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Attention Mosaics

Studies of Organizational Attention



ATTENTION MOSAICS

Studies of organizational attention

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Attentiemozaïeken
Onderzoeken naar organisationele attentie

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To my family

“Suppose a bricklayer is unable to work at an acceptable speed. There may be no lack of rationality in his behavior. The fact may be that his skills are not sufficiently developed to enable him to lay bricks rapidly. However, if attention were to be given to the skills themselves, if he were given instruction and training in proper methods, the impossible might readily become possible.” (H. Simon 1947)

Acknowledgements

(or attention credits)

I always had in mind that a research topic tells more about the researcher than his or her research interests. While reading tons of articles and books, collecting and analyzing data and writing the dissertation I didn't think about this. Now that my PhD is coming to an end and I have the time to think about attention in a less systematic way, I am trying to figure out why I chose to study and write about attention?!

Different from the abstract and academic narrative written in this book, the story behind my interest in attention is an anecdote. As such, it gives a good illustration and depicts well my suggestion that attention does matter and that it has a strong explanatory power. In the last five years I was bombarded with new and different stimuli: new country, new culture, new friends, different language, and different jargon, etc. All these novelties were happening in conjunction with a very clear goal to obtain my PhD. I was very lucky to have people that helped me either (un)focusing my attention or paying me (lots of) attention!

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Lu

Rotterdam, April 2010

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CHAPTER 1

MAY I HAVE YOUR ATTENTION, PLEASE? Setting the stage for research on organizational attention

1.1 Introduction

According to William James' (1890, p. 403) widely cited definition, attention "...is the taking possession of the mind, in clear vivid form of one out of what seem several simultaneously possible objects or trains of thought". For James (1890), attention implies some mechanism of focalization that leads individuals to withdraw from some things in order to deal with others effectively. Relatively more recently, Kahneman (1973, p. 2) contends that attention provides "...a label for some internal mechanisms that determine the significance of stimuli" (Kahneman 1973, p. 2). Though both definitions focus on attention at the individual level, the definitions share one crucial aspect with the definition of attention at the organizational level. According to scholars interested in organizational attention (Simon 1947, March and Simon 1958, Cyert and March 1963, Ocasio 1995, Ocasio 1997 and Jones and Baumgartner 2005), attention is both an output (Simon 1947) and a process (Cyert and March 1963 and Ocasio 1997). This duality explains, in part, why research on organizational attention has been more concerned with the *explanation* of organizational behavior than its *prediction* (Ocasio 1997).

At first glance, an attention-based perspective of organizational behavior might seem simple. Its main proposition suggests that "...individuals attend to some things, and thus do not attend to others" (Cyert and March 1963, p. 234). However, the process of paying attention is dependent on a variety of situational

aspects, which can make attention unstable and apparently erratic. According to Ocasio (1997, p. 188) organizational attention is “the socially structured pattern of attention by decision-makers within an organization”. Therefore, understanding organizational attention implies not only understanding the focus of the attention of decision-makers, but also the contextual and structural factors that influence the process underlying the focus.

As an output, attention is regarded as a critical organizational resource (Cyert and March 1963). As highlighted by Simon (1947, p. 226), “the limit is not information but our capacity to attend to it.” Therefore, attention is not only a limited resource, but a scarce one as well. This is particularly true in the contexts of information abundance (Simon 1947), multiple and diverse claims (Cyert and March 1963), and ambiguous situations (March and Olsen 1976). As a result, organizational attention is central to organizational survival. Organizations partially overcome the problem of attention scarcity through the division of labor, the establishment of rules and procedures as well as channels of communication (Ocasio 1997). These contextual structures distribute attention, and focus it on the multiple issues present in the environment faced by the organization (Ocasio 1995 and 1997). Thus, as a process, attention is comprised of elements and structural and relational mechanisms that distribute and focus the attention of decision-makers (Cyert and March 1963, Cohen, March and Olsen 1972 and Ocasio 1997). The cross-level nature of attention in addition to its dual character places attentional perspectives of organizational behavior in an advantageous position to explain phenomena in and around organizations.

1.2 The origins and further developments of theory about organizational attention

According to the behavioral theory of the firm (Simon 1947, Cyert and March 1963, March and Olsen 1976), attention is a scarce, yet vital, organizational resource. Therefore, the distribution of attention can be seen as the departure point in the process of understanding organizational behavior. As suggested by March and Olsen (1976), a primary tenet of building a theory that recognizes the limits and scarcity of time is that it deals with attention as contextual and subject to resource constraints.

Building upon Simon's (1947) influential work, Ocasio (1997) proposed the attention-based view of the firm (ABV). The ABV's (Ocasio 1997, p. 188) central argument "...is that to explain firm behavior is to explain how firms distribute and regulate the attention of their decision-makers". The seminal paper that presents the attention-based view (Ocasio 1997, p. 188), proposes a set of constructs and connecting mechanisms that "explicitly links individual information processing and behavior to the organizational structure through the concepts of procedural and communication channels and attention structures". Generally speaking, the ABV describes and explains how organizational responses are shaped by the manner in which organizations devote attention to their environments and how stimuli are distributed and channeled into decision-making processes (Ocasio 1995).

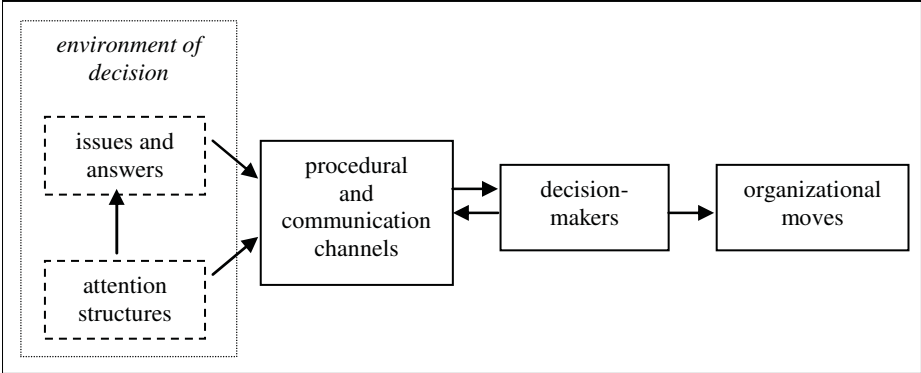
According to Ocasio (1997, p. 189) "the cognition and action of individuals are not predictable from the knowledge of individual characteristics but are derived from the specific organizational context and situations that individual decision-makers find themselves." Although the ABV assumes that it is the individual who ultimately pays attention, it proposes that a decision maker's focus of attention

(principle of focus of attention) is situated in and dependent upon the context (principle of situated attention) and the organizational structure (principle of structural distribution of attention). As a consequence, in this model of organizational attention little (if any) of the organizational attention patterns are explained by individuals' preferences.

1.3 Attention-Based View: an overview

The ABV is a theoretical framework elaborated by Ocasio (1997) that proposes an attentional process model to explain organizational behavior (see Figure 1.1 that depicts the core elements of the ABV). The model extends Simon's (1947) work by combining the cognitive and structural processes involved in the decision-making process. As a result, the ABV is both a process model and also a cross-level perspective of organizational behavior.

Figure 1.1: Model of situated attention and firm behavior (Ocasio 1997, p.192)



The ABV is considered to be cross-level because it assesses the influence of organizational structures on individual decision-making. An attention approach views organizational outcomes not as behavioral responses to objective stimuli,

but as organizational constructions structured by organizational attention (Ocasio 1995).

In addition to the principles of focus of attention, situated attention and structural distribution of attention, Ocasio (1997) describes a broad and abstract set of elements and mechanisms that delineate how attentional processing at individual, social cognitive and organizational levels interact to shape firm behavior.

1.3.1 Structural perspective of organizational attention

The two core constructs of the model of organizational attention, *attention structures* and *procedural and communication channels*, provide the theoretical foundation for the argument that social, economic and cultural structures determine the focus and distribution of attention at the organizational level. Although the identification of both constructs is helpful in terms of gaining a complete understanding of the attentional process, and of the mechanisms linking the various elements of the ABV, the use of both constructs makes it difficult to use the model to explain behavior of collectives other than the organization.

In fact, attention structures and procedural and communication channels are so intertwined that distinguishing one from the other does not appear to be meaningful. A close analysis of the research that uses the ABV to explain organizational behavior corroborates this assertion. This analysis shows that scholars rarely elaborate on the nuances of each element of the model, preferring to adopt a higher-level construct such as structures (Jacobides 2007), practices (Bouquet et al. 2009) or context (Hansen and Haas 2001). As pinpointed by Barnett (2008, p. 611), although Ocasio's (1997) categorization is useful, the conceptualization is confusing.

“The composite term procedural and communication channel is a relabeling of Allison’s (1971) more concise term, action channel (Ocasio 1997, p. 194). Furthermore, labeling concrete structures as channels and contextual influences as structures is counter to common parlance. One expects structures to be more, not less, concrete than channels. Adding to the confusion, both channels and structures are concepts within an overarching “structural” view of attention.”

From the standpoint of a structural perspective of attention process, the emphasis lies on how structures provide individuals with interests and identities that motivate action (Simon 1947). The rules of the game provide incentives and normative frames that shape environmental enactment and motivate action. Through their networks, individuals influence perceptions and advance their interests. Lastly, resources, along with rules and structural positions, configure the context in which the attention process takes place (Ocasio 1997).

Therefore, I agree with Barnett (2008) that a less confounded approach to analyzing attention structures and procedural and communication channels is to plainly identify the structural elements of an ABV as *concrete and contextual structures*. I also agree with the approach taken by Dutton et al. (2006) whose study shows how patterns of attention depend on the relationships between actions and attention over time. According to their empirical work on organizing compassion, there are contextual and emergent factors that influence attentional dynamics. They adopt the label “social architecture” to denote this set of factors. Accordingly, social architecture shapes attention and serves as a catalyst for (or hindrance to) action to extract, generate, and coordinate resources (Hansen and Haas 2001, Durand 2003, Yu et al. 2005, Jacobides 2007, Eggers and Kaplan 2009).

1.3.2 ABV structure – main elements and mechanisms

The fundamental components of the model proposed by Ocasio (1997) to explain organizational moves are: the environment of decision, the repertoire of issues and answers, the attention structures (composed by four attention regulators), the procedural and communication channels (see Figure 1.2 for a summary of these elements). The *environment of decision* encompasses both internal and external elements of the firm such as economic and financial markets, technology, institutional rules, etc. and provides the raw stimuli for the structuring of attention. It is noteworthy to add, at this point, that the ABV emphasizes “the enactment of the environment in the stimuli that is actually attended to” (Ocasio 1997, p. 193).

In addition to the environment of decision, Ocasio (1997) elaborates the model of situated attention around the concepts of issues and answers, attention structures, decision-makers and procedural and communication channels. Together, these elements comprise the structure of the attention process construct, and explain how “...distributed attention gets organized into collective patterns of action by values, routines, and networks that focus and spread attention, facilitating the coherence of attention-driven action” (Dutton et al. 2006, p. 85). Below, I will describe each of these elements individually, emphasizing their role in the process of attention.

Issues and answers represent a “...cultural and cognitive repertoire of schemas available to decision-makers in the firm to make sense of (issues) and to respond to (answers) to environmental stimuli” (Ocasio 1997, p. 194). They constitute cognitive categories and represent scripts for action. More importantly, issues and answers are cultural products embodied in artifacts such as physical space, documents, vocabulary, and narratives that affect their availability. *Procedural and communication channels* encompass “...formal and informal concrete

activities, interactions, and communications set up by the firm to induce organizational decision-makers to action on a selected set of issues” (Ocasio 1997, p. 194). Hence, they not only affect the availability of issues and answers, but also their salience.

Figure 1.2: Elements of the attentional process according to the ABV

Attentional process elements	Causal mechanisms	
	<i>Antecedent</i>	<i>Resultant</i>
Environment of decision	External and internal factors affect the environment of decision and provide stimuli for the attentional processing.	
Issues and answers	Issues and answers are embodied in cultural products and artifacts.	Cultural and institutional processes provide decision-makers with a repertoire of issues and answers.
Attention structures <ul style="list-style-type: none"> ▪ players; ▪ structural positions; ▪ rules of the game; ▪ resources. 	Attention structures are embedded in social, economic and institutional environment.	Attention structures, through its regulators, govern rank order and legitimization of the repertoire; attention structures provide decision-makers with interests and identities.
Procedural and communication channels	Attention structures create and distribute activities into channels.	Communication and procedural channels affect issues salience and availability; decision-making results from interactions of decision-makers in various channels.

Procedural and communication channels are created by *attention structures*, which also provide decision-makers with the interests and identities that guide their interpretation and action. Attention structures are social, economic and cultural structures that regulate the valuation and legitimization of issues and answers.

They are comprised of four regulators, namely, rules of the game, players, structural positions, and resources. Rules of the game “...constitute a set of assumptions, norms, values, and incentives – usually implicit – about how to interpret organizational reality, what constitutes appropriate behavior, and how to succeed” (Ocasio 1997, p. 196). Players, who can be either external or internal to the organization, affect attention through skills, beliefs and values. Players advance and structure their interests and identities through their connections and networks, thereby influencing perceptions. As such, they provide an entrepreneurial function in the allocation of attention, which is not always beneficial to the organization. Structural positions provide players with roles and social identification, and interact with the rules of the game to provide decision-makers with the interests, values and identities that regulate how they think and act. Finally, resources are assets (tangible and intangible) that make action possible. Like procedural and communication channels, resources are embodied in the structures and impact the availability of issues and answers.

From the standpoint of the ABV, *decision-makers* are specific social actors that actively participate in procedural and communication channels, whereas *players* are individuals from inside and outside the organization that affect the regulation of organizational attention. While decision-makers have discretionary roles due to their structural positions, players exert control over decision-makers due to their power (Ocasio 1997). Thus, whilst decision-makers have their attention regulated by their structural position and the rules of game they face, players can influence organizational attention through the beliefs, skills and values they bring to the business firm (March and Olsen 1976). Therefore, the model of situated attention proposes that attention structures ultimately provide decision-makers with interests and identities that are of significance and interest to the organization. It also suggests that decision-makers’ attention is situated in the firm’s procedural and communication channels, and that enactment of the environment is shaped by the

issues and answers available and by the interactions among participants in the specific channel.

1.3.3 Recent research

Organizational studies that emphasize the role of attention in organizational behavior depart from the idea that organizations, like individuals, have a limited capacity to attend to environmental stimuli. Thus, organizations are selective in what they attend to and what they ignore and are also selective in terms of their repertoire of responses. The bounded capacity of organizations to respond to stimuli is conditioned by individuals' limited cognitive ability and by the limited capability of organizations to distribute, coordinate and integrate the product of this cognitive ability.

Recent developments in management studies dealing with the concept of attention have seen efforts to combine organizational and individual characteristics in order to explain organizational outcomes (Corner, Kinicki and Keats 1994). This is a response to the claim that an exclusive focus on either analytical level necessarily limits the quality of the research (Yu, Engleman and Van de Ven 2005). Nevertheless, a significant amount of research on the effects of attention on organizational outcomes departs precisely from a cognitive perspective (e.g. Durand 2003, Levy 2005 and Cho and Hambrick 2006). In their study of the influence of board of directors in firms' strategies, Golden and Zajac (2001) show that board's attention to strategic issues is positively associated with strategic change. However, in spite of the clear relevance of their study, it is limited by being restricted to a single industry study. In another single-industry study, Cho and Hambrick (2006) test the influence of top management attention on strategic change. In a departure from Golden and Zajac's (2001) findings, their results indicate variance in attention allocation within industry, signaling that managerial cognition might not be homogenous and ingrained as is often suggested.

The effects of managerial attention on firm strategy have also been tested in a multi-industry setting (Kabanoff and Brown 2008). Kabanoff and Brown's (2008) study makes an additional contribution to the literature on attention by demonstrating the validity of analyzing the content of annual reports as a proxy for managerial attention. However, this was not the first study to use the content of annual reports to measure attention (see for example D'Aveni and MacMillan 1990, Levy 2005, Yadav, Prabhu and Chandy 2007). Yadav, Prabhu and Chandy (2007) tested the suggestion that letters to shareholders provide unparalleled access to CEOs' cognition in their study of the effects of executive attention on firm innovation. They provide a specific robustness check, which tests whether or not letters to shareholders do in fact reflect the topics occupying CEOs' attention. Yadav, Prabhu and Chandy (2007) compare the content of the boardroom agendas of two companies with their respective shareholders' letters and find that those letters reliably reflect the manner in which senior managers allocate their attention.

In their study of attentional patterns influence on post-merger integration processes, Yu et al. (2005) show that both cognition and structure influence organizational attention. Their results go further suggesting that mental models can be persistent and reinforced by organizational structure, which, in turn, can blind organizations to environmental opportunities. Dutton et al. (2006) suggest that organizational structures combined with individuals' cognition facilitate the emergence of the processes that coordinate key organizational resources such as attention. Their study also shows that individuals' attention to certain stimuli can be the most important trigger for various organizational processes, and that even those firms that have structural elements to facilitate these processes may fail to do so in the absence of those attention triggers. In sum, these studies indicate that structures and cognition interact to form the attention process (Ocasio 1997).

1.4 Relevance and Contributions

Ocasio's (1997) effort to expose the mechanisms that link structure and cognition and, hence, to extend Simon's (1947) work on organizational attention, has proven to be a timely contribution to the field of organizational and management studies (Gavetti, Levinthal and Ocasio 2007). According to the Web of Knowledge database, as of March 2010, there were 196 articles citing Ocasio (1997) and the Google Scholar search engine recorded almost 500 studies. These numbers certainly speak to the undeniable relevance of the ABV, and a closer look into this collection of both conceptual and empirical studies also indicates the versatility and fecundity of the ABV as it pertains to understanding organizational behavior.

The ABV (Ocasio 1997) has brought attention back to the forefront of organizational studies. Within this research stream, organizational attention is often viewed as a predictor of organizational outcomes. According to these studies, only those issues pertaining to the span of the attention of organizations are likely to be considered in decision-making processes. Additionally, these studies usually deal with specific contexts, focusing on research settings that are either country- or industry-specific. The contingent aspect of organizational attention justifies the delineation of the research design in this way. As was suggested by Ocasio (1997), firm attention is closely dependent upon the characteristics of the environment in which a decision is made and the situation in which individuals and collectives find themselves. The decision environment ultimately defines the issues and answers as well as the attention structures that focus and channel organizational attention.

In light of these recent developments, I contend that even if organizations are provided with structures designed to overcome constraints and limitations both at the individual and organizational levels, it is not possible to explain attention and

organizational outcomes if one does not account for decision-makers' cognition. The idea of accounting for both structural and cognitive aspects of distribution of attention is also relevant from the perspective of a practitioner. As was suggested by Birkinshaw, Bouquet and Ambos (2007) in their study of executive attention in global firms, managers from distant and small subsidiaries can use specific mechanisms to alter the structure of attention of multinational enterprises MNE. Together, these studies demonstrate that a better understanding of the relationships between managerial cognition, organizational structure and attention could help practitioners to design organizational structures that will produce the most efficient trade-offs on their interest (Barnett 2008). From a theoretical standpoint, the cross-level nature of the ABV makes it an advantageous framework to use to explain organizational responses.

1.5 About this dissertation

The remainder of this dissertation is devoted to explaining attentional processes and organizational attention and, finally, why attention matters. The main objective is to deepen the current understanding of organizational behavior by emphasizing the multilevel, cross-level, procedural and structural aspects of attention. In doing so, I believe that focusing on organizational attention not only provides an in-depth explanation of organizational behavior, but also contributes to the field of organizational studies by providing an extensive analysis of organizational attention.

1.5.1 Dissertation overview

This dissertation consists of three main independent studies reported in Chapters 2, 3 and 4. This section offers an overview of each study, presenting information on the nature of the studies, their focus and the methods that were employed. Figure

1.3 presents a summary of the studies of organizational attention reported in this dissertation.

Figure 1.3: Overview of the studies in this dissertation

	Chapter 2: <i>Attention span: expanding the attention-based view to team, organizational and social movements levels</i>	Chapter 3: <i>When a thousand words are (not) enough: an empirical study of the relationship between firm performance and attention to shareholders</i>	Chapter 4: <i>Sense and sensibility: testing the effects of attention structures and organizational attention on financial performance</i>
Theoretical approach	Functional analysis of organizational attention	Theoretical model combining ABV and resource dependence theory	Theoretical model to test the ABV focusing on the roles of attention structures and organizational attention
Organizational phenomena	Attentional processes in and across teams, organizations and social movements	Attention to shareholders	Organizational responses to social issues
Level of analysis	Multilevel	Business firm	Organization
Methodology	Conceptual	Multi-method: content analysis and OLS regression	Structural Equation Modeling

The following chapter, entitled “*Attention span: expanding the attention-based view to team, organizational and social movements levels*”, discusses homology and functional equivalence of the elements and mechanisms of the ABV at the levels of team, organization and social movements. Although manifested

differently, I argue that attentional processes are functionally equivalent at the team, organization and social movements levels. Additionally, I discuss how attentional processes undergo sedimentation and percolate across levels integrating micro and macro aspects of attention. As such, in Chapter 2, I present a multilevel and cross-level perspective of organizational attention.

I close this chapter by discussing the canonical elements of attention. Following the discussion of functional equivalence of the constructs of attention process at different levels, I argue that using a multilevel perspective of attention to explain organizational behavior advances current knowledge by tackling some of the limitations seen in current studies of attention. In the discussion, I show how context, institutions, structures, processes and agency are central to the theoretical model of attention. Moreover, I contend that these elements, in conjunction with the substantive / symbolic character of attention, matter in explaining organizational behavior.

In the following chapters of this dissertation, I report the findings of two empirical studies. In Chapter 3, “*When a thousand words are (not) enough: an empirical study of the relationship between firm performance and attention to shareholders*”, I propose a concurrent test of the ABV and resource dependence theory (RDT). I propose a conceptual model that combines the ABV and RDT to explain organizational attention to shareholders. On one hand, although RDT offers a seemingly uncomplicated explanation for organizational attention, the symbolic / substantive character of attention challenges a resource dependence perspective. On the other hand, the ABV focuses on the model of situated attention and, thus, does not emphasize how the external environment impinges upon organizational attention.

In developing the hypotheses, I propose a set of firm-level and country-level antecedents for attention to shareholders that are tested in a unique dataset, comprised of content analyzed data on shareholder attention for 313 firms from 24 different countries. Due to the nature of the data source, i.e. letters to shareholders, I also provide some additional analysis testing whether or not the models also explain attention to stakeholders. Furthermore, I also test whether or not letters to shareholders reflect impression management efforts rather than organizational attention.

The findings suggest that the attention-based view and resource dependence theory are complementary. Whereas RDT provides the ABV with an explicit perspective on the effects of the environment on attention, the ABV provides RDT with a more comprehensive and less deterministic view of the linkages between internal and external environment on organizational responses. The results also suggest that annual reports and other public accounts of organizations are relevant channels of communication that accurately reflect concrete and contextual aspects of organizations' attention processes.

In Chapter 4, "*Sense and sensibility: testing the effects of attention structures and organizational attention on financial performance*", I test the model of situated attention and firm behavior by examining the effects of attention structures and allocation of attention on organizational outcomes. In this chapter, I hypothesize a positive relationship between attention structures and allocation of organizational attention that, in turn, has an effect on financial performance. To test the hypotheses, I compiled a dataset with indicators of social responsibility exhibited by 338 Brazilian organizations between 2001 and 2007. I also provide some additional analysis testing two alternative explanations for the findings, namely a munificence argument and an instrumental stakeholder management explanation.

The results reveal that organizational attention to social issues fully mediates the relationship between attention structures and financial performance.

1.5.2 Contributions to the ABV

The three independent studies presented here test, deepen and expand attentional perspectives on organizational behavior. Moreover, these studies aim to renew scholarly interest in organizational attention. While highlighting some of the strengths and limitations of current theories of attention, the following studies expose a prolific research stream. As was suggested earlier, attentional perspectives of organizational behavior emphasize explanation rather than prediction. Therefore, the major contribution of the three studies reported in this dissertation to the field of organizational studies, is to emphasize the explanatory power of attention in addressing organizational phenomena.

The multilevel perspective of attentional process presented in Chapter 2 has the potential to explain a diverse set of organizational outcomes, not only at the organizational level, but also at the levels of team and social movements. Additionally, the proposed multilevel perspective spans different levels of analysis and exposes some of the mechanisms that explain how attention influences and is influenced by collectives. Moreover, the percolation and sedimentation movements are cross-level attentional processes that bridge micro and macro aspects of attention to provide an explanation for collective behavior. I argue that a multilevel approach to attention advances the field of organizational studies because it puts forward a comprehensive theoretical framework to explain how social, economic, institutional and cultural aspects and attentional processes interact and influence one another. Additionally, this chapter puts forward the canonical elements of attention, which illuminate the advantages of an attentional perspective of organizational behavior in and around organizations.

In Chapter 3, I combined the ABV and resource dependence theory to explain attention to shareholders. The theoretical model and hypothesis testing support the complementary nature of these two theoretical perspectives. The ABV enriches RDT by offering a more comprehensive view of the relationship between environment and organizational outcomes, including both the external and the internal constraints on organization. RDT, in turn, complements the ABV, making more explicit the effects of the environment on attention structures and, ultimately, on organizational behavior. Therefore, I contribute to the development of the ABV by providing an explanation of how environmental mechanisms affect attention, a relationship that is not explicitly addressed by Ocasio's (1997) model.

Finally, the study reported upon in Chapter 4 provides additional contributions. It contributes to the ABV by explicitly testing the role of attention structures on allocation of attention. Additionally, it contributes to studies of organizational attention by adopting a non-perceptual measure of attention and by deliberately testing its effects on financial performance. Moreover, this study broadens the ABV research realm by using organizational responses to social issues in a research setting outside the US domain.

Finally, in Chapter 5, I present a concluding overview of these studies and close this dissertation with a brief discussion of the contributions I make to research on organizational attention and also to the field of organizational studies as a whole. Additionally, I discuss the main difficulties and limitations associated with organizational attention research.

1.6 Why attention mosaics?

As previously described, early work on organizational attention (Simon 1947, March and Simon 1958 and Cyert and March 1963) emphasizes the way in which organizational structures and individual cognition can be combined to explain organizational behavior. Despite the clear structural focus given to organizational attention, scholars from the field recognize the effects of networks and interactions on organizations. From an attentional perspective, “decisions arise from multiple interactions within a relatively elaborate structure” (Cyert and March 1963, p. 234). More recent research on organizational attention and organizational behavior indicates that both structural and cognitive factors explain organizational outcomes (Bansal 2003, Bouquet and Birkinshaw 2008, and Rerup 2009). This research also suggests that the multiple identities of and the interactions among organizational members are a significant part of the explanation of organizational behavior (Dutton et al. 2006). These interactions take place not only in but also around organizations (Cyert and March 1963). In fact, they affect and are affected by attention structures and go beyond organizational boundaries.

According to Morgeson and Hoffman (1999, p. 252), in an organization, structures emerge when interactions take place. Accordingly, the structure of an organization, as of any other collective, can be viewed as a series of *ongoings* and events between and around its members. “Therefore, collectives are open interaction systems, where actions and reactions determine the structure of the system. [...] These collectives then interact, composing yet larger collectives.” I see this composite of interactions as an essential part of studies of organizational attention.

Collective constructs, such as organizational attention are dynamic in nature. The ABV explicitly identifies the systems of *ongoings* at the organizational level. It

also provides a description of how these interactions lend structure to the collective phenomenon that is attention. Cyert and March (1963) evoke the image of a mosaic to depict the dynamic association that exists between structure and interactions. According to their argument, the image of a mosaic depicts the functioning of attention process, as it is emergent and dynamic, yet structured.

CHAPTER 2

ATTENTION SPAN: expanding the attention-based view to team, organizational and social movement levels

The attention-based view of the firm is a versatile theoretical perspective of organizational behavior. Despite its complexity, it comprises a set of principles, elements and mechanisms capable of explaining organizational behavior phenomena not only at the business firm level, as originally proposed, but also at other levels. We argue that attentional processes have functional equivalence at the team, organizational and social movement levels and propose a multilevel theory of attention. By describing the elements of attentional processes within and across different levels of analysis we contribute to theories of attention, to the field of organizational behavior and also to the literature on social movements. A multilevel theory of attention enlarges the scope of research on organizational attention and provides a fuller understanding of the relationship between attention and organizational behavior.

2.1 Introduction

Attention is an inherently multilevel phenomenon (Kahneman 1973, Ocasio 1997, and Jones and Baumgartner 2005). As argued by Ocasio (1997), attention is a two-level phenomenon that involves a decision-maker on one level (i.e. the individual) and the situation in which the decision-maker finds himself on another level (i.e. the business firm). Therefore, the approach adopted by Ocasio (1997) to expose the elements and mechanisms underlying the attentional process restricts the ABV to explaining organizational behavior exclusively at the level of the business firm. On the one hand, the constructs and definitions of the ABV are coherent and

consistent with the author's aim to design a process model of organizational attention to explain firm behavior. On the other hand, the approach is disadvantageous in two ways. First, it confines the model and its core constructs to elements pertaining exclusively to the organization. Second, it neglects cross-level interactive effects across other levels of analysis. Limiting the ABV to analysis at the firm level does not do justice to the explanatory power of the model of situated attention. A closer examination of the constructs adopted by Ocasio (1997) indicates that the ABV approach can also explain organizational behavior at lower and higher levels of analysis. In this chapter, we argue that the ABV can be generalizable (Chen, Bliese and Mathieu 2005) to explain organizational behavior at team, organization and social movement levels.

From the standpoint of the ABV, organizations are social systems of collective action that structure and regulate individuals' cognition and action through rules, resources and social relations (Ocasio 2001). We contend here that the ABV contains the elements necessary to explain organizational phenomena at the level of the organization *as well as* at the team and social movement levels. The construct proposed by Ocasio (1997) is higher-level or aggregate in nature as it "...is construed as some form of combination of the lower level units" (Chan 1998, p. 235). This helps us to establish the functional relationship between attentional processes in other collectives such as teams and social movements. Additionally, we argue that acknowledging both the multilevel *and* the cross-level character of the attentional process contributes to the field of organizational studies by emphasizing its dynamic nature. As we describe further on in this paper, addressing concepts such as cross-level attentional processes, sedimentation and percolation serves to advance the field of organizational studies in which researchers are currently trying to cope with the "increasingly permeable and blurry boundaries" among collectives (Davis Morrill Rao Soule 2008, p. 393, and Zald 2008).

Following Rousseau (1985) and Johns (1999) we propose a multilevel theory of attentional process, which is generalizable to other levels of analysis and that is functionally equivalent (Morgeson and Hofmann 1999) at team, organization and social movement levels. Functional equivalence exists when two (or more) constructs lead to the same outcome, regardless of differences in structure and manifestation (Morgeson and Hofmann 1999). According to the specialized literature, a multilevel approach based on functional equivalence of constructs contributes to parsimony and increases the breadth of the theory (Chan 1998, and Chen, Bliese and Mathieu 2005).

We do not intend to say that an attentional process approach is capable of explaining every phenomenon in, at, and around organizations. What we propose here is simply that an attention-based view is capable of explaining various organizational phenomena at various levels of analysis in addition to the level of analysis currently used (i.e. the business firm level). The theoretical approach we put forward here essentially addresses the following question: *to what extent is the ABV generalizable to social collectives at lower or higher levels of analysis than the business firm?*

At the level of the team, the functional analysis of attentional process has been facilitated by previous research that directly addresses the role of attention in teams (Karau and Kelly 1992, and 2003, Hinsz, Tindale and Vollrath 1997, Kelly and Karau 1999, Kerr and Tindale 2004, and Kelly and Loving 2004). Within the ABV framework, some studies have also addressed the relationship between attention at the team level and organizational behavior (Levy 2005, Cho and Hambrick 2006, Nadkarni and Barr 2008, Vissa and Chacar 2009, and Beck and Plowman 2009). By integrating these research streams, we not only expand the span of the ABV to the level of the team. We also provide a distinctive theoretical

framework of attentional processes at the team level that is more explicit about the elements and mechanisms influencing attention in and around teams.

In addition to the general increase in the use of literature on social movements in organizational research (Campbell 2005, and Davis, Morrill, Rao and Soule 2008), there are two main reasons for our choice to focus on social movements (as opposed to other inter-organizational levels of analysis) to theorize about attentional processes at higher-levels of analysis. First, the social movements literature adopts a certain set of elements that are homologous to the elements of the attentional process model (Campbell 2005). According to social movements theory, both agency and structure determine movements' success and characteristics of the issues or causes alone cannot explain responses from targeted organizations (King 2008b). Additionally, resource mobilization, framing strategies and political opportunity structures, which are constructs central to this literature, are consistent with some of the elements proposed by the ABV. Second, we believe that an attentional perspective can be a useful framework for understanding the processes and efficacy of social movements (King, Bentele and Soule 2007, Kaplan 2008b, and Sine and Lee 2009) an area as yet underdeveloped by organizational scholars. Therefore, our study contributes to this literature by responding to recent calls for more systematic theory building on the dynamics and outcomes of social movements (Davis, Morrill, Rao and Soule 2008, and Zald 2008).

Our study offers several theoretical contributions. First, we contribute to the field of organizational studies by proposing a fertile, multilevel perspective of attentional process that is capable of explaining a diverse set of organizational outcomes at the levels of the team, organization and social movements. In doing so, we tackle some of the limitations of studies of attention such as the focus on a two-level, structure-driven process (Gavetti, Levinthal and Ocasio 2007). Whereas

the ABV refers in large part to the organizational-level effects on individual attention, our multilevel perspective highlights the embedded and nested character of the attention process. Our work integrates contemporary knowledge about embeddedness and the impact of larger social contextual effects. It also incorporates the multiplicity of lower and higher effects on the situational context of decision-makers. Moreover, our detailed description of the attention process broadens the structural perspective exposing some formal and informal mechanisms in and across levels of analysis that ultimately influence organizational behavior.

Second, the framework we put forward spans different levels of organizational behavior, offering a broader and deeper, yet complex (Klein, Tosi and Cannella 1999), understanding of how attention influences and is influenced by collectives. Instead of limiting the ABV to business firm phenomena, we argue that the multilevel perspective of attentional processes enlarges the scope of research on attention and collective behavior. Third, we describe the cross-level linkages of attention. We contend that the percolation and sedimentation processes integrate micro and macro aspects of the attentional process in order to explain organizational behavior. In the percolation process, attention seeps into higher levels spreading throughout teams, organizations and social movements and, in the sedimentation process, attention drops from higher to lower levels, leading to the sedimentation of attentional elements in organizations and teams. Thus, we suggest that our multilevel perspective of attention advances the field of organizational studies by offering a comprehensive framework that helps us to understand how social, economic, institutional and cultural aspects and attentional processes interact and influence each other (Thornton 2001). Finally, as was highlighted above, the multilevel theory of attention also contributes to the literature on team and social movements. It offers a distinctive and dynamic

framework for understanding team and social movements processes and provides an explanation of organizational behavior at these levels of analysis.

To support our argument for the necessity of a multilevel theory, we briefly present an overview of current, but sparse research on the ABV at the levels of the team and social movements. Next, we address the core assumptions of the attentional process based on the model of situated attention and firm behavior originally proposed by Ocasio (1997). Following that, we discuss our multilevel perspective on attention. Although attentional processes manifest themselves differently at different levels of analysis, we argue that they have the same function at team, organizational and social movements levels. Accordingly, we claim that to explain collective behavior, one needs to explain how attention is situated and distributed in the collective, whether that collective is a team, an organization, or a social movement. To build our multilevel perspective of attention, we first discuss the function of the construct and then expose its structure. Later, we discuss the cross-level mechanisms that affect attentional process at the levels of the team, organizations and social movements. We conclude this chapter with a concise explanation of the canonical elements of the multilevel perspective of attention.

2.2. ABV research at team and social movements levels

Despite the prevalent use of the ABV to explain organizational behavior at the organizational level, we have identified a few recent studies that either refer to or fully adopt the model of situated attention in an analysis of organizational behavior at both team and social movements levels.

2.2.1 ABV research at team level

Levy's (2005) empirical results indicate that attention patterns at the top management team level influence the international strategy of business firms. Cho and Hambrick (2006) use the ABV to explain how environmental changes affect top management team composition, which, in turn, affects organizational attention. In these two studies, the authors identify attention orientation as a property of the top management team. Nadkarni and Barr (2008) also identify the focus of attention as a team property, whereas Beck and Plowman (2009) emphasize the relevance of middle managers' focus of attention on organizational interpretation. Vissa and Chacar (2009, p. 1182) point out that "decision-making within the entrepreneurial team is consistent with the attention-based view of the firm" and show the complementarities of various aspects of the attentional process in their effort to explain entrepreneurial teams performance. Finally, Tuggle, Schnatterly and Johnson (2010) study attention orientation as a property of boards of directors.

In each of these studies, the authors highlight the effects of context on attention. However, with the exception of Tuggle et al. (2010), none of these studies present an analysis of the effects of concrete and contextual structures on attention at the level of the team. Moreover, in spite of Ocasio's (1997) remark that demographic characteristics are less important than the interactions and communication between team members, these studies focus on demographic characteristics to predict attention. Considering the cross-level nature of the ABV and its emphasis on the situated character of organizational attention, contextual effects (Johns 2006 and Griffin 2007) are an integral part of research on attention. Hence, studies that do not explicitly address cross-level effects on attentional process at team level are inherently limited.

2.2.2 ABV research and social movements

At the social movements level of analysis, scholarly adoption of an attention perspective is even more rare. Kaplan (2008b) combines social movements literature and the ABV to explain strategy making. Sine and Lee (2009) emphasize the role of attention in explaining the emergence of new markets in the context of social movements. It is also worth mentioning the research of King, Bentele and Soule (2007), which aims to explain the effects of social movement tactics on Congressional attention. In their research, they use the literature on social movements to explain fluctuation in attention to rights issues in the United States Congress. Though their argumentation does not focus on attention, it is of particular interest here due to the explicit link the authors draw between social movements and attention. This and other recent research on social movements (King 2008b, Briscoe and Safford 2008, and Weber, Rao and Thomas 2009) indicate some degree of structural and functional convergence with the literature on organizational attention.

The common ground of research on organizational attention is that it is crucial to understand the process of attention at the organizational level in order to explain organizational behavior in light of the various structural contingencies that have an impact on organizational outcomes. Therefore, the explanatory power of the ABV lies in the function of the construct proposed by Ocasio (1997). In particular, the theoretical role of the model of situated attention is to provide an inclusive conceptual framework of the elements and mechanisms that configure the attention process that ultimately determine how organizations move. We take this claim further by contending that to understand organizational behavior, it is crucial to have a full understanding of the attentional processes in and around organizations. Moreover, we argue that the function of the model of situated attention, which is primarily based on the role of contextual and concrete structures, is equivalent across team, organization and social movement levels.

2.3 Attentional process: assumptions of the multilevel perspective

This study is based upon a set of five assumptions that support the multilevel perspective of attentional processes. Namely, the attentional process is a *primer for organizing, contested, structured, instrumental and situated*.

First, attention is a *primer for organizing* (Ocasio and Joseph 2008, and Rerup 2009). According to Weick (1979, p. 3), “to organize is to assemble ongoing interdependent actions into sensible sequences that generate sensible outcomes”. Teams, organizations and social movements are collectives comprised of a series of events and ongoings that give rise to the emergence of collective constructs (Morgeson and Hofmann 1999). These *interacts* are organized by contextual and concrete structures that narrow down the number of possible actions (Morgeson and Hofmann 1999). We borrow the term *interacts* from the work of Weick (1979, p. 89) because it captures an important aspect of attention, which is interdependence. In theories of attention, interdependence refers to the idea that one’s attention is a function of others’ attention (March and Olsen 1976). Thus, *interacts*, which are a product of the idea that “the behaviors of one person are contingent on the behaviors of another person(s)” suits our objective well in this instance.

Moreover, Weick’s (1979) definition of behavior in terms of process of attention provides a distinctive and influential perspective. While he concentrates on the cognitive and social psychological processes that lead organizational members to notice and interpret their environment and act upon it, the perspective proposed by Ocasio (1997) emphasizes the structural effects of the situation on organizational attention. The structural character of the attention process, together with its focusing and selection mechanisms, provides the primer for organizing collectives

(Morgeson and Hofmann 1999). Organizing is dependent upon the intertwined linkages between actions and structures over time, and the model of situated attention exposes how distribution of attention works to organize a pattern of action that is a product of the interplay between issues and answers, attention structures, and procedural and communication channels (Dutton et al. 2006, and Ocasio and Joseph 2008).

A second assumption reveals the *contested* nature of the attention process. Accordingly, *interacts* are, among other things, characterized by a diverse set of conflicting interests and divergent demands. Additionally, attentional processes are embedded in social, cultural and economic environments in which there are a broad variety of issues competing for attention (Ocasio 1997, Ocasio 2001, Hoffman and Ocasio 2001, Hansen and Haas 2001, King, Bentele and Soule 2007, Bouquet and Birkinshaw 2008, and Bouquet et al. 2009). In this market for attention, what matters most is not the objective characteristics of the issues, but the manner in which players and decision-makers participating in the process of attention enact the issues vying for attention (Hoffman and Ocasio 2001, and King, Soule and Bentele 2007). Moreover, the number of issues on the demand side tends to be infinite, whereas the supply of attention is both limited and scarce (Simon 1947). This imbalance between demand for and supply of attention has some important consequences for collectives. Teams, organizations and social movements are collectives that can be viewed as loose structures of conflicting demands and interests competing for attention (Morgeson and Hofmann 1999). As suggested by Narayanan and Fahey (1982), these conflicts are never completely resolved, yet there is a prevailing need to balance attention (Rerup 2009).

Our third assumption suggests that conflict resolution is both based and dependent upon the *structured* nature of attention. Attentional processes consist of structural mechanisms of integration and selection that ensure some degree of coherence of

focus of attention among members of the collective (Karau and Kelly 1992, and 2003, and King 2008a). Attention structures concurrently provide members with the focus and intermediary objectives that motivate action (Simon 1947) and also prevent attention from being diverted to unimportant or marginal issues (Cyert and March 1963). These structures are essential to the attentional process. They constitute elements that not only guarantee that the attention of the collective is balanced, but also guarantee coherence of attention focus among collective members (Hinsz, Tindale and Vollrath 1997, and Rerup 2009).

Another relevant assumption of the process of attention is related to the *instrumental* character of attention: one pays attention to get it back; one calls attention in order to be attended to. Hence, the mechanisms underlying attentional processes at different levels are motivated and intentional. Attention structures and other elements of the process align individual and social cognitions and provide incentives for attention and action (Kaplan and Henderson 2005, Kaplan 2008a). As such, elements of the attentional processes are manifestations of truces that are negotiated among the members of the collective (Nelson and Winter 1982). Attention structures and practices are dynamic capabilities that lead to value creation (Bouquet et al. 2009, and Rerup 2009). These routines, which put cognition, capabilities and incentives together (Kaplan 2008a), and match prior experience, beliefs and values (Starbuck 1983) can be found at team, organizational and social movement levels because, at all these levels, they simultaneously facilitate interaction and create attention coherence among members and across levels.

Lastly, our fifth assumption suggests that attentional processes are *situated* (Hinsz, Tindale and Vollrath 1997, Ocasio 1997, and King, Bentele and Soule 2007). Although it is the individual who ultimately pays attention to issues and answers, the focus of attention is dependent upon and a reflection of the context in which

the individual finds him or herself (Ocasio 1997). Consequently, from an attentional perspective, the individual cognitive aspect of attention is attenuated and more emphasis is given to the contextual and contingent aspects of attention (Gardner, Dunham, Cummings and Pierce 1989, Hinsz, Tindale and Vollrath 1997, and Ocasio 2001). Players, resources, time and space are the dimensions of the context (Johns 2006 and Griffin 2007) in which the attentional process takes place. The resultant outcome is determined by the interactions between participants of the collective and also by the interplay between them as well as by the physical environment (Ocasio 1997). Thus, the attentional process "...is not property of autonomous individuals but results from prevailing characteristics of the situation." (Ocasio 2001, p. 51).

2.4 Attentional process: a multilevel perspective

The cross-level nature of attention implies that a relationship exists between the construct at one level, and another construct at a different level (Rousseau 1985). As emphasized by Ocasio (1997), although it is the individual who ultimately pays attention, the attentional process is situated and affected by contextual aspects of the environment. Hence, attention is, in fact, embedded in a higher-level situation that affects, shapes and transforms the process (Johns 2006). As previously discussed, the vast majority of research on attention presents analysis conducted at the organizational level. Therefore, little is known about the cross-level effects of attention and how an attentional process at one level influences attention at another level or even how elements at different levels interact. This is partially justified by the original aim of the ABV and how it is presented. However, this limits the potential of the model of situated attention to explain organizational behavior at other levels of analysis.

We propose a multilevel perspective of attention (Rousseau 1985, Chan 1998, Morgeson and Hofmann 1999, and Chen, Bliese and Mathieu 2005) that improves our understanding of “how phenomena at one level of analysis are linked to those at another and, in so doing, provide a more rich and complete perspective of a given phenomenon” (Gupta, Tesluk and Taylor 2007, p. 888). In order to achieve our objective, we suggest that attentional process is isomorphic at the levels of the team, organization and social movement. According to literature on multilevel theory, “isomorphic constructs that span levels of analysis have a similar function or causal output but differ in their structure (Klein, Tosi and Canella 1999, p. 246). Scholars also suggest that isomorphic or functionally equivalent constructs exist when the functional relationships underlying the variables lead to the same output (Rousseau 1985, Chan 1998, and Morgeson and Hofmann 1999).

In spite of some differences in its structure across levels, the construct of attentional process maintains its function at the levels of the team, organization and social movements. Centering on the function of a construct generates a ‘level-free metric’ that extends to various levels of analysis. Provided that outputs of the construct are comparable across levels, “one can justifiably speak of collectives ‘thinking, ‘learning’, and ‘behaving’” (Morgeson and Hofmann 1999, p. 255). Therefore, by focusing on the function of the construct of attentional process, we extend the original formulation of the ABV and propose a multilevel theory that spans across the levels of teams, organizations and social movements.

2.4.1 Attentional process function – explaining collectives’ behavior

According to the ABV, attentional processes encompass the firms’ social and economic structures that create, channel and distribute the attention of decision-makers. Organizational behavior, in turn, results from the complex interaction of the various discrete and attentional processes situated in the organization. The effect of an attentional process is an *organizational move*, which is a “...myriad of

actions undertaken by the firm and its decision-makers in response to or in anticipation of changes in its external and internal environment” (Ocasio 1997, p. 201). It is important to mention that from an ABV standpoint, an organizational move may or may not be successful. For instance, if one is adopting the ABV to explain strategic planning, the organizational move is the actual strategy plan resultant from the attentional process of strategizing (Ocasio and Joseph 2008); whether or not the plan will be implemented is a different question (Barnett 2008). The ABV has been used to explain strategic moves as diverse as internationalization (Levy 2005, and Bouquet, Morrison and Birkinshaw 2009), innovation (Yadav, Prabhu and Chandy 2007, and Chen and Miller 2007) and mergers (Yu, Engleman and Van de Ven 2005).

We contend that attentional processes occur in collectives such as teams, organizations and social movements. Collectives’ social and economic structures create, influence and affect members’ attention. Similar to organizational behavior at the level of the organization, attention structures, in combination with the *interacts* of the collective members, expose the elements of the attentional process that convert environmental stimuli into a collective move in teams and social movements as well. In a nutshell, attention structures combine the elements that ultimately explain organizational behavior.

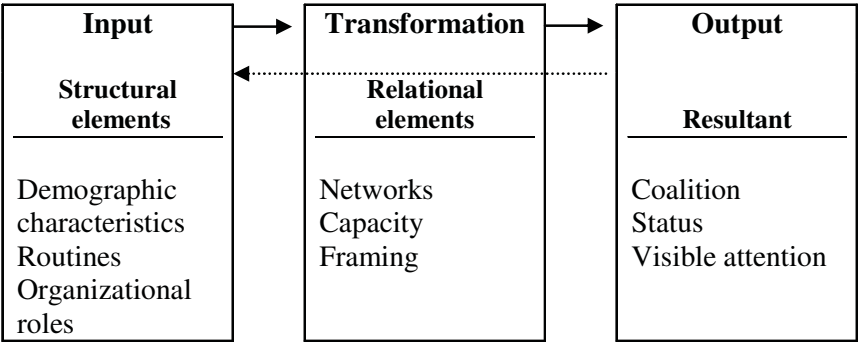
Proposition 1: Attentional processes occur at the team, organizational, and social movements levels of analysis in a functionally similar form.

2.4.2 Attentional process structure - elements of the multilevel approach to attentional process

In order to describe the attentional process structure, we divided its compositional elements according to their role within the process that contributes to the conversion of the raw stimuli into a collective move (see Figure 1.2 on page 8 for

an overview of the compositional elements). In Figure 2.1, we list each constituent element according to its role in the process, either as an input, transformation element, or output. Kahneman (1973) suggests that attention, as in any process model, has three main blocks of elements: input, transformation and output. The model of situated attention proposed by Ocasio (1997) can be analyzed and divided in the same manner. Accordingly, the first block of elements, labeled as input, is comprised of the repertoire of issues and answers available in the environment of decision and also the elements that regulate the focus of attention and determine the interests that motivate action. The second block, labeled as transformation, encompasses the set of elements that shape the focus of attention and provide the incentives and resources necessary for action. Finally, in the output block, we list some of the possible outcomes of attentional processes. These process blocks indicate the fluid, dynamic and emergent nature of attention (Kahneman 1973, Narayanan and Fahey 1983, and Ocasio 1997).

Figure 2.1: Attentional process elements according to their role



Inputs of the multilevel attentional process

From a structural perspective of attentional processes, the emphasis lies on how contextual and concrete structures provide individuals with interests and identities that motivate action (Simon 1947). Structural elements of attention are embedded

in and influenced by social, cultural and institutional environments. The attention structures are primarily constituted by members of the collective, their structural positions within collectives and also by the rules and resources available to the collective (Ocasio 1997). Together, these dimensions create the incentives and the normative frames that shape environmental enactment and motivate action (Ocasio 1995).

Demography The influence of individual members on attention has been explored by researchers interested in the effects of demographic characteristics on the focus of attention. When studying the effects of top management team attention on global strategies of multinationals, Levy (2005) includes information about tenure and age of team members to control for demographic effects on attention. Cho and Hambrick (2006) study shows how the effects of industry tenure, experience, and background of top management team members impact attention orientation. Focusing on boards of directors, Tuggle, Schnatterly and Johnson (2010) also find that tenure and background affect attention to entrepreneurial issues. Marginson and MacAulay (2008) include controls for age, gender, education and tenure in their study testing economic and organizational dimensions on short-termism, which is the focus of managerial attention on short-term aspects of organizational performance. In her research on the determinants of organizational change, Kaplan (2008a) explored the role of CEO attention on firms' responses to technological changes. She adopts a context-specific approach to CEO attention, yet she includes some CEO demographic characteristics to provide a proxy measure for the effects of cognitions on situated attention.

In a collective, be it a team (Hinsz, Tindale and Vollrath 1997), an organization, or a social movement, representatives of different constituencies often have distinct objectives. Consequently, collective members may view information differently based on their pre-existing objectives. As is often suggested, demographic

characteristics function as proxy measures for the expertise and knowledge of collective members (Karau and Kelly 2003). Alone, demographic characteristics are not capable of explaining the outputs of attentional processes because they do not capture the situated and context-dependent aspects of attention (Kaplan 2008a). However, as previous studies have shown, they can constitute important inputs for attentional processes. The final effect of demographic characteristics is, as is the case with other elements of attentional processes, contingent upon other compositional elements of the model of situated attention (Hinsz, Tindale and Vollrath 1997, Cohen and Bailey 1997, Cho and Hambrick 2006, and Weber, Rao and Thomas, 2009). On one hand, demographic homogeneity has been identified as an important moderator for pluralistic ignorance in corporate boards because it increases shared attention focus. On the other hand, heterogeneity has been associated with internationalization (Levy 2005) and entrepreneurial orientation (Cho and Hambrick 2006).

Routines One of the elements of attention structures that can attenuate the effects of demographic characteristics on attention are the rules of game (Ocasio 2001), the set of norms, values and incentives that guide and constrain members of the collective (Ocasio 1997). Team processes, in general, are affected by instructions, procedural factors, roles and norms in addition to members' perspectives (Hinsz, Tindale and Vollrath 1997). Scholars suggest that attentional processes at the team level demand an inclusive understanding of the effects of group structure, which includes norms, team composition, role relationships, communication hierarchy and leadership style. Accordingly, "these structures could influence both what general cues [...] the group attends to during its interaction and what pieces of information [...] the group notices and discuss" (Karau and Kelly 2003, p. 198).

To be more precise regarding their role on the attentional process, we identify these formal and informal principles as routines (Corner, Kinicki and Keats 1994).

“Action is driven by routines. Individuals attend to decisions when, and because, that is what they are expected to do” (March and Olsen 1976, p. 49). These routines contain some criteria for selection and they serve to induce collective members to attend to certain issues, while ignoring others (Simons 1991). They focus attention by matching prior experience, values and beliefs (Starbuck 1983). Additionally, routines can constrain or enable noticing and attending (Dutton et al. 2006). Finally, routines serve to stabilize expectations, perceptions of the environment, the range of alternatives considered, and decision rules and premises (Gavetti, Levinthal and Ocasio 2007).

Information extracted from recruitment policies, mentoring programs, and other routines transmit the rules that orient and focus attention (Marginson and McAulay 2008). Additionally, routines provide information about the incentive systems through which interpretations are made (Kaplan and Henderson 2005). Routinization in teams, including planned staff meeting, agendas and prescribed practices increase the salience of situational cues for expected and planned responses (Hinsz, Tindale and Vollrath 1997, and Drach-Zahavy and Freund 2007).

In an ethnographic study on compassion, Dutton et al. (2006) identify a set of routines, such as customer and community services or harm notification rules that enable collective attention to human pain, which is a fundamental part of compassion organizing, as they theorize. Additionally, routines facilitate coherence of attention focus among team members and enhance decision-making effectiveness, as is shown by the simulation studies presented by Jett and George (2005). Routines can also be detrimental, however, as they have the capacity to limit attention to a narrow set of alternatives and make it more difficult to take notice of weak cues (Rerup 2009).

Organizational roles Another relevant input of the attention process is the organizational roles of members of the collective. As highlighted by Ocasio (1997), while routines play a central role on organizational attention, the availability of issues and allocation of attention is a joint product of structural elements that include the effects of structural positions. The role and the position occupied by the members of the collective affect attention because structural positions "... [allow] actors to focus their attention on narrower patches of complicated reality" (Jacobides 2007). When occupying a certain position, a member of the collective is encouraged to attend to certain issues and answers. Consequently, he or she will exhibit a focus of attention related to the position (Allison 1971 cited by Ocasio 1997 and by Jacobides 2007). Furthermore, research on teams suggests that some members, depending on their position within the group, can be more influential in affecting focus and attentional process (Corner, Kinicki and Keats 1994, and Kerr and Tindale 2004). Allocation of tasks, responsibilities and authority provides teams with an attention structure that bridges organization-level and team-level decision-making processes and serves to minimize ambiguity and redundancy (Drach-Zahavy and Freund 2007).

As suggested by Dearborn and Simon (1958), position bias is a result of structural aspects of the collective and will lead to different selection mechanisms. Recent research suggests that the effects of position bias on attentional process can be attenuated by other integrative mechanisms or other structural aspects (Ketokivi and Castaner 2004). Finally, at the level of social movements, structural positions also affect attentional processes. As suggested by McCammon et al.'s (2001) empirical work on suffrage, changes in the roles of women and men in US society at large affected attention dedicated to voting rights in the period between 1866 to 1919. Gender roles were also found as to be a determinant aspect of social movement around the adoption of domestic partner benefits as shown by Briscoe and Safford (2008).

Proposition 2: Demographic characteristics, routines and organizational roles are structural elements of the attentional process. They determine the availability of issues and answers and provide collective members with attention focus.

Transformations of the multilevel attentional process

The intertwined effects of structural elements of attention are amplified when we consider the transformational elements of the attentional processes. A fundamental part of attentional processes at the team level is related to distribution and exchange of information. Shared cues are particularly important in determining teams' attentional processes and outcomes (Kerr and Tindale 2004). Interaction among team members is equivalent to what the ABV labels as communication and procedural channels (Ocasio 1997) as it "...constitutes the means by which ideas, resources, information, norms, strategies, and so forth are exchanged" (Hinsz, Tindale and Vollrath 1997, p. 44).

Networks Recently, researchers interested in entrepreneurial teams have shown that both demographic characteristics and network aspects matter for team performance. Vissa and Chacar (2009) suggest that demographics and networks are complementary aspects of entrepreneurial team performance, particularly under the conditions of resource scarcity. According to their study, these findings are of interest because they conflict with findings derived from research focused on teams established within organizations in which teams are formed on a functional basis. Vissa and Chacar's (2009) study describes some of the important elements of attentional processes and also provides support for the argument in favor of the inclusion of various contingencies to explain collective action. Moreover, they suggest that the effects of the structural and relational elements of the attentional process vary according to the situation in which members and collectives find themselves.

Networks are social and relational structures that shape individuals' behavior and constitute the conduits for diffusion of attention (Hung 2005). Both in and around collectives, networks are communication and governance channels that influence attentional processes by simultaneously providing attention focus and situated attention to members (Ocasio 1997, and Ocasio and Joseph 2008). More specifically, networks function as media of information exchange (Benjamin and Podolny 1999) and help to distribute norms and procedures (Pfarrer, Bartol, Khanin and Zhang 2008) among and across collectives. Actors use their social connections to signal credibility and gain attention (Lounsbury and Glynn 2001). Therefore, from an attentional perspective, network ties function as procedural and communication channels. As a result, the situations in which collectives and their members find themselves within the network, influence attentional processes in and around them. Depending on the position of the collective in its network, it may be able to influence the flow of attentional resources that can be deployed for its own benefit (Mahon, Heugens and Lamertz 2004, Hung 2004, and Overbeck and Park 2006).

As suggested by Benjamin and Podolny (1999, p. 545), "a firm's position in the status influences the attention that others pay to quality, their assessment of quality, and their regard for the product more generally." Additionally, firms pay close attention to other network members in order to use this information to determine how these other organizations responded to past situations that they currently face (Gulati and Higgins 2003). At the level of the team, scholars have suggested that centrality in the network both inside and outside team affect focus of attention and interactions among members (Kerr and Tindale 2004). At the organizational level, Bouquet and Birkinshaw (2008) test the effects of network on attention. According to their research, the position of a subsidiary within the parent company network affects the amount of attention from the headquarters.

Structural position in the network influences attentional processes at the social movements level of analysis as well. Interpersonal networks have been associated with mobilization in the social movements literature. Through interpersonal networks, individuals are drawn into collectives where they share and cultivate interests and identities with other members (King 2008a). Or, as suggested by Briscoe and Safford (2008), larger and more prominent firms are more attractive targets for social movements. Due to their centrality in the network, they might elicit certain responses from other firms and organizations in the field (Weber, Rao and Thomas 2009). Additionally, the empirical work of Briscoe and Safford (2008) reveals how board interlocks, information sharing and diffusion affect corporate attention to controversial issues and consequent adoption of contentious practices such as partnership benefits.

Capacity Resources are an essential part of the transformation stage of the attentional process. Both tangible and intangible resources are used to build organizational moves. When granted tangible resources, the issues that are the focus of attention can result in (new) activities (Ocasio and Joseph 2005). We refer to these resources as attentional capacity, which refers to the collective capacity to deploy resources to affect attention. According to Ocasio (1997, p. 198), the transformation of issues and answers into organizational moves "...requires that either existing resources be deployed or that new resources be acquired or developed".

Attentional processes at the social movements level are highly dependent on financial and human resources (Campbell 2005, and King 2008a). McCammon et al. (2001) show that social movements, like organizations and teams, either have a pool of resources or must mobilize capabilities in order to gain support and further movement effectiveness. Activists might need additional capacity in order to make

use of more institutionalized channels including lobbying and direct negotiation. Moreover, if activists adopt extra-institutionalized tactics, such as boycotts, their need to mobilize capacities becomes more salient and is a necessary condition for the effectiveness of the movement (King 2008b).

Framing In addition to the effects of networks and capabilities, framing is also an important element of attentional processes. Framing explicitly incorporates the idea of enactment, indicating that the situations in which players, decision-makers and collective members find themselves are not objectively given, but socially constructed (Ocasio 1995, Ocasio 1997, and Ocasio 2001). Furthermore, frames direct attention and, thus, influence attentional processes, outcomes and behavior (Kaplan 2008). Thus, framing involves the strategic use of shared meanings and definitions to focus attention in and around collectives (King 2008a and 2008b).

Research on attention in teams (Kelly and Loving 2004) suggests that interactions among team members are more relevant to the output of the attentional process than the initial focus of attention of each individual member. Furthermore, researchers interested in team effectiveness and outcomes (Hinsz, Tindale and Vollrath 1997, and Kelly and Loving 2004) suggest that the framing of issues can have significant impact on attentional processes and, consequently, on the effectiveness of the team. Empirical studies on information processing in teams indicate that members who mention conflicting arguments regarding the group's common understandings receive negative reactions (van Ginkel and van Knippenberg 2008). Thus, the framing of issues within teams is also a relevant part of attentional processes because it may have an effect upon the content and quality of focus in communication and procedural channels.

The literature on social movements emphasizes the way in which frames facilitate coding and decoding of raw stimuli, and also the manner in which a different

vocabulary may affect a movement's success (Weber, Rao and Thomas 2009). At the organizational level, Kaplan (2008) shows that framing is not only a practice, but also a reflection of members' sensemaking that affects "ways of seeing". The role of framing in attentional processes is to create resonance among members (McCammon, Campbell, Granberg and Mowery 2001), attain shared focus and influence and mobilize members (Campbell 2005). Frames activate action by linking stimuli to certain categories of issues and also by referring to past experience (King 2008b). This linkage occurs through attention flows.

Proposition 3: Framing, attention capacity and networks are relational elements of the attentional process. They affect and transform the salience of issues and answers and influence collective members' focus of attention.

Outputs of the multilevel attentional process

The outputs of attentional processes are better understood as reflecting the context and the transformations that shape the focus and flow of attention (Gavetti, Levinthal and Ocasio 2007). The instrumental character of attention in combination with its contested nature suggest that there are some potential rewards and benefits associated with paying attention (as well as costs associated with inattention) (Hoffman and Ocasio 2001). In addition to visible attention, we also highlight status and coalitions as important output elements of attentional processes.

Coalition Participation in governance and communication channels is fluid. Collective members vary in the amount of time and effort they dedicate to various issues and domains (Cyert and March 1963, and Cohen, March and Olsen 1976). The multiple claims on participant attention derive both from the collective as well as the external environment, and the final outcome depends on the mix of participants who engage with one another and attach themselves to the situation in

which they find themselves (March and Olsen 1976). Organizational roles refer to a set of issues to which the participant must attend. However, the structural elements of the attention process, such as routines, interact with relational elements influencing not only the things that are attended to, but also the individual who exercises the attention rights (March and Olsen 1976).

Cho and Hambrick's (2006) study provides a good illustration of how organizational attention process leads to the formation (or dissolution) of coalitions. In their study on the effects of industry deregulation, they show how changes in environmental regulations lead to changes in the composition of the top management team (TMT) of firms in the airline industry. As suggested by Cyert and March (1963, p. 39), "the composition of the viable set of coalitions will depend on environmental conditions". According to Cho and Hambrick's (2006) findings, the alterations to the composition of the TMT were a resultant of the attentional process triggered by the substantial deregulation of that industry in the U.S. in 1978.

As suggested by Mahon, Heugens and Lamertz (2004), coalition formation is also triggered by the need to secure resources, control power dependencies, manage uncertainty and gain and sustain legitimacy. From an attentional perspective, these environmental situations elicit attentional processes that govern the formation and dissolution of coalitions among collective members and those involving external parties (O'Mahony and Bechky 2008).

Status Status represents an organization's quality as perceived by its peers (Podolny 1993). It is a signal of the underlying quality of the organization's product or service, and is also a signal that the loose linkage between status and quality is mediated by the organization's network. An important aspect of this concept is that "status flows through the 'interlinkages' between individuals and

groups” (Podolny 1993, p. 833) and might cause attention to be directed to those collectives that are central or proximal in the network. Hoffman and Ocasio (2001) argue that status is not only an important part of the attentional process, but also an antecedent in explaining variance in attentional levels in the context of critical events. The role of status in the attentional process was also addressed by Pfarrer et al. (2008) in their research on the way in which external forces affect disclosure and compliance. To retain their structural position, certain companies are more prone to come forward and restate their earnings.

As we argued when discussing the role of networks in the attentional process, the formation and dissolution of networks impacts attentional processes both in and around collectives, which, in turn, may advance the status of certain collectives in their networks. Moreover, the status and the centrality of the collectives within a network attract attention flows and resources that can benefit them (Starbuck 1983, and Podolny 1993). Additionally, central and high status members and collectives use others’ “...perception as an instrumental resource to achieve their aims” (Overbeck and Park 2006, p. 235).

In addition to their network, collectives can use framing to acquire status. In particular, keeping in mind that status is not an objective aspect, but rather a perceived characteristic, framing strategies may help collectives to not only direct attention to specific issues and answers, but also to enable them to obtain higher status. Issues may be selectively conveyed and transmitted to others in the network (Mahon, Heugens and Lamertz 2004) that will influence behaviors that have a primary effect on attentional processes.

Visible attention As highlighted by Bouquet and Birkinshaw (2008), visible attention is one of the outcomes of the attentional process. While these authors emphasize the explicit attention expressed by company documents (i.e. annual

reports), we argue that resource allocation also indicates visible attention (Durand 2003). Annual reports, as well as other documents produced and publicized by teams, organizations and social movements depict the major topics attended to by the collective. At the level of the organization, content analysis of company documents has been adopted by scholars as a successful technique to establish a proxy measure of visible organizational attention (D'Aveni and MacMillan 1990, Levy 2005, Cho and Hambrick 2006, Yadav, Prabhu and Chandy 2007, Nadkarni and Barr 2008, and Kaplan 2008). In support of their argument for a “middle-range theory” of organizational attention, Hoffman and Ocasio (2001) used content analyzed data collected from business press (i.e. trade journals) to provide a proxy measure for industry attention to external events. The use of organizational documents as data source for the measurement of visible attention is not limited to content analysis. In their study on knowledge markets, Hansen and Haas (2001) were interested in understanding competition for organizational attention among suppliers of electronic documents. They used the number of hits on the organization's databases as a proxy measure of visible attention. Their work makes important contributions to studies on organizational attention, not only because they provide an additional proxy measure for visible attention, but also because they describe and expose the contested nature of the attention process.

A different approach to visible attention is adopted by Durand (2003) in his work on organizations' forecasting ability. This work was focused on the role of organizational attention in the risk assessment process. He adopts resource allocation as a proxy of attention to market competition and employee capability (specifically, he uses relative expenditures in market information and investments in education and training) and found that organizational attention improves the accuracy of forecasts. Another interesting example of visible attention is offered by King, Bentele and Soule (2007) in which a number of Congressional hearings

are used as an indicator for the attention paid by policy makers to rights issues. The number of hearings is the output of the attentional processes triggered by social movements and organizations. All these examples of visible attention, as well as status and coalitions, indicate some of the outputs of the attentional process. More importantly, they are examples of the way in which structural and relational elements of attention interact to result in what is generally referred to as attention (James 1890).

Proposition 4: Coalition formation, status and visible attention are some of the outputs of the attentional process. They reflect the structural and transformational aspects of the attentional process.

2.5 Percolation and sedimentation: explaining the cross-level effects of the attentional process

Hitherto we explored the function and the structure of the attentional process at the levels of the team, organization and social movements. Since we build our multilevel perspective by demonstrating homology across levels (Chen, Bliese and Mathieu 2005), we will now discuss the relationships between the parallel constructs across the various levels of analysis (Rousseau 1985, and Johns 1999). Given the early stage of development of the ABV (Sonpar and Golden-Biddle 2008), we acknowledge the exploratory nature of this current work.

Percolation and sedimentation are physical processes that describe movement dynamics of cross-level phenomena. Percolation refers to the movement of fluids through porous materials and sedimentation refers to the settling of suspended particles or fluids. According to Chen, Bliese and Mathieu's (2005) typology of homologous multilevel theories, the use of metaphors helps to describe phenomena that reside in multiple levels and across levels. In light of this, we

label the upward and downward cross-level processes of attention, percolation and sedimentation, respectively. It is worth noting that the use of the term percolation as a metaphor is new in the field. The term sedimentation, however, has been used by organizational scholars in the past (Clegg 1981, and Cooper et al. 1996).

In the *percolation process*, attention seeps into higher levels, passing slowly through the structures, processes and agents of attentional processes and spreading throughout the team, the organization and/or the social movement. Percolation is distinct from a simple diffusion process in which the spread of the phenomena is arbitrary (Winsor 1995). In its upward movement, we argue, the attentional process is influenced and shaped by contextual aspects encountered in the higher-levels. Issue selling literature offers good insight into the percolation process (Dutton et al. 2001, and Dutton et al. 2002). This research stream demonstrates how collective members can shape organizations' strategic actions by channeling others' attention to particular issues (Howard-Greenville 2007) and also how contextual aspects influence the upward attentional process (Sharma 2000). The ethnographic study of organizational responses to natural environmental issues by Bansal (2003) provides another interesting illustration. Her research reveals that senior managers influence organizational strategic agendas through allocation of resources. Additionally, organizational members' individual concerns play a crucial role in affecting the salience of natural environmental issues within the organizations. As a result of these two upward movements, one of the organizations under analysis adopted an environmentally friendly practice.

The recent published work by Weber, Rao and Thomas (2009) indicates that the internal process of organizations can work in concert with social movements. In this case, as they describe, individuals, groups and organizations can work as social activists as well as "internal advocates". As a consequence, they may be able to influence not only the attentional process within the organization, but also

the attentional process across organizations and upwards, spreading their concerns and values, as is described by Bansal (2003).

Proposition 5: Given the role of the structural and relational elements of the attentional process and the benefits of its outputs, attention percolates to higher levels of analysis. Percolation affects the salience of issues and answers and members' focus of attention across levels.

In the *sedimentation process*, attention drops from higher to lower levels, leading to the sedimentation of attentional elements within organizations and teams. The sedimentation movement suggests that attention settles, falling out of one level to rest in another, causing layering and accumulation of structural aspects (Clegg 1981) of the attentional process. Weber, Rao and Thomas (2009), cited above, show how social movements can penetrate organizational-level structures and influence lower-level attentional processes. Considering the embedded nature of both social movements and organizations, they argue, “the external contestation manifests itself in the internal polity of organizations.” (Weber, Rao and Thomas 2009, p. 109). Thus, attention penetrates from higher level to the level of the organization garnering access to shareholders' annual meetings, shifting investments to alternative businesses and, ultimately, affecting the formation of coalitions penetrating into the composition of executive boards (Davis and Thompson 2006, King 2008 and Weber, Rao and Thomas 2009).

Proposition 6: Given the role of the structural and relational elements of the attentional process and the benefits of its outputs, attention sediments at lower levels of analysis. Sedimentation leads to the persistence of certain issues and answers and members' focus of attention across levels.

2.5.1 Cross-level attention: from the lower level

We argued that attentional processes matter at the team level. Teams are open and complex collectives composed by "...members who perform specific functions and interact through coordination networks with one another, as well as with the larger social context in which the team is embedded" (Perretti and Negro 2006, p. 760). In our study, we focus on teams within organizational settings, which include teams that deliver services, produce goods, recommend improvements and decide upon the strategic orientation of their organizations (Cohen and Bailey 1997). Hence, teams are situated and context sensitive. Therefore, in order to comprehend team processes in general, and attentional process in particular, it is necessary to consider contextual effects (Griffin 2007). This is particularly relevant to an understanding of sedimentation of attention at the team level and also to an explanation of how team attention percolates to organizations and social movements.

The majority of the research available on attentional processes at the team level adopts experiments for hypothesis testing. This research design implies a limitation in their findings both in terms of an understanding of the attentional process in teams within organizations as well as in terms of an explanation of the various aspects that influence attention at the team level. Teams within organizations are embedded in an environment of decision that is composed by concrete and contextual structures that go beyond the characteristics of the team members and the task at hand. Consequently, current research on attention in teams acknowledges the context dependent nature and contingent character of attention, yet it does not explore the diverse inputs and relational elements affecting attentional processes.

“Attentional processes in groups raise the question, what information is the focus of attention? [...] We consider three particular aspects of attention in groups: (a) how groups influence members to focus attention internally or externally, (b) how the distribution of information in a group influences what information becomes a focus of attention, and (c) how group interactions focus attention on particular information” (Hinsz, Tindale and Vollrath 1997, p. 46).

2.5.2 The attentional focus model

Team attentional processes have been explored by scholars interested in comprehending the effects of time on group performance and team effectiveness. Karau and Kelly (1992 and 2003) and Kelly and Karau (1999) propose the attentional focus model (AFM), which is equivalent to the ABV. The AFM comprises the structural and relational elements present in teams that explain how members’ focus of attention and their interactions combined explain team outcomes. The AFM suggests that time pressure together with other situational factors interact with task characteristics and team structural variables to influence team attention, which in turn affects the content and outcomes of team interaction (Karau and Kelly 2003).

According to the AFM, time assigned to a task impinges on the environment of decision affecting the issues to which team members attend to. In doing so, it has an effect on the interaction among members as well as on the outcome and performance of the team. Facing time constraints, members will focus their attention on issues that are more closely related to task completion. Conversely, facing an abundance of time, team members will be less focused on task completion, and attention will be distracted to unrelated issues. Karau and Kelly (1992) further propose that time works in conjunction with other factors such as

individual differences, task demands, and group structure to determine environmental aspects that are most salient. Additionally, attention differences between team members are likely to affect interaction and information processes, which also impact the resultant of the attentional process. It is important to note that not all members of the team must have the same focus for the issue to be attended to (Hinsz, Tindale and Vollrath 1997).

Therefore, according to the AFM, time pressures affect focus of attention directing team members to attend to those issues more closely related to task completion and avoiding unrelated issues (Karau and Kelly 1992 and 2003). An important component included in the attentional focus model is the effect of interactions among team members on the output of attentional processes. To understand the effects of time restriction (or time abundance) on task completion, it is important to consider both the attentional focus of group members, but also the pattern of interactions among them. As suggested by the model of situated attention (Ocasio 1997) and by our functional equivalent model at the team and social movements levels, attentional process at the team level is also comprised of structural and relational elements.

Time is unlikely to operate in isolation (Kelly and Loving 2004). The relationship between time and attentional focus is also affected by contextual and contingent variables such as task complexity, demographic characteristics, social influence, framing, roles and normative systems. According to the AFM, input elements of attentional processes are likely to affect the content of the interaction among members of the team (Kelly and Karau 1999). In line with the ABV, structural elements of attention will affect both the salience and the distribution of issues on procedural and communication channels. Thus, the final effect of the focus of attention of group members is also dependent upon the interaction processes among members (Kelly and Loving 2004).

Distributed and shared attention indicate implicit consensus, which is the linking mechanism between the various levels of attentional processes (Corner, Kinicki and Keats 1994). An interesting suggestion put forth by the AFM is that time scarcity creates a “resource problem” such that teams cannot adequately attend to or process the environment of decision (Karau and Kelly 1992). Demographic characteristics, routines and other aspects of the attention structures channel the focus of attention of team members to very specific issues and answers, blinding them to what may be other relevant cues and unrelated issues. “Programs focus perceptions on events their creators believe important, so the programs blind organizations to other events that often turn out important” (Starbuck 1983, p. 92).

This focusing mechanism is reinforced by the fact that teams usually discuss and focus on common issues, rarely considering unique facts (Parks and Cowlin 1995). Additionally, considering the difficulty that team members have in expressing arguments that contradict the team’s preferences (van Ginkel and van Knippenberg 2008), the process of attention will be directed to the same issues and answers with little variation in response to changes in stimuli, causing attention to sediment and remain the same. Our point here is that the influence of context (Johns 2006) on organizational behavior at lower levels is reinforced by structural and relational elements of the attentional process. Moreover, collective members can benefit from the outputs of the process.

Proposition 7: Structural elements of the attentional process at the level of the organization interact with structural and relational elements of the attentional process residing at the level of the team. At the level of the team, interaction effects lead to the persistence of issues and answers and attention focus at lower levels of analysis of organizational behavior.

The sedimentation process is illustrated by the empirical research of Perretti and Negro (2006). According to their study, the distinction between different levels of experience in teams matters both at the team and the organizational levels. This distinction is relevant to group interactions, as well as group effectiveness and organizational socialization. The authors suggest that inexperienced and experienced team members use different attentional processes leading to explorative and exploitative moves. Old-timers are more accustomed to the status quo “ways of seeing” at the level of the team and also at the level of the organization. Different from newcomers, who usually bring forth novel interpretations and influence attention by means of ingenuity or improvisation, old-timers are source of rigidity and inertia (Perretti and Negro 2006). Rigidity and inertia lead to the sedimentation of structural elements of attention both at the team and organizational levels.

2.5.3 Cross-level attention: from the higher-level

The social movements literature is particularly applicable to acquiring an understanding of percolation and sedimentation of attention. As is often suggested, social movements are dynamic multilevel processes (King 2008a and Briscoe and Safford 2008) in which individual and organizational activists influence others by penetrating their attention structures or altering their governance channels (King, Bentele and Soule 2007, King 2008b and Sine and Lee 2009). Furthermore, the pervasiveness of social movements both in and around organizations (King 2008a and 2008b, Davis et al. 2008, and Weber, Rao, and Thomas 2009) provides us with a literature that is in a privileged position to address both the multilevel and also the cross-level aspects of attentional processes.

Political opportunity structure is a core concept in the literature on social movements. Political opportunity structure is the concrete and contextual structure that offers opportunities for mobilization and action. It is comprised of the formal

political structure and its capacity, but also the broader social, economic and cultural context (McCammon et al. 2001, Campbell 2005 and King 2008a). Thus, the political opportunity structure sets the limits for the effectiveness of movement strategies (Campbell 2005 and King 2008b).

The concept of political opportunity structures converges with the multi- and cross-level perspectives of attentional process first, because it treats the effectiveness of social movements as situated in an environment that extends beyond the immediate political structure (King 2008b and Weber, Rao and Thomas 2009). Second, it leaves room for agency, which, in combination with structure, is likely to provide an explanation of social movement outcomes (McCammon et al. 2001). “Fleshing out the nature of this agency gives organizational scholars [...] an improved understanding of the context in which organizations operate and change” (King 2008a, p. 43).

Recent research on social movements has shown how activists are capable of conducting organizational attention in the direction of their specific demands or issues. The penetration process described by this literature outlines the manner in which internal and external collectives infiltrate lower and upper level attentional processes, even when they have little access to formal and institutionalized channels (King 2008b and Weber, Rao and Thomas 2009). “Lacking a better channel of influence, social movements seek to disrupt the status quo and force policy makers to pay attention to issues that they would not consider otherwise” (King 2008a, p. 39).

The function of the concept of political opportunity structure adopted by social movement scholars is equivalent to the function of the concept of organizational attention proposed by Ocasio (1997). According to Campbell (2005, p. 45), political opportunity structure is a

“... set of formal and informal political conditions that encourage, discourage, channel, and otherwise affect movement activity. Political opportunity structures are said to constrain the range of options available to movements as well as trigger movement activity.

Furthermore, political opportunity structures can be conducive (Briscoe and Safford 2008 and King 2008b) and are said to influence strategy, structure and effectiveness of social movements (McCammon et al. 2001, Campbell 2005, Weber, Rao and Thomas 2009). These functionally equivalent aspects of the social movements literature, in conjunction with recent developments combining the internal and external dynamics of collectives (Zald 2008) provide support for the conceptual framework described by the percolation and sedimentation processes of attention.

Proposition 8: Structural elements of the attentional process at the level of the social movements interact with structural elements of the attentional process residing at the level of the organization. At the level of the organization, interaction effects influence the saliency of issues and answers and decision-makers' focus of attention. At a higher level, these interaction effects partially explain the effectiveness of the social movement.

2.5.4 Networks and collective members' dual role

Individuals are part of a larger social context and can simultaneously be a member of a team or organization and have a shared identity as an activist. This dual role, as a member and also an advocate, helps to explain how social movements garner support from targeted organizations (Briscoe and Safford 2008, Weber, Rao and Thomas 2009). It also provides supporting for our percolation of attentional

processes argument. Individuals with dual roles can have a passive influence on attention structures by the sheer fact of their social identities (Hillman, Nicholson and Shropshire 2008). However, they can also actively influence or manipulate attentional processes in their role as a supporter (Briscoe and Safford 2008, Kaplan 2008).

The role of networks in multilevel phenomena (i.e. innovation) has been studied previously. According to Gupta, Tesluk and Taylor (2007, p. 889) “networks are based on multiple types of ties among various constituent entities, whether they are individuals, teams, or firms and constructs that are best understood when considered in terms of the overall patterns of relationships (e.g. network density) and individual actor’s position in and relation to the network (e.g. centrality).” In attentional processes, networks play the same role and are particularly influential because they provide collective members with different identities, and thus, a different focus of attention.

Networks exist in and around organizations and, as such, affect attentional processes in and across teams, organizations and social movements. Network ties include personnel exchange, board interlocks and professional, trade and union associations, to name only a few. Organizations such as boards, associations, media, as well as stakeholder groups can fill structural holes and function as intermediaries, thereby transforming general issues into collective issues (King 2008a and Deephouse and Heugens 2009). Additionally, boundary organizations also function as intermediaries to the extent that they facilitate cooperation and bridge divergent interests across organizations. These organizations allow collectives to focus on issues that facilitate cooperation by enrolling members “on the basis of their convergent interest” (O’Mahony and Bechky 2008, p. 426). These indirect connections are part of the external and internal dynamics of these collectives and are, therefore, likely to affect the focus of attention and

organizational attention (Benjamin and Podolny 1999 and Gulati and Higgins 2003) both within the collective and outside it. Thus, networks function as conduits of attention and as channels of governance both within and across levels.

Proposition 9: Networks span team, organizational and social movement levels. They work as governance and communication channels of cross-level attentional processes. As such, they affect the salience of issues and answers and attentional processes across the various levels of analysis of organizational behavior.

The concrete and contextual structures at the levels of the team, organization and social movements are made up of rules and practices that are socially embedded and linked to institutional logics and conceptions of control (Weber, Rao and Thomas 2009). This helps to explain the influence of collective identities on attentional processes as well as how collectives acquire certain types of reputation according to their previous responses to social pressures (Benjamin and Podolny 1999, Briscoe and Safford 2008 and Weber, Rao and Thomas 2009).

Briscoe and Safford (2008, p. 464) suggest that organizations can be recognized as prone or resistant to activist influence.

“The adoption of a contentious practice by a company perceived to be impervious to activism generates surprise: the actions conflict with expectations about how resistant companies will behave in the face of activism. Such dissonance serves as a trigger for deeper reflection [...], focusing observers’ attention and potentially leading to more systematic information processing activities among observers.”

Thus, institutionally established collectives, organizations with certain reputations or central knots of the network are the targets of intense activism due to their visibility and power (Weber, Rao and Thomas 2009). These collectives are not only concerned about their external image, but are also concerned about their status within the collective and outside it (King 2008b and Weber, Rao and Thomas 2009).

Mobilization and support are also crucial to the processes of percolation and sedimentation of attention. An important aspect of framing, closely related to the idea of mobilization and capacity, which was not highlighted earlier, is the role of media (Briscoe and Safford 2008 and Weber, Rao and Thomas 2009). Media can have a direct effect on attention orientation, influencing framing at all levels when narrating and, thus, (re)framing collective actions (Hoffman and Ocasio 2001).

2.5.5 Cross-level attention: from the organizational level

There are two additional literature streams that provide support for our claims regarding the sedimentation and percolation processes. Issue selling and project championing studies offer theoretical arguments and empirical evidence explaining the way in which framing and other attentional elements percolate and sediment across levels. An important aspect highlighted by these literatures is that the issue seller or project champion has to believe organizations are amenable to their ideas (Barnett 2008). This idea converges with earlier suggestions regarding support and mobilization and also about the idea of (political) windows of opportunity often mentioned in the social movements literature (King 2008b). “Issue selling is the process by which individuals affect others’ attention to and understanding of the events, developments, and trends that have implications for organizational performance” (Dutton et al. 2001, p.716). Although primarily developed to explain the advancement of issues within organization, issue selling can also take place outside the organization and can influence the distribution and

allocation of attention in and around collectives. It is an important cross-level aspect of attention because an issue-selling perspective proposes that members and collectives direct the attention of insiders and outsiders to often unnoticed issues (Dutton et al. 2001 and Ocasio and Joseph 2005).

Based on the issue-selling literature, Bouquet and Birkinshaw (2008) propose that visible attention can be a response of a bottom-up attentional process. Accordingly, lower level units of analysis can use voice to garner upper level attention (King 2008a). Although Bouquet and Birkinshaw (2008) focus on headquarters' attention, their relational perspective of attention based on the concept of voice, is of particular interest for our understanding of the percolation process. Their study suggests that lower level units can use two strategies to penetrate the higher-level attentional process. The first strategy involves taking the initiative to actively generate flows of attention towards their issues, usually via concrete actions and visible outcomes that are presented to upper level units as new stimuli. The second strategy by which lower levels can penetrate upper levels involves the adoption of strategies designed to improve image and reputation, aiming at profile building. In this case, attentional processes are affected due to framing practices that influence perceptions at the upper-levels.

King (2008a, p. 35) adopts the construct of "voice" to build the arguments that underpin his propositions on stakeholder collective action. According to his study, stakeholder groups use ruptures in the corporations' structures "to voice their claims and exert influence". In studies on social movements, framing is emphasized not only as an important element for mobilization, but also as means to penetrate the political structures and the organizational field to influence decision-makers' agendas and gain external support (McCammon et al. 2001).

Proposition 10: Collectives and their members engage in framing strategies in order to influence attentional processes at the various levels of analysis. Framing, like networks, works as a governance and communication channel of cross-level attentional processes. It also interacts with structural elements of attentional processes, affecting the salience of issues and answers and attentional processes across the various levels of analysis of organizational behavior.

2.6 Why does it matter? The canonical elements of attentional processes

The multilevel perspective of attentional process offers a fruitful theoretical framework with which to understand organizational behavior as it addresses important elements that advance our current knowledge by tackling some of the limitations of past studies of attention (Gavetti, Levinthal and Ocasio 2007). This framework also bridges the micro-macro divide and spans different levels of organizational behavior offering a broader and deeper, yet complex (Klein, Tosi and Cannella 1999), understanding of how attention influences and is influenced by collectives. Even in its metaphoric stage, our multilevel perspective offers a composite model of attentional process and suggests a parsimonious starting point to expand the ABV to levels of analysis other than that of the business firm (Chen, Bliese and Mathieu 2005).

After having provided an overview of the current research on attention at the levels of the team and social movement, we discussed the function and the structure of the attentional process. Then, we argued in favor of a homology of attention at team, organizational and social movement levels of analysis of organizational behavior. Additionally, we delineated the cross-level linkages of attention putting forth our conceptual argument for the percolation and sedimentation process, which integrates micro and macro aspects of attentional process to explain collective behavior. As highlighted earlier, we do not intend to

explain all organizational behavior using the multilevel view of attention, nor do we intend to suggest that the elements and mechanisms described here are exhaustive. However, we believe that our framework advances the field by suggesting that the analysis of attentional processes at multiple levels and across levels is crucial to understanding how social, economic, institutional and cultural aspects enter into lower levels of attention, and how lower levels of attention “scale-up to collective outcomes” (Thornton 2001, p. 308). In the following sections, we discuss the canonical elements of this first effort to compile the elements of attention at the team, organizational and social movement levels to propose a multilevel theory of organizational attention.

2.6.1 Embeddedness - because the context matters:

Attention is situated. At all levels of analysis, social, political, cultural and institutional aspects impinge on the structural, relational and output elements of attentional processes. Thus, a multilevel theory of attention is inherently context dependent. Here, we adopt the view of context as consisting of constraints and opportunities that shape functionally equivalent processes that explain organizational behavior (Johns 2006).

As the percolation and sedimentation processes describe, context is not only the situation in which members and collectives find themselves (Ocasio 1997), but it is also a cross-level effect (Johns 2006). Additionally, structural positions, organizational roles, communication channels and other contextual and concrete structures of attention (Barnett 2008) are themselves embedded in the social, economic, cultural and institutional environment (Ocasio and Joseph 2005) suggesting a reciprocal effect. Therefore, organizational behavior in general and attentional process in particular can hardly be understood unless embeddedness is taken into consideration (Gavetti, Levinthal and Ocasio 2007).

Embeddedness is also important in light of the effects of institutions, which are seen here as nested systems in the sense that they are both “products of action” and “frameworks for action” (Holm 1995). An important consequence of this specific aspect of embeddedness is that both first and second order levels of action are structured and integrated (March and Olsen 1976). Therefore, disturbances at a lower level can be absorbed at the upper level and higher-level processes may also trickle down to lower levels (Holm 1995).

2.6.2 Institutions - because logic matters:

“The double nature of institutions, as both frames for action and products for action” (Holm 1995, p. 417) has further implications for the multilevel perspective of attentional processes. Institutional theorists have shown how organizational attention is structured by the institutional logics prevailing in the environment (Thornton 2004 and Thornton and Ocasio 1999) while, at the same time, suggesting that interests, identities and values are embedded within the dominant institutional logics (Thornton and Ocasio 2008). Institutional logics are “the socially constructed, historical pattern of material practices, assumptions, values, beliefs, and rules by which individuals produce and reproduce their material subsistence, organize time and space, and provide meaning to their social reality” (Thornton and Ocasio 1999, p. 804). Moreover, institutional logics are multiple (Schneiberg and Lounsbury 2008) and operate across multiple levels of analysis (Thornton and Ocasio 2008).

An emphasis on the pervasiveness of institutional logics in attentional processes at team, organizational and social movement levels is not necessarily novel (Thornton and Ocasio 1999, Thornton 2001 and Luo 2007). Take for instance the homologous concept of dominant logic (Prahalad and Bettis 1986 and Bettis and Prahalad 1995). Similar to institutional logics, the dominant logic permeates the organization, interacts with structural and relational aspects of attention, thereby

affecting organizational behavior (Bettis and Prahalad 1995 and Ocasio and Joseph 2005). Yet, our understanding of the multiple, conflicting and dual nature of these logics is relatively new (Holm 1995, Schneiberg and Lounsbury 2008 and Purdy and Gray 2009).

As was previously suggested, institutional logics can be both inputs and outputs in processes explaining organizational behavior. Additionally, the presence of multiple and conflicting logics implies the existence of various processes of attention and, consequently, a wider portfolio of outcomes. Moreover, these logics, together with context, help to link macro and micro aspects of attention and organizational behavior.

2.6.3 Attention structures – because distribution matters:

It is not only context and institutional logics that shape attention. Attention structures also impose constraints upon and elicit opportunities for collective members and may attenuate conflicts (Cyert and March 1963). Not all collective members have the same attention focus or are driven toward the same orientation (Cho and Hambrick 2006 and Rerup 2009). Attention structures distribute and allocate these differences and direct members' focus towards specific issues in order to guarantee some cohesion or convergence of collective attention.

Attention structures, which include a variety of formal and informal conduits for the flow of attention, are central to attentional processes because they distribute members' focus within and across levels. The distribution of attention enables collectives to attend to a vast number of issues at distinct levels at different points in time (Ocasio and Joseph 2005). An overlap between issues and attention focus confer coherence (Rerup 2009) across levels, whereas the distribution of attention allows for dispersion of attention. Finally, by distributing attention, these structures allow demands to be attended sequentially and, more importantly, they

foreshadow some of the conflicting and divergent issues faced by the collectives (Cyert and March 1963).

Moreover, attention structures are both concrete and contextual aspects that affect salience and influence the valuation and rank ordering of issues (Barnett 2008). They result in and are embedded in the broader social, cultural and economic context (Ocasio 1995 and 1997). Thus, they not only include organizational policies, routines and resources, but also relational aspects of the attention process. Therefore, the structural characteristics of attention not only explain distribution, but also help to explain why certain issues are given precedence over others, and why still others are neglected altogether. In concert with one another, the structural aspects of attention produce multiple flows of attention, influencing the distribution and salience of issues (Williams and Mitchell 2004).

2.6.4 Processes – because selection matters

“Attention provides a label for a set of mechanisms that determine the salience of stimuli” (Kahneman 1976, p. 2). The emphasis on process in our multilevel theory explains how attention narrows down the stimuli, limits the abundance of information and also how collectives select certain aspects, values and behavioral alternatives while discarding others. Contexts impose a series of stimuli upon collectives that also face competing logics and conflicting demands. It is the attentional processes within and across levels that elucidate the manner in which collectives resolve the trade-offs between what they attend to and what they ignore (Kacperczyk 2009).

The nature of attention as a process indicates that visible attention is only part of a complex and abstract set of formal and informal mechanisms that affect the focus of attention of individuals and collectives (Yu, Engleman and Van de Ven 2005 and Pfarrer et al. 2008). The benefits of attention, as well as the costs of

inattention, provide additional incentives to collective members to attend to a stimulus, regardless of certain structural constraints (Weber, Rao and Thomas 2009). An emphasis on what we ordinarily know as attention (James 1890) distracts our scholarly attention away from the underlying selection process, which, in fact, explains environmental enactment and organizational behavior.

2.6.5 Agency – because actors matters:

In presenting our multilevel perspective of attention processes, we discussed the role of demographic characteristics as input elements of attention. We also argued that the effects of demographic characteristics on the process interact with other elements and, consequently, as suggested by Ocasio (1997), these characteristics are just part of an explanation of organizational behavior. However, our work also suggests that individuals play an active role in the attentional process not only due to their organizational role, but also due to their structural positions and multiple identities (Hillman, Nicholson and Shropshire 2008 and Weber, Rao and Thomas 2008).

Collective members act on the basis of what they know, perceive and believe and “what they look at, what they notice, the weights they give to contradictory stimuli” reveal themselves in the process output as well as in the collective behavior (Cho and Hambrick 2006, p. 466). Despite the influence of organizational structures on channeling attention, members can actively alter and direct the attentional process (Bansal 2003 and Dutton et al. 2006). Even among the dominant coalition members, where attention scarcity is even more pronounced (Simon 1947, Cyert and March 1963 and Ocasio 1997) there are differences in attention focus. In this case, due to their organizational roles, structural positions and status, and despite some structural constraints, members of the collective may exercise their discretion and participation rights (March and Olsen 1976) according to their own concerns, which in turn affects the process and

its outcomes (Kacperczyk 2008). More importantly, a multilevel perspective of attention process shows that these effects are not restricted to one level of analysis, but several.

Collective members often find themselves in ambiguous and conflicting situations where they do not necessarily know how to act or move (March and Olsen 1976 and Holm 1995). As was previously suggested, members usually have dual roles, participating in a certain collective while at the same time being a member of another. Consequently, in any situation, a collective member attends to only a limited number of issues depending "... on the extent of his involvement in the organization and on the demands of the other commitments on his attention" (Cyert and March 1963, p. 35). These other commitments (Hillman, Nicholson and Shropshire 2008), which may or may not be related to the collective, provide different roles and structural positions, and are essential components of the percolation and sedimentation processes. They provide collective members with other identities such as those of issue sellers, champions, activists and status seekers to name a few, that can actively transform and affect the outcomes of attentional processes.

2.6.6 Symbolism and substance – because attention matters:

Finally, attention is both substantive and symbolic. It is difficult to understand attentional process at any level and across levels without also considering a symbolic perspective (March and Olsen 1976). First, attention can be viewed under a rational lens revealing that processes are largely explained and outcomes determined by the costs and the benefits associated with paying attention. Second, there are various symbols associated with these processes, such as status and image (Hoffman and Ocasio 2001). Yet, the distinction between the substantive and symbolic character of attention can be assessed if the other stages of the attentional processes are well understood.

Recognition of the distinction between symbolic and substantive attention is important in understanding and explaining attentional processes. Substantive attention, as indicated by actual resource allocation, is primarily important in the transformation phase of the attentional process. As described earlier, attentional resources in the form of attentional capacity can play a definitive role in determining process outcomes. Examples drawn from the social movements literature (King 2008a and 2008b), as well as from organizational studies (Ocasio and Joseph 2005 and Bouquet and Birkinshaw 2008), indicate the centrality of substantive attentional resources in driving collective moves and influencing effectiveness.

The symbolic nature of attention, however, is particularly manifest in the output of the attentional process. We argued that structural and relational elements of the attentional processes lead to outputs such as coalitions, status and visible attention. All of these output elements share an important characteristic that has implications for the understanding of attention. Coalitions, status and visible attention, specially as expressed by company documents, send signals and indicate who and what matters to the collective. Thus, like substantive attention, they represent symbolic resources that may have an effect upon other attentional processes in and around the collectives.

2.7 Final remarks

As suggested by Ocasio (1997) the complexity of the ABV is both a virtue and a weakness. Yet, we argue that attentional process, regardless of the substantive and / or symbolic outputs in which it may result, is a construct that is vital to expanding our current understanding of collectives in general and, organizations in particular. We also believe that a multilevel process theory of attention, which

comprehensively integrates environmental and structural elements and agency (Gavetti, Levinthal and Ocasio 2007 and Schneiberg and Lounsbury 2008), constitute an advancement of theories of organizational behavior. We further argue that expanding the breadth of theories of attention to other levels of analysis opens the field to various new and interesting research opportunities.

CHAPTER 3

WHEN A THOUSAND WORDS ARE (NOT) ENOUGH: an empirical study of the relationship between firm performance and attention to shareholders

The aim of this study is to concurrently test the explanatory power of the attention-based view (ABV) of the firm and of the resource dependence theory (RDT). We propose a conceptual model of attention to shareholders based on assumptions of both ABV and RDT, and test the hypotheses using a unique dataset comprised of content analyzed data on shareholder attention for 313 firms from 24 different countries. Our research findings highlight the complementary nature of the RDT and ABV and contribute to the literature on attention by providing empirical evidence and theoretical explanation for the scarcely explored relationship between firm performance and organizational attention.

3.1 Introduction

Since its initial publication (Pfeffer and Salancik 1978), resource dependence theory (RDT) has been widely used by scholars interested in understanding the linkage between organizations and their environment. RDT presents a unified theory of power at the organizational level, combining relevant constructs such as dependency, autonomy and constraints (Boyd 1990, Casciaro and Piskorski 2005 and Hillman, Withers and Collins 2009). The core of RDT lies in the idea that organizations are not self-sufficient and, as a result, they must manage their interdependences to gain access and control over required resources and information (Pfeffer and Salancik 1978). Accordingly, by managing external

control, organizations reduce the level of environmental uncertainty, thereby increasing their chances of survival (Boyd 1990).

Over the past three decades, RDT has been applied to explain various phenomena such as mergers and acquisitions (Pfeffer 1972, Pfeffer and Salancik 1978 and Finkelstein 1997), joint ventures (Pfeffer and Nowak 1976), board composition (Pfeffer and Salancik 1979) and stakeholder management (Mitchell, Agle and Wood 1997, Frooman 1999 and Jawahar and McLaughlin 2001). Despite having different research objectives, the results of this collection of empirical research support the idea that organizational structures and outcomes are primarily determined by the interdependence between the focal organization and third parties. In their search for survival, firms adapt their structures to cope with external control. RDT further suggests that organizational structures have their roots in the environment (Scott 1998). Therefore, how organizations learn, attend to and select aspects of their environment is mostly explained by their exposure to informational and environmental inputs (Pfeffer and Salancik 1978).

In spite of its extensive use in organizational research, RDT has some deficiencies and may be ill equipped to explain certain organizational outcomes. Perhaps the most criticized aspect of RDT is its environmental determinism with regard to organizational behavior. As interdependences impose numerous constraints, an organization is left with no other option than to respond to these constraints in order to survive (Galaskiewicz et al. 1985, Finkelstein 1997 and Pfeffer 1997). This criticism is based upon at least two key problems. First, early research on resource dependence, focused mostly on dyadic interdependences, whereas, in fact, the environment exerts multiple simultaneous and reciprocal pressures over organizations (Casciaro and Piskorski 2005). Additionally, RDT focuses predominantly on the task environment, whereas institutions are also source of pressure over organizations (Oliver 1991). Therefore, RDT proposes a

problematically simplistic linkage between external environment and organizations that neglects the embeddedness of organizational moves as well as the reality of organizations as institutions (Pfeffer 1997). Second, this linkage presents a high degree of determinism facing organizations, leaving almost no room for strategic choice and agency (Pfeffer 1982). From a resource dependence perspective, managerial action is only possible at a symbolic level and, consequently, will have little effect on organizational outcomes (Pfeffer 1981). Additionally, resource dependence does not provide an explanation for how organizations cope with the multiplicity of interdependences they face (Finkelstein 1990). A resource dependence approach focuses its explanation of the linkage between environments and organizations on the presence of structures and information systems as enablers of environment enactment without dealing with internal linkages, an exploration of which is required for a full understanding of organizational moves.

In spite of its existence in a relatively early stage of development (Sonpar and Golden-Biddle 2008), the attention-based view of the firm (Ocasio 1995 and 1997) provides a more comprehensive model of the linkage between environment and organization. It considers both external and internal aspects of the environment. According to the ABV, organizational outcomes are a resultant of three interrelated aspects: the focus of attention of decision-makers, the very specific context in which decision-makers find themselves, and the structural distribution of attention of the organization (Ocasio 1997). Therefore, when accounting for multiple processes at environmental, organizational and individual levels, the ABV provides an embedded and less deterministic view of the influence of the environment on focal organizations.

The AVB explicitly incorporates the managerial role as part of the explanation for organizational outcomes. An ABV perspective of organizational moves suggests

that what decision makers do depends on their focus of attention. RDT suggests that what decision makers do depends on the interdependences affecting the focal organization. In both perspectives, attention structures are central determinants of organizational behavior because they provide cues to decision-makers on how to respond to environmental stimuli (Pfeffer and Salancik 1978 and Ocasio 1997). However, an attention-based view of the firm offers a linkage and provides an explanation for how organizational structures are related to managerial cognition (Barnett 2008); a missing link in the resource dependence theory. Similar to RDT, the ABV has been used to understand a wide variety of organizational phenomena such as mergers and acquisitions (Yu, Engleman and Van de Ven 2005), innovation outcomes (Yadav, Prabhu and Chandy 2007), top management team composition (Cho and Hambrick 2006), and international orientation (Levy 2005, Bouquet and Birkinshaw 2008).

In this chapter we argue that the ABV and RDT are congruent and can be combined to explain organizational phenomena. Hence, the aim of this study is to test the joint explanatory power of the attention-based view of the firm and of resource dependence theory. By proposing a model of attention to shareholders based on assumptions of both the ABV and RDT, our study contributes to the literature in four ways. First, we provide a concurrent test of explanations for attention to shareholders based on a resource dependence perspective and attention-based view using content analyzed data from letters to shareholders. This source of data has been widely used in research about organizational attention (D'Aveni and McMillan 1990, Abrahamson and Hambrick 1997, Levy 2005, Cho and Hambrick 2006 and Yadav, Prabhu and Chandy 2007), but not necessarily in research testing assumptions of RDT. We also contribute to the literature on impression management by providing an alternative explanation for the content of public accounts of organizations. Although annual reports can be seen as a privileged communication channel, used to manage external impressions about

organizations (Staw, McKechnie and Puffer 1983, Bettman and Weitz 1983, Salancik and Meindl 1984, Abrahamson and Park 1994), they also are relevant governance channels. As such, they reflect important concrete and contextual aspects of the organization's attentional process (Abrahamson and Amir 1996 and Ocasio and Joseph 2005 and 2006). Third, we contribute to the development of the ABV by providing an explanation for some of the mechanisms "... of how the firm as a cultural and social system is shaped by the environment of action" (Ocasio 1997 p.193) that are not explicitly addressed by the model of situated attention and firm behavior. Finally, we also contribute to the literature on attention by providing empirical evidence for and a theoretical explanation of the almost entirely unexplored relationship between financial performance and organizational attention (Kacperczyk 2009).

Our work highlights the complementary nature of resource dependence theory and the attention-based view of the firm. RDT complements the ABV by making more explicit the effects of the environment on attention structures and, ultimately, on organizational behavior. At the same time, the ABV provides RDT with a more comprehensive view of the relationship between environment and organizational outcomes, including both the external and the internal constraints on organization. In so doing, the ABV supplies RDT with a less deterministic perspective that accounts for the influence of social structures, and individual and social cognitions. To achieve our objectives, we created a unique dataset comprised of content analyzed data of shareholder attention for 313 firms from 24 different countries.

3.2 Attention to shareholders: a resource dependence view

Resource dependence theory departs from the principle that organizations are unable to produce and generate all necessary resources for their operations and survival (Emerson 1962, Thompson 1967, White 1974, Pfeffer and Salancik 1978 and Salancik 1979). As a consequence, firms enter in exchange relationships to obtain necessary resources. On the one hand, these transactions with resource providers guarantee firms' operations. On the other hand, however, they increase external dependencies. Building upon the work of Emerson (1962) at the individual level and, Thompson (1974) at the organizational level, resource dependence scholars emphasize the effects of critical dependencies from the external environment on organizational structures and outcomes. According to this literature, organizations are embedded in environments that provide stocks of resources (White 1974). Dependency is a basic concept available to researchers trying to explain organizational outcomes. It is the inability of firms to generate their factors of production that forces them to engage in transactions with other organizations. These external dependencies explain phenomena such as joint ventures, mergers, boards of director composition, board interlocks and executive succession (Pfeffer and Salancik 1978 and Hillman, Withers and Collins 2009).

An important aspect of resource dependence theory is its emphasis on the contingent nature of external dependencies. According to RDT, the value of a resource is not inherent, but given by the exchange relationship. Thus, the value of a resource is a direct function of its utility to the firms' operations (White 1974), and the extent to which that resource is necessary for the firm to operate and survive (Aldrich and Pfeffer 1976). These resources can vary from raw materials and equipment to skills and knowledge.

Some scholars criticize resource dependence explanations for frequently ignoring the role of institutions in shaping organizational dependencies and decision-making as if critical dependencies were fixed (Salancik and Brindle 1997). However, Thompson's (1967) suggestion that regulations offer additional constraints to organizations is echoed by White (1974) who proposes that environmental constraints can be derived from the market of resources as well as from laws and regulations.

3.2.1 The symbolic role of management

In spite of the constraints imposed on decision-making by the environment, Pfeffer (1981) identifies social construction as the ultimate role of management. The boundaries created by critical dependencies to the organization limit managerial discretion (Pfeffer and Salancik 1978). Nevertheless, resource dependence scholars suggest that managers are able to manipulate the external environment (Pfeffer 1981). Managers exert influence over the environment in order to reduce uncertainty and dependence (Greening and Gray 1994). Arguments in favor of the symbolic role of managerial action are in line with the ABV, which suggests that organizational responses, as social constructions, are structured by organizational attention (Ocasio 1995). Accordingly, much of what we recognize as organizational behavior reflects the interpretations made by decision-makers and other organizational actors (March and Olsen 1976).

The symbolic role of managerial action adds a political perspective to organizational attention, suggesting that the purpose of managerial attention is to articulate social values and divergent interests (Greening and Gray 1994). Consequently, variation in organizational attention is limited not only by critical resource dependencies but also by the need to manipulate the environment. As Astley and Zajac (1991) highlight, organizational phenomena are partially

explained by the political forces existing around the critical dependencies and the organizations' need to accommodate them.

According to Pfeffer (1981, p. 5), the analysis of managerial action must be separated in two levels. At the level of substantive actions, organizational decision-making is, by and large, explained by external dependencies. Conversely, at the symbolic level, political language and symbolism are essential to legitimate and rationalize decision-making. As a result, he argues, "substantive organizational actions such as resource allocations are predicted from conditions of power and dependence." The same relationship does not hold for symbolic action, which must be assessed by different variables such as values and beliefs. Aldrich and Pfeffer (1976) suggest that symbolic managerial action, attention and perception are less important in severely constrained markets because external pressures increase the correspondence between symbolic and substantive organizational resources. However, it is precisely these contexts in which symbolic managerial action is more critical (Pfeffer 1981). This may indicate that stringent institutional environments favor substantive outcomes and, consequently, increase the explanatory power of symbolic action on organizational outcomes.

3.3 Hypotheses

Our research objective is to explain organizational attention, which is often cited as a critical resource. In this section we develop a theoretical model to explain attention to shareholders. In order to achieve our aim, we propose a set of hypotheses that concurrently test the explanatory power of RDT and the ABV.

From a purely economic standpoint, antecedents of organizational attention to firms' capital providers are based on resource dependence propositions. Accordingly, organizations are more likely to pay attention to capital providers

that control resources critical to organizations' operations and survival. The degree of attention paid to a resource provider varies between organizations that are more or less dependent upon the resource in question. Although resource dependence seems to offer a straightforward explanation for organizational attention, we have concerns about the substantive and/or symbolic character of attention as an organizational resource. Resource dependence theory proposes that dependencies on the external environment predict organizational structure and outcomes (Pfeffer and Salancik 1978). However, Pfeffer (1981) states that the correspondence between critical dependencies and organizational action holds true for substantive outcomes, and that only a small effect of external control may be expected for symbolic outcomes.

As maintained by the ABV, cognition and action are not predictable on the basis of individual characteristics, but are consequences of the situations in which decision-makers find themselves, such that attention is linked to the immediate context in which cognition and action are situated. Consequently, organizational attention is influenced by various factors ranging from cognitions of the top management team members (Levy 2005, Cho and Hambrick 2006 and Yadav, Prabhu and Chandy 2007) to external environments (Kabanoff and Brown 2008). Although the ABV assumes that it is the individual who ultimately pays attention, it proposes that decision-makers' focus of attention (principle of focus of attention) is situated and dependent upon the context (principle of situated attention) and the organizational structure (principle of structural distribution of attention). Therefore, the model of situated attention proposes that attention structures ultimately provide decision-makers with interests and identities that are of significance and interest to the organization. It also suggests that decision-makers' attention is situated in the firm's procedural and communication channels and that the enactment of the environment is shaped by the issues and answers available and by the interactions among participants in the specific channel.

3.3.1 Firm level antecedents

Absolute attention to shareholders Larger firms attract more public attention which may affect the absolute amount of organizational attention as a consequence. Pressure to be more effective also increases with organizational size. From a purely resource dependence perspective, increased complexity accompanies increased size, which, in turn, brings about additional critical dependencies. Conversely, larger organizations might also be more powerful, thereby increasing their insulation capacity (Greening and Gray 1994). An institutional perspective proposes that “the institutionalized expectations of other firms, consumers, and the state exert greater influence” (Goodstein 1994, p. 356). Hence, pressures are heavily felt in large organizations (Ingram and Simons 1995 and Julian et al. 2008). Additionally, legitimacy issues become more salient for larger organizations (Pfeffer and Salancik 1978). As a result, we expect that organizational attention will be positively affected by an increase in firm size.

H1: Firm size has a positive relationship with absolute attention to shareholders.

On one hand, RDT suggests that the use of organizational slack as a strategy may help organizations to cope with interdependence because it provides them with leeway to deal with a larger set of environmental elements. “Organizational slack, frequently apparent in the form of extra profits or resources, is useful not only to make the owners and managers happy but to facilitate managing the environment of competing demands” (Pfeffer and Salancik 1978, p. 274). On the other hand, according to the literature on attention, organizational slack enables an expansion of the attention capacity because it represents extra resources available to the organization that can be used to increase organizational attention to external and internal constituents, among other things (March and Olsen 1976).

From an attention perspective, organizations can use slack to buffer external environmental constraints. Yet, they can also use slack resources to attend to internal aspects of the organization (Cyert and March 1963). The underlying idea of the ABV is that organizational slack is a cushion that enables an organization to amplify and / or change its focus of attention (Chen and Miller 2007). However, this need not be done by attending more to external demands. Nevertheless, from both RDT and the ABV points of view, organizational slack provides organizations with resources that can be used to better manage their external environment.

H2: Organizational slack has a positive relationship with absolute attention to shareholders.

Relative attention to shareholders According to the ABV (Ocasio 1997), organizational attention depends on various aspects of organizational structures. Attention structures and procedural and communication channels direct organizational attention by setting rules, and creating policies, procedures and guidelines. Consequently, specific channels of communication will direct attention according to their very specific rules and routines. For instance, letters to shareholders (as are the focus here) are annual company documents addressed to shareholders and to other organizational stakeholders. They provide qualitative accounts of the organizations' past events and future prospects. Additionally, these letters are considered a privileged locus of communication with both internal and external environment. Thus, like the organizational size – absolute attention relationship, we expect that dedicated attention to shareholders will also be positively affected by firm size.

H3: Firm size has a positive relationship with relative attention to shareholders.

However, different from the organizational slack – absolute attention relationship, we expect that organizational slack will be negatively related to relative attention to shareholders. Considering our focus on letters to shareholders, we expect the cushion provided by those extra resources will be directed to attend to other stakeholders.

H4: Organizational slack has a negative relationship with relative attention to shareholders.

From a resource dependence perspective, measures of performance can work as proxies for two distinct concepts, namely effectiveness and efficiency. According to Pfeffer and Salancik (1978 p. 11), the difference between these concepts “... is at the heart of the external versus internal perspective on organizations.” On one hand, effectiveness, an external standard, is the ability of an organization to create acceptable actions and outcomes. On the other hand, efficiency, an internal standard, is the ability of an organization to make good use of resources in relation to the output. Since we are interested in understanding firms’ attention to shareholders, a specific constituency (Connolly, Conlon and Deutsch 1980) and resource provider, we use financial market performance as a proxy measurement of the firm’s effectiveness towards its shareholders. Conversely, accounting measures of financial performance such as return on equity (ROE) or return on assets (ROA) are ratios of utilization of resources to output, and can therefore be seen as proxies for a firm’s efficiency.

Using different measures of attention, Kacperczyk (2009) found a positive relationship between attention to primary stakeholders and firm profitability measured by ROE. In our specific case, we propose firm performance has different effects on attention to shareholders depending on the measures used. Whereas accounting measures of firm performance are good proxies for the efficient use of

internal resources, market measures are better proxies for the effectiveness in meeting shareholders demands. Thus, based on the assumptions of RDT, we hypothesize that market financial performance affects shareholder attention, whereas accounting financial performance has no effect.

According to the literature on self-serving attributes and impression management, firms facing low performance will use less explicit language (Staw, McKechnie and Puffer 1983) to explain their poor performance. Letters to shareholders might be used to convince shareholders and other stakeholders that, despite their performance, the firm is still operating in an environment under control (Salancik and Meindl 1984) and is operationally sound and stable (Segars and Kohut 2001). Following Bettman and Weitz (1983) who suggest that the conditions of the internal and external environment affect the amount of causal reasoning, we hypothesize a negative relationship between firm market performance and shareholder attention.

H5: Firm accounting performance has no effect on relative attention to shareholders.

H6: Firm market performance has a negative relationship with relative attention to shareholders.

3.3.2 Country level effects

In a significant amount of the literature on corporate governance, researchers make a broad distinction between two governance systems: outside and insider systems. Outsider systems (referred to as the Anglo-American shareholder model) are characterized by dispersed ownership of firms and are systems in which markets for corporate control work as a crucial mechanism tackling agency problems between managers and shareholders. Conversely, insider systems (referred to as the stakeholder model in continental European countries) are characterized by

concentrated ownership and represent systems in which large shareholders play an important role in monitoring management (Faccio and Lang 2002 and Aguilera and Jackson 2003). Thus, the relationship between firms and their shareholders is expected to differ between these and other governance systems since not all systems fit into these two typologies (Heugens and Otten 2007 and Aguilera et al. 2008). Firm ownership, capital structures, and capital markets play definitive roles in determining organizational outcomes. Hence, to explain organizational outcomes it is important to consider both the interaction of these external factors with internal aspects of the firm (Heugens and Otten 2007) and also the diversity of identities among shareholders and other stakeholders (Aguilera and Jackson 2003; Matten and Moon 2008).

Previous empirical work showed that CEO's and decision-makers' priorities change according to the environment in which they are operating (Robinson and Shimizu 2006 and Cho and Hambrick 2006). Accordingly, we argue here that organizational attention and outcomes are not context-free and, thus, "different organizational environments mediate hypothesized relationships between sets of practices and organizational outcomes, such as effectiveness, efficiency, or performance" (Aguilera et al. 2008, p. 478). Historically entrenched institutions at the country level affect both the way firms are governed (Aguilera and Jackson 2003) as well as the interdependencies among shareholders and other stakeholders (Matten and Moon 2008).

An important implication of the contextual effects of the environment on organizations, which is of particular interest in the context of this dissertation, is related to the various ways in which firms operating in different countries relate to their stakeholders (Maignan and Ralston 2002). "Comparative research in CSR between Europe and the United States has identified remarkable differences between companies on each side of the Atlantic" (Matten and Moon, 2008 p. 404).

In European countries, the role of stakeholders is more prominent than in the U.S., where the notion of shareholder supremacy prevails. The role of capital markets as source of finance (Aguilera and Jackson 2003) and the influence of shareholders on decision-making and managerial discretion (Crossland and Hambrick 2007) provide explanations for the question of why corporations in the U.S. are explicit about their CSR policies and practices (Maignan and Ralston 2002) whereas in Europe they tend to be more implicit (Matten and Moon 2008).

Both North-American and European firms will use explicit language to explain poor performance to their shareholders. However, given shareholder supremacy in the American context and the focus on stakeholders in the European context, we expect variation between these contexts. Therefore, we hypothesize that the relationship between firm performance and shareholder attention will be comparatively higher for American companies.

H7: The relationship between market performance and relative attention to shareholders is stronger for American companies than for European companies.

3.4 Data and methods

In our study, we follow a number of empirical research that have measured attention using content analysis of letters to shareholders (D'Aveni and McMillan 1990, Abrahamson and Hambrick 1997, Levy 2005, Cho and Hambrick 2006, Yadav, Prabhu and Chandy 2007 and Keegan and Kabanoff 2008). We believe this communication channel provides a privileged locus on the basis of which to test the environmental and organizational effects on organizational attention. Firstly, we agree with Rindova, Becerra and Contardo's (2004) proposition that those documents and texts are important means for acquiring stakeholder support, which can contribute to organizational outcomes. This characteristic of letters to

shareholders is also emphasized by Pfeffer (1981) when describing the role of management, and also by Staw, McKechnie and Puffer (1983) who suggest the use of the letters to shareholders as means of protecting and expanding firms' domains. Secondly, the use of annual reports and letters to shareholders enables comparison across firms and across different contextual environments. Thirdly, annual reports are directed to general external and internal audience, providing different types of information, from financial results to HR policies. Within the annual reports, letters to shareholders offer a qualitative view of the quantitative information presented (Segars and Kohut 2001).

More specifically, letters to shareholders must contain an accurate account of the year under analysis and also “communicate commitment to enhancing shareholder wealth” (Segars and Kohut 2001). Hence, although the letters are directed to a specific stakeholder group, they can be taken as good proxies of firms' attention because they represent a relatively homogeneous communication channel that is under the purview of the top management team, who will at least revise the content of this communication to ensure its validity.

Letters to shareholders as data source Letters to shareholders provide a privileged publicly available source of comparable company-level data (Bettman and Weitz 1983). The letters serve as “particularly good indicators of the major topics that organizational managers attend to” and revealing “how much attention is paid to various aspects of the environment, relative to others” (D'Aveni and MacMillan 1990, p. 640). Despite the common use of letters to shareholders to measure attention, none of these studies has had an explicit objective of testing the ABV (Ocasio 1997), in which these very specific documents play an important role as part of the model of situated attention and firm behavior. Annual reports, customer satisfaction surveys, memoranda and various other formal and informal documents comprise the procedural and communication channels of the ABV.

Although annual reports, in general, and letters to shareholders, specifically can be seen as a privileged communication channels to manage external impressions about organizations (Staw, McKechnie and Puffer 1983, Bettman and Weitz 1983, Salancik and Meindl 1984, Abrahamson and Park 1994) those channels are also relevant governance channels which reflect important concrete and contextual aspects of the organization's attentional process (Abrahamson and Amir 1996 and Ocasio and Joseph 2005 and 2006). Thus, we chose to use letters to shareholders to collect data about organizational attention not only because they provide comparable measures of attention, which are publicly available, but, more importantly, because of their central role in the model of situated attention. When taken together, these characteristics make shareholders' letters a suitable data source for our research objectives.

Sample Our sample is derived from the sample used by the Reputation Institute¹. The Reputation Institute is responsible for the RepTrak dataset, an index of corporate reputation scores, created on the basis of the result of a survey conducted in different countries during the first two of months of every calendar year (Reputation Institute 2007). The sampling process adopted by the Reputation Institute departs from the list of the world's 300 largest companies (in terms of revenue). When a country has fewer than 10 of these companies, then the next largest firms within that country are added to the sample until there are at least 10 firms for each country (Reputation Institute 2006). Their original sample is as large as 1000 companies, however only 600 companies are actually rated. Companies included in the RepTrak survey are only rated in their home countries and must have sufficient general public visibility to be included. Additionally,

¹ We would like to thank the Reputation Institute for providing access to the RepTrak data.

companies surveyed by the Reputation Institute are commercial companies, and, as such, are neither purely business to business nor investment trust funds.

In our research we departed from the list of 600 companies from 24 different countries rated by the RepTrak survey in 2006. From this list, we excluded privately held firms and focused on 410 publicly listed companies for which the financial data was publicly available. We also excluded a number of companies from the list of 410 publicly listed companies either because they were holding companies (13) or because we could not analyze their letters to shareholders (84). Of these cases, some companies did not publish letters to shareholders in their annual reports, others did not even have an annual report available (only their financial statements), some companies' letters to shareholders were only published in the native language of the home country and finally some letters could not be digitally converted to be used in the qualitative analysis software (NVivo 2.0). Our final sample is, therefore, comprised of the letters to shareholders published in 2004 from 313 companies.

Coding procedure The use of content analysis of letters to shareholders to study and measure attention has been successfully applied in past research (D'Aveni and McMillan 1990, Abrahamson and Hambrick 1997, Levy 2005, Cho and Hambrick 2006 and Yadav, Prabhu and Chandy 2007). As was suggested by Sonpar and Golden-Biddle (2008, p. 795-796), this combination of data source and analytical technique is well suited to elaborating upon adolescent theories, such as the ABV. The basic idea behind this technique is to classify text into reliable content categories, which are then converted into valid variables for use in further research (Weber 1990). In our research we used phrases or sentences as our unit of analysis based on the assumption that "groups of words reveal underlying themes" (Duriau, Reger and Pfarrer 2007, p. 6).

The coding procedure had several stages. In a first phase, one of the authors read 10 letters to shareholders of companies from three different home-countries (US, The Netherlands and Brazil) to check whether there were qualitative differences in the content regarding shareholder attention and other stakeholders' attention. We understand shareholder attention as the time and effort allocated by the firm to meet the interests of its shareholders. Strategic actions such as mergers and acquisitions, issues concerning buyouts, dividends and initial public offerings, activism and financial information disclosure are some of the issues we classify as firm attention to their shareholders. On the other hand, we classify local communities support, charity, corporate environmental programs, customer satisfaction, procurement, organizational health and safety as firm attention to stakeholders. Although attending to the demands of different constituencies (society at large, the environment, customers, suppliers, employees, and so on), these are topics known to be stakeholder oriented (Donald and Preston 1995, Clarkson 1995, Kochan and Rubinstein 2000 and Coombs and Gilley 2005). The 10 letters to shareholders read for this first stage of our coding procedure were from different companies than the ones listed in our sample. We did a relatively loose reading and classification of sentences for this sample of letters, which also had the objective of listing the most salient themes (our coding categories) addressed to the various firms constituencies.

In a second stage, the topics that appeared in the letters to shareholders were discussed with two scholars with expertise in the fields of corporate governance and stakeholder management. By comparing these topics with the literature, the objective of these discussions was to develop an inventory of unambiguous topics that could be found on letters to shareholders that would indicate shareholder and/or stakeholder attention. After a series of discussions and after sending the list of grouped categories to an expert panel consisting of 10 scholars from the field of management studies, we entered a third phase. We conducted a test run of our

coding scheme using NVivo software, assigning eight letters to shareholders to a Master's student for analysis. The author simultaneously coded the same letters. Possible inconsistencies and ambiguities were discussed before the remaining letters were coded. The final version of the coding scheme is comprised by a list of 22 categories grouped according to focus of attention (refer to Figure 3.1 for an overview of the coding categories). Based on the dichotomy between shareholder and stakeholder, we created two proxy measures, one for shareholder attention and the other for stakeholder attention.

Dependent variable Attention was measured using the results of the content analyzed letters. The proxies for shareholder and stakeholder attention were operationalized following the measures of relative attention used in previous works such as D'Aveni and MacMillan (1990) (degree of attention) and Levy (2005) (proportionate attention). Additionally, we also created a proxy measure for *absolute attention to shareholders* which is the logarithm value of the total number of characters displayed by the letters to shareholders. Hence, our proxy for *relative shareholder attention* is the ratio of characters coded under themes (or categories) of shareholders interests by the total number of characters displayed on the letter and similarly *relative stakeholder attention* is the number of characters coded under stakeholder categories divided by absolute attention.

Figure 3.1: Coding categories

SHAREHOLDER ATTENTION	STAKEHOLDER ATTENTION
<i>Financial capital categories</i>	<i>Social capital categories</i>
Shareholder value & earnings Shareholder strategy Managerial alignment Shareholder activities Financial reporting & auditing	CSR policies and programs (general) Corporate giving Ethics and compliance Local communities, minorities and diversity
	<i>Natural capital categories</i>
	Environmental policies and programs Environmental control
	<i>Political capital categories</i>
	Governmental involvement
	<i>Commercial capital categories</i>
	<i>Customers & clients categories</i>
	Satisfaction management Product safety and development
	<i>Suppliers categories</i>
	Contractual issues Partnership for R&D and market development
	<i>Human capital categories</i>
	Organizational climate & work quality Training & development investments Occupational health and safety Employee financial benefits Career planning & Job protection Labor relations (<i>Union</i>)

Independent variables There are several measures that could be used to indicate *size*, including total assets, total sales and number of employees. We opted to use total assets instead of total sales and the number of employees, which could also be seen as proxies for customers and employees dependence, respectively. Among measures of organizational *slack* (Bourgeois 1981), we used the current ratio (ratio of current assets to current liabilities), which is a measure of unabsorbed slack, or uncommitted liquid resources. The current ratio is a measure of organizational slack that indicates the firm's ability to meet immediate obligations or debts (Singh 1986 and Cheng and Kesner 1997). Thus, being a measure of available resources, current ratio captures the arguments developed in our hypothesis about the relationship between organizational slack and attention. We used return on equity (ROE) and Tobin's Q for our measures of *financial performance*; accounting and market respectively. Whereas ROE captures how well the firm is using its resources, Tobin's Q measures investors' expectations of the firm's profitability. We calculated Tobin's Q as the ratio of the firm's market value to its replacement costs using the formula put forth by Lindenberg and Ross (1981). All of these data were drawn from the Worldscope database.

Board independence as control The model of situated attention and firm behavior (Ocasio 1997) highlights the crucial role that decision-makers play in directing organizational attention because of their influence on the valuation of issues, especially in governance channels (Barnett 2008). The ABV distinguishes between players and decision-makers. Accordingly, decision-makers are social actors that participate in procedural and communication channels and players are social actors (or a group of actors) that can influence the attentional process by exercising their power (Ocasio 1997).

Assuming that the board of directors is a concrete group of actors that have some control or influence over the CEO (Zald 1969 and Bainbridge 2002), we added

variables indicating board independence to control for the influence of directors (players) on the CEO (decision-maker). We used a dichotomous measure to indicate that a CEO has a dual role as chair of the board of directors (*CEO duality*), and the *ratio of inside directors*, or the number of members of the board who are also part of the management team divided by the total number of directors on the board (see Dalton et al. 1998). These two variables provide proxy measures indicating higher CEO discretion over the content of the letters to shareholders.

Analysis and model development In order to test our hypotheses, we developed three sets of models for the different dependent variables: *absolute shareholder attention*, *relative shareholder attention* and *relative stakeholder attention*. As was discussed earlier, our measures of attention were collected by means of content analysis of the text of one specific communication and procedural channel in the model of situated attention and firm behavior (i.e. letters to shareholders). Hence, despite the different dependent variables, our sets of models include the same independent variables that were used to test the antecedents of attention to shareholders who are the main target audience of the content analyzed documents. The underlying reasoning here is that our measure for absolute attention is less sensitive to financial performance because the publication of the letters to shareholders is expected and predictable, independent of current financial performance. This means that regardless of the circumstances at hand, some amount of attention will always be dedicated to shareholders. However, the amount of this attention that is fully dedicated to and focused upon shareholders is hypothesized to be affected by financial performance. Additionally, we test whether the antecedents of relative shareholder attention also have an effect on stakeholder attention. In these set of models we investigate whether or not (positive) financial performance offers decision-makers more flexibility in terms of the attention they focus on shareholders and whether or not this shareholder

“attention slack” (Barnett 2008) is be dedicated to other corporate constituencies (Kacperczyk 2009).

Our three dependent variables have mean values that are significantly different from zero (Table 3.1 provides a summary of mean and standard deviation values), very few cases have values that equal zero and the frequency distributions tend toward normality, allowing us to employ ordinary least squares (OLS) regression analysis which is a simple and straightforward statistical technique. OLS has the additional advantage of providing an intuitive means of testing moderating effects, such as those hypotheses regarding country effects on shareholder attention (Cohen et al. 2003). The inclusion of interaction terms may contribute to multicollinearity, which, in turn, may artificially inflate the size of the regression coefficients (Aiken and West 1991). For that reason, we used mean-centered continuous measures for the variable included in the interaction terms (e.g. market financial performance). According to the results of the multicollinearity diagnostic tests we carried out, our models do not reveal multicollinearity problems (none of the computed variance inflation factors (VIF) were higher than five). Due in part to the increased variance of our sample that consists of data on companies from various countries, and also to the number of cases with missing values for one or more of the independent variables, we conducted a *post hoc* power analysis (Cohen 1992) of our results to test the effect size of our statistical model. This test revealed that all our relevant models exhibited more than 80% power (specifically, the full model for shareholder attention exhibited 92.49% power and the full model for stakeholder attention exhibited 80.92% power).

3.5 Results

Table 3.1 provides descriptive statistics and bivariate correlation coefficients for all of the variables included. The results of our absolute attention model, presented in Table 3.2, confirm the positive effect of size on attention, as stated in our first hypothesis. Our prediction of a positive effect of organizational slack on organization attention (Hypothesis 2), however, was disconfirmed.

Coefficients for size are positive and significant, whereas coefficients for slack are not significant and are approximately equal to zero. It is interesting to observe that one of our measures of board (in)dependence, namely the ratio of inside directors, has a negative and significant coefficient, suggesting that absolute attention is negatively influenced by executive-dominated boards.

The results presented in Table 3.3 provide support for four out of five of our hypotheses regarding relative shareholder attention. Although we found a positive and significant effect of size on absolute attention, the coefficients for size regressed on relative shareholder attention are not significant. On the other hand, the coefficients for slack are found to be statistically significant and negative in all relevant models for relative attention to shareholders, providing confirmatory evidence for Hypothesis 4. Together, these results show that size and slack do not have the same effects on organizational attention and shareholder attention as was predicted. Both hypotheses regarding the effects of financial performance were confirmed. Coefficients for accounting measures of financial performance were not found to be significant and, as such, have no effect on shareholder attention. Conversely, coefficients for the effects of market financial performance on shareholder attention are significant and negative.

Table 3.1: Means, Standard Deviations and Correlations

	N	Mean	s.d.	1	2	3	4
1. Absolute attention	313	3.89	0.26				
2. Shareholder attention	313	28.78	17.61	-.01			
3. Stakeholder attention	313	16.00	12.89	.20**	-.44**		
4. CEO duplicity ^a	309	0.33	0.47	.11	.02	.01	
5. Ratio inside directors	291	0.18	0.20	-.05	.09	-.03	.04
6. Size	313	4.48	0.72	.10	-.03	.09	.10
7. Slack	243	0.09	0.20	.08	-.14*	.11	-.04
8. Accounting performance	299	1.16	0.35	-.03	.01	.07	.02
9. Market performance	238	1.15	0.73	.07	-.09	.05	.15*
10. Reputation score	313	64.35	9.19	.01	-.05	.01	.03
11. European companies ^a	126	0.40	0.49	-.16**	.14*	-.13*	-.29**
12. ROW companies ^{a, b}	111	0.35	0.48	.01	-.03	.09	-.21**

*** p < .01

* p < .05

a Dummy variable.

b ROW stands for "Rest of the World".

Table 3.1: CONTINUED

	5	6	7	8	9	10	11
1. Absolute attention							
2. Shareholder attention							
3. Stakeholder attention							
4. CEO duplicity ^a							
5. Ratio inside directors							
6. Size	.02						
7. Slack	-.18**	-.19**					
8. Accounting performance	-.12*	-.01	.07				
9. Market performance	-.06	-.11	.11	.33**			
10. Reputation score	.04	-.22**	.17**	-.04	.13*		
11. European companies ^a	-.21**	-.08	-.02	.03	.01	.00	
12. ROW companies ^{a, b}	.35**	-.16**	-.05	-.09	-.23**	-.01	-.61**

** p < .01

* p < .05

a Dummy variable.

b ROW stands for "Rest of the World".

Table 3.2: Results of OLS Regression Analysis of Absolute Attention ^a

Variables	Model 1		Model 2		Model 3	
	<i>Board independence</i>		<i>Size and slack</i>		<i>Financial performance</i>	
CEO duplicity	0.04	(0.04)	0.00	(0.04)	-0.02	(0.04)
Ratio insider directors	-0.10	(0.09)	-0.09	(0.09)	-0.10	(0.09)
Size			0.14 ⁺	(0.03)	0.15**	(0.04)
Slack			0.03	(0.10)	0.02	(0.10)
Accounting performance					-0.08	(0.05)
Market performance					0.08	(0.03)
EU companies						
ROW companies						
EU x mkt perf.						
ROW x mkt perf.						
Constant	3.91	(0.03)	3.64	(0.15)	3.68	(0.16)
R ²	0.010		0.028		0.036	
F	1.026		1.431		1.230	

^a Standard errors are in parenthesis. N=207

⁺ p < .10

** p < .05

* p < .01

Table 3.2: CONTINUED.

Variables	Model 4			Model 5		
	<i>Country effects</i>			<i>Interaction effects</i>		
CEO duplicity	-0.06 (0.04)	0.00 (0.04)	-0.07 (0.04)	-0.07 (0.05)	-0.07 (0.05)	-0.07 (0.05)
Ratio insider directors	-0.14 ⁺ (0.09)	-0.14 ⁺ (0.10)	-0.14 ⁺ (0.10)	-0.14 ⁺ (0.10)	-0.14 ⁺ (0.10)	-0.14 ⁺ (0.10)
Size	0.14 ⁺ (0.03)	0.17** (0.04)	0.13 ⁺ (0.04)	0.13 ⁺ (0.04)	0.13 ⁺ (0.04)	0.13 ⁺ (0.04)
Slack	0.01 (0.10)	0.02 (0.10)	0.01 (0.10)	0.00 (0.10)	0.01 (0.10)	0.00 (0.10)
Accounting performance	-0.08 (0.05)	-0.08 (0.05)	-0.08 (0.05)	-0.08 (0.05)	-0.08 (0.05)	-0.08 (0.05)
Market performance	0.09 (0.03)	0.17 (0.03)	0.09 (0.03)	0.02 (0.04)	0.10 (0.03)	0.03 (0.04)
EU companies	-0.17** (0.04)		-0.19 ⁺ (0.06)	-0.20 ⁺ (0.06)	-0.19 ⁺ (0.06)	-0.20 ⁺ (0.06)
ROW companies		0.13 (0.04)	-0.02 (0.06)	-0.04 (0.06)	-0.03 (0.06)	-0.04 (0.06)
EU x mkt perf.				0.09 (0.05)		0.08 (0.05)
ROW x mkt perf.					-0.04 (0.07)	-0.02 (0.08)
Constant	3.77 (0.16)	3.63 (0.16)	3.78 (0.19)	3.79 (0.20)	3.79 (0.19)	3.79 (0.19)
R ²	0.061	0.047	0.061	0.065	0.062	0.065
F	1.850	1.411	1.614	1.523	1.459	1.368

^a Standard errors are in parenthesis. N=207

⁺ p < .10

** p < .05

* p < .01

Table 3.3: Results of OLS Regression Analysis of Shareholder Attention ^a

Variables	Model 1		Model 2		Model 3	
	<i>Board independence</i>		<i>Size and slack</i>		<i>Financial performance</i>	
CEO duplicity	-0.04	(2.54)	-0.02	(2.65)	0.01	(2.72)
Ratio insider director	0.07	(5.98)	0.05	(6.05)	0.05	(6.11)
Size			-0.06	(2.39)	-0.08	(2.43)
Slack			-0.13 ⁺	(6.71)	-0.12 ⁺	(6.72)
Accounting performance					0.09	(3.54)
Market performance					-0.14 ⁺	(1.81)
EU companies						
ROW companies						
EU x mkt perf.						
ROW x mkt perf.						
Constant	28.75	(1.82)	37.70	(10.19)	35.33	(11.10)
R ²	0.006		0.024		0.041	
F	0.592		1.239		1.437	

^a Standard errors are in parenthesis. N=207

⁺ p < .10

** p < .05

* p < .01

Table 3.3: CONTINUED

Variables	Model 4			Model 5		
	<i>Country effects</i>			<i>Interaction effects</i>		
CEO duplicity	0.06 (2.75)	-0.02 (2.73)	0.06 (3.09)	0.06 (3.09)	0.06 (3.09)	0.06 (3.07)
Ratio insider director	0.11 (6.21)	0.12 (6.63)	0.11 (6.60)	0.10 (6.64)	0.12 (6.62)	0.11 (6.61)
Size	-0.06 (2.39)	-0.11 (2.45)	-0.06 (2.54)	-0.07 (2.54)	-0.05 (2.56)	-0.05 (2.55)
Slack	-0.11 (6.60)	-0.12 ⁺ (6.66)	-0.11 (6.64)	-0.13 ⁺ (6.76)	-0.10 (6.72)	-0.12 ⁺ (6.75)
Accounting performance	0.09 (3.47)	0.10 (3.51)	0.10 (3.48)	0.10 (3.48)	0.09 (3.50)	0.08 (3.49)
Market performance	-0.14 ⁺ (1.78)	-0.17 ^{**} (1.83)	-0.15 ⁺ (1.84)	-0.23 ^{**} (2.46)	-0.18 ^{**} (1.93)	-0.32 [*] (2.76)
EU companies	0.22 [*] (2.60)		0.21 ^{**} (3.79)	0.19 ⁺ (3.83)	0.21 ^{**} (3.79)	0.178 (3.83)
ROW companies		-0.18 ^{**} (2.89)	-0.01 (4.18)	-0.04 (4.24)	0.01 (4.23)	-0.02 (4.25)
EU x mkt perf.				0.11 (3.42)		0.18 ⁺ (3.66)
ROW x mkt perf.					0.09 (4.96)	0.14 ⁺ (5.31)
Constant	27.84 (11.18)	40.82 (11.27)	28.53 (12.83)	29.68 (12.86)	27.65 (12.85)	28.89 (12.81)
R ²	0.082	0.064	0.082	0.089	0.088	0.101
F	2.540	1.955	2.213	2.127	2.106	2.208

^a Standard errors are in parenthesis. N=207

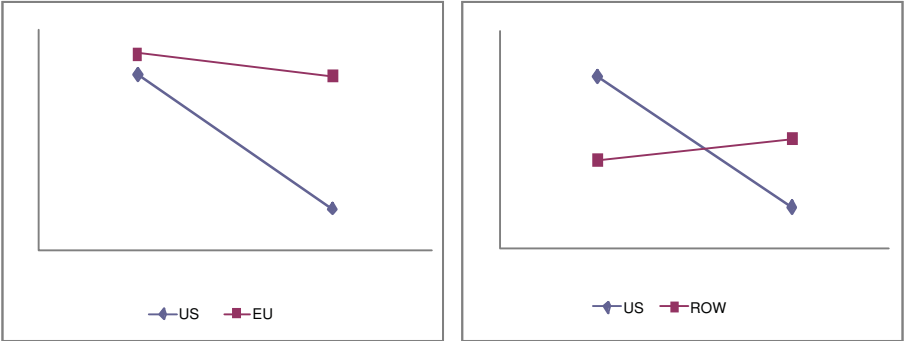
⁺ p < .10

^{**} p < .05

^{*} p < .01

Finally, our country level hypothesis was also confirmed by the coefficients of the interaction terms between European companies (and companies from the rest of the world) and market financial performance. For a better grasp of the interaction effects between country groups and financial market performance, we calculated the slope coefficients for the European companies and also for companies in the rest of the world and plotted the relationships between the country groups' dummy variables at the levels of bad and good financial performance (i.e. one standard deviation below and above the mean) (Aiken and West 1991). As depicted by Figure 3.2, we can see that shareholder attention in American companies is considerably more sensitive to variation in financial market performance, than it is in companies from other countries.

Figure 3.2: Moderating effects of country groups on shareholder attention



In sum, we found support for the all hypotheses with the exception of Hypothesis 2, which predicted a positive relationship between organizational slack and absolute attention to shareholders. Our findings suggest that relative attention to shareholders is sensitive to size (Hypothesis 3), slack (Hypothesis 4) and market performance (Hypothesis 6). Additionally, we found support for the non-effect of

accounting performance on attention to shareholders, as was predicted by Hypothesis 5. Finally, our results support our hypothesized country-level effects (Hypothesis 7) suggesting that attention to shareholders in American companies is more sensitive to market performance when compared to attention to shareholders in European companies.

3.5.1 Additional analysis

Does good financial performance have a positive effect on stakeholder attention?

Although addressed to shareholders, the letters to shareholders are also of interest to other constituents of the firm. In some cases the opening of the letter explicitly addresses stakeholders and very often all letters include some paragraphs discussing employee interests and demands. Therefore, we also tested whether or not financial performance and other antecedents of shareholder attention also affect stakeholder attention. When experiencing positive financial performance and in the presence of organizational slack, CEO's relative attention to shareholders was negatively affected. Does strong financial performance offer CEO's more flexibility to address stakeholders' interests, thereby increasing relative stakeholder attention? The results presented in Table 3. 4 indicate that stakeholder attention is neither affected by the firm's market financial performance nor by organizational slack, as their coefficients were not found to be significant. However, the coefficient of size is positive and significant, indicating that larger firms pay more attention to their stakeholders.

Table 3.4: Results of OLS Regression Analysis of Stakeholder Attention ^a

Variables	Model 1		Model 2		Model 3	
	<i>Board independence</i>	<i>Size and slack</i>	<i>Size and slack</i>	<i>Financial performance</i>	<i>Financial performance</i>	<i>Financial performance</i>
CEO duplicity	0.00 (1.87)	-0.05 (1.94)	-0.05 (1.94)	-0.07 (2.00)	-0.07 (2.00)	-0.07 (2.00)
Ratio insider directors	-0.04 (4.40)	-0.02 (4.40)	-0.02 (4.40)	-0.02 (4.50)	-0.02 (4.50)	-0.02 (4.50)
Size		0.16** (1.75)	0.16** (1.75)	0.17** (1.79)	0.17** (1.79)	0.17** (1.79)
Slack		0.08 (4.92)	0.08 (4.92)	0.07 (4.65)	0.07 (4.65)	0.07 (4.65)
Accounting performance				-0.02 (2.60)	-0.02 (2.60)	-0.02 (2.60)
Market performance				0.09 (1.33)	0.09 (1.33)	0.09 (1.33)
EU companies						
ROW companies						
EU x mkt perf.						
ROW x mkt perf.						
Constant	16.58 (1.34)	0.45 (7.46)	0.45 (7.46)	-0.18 (8.17)	-0.18 (8.17)	-0.18 (8.17)
R ²	0.001	0.027	0.027	0.033	0.033	0.033
F	0.126	1.393	1.393	1.144	1.144	1.144

^a Standard errors are in parenthesis. N=207

+ p < .10

** p < .05

* p < .01

Table 3.4: CONTINUED.

Variables	Model 4			Model 5		
	Country effects			Interaction effects		
CEO duplicity	-0.12 (2.04)	-0.03 (2.00)	-0.06 (2.28)	-0.06 (2.28)	-0.06 (2.28)	-0.06 (2.28)
Ratio insider directors	-0.07 (4.60)	-0.11 (4.85)	-0.10 (4.87)	-0.11 (4.90)	-0.11 (4.89)	-0.11 (4.91)
Size	0.16** (1.77)	0.21* (1.79)	0.19** (1.88)	0.19** (1.88)	0.19** (1.89)	0.19** (1.89)
Slack	0.06 (4.89)	0.07 (4.87)	0.07 (4.89)	0.06 (4.99)	0.06 (4.96)	0.05 (5.02)
Accounting performance	-0.02 (2.57)	-0.03 (2.56)	-0.03 (2.57)	-0.03 (2.57)	-0.02 (2.59)	-0.02 (2.59)
Market performance	0.09 (1.32)	0.13** (1.34)	0.12 (1.35)	0.06 (1.81)	0.15 ⁺ (1.43)	0.10 (2.05)
EU companies	-0.19** (1.93)		-0.08 (2.80)	-0.09 (2.83)	-0.08 (2.80)	-0.09 (2.84)
ROW companies		0.22** (2.12)	0.16 (3.08)	0.15 (3.13)	0.14 (3.12)	0.14 (3.15)
EU x mkt perf.				0.08 (2.53)		0.05 (2.72)
ROW x mkt perf.					-0.08 (3.66)	-0.06 (3.94)
Constant	4.49 (8.28)	-5.24 (8.24)	-1.95 (9.46)	-1.36 (9.50)	-1.39 (9.48)	-1.12 (9.52)
R ²	0.063	0.063	0.072	0.075	0.076	0.077
F	1.900	2.121	1.914	1.774	1.797	1.638

^a Standard errors are in parenthesis. N=207

⁺ p < .10

** p < .05

* p < .01

Do letters to shareholders actually reflect impression management efforts rather than organizational attention?

Despite being a suitable data source for the current study, there are concerns regarding a possible use of these of letters to shareholders for impression management purposes. Impression management literature suggests that corporate communications reflect intended strategies to persuade and convince external public about the appropriateness of organizational actions (Marcus and Goodman 1991, Elsbach and Sutton 1992, Arndt and Bigelow 2000 and Bansal and Clelland 2004). It further suggests that attempts to manage impressions are particularly prominent in performance justifications (Staw, McKechnie and Puffer 1983, Bettman and Weitz 1983, Salancik and Meindl 1984, Abrahamson and Park 1994). Impression management scholars would argue that letters to shareholders are carefully crafted documents intended to manipulate external audiences' perceptions rather than a governance and procedural channel reflecting organizational attention, as is suggested by the ABV literature.

To test whether or not texts derived from letters to shareholders that are dedicated either to shareholders or stakeholders simply reflect impression management efforts rather than organizational attention, we estimate the effects of our basic model, including board independence measures, company level variables (size, slack and financial performance) and our measures of relative attention against the reputation scores measured by the RepTrak data. Results of the regression analysis of corporate reputation reduce the likelihood that impression management as an alternative explanation is the correct explanation and corroborate our argument in favor of organizational attention. According to the results presented in Table 3.5, neither shareholder nor stakeholder attention has a significant effect on corporate reputation.

Table 3.5: Results of OLS Regression Analysis of Corporate Reputation ^a

Variables	Model 1 <i>Board independence</i>	Model 2 <i>Size and slack</i>	Model 3 <i>Financial performance</i>	Model 4 <i>Relative attention</i>
CEO duplicity	-0.07 (1.28)	-0.03 (1.30)	-0.07 (1.33)	-0.07 (1.33)
Ratio insider directors	0.08 (3.02)	0.12 ⁺ (2.97)	0.11 (2.99)	0.11 (2.99)
Size		-0.11 (1.18)	-0.1 (1.19)	-0.07 (1.20)
Slack		0.23* (3.29)	0.22* (3.28)	0.22* (3.29)
Accounting performance			-0.09 (1.73)	-0.09 (1.73)
Market performance			0.16** (0.88)	0.17** (0.89)
Shareholder attention				-0.06 (0.04)
Stakeholder attention				-0.06 (0.05)
Constant	65.84 (0.92)	72.24 (5.00)	73.30 (5.42)	73.21 (5.43)
R ²	0.01	0.08	0.10	0.11
F	1.086	4.360	3.831	3.382
			3.293	3.039

^a Standard errors are in parenthesis. N=223

⁺ p < .10

** p < .05

* p < .01

3.6 Discussion

In spite of the fact that content analysis of letters to shareholders has been used frequently in studies on organizational attention and impression management, we had some initial concerns regarding the validity of letters to shareholders as one of the procedural and communication channels modeled by Ocasio (1997). This issue was especially acute in the context of our research design as we focused our hypotheses on attention to external constituencies, specifically shareholders, in order to test RDT and the ABV concurrently. Therefore, in our analysis we considered impression management to be a potentially valid alternative explanation for our results. Although annual reports and letters to shareholders can be seen as an ideal communication channel with which to manage external impressions of organizations (Staw, McKechnie and Puffer 1983, Bettman and Weitz 1983, Salancik and Meindl 1984, Abrahamson and Park 1994), our results indicate that these corporate communications are also relevant governance channels. As such, they reflect important concrete and contextual aspects of the organization's attentional process as predicted by the ABV (Abrahamson and Amir 1996 and Ocasio and Joseph 2005 and 2006).

An interesting observation drawn from our results relates to the effect of organizational size on our various measures of attention: absolute, shareholder and stakeholder attention. In general, larger firms pay more absolute attention. However, they do not necessarily dedicate more of this attention to shareholders. Our research shows that organizational size affects absolute attention and attention to stakeholders. This result is in line with predictions drawn from RDT, which suggests that organizational size can be seen as a proxy for visibility and that larger organizations are vulnerable to a larger set of external interdependences. Thus, as a result of the increased number of resource dependencies, larger

organizations broaden their attention in order to manage their external environment.

In addition to the effects of size on organizational attention, our results pertaining to organizational slack and performance also provide insights. The negative effects of organizational slack and market firm performance on attention to shareholders indicates that these two firm level characteristics CEOs some leeway in terms of their ability to dedicate *less* attention to shareholders. However, a company's strong financial position and the latitude it provides to the CEO, does not necessarily guarantee that more attention will be allocated to other stakeholders. In a departure from the results reported by Kacperczyk (2009), we do not find that relief from sources of shareholder pressures and demands increases corporate attention to non-shareholder stakeholders. Although our results are not incompatible with the idea that more managerial discretion has an effect on shareholder attention, they do not substantiate the subsequent suggestion that an increase in managerial discretion, due to decreased shareholder pressure, leads to the attribution of increased attention to other stakeholders.

Our further analysis of the effects of financial market performance on shareholder attention in different countries may offer a better explanation not only of the results found by Kacperczyk (2009), but also for other studies on attention that rely on data derived from content analyzed letters to shareholders of companies from a single country, i.e. the U.S. (D'Aveni and MacMillan 1990, Abrahamson and Hambrick 1997, Levy 2005, Cho and Hambrick 2006 and Yadav, Prabhu and Chandy 2007). The prevalence of a logic of shareholder primacy (Bainbridge 2002) in the U.S. not only explains the sensitivity of attention to shareholders to variances in financial market performance. Additionally, it offers an explanation of the subsequent re-focusing of attention to other stakeholders and other issues of interest to the CEO. In European countries, as in the rest of the world, where

shareholders do not enjoy such a privileged position among other constituents, the logic might be more proximate to managerialism where “managers are [...] autonomous actors free to pursue whatever interests they choose” (Bainbridge 2002, p. 3). In the very specific case of letters to shareholders, one among many governance channels (Ocasio 1997), good market performance might offer CEOs more freedom to attend to other stakeholders, but also to reinforce the company’s identity (The Walt Disney Company 2004), or to express the CEO’s own ideas and view of the world (Berkshire Hathaway Inc. 2004). Furthermore, these arguments also provide support for our explanation over the alternative explanation based on an impression management perspective.

3.6.1 Theoretical contributions

One of the most criticized aspects of RDT is its environmental determinism with regard to organizational outcomes. External dependencies impose numerous constraints upon the focal organization, leaving no other option to respond accordingly in order to survive (Galaskiewicz et al. 1985, Finkelstein 1997 and Pfeffer 1997). RDT is also criticized for neglecting the embedded character of organizational moves as well as the reality of organizations as institutions. Additionally, RDT perspectives, it is argued, reduce and confine managerial action to the symbolic level (Pfeffer 1981). A resource dependence approach recognizes the multiplicity of internal and external environmental stimuli affecting organizations and the number of constraints on behavior including physical realities, social influences, personal preferences and cognitive capacities (Pfeffer and Salancik 1978, p. 15). However, a resource dependence approach focuses its explanation of the linkage between environments and organizations on the presence of structures and information systems as enablers of environmental enactment, failing to explore internal linkages, which are essential aspects of a complete explanation of organizational moves.

In a departure from the central tenet of the ABV that “to explain firm behavior is to explain how firms distribute and regulate attention of their decision-makers” (Ocasio 1997, p. 188), we suggest that the attentional perspective (Ocasio 1995 and 1997) of firm behavior is a more comprehensive model of the linkage between environment and organization as it takes both external and internal aspects of the environment into consideration. According to the ABV, organizational responses are the result of three interrelated aspects: the focus of attention of decision-makers, the very specific context in which decision-makers find themselves and the structural distribution of attention of the organization (Ocasio 1997). Because the ABV deals with multiple processes affecting firm behavior at environmental, organizational and individual levels, it not only offers a less deterministic view of the influence of the environment on focal organizations, but it also incorporates the managerial role as providing an additional explanation of organizational responses.

Our theoretical arguments and subsequent tests of our hypotheses highlight the complementary nature of the resource dependence theory and the attention-based view of the firm. The ABV provides RDT with a more comprehensive view of the relationship between environment and organizational outcomes, including both the external and the internal constraints on organizations. RDT, in turn, complements the ABV by making more explicit the effects of the environment on attention structures and, ultimately, on organizational behavior. Therefore, we contribute to the development of the ABV by providing an explanation for some of the mechanisms that explain “how the firm as a cultural and social system is shaped by the environment of action” (Ocasio 1997, p.193), which are not explicitly addressed in the model of situated attention and firm behavior.

3.6.2 Limitations and future research directions

Our sample consists of firm level data from companies from 24 different countries, bringing additional variance to be explained by theoretical and empirical tests. As we argued, there are many components of the organizational environment, including those at the country level, that might further our understanding of firm level phenomena (Crossland and Hambrick 2007). As a result of adding country level variance to our analysis, we experienced additional difficulties in identifying the very specific contextual factors that explain more of the phenomena under investigation. As suggested by Aguilera and Jackson (2003) and Matten and Moon (2008), there is a wide set of elements pertaining organizations' environment at the country level that affects how organizations respond to their stakeholders. It is not only the variety of these elements that adds to their complexity, but also the different combinations of these contextual elements and interactions between environmental and organizational characteristics that are also required for a full explanation of organizational practices, corporate strategies, and firm behavior (March and Olsen 1976). When we proposed testing country-level effects in our explanation of organizational attention, we were aware of the increased variance and complexity that was necessarily added to the current research problem as a result. With this in mind, we sought to extend beyond explaining variance alone in order to seek more statistical power and significant effects. In so doing, we geared our analysis toward capturing our arguments about the influence of the environment on very specific and localized aspects of organizational attention.

CHAPTER 4

SENSE AND SENSIBILITY: testing the effects of attention structures and organizational attention on financial performance

In our study we test the model of situated attention and firm behavior to explain organizational social responses. We hypothesize a positive relationship between the sensitivity of attention structures and organizational attention to social issues that, in turn, has an effect on financial performance. Using a unique dataset composed of indicators of social responsibility published by 338 Brazilian organizations between 2001 and 2007, we find support for our hypotheses. Our findings suggest that organizational attention to social issues fully mediates the relationship between attention structures and financial performance. We contribute to the field of business in society by unpacking the general relationship between social responsibility and financial performance.

4.1 Introduction

The attention-based view of the firm (ABV) has been applied to studies on decision-making and explains a wide array of organizational outcomes. Despite the numerous studies that have adopted the ABV to explain organizational outcomes, there are comparatively few studies that actually focus on the effects of organizational attention on financial performance (Levy 2005 and Bouquet, Morrison and Birkinshaw 2009). In addition to the fact that there are only relatively few studies exploring the relationship between organizational attention and financial performance, the role of attention structures in the model of situated attention proposed by Ocasio (1997) is only modestly explored by such studies (Yu et al. 2005, Jacobides 2007, Barnett 2008 and Rerup 2009). To be more

precise, to the best of our knowledge, there are currently no studies based on non-perceptual / self-presentational measures aiming to test the ABV comprehensively. Finally, a significant proportion of the studies using the ABV are based on U.S. data, thereby limiting their findings to that specific context.

Previous empirical research has illustrated the contingent and critical aspects of attention in terms of the development of innovation (Yadav, Prabhu and Chandy 2007), internationalization strategies (Levy 2005, Bouquet, Morrison and Birkinshaw 2009), market entry (Williams and Mitchell 2004, Eggers and Kaplan 2009) and forecasting ability (Durand 2003). In spite of its apparent versatility, the ABV has not been applied to issues that are germane to emerging economies. Take for instance the BRIC countries (Brazil, Russia, India and China): regarded as promising economies, these countries still face socio-economic problems that have the potential to hinder growth. Poverty alleviation, education, universal access to opportunities, and anti-discriminatory policies, are a few of the salient issues related to the environment of decision of organizations embedded in these countries. We argue that the ABV is uniquely equipped to explain organizational responses in these contexts in which both economic and social issues compete for organizational attention.

The context of our research is social responsibility of Brazilian organizations. For all its contradictions, Brazil reveals itself to be an interesting research context (Margolis and Walsh 2003). On one hand, its recent, yet strong, economic development has provided gains to the country and, amongst the other BRIC countries, Brazil is often considered to be in a position of comparative advantage. On the other hand, its social development lags far behind and the country still struggles with basic poverty issues such as hunger, high infant mortality, and low levels of education. Our unique dataset is composed of indicators of social

responsibility published by 338 Brazilian organizations between 2001 and 2007, totaling 1195 firm-year observations.

In this chapter, we develop a systematic test of the model of situated attention and firm behavior (Ocasio 1997) and, hence, provide several contributions. First, we contribute to the ABV by testing the explicit role of attention structures on the allocation of attention. Second, we contribute to research on attention by adopting a non-perceptual measure of attention. Instead, we use actual resource allocation patterns to measure the allocation of attention. Third, we also contribute to the ABV literature by deliberately testing the effects of organizational attention on financial performance. Next, we broaden the ABV research domain by testing our theoretical model on organizational responses to social issues for which the contingent aspect of organizational attention was not yet explored. Additionally, we extend the ABV by substantiating the role of organizational attention as a mediator between structure and performance. Finally, our study provides a test of the ABV outside of the U.S. context, which has been favored by empirical studies of organizational attention in the past. Our study also presents an important contribution to the field of business in society. First, we provide an explanation of the processes underlying returns on investment in social responsibility. Second, the application of the ABV to explain organizational responses to social issues helps to explain how social responsibility issues advance in the strategic agenda of organizations.

This chapter is structured as follows: first, we give a detailed description of some aspects of the ABV focusing on the contextual role of attention structures and emphasizing its strengths in explaining organizational responses. Next, we put forth our theoretical model on organizational responses to social issues based on attention structures, organizational attention and financial performance. We develop a set of hypotheses with regard to the linkage between the various

elements of our model. Then, we describe characteristics of our sample, define our measures and present structural equation modeling as the preferred method to test our hypotheses. Finally, we discuss the results, outline the contributions and limitations of our study and suggest some managerial implications of our findings for the Brazilian context.

4.2 The ABV at vantage point

The ABV is a structural perspective of how firms allocate and distribute attention. As previously discussed, the model extends Simon's work (1947) and suggests that a decision-maker's focus of attention is situated and dependent upon concrete and contextual structures. From an ABV perspective, attention structures, which include organizational policies, resources, work roles, people and their relationships (Ocasio and Joseph 2005), are the primary determinant of the attentional process. Attention structures influence allocation of organizational attention by affecting the availability and salience of issues and answers upon which decision-makers focus their attention. In this study, we test the process model of situated attention and organizational behavior elaborated by Ocasio (1997) by examining the effects of attention structures and allocation of attention on organizational outcomes. More specifically, we employ the ABV to understand organizational responses to social issues.

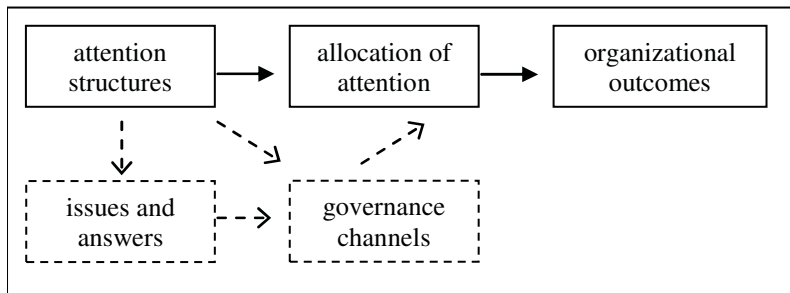
4.2.1 The contextual role of attention structures

Attention structures are social, economic, and cultural structures that direct the attentional focus of organizational decision-makers. They are the primary determinants of the model of situated attention (Yu et al. 2005 and Barnett 2008) and include organizational policies, human, physical and financial resources, work roles, people and their relationships (Ocasio and Joseph 2005, p. 47). From an

ABV perspective, attention structures provide the contextual aspects of the decision-making process.

As a contextual aspect of the ABV process model (see Figure 4.1 for a visual representation of this model. Note that the dotted lines indicate the linkages that are addressed in this chapter), attention structures are comprised of diverse elements that are likely to affect decision-making by giving precedence to issues that need attention. In a departure from March and Olsen's (1976) work, in which attention structures are limited to a set of authoritative rules, the ABV suggests that these structures consist of three additional elements. According to Ocasio (1997), the four regulators of organizational attention are: the rules of the game, players, structural positions and resources. Together, the elements of attention structures influence the distribution of managerial attention by producing different flows of information (Williams and Mitchell 2004).

Figure 4.1: Theoretical model based on the ABV



Although the ABV can be seen as a process model of decision-making, it also includes the role of other social actors, in addition to decision-makers, in influencing the process. In accordance with the ABV, decision-makers are specific social actors that actively participate in procedural and communication channels, whereas players are individuals from inside and outside the organization who

affect the regulation of organizational attention (Dutton et al. 2001, Dutton et al. 2002 and Bansal 2003). While decision-makers have discretionary roles as a result of their positions, players exert control over decision-makers as a result of their individual and structural power (Ocasio, 1997). Therefore, whilst decision-makers have their attention regulated by their structural position and rules of game, players can influence organizational attention by means of beliefs, skills and values they bring to the firm (March and Olsen, 1976).

Attention structures are an important part of the model of situated attention and organizational behavior because they generate a set of values that create order among issues in terms of relevance and also because they provide decision-makers with a set of interests that shape sensemaking and enactment of the environment (Ocasio 1997, p. 192). Attention structures act as a lens magnifying issues of priority that require attention. “Attention structures are the contextual factor within an organization that influence how its decision makers legitimize and prioritize activities and identify with possible issues vying for their attention” (Barnett 2008, p. 610). The structural aspect, together with its core argumentation, places the ABV in an advantaged position to contribute to the field of business in society. It provides a bold theoretical framework that explains fundamental issues, such as “how companies extract and appraise the stimuli for action; how companies generate response options; how companies evaluate these options and select a course of action; [...] and, finally, what consequences follow from corporate efforts to ameliorate social ills” (Margolis and Walsh 2003, p. 285).

4.2.2 An ABV perspective of organizational social responses

The attention-based view (Ocasio 1997) is particularly equipped to explain organizational social responses for various reasons. First, it proposes a cross-level process model of organizational attention providing a more comprehensive understanding of how individuals, organizations and environment interrelate to

explain organizational behavior. Second, the ABV constitutes a framework that combines both cognitive and structural processes involved in decision-making. Last, and most importantly, the ABV theoretical model accounts for contextual factors that affect organizational attention by channeling decision-makers foci of attention and that ultimately determine organizational outcomes.

From an ABV standpoint, environmental responses are not seen as behavioral responses to objective stimuli, but as organizational constructions shaped by the individual and the organization (Ocasio 1995). The set of mechanisms described by Ocasio (1997) to explain organizational responses places ABV at a vantage point from which to explain organizational responses to social issues. The ABV provides a mechanism-based theory (Davis and Marquis 2005) that aims not only to predict, but also to explain social initiatives by business (Margolis and Walsh 2003).

The combination of cognitive and structural processes affecting decision-making emphasizes the ABV's strategic vantage point from which it provides an explanation of organizational social responses. Recent empirical studies show that both individual cognitions and organizational structures affect how firms respond to environmental issues (Sharma 2000 and Bansal 2003). Apparent from the findings of these studies are the intertwined effects of social cognitions and organizational context in explaining how organizations respond to issues that matter to both its internal and external stakeholders. These findings were also corroborated by the work of Dutton et al. (2006) which showed how organizational structures interact with individual compassion to explain responses to unexpected events affecting organizations.

Finally, the ABV suggests that small differences or, contingencies, might have significant effects on the attention focus of decision-makers and on organizational

attention that will ultimately have an impact on organizational outcomes. As an empirical example, Kacperczyk (2009) suggests that changes in the structures of attention have different effects in different stakeholder groups and that firm performance is only positively associated with increased attention to primary stakeholders. Hence, an attention-based perspective can help us to understand not only responses to social issues, but also the relationship between organizational social action and financial performance. Accordingly, the association between social and financial performance is not predetermined; it is the result of various specific contingencies of organizations' attention structures.

4.3 Unpacking the effects of social responsibility on financial performance

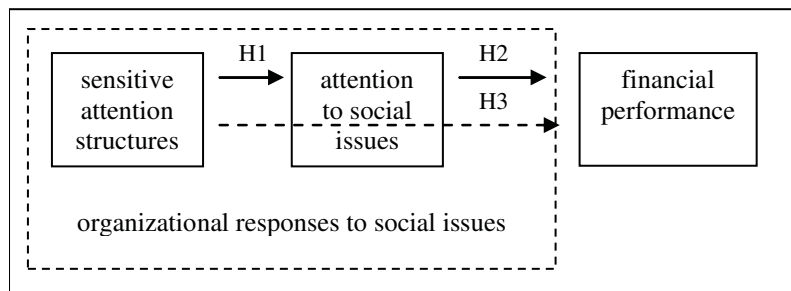
In this section we develop hypotheses linking attention structures, organizational attention and financial performance. We chose to test our theoretical model on organizational responses to social issues in a situation in which the contingent aspect of organizational attention was as yet unexplored. Additionally, we consider the model of situated attention particularly well suited to explain some of the processes underlying the heterogeneity of financial returns on social responsibility investment. Hence, supported by the ABV, our hypotheses suggest that organizational attention to social issues is affected by the sensitivity of attention structures toward specific stakeholders and that organizational attention mediates the relationship between attention structures and financial performance (as depicted by Figure 4.2).

4.3.1 The environment of decision or the research context

The context of our research is corporate social action and social issues involvement in Brazil (Marquis, Glynn and Davis 2007). The environment of decision experienced by Brazilian organizations provides a remarkably interesting setting in which to test an ABV perspective of organizational attention to social

issues. Among the BRIC countries, Brazil has been referred to frequently as a leading nation with high economic potential. However, the country still suffers from basic social problems such as poverty, violence and inequality. Both the diversity and complexity of the Brazilian context (Griesse 2007) broaden the environment of decision of organizations and provide an interesting setting in which to test how attention structures affect the prioritization of issues and the focus of attention of decision-makers (Ocasio 1997). Moreover, social and economic tensions are tangible and explicit, making this context a suitable starting point for a pragmatic approach to questions concerning the role of business in society (Margolis and Walsh 2003).

Figure 4.2: Hypothesized effects: Unpacking the effects of social responsibility on financial performance



4.3.2 Attention to social issues: focusing on employee welfare and benefits

Recent research findings (Bouquet and Deutsch 2008, Brammer and Millington 2008 and Bhattacharya, Korschun and Sen 2009) reemphasize earlier recommendations for a contingent approach to organizational responses to social issues (Arlow and Gannon 1982) and the need to account for contextual factors that may affect organizational behavior (Barnett 2007). A contingent perspective of organizational social action is pragmatic, yet complex, because it embraces various contextual factors to explain organizational responses to social demands in

addition to their effects on financial performance (Barnett 2007 and Brammer and Millington 2008). Organizational attention is suggested to be one among various contingent factors affecting organizational responses to social issues (Bouquet and Deutsch 2008 and Kacperczyk 2009).

Following recent research recommendations (Wang, Choi and Li 2008 and Brammer and Millington 2008), we center our study upon one component of social responsibility. Aggregating the multiple dimensions of social responsibility limits our capacity to understand its effects on financial performance for two main reasons (Hillman and Keim 2001 and Bhattacharya, Korschun and Sen 2009). First, different aspects of social responsibility might have different implications for financial performance (Hillman and Keim 2001, Barnett 2007 and Brammer and Millington 2008). Secondly, companies can simultaneously be both good and bad depending on the focus of social responsibility (Strike, Gao and Bansal 2006). Thus, we chose to focus our research on one specific dimension of organizational social responses, namely employee welfare and benefits.

According to the results of a panel of experts presented by Waddock and Graves (1997, p. 306), employee relations is the most important attribute of social performance because “an enlightened employee relations policy may have a very low cost, but can result in substantial gains in morale and productivity, actually yielding a competitive advantage in comparison to less responsible firms”. Furthermore, employees are often deemed to be primary stakeholders (Clarkson 1995), offering an additional explanation of their salience as group (Mitchell, Agle and Wood 1997) and also as an object of study (Goodstein 1994, Blum, Fields and Goodman 1994, Ingram and Simons 1995, Goodstein 1995, Turban and Greening 1997 and Milliken, Martins and Morgan 1998). Therefore, in our work, we center our analysis upon organizational attention to employee welfare and benefits

defined as the distinctive focus of organizational attention to a set of issues more directly related to the interests and benefits of the organization's employees.

4.3.3 Sensitivity of attention structures

In line with the ABV, attention structures consist of four attention regulators. In our model, we account for the role of the *rules of the game*, but focus mostly on *players*, or more specifically on organizational employees. We believe that players, represented by organizational employees, are the least heterogeneous attention regulator (allowing for cross-section comparison). Moreover, as was just discussed, employees constitute a key component of social responsibility (Waddock and Graves 1997) given their salience and status as primary stakeholders (Mitchell, Agle and Wood 1997 and Clarkson 1995). In addition to these advantages, we also believe employees are sensitive indicators of the effects of attention structures.

Centering our attention on employees has an additional and pragmatic advantage. Previous research on organizational responses to work-family (Goodstein 1994, Ingram and Simons 1995, Osterman 1995, Milliken, Martins and Morgan 1998) and work-life programs (Konrad and Mangel 2000), female management representation (Blum, Fields and Goodman 1994) and eldercare involvement (Goodstein 1995) lend us some indirect empirical support for the development of our hypotheses. According to this research, certain workforce characteristics influence attention structures and help to explain organizational responses.

Prior work has tested whether or not gender composition and family profile (i.e. whether or not an employee is a parent) of the work force affects organizational responses to work-family programs (Goodstein 1994, Ingram and Simons 1995 and Osterman 1995). Konrad and Mangel (2000) tested whether or not the presence of professional employees affects organizational responses to work-life

programs. Finally, gender composition and age distribution of the work force were tested for their effects on organizational responses to female participation in managerial positions (Blum, Fields and Goodman 1994) and to involvement in eldercare (Goodstein 1995). It is important to note that these studies do not report consistent results. Aside from Goodstein (1995) and Milliken, Martins and Morgan (1998), who included issue interpretation as an explanation for organizational responses (without finding statistical support, however), these studies aimed primarily at to the identification of resource dependency and/or institutional factors affecting organizational responses.

These studies define and operationalize organizational responses as organizational outcomes and test the direct effects of external and internal environment on those outcomes. We contend that what they define as organizational response is in fact organizational attention towards work-family and work-life programs, female management and eldercare and that work force composition is, in fact, an attention regulator. As such, we expect that attention structures have an effect on organizational attention first, and only afterward on organizational moves and outcomes.

As reported in a recent study, the most effective practices of corporate affirmative action and diversity policies include structural aspects such as staff diversity, a diversity committee and affirmative action plans are (Kalev, Dobbin and Kelly 2006, p. 590). This implies that employees are concurrently, salient stakeholders, fundamental components of social performance (Berman et al. 1999) as well as sensitive attention regulators. Therefore, we expect that employees have an effect on the prioritization of issues and answers by giving precedence to things that are immediate and specific, while ignoring what is remote (March and Olsen 1976, Ocasio 1997, Yu et al. 2005 and Barnett 2008).

H1: Sensitivity of attention structures is positively associated with organizational attention to social issues.

With the exception of Konrad and Mangel's (2000) work, none of the studies cited above tested the effects of organizational responses on performance. Even in the case of Konrad and Mangel's (2002) work, the authors were interested in the impact of work-family programs on firm productivity, and *not* financial performance. In addition, two event studies tested the effects of diversity (Wright et al. 1995) and work-family initiatives on share prices (Arthur 2003) and their effects on perceived organizational performance (Herring 2009 and Perry-Smith and Blum 2000). These findings support our hypothesis, although they are inherently limited due the nature of their measures of performance.

Ironically, the missing link between attention structures and organizational attention could be found on the research about social and financial performance in spite of the fact that these findings are disputed (Orlitzky et al. 2003, Margolis and Walsh 2003 and Barnett and Salomon 2006). For the purposes of our argument, we agree with Barnett (2007, p .795), who contends that "firms can benefit financially from attending to the concerns of their stakeholders". We also adopt previous results suggesting that "attention to [corporate social performance] CSP arenas does not represent a competitive disadvantage and may in fact be a competitive advantage" (Waddock and Graves 1997, p. 314) in order to propose that organizational attention to social issues, in general, and employee welfare and benefits, in particular, lead to improved financial performance (Berman et al. 1999).

Our argumentation has a twofold explanation. First, based on signaling theory, we suggest that when an organization dedicates attention to their employees' welfare, it sends a signal to its stakeholders (not only employees, but investors, customers,

governments etc.) that is comprised of a set of values and norms. In doing so, the organization's reputation may benefit, it may obtain community support, and may also attract customers and investors. All of these benefits can be translated into positive financial performance (Wright et al. 1995, Konrad and Mangel 2000, Perry-Smith and Blum 2000 and Arthur 2003). The effects of signaling on the philanthropy-financial performance relationship have been demonstrated to be particularly relevant for firms operating in dynamic industries (Wang, Choi and Li 2008).

Second, based on efficiency arguments, we suggest that under an efficiency strategy, in which the managerial aim is to make the best use and combination of the factors of production and resources, employee welfare and benefits can be a low-cost strategy for engendering material and emotional commitment (Grant, Dutton and Rosso 2008), increasing morale (Waddock and Graves 1997) and productivity (Wright et al. 1995 and Konrad and Mangel 2000). In other words, given an organization's dependence on labor for production, attention to employees can be an efficient use of resources (Grant, Dutton and Rosso 2008).

An analogy using shareholders may clarify our contention. Investors, like employees, obtain functional and psychosocial benefits from organizational attention (Bhattacharya, Korschun and Sen 2009, p. 258). When firms attend to shareholder interests, they do not only obtain stock returns, but also some "sense of achievement and self-esteem". As a consequence, firms benefit from an overall improvement in the quality of the relationship with their investors. This improvement, in turn, has a positive effect on financial performance. As we contend here, the same holds true when organizations pay attention to their employees' welfare.

H2: Organizational attention to social issues is positively associated with financial performance.

We suggested earlier that previous research on the effects of the workforce on organizational outcomes reported inconsistent findings due to a confounding constructual framing and operationalization. As our hypotheses suggest, attention structures have an effect on organizational attention, which in turn affects organizational outcomes. From an ABV perspective, organizational performance is not predetermined but is the result of the various effects and specific contingencies of attention structures on the process of organizational attention (Ocasio 1997, Kacperczyk 2009 and Bouquet, Morrison and Birkinshaw 2009). Financial performance cannot be predicted solely on the basis of attention structures. It is, however, explained by the way in which attention regulators channel decision-makers' focus of attention.

A contingent perspective of organizational responses to social issues corroborates this contention, suggesting that a firm responds to perceived social demands based on the particular relevance of an issue (Arlow and Gannon 1982, Berman et al. 1999 and Barnett 2007). Given the contextual role of attention structures and their role in the model of situated attention, we suggest that the effects of attention structures on financial performance are dependent upon the way in which organizations allocate attention.

H3: The relationship between attention structures and financial performance is mediated by organizational attention to social issues.

At this point, it is worth mentioning that, in our work, we use workforce diversity as a proxy measure of the sensitivity of attention structures. In this case, the mediation effect of organizational attention goes against claims made in the

workforce diversity literature, which suggest that diversity has a direct effect on financial performance (Herring 2009). We contend that the benefits of diversity must be attributed to selective aspect of attention by decision-makers as a result of the attentional processes at the organizational level.

4.4 Data and methods

Our data reveals information on Brazilian organizations. As was previously mentioned, Brazil is an interesting research context specifically because it is one that is rife with contradictions. On one hand, its recent yet strong economic development has entitled the country to economic gains. On the other hand, its social development lags far behind and the country still struggles with basic social issues (Griesse 2007). In Brazil, inequality is not restricted to income indicators and there is plenty of room for social action. Our dataset is comprised of information reported by Brazilian organizations that voluntarily published a social report called “Social Balance” (*Balanço Social*). Social Balance (SB) follows a specific set of social reporting guidelines advocated by the Brazilian non-governmental organization Ibase (Brazilian Institute of Social and Economic Analysis). This was the first initiative promoting social reporting that was carried out in Brazil and represents an important step in the development of measures of social performance of Brazilian organizations.

In 1996, Ibase began campaigning to promote the use of social reporting and voluntary disclosure of organizational information about expenditure on and contributions to social issues. As part of their initiative, Ibase released “Social Balance” as a specific format for social reporting and published guidelines regarding its contents. The most salient characteristic of SB is its simplicity. First, in terms of format, SB was designed to resemble an accounting balance sheet on which the individual responsible for the report must fill in the monetary values of

a list of items that are considered to be indicators of social responsibility. Second, in terms of content, required data on the items listed can be collected easily from internal accounts, reports and documents of the organizations.

Since 1996, there has been an increase in the number of companies that have adopted the SB model and have started to report social responsibility efforts. In that year, only nine Brazilian organizations published their SB whereas 233 companies reported theirs in 2003. It should be noted that for various reasons, the number of reports decreased after this year. First, the number of companies that adopted and published the SB peaked between 2003 and 2004. In this time period, the Brazilian Congress was discussing proposed legislation that would mandate companies to report and publish Social Balance. However, the legislation was rejected in 2004. Second, since 2000, other models and reporting guidelines have started to be discussed by Brazilian organizations and their stakeholders. In addition to the model proposed by Ibase, *Instituto Ethos* and the Global Reporting Initiative (GRI) became important players in the social responsibility arena in general, and in the area of social reporting, in particular (Griesse 2007). To illustrate this point, the number of companies adopting the GRI model increased from five in 2002 to 18 in 2006, whereas 192 and 126 organizations published the SB in 2002 and 2006 respectively. Finally, as a result of the learning process, many Brazilian organizations that had published the SB for several years opted for more comprehensive models for social reporting and, instead of publishing the single sheet of the SB, they began to publish full social reports. It is noteworthy that some of the SB indicators are still reported within these more in-depth reports. More importantly, the format of the SB that was proposed initially was improved by Ibase and by the organizations themselves that found that the adoption of social reporting was a convenient tool with which to manage stakeholders' interests and their social actions.

4.4.1 Sample

Initially, we collected all of the available information from the Ibase database, which is comprised of 1447 reports published by 351 Brazilian organizations between 1996 and 2007. During this period, the SB format changed three times and the current version has been the same since 2002 and is not significantly different from the previous version released in 2001. The modifications included in the various versions of the SB report were related to the inclusion of additional information and therefore, a dataset consisting of all of the available reports contains a large number of missing values for various indicators between 1996 and 2000. Thus, for the purposes of our analysis, we included the reports published from 2001 onwards (see Figure 4.3 for an overview of sample characteristics). Our final sample consists of 1195 reports published by 338 organizations distributed across various industries, but predominantly found in the manufacturing and utilities industries (around 26% and 21% of the organizations respectively). Of all the organizations, 5.33% are public institutions, whereas 55.91% are private and 38.76% publicly listed firms. To ensure the reliability of our data, we collected financial data on publicly listed companies published in the Worldscope reports and also by the CVM (*Comissão de Valores Mobiliários*, which is the Brazilian equivalent of the U.S. Securities and Exchange Commission). Correlations between measures collected in both reports are equivalent to 0.94 or higher.

Figure 4.3: Characteristics of the dataset

Distribution of organizations:		
Per organization type		
Type	Total n.	Relative n.
Public listed firm	131	38.76
Private company	189	55.91
Public institution	18	5.33
Total	338	

Distribution of reports		
per year		
Year	Total n.	Relative n.
2001	175	14.6
2002	192	16.1
2003	233	19.5
2004	225	18.8
2005	198	16.6
2006	126	10.5
2007	46	3.8
Total	1195	

Distribution of organizations:		
Per industry		
Industry	Total n.	Relative n.
Manufacturing	87	25.74
Utilities	72	21.30
Financial services	28	8.28
Communication and logistics	45	13.31
Trade (retail and wholesale) Services	9	2.66
	16	4.73
Construction and sanitary services	24	7.10
Extracting	17	5.03
Agriculture, cattle, timber, and aquaculture	40	11.83

4.4.2 Measures

Following the typology suggested by Marquis, Glynn and Davis (2007), we restricted our analysis to organizational social actions that *focus* on employee welfare and benefits in the *form* of organizational attention. As described below, our measures of attention structures and organizational attention are relative to organizational size. In addition to working as a control for organizational size, the relative measures also capture the *level* of organizational social action, the sensitivity of attention structures and breadth of organizational attention. Although size was found to be non-significant (Waddock and Graves 1997), it is regarded as an important contextual factor (Brammer and Millington 2008) in the relationship between social and financial performance.

In addition to these theoretical justifications for our relative measures, we also have some methodological reasons conceptualize our measures in this way. Including proxy measurements of size in amongst our variables helps us to control for the effects of omitted variables (Edwards 2008) and also to deal with bias as a result of common method variance (Spector 2006). In order to deal with potential problems caused by common method variance we followed the recommendations of Podsakoff et al. (2003) and performed Harman's single-factor test, also conducting the test with an unmeasured latent variable. We obtained resulting values for these two tests that do not compromise our analysis. Nevertheless, Spector (2006) recommends careful consideration of possible sources of bias that could affect the measures and suggests controlling for these sources of bias. Hence, by using measures relative to size for attention structures and organizational attention, we are including an additional control that may capture bias created by social desirability (Podsakoff et al. 2003 and Spector 2006).

Attention structures We measured attention structures using two indicators, namely the number of non-white² employees according to the payroll, and the number of disabled employees also according to the payroll. We chose these two indicators because they are particularly good proxies for sensitivity of attention structures in the Brazilian context. Brazil has the largest population of Afro-descendants after African countries and the third largest disabled population in the world. Since 1991, the disabled population of Brazil is protected by the “*Lei das Cotas*” (or “Quotas Law”), which requires Brazilian organizations to reserve a certain number of job positions for people with disabilities. More recently, members of Brazilian society and politicians have been discussing the implementation of quotas for the non-white population in the areas of higher education admission, contracts and jobs. It is beyond the aim of the present study to discuss the merits of these affirmative action policies. We simply use the information on quotas to illustrate that the relative number of non-white and disabled employees on payroll are suitable proxies for the sensitivity of attention structures.

From an attentional perspective, it is not merely the composition of the workforce that will affect organizational attention, but also its capacity to influence the schemes used by the decision-makers when valuating issues and answers (March and Olsen 1976 and Ocasio 1997). Therefore, the greater the proportion of non-

² We use *non-white* terminology to account for the mixture of different racial backgrounds present in Brazil. Racial diversity of the Brazilian population is such an important issue that the national institute for statistics (IBGE) adopts the terminology “*cor ou raça*” meaning “*color or race*” (instead of race or color only). Accordingly, it is comprised of five broad self-reported categories *branca*, *amarela*, *indígena*, *parda* and *preta*, which roughly represent White, Asians, Indigenous, Brown and Black, respectively. In our work, non-white refers to Black employees.

white and disabled employees on the organization's payroll, the more sensitive we can consider the attention structures to be.

Organizational attention In line with previous work that successfully used resource allocation-based measures for organizational attention (Durand 2003), we use organizational expenditures as a proxy for organizational attention to employee welfare and benefits. For our measure, we used five indicators of organizational expenditures, which are relative measures of the total amount of expenditures including food and meals for employees, social security, pension and retirement plans, healthcare and education and training per employee. In Brazil, where government expenditure is either meager or inefficient, private investments in workforce welfare in the form of healthcare or education benefits are particularly relevant.

Financial performance We used the logarithmic values of operating revenues and earnings before income and taxes as indicators of financial performance. These are account-based measures of performance that are well suited for use in our research because they capture internal efficiency and therefore, "reflect internal decision-making capabilities and managerial performance" (Orlitzky et al. 2003, p. 408).

Control variables

Procedural and communication channels We included a dummy variable for organizations that *published Social Balance in the previous year* for two main reasons. First, anecdotal evidence suggests that the truism "what gets measured, gets done" is particularly applicable to organizational attention (Davenport and Beck 2001). Hence, we expect that organizations might increase (or decrease) organizational attention to employee welfare and benefits as a result of being aware of the actual level of expenditures (Schwab and Miner 2008). Second, but still related to the previous point, according to the ABV, organizational reports are

one of the procedural and communication channels that affect distribution of organizational attention (Ocasio 1995, Ocasio and Joseph 2005 and Bouquet et al. 2009) because “by explicit measurable criteria, organizations learn to attend to some criteria and ignore others” (Cyert and March 1963, p. 124). To control for potential autocorrelation due to the time dynamics present in our dataset, we also included dummy variables for *year*.

Rules of the game In addition to players, rules of the game are another component of attention structures emphasized by Ocasio (1997). Rules of the game are attention regulators that are comprised by values and incentives that “specify the system of social and economic rewards and recognition obtained by organizational decision-makers in their interactions and links these rewards to specific issues and answers” (Ocasio 1997, p. 198). We included two dummy variables based on the suggestion that *organizational type* and *industry regulation* encompass certain rules that might affect organizational attention differently (Corner, Kinicki and Keats 1994, Goodstein 1994, Osterman 1995, Arthur 2003 and Herring 2009). We included a dummy variable for public organizations and another dummy for organizations operating in regulated industries. Public organizations are most likely to have different organizational goals and operate under a different logic than business firms. Therefore, human resource policies and practices and perceptions about the employment of human capital may be different when compared to profit-seeking organizations (Herring 2009). Additionally, we also included a dummy variable for organizations operating in the energy and telecommunication sectors. At the end of the nineties, the Brazilian economy experiences a large wave of privatization. Since then, water, oil and gas, utilities and telecommunication companies operate under the watch of regulatory bodies. Consequently, these are relatively more regulated industries.

Labor-intensity Finally, given our focus on employee welfare and benefits, we included the ratio of total labor costs to sales as a measure of labor intensity (Brammer and Millington 2008). Labor intensity provides a proxy measure of the dependence of the organization on human capital which may have an impact on organizational attention measured as expenditure on employees' welfare (Fields, Goodman and Blum 2005). As suggested by Herring (2009) service organizations are more likely to exclude non-whites from their workforce.

4.4.3 Methods

We tested our hypotheses using Structural Equation Modeling (SEM) carried out using AMOS 17.0 software. Due to the presence of missing values, we tested our models both using the correlation table as input (N=341) and also using raw data (N=1195) with multiple imputation techniques available in SPSS 17.0 (Schafer and Graham 2002). The results of tests using raw data with multiple imputation and a covariance matrix are not significantly different. According to Williams, Gavin and Hartman (2004), for SEM, listwise deletion is the preferred method of dealing with missing data, in spite of the information loss. Thus, we opted to report the results based on the analysis of the observations with complete information. We estimated the four structural models using the maximum likelihood procedure. First, we tested the relationship between attention structures and organizational attention, then we tested this same model including the control variables and finally we tested two other models for the partial and full mediation role of organizational attention in the relationship between attention structures and financial performance (Williams, Gavin and Hartman 2004). Partial mediation differs from complete mediation in terms of the presence of a direct relationship between attention structures and financial performance. Partial mediation is only confirmed if coefficients of the mediator and the coefficient of the direct path are significant (Baron and Kenny 1986 and James, Mulaik and Brett 2006).

4.5 Results

Table 4.1 reports means, standard deviations, and correlations between all variables included in the analysis. The first step was to assess the measurement model. For attention structures and financial performance we had fewer than three indicators. Thus, we assess their reliability using their correlation coefficients, which are 0.83 and 0.88 respectively. The composite reliability of our latent variable measuring the allocation of attention is 0.86 and each of the five indicators had individual reliability above 0.5 (they vary between 0.66 and 0.89). We obtained good model fit (adjusted chi-squared = 2.09, GFI = 0.99, CFI = 0.99 and RMSEA = 0.05) with 0.56 of variance extracted.

Next, we added the proposed paths to test the relationships as hypothesized. Table 4.2 summarizes the results of the models and the standardized beta coefficients for all the variables, including controls. Before testing our main models, we tested the basic model of the relationship between attention structures and allocation of attention without the control variables. According to recommended cut off values (Hu and Bentler 1999) and “popular rules of thumb” (Shook et al. 2004, p. 400), our model exhibited good fit (adjusted chi-squared = 2.68, sRMR = 0.03, GFI = 0.97, CFI = 0.98 and RMSEA = 0.07). After including the control variables, the model of the relationship between attention structures and allocation of attention still exhibited good fit (adjusted chi-squared = 3.08, sRMR = 0.06, GFI = 0.94, CFI = 0.92. and RMSEA = 0.08) with 0.29 of variance extracted and 0.78 model reliability. Finally, we tested the full model, now also including financial performance. The model in which allocation of attention fully mediates the relationship between attention structures and financial performance exhibited 0.36 of variance extracted and 0.86 reliability with good model fit (adjusted chi-squared = 4.03, sRMR = 0.07, GFI = 0.91, CFI = 0.89. and RMSEA = 0.09).

Table 4.1: Means, Standard Deviations and Correlations

	N	Mean	s.d.	1	2	3	4	5	6
1. Operation revenues	1181	2948.87	10926.10						
2. EBIT	1152	535.65	2630.02	.88*					
3. SB previous year	1195	0.81	0.40	.08*	.07**				
4. Regulated industry	1195	0.49	0.50	.00	-.01	.05			
5. Labor intensity	1171	0.30	3.16	-.02	.04	-.04	-.05		
6. Public organization	1195	0.05	0.22	.02	-.02	.05	-.08*	.00	
7. Payroll	1184	290.23	882.74	.73*	.62*	.09*	-.13*	.01	.14*
8. N. employees	1169	5679.78	137056	.58*	.47*	.10*	-.20*	.02	.19*
9. N. non-white employees	815	828.43	2171.64	.42*	.21*	.10*	-.19*	-.02	.19*
10. N. disabled employees	863	123.64	321.46	.35*	.27*	.09*	-.22*	-.01	.21*
11. Food and meal expenses	1176	18.99	65.67	.66*	.55*	.09*	-.13*	.01	.19*
12. Social security expenses	1137	73.97	238.89	.91*	.82*	.09*	-.08*	.01	.10*
13. Pension & retirement	829	26.22	89.36	.66*	.57*	.09*	.01	.00	.04
14. Healthcare benefits	1169	19.92	116.69	.90*	.87*	.06**	.01	.00	.06
15. Education & training expenses	1159	5.92	28.03	.90*	.93*	.07**	-.01	.03	.05

* p < 0.01

** p < 0.05

Table 4.1: CONTINUED.

	7	8	9	10	11	12	13	14
1. Operation revenues								
2. EBIT								
3. SB previous year								
4. Regulated industry								
5. Labor intensity								
6. Public organization								
7. Payroll								
8. N. employees	.87*							
9. N. non-white employees	.67*	.83*						
10. N. disabled employees	.59*	.80*	.68*					
11. Food and meal expenses	.97*	.90*	.68*	.64*				
12. Social security expenses	.91*	.77*	.56*	.53*	.87*			
13. Pension & retirement	.64*	.50*	.44*	.28*	.58*	.66*		
14. Healthcare benefits	.68*	.52*	.29*	.35*	.65*	.88*	.59*	
15. Education & training expenses	.66*	.53*	.27*	.34*	.62*	.88*	.57*	.95*

* p < 0.01

** p < 0.05

Table 4.2: Structural Model Results

	<i>Model 1</i>	<i>Model 2</i>	
	Attention structures → allocation of attention	Allocation of attention as mediator between attention structures and financial performance	
		<i>A- Partial mediation</i>	<i>B -Full mediation</i>
Attention structures → Nonwhite	0.66	0.65	0.65
Attention structures → Disabled	0.65	0.66	0.66
Attention structures → Allocation of attention	0.76	0.78	0.77
Allocation of attention → Food	0.72	0.73	0.73
Allocation of attention → Social Security	0.74	0.74	0.74
Allocation of attention → Pension	0.67	0.68	0.68
Allocation of attention → Healthcare	0.87	0.86	0.86
Allocation of attention → Education	0.72	0.72	0.72
Allocation of attention. → Financial performance		0.52	0.51
Financial performance → Operating revenues		0.91	0.91
Financial performance → EBIT		0.96	0.96
Attention structures → Financial performance ⁺		-0.01	
<i>Controls</i>			
Public organization → Attention structures ⁺	0.06	0.07	0.07
Public organization → Allocation of attention	0.17	0.16	0.16
Labor intensity → Attention structures	0.13	0.13	0.13
Labor intensity → Allocation of attention	-0.30	-0.31	-0.31
Regulated industry → Attention structures	0.13	0.13	0.13
Regulated industry → Allocation of attention ⁺	-0.00	-0.03	-0.03
SB previous year → Allocation of attention	0.12	0.13	0.13
Chi-squared	123.276	242.212	242.215
df	40	59	60
adj. chi-squared	3.082	4.105	4.037
RMR	0.013	0.023	0.023
SRMR	0.058	0.070	0.069
GFI	0.936	0.906	0.907
AGFI	0.895	0.856	0.858
CFI	0.920	0.893	0.894
RMSEA	0.078	0.096	0.094
Model reliability	0.779	0.851	0.861
Variance extracted	0.294	0.340	0.358

⁺ denote coefficients that are not significant.

4.5.1 Hypotheses tests results

Relationship between attention structures and allocation of attention The coefficient of attention structures significantly affects the allocation of attention (.76, $p < .05$), supporting Hypothesis 1. With regard to the control variables, we found that being a public organization does not have a significant effect on attention structures and that operating in a regulated industry does not have a significant effect on the allocation of attention. It is important to note that we found some counterintuitive results for the effects of our labor intensity control variable. Whereas labor intensity has a positive significant effect on attention structures (.13, $p < .05$), it has a negative effect on allocation of attention (-.31, $p < .05$). All of the results for our control variables were consistent throughout all models.

Relationship between allocation of attention and financial performance As suggested in Hypothesis 2, we found a significant effect of allocation of attention to social issues.

Mediating role of allocation of attention We found that attention structures do not have a direct significant effect on financial performance (neither when we test the model with the indirect path between attention structures and allocation of attention nor when the path is excluded from the model). However, we do find that attention structures have a significant indirect effect on financial performance through allocation of attention. As displayed in the last column of Table 2, attention structures have an effect on allocation of attention (.77, $p < .05$), which in turn, affects financial performance (.51, $p < .05$) These results not only confirm our third hypothesis (H3), but also indicate that that allocation of attention fully mediates the relationship between attention structures and financial performance.

4.5.2 Additional analysis

Munificence argument

A munificence explanation would suggest that positive financial performance is conducive to less constrained resource allocation, which, in turn, allows organizations to divert attention from their core operations to focus on other areas, including social investment (Brammer and Millington 2008; Wang Choi and Li 2008). As a result, one could suggest a different order of causality in the model we propose. Instead of testing the effects of organizational attention on financial performance, a munificence argument suggests that positive financial performance increases organizational attention to employee welfare and benefits.

To test the munificence argument as an alternative explanation for our results, we reversed the causal order between organizational attention and financial performance. In our additional analysis, we created a model in which attention structures directly affect financial performance, which has an effect on organizational attention. The results reveal decreased (and inadmissible) fit (adjusted chi-squared = 5.22, GFI = 0.89, CFI = 0.85 and RMSEA = 0.11). From an ABV perspective, historical financial performance is, together with other issues and answers, part of the environment of decision of the organization. Therefore, how historical financial performance will affect the allocation of attention depends on the attentional processes at the organizational level. Although these results do not rule out the effects of financial performance on organizational attention, they provide extra support for an ABV perspective on organizational responses to social issues.

Instrumental stakeholder management explanation

Stakeholder management theory suggests that systematic attention to stakeholders is critical to organizational success. Accordingly, there is a positive relationship between social performance and financial performance because attention to the

various stakeholder groups is instrumental to organization financial performance (Donaldson and Preston 1995, Jones 1995 and Berman et al. 1999). Hence, one could suggest instrumental stakeholder management as an alternative explanation for our findings.

In order to test stakeholder management as an alternative explanation for our results we tested the effects of labor intensity, industry regulation and organization type as antecedents of attention structures. According to the theory of instrumental stakeholder management, as opposed to being attention regulators, these three aspects shape organizational structures and general policies to respond to stakeholder demands (Donaldson and Preston 1995, p. 67). In our supplementary statistical analysis, we tested the effects of the variables of public organizations, labor intensity and regulated industry on attention structures only. Across the three models we found either decreased fit (for the model testing the relationship between attention structures and allocation of attention: adjusted chi-squared = 3.73, sRMR = 0.07, GFI = 0.92, CFI = 0.88 and RMSEA = 0.09) or unacceptable fit (for mediation models: GFI = 0.89, CFI = 0.86 and RMSEA = 0.10).

Hence, we believe our results provide strong evidence in support of our proposed theoretical framework based on the ABV. In addition to our results, Kacperczyk (2009) found further evidence supporting the mediating role of organizational attention. Her findings suggest that managerial attention is highly selective, even when managers are constrained by less strict governance mechanisms. In summary, organizations face various trade-offs related to the diverse and, sometimes conflicting, interests of their stakeholders. Whereas “stakeholder management requires, as its key attribute, simultaneous attention to the legitimate interests of all appropriate stakeholders” (Donaldson and Preston 1995, p 67), an ABV perspective explains the attentional process behind these trade-offs and emphasizes the fact that some interests are attended to (or are not attended to). In a

nutshell, the ABV explanation is an enlightening perspective because it is based on a process, cross-level model that first explains how attention, a limited and scarce resource, is allocated among the various stakeholders and second, how attention is related to financial performance.

4.6 Discussion

In this study, we proposed an attention-based perspective of organizational social responses. First, we hypothesized that sensitive attention structures have a positive relationship with organizational attention to social issues, which in turn has an effect on financial performance. Second, we suggested that the relationship between sensitive attention structures and financial performance is mediated by organizational attention to social issues. Using a unique dataset composed of information on Brazilian organizations, we found support for our arguments.

4.6.1 Theoretical contributions

The ABV as proposed by Ocasio (1997) extends earlier work on organizational attention (Simon 1947) as it provides a detailed description of how an organization's concrete and contextual structures drive the focus of attention of decision-makers and the flow of organizational attention (Barnett 2008). As a result, from an ABV perspective, organizational attention and firm behavior are dependent on the structural characteristics of the organization. Moreover, this structural perspective of organizational behavior highlights the influence of players in organizational attention (Ocasio 1997). Our study contributes to the ABV by providing an explicit and systematic test of the effect of attention structures on organizational attention.

Despite the numerous studies adopting the ABV to explain organizational outcomes, there are few studies that actually focus on the effects of organizational

attention on financial performance (Levy 2005 and Bouquet, Morrison and Birkinshaw 2009). This may be explained by the difficulties associated with measuring organizational attention. Our research extends the ABV literature by overcoming these two limitations. In our study we adopt a resource allocation-based measure of organizational attention and test its effects on financial performance.

We chose to test our theoretical model on organizational responses to social issues for which the contingent aspect of organizational attention was not yet explored. Hence, our study contributes to the field of business in society. Inspired by the research of Margolis and Walsh (2003), we adopted a pragmatic approach to explain the relationship between social and financial performance. When focusing on organizational responses to social issues in the Brazilian context to test the ABV, we embraced the pervasiveness of the economic and social tensions faced by businesses in society. Additionally, we departed from a new angle, proposing an ABV perspective of organizational social action (Marquis, Glynn and Davis 2007). As such, we identified and tested the contingent aspect of organizational attention in relation to social issues. Our results indicate that organizational attention fully mediates the relationship between attention structures and financial performance. Thus, by testing the role of organizational attention as a contingent factor and as a process underlying organizational social responses, we unpacked the social responsibility – financial performance relationship. Our findings respond to and confirm the relevance of recent research recommendations to include and account for contingent aspects affecting social and financial performance (Barnett 2007 and Brammer and Millington 2008).

We also make a contribution by providing an alternative explanation for the relationship between social and financial performance that represents a departure from the instrumental stakeholder management theory (Donaldson and Preston

1995, Jones 1995). Our findings suggest that additional internal factors other than organizational structures explain responses to stakeholder demands. As previously cited, Kacperczyk (2009) provides further evidence of the mediating role of organizational attention in explaining stakeholder attention. From an ABV standpoint, organizational attention is a cross-level process influenced by individual, organizational and environmental factors. We believe the process-based model of situated attention proposed by Ocasio (1997) provides a more comprehensive view of social responsibility. Despite being a structural approach, the ABV is broad enough to encompass the effects of individuals and managers (i.e. players and decision makers) on organizational attention. As such, it provides sound theoretical support for the argument that “a company’s social responsibilities are not met by some abstract organizational actor; they are met by individual human actors who constantly make decisions and choices, some big and some small, some minor and other of great consequence” (Wood 1991, p. 699).

4.6.2 Research limitations

This study has several limitations. First, our sample is composed of organizations that voluntarily adopted social reporting and disclosure of social indicators. Thus, our results might be biased towards organizations that, in general, are relatively more concerned about social issues. Future research would benefit from testing the effects of attention structure sensitivity in a research sample composed of organizations that do not adopt social reporting initiatives. Second, our dataset includes information on publicly listed firms as well as private corporations and governmental organizations. On one hand, it is an interesting approach to test differences related to the rules of the game. On the other hand, however, levels of transparency and accountability of both private companies and governmental institutions are far from being exemplar. Thus, information that is self-reported by these organizations is inherently subject to limited reliability. Third, the pooled cross-sectional nature of our research design does not allow for definitive causality

tests. Although our studies provide results supporting the causality proposed by the ABV, it is still possible that organizations that have better performance hire more employees regardless of their background and, also have more resources, including attention, to dedicate to stakeholders. Future research that is based on longitudinal data and methods will provide additional evidence to build upon our arguments.

4.6.3 Managerial implications

Our research has also brought forth several managerial implications based on the Brazilian context. Our findings suggest that workforce diversity is beneficial to organizations. Initially one might expect that organizations with a large number of non-white and/or disabled employees will need to pay additional attention to issues related to employee welfare because these groups of employees demand more for instance, education or healthcare (Herring 2009). However, our results support the opposite contention. Considering the (negative) effects of labor intensity on attention structures and organizational attention, we believe organizations that are more dependent on labor opt for workforce diversity because these employees are more productive (Wright et al. 1995) and are also more materially and emotionally committed (Grant, Dutton and Rosso 2008). As a result, these organizations have employees with higher levels of job satisfaction combined with lower levels of absenteeism and turnover (Wright et al. 1995). Therefore, despite their dependence on labor, they do not have to pay extra attention to employee welfare and benefits.

For reasons of parsimony, we suggest that the revealed positive effects of workforce diversity on financial performance as reported in our study may be specifically related to the Brazilian context. However, the magazine *The Economist* published an article describing an initiative by the International Airport of Mexico City to hire disabled employees that is bringing benefits not only to the

organization, but also to other stakeholders such as employees, customers and government (The Economist 2009, p. 48), This experience together with our findings seem to support the argument in favor of the benefits of social sensitive structures and organizational attention to social issues. We contend that these are benefits that can be translated into financial performance. Furthermore, they have the capacity to advance positive externalities that go beyond the organizational realm. More importantly, we contend that workforce diversity is an inclusive and broad corporate and social policy (Herring 2009).

CHAPTER 5

RENEWED ATTENTION: concluding remarks for future research

As was discussed in the introduction of this dissertation, the mosaic metaphor was previously used to depict the construct of attention in studies of organizational behavior (Cyert and March 1963, Cohen, March and Olsen 1972 and March and Olsen 1976). I concur that mosaics are particularly well suited to depict the intricacies of organizational attention and, as such, are an appropriate portrayal of theoretical perspectives on organizational behavior based on attention. The instability, fluidity and dynamism of attention suggest that organizational behavior can take different shapes in accordance with the multiplicity of definitions possible for each situation in which collective members find themselves. Additionally, regardless of the variety of definitions or shapes, each situation is linked to a larger stream of events and interactions (March and Olsen 1976 and Morgeson and Hofmann 1999). Thus, from a perspective based on attention, organizational behavior resembles a collage comprised of multiple situations in which individuals, collectives, issues and environments interact with and influence one another.

Despite the fluidity and dynamism of attention (Dutton, Fahey and Narayanan 1983), attention-based perspectives on organizational behavior suggest that there is (a non-conventional) order in the structuring of attention.

“In particular, it is argued that any decision process involves a collection of individuals and groups who are simultaneously involved in other things [...]. The attention devoted to a particular decision by a particular potential participant depends on alternative claims on attention. Since those alternative claims are not homogeneous across participants and change over time, the attention any particular decision receives can be both quite unstable and remarkably independent of properties of the decision. The apparently erratic character of decision making is made somewhat more explicable by placing it in this context of multiple, changing claims on attention” (Cyert and March 1963, p. 234-235).

A primary implication of attention’s erratic nature is that attentional perspectives on organizational behavior are primarily explanatory and, thus, have little predictive power. The inherent complexity of these simultaneous and constantly changing effects at many different levels and arenas indicates the difficulty associated with developing a theory of attention (Sonpar and Golden-Biddle 2008). For some authors, it may even be impossible to explain how social relations and situational effects have an effect on the behavior of organization and individuals (Friedland and Alford 1991).

This final chapter presents an overview of this dissertation. It assesses the contributions of the three studies to the stream of research about organizational attention. Additionally, it provides some managerial implications, limitations and suggestions for further research. I believe the studies reported here provide strong support for the ABV and, thereby, contribute to the development of a matured theory of attention.

5.1 Attention resources: assessing the contributions of this dissertation

It is the central thesis of this dissertation that an understanding of organizational behavior needs to be obtained on the basis of an examination of attention. I believe the three studies presented here reveal the vigor of this claim. In this section I provide an overview of the research findings and outline the contributions I make to research on organizational attention (see Figure 5.1 for a summary of these findings). Additionally, I discuss the general contribution my research makes to the ABV and also the managerial relevance of this dissertation.

5.1.1 Contributions to the ABV

The conceptual study “*Attention span: expanding the attention-based view to the team, organizational and social movements levels*” presented in Chapter 2 discusses the functional equivalence of the elements and mechanisms of attentional processes at other levels of analysis than those originally proposed by Ocasio (1997), i.e. the business firm. In this chapter, I highlighted the elements of organizational attention and their role in the attention process. I argued that these elements are homologous at multiple levels of analysis: in specific, at the level of the team, the organization and social movements. I argued that the attentional process is equivalent at those levels and, therefore, is an important construct with which behavior can be explained not only in organizations, but also in teams and social movements. In addition to the argumentation presented for functional equivalence at lower and higher levels of analysis, I discussed the cross-level movements of attention. Using the physical processes percolation and sedimentation as metaphors, I explained how attention seeps into upper levels and also how attention drops from higher to lower levels.

Figure 5.1: Main findings and contributions of this dissertation

	Main findings	Contributions
Chapter 2: <i>Attention span</i>	Identification of homology and functional equivalence of attention at the levels of the team, organization and social movements; Description of the cross-level effects and processes of attention; Identification of the canonical elements of the ABV.	Proposes a multilevel theory of attention; Expands the use of ABV to studies about teams in organizations and social movements; Reveals the strengths of the ABV to explain organizational behavior in and around organizations.
Chapter 3: <i>When a thousand words are (not) enough</i>	Congruency and complementary nature of ABV and resource dependence theory.	Extends ABV revealing some of the environmental mechanisms that affect organizational attention; Extends ABV exploring the linkage between firm performance and attention.
Chapter 4: <i>Sense and sensibility</i>	Identification of the mediation role of organizational attention; Explanatory power of ABV to explain organizational responses to social issues.	Provides an explicit test of the model of situated attention and firm behavior; Expands ABV to explain phenomena in the field of business in society.

This conceptual research makes several theoretical contributions to the organizational attention research stream. The identification and explanation of the functional equivalence of the attentional process at different levels of analysis, suggests that the ABV is generalizable across different levels of analysis. Hence, the multilevel perspective of attentional processes has the potential to explain a diverse set of organizational outcomes not only at the organizational level, but also at the levels of the team and social movements. Moreover, the percolation and

sedimentation movements bridge micro and macro aspects of attention to provide an explanation of collective behavior. Thus, the multilevel perspective I present here reveals some advantages of use the ABV to explain behavior in and around organizations. Therefore, I argue that the contributions of a multilevel approach to attention are not confined to studies of organizational attention. These contributions also advance the field of organizational studies more broadly because they put forward a comprehensive theoretical frame to explain how social, economic, institutional and cultural aspects and attentional process interact and influence one another.

Chapter 3, “*When a thousand words are (not) enough: an empirical study of the relationship between firm performance and attention to shareholders*”, presented the results of empirical research in which I proposed a conceptual model to explain attention to shareholders. Based on resource dependence theory and the attention-based view, the proposed model involved a concurrent test of these two literature streams. I argued that attention dedicated to shareholders is sensitive to variations in financial performance. To test the hypotheses, I adopted a mixed-method approach in which I combined content analyzed data from annual reports with regression analysis. The results reported in this chapter indicate that the relationship between attention to shareholders and financial performance depends on the measures of performance used and upon the context in which organizations find themselves. In addition to some firm level antecedents, this study found evidence that the sensitivity of attention to shareholder to financial performance is subject to country-level effects.

These findings reveal key contributions to the development of the ABV. Primarily, I extend the ABV in, at least, two important ways. First, the concurrent test of the ABV and RDT highlights the complementary nature of these two literature streams. RDT provides the ABV with a more comprehensive view and explanation

of the linkage between the environment and the process of situated attention. This linkage is addressed but not explored by Ocasio (1997). Thus, I advance theory on organizational attention by providing an explanation of how the environment of decision shapes and influences organizational attention. Second, I also add to the ABV by providing an explanation for the relationship between organizational attention and performance. Despite the large volume of research adopting the ABV to study organizational phenomena, there are very few studies that tackle this particular linkage.

The study “*Sense and sensibility: testing the effects of attention structures and organizational attention on financial performance*”, reported in Chapter 4, provides yet another test for the attention-based view of the firm. Using Brazil as the research setting, this study utilizes data on social responsibility to test the effects of attention structures and organizational attention on organizational responses to social issues. As discussed, Brazil has revealed itself as a very interesting and appropriate context in which to test organizational responses to social issues. The findings suggest that organizational attention is a full mediator between attention structures and financial performance. The adoption of the ABV to explain organizational social responses helps to identify some of the mechanisms underlying the relationship between social responsibility and financial performance, and tackle recent calls for a contingent approach to research in the field of business in society.

Chapter 4 provides additional contributions to the ABV. First, it provides an explicit test of the model of situated attention and firm behavior proposed by Ocasio (1997). As I discussed along this dissertation, many scholars have adopted the ABV to explain a broad scope of organizational phenomena. To date, no previous study had proposed a systematic test of the seminal research on the ABV. Second, this study broadens the ABV research realm by exploring organizational

responses to social issues in a research setting outside the context of the U.S. Considering the contingent and contextual nature of attention, both the research setting and the phenomenon under study play an important role in research on organizational attention. In sum, our study provides additional evidence of the virtues of the ABV.

5.1.2 Practical relevance

Throughout this dissertation I have emphasized the fact that attention is simultaneously both a product and a process. Identification of the dual nature of attention brings with it important implications for practice. Practitioners acknowledge attention as an output. Marketing managers, human resources professionals and social activists often mention the crucial need to attract customers, employees and media or congressional attention in order for their activities to be effective (Goldstein 2007, Davenport and Beck 2001, Jones and Baumgartner 2005 and Jackson 2008). We are inundated by information and, in such a context, a lack of attention seems even more pronounced (Simon 1947). Therefore, it is not uncommon to hear professionals identifying attention as a resource (Jackson 2008), as a currency (Davenport and Beck 2001) or as a commodity (Bouquet and Birkinshaw 2008). However, the underlying process is misunderstood (Davenport and Beck 2000). Consequently, practitioners fail to adequately develop attention capabilities, nor do they learn how to deal with and manage their existing attentional resources.

In this dissertation, I offer a dedicated focus on the research stream on organizational attention and uncover the canonical elements of attentional processes. Additionally, the empirical studies elucidate several relevant aspects of the process and its relationship with financial performance. Therefore, I provide practitioners with a descriptive and explanatory depiction of attention that enables them to recognize elements and mechanisms that can be measured and managed.

This does not imply that my work offers managerial tools for the effective management of attention, the topic of the manager-oriented book published by Davenport and Beck in 2001. However, I do offer a contextualized and comprehensive picture of how attention process affects and is affected by organizational behavior both inside and outside the organization.

5.2 Attention: limited yet renewable

According to this and previous research on attention, we learn that attentional processes are unstable, fluid, emergent and dynamic (March and Olsen 1976, Dutton, Fahey and Narayanan 1983). Although the limits of attention are often emphasized, scarcity and context-dependence are also critical aspects of organizational attention. An even less emphasized aspect is attention as a renewable resource. Attention capacity is limited. It restrains organizational capacity to assimilate, interpret and / or respond to stimuli (Ocasio 1995). However, organizations are incessantly facing a myriad of stimuli and situations that simultaneously reflect individuals' and collectives' cognitions and actions and environmental influences. Thus, the continuous changes on the situations faced by organizations suggest that attention is not only sequential (Simon 1947), but also renewed over time (Cyert and March 1963).

In this final section, I address some of the limitations of this dissertation and also suggest some avenues for future research. Despite their limitations, I believe that the studies reported here provide evidence and new insights that contribute to the development and further improvements of studies of organizational behavior from an attentional perspective.

5.2.1 Limitations

Taken as a whole, these studies provide contributions, but also underscore some of the limitations of the ABV and other attentional perspectives of organizational behavior.

First and foremost, the abstract and complex nature of attentional processes complicates any understanding of how the diverse set of structural and relational elements of attention influence and are influenced by the broader environment and specific situations. This limitation is particularly prominent in the second chapter in which I presented a multilevel theory of attention. To argue in favor of the functional equivalence of attention processes at the levels of the team, organization and social movements, I draw on a wide range of literature about organizations. Additionally, the emphasis on cross-level processes of attention demands that the reader become accustomed to a high level of abstraction. Although I believe the use of the percolation and sedimentation metaphors help to guide the reader through the argumentation, I acknowledge the exploratory nature of my ideas. On one hand, the process model of situated attention reveals itself as a comprehensive framework to address multiple organizational phenomena. On the other hand, however, it embraces too many elements from a variety of theoretical origins, revealing itself as a dense and complicated construct.

Second, despite the richness associated with being a contingent approach to organizational behavior, the context-dependent character of attention implies that different definitions are attributed to similar situations, which, thereby, entails diverse outputs and organizational responses. In the third chapter, in which I proposed a theoretical model to explain attention to shareholders combining the attention-based view and resource dependence theory, I also underscored the contextual character of attention. The findings regarding country-level effects on the relationship between organizational attention and financial performance

indicates that both the internal and external environments impinge upon organizations, thereby affecting attentional processes. In the fourth chapter, in which I tested the relationship between attention structures, organizational attention and financial performance, I highlighted the particularities of the research setting and their implications for our findings. Despite presenting interesting evidence about attention and organizational behavior, the results are limited in their ability to generalize on the basis of these findings (as is the case with findings from other studies in this research stream).

Finally, the nature of attention as a process together with its symbolic / substantive character creates a “formidable problem” relating to the measurement of attention (Kahneman 1973, p. 4). In spite of the numerous studies adopting the ABV to explain organizational outcomes, I identified only very few studies that actually focus on the effects of organizational attention on financial performance (Levy 2005 and Bouquet, Morrison and Birkinshaw 2009). This might be explained by the difficulties associated with measuring organizational attention. In the two empirical papers presented in this dissertation, I measured attention. In one, namely Chapter 3, I used content analyzed data collected from annual reports. In another, Chapter 4, I used resource expenditures. Content analysis of organizational documents and word count is by far the most common technique employed to measure attention (Levy 2005, Cho and Hambrick 2006, Yadav, Prabhu and Chandy 2007 and Kaplan 2008b). As discussed earlier, despite the validity of these measures, organizational documents are subject to impression management and also are sensitive to strategic self-presentation. Scholars have tried alternative measures either based on survey instruments (Bouquet and Birkinshaw 2008 and Bouquet, Morrison and Birkinshaw 2009) or time count (Yu, Engleman, Van de Ven 2005). While survey-based measures present some limitations due to their perceptual and self-presentation nature, time count is also limited because it captures one, and only one, dimension of attention (Kahneman

1973 and Ocasio 1997). Alternatively, I used a much less common measure of organizational attention. Following Durand (2003) I adopted actual resource-allocation data as a proxy measure of organizational attention. However, resource expenditure is neither openly disclosed nor homogeneous across levels of analysis.

5.2.2 Future research

The studies reported in this dissertation focused on organizational attention. As highlighted along the way, attention is a limited and scarce resource that is critical to management and organizations. More importantly, in spite of its complexity and degree of abstraction, attention is a potent construct that has the capacity to explain organizational behavior. The dual nature of attention, both as an output and a process, implies that attention is also versatile. Additionally, the cross-level approach that is opened up by attention perspectives on organizational behavior bridges micro and macro level aspects, providing linkage mechanisms between individual, organizational and environmental effects. Moreover, attention is a context dependent construct and, as such, provides researchers with a strategically advantageous framework that encompasses broad and specific contingencies that affect organizational behavior. Finally, an attention perspective of organizational behavior accounts for the role of agency in organizational responses and its effects on lower and higher levels of analysis.

I believe a full-fledged theory of attention is an ambitious goal, but some “simple beginnings” have already been proposed (March and Olsen 1976, p. 39). As recently outlined (Gavetti, Levinthal and Ocasio 2007), such perspective should address some of the limitations of the prevailing knowledge of organizational behavior. In order to do so, this theory, or perspective, must account for the limitations of individuals and collectives. It must also account for the linkages between structure and process and how they affect and are affected by individuals and collectives. Moreover, it must be capable of explaining how environmental

stimuli constrain individuals and collectives and how definitions of these situations affect responses. Another necessary component of such a theory is an account of the relational elements between and among individuals and collectives.

Notwithstanding the aforementioned limitations, I believe the three studies presented here corroborate earlier and recent contentions that to explain organizational attention is to explain organizational behavior. Additionally, these studies open up new directions for further development of organizational studies based on attention. First, the multilevel theory calls for both further description and specification in order to make it less abstract. In this direction, empirical research assessing the process model of attention at the levels of the team and social movements are needed in order to make my proposal more tangible and concrete. Second, research that combines attention and organizational behavior demands a more systematic discussion of appropriate methods and measures. Regardless of the number of studies published using measures of attention, little has been added to this literature in terms of our ability to measure attention. The studies presented in this dissertation open the arena for discussion and development of research designs and methodologies that are suited to the study of attention. Finally, this dissertation broadens the scope of application and usage of the ABV to other areas, such as social movements and business in society. More so than explanations of strategic behavior, attentional processes can advance the understanding of multiple phenomena in and around organizations.

Despite the virtue of the model of situated attention proposed by Ocasio (1997), the relevance and centrality of attention on organizational behavior together with the results found in empirical work on organizational attention pose challenges for scholars interested in attention. While the ABV provides a comprehensive, yet abstract, theoretical framework that helps to understand how, when and why firms respond to internal and external environmental stimuli, it still demands further

elaboration and systematic tests (Sonpar and Golden-Biddle 2008). How can we account for the contingent nature of organizational attention, explain organizational behavior and still obtain sound and generalizable findings? How much of the variance in organizational behavior can be explained by environmental, organizational and individual effects? Answering these and other questions about organizational attention, in general, and the ABV specifically requires studies that focus more on attention as a process as opposed to attention as an output.

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Samenvatting

Organisatiethoretische studies die de nadruk leggen op de rol van attentie in het gedrag van organisaties gaan uit van het idee dat organisaties, net zoals individuen, slechts een beperkte capaciteit hebben voor het opnemen en verwerken van prikkels uit de omgeving. Deze begrensde capaciteit wordt geconditioneerd door beperkingen in de cognitieve vermogens van individuen, en door beperkingen in het vermogen van organisaties om deze individuele cognities te verdelen over relevante taken, om ze te coördineren en om ze doelgericht te integreren. Het gegeven dat attentieprocessen zich afspelen op meerdere niveaus van aggregatie in organisaties, en het gegeven dat deze processen een dubbel karakter hebben omdat het begrip attentie zowel betrekking heeft op cognitieve processen als op de uitkomsten daarvan, maken dat op attentie gebaseerde theorieën interessante inzichten kunnen bieden ter verklaring van organisatiegedrag.

Dit proefschrift omvat een conceptuele studie en twee empirische studies over attentieprocessen in organisaties. In de conceptuele studie, getiteld: *“Attention span: Expanding the attention-based view to team, organizational and social movements levels”*, wordt betoogd dat attentieprocessen in functioneel equivalente vorm aantoonbaar kunnen worden gemaakt op drie verschillende niveaus van analyse en aggregatie: (1) het intraorganisatie team, (2) de organisatie zelf, en (3) de sociale stroming als aggregaat van organisatie actoren. De empirische studie, getiteld: *“When a thousand words are (not) enough: an empirical study of the relationship between firm performance and attention to shareholders”*, biedt een concurrerende test van op attentie gebaseerde theorieën en theorieën die de organisatie afhankelijkheid van hulpbronnen benadrukken, die immers beiden een verklaring bieden voor de relatie tussen organisatie zelfpresentaties en de financiële prestaties van de onderneming. Tenslotte test de empirische studie,

getiteld: “*Sense and sensibility: testing the effects of attention structures and organizational attention on financial performance*”, een procesmodel van gesitueerde attentie door onderzoek te doen naar de effecten van attentiestructuren en naar de verdeling van attentie voor organisationele prestaties en maatschappelijke reacties.

Samen verdiepen deze studies bestaande inzichten binnen op attentie gebaseerde organisatietheorieën, en bieden ze een nieuwe kijk op organisatiegedrag. Bovendien bieden ze nieuwe impulsen aan het wetenschappelijk onderzoek naar organisationele attentie, door het onderstrepen van de sterkten van deze onderzoeksstroom en door het ondervangen van een aantal van haar beperkingen.

Resumo

Estudos organizacionais que enfatizam o papel da atenção em comportamento organizacional partem do princípio de que organizações, assim como indivíduos, têm capacidade limitada para atender a estímulos ambientais. A capacidade limitada das organizações para responder a tais estímulos é resultado dos limites cognitivos dos indivíduos e também dos limites das organizações em distribuir, coordenar e integrar tais limites cognitivos. A natureza inter-nível da atenção organizacional, bem como seu duplo caráter tanto como processo, quanto como produto, indicam que teorias de atenção são instrumentos profícuos para explicar comportamento organizacional.

Esta tese de doutoramento é composta por um estudo conceitual e dois estudos empíricos sobre atenção organizacional. No estudo conceitual intitulado “*Intervalo de atenção: expandindo a teoria da firma baseada em atenção aos níveis de análise do time, da organização e dos movimentos sociais*”, argumenta-se que processos de atenção possuem equivalência funcional nos níveis de análise do time, da organização e dos movimentos sociais. O estudo intitulado “*Quando mais que mil palavras (não) são suficientes: um estudo empírico da relação entre desempenho da empresa e atenção aos acionistas*” testa o poder explicativo da teoria da firma baseada em atenção e da teoria da dependência de recursos para elucidar a relação entre desempenho da empresa e atenção aos acionistas. Finalmente, o estudo “*Razão e sensibilidade: testando os efeitos das estruturas de atenção e atenção organizacional no desempenho financeiro*” testa o modelo conjuntural e processual de atenção, examinando os efeitos de estruturas de atenção e da alocação de atenção nos resultados financeiros.

Juntos, estes estudos aprofundam e ampliam as perspectivas de atenção em pesquisas sobre comportamento organizacional. Além disso, renovam o interesse dos estudiosos em atenção organizacional, indicando pontos fortes e limitações das teorias de atenção e também revelando uma linha de pesquisa prolífica.

Biographical note



Luciana was born on July 23rd 1974, in Belo Horizonte, Brazil. She obtained a Bachelor Degree in Economics in 1998 and a Master of Philosophy Degree in Business Administration in 2002, both at Universidade Federal de Minas Gerais (UFMG). Since her early years in the university she has worked as a research assistant in different projects about the labor market and industrial relations. Luciana had a rewarding experience during her Bachelor and her paper won the national prize for Young Researchers in Industrial Relations in 1997/1998. Before starting her Master of Philosophy in Business Administration, she worked at the Industrial Relations Institute (IRT / PUCMinas). During her Master, Luciana worked as a Lecturer at PUCMinas where she taught Industrial relations. In early 2002, Luciana obtained her Master Degree with Honors. From 2002 to 2004, she worked as Organizational Behavior Researcher in Fundação Dom Cabral, a highly regarded Brazilian business school. There she had the chance to work with some international scholars and present her work in international conferences, which inspired her to pursue her doctoral degree abroad. In 2004, Luciana was granted with CAPES scholarship, a prestigious program held by the Brazilian Ministry of Education. Luciana moved to Rotterdam in 2005 when she started her PhD as ERIM PhD External candidate at the Business-Society Management Department. Luciana was guest lecturer and supervised Master students next to the development of her PhD research. Her work has been presented at several international conferences, including Academy of Management Meeting, EGOS Colloquium and ARCS Conference.

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ATTENTION MOSAICS STUDIES OF ORGANIZATIONAL ATTENTION

Organizational studies emphasizing the role of attention in organizational behavior depart from the idea that organizations, like individuals, have limited capacity to attend to environmental stimuli. The bounded capacity of the organizations to respond to stimuli is conditioned by the limited cognitions of individuals and by the limited capability of organizations to distribute, coordinate and integrate those cognitions. The cross-level nature of organizational attention, its dual character as both a process and an output, means that theories of attention afford interesting insights to explain organizational behavior.

This dissertation presents one conceptual and two empirical studies about organizational attention. In the conceptual study entitled "*Attention span: expanding the attention-based view to team, organizational and social movements levels*", it is argued that attentional processes have functional equivalence at the team, organizational and social movements level. The study entitled "*When a thousand words are (not) enough: an empirical study of the relationship between firm performance and attention to shareholders*", tests the power of the attention-based view combined with resource dependence theory to explain the relationship between financial performance and attention to shareholders. Finally, the study "*Sense and sensibility: testing the effects of attention structures and organizational attention on financial performance*" tests the process model of situated attention by examining the effects of attention structures and the allocation of attention on organizational social responses and performance.

Together, these studies deepen and expand attentional perspectives on organizational behavior. Moreover, they renew scholars' interest in organizational attention, indicating some of the strengths and limitations of theories of attention and also revealing a prolific research stream.

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