies of crisis situations, researchers have been able to identify issues that should have been attended to (Rerup, 2009). We used only those issues and alternatives that were visible in our empirical data. Our interviews allowed us to discover which issues were attended to by some managers and to pick up on “hindsight wisdom.” For example, some interviewees suggested that a particular issue, such as developing a stronger marketing orientation, was proposed but not attended to for some time (see also Joseph & Wilson, 2017, for a similar interpretation). In some cases, corporate publications also elaborated on alternatives to the organizational move taken, which provided information on issues and responses that were at least noticed by management.

3.2. Data and analysis

The target of our study was the company's HQ and its stainless steel subsidiary. The strategic transformation that the company underwent during the study period was a transition from a multi-business metal company to a focus on stainless steel production. The main data sources were company publications (more than 5000 pages), including annual reports and company magazines for its personnel and stakeholders, during the entire period of study, as detailed in Table 2. We believe the materials provide a diverse yet comprehensive source of information about the company. The materials also represent managerial decisions and elaborate on their reasoning at the time they were made, thus minimizing retrospective bias. Such publications are considered to reflect the major managerial initiatives, concerns, and points of view of company management, as they are likely carefully checked by senior management (Cho & Hambrick, 2006). Company management presentations during the time of the data collection were used as background information. In addition, we amended the company view by

Table 2
Summary of data sources.

Source	Time of publication	Total number
Annual reports	1993–2007	15
Personnel magazines	1993–2007	59
Stakeholder magazines	1993–2008	36
Articles in media	2000–2008	19
Presentations by company management	2007–2008	8
Interviews	2008	8
Published historical studies	1985–2005	4

drawing on articles in the business media during the latter part of the period studied. The company is also the subject of several high-quality historical studies that were cross-referenced (e.g., [Kuisma, 1989](#)). An initial conversation with the CEO of the company inspired the study, as the authors found it intriguing that the volatility of the price of nickel had taken the company by surprise ([Alvesson & Kärreman, 2007](#)).

After surveying the company literature, we conducted eight semi-structured interviews of company managers in various positions, both top management and middle management, representing different parts of the company (including subsidiaries) and having varying tenures during the period studied (two members of the TMT, two factory managers, two sales and marketing managers, and two technology managers). The interviews, which were carried out to obtain complementary data and for further data triangulation, lasted about 1.5–2 h and were recorded. The questions included: “Which were the most important choices [over a given period]?”; “How were they reasoned?”; “Which issues were debated?”; “Which aspects were considered self-evident?”; and “What other alternatives were discussed?”.

No major conflict emerged between the literature and the interviews; rather, the interviews provided additional information because little was found in the literature regarding purely operational decisions, sub-decisions in major strategic actions, contested decisions, and decision opportunities in which action was not taken. For example, interviewees stated the following, which did not emerge in the literature: “We proposed production of ferritic grades, but the board commented that the economic prospects of standard austenitic steels were equally good” and “The research people had many different initiatives for specialty products, but they were dismissed.”

The unit of information ([Dane, 2013](#)) in this study is a statement—a short quotation of approximately 15–100 words—that reflects the theoretical interest of our study, which means it covers strategy formation, management mindset, and resource-allocation decisions. As the statements are mostly made by specified managers, we were able to locate them either in the HQ and or the subsidiary. The statements were manually identified in the data and initially grouped into predefined classes relevant to our research approach ([Table 3](#)).

In the second stage of the analysis, we organized the statements chronologically around the 112 publicly announced decision opportunities that had led to organizational moves. For each decision opportunity, we collected from the statements background information such as the time and the unit of the company concerned (HQ or subsidiaries), as well as the stated goals, issues to be addressed, and action taken. In addition, we organized comments on the changes in the business environment, general reasoning, and alternative actions not taken.

The first author was responsible for conducting interviews and collect related studies, except statements including the word “nickel,” an important raw material in stainless steel. These statements were collected and further categorized by a research assistant to differentiate between strategic and operational issues without an “inside view” of the research question. Nickel was selected as a keyword because its increasing cost is connected to the performance outcome of the strategy and linked to important product portfolio decisions, and, thus, provided an opportunity to further examine managerial attention. The second author participated in the analysis by probing the argumentation from an “outsider’s point of view.” This division of labor gives the analysis further interpretive reliability ([Rerup & Feldman, 2011](#)). The empirical results were also discussed in a 2.5-h meeting with the executive team for further validation.

4. Attention patterns in the HQ and its subsidiaries

In the following, we describe the development of the main attentional patterns between the HQ and stainless steel subsidiary. To begin, we summarize the chronological order of the organizational moves in [Table 4](#). The events are mainly reported as connected to a particular subsidiary, and only corporate office events are allocated to the HQ.

Table 3
Initial grouping of statements.

Classes of statements in the databases	Number of statements
Statements including the word “nickel” (representing a critical raw material)	615
Statements on corporate strategy, company characteristics, and external events and issues	112
Statements on the subsidiary-related strategy, internal characteristics, and external events and issues of the subsidiary	290
Comments on marketing, customers, and distribution channels of the subsidiary	101
Statements on resource allocation decisions	112
Total	1230

Table 4

Overview of the major events and the organizational moves during the period studied.

Year	Event in stainless steel	Event in HQ	Event in other subsidiaries	External events and developments
1993	Investment in the stainless steel unit for increased output			
1994	Investment in the stainless steel unit for increased output	International share issue, state ownership diluted	Increase of nickel production capacity Nickel exploration projects	Opening of the Finnish equity market to foreign investors Low price of nickel
1995	Investment in the stainless steel unit for increased output Planning of doubling the output at the original site R&D for new product applications	Production efficiency and technological competence declared as core competences	Investments in copper products Exploration and investments in nickel mining	Growing demand of stainless steel in the automotive industry.
1996	Investment in the stainless steel unit for increased output Planning of doubling the output (Project Double) at the original site			Increasing global overcapacity of stainless steel.
1997	Planning of Project Double	Change in governance model	Investment in copper products Investment in nickel mining	Pressure for growth Uncertainties in international mining.
1998	Planning of Project Double Investment in the stainless steel unit for increased output Purchase agreement for captive nickel			Low price of nickel
1999	Investment decision for Project Double			
2000	Merger and founding of joint venture	New strategy and organization	Divestment of nickel business Investments in copper products and base metals Investments in copper products and base metals	
2001	Strategy and organization of joint venture Various reorganizing activities			
2002	Joint venture partner leaves, purchase of the whole of stainless	Ownership in joint venture reduced. Share issue	Investments in copper products and base metals, Divestment of mining	
2003	New head of business		Divestment of base metals	Price of nickel increases. Demand of high-nickel steel slows down
2004		New CEO, New strategy: Stainless steel becomes the main business		
2005	Project Double fully on stream	New organization		Nickel price peaks
2006			Divestment of copper products and technology	
2007				Nickel price peaks

The first section describes a development during which the stainless steel subsidiary gained positive attention from the HQ and directly influenced its thinking. The outcome was a major resource-allocation decision related to expanding production capacity at the subsidiary. However, the need to broaden the product range (beyond high-nickel products) proposed by the subsidiary was not approved by the TMT.

In the second section of results, the HQ began to focus its attention on broadening the product range but responded differently than the subsidiary proposed, instead raising the possibility of an acquisition. However, the presumed strengths of the acquired unit in marketing were never utilized, even though they were part of the reason for the acquisition. The third section describes the abrupt changes initiated by major environmental shocks, which left the management with very little room for maneuvering.

The quotations used as evidence include both excerpts from corporate publications at the time of the events described (marked "Pub., year of publication") and from the interviews carried out during the study (marked "Int.").

4.1. *The voice of the subsidiary influences the HQ's attentional perspective but fails to shape it further (1990–2000)*

The attentional perspective of the HQ in the early 1990s was strongly influenced by the origins of the company, which started with copper mining and integrated copper production. The business had grown and diversified, but much of management's knowledge remained in mining and metallurgy. The corporate portfolio consisted of relatively independent businesses: "Multimetal-[company] managers led a decentralized conglomerate, with divisions being very independent" (Int.). The stainless steel subsidiary had started operation in 1976 in the vicinity of a ferrochrome mine, and its managers had

to prove their legitimacy to both corporate management and to the various stakeholders: “The corporate management was committed to the traditional businesses of the company, stainless was a newcomer. [The stainless subsidiary was] under great pressure to make money” (Int., Subsidiary manager). Its original strategy for earning the attention and approval of corporate management was to concentrate on production efficiency and on a limited number of commodity products marketed through distributors, reflecting the general assumption: “This equipment can produce these products efficiently and the task of sales is to find customers for them” (Int., Subsidiary manager). This was strengthened by a series of investments that increased output and production efficiency.

By the mid-1990s, the production unit had become the world’s most efficient in stainless steel, provoking the subsidiary managers to proudly voice their views on profit-making: “In a [headquarters’] strategy meeting, where other managers had lengthy presentations with slides, [a subsidiary manager] wrote two objectives on the white board: (1) to make money; and (2) to make more money” (Int.). The stimuli were effective, and management attention was increasingly directed toward stainless steel, as shown by numerous favorable resource-allocation decisions and the high recognition given in various corporate publications: “Among our business areas stainless steel showed again excellent profit. We shall make sure in our investment policy that it maintains its competitive position” (Pub., 1994).

As the production output of stainless steel kept growing, the subsidiary managers noted various worrying stimuli in the environment. Globally, the production capacity of stainless steel exceeded demand, and Asian producers in particular were very cost competitive: “There is overcapacity globally, and it has reduced the price of stainless steel, [a subsidiary manager] admits; [company] investments [at the subsidiary] contribute to this overcapacity” (Pub., 1997). In addition, because of its limited product range, the company was not present in new growth markets, such as catalytic converters. Suitable stainless steel grades were not produced by the company, although R&D projects for the production and application of nickel-free grades had been carried out almost from the beginning of the stainless steel business. The subsidiary repeatedly proposed such projects to the HQ, but it never approved them, and, consequently, the product range was not broadened. The company remained critically dependent on nickel in its stainless steel production.

Nickel was mainly purchased on the world market, even though the HQ managers were fully aware that “[nickel] raw material [was] not abundantly available [worldwide]” (Pub., 1997). Increasing production of stainless steel would require greater amounts of nickel, and, therefore, the possibility of using captive nickel was piloted in the company. However, the various possibilities of using captive nickel, such as company-owned mines or the company’s own nickel production, were not considered: “Nickel business is not good if you do not have your own concentrates ... and international mining requires capital and ability to carry risk” (Int.). Instead, the nickel-related businesses were considered separate from the stainless steel business (see Fig. 2) and both mines and the nickel production businesses were divested. The risk management strategy of the subsidiary included a massive increase in the purchase of recycled raw material. It was only around 2004 that nickel procurement was considered a strategic issue at the subsidiary because of its increasing price.

Despite the growing overcapacity, an investment to double the production of stainless steel in the original location of the subsidiary (Project Double) was approved in 1999. However, the related proposals to include nickel-free grades in the investment program were not approved by the HQ managers. A perspective originally emphasized by the subsidiary managers—the reliance on production efficiency—strongly shaped the attention of the HQ, whereas a later proposal for broadening the target market and reducing the risks of nickel procurement failed to do so (see Table 5).

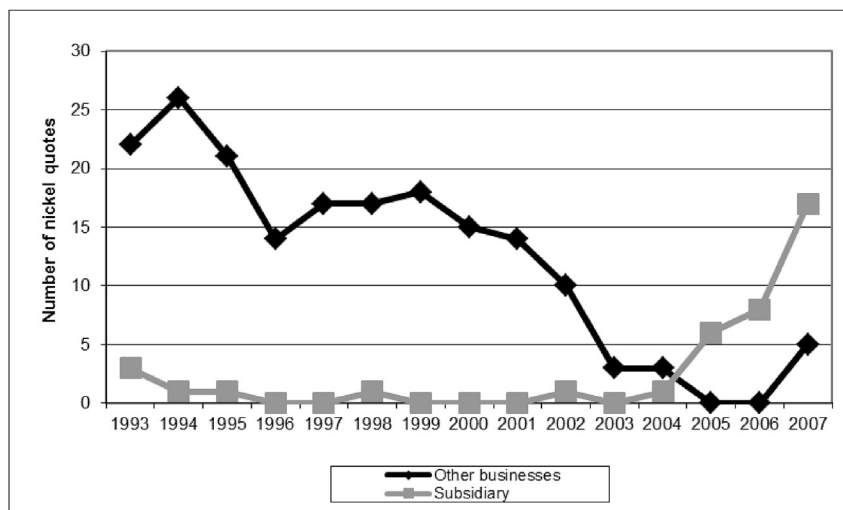


Fig. 2. The number of quotations on strategic issues with the word “nickel” in publications concerning the stainless steel subsidiary and other businesses of the company.

Table 5
Summary of attention patterns in “Voice of the subsidiary”.

	Attended to by HQ	Not attended to by HQ	Attended to by subsidiary	Not attended to by subsidiary
Stimuli for bottom-up attentional processes				
Stainless voicing profit and efficiency	Good results of efficiency			
Stainless steel global overcapacity	Reliance on efficiency	Impact of investments on overcapacity (in concrete actions, recognized in rhetoric)	Potential of broadening of product range	Impact of investments on overcapacity (in concrete actions, recognized in rhetoric)
Increasing shortage of nickel	Impacts on nickel business. Possibility of captive nickel was tested	Potential of captive nickel (in concrete actions, emphasized in rhetoric)	Potential of recycled stainless steel as additional nickel source	Potential of captive nickel. Risk of nickel shortage on stainless demand
Stainless voicing need to broaden product range		Ignored, proposals not accepted		
Attentional perspectives				
	Raw materials, mining Distributed conglomerate, independent subsidiaries		Pressure for profit	

4.2. Direction lost? (Not) attending to product range and markets (2000–2001)

Stimuli from the financial market emphasized the need to grow: “Many metals companies are simply too small to make an impact in the portfolios of big institutional investors. So the answer is industry consolidation to avoid being marginalized by investors. There is no point in staying small and getting ignored” (Pub., 2001; Interview of a banker). Therefore, HQ managers felt that “something had to be done” (Int.).

Other stimuli came from the mining business of the company. Some of the international mining projects were unsuccessful, which directed the attention of HQ managers to strategies that moved away from raw materials and toward customers.

In response to these external and corporate-performance-related stimuli, the company merged the subsidiary business with a market- and customer-oriented UK-based company: “[The partner] is a company that develops a stainless steel product, when a customer need is recognized” (Int.). The most interesting of the merger partner’s capabilities was its R&D competence in product and application areas. For the company, which sold through wholesalers, this was new customer knowhow: “[The merger partner] knew the process development of end users. They had channels through which to approach the customers. R&D reported to marketing management” (Int.). The official reasoning of the HQ managers for the merger was market knowledge and broadening the product spectrum: “The essential reasoning for the merger ... is the excellent strategic fit of the companies. The cost competitiveness, quality and service of [the subsidiary] will be combined with a global sales network and the broad product range of [partner]” (Pub., 2000).

The arrangement of the joint venture allowed the HQ managers to expand the other businesses in the company as well. However, the management positions of the new independent joint venture were filled with managers from the original subsidiary: “The managers were [subsidiary]-based, had their home and pride in the [subsidiary]” (Int.). This implies that the partner’s knowledge was not fully utilized.

The integration process of the joint venture was difficult. The main issues debated concerned the product range and organization of the sales function: “Management of sales from a separate sales company [which was the practice] in [the partner] was considered impossible by [the subsidiary], which was used to managing the sales from the factory” (Int.). Managers of the partner characteristically felt “pride over special products, even despising commodity products” (Int.), whereas the subsidiary had invested in production efficiency in commodity products. The voice of the original subsidiary was stronger and attended to by management: “[The subsidiary] was absolutely dominating” (Int.). The outcome was that the synergies mentioned during the acquisition were not realized in the strategy of the joint venture. Simultaneously, the HQ managers retreated to their original attentional perspective, and developed the copper products and base metals businesses (Table 6).

4.3. A series of crises changed the attention patterns of managers (2002–2007)

The attention of HQ managers after 2002 was shaped by exceptionally strong and abrupt stimuli. First, they faced a take-it-or-leave-it situation regarding the subsidiary business, as the joint venture partner decided to sell its share. The decision to keep the subsidiary business was not easy for the HQ managers, and statements reverted to the pre-merger rhetoric: “We have always emphasized that stainless steel will remain an important part of our value formation” (Pub., 2002).

Table 6

Summary of attention patterns in “Attention to product range and markets”.

	Attended to by HQ	Not attended to by HQ	Attended to by subsidiary	Not attended to by subsidiary
Stimuli for bottom-up attentional processes				
Financial market emphasizing growth	Recognized in corporate publications Strategy slogan: Double and transform. Joint venture allowed growth also in other businesses		Growth in the original location	Potential benefits of increased geographic spread of the business
Mining business risks realized	Divestment of mining	Possibility of captive nickel in stainless		Possibility of captive nickel
Need for market orientation	Reasoning of joint venture based on this	Possibility of developing management capabilities to exploit the strengths of the acquired units	Need to mend operational weaknesses of the acquired units	Potential of strengths of the acquired units
Stainless voicing efficiency	Stainless managers to run the joint venture	Overwhelming power of stainless in joint venture		
Attentional perspectives				
	Original portfolio of independent businesses		Efficiency, technical superiority – on the original location	

The decision to buy out the partner increased the net gearing, or indebtedness, to a very high level, and the company had to start divesting its other businesses. In a spate of bad timing, the company had just decided to focus on stainless steel when the high price of nickel and global overcapacity hit the business in an unexpected way: “The growth of the demand of high-nickel stainless steel started to slow down by the end of 2003 when the price of nickel increased to a historical maximum. Therefore the customers have sought out alternative stainless steel grades in some applications and also slowed down the shift from other materials to stainless steel” (Pub., 2005). Some of the measures ignored earlier were now implemented: the production of nickel-free grades, an increase in special grades, and more direct channels to customers. However, the situation remained difficult because of the two extreme peaks in nickel prices: in 2005 and 2007.

5. Findings: temporal and repertory mismatches

We noticed a phenomenon that we call temporal mismatch, and define it as misalignment over time in terms of attention to issues between the HQ and its subsidiaries. We also found repertory mismatches, which, for the purposes of this study, are defined as misalignment between the HQ and its subsidiaries in terms of attention to potential responses or actions to be taken.

In our analysis, these mismatches were connected to severe performance consequences for the company as nickel simultaneously became expensive and was central to the company's product market range. Attention to this threat would have benefitted the company. Other reasons for financial outcomes also existed, but it is not our purpose in this study to explain the company's performance. We therefore analyze the attentional patterns at our case company based on [Tables 5 and 6](#); the results are summarized in [Fig. 3](#).

The HQ gradually changed its attentional perspective from the original raw material focus to a strong emphasis on production efficiency (economies of scale, focus on limited products) based on the strong voice of the subsidiary. However, this change was a double-edged sword for the subsidiary. The focus on production efficiency later made it difficult for the subsidiary to gain a hearing on any aspect of the product portfolio-related issue that did not fit the efficiency perspective.

The subsidiary was quicker than the HQ to react to new environmental stimuli within its own business area, such as the demand to broaden the product range as a response to the growing global overcapacity (see [Table 5](#)). The HQ depended in the business level stimuli on second-hand information and lagged behind, which was one of the *temporal mismatches of attention* between the HQ and the subsidiary.

As a result, the proposal to broaden the product range was denied, which suggests that the HQ managers attended neither to the risks involved in the narrow product range, nor to the connected dependence on nickel as raw material. The attention patterns between the HQ and the subsidiary were out of sync, as the subsidiary had already “moved on” and the HQ was left behind, causing the temporal mismatch in attention that affected the strategic decision-making.

The pressure from financial institutions, which is an example of corporate-level stimuli, reached the HQ before the subsidiary. The decision on a joint venture is an example of such an attentional mismatch. The action, which was based on the issues and repertories attended to by the HQ, met resistance by the subsidiary, whose managers did not engage in attending to the general financial issues. They responded to the situation from the earlier attentional perspective of production efficiency and did not take advantage of the capabilities of the joint venture organization.

Another attentional mismatch was between the *repertories of available actions* of the HQ and the subsidiary. The HQ attended to corporate-level answers, such as acquisitions, business portfolios, and corporate financing. The subsidiary attended to answers related to products, production, and the development of the original production site. For example, nickel

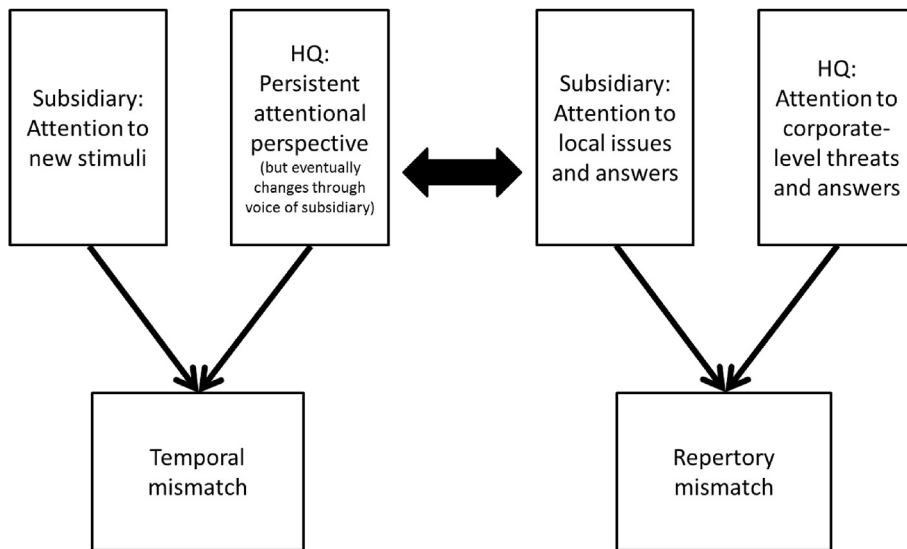


Fig. 3. Attention out-of-sync: The mismatch between timing and action.

was a local raw material that the subsidiary procured through recycling. For the HQ, nickel was a portfolio issue concerning the position of nickel mining and manufacturing at the company, and the response was to divest the business that carried increasing (mining) risks.

In some cases, the mismatch is both temporal and repertory-based. The merger and founding of a joint venture was the HQ's attempt to improve the product and market capabilities of the production-oriented subsidiary. The subsidiary had argued only sometime earlier for the broadening of the product portfolio for market access reasons, and had been refused the necessary resources by the HQ (a temporal mismatch). The response of the subsidiary would have been to broaden the product range at the original location, something that R&D activities had already supported. Yet, the HQ entered into a joint venture with presumed access to market capabilities (a repertory mismatch). Thus, a temporal mismatch was eventually coupled with a repertory mismatch.

6. Discussion

This study provides empirical evidence on the development of attentional patterns in a multi-business company over time, based on both top-down and environmental stimuli-driven processes. We elaborate on the attention patterns behind strategic failures, such as belated attention to market threats and a failed acquisition. The origins of a strategic failure cannot be attributed to ignorance of external market changes alone, given that management is frequently aware of such changes (e.g., Tripsas & Gavetti, 2000), nor is the question one of emotional inability to communicate between middle and top managers, although distributed attention makes such communication skills necessary (Vuori & Huy, 2016). The HQ and its subsidiaries have complex relationships, and some strategizing by subsidiaries takes place (Kristensen & Zeitlin, 2004). However, we conclude that the issue is attention as a bounded resource and its mismatched allocation to issues and responses. We continue Joseph and Wilson's (2017, p. 1796) call for understanding how a multi-business firm pays attention to particular issues and to the particular unit's interpretation of these issues and solutions at a point in time. We expand on their findings by suggesting there are temporal and repertory issues that go beyond organizational structural designs into local and corporate sources of knowledge.

Our contribution to the literature on the ABV of firms (Ocasio, 1997, 2011) is empirical evidence of failure in aligning attention at a multi-business company. Many of the elements have been proposed in the literature, but the full operations of the attentional mechanisms have not been described. Temporal mismatch in terms of *issues* develops because subsidiaries often attend to new external cues first, as they access first-hand information on their own business (e.g., Cho & Hambrick, 2006; Dutton & Ashford, 1993; Joseph & Ocasio, 2012; Joseph & Wilson, 2017). The HQ develops attentional perspectives, which are persistent, especially if they are founded on history and experience (Gavetti & Levinthal, 2000; Levinthal & Rerup, 2006), good performance (Rerup, 2009), dominant logic (Bettis & Prahalad, 1995), and the paradigm of the company (Johnson, 1988; Walsh, 1995). Temporal mismatch is by no means limited to issues attended to by the subsidiary and the HQ suffering from inertia: based on our case, it also takes place when the HQ first attends to corporate-level issues, such as financial pressures to grow, as also discussed by Joseph and Wilson (2017).

The HQ attentional perspective is not carved in stone, but can be changed through the voice of subsidiaries (Bouquet & Birkinshaw, 2008) or strong environmental shocks (Grinyer & Spender, 1979). However, our study suggests that this does

not always happen in a timely manner. Despite having a strong profile and initiative-rich voice (Bouquet & Birkinshaw, 2008), the subsidiary first gains positive attention from the HQ in the form of investment programs, but then is ignored. Thus, the two conditions mentioned by Bouquet and Birkinshaw (2008) for gaining attention appear insufficient in this case.

An additional way to interpret this temporal mismatch is to suggest that the subsidiary saw both production efficiency and, later, market pressure as opportunities (e.g., Barreto & Patient, 2013) to expand its own business, and, thus, attended to them more continuously and incrementally. The HQ was committed to the existing strategy course until it perceived a corporate-level threat in the rapidly deteriorating financial performance.

As we found, a mismatch may also arise between the responses considered pertinent by various parts of the company to the issue that, by then, has been agreed to be worthy of attention (Ocasio, 1997). Bansal et al. (2017) suggest that the temporal and spatial scales of issues may affect how they are attended to. Our data shows that the attention of the subsidiary focuses on local issues and responses, whereas the HQ attends to corporate-level issues and responses, as also discussed by Joseph and Wilson (2017). These do not always coincide, and, therefore, a repertory mismatch develops. Actions that are possible for the HQ to take, such as an acquisition, may override more local action, such as product-related R&D.

The importance of cross-level channels in the alignment of attention within companies is emphasized by Joseph and Ocasio (2012). Specifically, the temporal coupling of corporate and business unit agendas through communications (Ocasio et al., 2018) is recommended. Ocasio et al. (2018) call for researcher attention to what is being communicated beyond information processing communication channels—the “pipes and prisms.” We join a recent call by Ocasio et al. (2018) to pay attention to the content of strategic change in terms of issues and initiatives.

Finally, we contribute to the methodology of operationalizing attention, in particular, measuring inattention beyond statements in the annual report (e.g., Cho & Hambrick, 2006; Maula et al., 2013, Joseph & Wilson, 2017). We gather both published and interview data and classify the material as decision opportunities in which issues are or are not attended to. This allows us to draw a more complete picture of attention at different levels of a company, thus encompassing not only top-down attention, but also bottom-up attention and the episodic interactive dynamics between the two. In addition, we offer empirical evidence that confirms the findings of extant, more theoretical, studies. We confirm the presence of the processes of attention shaping illustrated in Fig. 1: forward-looking, experience-based, focused on particular issues, and attuned to external stimuli (Ocasio, 2011).

Future research should consider nuanced investigation of attention in which the dynamics of attending to emerging issues can be studied in terms of decision opportunities, issues, and responses. The patterns of inattention should be revelatory in terms of the timing of strategic decisions and their consequences for the internal dynamics of the organization (Laamanen & Wallin, 2009). This timing of (in)attention is likely to further define the repertory of actions available as responses to a particular strategic issue. This adds to our understanding of why companies take strategic actions in a belated manner and why they choose one response over another. For example, despite the challenges related to acquisitions, they present a common “response,” or possibly a familiar vocabulary, to a strategic issue (Ocasio et al., 2018) beyond solution approaches such as developing new product markets, that require persistence over time and may appear indecisive at first. Such delays in action and accompanying repertory mismatches can be costly and detrimental to the organization: early action allows more incremental, exploratory actions, whereas the options are likely to be limited and much riskier later. Understanding the availability of strategic actions, or the repertory, as opportunities become threats over time is important for management and worthy of future study.

6.1. Managerial implications

Ignoring significant performance-affecting information is not new: the consequences of uneven attention within a company caused a severe crisis at Novo Nordisk, as recounted by Rerup (2009): “[I]nformation never received significant attention from corporation until it was too late” (p. 880). However, the reasons that such information, which is well known to management, remains unexploited are less clear. We conclude that the role of an attentional temporal mismatch between a subsidiary and the HQ is one important factor regarding strategic issues. This temporal mismatch is likely due to senior executive commitment to an established strategy (Bettis & Prahalad, 1995) and, hence, related to the inattention to alternatives. Although a subsidiary may be at liberty to react to external stimuli in a more agile manner, the HQ and the TMT need to maintain a certain consistency for credibility (a CEO's reputation being linked to a particular strategy) and thus persist in their attentional perspective. However, a subsidiary may have its own persistent perspectives—in our case, mainly visible in the limitation to actions within the original site and inability to develop the business in general. The repertory of action therefore differs: the HQ may need to take more extreme, belated action with eventual performance effects, whereas the subsidiary may prefer more incremental development steps.

Attending to changing issues does not necessarily mean changing strategy; it could also mean learning about the environmental changes while the issues can still be characterized as opportunities rather than threats. Experimentation is often recommended as a low-key approach here. Such exploratory, incremental action may help attenuate the internal tensions that more extreme actions may evoke. This may require more ambidexterity from top management—being able to maintain the strategic thrust while exploring additional directions or “pivots.” One way to facilitate such ambidexterity might be to develop “off-line” channels for attention where alternatives to the existing strategy course can be explored and discussed without raising questions on the top management's credibility and the company's commitment to its current strategy. Attention to important strategic issues, their timing, and the strategic repertory may, thus, become more synchronized, while

the diversity of attention and the consequent consideration and contest of multiple perspectives (Kaplan, 2008) can be maintained.

Conflicts of interest

The authors are not aware of any conflicts of interest concerning this paper.

Acknowledgement

We thank Tekes – the Finnish Funding Agency for Innovation (at present Business Finland), for funding. We also thank Antti Heikkinen for technical assistance in the data collection. We are grateful for the generous time the Company CEO, Executives and the managers interviewed dedicated to the study.

References

- Alvesson, M., & Kärreman, D. (2007). Constructing mystery: Empirical matters in theory development. *Academy of Management Review*, 32, 1265–1281.
- Bansal, P., Kim, A., & Wood, M. (2017). Hidden in plain sight: The importance of scale in organizations' attention to issues. *Academy of Management Review*. Published online before print <https://doi.org/10.5465/amr.2014.0238>. (Accessed 27 January 2017).
- Barreto, I., & Patient, D. L. (2013). Toward a theory of intraorganizational attention based on desirability and feasibility factors. *Strategic Management Journal*, 34, 687–703.
- Bettis, R. A., & Prahalad, C. K. (1995). The dominant logic: Retrospective and extension. *Strategic Management Journal*, 16(1), 5–14.
- Blettner, D. P., He, Z., Hu, S., & Bettis, R. A. (2014). Adaptive aspirations and performance heterogeneity: Attention allocation among multiple reference points. *Strategic Management Journal*, 36, 987–1005. <https://doi.org/10.1002/smj.2260>.
- Boeker, W. (1989). Strategic change: The effects of founding and history. *Academy of Management Journal*, 32, 489–515.
- Bouquet, C., & Birkinshaw, J. (2008). Weight versus voice: How foreign subsidiaries gain attention from corporate headquarters. *Academy of Management Journal*, 51, 577–601.
- Bouquet, C., & Birkinshaw, J. (2011). How global strategies emerge: An attention perspective. *Global Strategy Journal*, 1, 243–262.
- Brunsson, N. (1989). *The organization of hypocrite: Talk, decisions, and actions in organizations*. Chichester, UK: Wiley.
- Burgelman, R. A. (1991). Intraorganizational ecology of strategy making and organizational adaptation: Theory and field research. *Organization Science*, 2, 239–262.
- Buyl, T., Boone, C., & Matthyssens, P. (2013). The impact of the top management team's knowledge diversity on organizational ambidexterity. *International Studies of Management & Organization*, 42(4), 8–26.
- Cho, T. S., & Hambrick, D. C. (2006). Attention as the mediator between top management team characteristics and strategic change: The case of airline deregulation. *Organization Science*, 17, 453–469.
- Cohen, M. D., March, J. G., & Olsen, J. P. (1972). A garbage can model of organizational choice. *Administrative Science Quarterly*, 17(1), 1–25.
- Cyert, R. M., & March, J. G. (1992). *A behavioral theory of the firm* (2nd ed.). Malden, MA: Blackwell.
- Dane, E. (2013). Things seen and unseen: Investigating experience-based qualities of attention in a dynamic work setting. *Organization Studies*, 34(1), 45–78.
- Dutton, J. E., & Ashford, S. J. (1993). Selling issues to top management. *Academy of Management Review*, 18, 397–428.
- Dutton, J. E., Ashford, S. J., O'Neill, R. M., & Lawrence, K. A. (2001). Moves that matter: Issue selling and organizational change. *Academy of Management Journal*, 44, 716–736.
- D'Adderio, L. (2014). The replication dilemma unravelled: How organizations enact multiple goals in routine transfer. *Organization Science*, 25, 1325–1350.
- Eggers, J. P., & Kaplan, S. (2009). Cognition and renewal: Comparing CEO and organizational effects on incumbent adaptation to technical change. *Organization Science*, 20, 461–477.
- Gavetti, G., & Levinthal, D. (2000). Looking forward and looking backward: Cognitive and experiential search. *Administrative Science Quarterly*, 45, 113–137.
- Greve, H. R. (2008). A behavioral theory of firm growth: Sequential attention to size and performance goals. *Academy of Management Journal*, 51, 476–494.
- Grinyer, P. H., & Spender, J. (1979). Recipes, crises, and adaptation in mature business. *International Studies of Management & Organization*, 9(3), 113–133.
- Hambrick, D. C. (1982). Environmental scanning and organizational strategy. *Strategic Management Journal*, 3, 159–174.
- Hoffman, A. J. (1999). Institutional evolution and change: Environmentalism and the US chemical industry. *Academy of Management Journal*, 42, 351–371.
- Hoffman, A. J., & Ocasio, W. (2001). Not all events are attended equally: Toward a middle-range theory of industry attention to external events. *Organization Science*, 12, 414–434.
- Johnson, G. (1988). Rethinking incrementalism. *Strategic Management Journal*, 9(1), 75–91.
- Joseph, J., & Ocasio, W. (2012). Architecture, attention, and adaptation in the multibusiness firm: General electric from 1951 to 2001. *Strategic Management Journal*, 33, 633–660.
- Joseph, J., & Wilson, A. J. (2017). The growth of the firm: An attention-based view. *Strategic Management Journal*, 39, 1779–1800.
- Kaplan, S. (2008). Framing contests: Strategy making under uncertainty. *Organization Science*, 19, 729–752.
- Kaplan, S. (2011). Research in cognition and strategy: Reflections on two decades of progress and a look to the future. *Journal of Management Studies*, 48, 665–695.
- Knudsen, M. (2011). Forms of inattentiveness: The production of blindness in the development of a technology for the observation of quality in health services. *Organization Studies*, 32, 963–989.
- Kristensen, P. H., & Zeitlin, J. (2004). *Local players in global games: The strategic constitution of a multinational corporation*. Oxford: Oxford University Press.
- Kuisma, M. (1989). *A history of Outokumpu*. Gummerus (Jyväskylä).
- Kunnas, P. (2009). *Systematic management of emerging strategic issues: Organisational attention allocation and strategic issue management system performance*. PhD diss. Helsinki University of Technology.
- Laamanen, T., & Wallin, J. (2009). Cognitive dynamics of capability development paths. *Journal of Management Studies*, 46, 950–981.
- Laureiro-Martinez, D., Brusoni, S., Tata, A., & Zollo, M. (2014). The emergence of choice patterns: Evidence from a laboratory study. *Academy of Management Proceedings*, 1, 16429.
- Levinthal, D., & Rerup, C. (2006). Crossing an apparent chasm: Bridging mindful and less-mindful perspectives on organizational learning. *Organization Science*, 17, 502–513.
- Li, Q., Maggitti, P. G., Smith, K. G., Tesluk, P. E., & Katila, R. (2013). Top management attention to innovation: The role of search selection and intensity in new product introductions. *Academy of Management Journal*, 56, 893–916.
- March, J. G., & Simon, H. A. (1958). *Organizations*. Oxford: John Wiley & Sons.
- Maula, M. V. J., Keil, T., & Zahra, S. A. (2013). Top management's attention to discontinuous technological change: Corporate venture capital as an alert mechanism. *Organization Science*, 24, 926–947.
- McMullen, J., Shepherd, D., & Patzelt, H. (2009). Managerial (in)attention to competitive threats. *Journal of Management Studies*, 46, 157–181.

- Nigam, A., & Ocasio, W. (2010). Event attention, environmental sensemaking, and change in institutional logics: An inductive analysis of the effects of public attention to Clinton's health care reform initiative. *Organization Science*, 21, 823–841.
- Ocasio, W. (1997). Towards an attention-based view of the firm. *Strategic Management Journal*, 18, 187–206 (Summer Special Issue).
- Ocasio, W. (2011). Attention to attention. *Organization Science*, 22, 1286–1296.
- Ocasio, W., & Joseph, J. (2008). Rise and fall—or transformation? The evolution of strategic planning at the general electric company, 1940–2006. *Long Range Planning*, 41, 248–272.
- Ocasio, W., Laamanen, T., & Vaara, E. (2018). Communication and attention dynamics: An attention-based view of strategic change. *Strategic Management Journal*, 39(1), 155–167.
- Plourde, Y., Parker, S. C., & Schaan, J. (2014). Expatriation and its effect on headquarters' attention in the multinational enterprise. *Strategic Management Journal*, 35, 938–947.
- Prahalad, C. K. (2004). The blinders of dominant logic. *Long Range Planning*, 37, 171–179.
- Quinn, J. B. (1980). *Strategies for change: Logical incrementalism*. Homewood, IL: Richard D. Irwin.
- Rerup, C. (2009). Attentional triangulation: Learning from unexpected rare crises. *Organization Science*, 20, 876–893.
- Rerup, C., & Feldman, M. S. (2011). Routines as a source of change in organizational schemata: The role of trial-and-error learning. *Academy of Management Journal*, 54, 577–610.
- Ridge, J. W., Johnson, S., Hill, A. D., & Bolton, J. (2017). The role of top management team attention in new product introductions. *Journal of Business Research*, 70, 17–24.
- Shepherd, D. A., McMullen, J. S., & Ocasio, W. (2016). Is that an opportunity? An attention model of top managers' opportunity beliefs for strategic action. *Strategic Management Journal*, 38(3), 626–644.
- Simon, H. A. (1947). *Administrative behavior: A study of decision-making processes in administrative organization*. New York: Macmillan.
- Thornton, P. H., & Ocasio, W. (1999). Institutional logics and the historical contingency of power in organizations: Executive succession in the higher education publishing industry, 1958–1990. *American Journal of Sociology*, 105, 801–844.
- Tripsas, M., & Gavetti, G. (2000). Capabilities, cognition, and inertia: Evidence from digital imaging. *Strategic Management Journal*, 21(10/11), 1147–1161.
- Tuggle, C. S., Sirmon, D. G., Reutzell, C. R., & Bierman, L. (2010). Commanding board of director attention: Investigating how organizational performance and CEO duality affect board members' attention to monitoring. *Strategic Management Journal*, 31, 946–968.
- Vuori, T., & Huy, Q. (2016). Distributed attention and shared emotions in the innovation process: How Nokia lost the smartphone battle. *Administrative Science Quarterly*, 61, 9–51.
- Walsh, J. P. (1995). Managerial and organizational cognition: Notes from a trip down memory lane. *Organization Science*, 6(3), 280–321.
- Wilson, J., & Joseph, J. (2015). Organizational attention and technological search in the multibusiness firm: Motorola from 1974 to 1997. *Advances in Strategic Management*, 32, 411–439.
- Yadav, M. S., Prabhu, J. C., & Chandy, R. K. (2007). Managing the future: CEO attention and innovation outcomes. *Journal of Marketing*, 71(4), 84–101.