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Non-executive directors: environmental scanning in an enacted world

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NON-EXECUTIVE DIRECTORS: ENVIRONMENTAL SCANNING IN AN

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Abstract

Non-executive directors (NEDs) are external members of an organization's board of directors. These directors' most significant contribution arguably is found in the quality of their strategic insights, as they ostensibly bring a fresh perspective and set of experiences to acts of strategy and sense making. This study examined NEDs' contribution to the environmental scanning phase of an organization's strategic planning process. Data were gathered from a convenience sample of seven current NEDs. Findings indicated that the framing process used during the environmental scanning phase directly influenced how NEDs make sense of the environment. Additionally, NEDs were found to prefer an "objective" environment that is externally located. Finally, NEDs consciously appraise each other's contribution to the overall discussion. Study findings were incorporated into a conceptual model. Future studies should use a larger sample of NEDs, including peers from the same boards and those from across multiple industries.

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Chapter 1

Introduction

The dogmas of the quiet past are inadequate to the stormy present. The occasion is piled high with difficulty, and we must rise with the occasion. As our case is anew, so we must think and act anew.

Abraham Lincoln, 1862 Annual Message to Congress.

Today's organizations are operating within a context of warp-speed change and escalating complexity. In recent years, these types of contexts have been referred to as volatile, uncertain, complex, and ambiguous (VUCA) environments (Liebl & Schwartz, 2010). The dynamic nature of these environments increase the pressure for organization leaders to possess strategic clarity and engage in strategic reflection, as their understanding and response to their environments ignite a series of strategic decisions that have far-reaching impacts on the organization and all its stakeholders (Lahl & Egan, 2012; Worley, Williams, & Lawler, 2014). As part one of the routines of organizational agility, Worley et al. (2014) have identified the importance of accurately perceiving the environment. Worley et al. state that there are three critical features to the perceiving routine: Sensing the environment, communicating information to decision makers, and interpreting environmental signals. Lahl and Egan (2012) contend that as leaders' capacities for strategic reflection and clarity increase, so do their ability to detect and respond to new trends, threats, and opportunities as they emerge.

Consider the case of an Australian infrastructure, construction, and asset management organization. The company experienced a boom from 2006 to 2007, during which time it purchased multiple companies in the North America, South America, the Middle East, and India. Company shares were valued at approximately 16 AUD/share (up

from 4.751. AUD/share in July 2005) and the company employed roughly 23,000 individuals. In December 2012, the company completed a $575M acquisition that was expected to competitively differentiate the organization and allow it to move into the even more profitable oil & gas market. By all accounts, it was a time of great potential growth for the company.

Just fourteen months later, the company had to concede a write-down of $270 million on the 2012 acquisition. Moreover, many of the other companies that had been acquired had been sold or were being dramatically scaled down. Company shares plummeted to about 1 AUD/share, cash flow issues arose, the company was unable to service its debts, and smaller communities it served experienced acute strain. Massive strategic manoeuvring followed, including restructurings, offshoring, salary freezes, and more.

Examining the ten years of events leading up to this meltdown suggests several possible precipitators, such as the 2008 global economic crisis, semi-privatization of assets by local government, the decline of the mining and oil sector, and—perhaps even more importantly—a lack of consistent executive leadership.

In just seven years, the company had had three chief executive officers, with one of them serving two years. The only apparent constant during this time in this organization was the board of directors, largely comprised of a few large stockholders (termed *non-executive directors* of the company) and highly influential senior leaders (termed *executive directors*). It was in these hands that the fate of approximately 23,000 employees and their company rested. Given the disappointing end to the organization's period of promise from 2006 to 2013, it is safe to conclude that the board made suboptimal strategic decisions.

Several questions and possible theoretical explanations remain about where the board's decision making went wrong. Had the markets moved too fast for board members to make sense of and navigate the environment? Had the markets moved too slowly for board members to detect environmental threats and opportunities? Was the failure "to see" the enactment of a self-defence mechanism (often unconscious response to unsettling information and corresponding psychological uncertainty) prevented board members from accurately perceiving the environment? Although ample research has been conducted on the former two questions (sources), this third possible explanation bears more examination.

O'Hara and Leicester (2012) state that we see what we want to believe, rather than believe what we actually see. In turn, the authors advise readers to change their inner stance to one of growth—by learning to be and to do in the context of the 21st century. Moreover, Jaworski (1996) explained that perception, language, and action are inextricably linked, where language influences people's range of perceptions such that "we do not describe the world we see, but we see the world we describe" (p. 178). This act of applying language and perception to one's world and experiences is called *sense making* (Weick, 1995). In turn, sense making informs people's actions and "creates" or enacts the world in which they find themselves. Applied to strategic management, board members' sense making of their organizational environment informs their strategic clarity and reflections, which in turn influences their decisions, actions, and eventual outcomes. The body of work that examines the linkages between perception, language, and action is referred to as *social constructionism*, and it represents a growing focus in organizational theory and research (Berger & Luckmann, 1966).

Sense-making and social construction as applied to organizational leadership may be particularly potent during environmental scanning, the phase of strategic planning where leaders determine what external forces are at work on the organization and what threats and opportunities are present in the environment (Mintzberg & Quinn, 1996). Importantly, the sense-making process is based on individually and collectively operating assumptions (unconscious at times) about how the "world out there" operates and is both ongoing and dynamic as well as strongly influenced by prevailing mental models informed by individual and organizational experience (Jaworksi, 1996).

Of particular interest in this study is the influence of non-executive directors (NEDs) on shared understanding during the environmental scanning phase of strategic planning. Importantly, NEDs are located external to the organization and ostensibly bring a fresh perspective and set of experiences to act of sense making. Accordingly, Dunne and Morris (2008) have asserted that NEDs' most significant contribution is the quality of their strategic insights. Moreover, NEDs, compared to executive directors and senior managers, may vary in their perceptions and contributions to the overall strategy. Examining NEDs' role in environmental scanning is the focus of this study.

Study Purpose

The purpose of the present study was to understand NEDs' contribution to the environmental scanning phase of an organization's strategic planning process.

1. How do NEDs describe the environmental scanning process?

2. To what extent do NEDs, compared to other influences, shape a shared understanding of the environment?

3. What are the outcomes of the environmental scanning process?

Significance of the Study

A preponderance of research and books discuss the general role of boards of directors and strategy in organizational life (Pugliese et al., 2009; Benningson & Leonard, 2013; Fama & Jensen, 1983; Hendry, Kiel, & Nicholson, 2010). Fewer studies deal exclusively with NEDs' role in strategy. Even fewer apply a social constructionist lens to strategic management (e.g., Christensen & Westenholz, 1999; Smircich & Stubbart, 1985) and far fewer apply a social constructionist lens to NEDs' contribution to environmental scanning. The present research helps fill this gap in research. Moreover, applying a social constructionist lens to the process of environmental scanning and NEDs' contribution to it may illuminate how NEDs may more effectively perceive and create different strategic opportunities for their organizations. Exploring the study topic, contributing new insights, and informing practice may better support NEDs in carrying out their highly impactful roles.

Definitions

Three definitions are central to the present study:

1. Strategy: a perspective (Mintzberg, 1988) that results from individual and collective sense-making and produces a collective construction of reality about how to win in a particular business.

2. Environmental scanning: the phase of strategic planning where leaders determine what external forces are at work on the organization and what threats and opportunities are present in the environment (Starbuck & Milliken, 1988; Weick, 1995).

3. Non-executive director (NED): A NED is a member of the board of directors who is neither an employee nor an executive leader of the company. A NED does not participate in the day-to-day operation of the business but is responsible for monitoring the actions of the organization's executives and contributing to strategy development.

Organization of the Study

       This chapter provided the background and context for the study. The research

purpose, study setting, and significance of the study also was outlined. Chapter 2 reviews

past theory and research relevant to the study. Theories related to corporate boards,

NEDs, strategic planning, and social constructionism are examined and discussed.

Chapter 3 describes the methods that were used in this study. Specifically, the research

design and procedures related to participant selection, data collection, and data analysis

are outlined.

       Chapter 4 presents the study results. Chapter 5 provides a discussion of the

results, including key conclusions, recommendations, limitations, and suggestions for

continued research.

Chapter 2

Literature Review

The purpose of the present study was to understand NEDs' contribution to the environmental scanning phase of an organization's strategic planning process. This chapter provides a review of relevant theory and literature. A brief overview of corporate boards is provided first. Literature about NEDs, including their roles and success factors, is then examined. Theory and literature related to strategic planning and environmental scanning, with particular focus on NEDs' involvement in the process is discussed third. The fourth body of literature discussed is social constructionism as it applies to NEDs' strategic planning activities.

Corporate Boards

Gevurtz's (2004) comprehensive review of the historical and political antecedents of corporate boards, going back to medieval times, indicates that a board's two primary purposes was to represent members' interests and to adjudicate disputes. They carried out their role through hierarchical (versus collective) decision making and political legitimacy. Notably, boards historically did not serve as a monitoring or organizational governance body, as they do today. In addition to providing governance, today's boards of directors are expected to contribute to the organization's strategy (Barton & Wiseman, 2014; Charan, 2005; Charan, Carey, & Useem, 2014; Hendry et al., 2010). Some researchers even consider the success of a company's strategy as a reflection of the strength of its directors. For example, Bhaghat, Hirt, and Kehoe (2013) concluded, based on their global study of boards, that one of a board's most important roles and the ultimate measure of its stewardship is ensuring that the company has a great strategy.

Based on their study of Danish boards of directors, Christensen and Westenholz (1999) additionally concluded that the role of the board is to socialize its members, maintain its unity, and to successfully play its role as strategist. The researchers state that, in the enactment of reality, part of the board's role is to convince a range of stakeholders that it is performing its role successfully. However, the specific roles played by NEDs in crafting these shared perceptions and promoting organizational growth over time was unexplored.

Non-Executive Directors

Two primary types of directors populate a board: executive directors, who hold leadership positions within the company, and NEDs, who are external to the organization, are not involved in the day-to-day operations of the company, and who may or may not be shareholders. Whereas executive directors have day-to-day knowledge of the business, NEDs provide an external view and independent judgment. Thus, each type of director brings to the board valuable and unique perspectives, wrought from a distinct set of realities.

The Institute for Directors New Zealand (2016) further distinguishes external directors into two types: NEDs, who are shareholders of the organization, and independent directors, who are not shareholders and, therefore, are truly independent from the organization. The Institute further elaborates that NEDs tend to have a more detailed knowledge of the organization than independent directors, and consequently may be better positioned to fill knowledge or skill gaps or help new leadership get up to speed. Although independent directors may lack intimate knowledge of the specific organization, they typically are successful business people and business war veterans, who bear the scars of having overcome adversity and risk. Consequently, these types of

directors often have a strong bias towards action or learning by doing rather than through academic channels. For the purposes of this study, independent directors are included within the NED category.

Roles. Relatively little research has been conducted on NEDs' specific roles on corporate boards (George, 2013; McNully & Pettigrew, 1999; Pye & Camm, 2003). Based on their examination of U.S. and U.K. unitary boards, where all members have equal responsibility for board outcomes, Pye and Camm (2003) concluded that NEDs are expected to fulfill a legal responsibility for formulating and implementing a company's strategy and carrying out a series of important governance functions. Board member roles are expected to evolve in concert with changing organizational, market, and regulatory expectations.

Key competencies. Key competencies for NEDs, as outlined by the Institute of Directors New Zealand (2016), include comprehending, articulating, and maintaining the big picture and strategic outlook; engaging in strategy formulation, direction, implementation, and communication; contributing to the development and redevelopment of organization culture based on vision strategy; and maintaining specific sector knowledge. The Institute of Directors New Zealand (2016) also identified required attributes and desirable attributes. Required attributes include self-awareness, alertness, and responsiveness to change, ability to deal with ambiguity, and ability to collaborate and value others' input. Desirable attributes include being inventive, original, curious, inquisitive, and intuitive.

In particular, NEDs can leverage and share their external perspectives as they relate to strategic issues facing the organization and the markets in which it operates. NEDs also must take care not to obstruct, override, or otherwise short circuit valid

organizational strategies already in place. Rassart and Miller (2015) elaborated, "In a productive relationship, the questions the board asks should be ones that are purposeful and legitimately probe and advance the strategy without grandstanding or attempting to 'one up' management" (p. 4). NEDs need to find effective ways and go about offering fresh thinking so that they influence executive board members (management) in shifting their perception/framework to the new contexts surrounding current organizational strategy.

These role definitions and attributes are used as a guide for hiring decisions and thus influence who is ultimately selected for the roles and how they carry out those roles. In other words, the roles and attributes will influence how NEDs enact the worlds around them.

Tacit knowledge. Tacit knowledge is sometimes easy to ignore, as it is unconscious and cannot readily be seen by the action agent (in this case, NED participants). Klein (2009) says that the role of tacit knowledge is to make perceptual discriminations. Perceptual discrimination can be seen in action, such as when an individual engages in pattern matching, constructs a work around, uses perceptual skills, judges what is typical or atypical, and develops his or her own mental models.

Strategic Planning

Planning is an organizational management process that is inseparable from the structure, behavior, and culture of the company (Duhaime, Stimpert, & Chesley, 2012). There are two important parts of the process, which Duhaime et al. call formulation and implementation. During the formulation phase, organizations identify opportunities and threats in the company's environment and come up with strategies to maximize opportunity and minimize risk.

Strategic planning is a disciplined effort that produces critical, direction-setting decisions and actions. Duhaime et al. (2012) share that decisions are strategic for at least three reasons: They have an impact on the overall performance and health of the organization in the short and long term; these decisions often involve making choices around allocation of resources; and they involve more than one functional department. Effective strategic planning is able to concisely articulate where an organization is heading, the actions required to get there, and spell out what success looks-like. The traditional strategic planning process starts with the defining a future state, setting the context, defining the strategic framework (e.g., SWOT), defining goals and governance review, refining and ratifying strategies, implementing the plan, and initiating feedback and review processes.

Directors' roles in planning. Fama and Jensen (1983) proposed that senior managers and boards should play two primary roles concerning strategy: (a) decision management (initiating and implementing strategic decisions) and (b) decision control (ratifying and monitoring strategic actions). Much later, Hendry et al. (2010) distinguished between interactive strategizing and procedural strategizing in reference to board members' activities.

Pugliese et al. (2009) conducted a review of 150 studies and concluded that conflicting theoretical viewpoints exist regarding board members' roles in setting organizational strategy. Pugliese et al. characterized one set of theories as a *conflict viewpoint* that positions directors as agents of self-interest (e.g., agency theory). Another set of theories was dubbed a *consensus viewpoint*, which assumes that directors are intrinsically motivated to and indeed do act in the firm's best interest (e.g., resource dependency theory, stewardship theory). A problem with this classification is that it

supports polarized views of directors' intents and actions, rather than dualistic views of directors who uphold both their own self-interests and the interests of the firm.

The work of McNulty and Pettigrew (1999) provides a conceptual guide from which this research draws on, specifically in their conclusions of the impact that NEDs have in the strategy process in the boardroom and how NEDs or part-time board members are able to influence the methodologies and processes by which those strategies evolved. Based on interviews with 108 U.K. NEDs and other part-time board members, McNulty and Pettigrew (1999) concluded that NEDs participate in strategy in three ways: by making strategic decisions; shaping strategic decisions; and shaping the content, context, and conduct of the strategy. McNulty and Pettigrew concluded that NEDs exert influence over all or some of these levels, beyond simply ratifying decisions made by management. For example, NEDs may contribute to established strategies by "asking executives to justify why certain courses of action have either been taken or not taken" (p. 65).

More recent articles have explored other dimensions of directors' involvement in strategy. Benningson and Leonard (2013) urged boards to move from a focus on risk management toward a focus on opportunity-generating capabilities and growth strategies. Bhagat et al. (2013) reasoned that boards may default to simply reviewing and approving management-proposed strategies due to time pressures or lack of detailed industry knowledge. Bhaghat et al. added that boards also often struggle to move beyond simple compliance monitoring and addressing related issues. Based on Pugliese et al.'s (2009) work, it appears that boards range in their strategic efforts, from decision control to working cooperatively with managers in strategy formulation and implementation. Bhagat et al. urged directors to generate a deep understanding of industry dynamics in order to recognize relevant internal and external data, identify patterns as they emerge,

and engage in strategic dialogue that triggers new insights and creates a shared understanding of what is needed to create growth and better returns.

In the wake of the global financial crisis, boards increasingly find themselves having more "uncomfortable" conversations around the strategy (Bhagat et al., 2013). Charan (2005) observed that boards of directors and executive leadership sometimes feel at odds with each other, primarily because of how and when strategy is discussed. While board members might think their strategy queries go unanswered, chief executive officers and key management may experience a feeling of "groundhog day," when strategic issues previously discussed continue to be revisited to back up new proposals.

Factors influencing directors' involvement. McNulty and Pettigrew (1999) found that NEDs' involvement with strategy was conditioned by such factors as (a) public debate, history and performance of the board (e.g., board meeting agendas, meeting procedures, amount of contact with the company); (b) heightened interest and debate in governance practices; (c) organizational performance difficulties; and (d) growth opportunities (e.g., entrance into new markets, mergers and acquisitions, divestures). These factors created conditions wherein NEDs often get more involved in strategy development (McNulty & Pettigrew, 1999).

McNulty and Pettigrew (1999) also observed that a NED's increased influence on the strategy was a byproduct of contributing to the processes where those strategic ideas came to be formulated (e.g., suggesting methods such as an offsite strategy retreat). For example, some companies convene special annual or semiannual strategy planning retreats that offer board members a more informal relaxed forum for "reviewing both the content and process of the strategy" (p. 69). In such cases, "the purpose is for executives to share their thinking . . . rather than [to simply] justify or convince [NEDs] of a

particular course of action" and this tends to result in greater involvement of NEDs in the strategy process (p. 69).

The image of informal offsite events that allow for extended board member interaction points to a particular focus in this study of how relations among board members impact strategy and at what level. McNulty and Pettigrew (1999) emphasized that external relationships between executive and non-executive board members strongly influence a NED's opportunity to contribute to strategy. For example, strong informal relationships set the context for productive interactions when sharing information, challenging decisions, and setting new directions. More recently, Rassart and Miller (2015) similarly emphasized the importance of quality interactions between management and NEDS for crafting and refining strategy. However, Rassart and Miller tend to be more fatalistic in concluding that in VUCA environments, both parties tend to favor status quo because they underestimate the risks of the current direction and structure while overestimating the risk of change.

Rassart and Miller's (2015) conclusions reveal that quality conversations may be a necessary but insufficient condition for assuring that organizational strategy is effective and sustainable long term. They added that within VUCA environments, organizational assumptions need to be continually updated based on so-called industry clock speed. Shifts in assumptions, in turn, need to be linked to shifts in the strategies those assumptions support. To do so, Rassart and Miller urged that management and NEDs engage in productive interactions and a cadence of interactions that allow the exploration of the many facets and issues that arise with the organizational strategy.

Processes of strategic planning and environmental scanning. Westley (1990) stated that people use strategy as a framework to give meaning, purpose, and direction to

the organization. Environmental scanning is considered to be a principal sub-activity during strategy formulation (Mintzberg & Quinn, 1996). During this process organizations identify opportunities and threats that may impact their organization to enable them to identify a range of strategic alternatives that match their corporate capability.

Stubbart (1982), in his study of the effectiveness of environmental scanning corporate units, highlighted that environmental scanning was different from industry or competitive analysis in two ways: (a) it was broader in scope and future directed and (b) it provided decision makers with future trends in a range of aspects, such as forecast of trends in competition, regulation, technology, culture, demographics to name just a few. This information was then used as a resource by decision makers to adapt the organization's long term to strategy to ongoing change. Stubbart also mentioned that these environmental scanning units had another vital task of providing assumptions for long term planning. Among his findings Stubbart reported the challenges that these units found in defining the environment, evaluating what information was worth having, interpreting its impact and convincing executives about its accuracy. Another of Stubbart's findings related to this research was that well defined traditional businesses had a narrow focus on what their environments were, and felt that they knew all the variables that could impact them.

Several strategic thinking and environmental scanning models are commonly used today:

1. Boston Consulting Group matrix, a growth share matrix divided into four fields through which a company can assess the value of the company's investments, designating them as cash cows, stars, question marks, and dogs (Krogerus & Tschappeler, 2008).

2. Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis, which aims to develop strategies that emphasize an organization's strengths and mitigate its threats and weaknesses (Krogerus & Tschappeler, 2008).

3. Ansoff Matrix, another growth share matrix that hinges upon assessing the risks of new and existing products. Products are thus identified as being opportunities for market penetration, product development, market development, and diversification (McKeown, 2012).

4. Political, Economic, Social, Technological Legal, Environmental (PESTEL) analysis, which provides an overview of the various macro-environmental factors that need to be considered when crafting strategy (Institute of Directors New Zealand, 2016).

5. The Blue Ocean method, a structured approach of pursuing a dual focus on differentiation and low cost leadership to innovate a major market business offering and eliminate competition. The aim of this approach is to reorder market realities in radical new ways. This approach differs from the others in that it generates major shifts in how board members make sense of interpret their realities (Kim & Mauborgne, 2005).

Strategic insights. Dunne and Morris (2008) state that the most important contribution a NED can make is the quality of his or her strategic insight. In the public arena, Githens (2013) suggests that the purpose of strategic thinking is to produce insights, which he defines as an individual recognition of the accurate nature or something and how it connects with the current conditions.

Klein (2014) offers us an alternative definition of insight that aligns more strongly with the study at hand. He elaborates insights transform the individual, moving the person towards a new narrative, by changing the way he or she thinks and helping him or her shed old beliefs by replacing them with new ones that are more accurate and functional. New insights also help people notice what is happening around them in different ways, thus, encouraging people to re-examine and revise their goals.

Generating strategic foresight. Environmental scanning, for the purposes of strategic planning, involves a process of converting observations of one's reality into strategic *foresights*, defined as the ability to see what is emerging (Sanders, 1998) or the

ability to sense what could happen before it happens (Johansen, 2007). Foresights enable individuals to understand the dynamics of one's larger context and to recognize the initial conditions of emerging patterns and trends. Johansen elaborated that insight is rooted in one's experiences and observations. Foresights emerge from listening for, sensing, characterizing, and anticipating the futures that could emerge from the present. With foresight, one may articulate a strategic vision of where one is (the present) and where one wants to go (the future).

Both Sanders (1998) and Johansen (2007) offer specific techniques for short circuiting outdated or current patterns of viewing the world and discovering foresights that lead to new strategic thinking. The approaches these authors use may mimic the processes NEDs use as they engage in board strategy sessions, bringing their own perspectives, blending these with insights gained through formal and informal analyzes and discussions, generating foresights, and formulating new or confirming existing strategies. Examining the specific processes NEDs use in this process is the focus of the present study.

Strategic foresight is related to Mintzberg and Quinn's (1996) discussion of strategy. They add that a strategy may be considered a plan, ploy, pattern, position, and perspective. They characterize these as five disparate but interrelated definitions of strategy. They explained that strategy as perspective may arise as a byproduct of the organization's earlier experiences leading to a consolidated a view of what works, and giving rise to what would appear to be an organizational personality. Perspective in this case arises out of previous patterns of success and failure, as well as engaging in a preferred role or position. Brunsson (1982, as cited by Mintzberg & Quinn, 1996) suggests that while strategy plans and positions may be dispensable, *perspectives are*

immutable and become ingrained in the organization's behavior. Over time, organizations develop what the Germans called *Weltanschauung,* which literally means worldview. Mintzberg describes this as the collective intuition of how the world works: strategy is then a perspective shared by the members of an organization.

Social Constructionism

Social constructionism suggests that people formulate different views of reality based on their experiences of it (Bascobert-Kelm, 2005; Watkins, Mohr, & Kelly, 2011). Moreover, people's views tend to morph as a result of their interactions with others and the co-creation of new environments. This explanation emphasizes the dynamic nature of reality—rather than reality (or an organization's environment) being singular, fixed, and set apart from the individual, it is through sense-making that these are created (Weick, 1995). The next section examines perceptual filters and sense-making in detail.

Perceptual filters. Starbuck and Milliken (1988) describe effective perceptual filtering as the ability to magnify relevant information so that it comes into the perceptual forefront and irrelevant information ebbs away into the foreground. Perception occurs in two stages: *noticing*, the process of narrowing down where to look and what to see by picking up on major events and gross trends, and *sense-making*, which focuses on subtleties and interdependencies and leads us to conclusions of what the information means.

Starbuck and Milliken (1988) noted that perceptual filtering requires thorough knowledge of the task environment in complex environments. At the same time, "Perceivers are inseparable from their environments because each depends on the other, and perceptions can either validate or invalidate themselves when people act on their environment" (p. 6). The implications of this are that in real-life settings, individuals are

unaware of all sources of stimuli or may not know how to sift through what data may be relevant or not; therefore, discovery can only be done through trial and error.

Starbuck and Milliken (1988) suggest that if the filtering is effective, the filtered data is less precise, but more comprehensible. They add that caution should be taken when applying executive experience gained during times of stability to situations that arise during periods of rapid change. The authors elaborated that during change, individuals need to act creatively rather than succumb to perceptual errors informed by past experience, as retrospective analysis may oversimplify links between behaviors and outcomes. Moreover, perceptual errors can have strongly detrimental impacts in rapidly changing organizations and environments, and many of these errors are revealed only in retrospect. This appears to be relevant to the study organization, which did not accurately perceive the changes in its own environment until well after the fact.

Starbuck and Milliken's (1988) observations are reflected in the work of Worley et al. (2014), who found that agile organizations engage in four routines: strategizing, perceiving, testing and implementing. The authors describe the perceiving routine as: "The process of broadly, deeply and continuously monitoring the environment to *sense* changes and rapidly *communicate* these perceptions to decision makers, who *interpret* and formulate appropriate responses" (p. 27).

Sense-making. Sense-making is an ongoing process with no beginning and no end, and the products of sense-making are ever evolving (Weick, 1995). Sense-making has been defined as a thinking process of figuring out what is going on, often using retrospective accounts, for the purpose of explaining surprises and anticipating what may happen next (Klein, 2009). Weick added that in the act of sense-making, individuals

cognitively bracket experience into chunks, enabling them to zero in on certain instances, pick up cues from those moments, and make meaning from them.

Weick (1995) explained that this process helps individuals cope with the pure duration of the experience by creating breaks in the streams of experience and honing in on, labeling, and categorizing those experiences. Starbuck and Milliken (1988) emphasized that sense-making is biased by a process of punctuating, where individuals are predisposed to finding streams of flows that match their current beliefs and expectations. Through this increased attention, punctuation works to engage the person in an ongoing process of repeatedly enacting and socially constructing the same types of events over and over. Importantly, sense-making is a social act: each person's sense-making is influenced and shaped by their social interaction with others. The implication is that when people are in new social settings, sense-making requires learning how to interpret and how to express themselves in the local lingo (Schutz, 1964).

Moreover, the sense-making process is not just a logical process of action devoid of emotion. In fact, it is an emotional response which triggers the interruption to the flow of experience. This link between emotion and experience presents a potential new challenge as those experiences and perspectives become deeply personal and defining, and develop into part of the individual's standard operating procedure. To the extent that this occurs, one's perspectives may be increasingly hard to change, unless help is engaged in re-examining one's underlying assumptions.

Metaphors. A few metaphors commonly depict the idea of sense-making: connecting the dots, putting ideas together like in an assembly line, and putting together a picture puzzle. Klein (2009) argued that such metaphors present a false sense of clarity regarding what is really going on and overestimate the completeness of one's data set. He

elaborated that in uncertain situations, one may not know how many pieces are there, how the pieces actually fit together, what they look like, or where they come from. Expertise in this case will only enable people in recognizing those pieces or dots they are most familiar with.

For example, Cooper Ramo (2009) pointed out that elements that are ever-present within an environment (e.g., fallen trees) often are ignored or disregarded concerning their connection to the larger picture (e.g., preservation of the ecosystem). Absent this awareness, little thought is given to the possible negative consequences of removing the fallen trees (e.g., increased forest fires). In the business arena, financial analysts such as Bill Browder anticipated the housing and economic collapse, when he recognized that the financial markets wouldn't be able to absorb further debt from leveraged-buyout deals.

Importantly, sense-making forms unconscious and conscious anticipations and assumptions, which serve as predictions about the future (Weick, 1995). Sense-making may or may not result in action (Feldman, 1989; Johansen, 2007). Feldman elaborated,

> Sense-making . . . does not result in action. It may result in an understanding that action should not be taken or that a better understanding of the event or situation is needed. It may simply result in members of the organization having more and different information about the ambiguous issue. (p. 20)

These concepts and examples reveal the possibilities and limitations of the sense-making process. The next section discusses how sense-making may be applied to the strategic planning process.

Applications to strategic planning. Very little research has applied a social constructionist lens to strategic management (e.g., Christensen & Westenholz, 1999; Smircich & Stubbart, 1985) or to NEDs' participation in environmental scanning. Moreover, contrary to concepts of social constructionism, the prevalent view among

boards of directors as it concerns strategic planning is one of an objective, externally situated organizational environment. For example, the Institute of Directors New Zealand (2016) stated, "The board has a leadership role in scanning and assessing the entity's external environment. . . . A board that understands the environment is able to add, enhance value to management operations" (p. 37).

Much earlier, Smircich and Stubbart (1985) pointed out the two traditional lenses (objective and perceived worlds) through which an environment can come to exist in the mind of the strategist. The researchers offered a third lens—an interpretive framework of an *enacted environment* created through "the social construction and interaction processes of organized actors" (p. 724). Smircich and Stubbart elaborated that the organization's environment is "generated by human actions and accompanying intellectual efforts to make sense out of these actions" by apprehending the world by bracketing experience, punctuating selected moments, which helps them turn a continuous flow of experience into meaningful components. (p. 726). They emphasized, "From an interpretative worldview, separate 'objective environments' simply do not exist" (p. 726).

In practical terms, the adoption of an interpretative lens suggests three implications for organizations. First, organization leaders and consultants would need to forsake the call to adapt to an "objective" environment, replacing it with one that focuses on creating new visions of the future that can be enacted. This is the product of swapping preconceived frameworks of how and what one "pays attention to" with new interpretations that will lead to new trends. Smircich and Stubbart (1985) pointed out that this process can only be done retrospectively rather than prospectively.

Second, it will be necessary to reconsider the organizational constraints, threats, and opportunities. Smircich and Stubbart (1985) note that novel strategies are often "perpetrated" by outsiders who are unaware of the organized industry sense mechanisms, which are nothing more than an agreed-upon set of satisfactory explanations of their social worlds (i.e., why things are the way they are and, in many cases, why should they stay that way). Further, Weick (1995) pointed out that these organizational features emanate forth from the organizational members themselves. Therefore, change within organizations requires person-level changes. He elaborated, "Problems that never get solved, never get solved because managers keep tinkering with everything but what they do" (p. 152). The lesson here is to actually develop the ability to self-reflect and continuously re-examine assumptions and limitations and or to develop strategies such as the creation of the role of wise-fool within an organizational setting who continuously challenges taken-for-granted ways of viewing and doing in the world. NEDs, as externals to the organization, can play important roles as thought provocateurs, which may lead to new insights and views of the world.

Third, strategists will need to shift their roles from gathering externally situated information and formulating decisions based on that data to managing meaning based on that information. Here strategists are encouraged to apply their imagination and creativity to the organizational setting that employees used to interpret the flow of events, such as the ceremonies and rituals that reflect organizational culture as well as unique happenings (Smircich & Stubbart, 1985). Examples of culture include language, incentive schemes, open-plan offices, Google-like environments, and flexible work practices. Such artifacts powerfully influence the socio-emotional aspects and social construction of the organization.

Based on these implications and for the purpose of the present study, the concept of social constructionism as applied to a board of director's strategic planning occurs as depicted in Figure 1. NEDs, operating primarily in a world outside the organization, formulate their worldview based on their sense-making about past external experiences. Executive directors, operating primarily in the interior world of the organization, formulate their worldview based on their sense-making about past internal experiences. These two sets of directors engage in a dialogue about their worldviews and the assumptions underlying them, which gives rise to a shared sense of the environment, which in turn leads to the co-creation of a new or co-confirmation of the existing strategy.
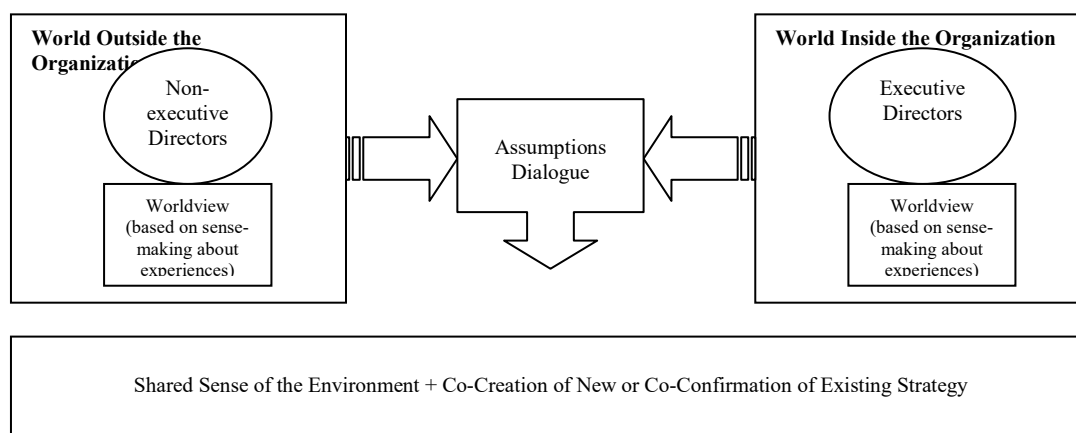
Figure 1: Conceptual Model of Socially Constructed Strategy

What is clear from the earlier discussion about sense-making is that there are untapped ways to see environments. NEDs, in collaboration with senior executives, have the potential to devise new ways of scanning the environment. This may include the using the self as the first instrument for perceiving and communicating changes in the environment, putting in place methods and processes that foster a system-wide understanding of the environment, and enabling the board to discover slow moving variables as a greater understanding of the system emerges. Investigating how NEDs scan

the environment, in service of achieving strategic clarity and insight, forming new strategies, or confirming existing strategies was the focus of the present study.

In particular, as external agents of the organizations, NEDs' most impactful contribution to strategy may be that they can see relationships that others cannot. This underscores NEDs' role in supporting long-term organizational success, especially when agility and change are required. NEDs' contributions in this way are particularly salient, given unconscious organizational preferences to see events from consistent viewpoints.

Conclusion

The literature reviewed in this chapter has emphasized that an organization's external environment is a product of collective sense-making. This presents an opportunity for a deeper understanding about how NEDs comprehend and construct the organization's constraints and opportunities. The present research project investigated the role NEDs have chosen to play regarding strategy formulation, taking on the role of sense-givers (saying what it might be), sense corroborators, and sense-makers regarding the future. Additionally, the research explores NEDs' perceptions of how much influence they may have on their environments. The next chapter describes the methods used in the present study.

Chapter 3

Methods

The purpose of the present study was to understand NEDs' contribution to the environmental scanning phase of an organization's strategic planning process.

1. How do NEDs describe the environmental scanning process?

2. To what extent do NEDs, compared to other influences, shape a shared understanding of the environment?

3. What are the outcomes of the environmental scanning process?

This chapter describes the methods used in the present study. The first section describes the chosen research design. Next, procedures regarding participant selection, data collection, and data analysis are discussed.

Research Design

A qualitative research interviewing design was selected for this study. Qualitative research is anchored in a postmodern epistemology, which assumes knowledge is borne out of the interaction between researcher and participant, and aligns itself with Kvale and Brinkman's (2009) description that "knowledge is neither inside a person nor outside in the world, but exists in relationship between the persons and world" (p. 53). According to this view, "knowledge is constructed of the inter-action between the interviewer and the interviewee. An interview is literally an inter-view, an inter-change of views between two persons conversing about a method of mutual interest" (p. 2). These descriptions of interviewing align with concepts of social construction. Researchers as early as Berger and Luckmann (1966) have used this research method with great success.

It follows that the qualitative research interview is a specific type of conversation intended to enable the researcher to access the world from the participant's perspective

and understand his or her full story. This aspect enables qualitative researchers to gain different types of data and insights than can be gained through quantitative research. For that reason, Weiss (1994) asserted that qualitative research is valuable in its own right and should not be minimized as being only exploratory or as a preliminary step to other types of research.

A qualitative approach was appropriate for this study because it would allow the researcher to gather in-depth data and detailed descriptions about the process by which NEDs gather and interpret data as part of environmental scanning. Weiss (1994) explained, "Qualitative interview studies have provided descriptions of phenomena that could not have been learned about in any other way," especially because interviews allow researchers to hear participants' firsthand perceptions and reactions regarding their experiences (p. 12).

Participants

A sample of seven participants was drawn for this study. Participants needed to satisfy a single criterion to take part in the study: the participant was an active non-executive board member. Beyond assuring that participants meet this criterion, no pre-screening was conducted, nor were attempts made to achieve a cross-section of industries, company sizes, or number of boards served. The size of the sample was small and may limit the generalizability of the results.

Convenience and snowball sampling strategies were used to locate participants. Convenience sampling means that the researcher utilized his or her personal and professional networks to recruit participants (Creswell, 2013). Snowball sampling means that the researcher asked qualified participants to refer the researcher to other possible participants.

The researcher began by writing a request for participants that described the study, the voluntary and confidential nature of participation, and a request for interested individuals to contact her. Three specific steps for recruiting participants were then carried out:

1. The researcher posted a request for research participants to her social media accounts as well as to the Institute of New Zealand Directors LinkedIn group. The Institute of New Zealand Directors is a membership organization of more than 6,600 directors spanning New Zealand public and private sector organizations.

2. The researcher sent a request for research participants to several executive search agents who specialize in placing executives and directors.

3. As part of her written requests (see Steps 1 and 2), the researcher asked recipients to forward the request to other possible participants. She additionally asked her study participants to recommend possible participants.

Certain limitations with these approaches need to be acknowledged. For example, the use of convenience sampling approaches naturally limit the scope and representativeness of the findings to reflect the researcher's network of contacts (Creswell, 2013). Additionally, snowball sampling naturally fails to recruit people who have few social contacts "and will therefore underrepresent every belief and experience that is associated with having few social contacts" (Weiss, 1994, p. 29).

This population of research participants is considered an "interview elite" in that NEDs are leaders in powerful positions and the researcher's access to them was limited. Therefore, convenience and snowballing sampling were believed to be the most effective recruitment approaches.

When interested participants contacted the researcher, she confirmed they were active non-executive board members, sent them an information sheet and then scheduled a mutually agreed upon interview time.

Data Collection

Each participant completed a one-on-one, semi-structured, 30- to 45-minute interview during which the researcher asked them questions about how they went about making sense of the organization's environment and how they reached a shared understanding of the environment with other board members. The following sections describe ethical considerations of conducting interviews, the interview design, and procedures for administering the interviews.

Interview design. The set of topics the study explored comprised the substantive frame for data collection (Weiss, 1994). The interview script for the present study consists of fifteen questions organized into four categories: demographics, environmental scanning process, influences on environmental scanning, and outcomes of environmental scanning process (see Table 1). These four categories map to the research questions of interest to this study.

In addition to asking about their processes, respondents were asked whether other NEDs go through a similar process of coming to a shared understanding of the environment. This allowed the researcher to gauge the respondent's own assessment of the findings' generalizability (Weiss, 1994) and examine the similarity of dynamics and constraints across the interviews. This aspect of the study helped control for the limitation of having a small sample. Preliminary interviews with a pilot group of three NEDs were conducted to verify the clarity and appropriateness of the interview questions. Some refinement of the questions were made based on pilot participant feedback. For example:

a. "Why is that?" was changed to a more specific question of "how do you know that?"

b. An additional question was added: What is environmental scanning for you?

Table 1

Interview Design

Category	Interview Questions
Demographics	- How long have you been serving on boards? - How many boards have you served on? - Have you being mostly involved in for-profit or not-for profit organizations? - What is/was your role in those other boards—one of executive or non-executive director? - How much of your time as a board member is spent in the strategic planning process? - What experiences and/or learning have best prepared you to engage in this process?
Environmental Scanning Process	- How much of the time spent in strategic planning is dedicated to scanning the environment and looking at threats and opportunities and other trends that could impact performance? - What are your favorite methods/processes for doing this work? Why is that? - In the boards that you have been involved —how is environmental scanning done? Tell me about what happens – about key events/interactions. - Do you know if other boards go through a similar process as the one you have described? What makes you think that?
Influences on Environmental Scanning	- As an outside director do you feel that your point of view is listened to around the topic and issues of environmental scanning? Why is that? - And what was the response that you got to your views around this topic as an executive director? Same, different? Why do you think is that? - For you, is there any particular source—either a tool/ another member's point of view and/or discussion that may weight a bigger influence on this topic?
Outcomes of Environmental Scanning Process	- In your view, did the environmental scanning process result in a shared understanding among board members on the environments? On a scale of 1 (poor) to 10 (great)—How would you rate the quality of the conversation? What do you think could make it better? (If less than 10) - In your opinion, how important is environmental scanning to formulating a good strategy?

Administration. Each interview was semi-structured, lasted 30 to 45 minutes,

and was audio taped. Kvale and Brinkman (2009) urged researchers to be aware of

several considerations when performing interviews. First, researchers should strive to engage in "inter-action" with participants during the interview to generate rich data and participant accounts. Researchers can do so by actively listening, following up on lines of inquiry related to the topic, and seek to clarify and extend the interview accounts. Researchers should avoid simply soliciting short answers to standardized questions.

Second, the interview conversation cannot be a considered a "normal" conversation between equal partners, as the researcher sets the agenda and controls the situation (Kvale & Brinkman, 2009). It follows that researchers should strive to be non-threatening and to put the interviewee at ease. The power asymmetry may be cancelled out or even reversed by the power position of the interviewees. In the case of elite or expert interviewees, there is an additional risk that they might default to "prepared 'talk tracks' to promote the viewpoints they want to communicate by means of the interview" (p. 147). Researchers need to possess considerable interviewing skill to move beyond these prepared responses to generate an in-depth account.

Third, researchers must take care to avoid their own biases and judgments during the interview, "even when that goes against the interviewer's grain" (Weiss, 1994, p. 131). Without this self-awareness, accounts can be thin and even highly biased.

Data Analysis

Interview data was transcribed by a professional transcriber service for later data analysis. The data was then analyzed for this study through a combination of Kvale and Brinkman's (2009) social construction interview analysis and Weiss's (1994) transcript analysis procedures. Kvale and Brinkman's (2009) approach stresses that the researcher plays an active role in co-creating meaning during the interview through the way he or she posed questions and subsequent responses, probes, and follow ups.

Once the interview transcripts were created, a four-step process of analysis was used to examine them, based on Weiss (1994):

1. The researcher reviewed and thought about the data gathered. Based on that review, several themes (codes) reflecting the main ideas expressed by participants related to the researched topic were proposed. It is important to note that coding was iterative, in that it was not considered complete until the final report was finished.

2. The researcher sorted the participants' responses based on the identified codes.

3. The researcher reflected on and begin interpreting the meaning of the results. These reflections were incorporated in chapter 5 of the present study.

4. The researcher would share the initial coding and one of the interview transcripts with two fellow students. The students analyzed the transcript using the coding framework and then the three sets of analyses (the researcher's and the two student's) were compared. The aim was to achieve at least 80% similarity (termed interrater reliability) of the results. This process achieved a 90% reliability.

Conclusion

This chapter described the overall research design, described the participant sample and interview design, and outlined the intended analysis of the data collected. The method described was designed to understand more closely the practices and processes NEDs went through with their boards to reach a shared understanding of the environmental context. Detailed discussions of the findings from the research follow in Chapter 4.

Chapter 4

Results

The purpose of the present study was to understand NEDs' contribution to the

environmental scanning phase of an organization's strategic planning process. Three

research questions were examined:

1. How do NEDs describe the environmental scanning process?

2. To what extent do NEDs, compared to other influences, shape a shared
   understanding of the environment?

3. What are the outcomes of the environmental scanning process?

This chapter reports the results of the study. Participant demographics are

presented first, followed by a report of the processes organizations use to conduct

environmental scanning; the extent to which NEDs, compared to other influences, shape

a shared understanding of the environment; and the outcomes of the environmental

scanning process. The chapter structure follows in general the interview design described

in Chapter 3. To recreate some of the interview flow the results are presented per

category and are preceded by the relevant key interview questions.

Demographics

The purpose of the questions asked in this section was to describe director

backgrounds and better understand how that background might contribute to particular

apprehensions or ways of viewing and relating to the environment.

All participants were drawn from the researcher's own network or through

referrals, as no NEDs responded to the social media post on the Institute of New Zealand

Directors LinkedIn group. As shown in Table 2, the participants were generally balanced

in gender (females = 4, males = 3). All had at least 6 years of board experience, and most

had served on international boards (n = 5), on both non-profit and for-profit boards (n = 4), and in both executive and NED roles (n = 7). The depth and diversity of participants' experiences enabled them to provide rich data and to reflect on the differences of being an executive director versus a NED. Thus, despite the use of convenience and snowball sampling strategies, the sample provided the researcher with a depth and breadth of insights regarding how environmental scanning is performed across a range of board types and roles.

Table 2

Demographic Characteristics of Interview Participants

Participant	Gender	Years of board experience	Board type	Company Type Experience	Role Experience
A	Female	More than 15 years	For-profit and nonprofit	New Zealand and international	Executive Director and Non-Executive
B	Female	6 to 10 years	For-profit and nonprofit	New Zealand only	Executive Director and Non-Executive
C	Male	11 to 15 years	For-profit only	Australia/New Zealand and international	Executive Director and Non-Executive
D	Female	More than 15 years	For-profit and nonprofit	Transnational	Executive Director and Non-Executive
E	Male	More than 15 years	For-profit only	Transnational	Executive Director and Non-Executive
F	Female	6 to 10 years	For-profit and nonprofit	New Zealand only	Executive Director and Non-Executive
G	Male	6 to 10 years	For-profit only	Transnational	Executive Director and Non-Executive

To fully understand how a NED's way of understanding the environment came to be, participants were asked to describe what experiences and learning best prepared them to engage in the environmental scanning processes. As shown in Table 3, participants named four themes: building knowledge (n = 7), developing skills (n = 4), gaining experience (n = 3), and developing relationships (n = 3).

Participant A described building knowledge to participate in the strategic meeting with these words:

In my role here [as Executive Director] at XXX, [I spend] about 3 days prior to a board meeting, following up on the actions that were agreed before that. So I would say one week to a month. On another one, [where I serve as non-executive chair of a non-profit], I probably spend half a day a week.

Table 3

Participants' Preparatory Experiences for Environmental Scanning Process

Theme and sample responses	n	Participants
Building knowledge • Reading articles and other business-related material (3) • Building specific knowledge and areas of expertise over more than 15 years (2) • Developing knowledge of structure models (2) • Developing knowledge of how to build and monitor and strategic plan (2) • Developing knowledge of business processes, constructing a debate or discussion, (1) • Conducting proactive internet searches (1) • Understanding intricacies of what's happening in the external market (e.g., dynamics of government, market, competitors) (1) • Preparing for meetings (1)	7	A, B, C, D, E, F, G
Developing skills Developing critical thinking (1) Developing ability to engage in vigorous debate (1) Developing ability to gauge effectiveness of strategies (1)	4	B, F, E, G
Gaining experience Gaining experience as a board member or executive director (3) Applying knowledge (1) Working for different companies and sectors across geographical locations (1)	3	A, D, E
Developing relationships Developing and maintaining wide networks (2) Attending conferences and seminars (2) Soliciting feedback from fellow board members(1)	3	A, E, F

N = 7

At first glance, the preparation routine for taking part in a strategic meeting can be seen as a direct output of hours spent engaging in researching, reading, and making sense of data or information provided prior to the meeting. However, this interpretation

disregards the fact that time is a key element of how experiences are built. The preparation stage, for example, can be seen through two time lenses: a short term time lens that acknowledges the immediate occasions spent in preparing, recalls knowledge and builds on prior learning to create a particular aspect of the experience. A long term time lens, in turn, acknowledges how all the broader experiences and acquired learning are built through time and transforms into tacit knowledge.

When speaking about the importance of developing skills, Participant G described the significance of being able to take part in vigorous debate and still remain open. She also described and anchored her specific learning experience using the short term lens in the immediate present.

> What would I say? I think following good thorough processes for doing it, so following a process that ensures there's multiple channels and multiple perspectives. Because one of the risks around the board table is that there's too much common thinking and the board room should have vigorous debate, and that requires lots of different inputs and different perspectives so that all angles are debated thoroughly and the best strategies for the organization are agreed upon.

Respondent D mentioned the importance of gaining experience on past boards. In this case, the respondent anchored her experience through the long-term lens when she reflects back and talks about how her experiences have been built through different and broader interactions over a period of time.

> I suppose for me it was particularly working as an executive before I became a board director. I was on the executive team of [a large international conglomerate] group and I worked internationally and I was exposed to both working in different regions in the world but also working in the global headquarters in London. I was exposed to these sorts of processes of what I call strategic inputs . . . deliberations . . . but I suppose they're what you'd call strategic inputs. . . . So working for a blue chip company like X allowed me to understand and be exposed to how that works in what I call best practice global companies. So then when I became a director on the board of other companies, I was able to apply that thinking and have input around that process to ensure that the strategic review was done in a robust way in the companies where I'm now a non-executive director.

NED D additionally mentioned the need for continuous learning:

> I think a big issue for directors in the current dynamic business environment is to invest substantially in the time and effort required to enhance their own learning and education, be that about specific technical issues, be that about some element of global supply chains or commerce or whatever it might be. I don't just rely on what I knew from 25 years in the oil industry. I spend I'd say 20% of my time in educating myself through different forums and events and reading etc. to expand my knowledge as a director and be able to contribute more effectively.

Environmental Scanning Process

The questions formulated in this section sought to discover the mechanisms and/or tools that boards use to engage in environmental scanning. Participants were asked to describe their preferred methods, processes, key events, and interactions. The researcher followed this up by asking respondents if they knew whether other boards went through a similar environmental scanning process. Respondents referenced their own experience in other boards when making this comparison. Four interviewees served on more than two boards at the time of the interviews. Listed below are the planned anchoring questions posed to explore the environmental scanning process; supplementary questions were used to clarify and to get a richer picture of the process itself.

Definitions of environmental scanning. Interviewees were asked to define what environmental scanning was in their own words. Six out of seven NEDs answered this question. Table 4 shows that each participant had slightly different definitions of the environmental scanning process. The differences centered on three aspects:

1. Time frame. Three NEDs referenced a frame of time taken into account to do their future scoping (i.e., recent events that impact current activity, 3 to 5 years, 10 or more years). Participants' answers indicated that organizations vary in terms of how much historical data is used as context for scanning and how far forward planning extends.

2. Boundary setting. Two NEDs set specific boundaries or endeavored to clarify what elements or parts of the environment were to be considered in or out of scope. Elements included all present-day events that may have an impact on

current business; obligations that need to be met; wider market trends; substantial factors and environmental attributes that could affect the environment within the next 10 to 20 years, including the threat of substitution by users of product; and awareness and understanding of historical events to better understand the present and inform the future.

3. Scenario planning. Only one NED mentioned the creation of alternative futures with the current information. For example the use of scenario planning to better prepare for the future and/or using that information in creating new businesses as in the case of UBER.

Table 4

Respondents' Definitions of Environmental Scanning

Participant	What is environmental scanning for you?
A	Environmental scanning for me is having an awareness of what is happening out in your immediate neighborhood, but what's happening locally, nationally, regionally and internationally, and the things that may impact on your organization. So it could be for instance new business coming to town that might employ people or it might be something around emergency management - civil defense. It could be something around for instance the Pike River disaster and other disasters and the impact that has on our organization.
B	For me it's an understanding of the context within which your operation exists and a deeper understanding of the obligations you have to all the stakeholders to protect the long term existence or viability of your unit, whatever it is.
C	Well it's the awareness of the things that you think will happen in the next three to five years. If you take that sort of period it's about accessing all of the sources and information that can give you some view on where the markets that you want to operate in are heading and then obviously drawing your conclusions from there. But yeah environmental scanning is accessing all of that information and trying to synthesize it into something that drives some meaningful action.
D	I think it's a process to identify and bring together all material aspects and factors that are relevant to your current and future business model and your current and future business vision or purpose. So why are we in business, what is the objective function of this company, and what are all the significant elements, factors, and environmental attributes that could and will affect us? Now you've probably come up with a really long list so through a global company you would probably focus on the top ten or twenty, or even the top ten or five, because they're the things that will make a strategy successful or not. And then the nuances that come down the list, elements and factors that are further down the list, they may be things that are going to happen such a long way out that they're not relevant today or that they're only relevant to certain markets and so you'd

Participant	What is environmental scanning for you?
	be looking at them at a lower order or a country or market level strategy. So an example might be if you're looking at the strategy for a copper mining company, one of the really long term factors that comes up from time to time is substitution. When will people be able to substitute copper, particularly in telecommunications and wiring, when will there be a product that someone invents that you can use instead of copper? And if that day comes then that's a pretty major issue for a copper company. Now we don't produce copper, we mine copper ore and we export it, and other people smelt it and turn it into copper. But that's such a long way off that it needs to be on your environmental scan but for the next five to ten years you don't need to factor that in. But in ten to twenty years, if you're looking out that far, then maybe you do. But you need to have it there and be aware of it as something that is going to happen as human's inventive capacity will continue to create alternative products the way it has for a lot of other metals and plastics over the last fifty to one hundred years. So I'm giving that as a long range example of something that would come up in an environmental scan but you wouldn't necessarily plan for it in the next five years.
E	To me what an environmental scan is, is actually examining the environment in which you expect to operate in the future, and given that environment, how the environment is going to impact on one's business. That is my interpretation of that.
G	I'd define it as being aware of news and being aware of emerging trends, and I guess also being aware of history in that that can be very relevant for the future as well . . . I've got an interesting scenario in XXY at the moment. So, globally oil prices have fallen 50% in less than 12 months' time and gas prices have fallen 40%. People that have been in the industry a long time know that this can happen from time to time, and they know that you batten down the hatches, quickly alter your cross base – the things that are within your control – and then look to ride it out hard. People that have not had that experience or not read about it and understood it and known about it might panic or more likely be too slow to react, and so have a suboptimal response to it. It's important to do that. The famous one in the oil industry was Arie de Geus who worked at Shell and then became a famous international consultant, so during one of the oil price collapses he had prepared Shell for three different scenarios of price barrel of oil, so Shell had prepared for that and knew exactly what to do and so were very successful through scenario planning and analysis, so would've responded faster and better than their competitors. So people that read widely would have known that and might have then gone and applied it. So that's what I would call part of the environmental scanning. Another example is UBER.

Contribution of environmental scanning to the strategic planning process. A

guiding assumption of the present study was that environmental scanning is an important

phase or step in the strategic planning process. Notably, all participants emphasized that

environmental scanning is an ongoing process rather than a task carried out periodically

as part of strategic planning. Participants explained that they did not think of the

environmental scanning process in terms of an event that is time-bound. Instead,

participants described the current business environment as very dynamic and stressed the

importance of conducting ongoing environmental scanning rather than performing it as a

punctuated event or sub-activity of a more formal strategy formulation process.

Participant A shared:

> It does vary, but it's not as if you can put aside some time and say right I'm just going to spend that time on my strategic plan because it's something that's eating and breathing all the time. You go home and you sleep it, you've constantly got your eyes open.

Participant F commented:

> I personally think it's really important that you remain current at all times, so that when things hit the board table you actually have a context for them. So rather than just do a once a year let's do an environmental scan and see what's happening so I can contribute to the strategic planning, I actually think that that's insufficient as a [NED] and you need to be able to have current context and knowledge to deliver your duties as a [NED] month-to-month.

Participants' responses suggest that environmental scanning has morphed into a

standalone but continuous process whose purpose is to provide ongoing feedback and

feed-forward loops to the organization's strategy.

Participant NEDs were also asked during this part of the interview to assess how

much board time was spent in the strategic planning process and, of that time, how much

was devoted specifically to scanning the environment. It would follow that boards that

spend a limited amount of time doing strategic planning may have a stronger focus on

governance and be less interested in scanning the environment.

The time span used in the strategic planning process varied. Some boards allocated a percentage of time in any given meeting while others devoted specific meetings to this topic that ranged from 1. 5 hours to 2 full days in a year (see Table 5). Four participants reported three themes: Participants B and F dedicated specific board meetings to the effort. Participants C and F reported holding "strategy days," and Participants C and D reported dedicating 20-30% of board time to the effort.

Table 5

Overall Time Spent in Strategy Planning Process

Theme and responses	Respondents

Meetings
    ● 2 out of 10 board meetings, 1. 5 hours spent out of total 2-2. 5 hour meeting time
    ● 1 meeting every 2 months
	B
	F

Specific strategy days
    ● 1-day bimonthly sessions
    ● Annual 2-day sessions
	F
	C

Described as a % of overall board time ● 20-30% of board time	C, D

Frameworks and sources used in environmental scanning. Respondents were asked to describe their preferred frameworks to guide their thinking during the environmental scanning process. Four participants used a combination of well-known and slightly newer strategy frameworks (see Table 6). Participant A described novel and/or non-traditional strategy methods, such as filling out one page with a word dump or mind map. She stated that her board liked these methods, as they condensed information and focus people:

> [We use] what I'd call word dump and mind mapping. It's writing down a whole lot of words and then alongside that trying to categorize things. We have some strategic drivers so we try and identify risks and strategic drivers and then work from there. . . . It's a picture that can tell a very big story whereas otherwise you're writing a whole lot of words that nobody wants to read. My board

particularly likes everything on one page. Yes I do because it really condenses things and it focuses you. I think when we've got lots and lots of papers you get lost in looser detail whereas the strategic governance leadership [quadrant] is there all the time.

Participant C described the X Factor Strategy, which consists of using the organization's distinctive combination of skills and resources to implement strategies that competitors cannot implement as effectively:

It's basically turning some of the Porter strategy stuff on its head. . . . It's about identifying maybe what the top six things are that you should be doing well, and then being able to reference where you make gains against those things. . . . I think it reflects the real world a bit more than maybe some of the other strategy frameworks that you deal with.

Table 6

Preferred Frameworks and Sources Used During Environmental Scanning

Theme	n	Respondents

Strategic frameworks
    Porter's Five Forces model (2)
    SWOT (1)
    Word dump and Mind mapping (1)
    X Factor Strategy (1)
    Structure of Environmental Scanning
    Conversation (1)
	4	A, B, C, D

Sources of Information
    Individual industry experts and analysts (3)
    Major consulting firms (e.g., McKinsey, BCG)
    (1)
    International site visits (1)
    Direct dialogue with local business owners
    and operations (1)
	3	D, E,G

No awareness of a specific environmental scanning tool	1	F

N = 7

Three of the seven participants described the various sources of information they consult. Three draw on external advice of major consulting firms and/or individual industry experts, mostly by inviting these experts or analysts to present to the board during the environmental scanning process. Two out of these three NEDs had a

preference for using industry experts to provide financial information around market performance, such as expected rate of return. Participant D explained that she found external advice helpful during environmental scanning process for checking her own assumptions and gaining a wider understanding of the world:

> I think because if the major element of the strategy is fairly heavily reliant upon a set of assumptions, it's very important to get different views on those assumptions. So in terms of the external perspective, understand how our assumptions on, say, commodity pricing or currency might be compared to someone else who is perhaps from a different region, has a different perspective. It doesn't mean we necessarily change our assumptions but that we're very open to and understand why others might use different assumptions so that we're fully informed. I think that answers the first why, why would we do that and why do I think that's important.

This same participant also expressed the value of conducting site visits. She shared, "There's nothing like seeing something first hand to really appreciate the nature of it. It might be its complexity, it might be its quality, and it might be its competition. "

Only one participant reported not being aware of a specific scanning tool. Notably, the pattern of responses suggest that three participants (i.e., B, C, E) preferred using more than one method or tool to scan the environment.

Success factors of the environment scanning process. Each participant was asked to describe in detail how the environmental scanning process is done in the boards they served. This question was followed by requesting the participants to articulate the key events and interactions. Six out of the seven participants' responses did not describe the environmental scanning process as a sequence of events or a narrative; rather, these participants identified the success factors of the process (see Table 7). The components identified by participants range from physical objects (e.g., board packs) to the ways they, the board, and senior leadership interacted with each other.

The most frequently cited factor (n = 6) was senior management behaviors. Respondent C talked about the importance of how senior managers conveyed that information (i.e., senior managers' ability to clearly highlight to the board particular issues and/or topics).

The second most frequently cited factor was NED characteristics and behaviors (n = 4). Respondents A and C commented about the impact that other NEDs' personal background and industry experience have during the environmental scanning process. Respondents D and G drew attention to other NEDs' willingness and/or disposition to gather broad-based perspectives during the process.

The third most frequently cited factor mentioned was the board pack and/or board papers (n = 3). A *board pack* is a key source of information for directors prior to a board meeting. It consists of data and information deemed essential to make sure that the discussion and decisions taken during the board meeting are as productive and effective as possible. Board packs are usually put together by senior management. However, it is the board led by the chair who is responsible for setting expectations around content, format, timing amount and quality of information provided. Participant C commented on the quality of the perceived thinking that went into the board pack:

> For example . . . we had a group there that was supported by people like McKinsey and others who created pretty ornate strategic documents. And although McKinsey gets maligned from time to time, they really led some very, very important strategic thinking.

Two other elements were also highlighted, the role of the chairman (n = 1), as well as the quality of interactions between board members (n = 1). Participant B emphasized how the way that the members interacted with each other during the environmental scanning process defined the quality of the process.

[It was a] very good board. I think everyone felt, more importantly than actually having agreement or consensus, that they had ample opportunity to question and ask about things they didn't agree with or challenge appropriately. So I thought that was more important—that robust coming together—the dialogue.

Table 7

Success Factors of the Environmental Scanning Process

Success Factors	N	Respondents
Senior management behaviors • Information sharing from chief executive officer and managerial team • Highlighting of relevant information	6	 A, B, C, D, E, F C
Non-executive directors characteristics and behaviors • Personal background and industry experience • Board members' gathering of a broad base of perspectives	4	 A, C D, G
Quality of board pack or board papers	3	A, C, G
Board chairman	1	A
Quality of interaction between board members	1	B

N = 7

Participant D provided a detailed description of the environmental scanning process her board went through prior to making an investment in a new market. The process consisted in the chief executive offer and other senior managers visiting the target market to understand the current market dynamics, do an evaluation and present a proposal to the board. In this case the recommendation was in entering the market with a partner through a joint venture agreement. The board as a whole visited the target market. During the visit, board members were able to interact with a number of potential stakeholders (e.g., leasing agents, potential customers). This was supplemented by industry research. The trip offered the board the opportunity to gather firsthand data they later used to have robust conversations about the investment. It also helped them see the new venture through their own experience rather than just a report. She elaborated:

The board then visited the United States and the particular markets that we're investing in . . . to see and understand that proposition and that hypothesis and

then approve the board investment proposal for that strategy . . . We heard first-hand from local property industry participants be they developers, be they customers, or be they leasing agents, so we got a lot of external input. (We gathered) qualitative views of various industry participants, and we got the quantitative facts on the amount of certain categories of property in the market that were available. Then we also looked at the strategies of other big U.S. and global property companies to understand what they were looking for . . . In that example I've given you, when we came back to discuss it, we were all very well informed and we could have a much more robust discussion… We've seen it and we've experienced it, and we can refer back to our own experiences of that opportunity, not just some document that was put to us the year before.

Two participants also acknowledged the challenges of the environmental scanning process (see Table 8). Participants C and D expressed feeling overwhelmed by the amount of data and information to be processed. Participant C explained that the amount of data is directly related to the type of industry the organization is operating in:

Having said that, there are some for example such as in XXX, where because a lot of it's to do with the mining industry there are far more sources of data referencing the mining industry. I think that's just because the mining industry is very rich and therefore a lot of people have been able to make money out of doing environmental scanning and providing good source documentation. So I think we're almost overwhelmed with the amount of information we can access in that environment.

Table 8

Challenges of the Environmental Scanning Process

Challenge	n	Participants
Feeling overwhelmed by the amount of data and information that needs to be processed	2	C, D
Too little time spent on scanning the environment	1	D

N = 7

Respondent D also voiced his belief that his board did not spend enough time doing environmental scanning. He explained that time constraints may impact the quality of the environmental scan: "I think the challenge is that too many companies don't spend enough time on it and let their agenda be dominated by more mundane and compliance related issues. "

NEDs' perceptions on how other boards engage in environmental scanning.
All participants were asked if they knew if other boards went through a similar
environmental scanning process to the one they had described for their boards. This
question was asked to gauge the respondent's own assessment of whether the themes,
processes, and methods could be generalized to a wider pool of boards. Six of the seven
NEDs offered an answer to this question (see Table 9). Three reported that the
environmental scanning process they had described was the same or similar to what other
boards do. Two (D and E) suggested that other boards had slightly different methods;
they anchored their responses on their experience with other boards. Respondent C
qualified his response by saying that other boards used better environmental scanning
processes than the board where he currently serves. His comments were based on his
previous experience of working for organizations that had the financial resources
required to tap into well-known consulting companies, which in his mind provided
quality strategic thinking.

Table 9

Respondent's Own Assessment of Generalizability of the Process

Theme	n	Participants	Sample Response
Other boards use the same/similar methods as we do	3	A, B, F	"I think it's probably the same way." (Respondent A)
Others boards use (slightly) different methods than we do	2	D, E	"Well I'm on the board of four companies and each one of those has a different process and so I think all companies do this slightly differently." (Respondent D)
Other boards use better methods than we do	1	C	"But I'm sure others do it better than we do because they have better thinkers and more resources." (Respondent E)

N = 6

As a follow up question, participants were asked to share how they learned what other boards do during the environmental scanning process. Five participants provided responses (see Table 10). Of these, three cited their own experiences serving on other boards. Participants B and F based their knowledge on what other trusted contacts told them, as they were currently serving on only one board.

Table 10

Sources of Knowing

Theme	n	Respondents	Sample Response
I experience it myself	3	C, D, E	"For example, in my time even in Company A, but if you look back to Company B" (Respondent C).
Other people who I know and trust told me (described as friends or well-known)	2	B, F	"I'd assume they go through something like that, but my feedback from friends who have been on XX boards and things" (Respondent B).

N = 5

Influences on Environmental Scanning

The line of inquiry pursued in this category explores how a NED's point of view contributes to a shared understanding of the environment context within a board setting.

As a preamble to answering the question about the impact of point of view, two of the seven NEDs framed their response by first clarifying what they believed was the role a NED played in the boardroom. The two themes concerned governance and clear boundaries between management and the board. NED E explained:

> That's an interesting question because really at a board level it is the responsibility of the board to set out the longer term parameters and where it wants to go and what it wants to achieve in the longer term. I would say that it is the responsibility of management to then compile its business plans that would ensure that those goals as set out by the board at a strategic level are met because a non-executive board will not sit down and start writing a business plan – that's not their job.

Respondents' own perception of level of influence. This section presents

findings regarding the respondent's own perceptions of whether their opinions were

listened to by other board members in their role as NED. Six of seven respondents

provided an answer to this question (see Table 11). All six felt that their points of view

were heard.

Table 11

Respondents' Own Perception of Level of Influence

Respondent	Is your point view listened to on this topic?	Sense of knowing
A	Yes	Because there's some discussion afterwards . . . .
B	Yes	Because when we have discussions I think we're all open to changing our minds, and so when we end on a decision, it's typically one that's been actively debated and people have said yes, no, or I agree with the majority - I'll go along with it even though I've got these reservations - so it's a very open process.
C	Yes	So I think my point of view is listened to because I have a unique take on some of the things that they're doing.
D	Yes	I think the boards that I'm on, most of the time the management see this as a value-adding process.
E	Yes	Very much so. My situation is slightly different because you need to remember that I used to be finance director of the group and there are still people in there who are on the board who I know extremely well and they know me extremely well from the time that I used to work for the company.
F	Yes	I know that one of the reasons that I was selected for this board is that they were looking for people who had adaptive technical experience in the leadership development area. So from that perspective, the board has a composite skill set that was specifically selected so the people are definitely listened to.

Participants were asked to compare the impact that their responses attracted in the

roles of executive and non-executive directors. Three out of the seven respondents

responded to this question (see Table 12). Participants A and C reported their voice had a greater impact as an executive director than a non-executive one. They explained that, as NEDs, they were only one voice among several others in the room. Participant C also pointed out that executive directors or management exercise some control over the agenda and, therefore, may choose to move quickly on to other topics they consider more important. At the end, Participant C said it was a matter of choice if management took advice from an individual director.

NED F had another perspective over the level of impact of her point of view. She felt that she was equally heard as an executive or non-executive director. She took up the role of NED with the understanding that she was equally liable under the law for what she called the health of the business. She alluded to the issue that some executive directors may struggle with the boundaries posed to them as non-executive director roles.

Sources of influence that affect participants' points of view. Each participant was asked to pinpoint if there was any particular source—either a tool or another board member's point of view that had a bigger influence on this topic. Six out of the seven respondents were able to share what influences their point of view (see Table 13).

Five participants reported they would be influenced by another NED's viewpoint, depending on the issue. Precisely as to when the NEDs let themselves be influenced by another NED is the result of their appraisal of a peer's overall level of credibility and competence. This overall evaluation of the contribution that a NED can make is based on the collection of past experiences, know-how, and quality and effectiveness of interactions within the board setting with other board members. Participant D shared, "So depending on the issues, I would be more influenced by the people with those backgrounds and also the ones whose judgment I respected the most, or valued the most."

Table 12

Respondents Own Perception of Point of View Impact

Respondent	Impact in Executive Role	Impact in Non-Executive Role	Responses
A	More	Less	On the other board as a non-exec I'm just one of the various voices around the table and I don't think that my voice is probably any more listened to than someone else's except perhaps where I'm the president.
C	More	Less	The reality is I can express my views, whereas as a non-executive director, I'm only one of seven. The management are sometimes looking and listening and agreeing, but other times they're looking and waiting for the moment to pass so they can move on to something that's more important to them. And you have to accept that you are only one of seven and that management to some degree, or indeed a large degree, are free to take the advice of an individual director on its merits and make their own decisions.
F	Same	Same	I've always assumed that my non-executive director role is a director role, so what I mean by that is that if you're an executive director you carry equal liability as a director for the health of the business by legislation. So I've always put on my director hat rather than my non-executive hat sitting around the board table. . . So personally I don't see a difference, but I know that some executive directors find it hard to draw the line between their executive role and their non-executive role.

Table 13

Sources of Influence that Affect Participants' Points of View

Theme	n	Participants	Sample Response
Another non-executive director's opinion, based on issue	5	A,B,C,D,E	It will be probably specific to the issue so it will vary. There is no one person that carries more weight, it will vary on the issue that's being discussed because someone might have knowledge of what's happening elsewhere. . . and as I said earlier because it's constantly changing even the quiet ones speak up when it's probably their skill area. (A)
Board Composition - Members of the board (3) - Selection process of board members (2) - Chairperson (2)	4	A, B, C, D	In the case of the [Company X] board, without naming names, that's quite good because I could say five of the seven board members can really make quite meaningful contributions and we've probably only got two passengers. That's about as good as it gets in my experience (Respondent C)
Time spent together as a board	2	A,B	They've been together a long time so they have had their strengths and they all make sure everybody has a chance to say what they want to say. There's not a lot of dissension, but at the same time there isn't group think either, there's room for people to have a different position. (B)

Participant C elaborated:

It's the combination of the person and the idea. There's no doubt that on every board you'll look at some people and you'll have a higher regard for their views than others, either because you think they have the relevant experience, or you think that they are good at and have evidenced over time an ability to scan the environment and draw conclusions. You're always looking at boards and saying who is really contributing here. Just as we do in management, you evaluate the worth of the people and their capabilities, and then you apportion weight to their opinions based on that.

Participant D, who is currently serving in four boards at the moment, brought the issue of the balancing act NEDs need to engage in as they discern who and what to listen to, as they formulate their own points of view.

> I think it's dangerous for a board, and I wouldn't want to be on a board where you had individuals who had unreasonable amounts of influence, be that through their personal impact or through their knowledge across a wide range of topics. I think however that there are always times when . . . and hopefully there are always times when someone's unique experience can add and enhance a discussion.

Board composition (n = 4) also was reported to influence their viewpoint, including how other NEDs are selected, peer NEDs, and the chairperson. Participant D underscored the role that the chairman/woman play to ensure there was an adequate understanding of the issue by asking management to provide more information prior to holding the discussion.

> If the issue was such that only a small number of board members had knowledge or understanding about it then I would say to the management that you as the management need to give us more information to better inform us to make a decision as opposed to rely or be swayed by one person who might know more about something than the others do. So you would ask for a deeper, more expansive briefing document from the management. I have been in that experience a few times where the chairman has said look this is a fairly technical specific issue, we need more information to make a decision so we'd like the management to prepare a briefing document covering XYZ.

Participants A and B talked about the length of time boards spent together contributes to identifying and playing to strengths. Factual evidence and how it was presented was an important source of influence for Participant F. Expert advice, whether through special industry sources or industry analysts, was a source of influence for Participant D, and complemented information she gained through her own independent research.

Outcomes of Environmental Scanning Process

Participants were asked to describe the outcomes and the importance of the environmental scanning process in formulating a good strategy. First, all participants were asked to rate on the scale of 1 (poor) to 10 (great), the quality of the conversation that lead their boards to arrive at a shared understanding of the environment. Respondents

who are involved with multiple boards provided multiple scores, as well as reasons why

their scores varied. It is worthwhile to point out that only four out of seven participants

gave a direct answer, rated their boards, and provided a potential solution to bridge that

gap (see Table 14).

Table 14

Rating and Rationale of Quality of Board Conversations

Participant	Score	Rationale for the score
A	3. 5 to4	• NEDs are elected rather than appointed. • Lack of resources to upskill elected NEDs
C, D	5 to 6	• Lack of industry experience by some NEDs (1) • Ability of management to synthesize external data and bring forward opportunities (1)
C, D, F, G	7 to 8	• NED with direct industry experience (1) • Executive directors experienced in operating in 16 global markets (1) • Team dynamics that facilitate having healthy debates among board members (1) • Board Leadership (1) • Tenure of Executive Directors (1)

N = 5

The mode as well as the highest score was 8 and the lowest score provided was 3.

5. The gaps and opportunities for growth were attributed to a number of factors, the most

prominent single factor (n = 4) was industry background and experience, whilst one of

the respondent underlined the importance of international experience. The theme of board

composition (n = 2) was also brought up. Participant A stated that her low score reflected

two aspects present in the non-for profit space: the opportunity of better selection of peer

NEDs and lack of financial resources to build the skills of NEDs who were already

onboard. Participant C who serves on publicly listed companies attributed good NED

selection to having a good board. Executive directors or senior managers were seen as

another element (n = 3) of why the scores were high. Different dimensions were underscored when talking about senior managers: business experience (n = 2), perceived level of ability by management to synthesizing external data and bringing it forwards to the board (n = 1), length of service and shared experience of the executive directors as a group (n = 1).

The board as an entity was also referred to as a key element by four participants. However, all of respondents mentioned different aspects or a combination of them such as board leadership (n = 2), role board plays in asking and suggesting information for strategic debate (n = 1), degree of openness of the chair and other board members to have healthy debates (n = 1), and team dynamics.

As a follow up question, respondents were asked to provide potential solutions to bridge the perceived gap to get their boards to a score of 10. Respondent answers can be seen in Table 15. The solutions varied and addressed particular issues that were present in their current boards. Participant A addressed issues related to non-for –profit boards such as having NED position descriptions that described the specific skills required to do the role, as well as being able to appoint selected members to reach an adequate mix of skills. Participant C mentioned that attracting board members that have the required industry knowledge is important for smaller companies. Respondent F felt spending more time together as a board was key to uplifting the scores, whilst respondent G thought it would be the result of the level of interest displayed by the NED in the industry.

Participant C shared his thoughts about NEDs:

There's this debate within directorial circles as to how many independent directors you should have and what independence means. Unfortunately I think often it's meant that they have relatively little industry background, so when you have a strategic discussion in that environment, you are really schooling the directors on what they should be looking at in a strategic sense.

Table 15

Solution to Bridge Quality of Conversations Gap

Respondent	Starting Board Rating	Potential solutions to bridge the gap
A	3. 5 to4	For voluntary and non-profit boards with elected members • Able to appoint members with the required qualifications (non-profit boards with elected members) to provide a mix of skills • A position description detailing specific skills
C	5 to 6	For smaller listed companies • Attract and finding board members that have the required industry knowledge
F, G	8	More time. Level of Interest of the NED in the industry

The importance of environmental scanning in strategy formulation. To conclude the interview all participants were asked to share their opinions about how important was environmental scanning to formulating a good strategy. Six out seven participants answered this question. Table 16 shows that all those that responded to the question (N = 6) placed high value in the environmental scanning process. Respondents B and C mentioned that environmental scanning was crucial. Participant A believed that NEDs contribute to this process by being in the outside world and constantly scanning the environment and bringing ideas, opportunities and risks to the board.

Participant D highlighted that traditional sectors are already seeing quite a lot of disruption by non-traditional players, and that there was a need for environmental scanning to include a much deeper understanding of how competition may look like in the future, and not restricting itself to just current market competitors.

Participant G talked about the pace of change as being continuous and how it is important to scan the environment for emerging trends, otherwise organizations may run

the risk of not having relevant value propositions. Environmental scanning provides de

context for organizational strategy said respondent E. He went on to elaborated that a

strategic plan cannot be created in a vacuum; there is a need to anchor it your assessment

of the environment in its present and future format.

The environment as a social construction. As part of the evolving nature of the

interview process and based on the preceding comments by some of the respondents

regarding the nature of the environment seen as a restraint or an opportunity, three of the

seven participants were specifically asked to locate where they thought the environment

was. Here the researcher sought to clarify if the environment was perceived to be a social

construction that could be co-created and was internally driven and/or external to self and

could only be reacted to. Participants' responses about the location of the environment

were mostly externally focused and framed the environment within a set of given

elements. In some cases there was some room for adjustment and proactive action in co-

creating more favorable conditions.

Participant B stated that sometimes, organizations are able to co-create their

environments i.e., internally driven, but the choice was dependent on the type of

organization you were part of. She provided the following example about private and

public schools:

> I'd probably say a bit of both, probably more on a day to day basis in response to
> the environment. So for example in school (public school) you can't choose
> who's in zone so you have to be able to accommodate all the people who are in
> zone. You can't say I don't want children with disabilities, I don't want (ethnic
> group), I want this – it's not like that. So whereas I think private schools have
> different barriers to entry that they take advantage of (e.g. reluctance to enroll
> children with disabilities). And I don't agree with that, but that's the difference in
> terms of the resource allocation, and I know because it happened to one of my
> friends.

Table 16

Importance of Environmental Scanning Process in Strategy Formulation

Respondent	How important is environmental scanning to formulating a good strategy?
A	I think it's very important, and I don't think that environmental scanning is just related to board members. Board members are out there in the wide world so they are constantly scanning their environment and bringing ideas and opportunities or risks, comments, back to the board. It's not an isolated thing where you sit down and you devote a day - a year.
B	Crucial
C	Well it's absolutely crucial for my money.
D	They're pretty critical. You can't formulate a good strategy without it, and a good strategy must start very broad, and it must particularly in the current business environment where traditional sectors are seeing quite a lot of disruption by non-traditional players. Even understanding who your competition is, is a much harder question to answer than say it was ten years ago, because ten years ago you'd say it's obviously Company A, B or C because they all make widgets like we do. They might supply different markets, they might have more cost-effective manufacturing, but we all compete ultimately in the same space. Nowadays your environmental scanning needs to include a much deeper understanding of who could potentially or who is already operating in your market space who may have never been seen as a competitor before. (RD)
G	Very important, a famous example is the one of IBM not realizing that PCs were going to be successful and continuing to invest in mainframes. . . . So the pace of change is continuing to get faster and organizations need to be scanning for trends and emerging trends all the time, otherwise they risk not having relevant value propositions or becoming irrelevant. Look at the impact of Uber on taxis in some parts of the world, for example. And it's a form of competition that would never have been thought of.
E	Oh absolutely. You cannot create a strategic plan in a vacuum. You are looking for disaster if you go there and say "this is what we're going to do" without thinking about the environment in which you are going to operate. You take even a club – just take a social club that you have. For them to work out what's going to happen next year they need to understand what the population flows are, what the traffic flows are, whether there is going to be any changes from the city council in terms of roading, and a whole range of things. It would be futile if you tried to set your plans without understanding what the environment is going to be in the future. You will not get it right but you need to make an assessment of what you think, based on the best available information that you currently have, the environment is going to be.

I'd probably say a bit of both, probably more on a day-to-day basis in response to the environment. So for example in school (public school) you can't choose who's in zone so you have to be able to accommodate all the people who are in zone. You can't say I don't want children with disabilities, I don't want (ethnic group), I want this – it's not like that. So whereas I think private schools have different barriers to entry that they take advantage of (e.g. reluctance to enroll children with disabilities). And I don't agree with that, but that's the difference in terms of the resource allocation, and I know because it happened to one of my friends.

NEDs E and G felt that the environment was both internally and externally located. To illustrate this duality, Participant G said:

It's a variety of both. So just before coming onto this call I was reviewing a submission around XX's response to an earthquake which damaged our buildings in Wellington. So our whole environment changed through a very significant earthquake. That was nothing we could control, we had identified it as risks and you can plan for it, but there are events that you can't control and there are some events that you can control and influence, so it would be both.

Summary

This chapter summarized the research findings that arose from the study. First, participants represented a good mix range of demographic categories. For example four of seven respondents were female and three of them were males, served in a mix of profit and non-for profit and had the experience of serving in both executive and non-executive roles.

Second, participant's definitions of the environmental scanning process were slightly different. Differences were centered in two aspects, the time frame taken into account to do the scanning and establishing the elements to be considered in or out of scope during the environmental scanning process, such as business obligations to be met or understanding historical events to wider market trends.

Third, reported descriptions of the environmental scanning process suggested that the process itself is now seen as a stand-alone but continuous process whose purpose is to provide ongoing feedback and feed-forward loops into the organization's strategy.

Fourth, the quality and type of preparatory experiences that NEDs have acquired through time have an impact on the ability of NEDs to engage in environmental scanning. As experience increases, the tacit knowledge on which they are able to call in different situations helps to recognize patterns, work arounds, what is typical and atypical, as well as their own mental models.

Fifth, a combination of strategic frameworks, such as Porter's five forces and X factor strategy, as well as how conversations around the topic are structured were reported by NEDS to be used during the environmental scanning process. This was closely followed by the use of professional advice through independent industry experts and/or major consultancy firms as a source of information during this process.

Sixth, only one interviewee described the environmental scanning process. Most participants offered a range of success factors that included physical objects, such as board packs, to more intangible ones as the manner in which board members interacted with each other. Participant NEDs were also asked to assess if the scanning process that they had described could be generalizable to other boards. Their opinions varied, but most respondents agreed that the environmental scanning process in other boards was the same or similar.

Seventh, executive directors' ability to sense, communicate, translate, and share what is happening in the environment with the board was cited as the most frequent success factor that influence the impact of the environmental scanning process followed closely with the quality of the board packs.

Eighth, most respondents felt that their points of view were listened to by the other board members. When asked to compare their level of impact with an executive director role, two out three respondents to this question stated that their voice was one of many, and thus its impact diluted.

Ninth, the majority of NEDs interviewed were open to be influenced by peer board members and that this openness to be influenced was issue dependent. NEDs that participated in this research stated that they remained open for dialogue but were forthcoming with their assessment of who and why they listened to some NEDs more than others during the environmental scanning process. NEDs that took part on this research assessed other NED's based on experience and the quality of their thinking. Quality was determined by how grounded the thinking was on objective data that could be tested or which was familiar and made sense to the other NEDs.

Tenth, with respect to the outcomes of the scanning process, respondents gave the activity good marks and felt it was key to good strategy formulation. When participants were asked to rate their boards about their environmental scanning process, scores range from 3.5 to 8. A number of levers were identified to bridge the gap, such as spending more time together as a board or increasing the overall appeal of particular industry and/or organization to create a wider pool of potential NED candidates.

Finally, from a social constructionist perspective, there was little evidence that NEDs used a social constructionist lens as a way of sensing and creating their environment. The preferred way in which the NED participants apprehended the environment was through an objective lens, driven by data and external observation. When discussing the environment, respondents talked about responding to a set of given environmental variables. Two participants thought that environments could potentially be

created within a given environment. Two highlighted how companies like Uber had been able to create a new markets and/or reality. The creating of new markets was described as something that others did but may be impossible to replicate in certain industries.

Chapter 5

Discussion

The purpose of the present study was to understand Non-Executive Directors'

contribution to the environmental scanning phase of an organization's strategic planning

process.

1. How do NEDs describe the environmental scanning process?

2. To what extent do NEDs, compared to other influences, shape a shared
   understanding of the environment?

3. What are the outcomes of the environmental scanning process?

This chapter provides a discussion of the results, including key conclusions,

recommendations, limitations, and suggestions for continued research.

Conclusions

Study findings were reviewed and conclusions were drawn for each of the

research questions. An additional conclusion, which concerned the application of a social

constructionist lens to the environmental scanning process, also was drawn based on the

findings. These conclusions are described below.

Participants' definitions of the process. Participants' definitions of the

environmental scanning process were more similar than different. The differences

depended on time horizons (i.e., how much historical context to consider, how far

forward to plan), boundary setting (i.e., what's in scope), and scenario planning (i.e.,

creating various future alternatives). This reflects Stubbart's (1982) finding that defining

what the environment is and what elements should be taken into account during strategy

planning was the biggest challenge.

Despite general agreement about the purpose of the scanning process, the implication of these varying definitions is that decisions about what is included within environmental scanning (the guiding framework) can dramatically influence the outcomes of the process. Boards that do not have access to environmental scanning units or consulting firms that can supply trend forecasts, guiding assumptions, and other helpful frameworks will need to rely heavily on their NEDs and other directors to devise ways to interpret what is going in the market and to determine future trends.

Alternatively, despite these variations in participants' definitions, it may be that change is now so continuous and pervasive that environmental scanning has as much to do with understanding and negotiating the present as with predicting and planning for the future. In such cases, the present is used as an anchor. Furthermore, environmental scanning may be less relevant for organizations that engage in dialogic methods (e.g., appreciative inquiry) or strategic planning techniques (e.g., Blue Ocean) as they seek to design their future based on their own experience and interpretations of what is needed.

Performance of environmental scanning as an ongoing, standalone process. The findings also suggested that environmental scanning has become an ongoing, standalone process. This contrasts with past literature, such as Mintzberg and Quinn (1996) that viewed the environmental scanning process as a sub-activity of the strategic planning process. Given this shift, new frameworks may need to be developed and shared regarding how to conduct environmental scanning on an ongoing basis. For example, performing environmental scanning in an ongoing manner requires being able to pick up changes in context and how they may translate into future trends.

Alternatively, participants may simply be mislabeling ongoing context and impact checking activities as *environmental scanning*. That is, rather than actual environmental

scanning, they primarily may be confirming that the strategy is on track, a function of strategic control as opposed to environmental scanning. It is important to confirm whether they are referring to present-oriented context and impact checking or future-oriented environmental scanning that raises new assumptions and helps to reshape the strategy.

First, the findings support the conclusion that scanning is now continuous vs. episodic and annual. Second, there may be some confusion over or blurring of purpose and function. Strategic control is about scanning the environment to determine if the strategy is on track whereas environmental scanning is about looking into the future.

Role of participants' preparatory experiences. NEDs in this study reported that their preparatory experiences of building knowledge, developing skills, gaining experience, and developing relationships influence their abilities to engage in environmental scanning. These findings are consistent with Klein (2009), who found that over time, these preparatory experiences culminate in tacit knowledge that helps NEDs engage in perceptual discrimination. Similarly, NEDs discussed their abilities to engage in pattern matching, discriminate between the typical and atypical, and develop their own mental models. Similarly, Duhaime et al. (2012) found that NEDs' mental models form over time and filter how these directors sense, communicate, and translate the environment to others. Although past experience, tacit knowledge, and mental models can help increase the effectiveness and efficiency of environmental scanning, they can also be unhelpfully limiting or biasing. Therefore, it is critical for NEDs to possess certain traits, as outlined by the Institute of Director New Zealand (2016), including self-awareness, responsiveness to change, and inquisitiveness and curiosity. These new

attributes help NEDs to be open to new data, patterns, and directions as well as to shift their mindsets, as needed.

Use of tools and frameworks. Findings also indicated that NEDs used various strategic frameworks and relied on professional advice from industry experts and major consultancy firms to guide their environmental scanning process. Similarly, Stubbart (1982) argued that environmental scanning units in smaller companies seem to have been replaced by professional advice provided by consultancy firms (that also tend to view environmental scanning broadly).

It is unclear why the participating boards have shifted toward reliance on external experts—namely, whether it was to ascertain better industry understanding, awareness of future trends, or acquisition of new sets of assumptions that could be factored into the strategy. However, it is notable that small firms that lack both internal scanning units and financial resources to purchase frameworks or to secure the help of consulting firms may be operating in a vacuum. It follows that lack of external frameworks and sources of guidance may make the process of environmental scanning more difficult and yield less than ideal decision making.

Success factors. Participants also identified success factors for the environmental scanning process. The leading success factor named by participants was executive directors' ability to sense, communicate, translate, and share what is happening in the environment with the board. This suggests that senior managers act as powerful intermediaries in depicting what the environment is, what it looks like, what adequate responses may be possible, and what the perceived opportunities and risks are. In other words, they play the role of sense givers (Weick, 1995). Similarly, Worley et al. (2014) stated that senior managers played a crucial role in agile organizations' perceiving

routine. The implications of this finding is that management plays a pivotal role in environmental scanning—not just in sensing what is happening in the environment, but also in terms of their ability to translate, communicate, and share these observations (in this case, with the board).

No past academic literature was found that outlined specific success factors for the boards' environmental scanning processes, although the Institute of Directors in New Zealand (2016) did acknowledge the importance of board papers for fueling discussions about the future of the organization and for enhancing decision making. Additionally, the success factor of NEDs' personal backgrounds and experiences align with other researchers' emphasis on the importance of NEDs' skills during environmental scanning, such as Klein's (2009) discussion of pattern recognition and discernment of deviations in market routines, Weick's (1995) discussion of executive confidence and sense making abilities, and McNulty and Pettigrew's (1999) discussion of NEDs' influence on environmental scanning processes. At the same time, it is important to observe Starbuck and Milliken's (1988) warning that executive experience may be overrated as it may grow obsolete rapidly in a context of rapid change.

Influences on shared understanding of the environment. The second research question examined the extent to which NEDs, compared to other influences, shape a shared understanding of the environment. Study findings indicated that NEDs act as sense corroborators by providing their thoughts, observations, questions, and opinions about the information presented to them by the executive team. Participants further articulated two conditions that support them in this role: (a) having high-quality conversations with other board members and with management and (b) being aware that he or she is one voice among many voices in the room.

Rassart and Miller (2015) underscored the importance of quality interactions between management and NEDs for crafting and refining strategy, although they cautioned that quality conversations alone were not enough to assure an effective and sustainable long-term strategy. Research stresses that NEDs should be involved in the overall strategy process (Benningson & Leonard, 2013; Bhaghat et al., 2013; Charan, 2005; Charan et al., 2014). McNulty and Pettigrew (1999) elaborated that NEDs shape the content, context, and conduct of the strategy during the environmental scanning phase and that NEDs' contributions extend beyond mere ratification of decisions made by management.

NEDs also reportedly play a sense-making role during the environmental scanning process. Participants described sense-making as an individual and deeply personal decision-making process rooted in both their past experiences as well as objective external-oriented data. This description is similar to Starbuck and Milliken's (1988) definition, which indicates that sense-making is a biased process of understanding, whereby individuals find and reinforce streams and patterns of data that match their current beliefs and expectations. Sense-making also was described as a social act, whereby NEDs were open to other board members' influence, based on the perceived relevance and value of their experience, the quality of their thinking, and quality of their objective data and evidence. Several authors similarly referenced sense-making in a social way (Schutz, 1964; Starbuck & Milliken, 1988; Weick, 1995).

The risk of this process of sense-making, however, is that NEDs—as perceivers—may consciously or subconsciously focus on data that only corroborates what they already know. Weick (1995) cautioned that, in a changing world, both the typical questions and the routine answers are suspect. No data was found to suggest that NEDs or

their boards periodically reevaluate their guiding questions about the environment or the logic and inherent assumptions underlying their own and other board members' views.

Outcomes of the environmental scanning process. The third research question sought to identify the outcomes of the environmental scanning process. Participants reported that environmental scanning was key to strategy formulation, consistent with Mintzberg and Quinn's (1996) view. Participants added that the process enhanced their understanding of the different variables in the perceived environment.

Participants also identified several ways to increase the effectiveness of the environmental scanning process. These included members spending more time together as a board and increasing the overall appeal of a particular industry or organization to create a wider pool of potential NED candidates.

Despite the positive views of environmental scanning offered by past researchers and the present study's participants, it is unclear whether NEDs actually achieved strategic foresights as a result of environmental scanning. Strategic foresights are defined as the ability to see what is emerging (Sanders, 1998) or the ability to sense what could happen before it happens (Johansen, 2007). This represents an important area for continued inquiry.

Application of the social constructionist lens to the process of environmental scanning. According to theories of social constructionism, no one objective and true reality exists independent from the observer; instead, people create their own versions of reality through their interactions with others (Bascobert-Kelm, 2005; Watkins et al., 2011). The present study failed to support the idea that NEDs actively and consciously engaged in social constructionism while forming their understanding of the environment.

Participants reported that they generated their understanding of the environment based on objective data gathered through external sources. This data helped them create a common framework for discussion which facilitated a shared understanding and ease communications. Even though a NED may perceive that his/her understanding of the environment may be the direct result of intentionally gathering objective data, making sense of the data, and the subsequent actions derived from the meaning attributed to that data, are a social construction. The process of socially constructing the environment occurred in these cases outside the awareness of the participants.

The application of the concept of social construction to environmental scanning opens a realm of opportunities and potential for competitive advantages for NEDS and other strategists. Gaining the understanding that the environment can be construed as a way or pattern of approaching life, rather than an intractable reality that is true or false, may be paradoxically unsettling and liberating at the same time, as it moves the strategist away from concepts such as objectivity, truth and neutrality (Gergen, n.d.). In other words, we go from binary thinking (i.e. yes or no, true or false, best practice) to fit for purpose. At the same time we move from single to multiple and contextually dependent realities (Watkins et al., 2011). Numerous practical examples of the advantages gained through different approaches to reading the environment, creating meaning, and acting on it can be found in Osterwalder and Pigneur's (2010) book, *Business Model Generation*. A case in point is the way in which companies choose to redefine their relation to their customers. One example here is the emergence of user communities, where companies facilitate online communities where members can exchange ideas, knowledge and assist in resolving each other's problems. Another approach to the creation of communities is the one used by GlaxoSmithKline who launched a private online community to support a

prescription free weight loss product to gather a better understanding of their client base and in so doing better handle customer expectations. More recently, other companies have re-thought the way they relate to their customers by asking their customers to co-create value for other customers such as Amazon.com. Others, such as Youtube.com, have altogether redefined the idea of what a customer is from a user or purchaser of goods and services at a cost, to partnering with its users to create content which is then enjoyed for free by other users. The bigger the community of active users, the larger the advertising platform which YouTube can on-sell to their sponsors and clients.

The insight that the environment can be construed as a pattern can assist NEDs to intentionally seek a variety of inputs sources (e.g., other industries) to overcome their apparent reliance on selected objective external data. Data that may conform with their patterns of meaning and which may narrow the possibilities for discovery and discussion given researchers' observations that peoples' prevailing mental models and past experiences strongly shape and bias their views (Jaworski, 1996; O'Hara & Leicester, 2012). Such biased views, however, can negatively impact the competitive advantage of organizations. For example, in Weick's (1995) research, managers who embraced self-sufficiency overlooked financing options and thus paid less attention to borrowing rates.

Another important concept is that reality is continuously re-created in conversations and through interactions with others. A hallmark of the constructionist principle is that it recognises that individuals construct their selves through dialogue and interactions with others. This shifts the stress from just collecting data to managing meaning as well as raising awareness around how individuals continuously influence each other. The meaning that NEDs and Executive Directors create together about the environment exists in the conversational space. It is the result of the many conversations

among NEDS, executive directors, and others outside the boardroom. It is through this conversational process that strategists shape their future world and decide how best to enact what they want to create. Gergen (n.d.) suggests that if one perceives that new worlds of meaning are possible, this perception can open the door to look at the environment in new and novel ways, allowing us not to be controlled by our past.

Gaining such an awareness about the layered process of coming to understand the environment allows NEDs to re-examine what they have chosen to notice and make sense of. The competitive advantage then lies in their overcoming self-imposed and often unconscious limitations to generating insights and foresights. Making use of some of the strategies suggested above, such as re-examining our assumptions of how the environment operates, looking for multiple sources of data, and paying more attention on how boards create and manage meaning, could assist with reversing the current dynamics of why innovative strategies may be often conceived of and executed by outsiders who have little awareness or regard for keeping the status quo.

Literature on the uses and benefits of socially constructed understanding during environmental scanning is fragmented at best. Smircich and Stubbart's (1985) suggestion to add this interpretative framework as a third lens for dealing with the environment seems to have had little impact. This may be due to a lack of understanding of the concept itself among business people, the absence of practical illustrations of how it works and the potential benefits that the organizational can create for themselves. Nonetheless, organizations that have embraced such practices as Appreciative Inquiry and more recent books such as Reinventing Organizations (Laloux, 2014) provide a number of examples, where companies have re-created their environments by moving away from monitoring specific output metrics to ensure growth and high levels of

customer service, by rethinking their environments. The present study's findings suggest

that there is an opportunity for NEDs to explore more fully the layering process of data

interpretation. Furthermore, this study suggests that meaning creation can lead to multiple

possibilities and courses of action, potentially giving competitive advantages like

redefining their markets and interaction with customers to name of a few. Although some

of the NEDs in this research stated they were aware of their assumptions and biases, they

were apparently unaware of how their preference for what they label "objective data"

may limit what they notice and bias their understanding. The concept of social

construction remains unknown or not seen as something that can be put into practice in

the business realm.

Recommendations

Five recommendations are offered based on the present study's results. These

include the need to use awareness-expanding tools, examine and revise prevailing mental

models, use various strategy review tools, improve the nature and quality of board

dialogue, and strengthen board members' relationships. These are discussed in detail in

the following sections.

Use awareness-expanding tools. Discussion and interpretation of the study

findings revealed the criticality of expanding NEDs' awareness to enhance the

effectiveness of the environmental scanning process. Past researchers emphasized that

boards need to be more explicit and intentional in designing their environmental scanning

framing process to have a dual goal of not just collecting more data that is familiar to

them, but that also expands their own awareness.

Many methodologies and frameworks are available for this purpose, such as

Sanders' (1998) Futurescape and Johansen's (2007) Foresight to Insight to Action, both

of which embrace environmental complexity and short circuit outdated patterns of perceiving, thinking, and viewing the world. OD practitioners also can develop or introduce other concepts and frameworks (e.g., self as instrument) that enhance environmental scanning. The aim of these models is to trigger insights that lead to new sets of assumptions, new pattern recognition, and consequent foresights that lead to better organizational strategies. This approach is anticipated to expand NEDs' decision making beyond existing and possibly outdated tacit knowledge and pattern recognitions.

Examine and revise prevailing mental models. In addition to expanding awareness, it is important for NEDs to examine and revise their prevailing mental models, as these strongly and often subconsciously influence and bias their perceptions and decisions. Accordingly, Duhaime et al. (2012) advised that senior teams allocate some time to explore their own mental models, whether individually or collectively. This can be accomplished using the assistance of tools, frameworks, or external consultation that help the group become aware of their operating mental models and implicit biases. A case in point is offered by Theranos which operates in the blood testing business, considered by many as a mature industry. Elizabeth Holmes recognized new patterns in the environment and revolutionized the industry by creating a new blood sample technology which requires only a few drops of blood rather than a syringe. This new technology is easy and gentler on the patient, the processing time is fast, the physical space for the processing equipment is a lot smaller, all this at a lower cost than current technology. In 2014, Theranos was worth $9 billion dollars and continues to grow and expand.

On an individual level, NEDs can seek to deepen their awareness of their own taken-for-granted mindsets and behaviors and solicit feedback from their networks (Weick, 1995).

Use various strategy review tools. NEDs' awareness may be further expanded and mental models revised through the use of tools that allow directors to examine their strategy through different lenses. External organization development consultants may be asked to suggest additional, alternative frameworks. Such tools include the Strengths, Opportunities, Aspirations and Results (SOAR) framework, an appreciative adaptation of the traditional Strengths, Weaknesses, Opportunities, and Threats (SWOT) framework (Watkins et al., 2011).

Other tools include systems thinking, complexity theory, Sanders' (1998) FutureScape, Johansen's (2007) forecast maps, and Snowden's (2005) Cynefin model, which is designed to trigger insights about events and variables relevant to other domains, leading to new questions and sets of information. Guest experts and speakers from other industries, cases studies of industry disruptors, site visits, and strategy retreats are additional tools for expanding directors' conceptions of their environment and possibilities (McNulty & Pettigrew, 1999).

Approaches and frameworks like these help people see the environment as an evolving whole that is being shaped and re-shaped by the field of connections, relationships, and patterns of interaction (Sanders, 1998). The intention of these tools and frameworks is to not only confirm existing beliefs but to challenge assumptions and attain novel environmental insights that translate into foresights helpful for determining future strategic moves.

Improve the nature and quality of board dialogue. Success with many of these recommendations requires that the nature and quality of the board members' dialogue improve (Dunne & Morris, 2008). Improving the dialogue is particularly necessary, given that the most significant contribution that NEDs can make is the quality of their strategic insight. OD practitioners can help boards create conducive climates for productive debate that culminates in the creation of new insights.

Individual NEDs—especially newcomers to a particular board—also have a responsibility to learn the board's language and jargon to promote their own sense-making and ability to contribute to the discussion (Schutz, 1964). Moreover, as NEDs become increasingly aware of how sense-making takes place, they may gain the opportunity to shift their roles from sense corroborators to sense provocateurs. By indulging their curiosity and posing new questions for discussion, NEDs can create the conditions that will heighten uncertainty, creating the opportunity to explore new understandings of what is happening.

Strengthen board members' relationships. Study findings indicated that NEDs' interpersonal perceptions of and relationships with each other and other board members influenced the process and outcomes of environmental scanning. McNulty and Pettigrew (1999) further advised that external relationships between executive directors and NEDs could strongly influence the NED's opportunity to further contribute to strategy. Forging strong, trusting relationships between directors, both inside and outside the board room is advised. Although the present study data did not indicate how board members may actively improve and deepen their relationships, an important first step is to simply spend more time together.

Limitations

Three primary limitations affected the study. First, the researcher's attempts to draw a broad range of participants through advertisements on NED sites and other forums failed to attract respondents. Use of the researcher's personal and professional network narrowed the pool of possible participants. This in turn affects generalizability of the findings. An alternative strategy would be to cultivate and develop relationships with well-networked NEDs, who may then help expand the researcher's access to possible participants. Additionally, at seven participants, the sample size was small. Moreover, no participants served on boards that operated in industries reliant on continuous product innovation. Future studies should both increase the sample size and the industry representation.

Second, the study relied on self-reported data, capturing only respondents' insights and observations of the environmental scanning process. This research could not corroborate their data. Future studies could enhance the quality of the findings by including members of the same board and use those views to compare, contrast, and refine the statements provided around the process.

Third, researcher and participant bias may have affected the study. The researcher did not have firsthand experience as a NED, which may have affected her ability to discern fruitful avenues for discussion during interviews or subtle themes during analysis. Additionally, the researcher had previous work experience with two participants. These participants referred to previous shared experiences to frame the context or illuminate their current experiences. These past experiences and references may have triggered unconscious biases within the researcher, thus influencing the accuracy of her data collection and analysis.

Suggestions for Continued Research

A leading suggestion for continued research is to perform the present study again using an expanded, cross-industry sample of NEDs. Collecting unobtrusive data, such as organizational performance data, and other forms of data also would be helpful for corroborating participants' self-reported data. In particular, it is important to gauge the impact of the environmental scanning activities on NED perceptions, assumptions, strategic foresights, and long-term success of the organization.

A second suggestion for research is to more deeply examine sense-making and dialogical processes at the individual and collective levels within boards, with the aim of determining the most effective approaches for heightening productive debate, defusing destructive conflict, and shifting mindsets and actions.

A third suggestion for research is to more deeply examine social construction as it relates to the development of shared understanding of the environment among board members. This suggested research could build upon the model proposed in the present study regarding how shared understanding develops.

Summary

NEDs are members of a board of directors who are external to the organization and ostensibly bring a fresh perspective and set of experiences to acts of strategy and sense making. Researchers have asserted that these directors' most significant contribution is found in the quality of their strategic insights. The effectiveness with which they construct a shared understanding of the organization and its prospects with internally located directors may substantially influence the organization's strategy and outcomes.

The purpose of the present study was to understand NEDs' contribution to the environmental scanning phase of an organization's strategic planning process. Data were gathered from a convenience sample of seven current NEDs.

This research found that the framing process used during the environmental scanning phase had a direct influence in how NEDs make sense of the environment. It also surfaced that NEDs clearly prefer an "objective" environment that is externally located. Finally, NEDs were found to consciously appraise each other's contribution to the overall discussion.

Future research studies may benefit from using a larger sample of NEDs. These NEDs could include peer members sitting on the same boards, and/or be drawn from multiple industries. The selection of such industries and organizations should include those that are heavily reliant on continuous product/service innovation. Findings from studies with these criteria could give valuable insights into the generalizability of the proposed model. The findings would also potentially advance our understanding of the impact the use of different tools and methods has on creating a shared understanding of the environment.

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