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(How) Does discretion change over time? A contribution toward a dynamic view of managerial discretion

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KEYWORDS

Managerial discretion;
Dynamic model;
Executive cognition;
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Awareness

Summary A quarter of a century ago Hambrick and Finkelstein (1987) called for work on the dynamics of managerial discretion. The present paper aims at developing ideas of such a dynamic view by integrating insights from research on cognition and learning into discretion theory, complementing established research on the role of context with a view that focuses on the manager as the driving force of discretion. We conceptualize discretion as the scope of options a manager may choose from. Accordingly, the cognitive concepts of awareness and attention are central building blocks. We argue that a manager may intentionally influence the degree of discretion by purposefully choosing the set of issues and options to be included in his or her strategic issue array. However, though it is the manager him- or herself who ultimately decides upon the allocation of his or her scarce attentional resources, we argue that this decision and, by that, the degree of managerial discretion is substantially affected by personal, relational, and situational factors. Understanding how these factors affect a manager's allocation of attention over time is imperative to understand the dynamics of managerial discretion.

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Introduced to scholars of strategic organization by Hambrick and Finkelstein (1987) a quarter of a century ago, managerial discretion theory has helped to bridge two polar views of strategic action in organizations. Over the past two decades managerial discretion theory has proven to be very appealing conceptually and has widely been cited in leading management journals. Thereby, the concept has helped to explain organizational phenomena such as executive compensation (Cho & Shen, 2007; Finkelstein & Boyd, 1998), executive

tenure and turnover (Finkelstein & Hambrick, 1990; Shen & Cho, 2005), environmental commitment (Aragon-Correa, Matias-Reche, & Senise-Barrio, 2004), and strategic orientation (Rajagopalan, 1997; Rajagopalan & Finkelstein, 1992). However, as Keegan and Kabanoff (2008) have pointed out, managerial discretion theory has had far less impact on the management literature to date than it should have. This assessment is supported by Boyd and Gove's (2006) review, according to which only 16 studies have empirically explored managerial discretion theory.

The reason for this is likely to be twofold. First, since its introduction to the literature, scholars have focused on the application of the original concept. Less attention has been paid to its refinement and/or extension. Only recently, Finkelstein and Peteraf (2007) provided an excellent conceptual piece of work aimed at further developing manage-

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rial discretion theory. While their extension to managerial activities is important in its own right, their work has also to be applauded for reemphasizing the role of the manager. Although Hambrick and Finkelstein (1987) argued that discretion originates from the manager's awareness of options, to date research has mainly explored the role of context in determining managerial discretion (Li & Tang, 2010). In contrast, important individual factors that affect managerial discretion such as cognition and learning have, by and large, been neglected.

Second, little attention has been given to the idea that a manager's discretion may vary over time, despite the fact that Hambrick and Finkelstein (1987) called for the development of a dynamic view of managerial discretion. But, as Finkelstein and Peteraf (2007, p. 244) have argued, the question of how discretion changes over time is "an important question, not only because the effects of discretion have found to be substantial in subsequent research, but also for the more general reason that much theory on strategic organization implicitly assumes a static model of the world, even though it is quite evident that change is endemic to strategy."

Therefore, the objective of our paper is twofold. We aim to complement established research on managerial discretion by (i) focusing on the manager as the driving force of discretion and (ii) devise ideas for the development of a dynamic view of managerial discretion. To do so, we will reconsider Hambrick and Finkelstein's (1987) original article and define managerial discretion as *the number of options a manager is aware of*. We follow Finkelstein and Peteraf (2007), according to which any development of a dynamic view must depart from the manager him- or herself, and contribute to the individual-level base of discretion, which Finkelstein, Hambrick, and Cannella (2009, p. 33) have assessed a critically important arena for investigation.

In particular, we integrate recent insights on cognition and learning to explore how a manager's allocation of attention and, by that, his or her degree of discretion changes over time. We argue that while a manager may intentionally influence the degree of discretion by purposefully choosing the set of issues and options to be included in his or her strategic issue array, the decision to allocate attentional resources to the respective issues and options is substantially affected by personal, relational, and situational factors. Thus, understanding how these factors affect a manager's allocation of attention over time is imperative to understand the dynamics of managerial discretion.

The remainder of the paper is structured as follows. Subsequently, in Section "Reconsidering the concept of managerial discretion", we reconsider the original article and highlight the implications of the original concept for a dynamic view. In doing so, we identify the cognitive concepts of awareness and attention (Koch & Tsuchiya, 2006; Wickens & McCrley, 2008) as crucial building blocks. Section "Linking attention to the dynamics of managerial discretion" provides a detailed discussion of managerial attention. Next, in Section "Toward a dynamic view of managerial discretion", we seize on Hambrick and Finkelstein's (1987) call for the development of a dynamic view of managerial discretion. In particular, we explore how a manager's attention to strategic issues over time, and, by that, the manager's discretion, is affected by personal, relational, and situational

characteristics. We end the paper with a conclusion in Section "Conclusion".

Reconsidering the concept of managerial discretion

The manager – the neglected part in managerial discretion theory

To clarify why it is important to reemphasize the role of the manager in managerial discretion theory, we will subsequently provide an in-depth analysis of Hambrick and Finkelstein's (1987) original conceptualization of discretion. At the outset of their work, Hambrick and Finkelstein (1987, p. 372) introduced *potential actions* or *options* as the basic building block of their concept. Subsequently, they elaborated that managerial discretion resides in part within the manager rather than being determined solely by contextual forces and conclude that a "*chief executive who is aware of multiple courses of action that lie within the zone of acceptance of powerful parties is said to have discretion*" (Hambrick & Finkelstein, 1987, p. 378, italics in the original). Postponing for a moment what is meant by awareness, it is important to comment on the fact that managerial discretion is at the intersection of two independent sets of options: one being the options of which the manager is aware of (what we will label MA), and the other made up of the options that would meet the approval of powerful stakeholders, that is, that are contained within the zone of acceptance (ZoA). Consequently, discretion may formally be expressed as:

$$\text{Managerial discretion} = \text{MA} \cap \text{ZoA}$$

Hence, as depicted in Fig. 1, managerial discretion may best be understood as a continuum (Kleindienst & Hutzschenreuter, 2010). At the one extreme, albeit this is likely to be rather a theoretical than a practical possibility, the manager may face no discretion at all (Alternative A). This is the case, whenever the intersection between MA and ZoA is the empty set, which may be due to two reasons: first, it may be that the manager is unaware of a single option. Second although the manager is aware of a multitude of options, it may be that all of these options fall outside the ZoA. At the other extreme, it may be that the manager faces the maximum degree of discretion (Alternative C). This is the case, whenever all of the options the manager is aware of, are contained within the ZoA, that is, whenever MA is a subset of ZoA. In this case, the manager would face no constraints for his or her actions and would be able to act upon every single option he or she is aware of. It is important to note, however, that the manager's degree of discretion would not increase even if the ZoA would allow for additional options to be acted on. This is to say that options the manager is not aware of, do not contribute to his or her discretion. In between these two extreme positions, the intersection of MA and ZoA reflects the manager's actual degree of discretion (Alternative B). In this case, the manager may be aware of a variety of options, however, only those options that fall within the ZoA contribute to the manager's level of discretion. This may also include complex and uncertain options, which are hard to observe by powerful parties and are therefore not constrained when acted upon (Finkelstein & Peteraf, 2007).

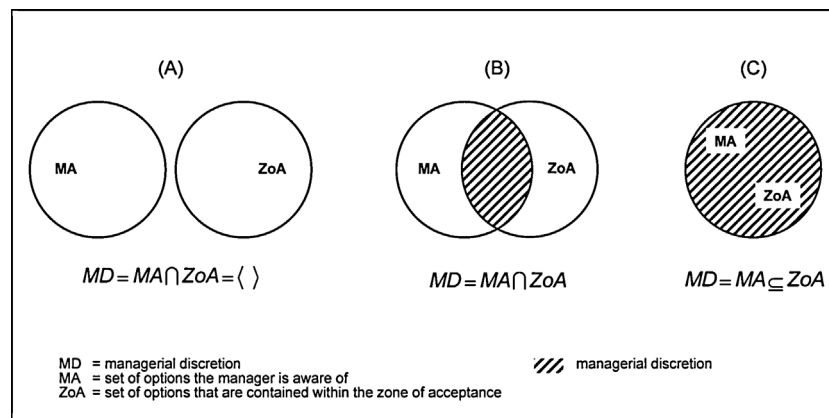


Figure 1 The continuum of discretion.

The preceding analytical distinction in Fig. 1 is important since it addresses an issue that has not yet been addressed but complements previous research. Studies such as Hambrick and Abrahamson (1995), Rajagopalan and Finkelstein (1992), Finkelstein and Boyd (1998), or Li and Tang (2010) have measured managerial discretion at the industry or organizational level. There is no question that all of these studies have provided valuable insights on managerial discretion theory. However, focusing on contextual factors it was implicitly assumed that managers are aware of all options contained within the ZoA (Kleindienst & Hutzschenreuter, 2010). This narrow view prevented to explore that a manager may just not be aware of some options. Hence, what has been measured by focusing on the context was the maximum potential level of discretion a given manager is able to obtain within a given context. In other words, the focus was on discretion imposed by context. Managers were implicitly considered to be identical, differences between individuals could not be addressed, and in doing so, cognition as the main driver of the individual sources of discretion (Finkelstein et al., 2009) could not be explored.

Our analysis illustrates that it may be valuable to complement the view of discretion imposed by context with a view of discretion originating from the manager him- or herself. This view highlights that given that the necessary condition for the existence of managerial discretion is the manager's awareness of options, the manager him- or herself is to a large degree in control of his actual level of discretion. In contrast, by defining which options are contained within the ZoA, the context sets the boundaries of managerial discretion.

Up to now, we have taken a static view. However, in order to develop a dynamic view of managerial discretion, it is important to begin with an understanding of the underlying mechanisms that may result in variation of a manager's discretion (Finkelstein & Peteraf, 2007). Following our reasoning, a change in managerial discretion may analytically be the result of an increase or decrease in MA, an increase or decrease in ZoA, or any combination. Juxtaposing MA and ZoA, we obtain a 3×3 -matrix reflecting all theoretically possible alternatives of change in managerial discretion. It is important to note that increase and decrease refer only to the amount of options contained within the intersection, since an increase/decrease of options not being part of the intersection does not affect the level of discretion.

As can be seen in Fig. 2, there are several possibilities that account for a change in discretion. However, Hambrick and Finkelstein (1987) and Finkelstein and Peteraf (2007) have noted that factors influencing discretion may be analyzed independently in a ceteris paribus fashion. Consistent with the focus of our paper we therefore limit our analysis to the middle column. In other words, for the remainder of the paper we assume that the ZoA remains constant, whereas MA may be subject to change. Hence, we take a complementary view to established research, and in order to explore how changes in the manager's awareness of options influence discretion, assume a constant ZoA.

The role of awareness

Hambrick and Finkelstein (1987, p. 378) contended that "a manager must be aware of an option for it to be part of the discretionary set." It is likely that we all have an intuitive understanding of what the word awareness means. Nevertheless, it seems appropriate to develop a more precise idea of what is meant by the term in order to characterize its importance in managerial discretion theory. According to Webster's dictionary (Neufelt & Guralnik, 1989, p. 95) awareness describes the quality or state of being aware, which in turn "implies having knowledge of something through alertness in observing [...] what one sees, hears, feels, etc." Likewise, the Penguin Dictionary of psychology (Reber & Reber, 2001, p. 74) defines awareness briefly as "an internal, subjective state of being cognizant or conscious of something." Hence the definitions stress awareness as an internal state of the manager, being directed toward an issue and connected to available information and knowledge. Additionally, awareness emphasizes consciousness or conscious perception.

In sum, the concept of awareness has two important implications. First, awareness precludes anything that may occur or exist unconsciously. Second, since manager's awareness (and in fact the awareness of all individuals) is constantly changing depending upon the stimuli that impinge on the mind, the concept of awareness is inherently dynamic and provides an appropriate starting point for the development of a dynamic view of managerial discretion theory. Consequently, Hambrick and Finkelstein's (1987) notion that the manager must be aware of an option for it to be part of

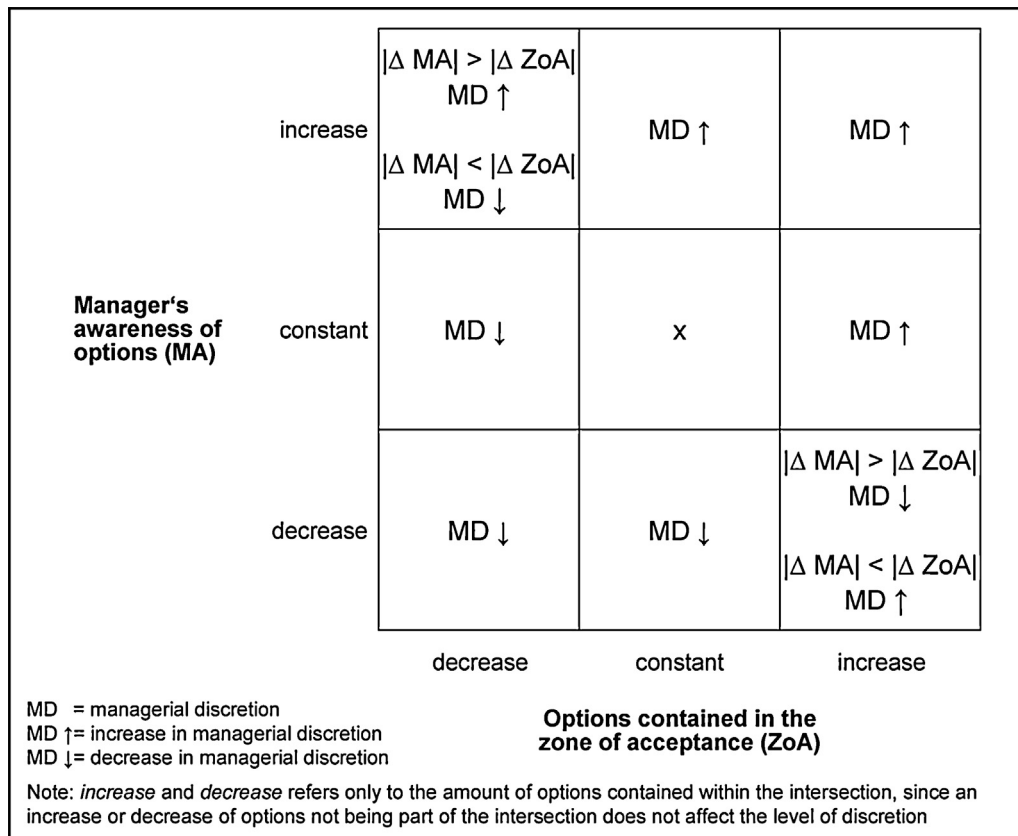


Figure 2 Reasons for variations in the level of managerial discretion.

the discretionary set requires perception of the respective option. However, to perceive the option, that is, to bring the option to awareness, attention must be focused on it (Kahneman, 1973; Koch & Tsuchiya, 2006; Wickens & McCarley, 2008).

Linking attention to the dynamics of managerial discretion

Managerial attention

In his classic book, *Principles of Psychology* (1890, p. 403–404), William James stated that “everyone knows what attention is. It is the taking possession by the mind, in clear and vivid form, one out of what seem several simultaneously possible objects or trains of thought. Focalization, concentration, of consciousness are of its essence. It implies withdrawal from some things in order to deal effectively with others, and is a condition which has a real opposite in the confused, dazed, scatterbrained state which in French is called *distraktion*, and *Zerstreuungheit* in German.”

The theoretical importance of attention is twofold (Wickens & McCarley, 2008). First, attention, along with storage (=memory) and speed (=response time), is one of the three main limits of human information processing (Haukedal, 1994; Kabanoff & Brown, 2008). Second, since attention influences a variety of other psychological phenomena, it is an important concept underlying decision making (Moors & De Houwer, 2006; Wickens & McCarley, 2008).

The selective or filter aspect of attention refers to the existence of mechanisms that control the significance of stimuli. Acting as a front-end filter, attention regulates what stimuli are selectively attended to in preference to others. Allocating attention toward a stimulus above a certain threshold, memory is activated and its content is brought to awareness, that is, into the working memory (Bunting & Cowan, 2005; Haukedal, 1994; Kuvaas & Kaufmann, 2004). Memory content can subsequently be used under conscious control (Fiske & Taylor, 2008). Hence, attention controls perception.

The intensive or resource aspect of attention, in turn, refers to the amount and/or intensity of attentional resources allocated to selected stimuli (Moors & De Houwer, 2006). According to capacity theory of attention (Kahneman, 1973; Moray, 1967), there is a general limit concerning the available capacity to perform mental work. While attentional capacity can intentionally be allocated with considerable freedom between multiple stimuli (Moray, 1967), the limited total quantity of attentional resources induces that concurrent stimuli tend to interfere with one another (Kahneman, 1973; Wickens & McCarley, 2008).

Consistent with previous research on managerial attention (Cho & Hambrick, 2006; Fiol & O’Connor, 2003; Kabanoff & Brown, 2008; Levy, 2005; Nadkarni & Barr, 2008), we subsequently assume that managers operate in an information environment too rich to be fully attended to. To deal with this cognitive overload, managers employ a process of selective attention. They focus their attention on some stimuli, while selectively ignoring others (Bogner & Barr, 2000; Nadkarni & Barr, 2008).

While it is the manager who ultimately decides upon the allocation of his or her attentional resources to some stimuli, it is important to note at this point that the decision to allocate attentional resources is contingent upon a variety of determinants such as personal, relational, and situational characteristics. In other words, attention allocation is not a purely ‘inside-out’ process exclusively controlled by the manager him- or herself. Rather, the allocation of attentional resources is to a substantial degree an ‘outside-in’ process, that is, contingent upon relational and situational factors the manager is confronted with (Ocasio, 1997; Sproull, 1984). Hence, to understand the dynamics of managerial discretion, both perspectives have to be considered.

Strategic issues, options, and the strategic issue array

Previous research has shown that managers (and indeed all individuals) do not attend to stimuli in isolation (Dutton & Duncan, 1987; Kotter, 1982). Rather, they simultaneously allocate their attention across a set of stimuli (Dutton, 1997; Kabanoff & Brown, 2008). In the present context, these stimuli are best understood as strategic issues. The set of strategic issues a manager attends to at any one time is called a strategic issue array (Bowman & Bussard, 1991; Dutton & Duncan, 1987; Kotter, 1982). Bowman and Bussard (1991, p. 88), for example, elaborated that a CEO they interviewed had a strategic issue array that was comprised of nine issues: restructuring following a merger/divestment, financial performance, a proposed strategic business unit (SBU) divestment, planning processes, management development, and his vision for the firm. Similarly, Kotter (1982, p. 61) reported that the strategic issue array of one of his interviewees included completing the installation of a new computer system, restructuring a part of his organization, developing the people working for him, coping with an upcoming NLRB election, meeting quarterly sales and earnings targets, finalizing a yearly set of objectives, and expanding his business via acquisition.

Strategic issue arrays are likely to encompass loosely connected goals and plans, to include a broad range of financial and organizational issues, and to address long-, medium-, and short-term concerns. Hence, a strategic issue array can be seen as a form of meta-decision making, involving the choice of issues to be solved, the structuring of those issues, as well as the choice and application of evaluation criteria (Mitroff & Betz, 1972).

Strategic issues are commonly described as being ill-defined, complex, uncertain, and ambiguous (Ansoff, 1980; Haukedal, 1994; Haukedal & Gronhaug, 1994). Consequently, there is no proven algorithm to formulate a well-defined problem and no clear relationship between problem definition and best solution. Rather, the manager may choose from a variety of *options* to resolve the respective strategic issue (Lyles, 1987).

Let us look back at Bowman and Bussard’s (1991) CEO with the *issue* ‘SBU divestment’ in his *strategic issue array*. To resolve the issue, several *options* are available, such as, sell it to another firm, seek a listing for it, bring it into a joint venture, close it, and so forth. Now, while there may be numerous options available for resolving the issue, the CEO’s

latitude of action is limited to options he or she is aware of. In other words, the CEO’s discretion depends upon how many different options he or she is able to be aware of for a given issue.

In sum, a manager’s level of discretion is contingent upon the number of options he or she is aware of for those strategic issues contained in his or her strategic issue array. Given that a manager’s strategic issue array depends upon the allocation of attention, it is imperative for the development of a dynamic view of managerial discretion to understand how managers allocate their attention and how this allocation of attention may change over time. The allocation of attention, however, does not occur by chance. Rather, attention allocation is the result of a manager’s personal characteristics, his or her relation to others, and the situation in which the manager finds him- or herself in (Ocasio, 1997).

Though discretion theory has been developed independent of the respective manager’s hierarchical position within the firm, the received literature has typically focused on the CEO. Therefore, in order to ensure consistency with prior research the CEO is the focal manager in the development of our ideas concerning a dynamic view of managerial discretion. In doing so, we acknowledge that the CEO is the principal leader and architect of the firm and as such of particular interest for discretion theory (Finkelstein et al., 2009).

We begin with the CEO’s personal characteristics. That is, we take an ‘inside-out’ perspective, with the CEO occupying center stage. Subsequently, we extend our reasoning to include an ‘outside-in’ perspective, encompassing relational as well as situational characteristics and explore how these characteristics affect a CEO’s allocation of attention. Fig. 3 presents the building blocks of our theory (personal, relational, and situational characteristics) that we subsequently will elaborate upon. It also portrays the proposed relationships between the key constructs and a CEO’s discretion discussed within each building block.

Toward a dynamic view of managerial discretion

Personal characteristics

The upper echelons (Hambrick & Mason, 1984) and the CEO psychology literatures (Bono & Judge, 2004; Hiller & Hambrick, 2005; Resick, Weingarden, Whitman, & Hiller, 2009) suggest that psychological attributes such as core self-evaluation (Hiller & Hambrick, 2005), narcissism (Chatterjee & Hambrick, 2007), or hubris (Hayward & Hambrick, 1997) influence CEOs’ attention allocation. As such, psychological attributes affect what issues CEOs attend to and what issues they ignore and have a direct effect on what issues are contained within the strategic issues array and, as a logical extension, on the degree of discretion.

Recently, researchers have called for using comprehensive and valid psychological frameworks to assess fundamental personality differences (Cannella & Monroe, 1997; Hiller & Hambrick, 2005). Therefore, we rely on the five-factor model “that represents the current orthodoxy in personality assessment and is a simple, robust, and comprehensive way of understanding fundamental personality differences”

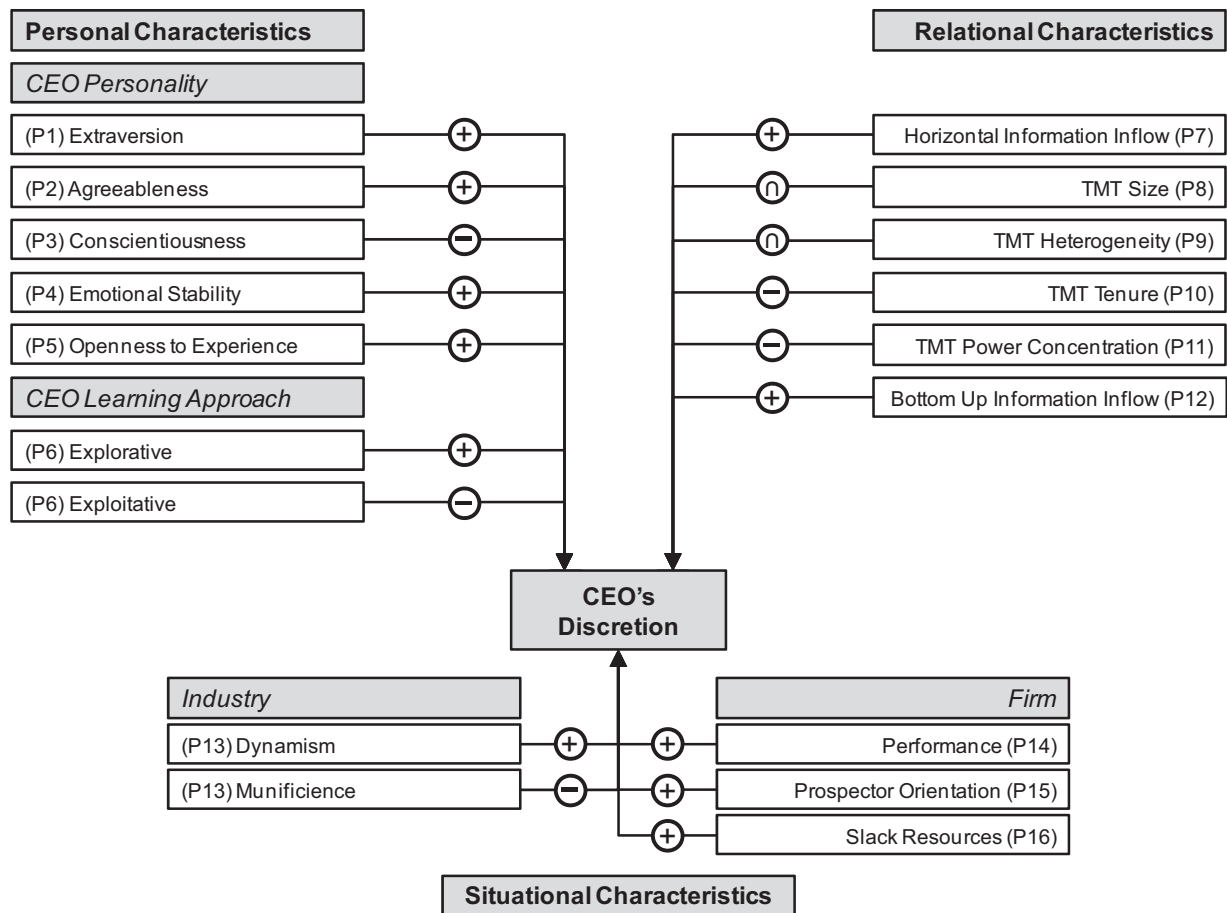


Figure 3 Proposed relationships in the dynamic view of managerial discretion.

(Peterson, Martorana, Smith, & Owens, 2003, p. 797), rather than some random compilation of psychological attributes that are discussed in the upper echelons and CEO psychology literatures. The dimensions that make up the five-factor model are *Extraversion*, *Agreeableness*, *Conscientiousness*, *Emotional Stability*, and *Openness to Experience* (Goldberg, 1990; McCrae & Costa, 1987).

Extraversion

The concept of extraversion captures an individual’s tendency to be sociable, assertive, and active. As such, extraverted individuals experience positive affects such as energy, zeal, and excitement (Boudreau, Boswell, Judge, & Bretz, 2001). Accordingly, extraverted CEOs have no difficulties to engage in social interactions with other individuals. This ease of engaging in social interaction, in turn, enables extraverted CEOs to easily get to know new people and introduce people to each other. Given that extraverted CEOs are articulate, expressive, and dramatic they are able to persuade, influence, and organize others (Judge & Bono, 2000). Accordingly, over time extraverted CEOs build broad and diverse networks of social relationships. These relationships typically include both social relationships within the firm as well as relationships outside the firm, and are likely to encompass strong ties as well as weak ties (Granovetter, 1973).

Research has shown that CEOs assign greater importance to information and advice from personal sources than to

impersonal sources (Aguilar, 1967; Brown & Eisenhardt, 1997; Elenkov, 1997). Hence, this literature would suggest that what issues are contained within a strategic issue array is substantially affected by the CEO’s network of social relationships, since it directly influences the CEO’s allocation of attention. Extensive social interactions result in comprehensive information gathering enabling the CEO to perceive a broader and more diverse range of strategic issues. Additionally, relying on extensive advice networks (McDonald, Khanna, & Westphal, 2008) is not only likely to expose the CEO to alternative and novel strategic issues, but also to alternative and novel options to resolve these issues.

Proposition 1. *The greater the CEO’s extraversion, the higher his or her discretion. In particular, over time a CEO’s extraversion enhances his or her discretion through the development of an extensive network of social relationships.*

Agreeableness

Individuals characterized by agreeableness show a tendency for personal warmth, cooperation, trust, and acceptance of others (Peterson et al., 2003). In particular, agreeable CEOs pay special attention to neglected individuals or groups within their firm. They pay special attention to treating each subordinate as an individual, to express appreciation, and to focus on employee empowerment (Bono & Judge, 2004;

Judge & Bono, 2000). The creative and risk taking culture that is fostered by agreeable CEOs over time tends to enable free and comprehensive exchange of information within the firm (Nadkarni & Herrmann, 2010). Given that agreeable CEOs are perceived as being more approachable in the eyes of their subordinates, agreeable CEOs are likely to be actively involved in the comprehensive information exchange. This, however, is likely to broaden the scope of issues and options perceived by agreeable CEOs.

In contrast, disagreeable CEOs are likely to create a climate of competition and fear (Nadkarni & Herrmann, 2010). Given such a climate, employees tend to comply rather than to think independently and are hesitant to share information that may challenge CEOs' personal beliefs and preferences. Rather, employees are likely to filter and mold information before passing on the information to disagreeable CEOs. Therefore, disagreeable CEOs tend to predominantly receive and, thus, allocate attention to information that fits their acceptance zone, thereby limiting the scope of issues and options they perceive (Hambrick & Fukutomi, 1991).

Proposition 2. *The greater the CEO's agreeableness, the higher his or her discretion. In particular, over time a CEO's agreeableness enhances his or her discretion through the development of a comprehensive information exchange culture.*

Conscientiousness

Conscientiousness refers to the degree to which individuals show dependability, responsibility, perseverance, achievement orientation, and concern with following established rules (Peterson et al., 2003). Accordingly, CEOs which show a high degree of conscientiousness are intolerant for ambiguity. Driven by their desire for structure, they derive satisfaction from having control over their environment. As such, highly conscientious CEOs tend to focus on tasks rather than on social interactions and relationships (Miller & Dröge, 1986; Peterson et al., 2003).

Because of their concern for dependability and their intolerance for ambiguity, highly conscientious CEOs avoid taking novel and uncertain actions. Rather, over time highly conscientious CEOs almost exclusively rely on known actions and selectively ignore new and unique actions that challenge their existing experience and assumptions. As Nadkarni and Herrmann (2010, p. 1053) have reasoned such CEOs are likely "to develop narrow fields of vision and a selective perception bias that predisposes them to ignore environmental stimuli that do not match existing assumptions."

Thus, conscientious CEOs' tendency of being task-oriented rather than relationship-oriented and focusing on tried-and-true actions rather than on novel ones is likely to affect what issues and options they allocate their attention to. Rather than attending to novel issues and including them in the strategic issue array – which may go along with uncertainty and loss of control – conscientious CEOs tend to restrain the issues under consideration to known strategic issues with known options.

Proposition 3. *The greater the CEO's conscientiousness, the lower his or her discretion. In particular, over time a CEO's*

conscientiousness diminishes his or her discretion through the development of a strong selection bias.

Emotional stability

An individual's capacity for emotional adjustment and self-confidence is captured by his or her emotional stability (Nadkarni & Herrmann, 2010). CEOs with high emotional stability are able to adjust their emotional states to varied situational demands. Accordingly, even in stressful situations emotional stable CEOs remain calm, tempered, and relaxed (Bono & Judge, 2004). Therefore, the more emotionally stable a CEO is, the better his or her ability to adapt to unpredictable and changing situations.

Their ability to remain calm, allows emotionally stable CEOs to process ambiguous and adverse information. The high degree of self-confidence that is characteristic for emotionally stable CEOs enables them to challenge the status quo and take risks. As a result, over time emotionally stable CEOs are likely to broaden their field of vision, to exhibit reduced selective perception and interpretation biases, and to be increasingly receptive to novel issues and options (Judge & Bono, 2000; Nadkarni & Herrmann, 2010). Conversely, CEOs exhibiting emotional instability or neuroticism have a tendency to experience negative affects such as fear, sadness, guilt, or anger (Bono & Judge, 2004). Therefore, over time such CEOs are increasingly unlikely to allocate attention to ambiguous and adverse information. This, in turn, increases their selective perception bias, limiting the scope of issues and options being considered.

Proposition 4. *The greater the CEO's emotional stability, the higher his or her discretion. In particular, over time a CEO's emotional stability enhances his or her discretion through the development of improved sensing capabilities.*

Openness to experience

Individuals that value intellectual matters, have broad interests, and exhibit a preference for variety are characterized by openness to experience. Typically, this also goes along with interest in unusual thought processes as well as thoughtfulness and creativity (McCrae & Costa, 1987). The multifaceted interests and the preference for variety implicates that high openness to experience CEOs are likely to be receptive to a broad range of issues and options. Likewise, their interest in unusual thought processes enables open CEOs to allocate attention to information that challenges their existing experience and assumptions. Hence, similar to emotional stability, openness to experience is likely to counteract selective perception and interpretation biases (Judge & Bono, 2000; Nadkarni & Herrmann, 2010).

Conversely, CEOs being adverse to new experiences are likely to have a relatively restricted field of vision and to consider only such information that is relatively close to known information (Cyert & March, 1963). Hence, over time such CEOs are likely to develop habits, establish routines, and increasingly rely on past experiences. This, however, is likely to foster the emergence of substantial perception and interpretation biases, leading to a restricted scope of issues and options to which they allocate their attention.

Proposition 5. *The greater the CEO's openness to experience, the higher his or her discretion. In particular, over time a CEO's openness to experience enhances his or her discretion through the development of a broad field of vision.*

The five-factor model provides a perspective on individual differences that are likely to affect a CEO's degree of discretion over time based on personality traits. These personality traits, however, have also been found to affect an individual's learning approach (Blickle, 1996). Personality traits are likely to facilitate or inhibit the use of a specific learning strategy, and as such improve or deteriorate the associated outcome. Likewise, an individual's personality traits may provide the motivational impulses or blocks to use a specific learning strategy.

The learning strategy adopted by a specific individual – for example the CEO – has recently received increasing attention in the literature (Laureiro-Martinez, Brusoni, & Zollo, 2010; Mom, Van Den Bosch, & Volberda, 2007). Given that a learning strategy is concerned with the scope of issues under consideration, learning is likely to be an important means to increase or decrease the degree of discretion over time. Accordingly, the learning strategy adopted by a CEO is of great interest within discretion theory. Therefore, we subsequently elaborate on how the adoption of two different learning strategies – exploration and exploitation (Lavie, Stettner, & Tushman, 2010; March, 1991) – affects a CEO's degree of discretion. In doing so, we also outline how the respective learning strategy may be affected by specific personality traits.

Exploitative vs. explorative learning

In his seminal article March (1991) acknowledged the fundamental distinction between exploitative and explorative learning. While previous research has predominantly investigated the notions of exploitation and exploration on an organizational (e.g. Benner & Tushman, 2003) and inter-organizational level (e.g. Lavie & Rosenkopf, 2006), recent research in strategy and neuroscience has also considered the micro – that is, individual – level of analysis (e.g. Laureiro-Martinez et al., 2010; Mom et al., 2007).

According to March (1991, p. 71) exploitation “includes such things as refinement, choice, production, efficiency, selection, implementation, execution”, whereas exploration “includes things captured by terms such as search, variation, risk taking, experimentation, play, flexibility, discovery, innovation.” While the original definitions of exploitation and exploration are quite broad in scope, Levinthal and March (1993, p. 105) later restricted their definitions to the knowledge domain, stating that exploitation refers to “the use and development of things already known”, whereas exploration refers to “a pursuit of new knowledge”. Hence, these definitions would suggest that – apart from other factors having impact on CEOs' learning approaches – conscientious CEOs tend to engage in exploitative learning, whereas CEOs with high openness to experience are more likely to engage in explorative learning.

At the core, exploitative learning aims at optimizing task performance. Over time, repeated exploitation creates reliable feedback enabling CEOs to even better assess the likely success of future exploitation efforts (Lavie et al., 2010).

Exploitation is therefore likely to deepen CEOs' existing knowledge base, enhancing the efficiency of existing knowledge, while simultaneously restricting search efforts for new knowledge. The bias toward repeated application of existing knowledge is then likely to lead to a ‘competency trap’ (Levitt & March, 1988). Hence, due to the self-reinforcing nature of exploitative learning, CEOs characterized by exploitative learning are likely to overemphasize attention allocation to known issues and options at the expense of novel issues and options.

In contrast, the essence of explorative learning is disengagement from the known and creating variety in experience (Mom et al., 2007) through engagement in diverse search activities. Such search activities, that is, allocation of attention, may range from the simplest form – random search – to more structured types of search, such as the use of heuristics or explicit algorithms (Laureiro-Martinez et al., 2010). Therefore, over time exploration broadens CEOs' existing knowledge base through the continuous perception of novel issues and options.

Proposition 6. *Over time, a CEO's learning strategy affects his or her discretion in a way that (a) a CEO relying on exploitation will experience diminishing discretion, whereas (b) a CEO relying on exploration will experience increasing discretion.*

Relational characteristics

So far, we have argued that certain personal characteristics of CEOs influence the allocation of attention and, by that, the degree of discretion. However, it is evident that CEOs do not act in isolation. Rather, their attention allocation is substantially affected through the interaction with members of the firm. In the following, we will first explore how top management teams (TMT) affect the allocation of attention of their CEOs. Subsequently, we elaborate on the role of middle managers.

At this point some additional words regarding the perspective we take in our reasoning seem appropriate. In order to develop our theoretical arguments, we subsequently adopt an information processing perspective (Haleblian & Finkelstein, 1993). The rationale to do so is twofold. First, prior research has shown that information processing is a major part of a CEO's job (Henderson & Fredrickson, 1996; Thompson, 1967). Second, and even more important, information processing and specifically, the corresponding allocation of attention are among the main concepts within discretion theory.

However, it is evident that focusing on a single perspective may result in a partial view only. For example, interaction of individuals – in particular in a firm context – is not only characterized by information exchange but also by lobbying, manipulation, and politics, which in turn may affect what issues receive attention. However, in order not to make the paper even more extensive and complex, we will proceed in a ceteris paribus fashion focusing on the information processing perspective.² Therefore, we subsequently explore how

² We are grateful to an anonymous reviewer for pointing this out.

information inflows and characteristics of the TMT affect CEOs' information-processing capabilities regarding the perception and consideration of issues.

Horizontal information inflows

Obviously CEOs are not alone in running their firms. Rather, CEOs are usually part of a TMT whose members have clearly defined responsibilities. Operating at the boundary of the firm and its environment, the TMT must "monitor and interpret external events and trends, deal with external constituencies (ranging from security analysts to key distributors), and also formulate, communicate, and monitor the organization's responses to the environment" (Hambrick, 1994, p. 175). Thus, processing and communicating information is one of the chief responsibilities of members of the TMT (Henderson & Fredrickson, 1996).

In general the CEO is in charge of the overall firm and does not necessarily occupy specific functional and/or business-line responsibilities as do the remaining members of the TMT (Bigley & Wiersema, 2002). In order to run the firm effectively, the CEO is therefore reliant upon members of the TMT to share information. Through repeated personal interaction with members of his or her TMT, the CEO acquires information on specific issues and options. Put differently, through the interaction with TMT members, the CEO's attention is guided toward specific issues and options. These respective issues and options may either be familiar or novel to the CEO. TMT members may, for example, share rather unambiguous information such as sales figures, throughput times, etc. To the degree that this information is related to issues and options with which the CEO is familiar, the information contributes to deepening the CEO's knowledge base rather than broadening it. In other words, such information inflows are likely to contribute to the CEO's exploitative learning.

However, the interaction with TMT members may also guide the CEO's attention to novel issues and options. Due to the strategic nature of this information, it is "less effective for dealing with or improving analyzable and rather unequivocal tasks and associated problems" (Mom et al., 2007, pp. 915–916). Hence, these information inflows from members of the TMT do not contribute to the reliability of a CEO's experience, that is, do not relate to the CEO's exploitation activities (March, 1991). Rather, such information inflows are related to the CEO's exploration activities, enabling the CEO to perceive novel issues and options (Mom et al., 2007).

Proposition 7. *The greater the CEO's information inflows from members of the TMT, the higher his or her discretion. In particular, information inflows from members of the TMT contribute to the CEO's explorative learning strategy that over time leads to the perception of a broader range of issues and options.*

Buyl, Boone, and Matthyssens (2011) have argued that a TMT's composition is an antecedent of managerial cognition and as such may influence the allocation of attention. Therefore, we now turn to the characteristics of the TMT in order to explore how TMT composition may affect a CEO's allocation of attention and, by that, his or her discretion. In particular, we elaborate on TMT characteristics that have been found in previous research to be of particular interest in the context

of information processing (Amason & Sapienza, 1997; Haleblan & Finkelstein, 1993; Henderson & Fredrickson, 1996; Knight et al., 1999; Miller, Burke, & Glick, 1998; Prahalad & Bettis, 1986). These TMT characteristics are: *size, heterogeneity, tenure, and power distribution.*

TMT size

TMT size is associated with the ability to process information. In particular, Haleblan and Finkelstein (1993, p. 846) have argued that larger TMT size can improve information processing capabilities by "(1) increasing the number of items of information that can be absorbed and recalled, (2) increasing the number of critical judgments available to correct errors in inference and analysis, (3) increasing the number of potential solution strategies, and (4) increasing the range of perspective brought to bear on a problem."

Though individuals possess only limited attentional resources that cannot be extended (Kahneman, 1973), a team-context provides the opportunity to easily extend the total amount of attentional resources by adding extra members to the team. Thus, in the given context members of the TMT may be understood as attentional resources that reside outside the CEO, but upon which the CEO may draw. Hence, increasing the size of the TMT enables the CEO to extend the amount of attentional resources that may be used to perceive issues and options (Sproull, 1984). From this perspective, however, it directly follows that under the assumption of repeated personal interactions and information exchange between members of 'the TMT and the CEO, the size of the TMT is directly related to the amount of issues and options the CEO may perceive.

Larger TMTs provide another critical advantage over smaller ones. Research has shown that individuals rely on two different modes of thinking: (i) the conscious cognitive mode involving effortful processes and the use of analytic capabilities and (ii) the automatic mode involving the development and deployment of heuristics and intuition (Hodgkinson & Clarke, 2007; Louis & Sutton, 1991; Schneider & Shiffrin, 1977). Louis and Sutton (1991) argued that organizational decision-making requires the ability to switch back and forth between these two modes. However, because individuals exhibit differences with regard to their preference for the way in which information is gathered, organized, processed, and evaluated, this so-called 'switching cognitive gears' – though desirable and required – is difficult (Louis & Sutton, 1991). Given that only few individuals possess the ability to switch cognitive gears it is imperative for the TMT to possess both types of individuals: those driven by the details of available data, approaching issues by a step-by-step systematic fashion and subject of being 'unable to see the wood for the trees' and those driven by gaining an overview of issues and options at hand at the expense of the detail (Hodgkinson & Clarke, 2007). Thus, while the analytical capabilities of individuals falling into the first category are likely to help uncover novel options for given issues, individuals falling into the second category are likely to sense emergent issues ahead of their analytic counterparts. Hence, the larger the TMT, the more likely individuals falling into both categories are included, providing the TMT with the requisite mix of individuals that is imperative for decision-making (Hodgkinson & Clarke, 2007; Louis & Sutton, 1991).

Although the advantages of larger TMTs seem considerable, increasing size tends to create coordination and communication problems and tends to decrease TMT cohesiveness as members of the TMT experience increasingly less satisfaction (Blau, 1970; Haleblan & Finkelstein, 1993; Shaw, 1981). Following Steiner (1972) group productivity is composed of potential productivity minus losses resulting from faulty processes. The increasing coordination and communication demands imposed by increasing TMT size are likely to consume attentional resources – attentional resources that can no longer be allocated to the perception of issues and options. Likewise, decreasing satisfaction is likely to affect the degree to which members of the TMT interact with one another that may result in less horizontal information inflows for the CEO. In sum, these faulty processes are likely to negatively affect the range of issues and options the CEO may perceive.

Proposition 8. *There is an inverted U-shaped relationship between TMT size and a CEO's discretion. In particular, a CEO's discretion tends to increase with TMT size through (i) extended attentional resources and (ii) through the possibility to obtain a requisite mix of analytical and 'big-picture' individuals within the top management team up to a point where faulty processes consume attentional resources that can no longer be allocated to issues and options, resulting in a subsequent decline of the CEO's discretion.*

TMT heterogeneity

As with TMT size, the information processing perspective is informative regarding how TMT heterogeneity affects a CEO's discretion. TMT heterogeneity, understood as heterogeneity of demographic characteristics such as functional background (e.g. Carpenter, 2002), educational background (e.g. Smith et al., 1994), age (e.g. Tihanyi, Ellstrand, Daily, & Dalton, 2000), or tenure (e.g. Carpenter & Fredrickson, 2001), has received a great deal of attention in the strategy literature. In particular, researchers have held for some time that heterogeneity affects both the cognitive capability of a TMT and the interaction process through which the team produces its decisions (Amason, 1996).

According to upper echelon theory (Hambrick & Mason, 1984), a TMT's demographic heterogeneity directly affects the team's cognitive capability. In particular, demographic heterogeneity has been argued to provide the team with at least two important resources that are not available to more homogeneous teams (Certo, Lester, Dalton, & Dalton, 2006; Haleblan & Finkelstein, 1993). First, heterogeneity directly increases the range of perspectives. As such, TMT heterogeneity increases the scope and variety of issues and options to which members of the TMT allocate their attention. Second, demographic heterogeneity increases the levels of information available to the TMT. Individuals tend to be attracted to and interact more frequently and easily with similar individuals (Byrne, 1971; Williams & O'Reilly, 1998). As a result, the networks of social relationships of members of homogeneous TMTs tend to overlap. Conversely, the networks of social relationships of members of heterogeneous TMTs have less overlap, resulting in heterogeneous TMTs having access to more information as compared to homogeneous TMTs. Again, this plus in information is likely to

increase the scope and variety of issues and options to which members of the TMT allocate their attention.

While heterogeneity may increase the scope and variety of issues and options under consideration through its positive effect on cognitive capability, it is also likely that being a source of conflict heterogeneity affects group processes (Amason, 1996; Knight et al., 1999). In fact, research has shown that conflict arising from group heterogeneity can be both beneficial and detrimental, because conflict appears in at least two different forms: cognitive and affective conflict (Amason & Sapienza, 1997; Simons & Peterson, 2000). According to Amason and Sapienza (1997, p. 496) cognitive conflict is "task-oriented and arises from differences in judgment and perspectives." Similarly, Simons and Peterson (2000, p. 102) have argued that cognitive conflict is "a perception of disagreements among group members about the content of their decisions, and involves differences in viewpoints, ideas, and opinions." While cognitive conflict is likely to consume attentional resources, it has also been shown to increase the information exchange between members of the TMT and encourage the thorough evaluation of alternative information (Amason & Sapienza, 1997). Hence, it is likely that both effects compensate one another with regard to their effect on discretion.

Affective conflict on the other hand, is likely to have a substantial detrimental effect on discretion. Affective conflict is a "perception of interpersonal incompatibility and typically includes tension, annoyance, and animosity among group members" (Simons & Peterson, 2000, p. 102). Producing suspicion, distrust, and hostility among members of the TMT (Amason & Sapienza, 1997), affective conflict diminishes the information processing capability of the TMT, because TMT members spend their time and energy focusing on each other rather than on their tasks (Evan, 1965; Simons & Peterson, 2000). The team's cognitive capability is further limited as affective conflict increases the stress and anxiety levels of the members (Staw, Sandelands, & Dutton, 1981). In sum, affective conflict decreases the TMT's cognitive capability and, by that, the scope and variety of issues and options to which members of the TMT allocate their attention.

Proposition 9. *There is an inverted U-shaped relationship between TMT heterogeneity and a CEO's discretion. In particular, a CEO's discretion tends to increase with TMT heterogeneity as it increases a TMT's cognitive capability up to a point where faulty processes arising from affective conflict consume attentional resources that can no longer be allocated to issues and options, resulting in a subsequent decline of the CEO's discretion.*

TMT joint tenure

Social and psychological effects of TMT joint tenure suggest that the time members of a top management team spend together may have an impact on a CEO's discretion. Tenure tends to restrict information processing (Finkelstein et al., 2009). Over time, individuals develop habits and routines, form preferences for information sources, and increasingly rely on past experiences (Finkelstein & Hambrick, 1990; Hambrick & Fukutomi, 1991). As tenure increases, individuals develop a set of responses to address environmental and

organizational stimuli, inhibiting the chance of change (Miller, 1991), and increasing strategic persistence (Katz, 1982).

Similar processes unfold on the team level. As a team's joint tenure increases, teams develop shared repertoires as a result to long-term acculturation and socialization (Pfeffer, 1983; Prahalad & Bettis, 1986; Schein, 1968). Hence, the more time members of a TMT spend together, the more they experience maturation and rigidity, increasing the team's commitment to the status quo (Staw, 1981). Although the cognitive processes that lead to maturation and rigidity are affected by feedback of prior actions, the learning that originates from this feedback tends to be highly myopic (Buyl et al., 2011; Levinthal & March, 1993). In sum then, joint tenure is likely to restrict the scope of issues and options to which members of the TMT allocate their attention.

TMT turnover, the exit and entry of members of the TMT, might be considered one way to break the trend of maturation, rigidity, and limited scope of attention allocation. However, research based on Schneider's (1987) attraction–selection–attrition (ASA) framework has shown that over time TMTs become increasingly homogeneous (Boone, Van Olffen, Van Witteloostuijn, & De Brabander, 2004; Nielsen, 2009). The ASA framework posits that similar individuals will be attracted by specific jobs and firms. Likewise, Byrne's (1971) attraction paradigm has shown that members of a group are favorable to similar others and are more likely to admit new members that are similar to themselves. Hence, over time firms attract, select, and retain an increasingly homogeneous group of individuals, driving out heterogeneity (Kanter, 1977; Nielsen, 2009). As Kanter (1977, p. 48) has reasoned, managers tend to privilege “those who fit in, [...] those they see as “their kind”. In other words, firms – and also TMTs – are characterized by homosocial reproduction, that is, a tendency to reproduce themselves by selectively admitting similar individuals and facilitating the dismissal of dissimilar individuals (Boone et al., 2004; Buyl et al., 2011). Thus, both social and psychological effects of TMT joint tenure indicate a homogenization process within TMTs (Kanter, 1977).

At first sight, tenure may be considered to increase discretion, as it is likely that experience increases with tenure and, by that, the ability to choose from different issues and options. While an increase in experience is likely to reflect the beneficial aspects of learning from a managerial discretion perspective, it is important to note that in the present context learning may also have a dark side. Tenure is likely to increase the probability that the CEO and members of the TMT may develop preferences for specific options, as these may reappear over time. This, however, is likely to affect discretion. Behavioral learning theory has shown that behavior is a function of its consequences (Ariely & Norton, 2007; Haleblan & Finkelstein, 1999). Consequences that arise from a certain behavior – the choice of an option – are responsible for the development of preferences (Weiss & Ilgen, 1985).

The law of effect (Thorndike, 1913, p. 4) helps to explain how individual selection processes work. A specific situation (S) evokes a variety of potential responses, for example, (R1), (R2), (R3), and (R4). One of these responses, say (R4), is chosen and followed by a satisfying state of affairs (A+), with the satisfier stamping in a bond between the situation and the response. Hence, when the same situation (S) occurs in the

future, the strengthened bond ensures that the specific response (R4) is more likely to occur. The bond can thus be considered a mechanism translating the individual's history of previous trials into an overt response on the next trial. The behavior gains momentum (Nevin & Grace, 2000), and resistance to change occurs (Weiss & Ilgen, 1985). For a satisfying state of affairs this relationship can formally be described by

$S : (R \rightarrow A+) \rightarrow \text{increase in } p(R|S).$

Whereas in the case of an annoying state of affairs, that is, (A–)

$S : (R \rightarrow A-) \rightarrow \text{decrease in } p(R|S)$

applies (Nevin, 1999; Thorndike, 1932). Hence, learning about the consequences of choosing an option is likely to lead to a change in probability of specific responses (Skinner, 1950). Given that discretion arises from the ability to choose between different options, strong preferences for a specific option are likely to decrease the overall amount of options an individual or a team is able to be aware of, while the development of an aversion for a specific option will preclude the respective option from further consideration. Hence, in both cases the development of preferences leads to a reduction of discretion.

Proposition 10. *The higher a TMT's joint tenure, the lower the CEO's discretion. In particular, TMT joint tenure increases cognitive homogeneity and probability of preference development, leading to the perception and consideration of a lower range of issues and options over time.*

TMT power concentration

Power may be defined as an individual's capacity to exert his or her will, the ability to get things done the way he or she wants them to be done (Dahl, 1957; Finkelstein, 1992; Salancik & Pfeffer, 1977). In specifying the concept of power, Emerson (1962) has argued that power is a relational concept than can only be understood in a particular context. Accordingly, the notion of power is only meaningful in relative terms, some individuals being more powerful than others (Greve & Mitsuhashi, 2007). However, as Haleblan and Finkelstein (1993, p. 848) have reasoned, though “power often carries a negative connotation (Pfeffer, 1981), there is no reason to expect any particular distribution of power, whether it conveys power to one person or distributes it more equally to many, to be more advantageous than another in a general sense.” Nonetheless, following our earlier reasoning on TMT characteristics, it seems likely that the information processing within a TMT and, by that, a CEO's discretion is affected by the power concentration within the TMT.

There is considerable agreement in the literature that a TMT's task is to deal with strategic issues, which are unstructured and ambiguous (Finkelstein et al., 2009; Hambrick, 1994). However, as scholars have argued such “less programmable” (Tushman, 1977) issues invite the use of power, with each member of the TMT favoring his or her preferred choice (Mintzberg, 1983).

Unequal distribution of power within the TMT, that is, a high concentration of power, leads to a reduced information exchange and debate among the members of the TMT (Greve

& Mitsuhashi, 2007). TMT members with less power are likely to be prone not to voice their ideas or, if they do, may be ignored. Likewise, members with less power may fear reporting information that run counter to those preferred by the more powerful members of the TMT (Hambrick & D'Aveni, 1992). Accordingly, powerful members of the TMT dominate the information exchange and as such, the TMT may focus its time and effort in either supporting or rejecting the issues raised by the powerful members, rather than trying to come up with alternative and/or additional issues to resolve a problem (Haleblian & Finkelstein, 1993). As a result, over time TMT members with less power are likely to give up contributing to TMT meetings as their perspectives and opinions are largely ignored (Pitcher & Smith, 2001). This, however, is likely to result in less issues and options being perceived.

Conversely, a rather equal distribution of power makes it more likely that the information exchange between members of the TMT is participative and open. In other words, attention is allocated to the issues and options perceived and presented by each and every member of the TMT, increasing the overall scope of issues and options considered.

Proposition 11. *The higher the concentration of power within a TMT, the lower the CEO's discretion. In particular, increasing power concentration within a TMT leads less powerful TMT members to give up contributing to the identification of issues and options, leading to the perception of a lower range of issues and options over time.*

Bottom-up information inflows

Research has shown that middle managers possess crucial information and perspectives that may substantially differ from those of the members of the TMT (Bower, 1970; Burgelman, 1983; Floyd & Wooldridge, 1994). As Dutton, Ashford, O'Neill, Hayes, and Wierba (1997, p. 407) have reasoned: "It is often middle managers rather than the top managers who have their hands on the 'pulse of the organization' and are closer to customers and other stakeholders." Given this proximity, middle managers play a crucial role in detecting strategic issues and mobilizing resources around these issues (Burgelman, 1983; Dutton & Ashford, 1993a; Dutton et al., 1997; Ren & Guo, 2011). Middle managers direct the attention of their TMT – including the CEO – by supplying information about internal or external issues (Dutton & Jackson, 1987; Floyd & Wooldridge, 1992).

By engaging in what has been called *issue selling* middle managers intentionally affect the allocation of scarce and limited attentional resources toward some issues. As such, issue selling is a process directed at shaping the strategic issue array of the organization and as a logical consequence, the strategic issue array of the CEO (Dutton, 1988, 1997; Dutton & Ashford, 1993b). Thus, from an information processing perspective issue selling may be conceptualized as bottom-up information inflows, that is, information originating from individuals at lower hierarchical levels than the TMT/CEO. Issue selling is not concerned with the reporting of unambiguous data but rather with ambiguous and ill-defined information. Consequently, given the ambiguous and ill-defined nature of such bottom-up information inflows, they are unlikely to be related to a CEO's reliability in experience

or depth of existing knowledge base (Mom et al., 2007). Hence, middle managers' issue selling does not affect a CEO's exploitative learning activities. Rather, bottom-up information inflows are likely to contribute to the CEO's explorative learning activities by providing information on novel issues and options (Floyd & Wooldridge, 1992; Mom et al., 2007; Ren & Guo, 2011).

Proposition 12. *The greater the CEO's information inflows from middle managers, the higher his or her discretion. In particular, information inflows resulting from middle managers' issue selling contribute to the CEO's explorative learning strategy that over time leads to the perception of a broader range of issues and options.*

So far, we have argued that a CEO's allocation of attention and, by that, his or her degree of discretion is affected by both personal characteristics and relational characteristics. However, as Ocasio (1997) has reasoned, a CEO's allocation of attention depends on the particular context or situation the CEO finds him- or herself in. Therefore, we subsequently turn to situational characteristics and explore how these may affect a CEO's allocation of attention.

Situational characteristics

In the following, we extend our arguments to include situational characteristics and their effects on attention allocation and discretion. In particular, we elaborate on industry and firm characteristics.

Industry dynamism and munificence

One of the primary assumptions within the strategy literature has been that a firm's long-term survival requires a fit between the firm and its industry environment (Anand & Ward, 2004; Venkatraman & Camillus, 1984). Hence, it is reasonable to assume that to the degree to which industry characteristics change over time, so does a CEO's degree of discretion. Though different dimensions have been used in the literature to describe a firm's industry environment, there is a growing consensus that two dimensions are of particular importance: industry dynamism and industry munificence (Dess & Beard, 1984; McNamara, Haleblain, & Dykes, 2008; Nielsen, 2009; Thompson, 1967).

Industry dynamism refers to environmental instability that is turnover, absence of patterns, and unpredictability (Dess & Beard, 1984). The more dynamic the industry, the higher the uncertainty the CEO and his or her TMT has to deal with. In order to be able to cope with the uncertainty imposed by highly dynamic environments, firms tend to segment homogeneous elements of their environments (March & Simon, 1958). The variety of homogeneous elements, however, leads to an increase in information-processing demands on the executive team (Galbraith, 1973). As outlined above, TMT heterogeneity is one means to meet this demand for increased information-processing (Haleblian & Finkelstein, 1993; Jaw & Lin, 2009; Sutcliffe, 1994) by providing an appropriate requisite variety. Hence, as Nielsen (2009, p. 285) has argued it is likely that industry dynamism mitigates the trend of homosocial reproduction in TMTs.

Industry munificence refers to the extent to which the firm's environment can support sustained growth (Dess & Beard, 1984). Environments that permit firm growth help buffer the organization from external threats (Cyert & March, 1963; Nielsen, 2009). Executive teams in munificent industry environments tend to operate with less constraints and are exposed to less pressure to make highly uncertain strategic decisions. In short, they face less information-processing demands. Hence, given that there is no pressure to notice and gather different environmental information, the trend of homosocial reproduction may be fostered.

Proposition 13. *Over time, a CEO's degree of discretion varies with the dynamism and munificence of the industry in which his or her firm operates. In particular, the more dynamic the industry environment becomes over time, the broader the range of issues and options the CEO is likely to perceive, whereas the more munificent the industry environments becomes over time the less issues and options the CEO is likely to perceive, and vice versa.*

Firm performance

Research has shown that performance affects the scope and variety of issues and options to which individuals allocate their attention (Gino & Pisano, 2011). The Carnegie School, for example, posits that failure to meet the organization's aspiration level triggers problemistic search (Cyert & March, 1963; March & Simon, 1958). Problemistic search implies that attentional resources are allocated to novel issues and options in order to find solutions that may subsequently help to increase performance. Thus, by focusing on the resolution of adversity, the scope and variety of issues under consideration is increased.

In contrast to poor performance, good performance has been shown to lead to persistence (Audia, Locke, & Smith, 2000; Gino & Pisano, 2011). Miller (1993), for example, has argued that good performance leads firms to develop too sharp an edge. Thus, successful firms "amplify and extend a single strength or function while neglecting most others. Ultimately, a rich and complex organization becomes excessively simple – it turns into a monolithic, narrowly focused version of its former self" (Miller, 1993, p. 116). In other words, a history of success implies that over time the scope and variety of issues and options under consideration declines (Audia et al., 2000; Gino & Pisano, 2011).

Proposition 14. *Over time, a CEO's degree of discretion varies with the firm's history of performance. In particular, a CEO's discretion tends to decrease (increase) in the presence of a history of success (failure) as the scope and variety of issues and option to which attentional resources are allocated decreases (increases).*

Firm strategic orientation

The variety of strategic issues a CEO and his or her TMT can attend to is virtually infinite. However, the issues that are actually considered tend to be restricted not only by limitations of human information-processing, but also by the kinds of issues that are perceived to be viable in a specific setting

(Kabanoff & Brown, 2008; Nadkarni & Narayanan, 2007; Ocasio, 1997). Kabanoff and Brown (2008), for example, have argued and shown that managers develop knowledge structures consistent with the strategic orientation of their firm. These knowledge structures (Walsh, 1995) facilitate information processing by drawing attention to relatively well-specified issues that are aligned with the respective strategic orientation, while ignoring issues that are more distant. The focus of attention to issues that are aligned with firm strategic orientation is further reinforced by the use of management control systems (Ren & Guo, 2011). According to Simons (1987, p. 358 italics in the original) management control systems can be defined as "formalized procedures and systems that use information to maintain or alter patterns in organizational activity." As management control systems tend to be designed in accordance with firm strategic orientation (Chenhall, 2003), their use reinforces the focus on issues that are perceived to be viable for firms with a specific strategic orientation. Prior research has shown, that management control systems differ according to the firm's strategic orientation (Miles & Snow, 1978). Defender firms, for example, tend to emphasize financial measures, whereas prospector firms focus more on non-financial measures such as new product development or market share (Chenhall, 2003; Ren & Guo, 2011; Simons, 1987). To the extent that knowledge structures and management control systems are aligned with the firm's strategic orientation, it may influence the CEO's degree of discretion: defender firms tend to focus on exploitation, whereas prospector firms tend to emphasize exploration (Miles & Snow, 1978). Given that a CEO's degree of discretion is to a considerable extent contingent upon his or her firm's strategic orientation, a change in a firm's strategic orientation can be considered as an impetus leading to a corresponding change in a CEO's perception of issues and options and, by that, in discretion over time (Cho & Hambrick, 2006; Rajagopalan, 1997).

Proposition 15. *A CEO's degree of discretion varies with his or her firm's change in strategic orientation over time. In particular, CEOs in firms changing from defender to prospector orientation are likely to face an increase in discretion, resulting from the increasing focus on exploration as opposed to exploitation, and vice versa.*

Firm slack resources

Slack resources have long been recognized to affect individual and organizational behavior (Bourgeois, 1981; Cyert & March, 1963; Nohria & Gulati, 1996). For example, prior research has shown that slack resources promote experimentation with issues that would not be approved in the absence of slack resources (Nohria & Gulati, 1996; Ren & Guo, 2011; Singh, 1986). In particular, March and Shapira (1992) have argued and shown that slack resources direct managerial attention toward the advantages rather than the dangers of exploration. The presence of slack reduces the fear of failure, leads to a relaxation of controls and, as a result, to an increase in explorative activities. Hence, as slack increases a CEO may increasingly engage in explorative learning. As such, slack resources free CEO's attentional resources from known issues to be allocated to novel issues and options. Conversely, where slack resources are missing, tight controls and efforts

to improve productivity are preferred. Thus, though necessity may beget ingenuity, the absence of slack resources in general leads the CEO to be preoccupied with exploitative learning, that is, allocating his or her attention to known issues and options (Cyert & March, 1963).

Proposition 16. *A CEO's degree of discretion varies with his or her firm's slack resources over time. In particular, plentiful slack resources can be considered an enabler in a sense that a CEO facing plentiful slack resources is likely to engage in explorative learning leading to the perception of a broader range of issues and options, whereas the absence of slack resources fosters exploitative learning, leading to the perception of less issues and options.*

Conclusion

Some 25 years ago Hambrick and Finkelstein (1987) introduced managerial discretion theory and concluded that “a temporal, dynamic view of discretion is what we eventually need.” We have tried to address that call in this paper with complementing established research with a view of discretion that focuses on the manager as the driving force of discretion. Most importantly, however, we have tried to provide an impetus for the future development of a dynamic view of managerial discretion by establishing the link between a manager's allocation of attention and managerial discretion. At the core, we have put forth the essential idea that personal, relational, and situational characteristics are responsible for a manager's allocation of attention, and that changes in a manager's degree of discretion over time – the dynamics of discretion – may be driven by the respective characteristics.

Our arguments rest on some basic assumptions. First, in accordance with Finkelstein and Peteraf (2007) it is our contention that, though by and large neglected in discretion theory, the manager takes an important role in the development of a dynamic view. Second, we have elaborated on Hambrick and Finkelstein's (1987) notion that the manager must be aware of an option for it to be part of the discretionary set, by showing, that in fact managerial attention is a crucial building block in such a dynamic view. Third, we have used the dual nature of attention, that is, filter and capacity to establish a link between the dynamics of discretion and managerial attention, drawing the connection by emphasizing the manager's strategic issue array and his or her awareness of options. Fourth, we have emphasized that the degree of discretion is not given, but rather, that a manager may to a certain degree intentionally influence the degree by purposefully choosing the set of strategic issues and options to be included in the strategic issue array.

If one accepts these assumptions, then several implications emerge. At the most basic level, we have reasoned that although the context sets the basic constraints on the availability of discretion (Hambrick & Finkelstein, 1987), it is the manager's allocation of attention that is ultimately responsible for the actual degree of discretion. This view is consistent with claims that high-discretion managers in low-discretion contexts tend to create and select high-discretion activities (Finkelstein & Peteraf, 2007; Peteraf & Reed, 2007).

However, it is important to keep in mind that the allocation of scarce and limited attentional resources is driven not only by personal, but also by relational and situational characteristics. More specifically, a manager's degree of discretion is neither stable over time, nor merely the result of the respective manager's personality and learning strategy, but rather dynamic and also the result of his or her interaction with other managers. For example, in the case of the CEO, the characteristics of the TMT may substantially affect the scope and variety of issues and options perceived by the CEO and, as such, his or her degree of discretion. As TMT characteristics are subject to change over time, so is the CEO's degree of discretion.

In summary then, we have provided a complementary view of managerial discretion by focusing on the manager's personal, relational, and situational characteristics and, in particular, the manager's awareness of issues and options. As such, the arguments put forth in this paper offer an impetus for further advancing a dynamic view of discretion as they relate the aforementioned characteristics to the development of the degree of discretion over time. Clearly, more work on the dynamics of managerial discretion is needed. However, at the end a dynamic view of managerial discretion as called for by Hambrick and Finkelstein a quarter of a century ago may emerge.

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