
Mind the Gaps!

An Assessment of Research on Managerial Perception Gaps



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Unternehmerische Perception Gaps, Unternehmerische Wahrnehmung, Selektive Wahrnehmung, Ursache/ Entstehung von Perception Gaps, Folgen von Perception Gaps, Literatur Review

Managerial perception gap, managerial perception, selective perception, perception gap antecedent, perception gap consequence, literature review



Das Auftreten von „Managerial Perception Gaps“ ist ein verbreitetes Phänomen und kann weitreichende Konsequenzen für Organisationen mit sich bringen. Die vorliegende Studie untersucht den aktuellen Forschungsstand zu Wahrnehmungslücken, strukturiert das vorhandene Wissen anhand eines integrativen Modells und schafft somit für den Leser einen Überblick zu den treibenden Faktoren und Konsequenzen solcher Wahrnehmungsasymmetrien. Darauf aufbauend werden zukünftige Forschungsmöglichkeiten vorgeschlagen. Diese Vorschläge umfassen die Schliessung bestehender Wissenslücken zur Entstehung sowie den Konsequenzen von Wahrnehmungsasymmetrien, sowie eine konzeptionelle Erweiterung der Literatur, mit dem Ziel die komplexen Beziehungen zwischen unterschiedlicher Wahrnehmungslücken und ihrer Auslöser und Konsequenzen besser zu verstehen.

Managerial perception gaps are common and have considerable implications for organizations. This study examines the extant knowledge on managerial perception gaps, and proposes an organizing framework for their antecedents and consequences. Based on this analysis, we identify several shortcomings in the extant literature and outline a future research agenda. We recommend three avenues for future research: 1) illuminating the underlying processes and micro-foundations, 2) advancing conceptualization and measurement, and 3) exploring complex, multilevel, and nested relationships.

1. Introduction

Key premises in management research are that organizations are comprised of individuals who are characterized by bounded rationality, and that their beliefs, values and interpretations influence their actions and behaviors, which – in turn – shape organizational outcomes (Argote & Greve, 2007; Cyert & March, 1963; Gavetti, Levinthal, & Ocasio, 2007; Hambrick & Mason, 1984). Since individuals in organizations differ, their interpretations and perceptions also often differ. Thus, an important concern in management re-

search is the asymmetries between the perceptions of two or more parties within and across firms (Birkinshaw, Holm, Thilenius, & Arvidsson, 2000; Chini, Ambos, & Wehle, 2005; Corsaro & Snehota, 2011; Cuypers, Koh, & Wang, 2015; Lee, Koh, Yen, & Tang, 2002; Luk & Layton, 2002).

Such *perception gaps*, which may relate to individuals' values, aims, or strategy execution, are common and can lead to tensions and inefficiencies in firms, by making it hard to reach the venture's overall goals (Asakawa, 2001; Birkinshaw, Holm, Thilenius, & Arvidsson, 2000; Cegarra-Leiva, Sánchez-Vidal, & Gabriel Cegarra-Navarro, 2012; Holm, Johanson, & Thilenius, 1995; Puscasu & Gheorghe, 2015; Raithel & Schwaiger, 2015; Taylor, 2015). Thus, identifying when and where these perception gaps and asymmetries arise and what effects they can have are vital for sustaining a firm's financial viability and for ensuring its survival and prosperity (Beyer, Chattopadhyay, George, Glick, & Pugliese, 1997; Chini et al., 2005; Holden, 1999).

Scholars across several management disciplines have explored various phenomena, and such research has utilized different focal units of analysis and methodological approaches. Perceptions have been studied in the context of separate functions in organizational units (e.g. R&D manager and production manager) and at the individual level (Brockhoff, 1998; Chini et al., 2005). For instance, perceptual misalignments emerge as managers evaluate the performance of their own or other units (Chini et al., 2005). Also, scholars studying MNCs, HQ-subsidiary relationships, and alliances report a phenomenon in which one individual or organizational unit perceives certain tasks, facts, or goals differently to other units or individuals, or in a way other than they were intended. Regardless of whether these research efforts seek to describe these perceptions or to remedy them, they are all concerned with the underlying perception gaps between their units of analysis.

Despite the diversity of extant research, the various research endeavors share a common goal of understanding, tracing, and measuring such costly organizational and individual incongruences. Specifically, scholars and practitioners seek to understand the origins and consequences of such managerial misalignments. However, we lack a systemic, comprehensive understanding of what we know and what we have yet to learn. The highly fragmented state of the literature, the utilization of various methodologies, and the diversity of the levels at which perception gaps have been investigated call for a content-focused and methodology-focused analysis of the state of knowledge in this field. A systematic analysis offers an opportunity to consolidate the existing knowledge, identify areas for cross-fertilization, and uncover future research directions.

This study seeks to provide scholars with a complete overview of the relevant literature regarding the antecedents and consequences of perception gaps, and to ultimately answer our primary research question: *What is the current state of knowledge on managerial perception gaps and to what end should this state be expanded?* To answer this research question, we conducted a systematic literature review. This review provides scholars with a comprehensive basis for advancing the bodies of knowledge in various fields and should be viewed as a motivation for such advancements. We systematically map perception gaps, and provide extensive guidance on methodological and managerial concerns related to this topic.

2. Background

2.1 Terminology and Origins

Because various terms exist, it is important to clearly define the key ones. We define *perceptions* as the cognitive subjective interpretation of events or developments by an individual. Scholars have suggested that decision-makers' interpretations of an environment can significantly influence the behaviors and actions of the individuals and their organizations (Hambrick & Mason, 1984; Starbuck & Milliken, 1988; Thomas, Clark, & Gioia, 1993). For instance, an early study by Anderson and Paine (1975) showed how managerial perceptions influence strategy formulation. Their study built on Harrison (1975), who suggested that the perception process in managerial decision includes: 1) selectivity – the separation of information for further consideration; 2) closure – the compilation of pieces of information into a meaningful whole; and 3) interpretation – the use of previous experience as an aid in assessing information.

On this basis and in line with prior research (Birkinshaw et al., 2000; Chini et al., 2005; Holden, 1999; Luk & Layton, 2002), we use *perception gap* to capture a difference in the interpretation of a situation by two or more individuals or organizational units, that is, when two or more parties' interpretations of the same 'fact', event, or development differ. Scholars sometimes use related terms, including *perception difference*, *perception asymmetry*, and *perception misalignments*. We considered these synonyms in our literature identification approach.

While the origins of research on perceptions gaps are difficult to trace, scholars in several fields, including psychology, have explored related phenomena. Although providing a complete account of these adjacent research fields falls outside the purpose and scope of this study, we briefly sketch three related research areas¹: First, *cognitive dissonance theory* investigates the inconsistencies in individual's knowledge of actions and feelings and behavior. Scholars have identified dissonances, or gaps, between one's objective knowledge of actions and subsequent inconsistent behavior. For instance, a smoker understands that this action may have negative consequences, yet continues to smoke (Festinger, 1957). A second, somewhat related research area centers on *self-perception theory*, which was originally used to understand questions concerning the *philosophy of mind* (Bem, 1967, 1972; Bem & McConnell, 1970) and was employed as an inwardly focused assessment of how an individual perceives themselves and whether or not this perception matches objective reality. The circumstances this theory focuses on is rarely observable to anyone else but that individual. A perception difference or gap may arise between a subjective own state representation and the true nature of the individual. Research in the field investigates the domains and standpoints on oneself. A third theory is *balance theory*, which seeks to explain how the subjective attitudes and emotions individuals feel towards each other impacts on the creation of functioning social groups (Heider, 1944, 2005; Hummon & Dorian, 2003).

While these research areas are largely focused on individuals, scholars in various management disciplines have studied perceptions gaps in organizations. Management research focuses on how managerial perceptions gaps emerge and their implications in organizations (Birkinshaw et al., 2000; Chini et al., 2005; Corsaro & Snehota, 2011; Cuypers et

¹ We are grateful to one of the reviewers to steer our attention to these theoretical foundations.

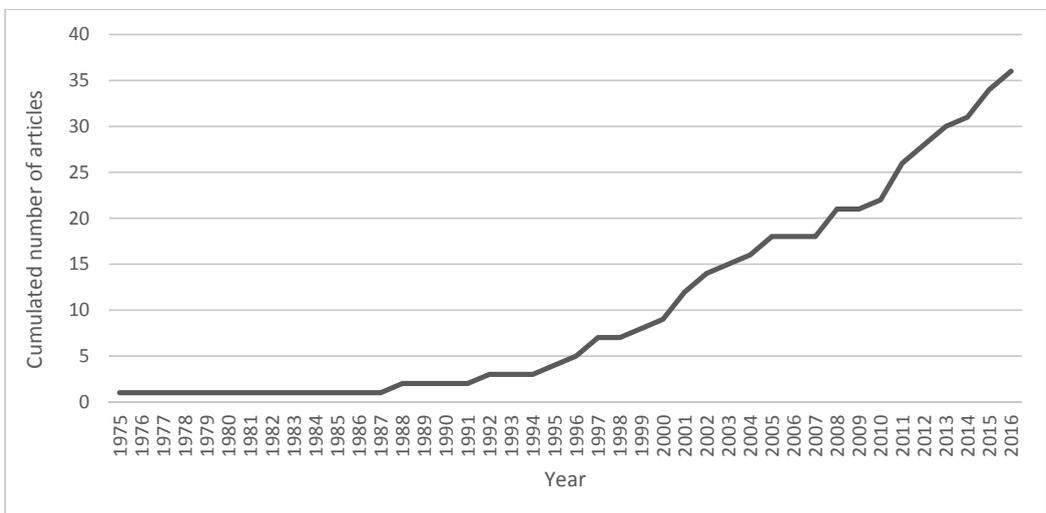
al., 2015; Lee et al., 2002; Luk & Layton, 2002). However, little work has been done to consolidate the topic within management literature. We address this shortcoming.

2.2 Approach

In line with this study's purpose, we followed a structured approach to ensure that the relevant works were included (Short, 2009; Tranfield, Denyer, & Smart, 2003; Webster & Watson, 2002). Our search process comprised three steps. First, we defined the formal parameters of our search, including the relevant keywords. To ensure inclusion of all relevant and validated literature in this research field (Tahai & Meyer, 1999), we chose the top 124 management journals² by employing an impact factor cutoff of 1.0. We placed no restrictions on the publication date. We searched the Thomson Reuters *ISI Web of Knowledge* article database for six keywords: *perception gap*, *perception difference*, *perception asymmetry*, *perception and misalignment*, *managerial perception*, and *selective perception*. This resulted in 158 articles. Second, we screened these articles for relevance. We read the abstracts and, when necessary, the entire article. We deemed the articles that deal with perception gaps, utilize data derived from the author's own research, and offer advanced insights into the theoretical and practical implications of perception gaps to be relevant. Third, we used a backward and forward search of the Thomson Reuters *ISI Web of Knowledge* to identify nine other relevant articles that had not been caught in the initial query. These three steps yielded 37 articles. The topic's diversity is reflected in the number of journals included in the review.

To capture the topic's diversity concerning the research subject and methodology, the first author extensively analyzed the methods employed in the articles, categorized their dependent and independent variables, and classified the various levels of analysis. While the first author conducted the in-depth analysis of each article and the initial development of the framework, both authors discussed all unclear details until agreement was reached.

Figure 1: Cumulative Number of Studies (1975 to 2016)



² Thomson Reuters, *Journal Citation Report 2015*.

3. Extant Knowledge

Our analysis revealed that management scholars have studied managerial perceptions gaps on three levels: individual, within organizations, and across organizations. Thus, we organized the discussion of the extant knowledge in terms of the levels at which perception gaps occur. For each level, we include a summary of insights into the antecedents and the outcomes of perception gaps.

3.1 Interpersonal Perception Gaps

The first group of articles focuses on individual-level gaps. Such *interpersonal* perception gaps can occur among managers, between superiors and employees, and between sales people and customers. This also includes gaps between individuals' perceptions and reality, such as a manager's perception of the firm's performance, and how a manager's experience influences her or his perception and decision-making. For instance, Starbuck and Mezas (1996) argue that perception gaps can emerge if managers' perceptions of company issues differ from reality. In total, 28 studies investigated the antecedents and consequences of perception gaps. Appendix 1 provides detailed summaries of these articles.

Most articles that investigated the antecedents of such perception gaps explored individual factors. For instance, Clarke and Mackaness (2001) suggest that individual differences in perception primarily occur because managers take a 'bounded' view of problems, and because they search for and select information in different ways, since they employ different cognitive styles to reach decisions (Levy et al., 2015). These cognitive styles are formed by a manager's total work experience and relevant work experience in their industry. Perceived leadership opportunities was further shown to be largely influenced by individual background such as gender, tenure, and education (Levy et al., 2015). Beyer, Chattopadhyay, George, Glick, Ogilvie, and Pugliese (1997) conclude that managers' information processing is largely influenced by their functional experience. Swartz (2008) investigates factors that affect managers' perceptions of project stability concerning objective stability, and concludes that the perception gap of a manager analyzing a project heavily depends on his assessment of the project's size, scope, and stage of completion. In turn, this assessment is heavily influenced by an individual's career experience. Further, perception gaps among managers are affected by managers' prior experience and certification levels. In addition, Shore, Bommer, and Shore (2008) investigated managerial perceptions of employee commitment and how these perceptions are affected by employee tenure. They argue that self-reported affective commitment and supervisor-focused impression management predict managerial perceptions of affective commitment, while age, tenure, education, training and development, and self-focused impression management relate to managerial perceptions of continued commitment. Depending on how a manager perceives an employee's commitment, the perception gap between their assessment and the de facto commitment level may increase. Finally, Waller, Huber, and Glick (1995) investigated the influence of executive background on executives' perceptions. They find a gap between executives' perceptions of reality and the perceptions of less senior managers, based on their past experiences.

Another important set of factors centers on personal traits. Dennis, Robert, Curtis, Kowalczyk, and Hasty (2012) examined how managers' trust dispositions affect trust formation and their perceptions of trust towards other team members. Walsh (1988) identi-

fied belief structures and problem identification processes as factors that managers perceive as important for overall company success. Ketokivi and Castaner (2004) investigate the effects of commitment, such as participation in strategic planning, on managers' position biases.

Education and internal factors such as training can also play a role. Three articles related to these factors (Lee et al., 2002; Sligo, 1997). Pittaway and Thedham (2005) explored the perception gap relating to required training levels between owners of small to medium-sized businesses and graduates. Their results show that smaller firms place greater emphasis on graduates' abilities to 'fit' into the business. However, SMEs expect graduates to be able to perform and contribute immediately. This indicates that graduates' education level strongly influences the size of the perception gap between graduates and SME owners. Another study showed how internal factors such as poor leadership training can lead to employee perception gaps about communication (Bornman, 2015). External factors, such as a distance dimension, has also been shown to impact managers' perceptions (Kraus, Ambos, Eggers, & Cesinger, 2015).

Prior research also reveals several consequences of interpersonal perception gaps. We found 12 intermediate consequences, such as changes in the firm's strategic direction (Schmitt, Barker, Raisch, & Whetten, 2016), effects on corporate social responsibility efforts (Hahn, Preuss, Pinkse, & Figge, 2014; Li, Toppinen, & Lantta, 2016), or the working climate in the organization. For instance, Anderson and Paine (1975) assert that strategies are strongly influenced by two sets of perceptions: perceptions of environmental uncertainty and perceptions of the need for change in the organization's strategic properties. Baer, Dirks, and Nickerson (2013) postulated that a perception gap occurs owing to different objectives within for instance a diverse team. This misalignment severely affects the strategy formulation process. A firm's strategy can also be affected by interpersonal perception gaps, as discussed by Giaglis and Fouskas (2011). The impacts of managerial perceptions regarding such topics as increasing competition, greater substitution threats, and increased buying power are associated with broader, more innovative competitive reactions. Two additional intermediate implications are embedded in the context of a change in working climate: Data from two quantitative studies with more than 300 participants show that a perception gap between superiors and employees regarding such issues as employee empowerment or the definition of work-life balance leads to a decline in the working climate (Cegarra-Leiva et al., 2012; Holden, 1999). Holden (1999) demonstrates that perception gaps between managers and employees regarding the aims of employee empowerment lead to dissatisfaction among employees.

We found five performance implications, including financial implications for the firm (Walton & Dawson, 2001) and consequences for firm survival. For example, Doloi (2011) highlights a project cost overrun arising from a perception gap between the board of stakeholders' assessment of project status and reality related to market conditions, site conditions, project complexity, and project design complexity. Further, a CEO's perceptions of climate and leadership style, and any resulting perception gap, can lower the organization's performance (in terms of returns on assets) through poor information processing and a lack of management's information processing capability (Døjbak Haakonsson, Burton, Obel, & Lauridsen, 2008). Luk and Layton (2002) show that perception gaps between customers and hotel management on service quality negatively impact on de facto service quality.

In general, interpersonal gaps are by far the most common asymmetries studied by scholars. In line with Weick's arguments (1969), it is generally accepted that perceptions of environmental and internal characteristics, rather than the objective characteristics of the environment, play a key role when, for instance, considering the strategy formulation process in a firm (Anderson & Paine, 1975). The existing analyses of interpersonal perception gaps show that no one single industry is particularly vulnerable to such misalignments. However, research on specific industries suggests that certain industries – those in which professions center primarily on individuals, such as service, tourism, construction, banking, and hospitality – may be more likely to suffer from interpersonal perception gaps than for instance technology-dominated sectors.

3.2 Intra-firm Perception Gaps

The second group of articles studies *intra-firm* perception gaps. Such misalignments refer to asymmetries within a firm. For instance, Chen, Sun, and McQueen (2010) demonstrate that cultural and communication difficulties and weak relationships are critical barriers to successful knowledge transfer between headquarters and subsidiaries, and therefore negatively affect collaboration within the firm. We found four articles in this category, two on the antecedents of this asymmetry type and two on the consequences. Appendix 2 provides detailed summaries of the articles.

The two articles that analyze the antecedents of gaps within a firm focus on company-level factors. For instance, Asakawa (2001) attests that the tensions caused by perception gaps between a headquarters and a subsidiary do not appear to originate in autonomy and control issues between the headquarters and the subsidiary but in the sharing of information between the parties. Barton, Brown, and Marsh (1992) investigate the behaviors of head offices and how internally generated short-termism leads to myopic under-investment. While no general assertion can be made on which industries are most prone to intra-firm perception gaps, Asakawa (2001) proposes that perception gaps are higher in electronics than in the pharmaceutical industry.

Concerning the consequences of intra-firm perception gaps, the existing studies reveal effects on collaboration within the organization. For instance, Birkinshaw et al. (2000) show that an over-estimation of a subsidiary's role leads to greater headquarters control and less cooperation within the relationship. Similarly, Chini et al. (2005) suggest that a perception gap between headquarters and a subsidiary leads to lower satisfaction on both sides, which can be assumed to lead to less collaboration.

3.3 Interfirm Perception Gaps

The third group of articles explores *interfirm* perception gaps. Interfirm perception gaps occur between two separate organizations. We found five studies in this category. Appendix 3 provides detailed summaries of the articles.

A few studies have explored antecedents of perceptions gaps between firms. For instance, Glaister, Husan, and Buckley (2003) show that there are differences in perceptions of autonomy and decision-making between each of the parent firms in a joint venture, and between the parent firms and the joint venture's management. This perceived misalignment can be affected by knowledge management and information flows within the cooperation. In addition, Zabkar, Cater, Bajde, and Cater (2013) show that there are three clus-

ters of firms with different perceptions about their customers' environmental characteristics.

Concerning consequences, Corsaro and Snehota (2011) argue that if firms are aware of a misalignment and if that misalignment is perceptual, any effort to align practices will have positive effects, even if the misalignment persists. This article highlights a financial performance consequence, since such a misalignment will eventually lead to inefficiencies in the use of the available resources in the B2B relationship. The second implication of interfirm perception gaps relates to company survival. Herbst and Merz (2011) show that perception gaps concerning brand personality exist in industrial B2B markets. These gaps depend on the focus of the industrial transaction process. For instance, industrial brands focused on single transactions are perceived as better performers but as less credible, while industrial brands focused on relationships are perceived similarly across the two personality characteristics. In this case, a loss of credibility is a real threat to the firm's performance in the industrial marketplace. The third consequence of interfirm perception gaps points to the impacts of managers' differing perceptions of environmental strategies and shows that, in Western firms, top managerial mindsets has the strongest effect and regulation the weakest effect on proactive environmental strategies (Liu, Guo, & Chi, 2015).

While the extant studies provide initial insights into interfirm perception gaps, we need to learn more about the antecedents, processes, and consequences of such gaps.

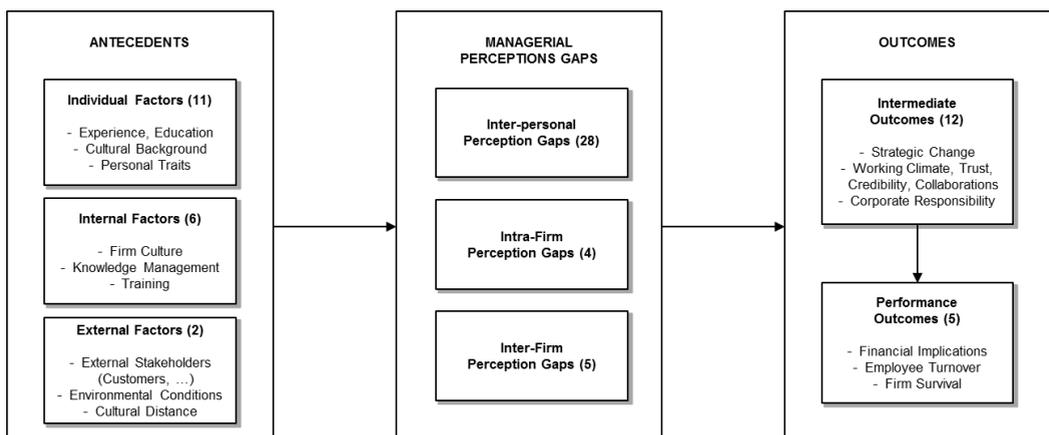
4. Synthesis and Directions for Future Research

4.1 An Integrative Framework

Based on this analysis, we propose an organizing framework that summarizes and integrates the existing knowledge on managerial perception gaps at the three levels. As illustrated in Figure 2 and elaborated in detail below, the framework has three main elements: (I) antecedents, (II) gaps, and (III) outcomes.

As shown in the center of Figure 2, scholars have studied three distinct perception gap types: First, *interpersonal* perception gaps refer to individual-level asymmetries. They occur between two or more individuals or between one individual and reality. They can be observed among managers, between superiors and employees, and between sales personnel

Figure 2: Organizing Framework for Research into Perception Gaps



and customers. Second, *intra-firm* perception gaps occur when there are misalignments within an organization. Such perception asymmetries can arise between separate business units, divisions, and working groups, or between the headquarters and a subsidiary. Third, *interfirm* perception gaps adopt a company level of analysis and describe gaps between two firms. They might be observed between two competitors, or within a B2B or an alliance relationship.

As can be seen on the left in Figure 2, scholars have studied a number of antecedents, which we organize into four groups: First, *individual factors* is the most commonly studied cause of perception gaps: 100% of gaps caused by individual factors are interpersonal perception gaps. In turn, roughly 40% of the consequences of such interpersonal misalignments have immediate performance implications. It also includes personal traits such as belief structures, problem identification, trust levels, and commitment. The three articles that fit into this category all cause interpersonal perception gaps. Such factors as intuition, experience, and commitment are often underestimated. Most individuals make decisions based on their experiences, belief structures, and intuition. When these influences cause an individual to perceive and interpret certain situations in a way that does not represent the best interest of a venture, gaps arise. Thus, it is key to staff an organization with the right people. Further, although underlying issues, such as work-life balance, effective knowledge flows within and between business units, and employee or manager training may not always be top priority, they may have long-term consequences. This also highlights the need for executives to question their own intuition and belief structures, as well as their alignment with their organization's beliefs. Second, *internal factors* include articles focused on how training level, company culture, and knowledge management influence perception gaps. Knowledge management covers causes of perception gaps relating to poor information flow, poor information-sharing, or autonomy and control issues. Finally, *external factors* include studies in which outside stakeholders or other externalities caused the emergence of a perception gap.

As can be seen on the right in Figure 2, scholars have studied a variety of consequences that can be categorized as intermediate consequences and performance consequences. Intermediate consequences include *strategic changes*, problems with *collaboration* in an organization, changes in the *working climate*, or the firm's corporate responsibility. For instance, when perception gaps arise between headquarters and a foreign subsidiary owing to cultural differences, when business units work in parallel but in opposite directions owing to a lack of knowledge transfer, or when employees are demotivated because they have different perceptions of work-life balance to their superiors, inefficiencies arise that could have devastating consequences. Notably, almost all of the research on the intermediate consequences of strategic change is almost solely based on theoretical (Baer et al., 2013; Pillai, 2010) and review articles (Anderson & Paine, 1975). Performance consequences include *financial consequences*, potential threats to *company survival*, or *employee turnover*. Five of the 17 identified consequences of perception gaps have performance implications. Hence, such gaps may have considerable practical implications. With many firms suffering from slow or inefficient innovation processes, poor working climates, difficulties establishing collaboration within the firm, and troubles in executing planned strategic changes, an investigation of such gaps within the organization could be the answer.

Regarding the model's overarching structure, scholars should expand their research efforts in the under-represented categories and should uncover additional groupings. We

also point to the need to extend research into intra-firm and interfirm perception gaps. Further, in reality, the relationships outlined in Figure 2 may be complex, recursive, and bidirectional rather than unidirectional.

4.2 Avenues for Future Research

Our attempt to organize the extant literature offers interesting insights into the different antecedent types of perception gaps, the types of gaps that arise from them, and the effects they ultimately have in an organization. However, our analysis also demonstrates that the current knowledge is limited in several respects. First, the extant knowledge largely rests on findings about interpersonal perception gaps. Second, although most studies rely on samples that cover multiple industries, many tend to focus on organizations in the U.S. Third, the existing knowledge concerning the processes and underlying mechanisms appears to be limited, since it focuses on either the emergence of perception gaps or their consequences.

Table 1: Opportunities for Future Research

Future research area	Potential research questions
(1) Study underlying processes and micro-foundations	<ul style="list-style-type: none"> ▪ How do different gap types form? ▪ How are antecedent factors converted into intermediate or performance consequences? ▪ How do perception gaps evolve over time? Do all gaps increase over time if untreated? How long does a perception gap exist before its various consequences unfold? ▪ What are the potential moderating factors between antecedents and perception gaps, and between perception gaps and their consequences? ▪ To what extent are the relationships among antecedents, content, and implications unidirectional (or not)? ▪ What individual psychological factors drive the emergence and consequences of managerial perception gaps?
(2) Advance conceptualization and measurement	<ul style="list-style-type: none"> ▪ How do the measurement and definition of a gap affect its consequences? ▪ Does a simple difference or a true change measurement of a perception gap offer more insight into its consequences? ▪ What is the best measure for observing a change in perception gaps over time?
(3) Explore complex, multilevel, and nested relationship	<ul style="list-style-type: none"> ▪ What are the antecedents of perception gaps between multiple parties (multiple individuals, multiple units within firms, multiple firms in alliances and JVs)? ▪ What are the consequences of perception gaps between multiple parties (multiple individuals, multiple units within firms, multiple firms in alliances and JVs)? ▪ To what extent do perception gaps at the individual, intra-firm, and interfirm levels of analysis interact? ▪ What is the effect of the simultaneous occurrence of different perception gaps? How do interrelations among different perception gaps affect their consequences? ▪ How do interrelations among different antecedent and implication categories affect gaps and their consequences?

These limitations lead us to highlight several future research areas. The first focuses on opening the black box, the second on the method, and the third on advancing multidimensional studies of perception gaps. While we hold all five suggestions are essential for fostering our knowledge, the suggested research allies are ranked according to their prominence concerning this review and their complexity. Table 1 provides a summary as well as possible research questions.

(1) Study underlying processes and micro-foundations

One key area of future research centers on the underlying processes. One key area for future research is examining the processes associated with perception gaps. This includes questions such as: *How exactly do perception gaps emerge? How do they lead to intermediate consequences and performance consequences?* Such research should also explore various micro-foundational factors, such as emotions and experiences (Langley, Mintzberg, Pitcher, Posada, & Saint-Macary, 1995). Another area from which insights could be very helpful in understanding the gap formation process are the factors that moderate the relationships between antecedents and perception gaps, and those between perception gaps and their consequences. The current literature has left this question largely unexplored.

Similarly, we see ample opportunities to explore the time dimension concerning perception gaps. Most of the extant research relies on the assumption that perception gaps are a static or linear phenomenon. Thus, we lack a comprehensive understanding of how perception gaps develop and behave over time. Most of the articles included in this review offer static representations of perception gaps between individuals or units in firms or alliances. However: *Do all gaps increase over time if they are untreated? How long does a perception gap usually exist before its consequences become visible?* One key element in studies along these lines will be longitudinal investigations of perception gaps. Such investigations would also improve our understanding of warning signals and patterns in the emergence of perception gaps.

An important future research area centers on individual micro-foundations that underlie the emergence and consequences of managerial perception gaps. To date, the psychological factor in this process has seen very little research. Scholars have mainly focused on key demographics such as work, age, and education. We need to go beyond this, to understand the psychological constructs behind perception gaps. The importance of these underlying processes have been identified as the driving force behind organizational and individual actions (Abell, Felin, & Foss, 2008; Barney & Felin, 2013; Contractor, Foss, Kundu, & Lahiri, 2015; Felin & Foss, 2005, 2009; Felin, Foss, Heimeriks, & Madsen, 2012).

(2) Advance conceptualization and measurement

Several research opportunities relate to the conceptualization and measurement of perception gaps. For instance, there are two general bases of computation: gaps between two or more individuals' perceptions of reality, and gaps between one or more individuals' perceptions and reality. The articles included in this review do not explicitly differentiate between the two. Thus, one interesting future research direction would be to investigate whether gaps caused by asymmetries between two individuals or units' perceptions of reality have different consequences than the asymmetries between an individual's and a unit's perception of reality and reality. In the former case, the two individuals or units both in-

interpret the reality, and the perception gap merely reflects the extent to which those interpretations differ. In the latter case, reality is an objective truth.

A second issue here centers on gap measurement. In line with Bergh and Fairbank (2002), future research might utilize several methodological approaches to measuring a perception gap. An initial description of the gap between two individuals or units requires a *simple difference* measurement. Such a measurement merely indicates the distance between two interpretations. If the aim is to investigate the gap between an individual's and a unit's interpretation of reality and reality, one would need a true change measure. However, several other measurement techniques could prove help to improve our understanding of perception gaps. For instance, a residuals technique could help to predict a change in perception gaps, while growth curves could be an adequate method for mapping the change in perception gaps over time (Bergh & Fairbank, 2002).

(3) Explore complex, multilevel, and nested relationships

We see a need to advance research to account for the complex, nested, and multilevel relations (i.e. to shift the focus from bilateral to multilateral gaps and from single-level to multilevel research). For instance, we see a need to advance research from exploring bilateral gaps between two parties to exploring gaps between multiple parties. However, such research is likely to be methodologically problematic. Nonetheless, to the extent possible, multilateral research appears crucial if we are to develop a more complete state of knowledge on the nature and implications of perception gaps.

We also see ample opportunities for research investigating the interconnections among the different perception gap types in a multidimensional way. We identified three key levels at which perception gaps can emerge. One promising research area would be to investigate whether perception gaps can occur at several of these levels simultaneously, or if a perception gap on one level leads to another. Thus, research that investigates perceptions at the unit level and at the individual level can be fruitful. Also of interest could be the question whether a combination of two or more gap types has a more severe effect on the organization than just one. Future research must address the challenges posed by possible simultaneous influences of various levels of analysis (Wooldridge, Schmid, & Floyd, 2008).

A related research concern here is whether the consequences of a combination of perception gaps are worse than in a single-analysis scenario and, if so, how this is reflected in the types and severities of those consequences? Further investigation could then explore whether a pattern is observable in the appearance of perception gaps. If it is possible to generalize whether certain misalignments commonly appear in reaction to certain perception gap types, asymmetries may be more effectively recognized and eliminated during or even before their formation. Analogously, another research avenue likely to be fruitful would be to carefully investigate the occurrence of perception gaps based one more than one antecedent type or gap type, which may cause more than one consequence type. While Figure 1 proves the existence of such constellations, we know little about their effects.

5. Conclusions

A fundamental objective of management scholars is to understand the relationships among individuals, units, and sub-units of organizations. We sought to systematically examine, analyze, and organize the relevant literature on perception gaps in such relationships. We

developed an integrative framework that provides scholars with a comprehensive overview of the antecedents and consequences of perception gaps, and that helps to illustrate several areas for future research.

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Appendix

Appendix 1: Summary of Research on Interpersonal Perception Gaps

Study (year)	Journal	Study type	Industry	Gap specifications	Key findings
Beyer, Chattopadhyay, George, Glick, Ogilvie, & Pugliese (1997)	<i>Academy of Management Journal</i>	Empirical, case study, and survey of 120 MBA students, 1997	Multiple	The breadth or narrowness of subjects' information processing.	Managers' information processing are influenced by their functional experience, but not necessarily in the ways previously theorized and investigated. Belief structure does not mediate the relationship between functional experience and selective perception.
Bornman (2015)	<i>Doctoral dissertation</i>	Review and empirical	Multiple	A gap analysis of employee perceptions and expectations of leadership communication.	Leadership communication is perceived as lower by employees than they expect of communication leaders.
Clarke & Mackaness (2001)	<i>Journal of Management Studies</i>	Empirical, qualitative; interviews with three senior executives, cognitive mapping, 2000 to 2001	Retail	Gaps emerge because managers: 1) take 'bounded' views of problems, 2) search for and select information in different ways, and 3) have contrasting cognitive styles.	Senior managers use simpler cognitive explanations and rely more on a higher proportion of non-factual information. Owing to managers' experience and differing cognitive styles, there is a difference in perceived correct decision-making.
Dennis, Robert, Curtis, Kowalczyk, & Hasty (2012)	<i>Information Systems Research</i>	Empirical, qualitative; 317 students, vignettes, 2x2 factorial design	Multiple	Perceptions of virtual team members and trust levels towards them.	In virtual teams, behavioral controls amplify the salience of all behaviors, and individuals' selective perception biases influence how these behaviors are interpreted.
Hahn, Preuss, Pinkse, & Figge (2014)	<i>Academy of Management Review</i>	Conceptual	Multiple	Different cognitive frames (perceptions) of managers on corporate sustainability.	Different cognitive frames lead to differences in breadth and depth of scanning, interpreting, and responding concerning suitability issues.
Ketokivi & Castaner (2004)	<i>Administrative Science Quarterly</i>	Empirical, qualitative; 164 manufacturing plants, Anova, Manova, 1994 to 1997	Multiple	Gap present between overall goals and priorities of the firm and the perceptions of managers of the priorities and goals of their departments.	Participation in strategic planning and communication of plans reduce managerial position biases and perception gaps.
Kraus, Ambos, Eggers, & Cesinger (2015)	<i>Journal of Business Research</i>	Empirical, 126 CEOs and top managers responsible for internationalization in companies with HQ in Germany and Switzerland	Multiple	Perceptions of risk in internationalization decisions.	Distance impacts the internationalization decision.
Lee, Koh, Yen, & Tang (2002)	<i>Information & Management</i>	Empirical, qualitative; 85 IS practitioners, 63 IS academics, 2000 to 2002	Information systems (IS)	Perceptions of two groups about the required level of a particular software-based technical specialty.	The significant perception gaps can be explained by the apparently ineffective IS education system. Academic emphasis may be changed to include more interpersonal skills.
Levy, Taylor, Boyacigiller, Bodner, Peiperl, & Beechler (2015)	<i>Journal of Business Studies</i>	Conceptual	Multiple	Perceived leadership opportunities in MNCs.	Perception gap increased by gender, tenure, education between parent country nationals and host country nationals and third country nationals
Pittaway & Thedham (2005)	<i>International Small Business Journal</i>	Empirical, qualitative; focus group with 4 small business owners, interviews with 139 SMEs, 1999 to 2000	Hospitality	Perception gap between graduate students' abilities and their ability as perceived by SMEs.	Smaller firms placed greater emphasis on graduates' abilities to 'fit' into the business. The findings suggest that SMEs expected graduates to be able to perform and contribute immediately.
Schmitt, Barker, Raisch, & Whetten, (2016)	<i>Long Range Planning</i>	Conceptual	Wood	Differences in managerial perceptions and interpretations impact on their strategic renewal behavior.	The firms' renewal activity types vary with the environmental scarcity types they face.
Shore, Bommer, & Shore (2008)	<i>Journal of Organizational Behavior</i>	Empirical, quantitative; 490 employees of a U.S. manufacturing firm	Steel	Differences between managers' perceptions of employee commitment and de facto level of commitment displayed by an employee.	Age, tenure, education, training and development, and self-focused impression management relate to managerial perceptions of continued commitment.
Sligo (1997)	<i>International Journal of Management Science</i>	Empirical, quantitative; 33 organizations and 1,395 people, 1994 to 1995	Multiple	Perceived access to information (knowledge) between two groups of different educational levels.	As educational levels rise, participants better understand how much information may be available on relevant topics.
Starbuck & Mezas (1996)	<i>Journal of Organizational Behavior</i>	Conceptual, 70 MBA students	Multiple	Difference between subjective and objective data. Perception of managers of firm issues and reality.	Use 'objective' data that are more relevant to managers' perceptions of their firms' environments by seeking out less aggregated data and by waiting until appropriate data become available.

Study (year)	Journal	Study type	Industry	Gap specifications	Key findings
Swartz (2008)	<i>Project Management Journal</i>	Empirical, quantitative; 48 project managers	Aviation	Differences in perceptions of managers of overall project stability and various project attributes and performance measures, primarily concerning a new concept of stability, to de facto project stability.	Stability is believed to be as important as the more common measures (e.g. schedule, performance, cost). Perceptions of project stability differ depending on program size, scope, and stage of completion, and between managers depending on their work experience and certification levels.
Waller, Huber, & Glick (1995)	<i>Academy of Management Journal</i>	Empirical, qualitative; 63 executives of 63 firms	Multiple	Differences between reality and executives' perceptions; differences between executives' perceptions of reality and those of less senior managers.	Functional background affects the changes executives perceive in their organizations' effectiveness. Differences exist between executives' perceptions of reality and those of less senior managers. Executives' perceptions influence their actions.
Walsh (1988)	<i>Academy of Management Journal</i>	Empirical, qualitative; 121 mid-career managers, 1983	Multiple	Differences in managers' perceptions of the importance of factors to a firm's success (perception gaps between managers).	Results show that managers who are able to identify problems make use of all 5 domains (HR, accounting, marketing, internal management, external management).
Anderson & Paine (1975)	<i>Academy of Management Journal</i>	Perceptual, literature review	Multiple	Whether a manager sees environmental (un)certainly or feels the need for organizational change.	Strategies are influenced by two perceptions: the perception of environmental uncertainty and the perception of the need for change in strategic properties of the organization.
Baer, Dirks, & Nickerson (2012)	<i>Strategic Management Journal</i>	Theoretical	Multiple	Gap constitutes the differing objectives of diverse team members, which impacts on the overall strategy formulation process.	Individuals have bounded rationality and may seek self-interest. A gap is formed through the differing objectives within a diverse team, which affects the strategy formulation process.
Doloi (2011)	<i>International Journal of Project Management</i>	Empirical, qualitative; 6 firms, 2008	Construction	Perception measurement: market condition, site condition, project complexity, design complexity.	Compliance is a key issue in influencing cost performance. Further, during the inception of a project, political and legislative factors play significant roles. Project cost overruns result from perception gaps.
Giaglis & Fouskas (2011)	<i>Management Decision</i>	Empirical, quantitative, 174 managers, multiple regression, primary field study	Multiple	Differences between managers' perceptions of the competitive environment and organizational capabilities and reality.	The results show an association between managerial perceptions and the innovativeness and breadth of competitive responses.
Haakonsson, Burton, Obel, & Lauridsen (2008)	<i>Management Decision</i>	Empirical, quantitative; 252 firms, multivariate regression analysis, 1997	Multiple	CEOs' perceptions of climate and leadership styles.	The results indicate that misalignments between climate and leadership style are problematic for organizational performance.
Holden (1999)	<i>Personnel Review</i>	Empirical, quantitative questionnaires and 337 qualitative interviews in two banks, 1992 to 1995	Banking	Perceptual gaps between managers and employees concerning employee empowerment.	There is a desire by senior management to restrict forms of empowerment to workplace levels; employees and lower-level managers continue to perceive EI measures as power-enhancing.
Li, Toppinen, & Lantta (2016)	<i>Journal of Small Business Management</i>	Qualitative, semi-structured interviews with 23 line managers	Multiple	Chinese and Finnish managers' perceptions of corporate responsibility.	In firms with a strong stakeholder approach, managers adopt informal corporate social responsibility strategies.
Luk & Layton (2002)	<i>Service Industries Journal</i>	Empirical, quantitative; 14 hotels: 108 guests, 21 managers, 51 room service providers, 2000 to 2002	Hospitality	Differences in customer expectations by managers, front-line service providers, and customer and service providers' perceptions of such expectations.	Perception gaps negatively impact on overall service quality.
Pillai (2010)	<i>British Journal of Management</i>	Conceptual, literature review	Multiple	Differences between managers' perceptions of external and internal factors, wisdom, and accuracy.	Managers who over-estimate external factors and display high confidence in their estimates are likely to enact strategies that are more evolutionary and incremental.
Sanchez-Vidal, Cegarra-Leiva, & Cegarra-Navarro (2012)	<i>International Journal of Human Resource Management</i>	Empirical, quantitative; 229 managers and 511 employees, 2009	Metal	Differences in perception of work-life balance (WLB) availability at a firm between management and employees.	Perception gaps exist between managers and employees regarding the availability of WLB practices. Managers indicate higher WLB practice implementation than employees.
Walton & Dawson (2001)	<i>Journal of Management Studies</i>	Empirical, qualitative; 39 executives, individual differences model of multidimensional scaling	Multiple	Differences in managers' perceptions of organizational effectiveness and academics' views of organizational effectiveness.	The results show that the same values organize the patterning of effectiveness criteria in a cohesion-based solution for managers and academics.

Appendix 2: Summary of Research on Intra-firm Perception Gaps

Study (year)	Journal	Study type	Industry	Gap specifications	Key findings
Asakawa (2001)	<i>Research Policy</i>	Empirical, qualitative: focused interviews at 10 Japanese MNC; quantitative: questionnaire survey with 113 HQs & subsidiaries	Multiple	Measure various dimensions of perception gaps. Evaluate HQ-subsubsidiary relationships in terms of autonomy, control, and information-sharing.	Tensions appear to have their origins not in autonomy and control issues between HQ and the subsidiary, but in the sharing of information between the two.
Barton, Brown, Cound, Marsh, & Willey (1992)	<i>Long Range Planning</i>	Empirical, quantitative, 100 questionnaires, 1989	Multiple	Gaps between senior head office and divisional managers. Differences between divisional perceptions of strategic investment processes and those of head office.	The behaviors of head offices lead to internally generated short-termism and myopic under-investment. Differences exist between divisional perceptions of strategic investment processes and head office perceptions, plus judgments about value added by the HQ.
Birkinshaw, Holm, Thilenius, & Arvidsson (2000)	<i>International Business Review</i>	Empirical, qualitative, LISREL; 100 HQ- subsidiary dyads, 1996	Multiple	Gap between HQs' and subsidiaries' perceptions of the subsidiary's importance to other corporate units.	HQ and subsidiary managers have different perceptions of their roles in the MNC. Subsidiary managers' over-estimation of their own role leads to greater HQ control over the subsidiary, which is associated with lower cooperation by the subsidiary.
Chini, Ambos, & Wehle (2005)	<i>European Management Journal</i>	Empirical, quantitative; 79 dyadic pairs of HQ and subsidiary responses	Cosmetic	Perception gaps are the differences in perceptions between HQ and a subsidiary concerning the MNC's management processes.	Higher perception gaps lower satisfaction on both sides. The results show that perceptions differ across environments, and among HQs and subsidiaries.

Appendix 3: Summary of Research on Interfirm Perception Gaps

Study (year)	Journal	Study type	Industry	Gap specifications	Key findings
Glaister, Husan, & Buckley (2003)	<i>British Journal of Management</i>	Empirical, qualitative; 60 interviews and quantitative; 63 questionnaires, 1997 to 1998	Financial	Gap constitutes the difference in perceptions of autonomy between joint venture partners.	The findings show differences in the perceptions of autonomy between each of the parent firms, and between the parent firms and IJV management.
Zabkar, Cater, Bajde, & Cater, (2013)	<i>E & M Ökonomie a Management</i>	Quantitative	Multiple	Perception of customers' environmental activeness.	Three company clusters exist. These differ significantly in their perceptions of customers' eco-characteristics.
Corsaro & Snehota (2011)	<i>Industrial Marketing Management</i>	Empirical, qualitative; 84 customers and suppliers, template analysis, 2007 to 2009	Multiple	Gaps in parties' interpretations of a problem and its solution for customers. Thus, the perception gap relates to the availability of resources and how these are combined.	There is a tendency toward misalignment over time. A change in alignment is linked to perceptions of the available resources and how these are combined, along with parties' interpretations of key events.
Herbst & Merz (2011)	<i>Industrial Marketing Management</i>	Empirical, qualitative; interviews with 24 firms, quantitative, online survey with 117 practitioners and 513 alumnae	Multiple	Differences in brand perceptions in the B2B market.	The results indicate that general perception differences exist in the industrial market, depending on the focus of the industrial transaction process.
Liu, Guo, & Chi, (2015)	<i>Management and Organization Review</i>	Conceptual, meta-analysis of 68 studies	Multiple	Managerial mindset of environmental strategies.	In firms in Western countries, top managerial mindsets have the strongest effect and regulation the weakest effect on proactive environmental strategies.

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