

Hagen, Moritz; Su, Wenjia; Junge, Sebastian

**Article — Published Version**

## 60th birthday of 'A Behavioral Theory of the Firm': a review of the relational concepts and recommendations for future research

Management Review Quarterly

**Provided in Cooperation with:**

Springer Nature

*Suggested Citation:* Hagen, Moritz; Su, Wenjia; Junge, Sebastian (2023) : 60th birthday of 'A Behavioral Theory of the Firm': a review of the relational concepts and recommendations for future research, Management Review Quarterly, ISSN 2198-1639, Springer International Publishing, Cham, pp. 1-46,  
<https://doi.org/10.1007/s11301-023-00369-x>

This Version is available at:

<https://hdl.handle.net/10419/312451>

**Standard-Nutzungsbedingungen:**

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

**Terms of use:**

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*



<https://creativecommons.org/licenses/by/4.0/>



# 60th birthday of 'A Behavioral Theory of the Firm': a review of the relational concepts and recommendations for future research

Moritz Hagen<sup>1</sup> · Wenjia Su<sup>1</sup> · Sebastian Junge<sup>1</sup> 

Received: 19 January 2023 / Accepted: 31 July 2023  
© The Author(s) 2023

## Abstract

This year, we celebrate the sixtieth anniversary of 'A Behavioral Theory of the Firm' (BTF) (Cyert and March in *A behavioral theory of the firm*, Prentice Hall, Englewood Cliffs, 1963), which central ideas and concepts are fundamental to almost all theoretical and empirical work focusing on organizational decision-making. In particular, the four underlying relational concepts of BTF: (1) quasi resolution of conflict, (2) uncertainty avoidance, (3) problemistic search, and (4) organizational learning provide theoretical explanation for firms' decision-making behavior. However, as literature has grown, focus of the studies and application of the concepts are becoming increasingly fragmented, leading to parallel and decoupled insights rather than cohesive and complementary explanations. We conduct a systematic literature review of 114 publications in top-ranked journals to provide a deeper understanding of the applications of BTF's four relational concepts and their interrelation. Reviewing and synthesizing extant literature, we identify seven different organizational decision areas in which mainly two relational concepts, problemistic search and organizational learning, are applied to explain specific firm behaviors. The relational concept of quasi resolution of conflict and uncertainty avoidance seem underrepresented or almost neglected in the BTF-related research. Furthermore, we provide an integrative process framework connecting the four relational concepts and related research insights, and thereby, highlight opportunities for future research.

**Keywords** A Behavioral Theory of the Firm · Problemistic search · Organizational learning · Quasi resolution of conflict · Uncertainty avoidance · Decision-making

**JEL Classification** L20 · L21 cross-classified with D21 · L22 cross-classified with D23

---

✉ Sebastian Junge  
sebastian.junge@fau.de

<sup>1</sup> Department of Management, Friedrich-Alexander-Universität Erlangen-Nürnberg, Lange Gasse 20, 90403 Nuremberg, Germany

# 1 Introduction

Cyert and March's (1963) seminar work, 'A Behavioral Theory of the Firm' (BTF), has served as an influential, theoretical groundwork for organizational theory and strategic management literature for six decades. Especially, their four major relational concepts, problemistic search, uncertainty avoidance, organizational learning, and quasi resolution of conflict, provide valuable insights for researchers and practitioners to understand the decision-making processes within firms (Cyert & March 1992).<sup>1</sup>

Despite the tremendous scientific attention given to BTF, literature based on its relational concepts remains fragmented. Most scholars mainly focus on individual relational concepts, leading to parallel and decoupled insights rather than cohesive and complementary explanations of organizational decision-making. The lack of a holistic view through the lens of all relational concepts by Cyert and March may hinder the development of realistic predictions of organizational decision behavior. In addition, different terms (e.g., problem-driven search (Arrfelt et al. 2013) or problem-oriented search (Greve 1998)) are employed to refer to the same relational concept (e.g., problemistic search). The lack of unified vocabulary impedes the identification of relevant insights and a complete portrayal of the current state of research. Based on these issues, we derive our research question of *how BTF, and particularly its four relational concepts, have been applied to predict organizational decision-making*.

Our systematic literature review of 114 publications addresses this question, and thereby contributes to the literature of BTF in two ways. First, we identify different research streams emerging from BTF's four relational concepts. We find that a multitude of BTF-related scholars predominately applying problemistic search and organizational learning to various decision areas, such as organizational change (e.g., Miller and Chen 1994; Park 2007), innovations (e.g., Gaba and Joseph 2013; Greve 2003a), research and development (R&D) search (e.g., Blagoeva et al. 2020; Rudy and Johnson 2016), expansions (e.g., Audia and Greve 2006; Ref and Shapira 2017), acquisitions (e.g., Iyer and Miller 2008; Kuusela et al. 2017), network decisions (e.g., Baum et al. 2005; Shipilov et al. 2011), and corporate fraud (e.g., Harris and Bromiley 2007; Mishina et al. 2010). Second, we provide a holistic view on these relational concepts for a more realistic explanatory approach for firms' decision-making. We conceptualize an integrative process framework based on the four relational concepts to integrate the existing findings, discuss controversies, and identify opportunities for future research.

The structure of our review is as follows. We begin by explaining the theoretical foundation of the BTF and its four relational concepts. Subsequently, we describe the method and sample used in our systematic literature review. We move forward by discussing our findings on the application of BTF's relational concepts in various decision areas and developing an integrative process framework that synthesizes the

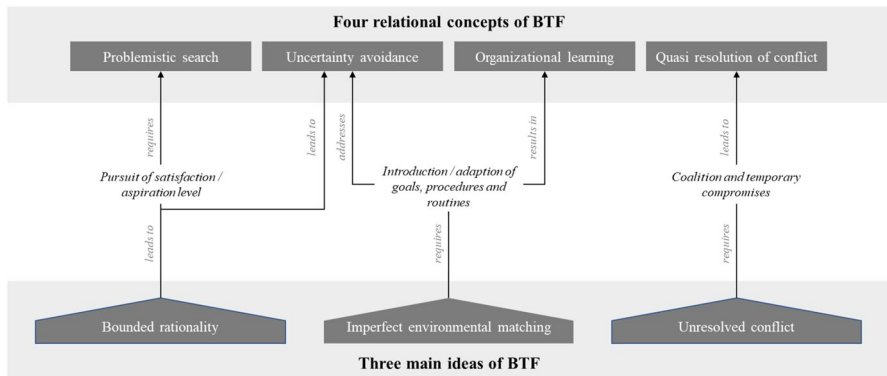
<sup>1</sup> In 1992, Cyert and March published a second edition of their seminal book 'A Behavioral Theory of the Firm' from year 1963. For our study, we use the second edition from year 1992.

existing findings. Guided by our framework, we highlight future research directions and conclude by reflecting on the past six decades of BTF work.

## 2 Theoretical foundation of the BTF

In the period from the late forties to the early sixties, 'Administrative Behavior' (Simon 1947), 'Organizations' (March and Simon 1958), and 'A Behavioral Theory of the Firm' (Cyert and March 1963) laid the foundations for research on organizational decision-making and firm behavior (Argote and Greve 2007; Gavetti et al. 2012). These three influential bodies of literature built the intellectual roots for what has come to be called the 'Carnegie School'. The identity of the 'Carnegie School'—based at the Carnegie Institute of Technology, Pittsburgh, Pennsylvania—stems from three main premises: taking "organizations as the ultimate object of study, decision-making as the privileged channel for studying organizations, and behavioral plausibility as a core principle underlying theory building" (Gavetti et al. 2007, p. 523). All of the three Carnegie's cornerstones were enriched through a broad interdisciplinarity. The school's concepts and insights did not only draw from economics, but also from political science, psychology, and sociology (Augier and March 2008). The latest of these three publications—'A Behavioral Theory of the Firm'—builds on the ideas and concepts of the preceding works and refines them. In this publication, the authors express their critique of the traditional economic assumptions. Based on their critiques, they formulate alternative concepts that include a more realistic view on organizational decision-making.

Cyert and March's (1992) main critique of the neoclassical theory of the firm can be divided into two separate arguments. First, they question the motivational and cognitive assumptions employed by the neoclassical theory of the firm: profit maximization and perfect knowledge (Cyert and March 1992). According to Cyert and March (1992), profit maximization should not be considered as the only objective of a firm. Every individual inside an organization pursues personal goals. Hence, profit maximization is either one among many goals or not a goal at all (Cyert and March 1992). Even if the maximization of profits is the dominant objective of a firm, a more realistic assumption would be the satisfaction instead of the maximization assumption. Firms set aspiration levels and benchmark their actually achieved profits on previously set levels, rather than striving for absolute profit maximization (Cyert and March 1992). Aspiration levels are "the smallest outcome that would be deemed satisfactory by the decision maker" (Schneider 1992, p. 1053). They build on comparisons with their own past performances (historical aspiration) and / or performances of other peers (social aspiration) (Cyert and March 1992; March and Shapira 1992; Ref and Shapira 2017). Second, Cyert and March (1992) were skeptical about the assumption of perfect knowledge because a firm needs to gather information and does not have it in advance. Finally, they doubt that the real firm has much in common with the firm characterized by neoclassical theory (Cyert and March 1992). Theory assumed, for example, that there are no complex organizations, no problems of control, and no standard operating procedures (Cyert and March 1992). Neglecting these characteristics, the firm loses most of its original identity and meaning. All



**Fig. 1** BTF's four relational concepts based on three main ideas

these aspects together raised the need for a more realistic behavioral theory of the firm, and thus, built the antecedents of Cyert and March's studies.

Originally, 'A Behavioral Theory of the Firm' was mostly built around three related but largely independent ideas: bounded rationality, imperfect environmental matching, and unresolved conflict (Cyert and March 1992). Bounded rationality implies that, due to biases in decision-making as well as limited information, rational actors do not exist. Inconsistent with traditional economic theories, Cyert and March (1992) posit that time-consuming calculations of optimal behavior are often costly or impossible, and should thus be avoided. The second idea, imperfect environmental matching, emphasizes the importance of organizational adaption. Rules, forms, and practices that an organization uses are not inevitable determined by the demands of its environment, and therefore, not perfectly matched. Unresolved conflict assumes that latent goal conflicts are prevalent in every organization, which cannot be entirely resolved by contracts (Cyert and March 1992).

### 3 Four major relational concepts

Instead of focusing on a grand theory, Cyert and March (1992) aim to generate little but powerful and realistic ideas to explain organizational behavior (Liu et al. 2015). Originating from the three above-mentioned ideas (bounded rationality, imperfect environmental matching, and unresolved conflict), they develop four relational concepts that represent the core of the BTF: *problemistic search*, *uncertainty avoidance*, *organizational learning*, and *quasi resolution of conflict* (see Fig. 1) (Cyert and March 1992).

The first relational concept, *problemistic search*, emerges from the idea of bounded rationality based on two assumptions. First, organizations are subject to limited rationality due to the imperfect knowledge of information and options required for decision-making, and consequently, they need to actively search for alternatives (Cyert and March 1992; Simon 1947). Second, organizations do not

act rationally, e.g., by maximizing their profit according to the neoclassical theory. Instead, they pursue satisfaction that is determined by their predefined aspiration level (Cyert and March 1992). Problemistic search is triggered by performances below the aspiration level. Search activities of an organization never occur voluntarily and randomly (Cyert and March 1992); they are motivated and stimulated by a detected problem (Gavetti et al. 2012). Furthermore, search is simple-minded, meaning that it is based on a simple model of causality (Augier and March 2008). More precisely, organizations will “(1) search in the neighborhood of the problem symptom and (2) search in the neighborhood of the current alternative” (Cyert and March 1992, p. 170). As organizational search is biased by its prior experience and goals (Cyert and March 1992), it is closely connected to organizational learning.

The idea of imperfect environmental matching builds the foundation for the second and third concept *uncertainty avoidance* and *organizational learning*. Organizations adapt their posture to certain environmental conditions without knowing all relevant information and the outcome of the adaption in the first place (also related to the notion of bounded rationality). This poses a level of uncertainty to organizations and leads to a preference for a short-term rather than an uncertain long-term planning horizon (Cyert and March 1992). The concept of *uncertainty avoidance* postulates that firms try to avoid uncertain situations and make almost every situation as controllable as possible. To cope with the uncertainties, organizations impose standard operating procedures in their decision-making processes (Cyert and March 1992) and negotiate contracts with their internal and external environment to enhance their reliability (Augier and March 2008). When making decisions without all necessary information (under uncertainty), firms tend to exhibit risk-averse habits by relying on an existing set of procedures and routines and engaging in a narrow search of solutions in their neighborhood (Cyert and March 1992). Thus, uncertainty avoidance is closely tied to a firm's risk-taking behavior, which reflects the willingness to accept potential losses associated with uncertain situations (Cyert and March 1992). However, the major difference is that uncertainty is unspecific, while risk is attached to concrete losses or negative outcomes and often quantified with a probability (Hofstede 2001).

Not only individuals show adaptive behavior over time, but also organizations do (Cyert and March 1992). The constant adaption of organizations to their environment leads to the third relational concept, *organizational learning*. Firms adapt their goals, known as aspiration levels, as a function of goals of previous periods and goals of comparable other organizations (Augier and March 2008). Moreover, firms can adapt their attention and search rules as they perceive and interpret certain behaviors as successful (Gavetti et al. 2012). Organizational learning can take place both locally and on the corporate level. This is because organizational functions perceive situations from their own perspective, and accordingly evaluate same events differently (Augier and March 2008).

The concept of *quasi resolution of conflict* stems from the idea of unresolved conflict. Organizations inevitably struggle with latent goal conflicts, as they act as a coalition of members and sub-units rather than an individual. More precisely, organizational members and sub-units have diverging, and thus potentially conflicting interests regarding profit, sales, market share, inventory, and production (Cyert

and March 1992). In order to reduce the complexity of these interrelated problems and goal conflicts, organizations seek temporary compromises among different goal dimensions and action alternatives for the sake of mutual acceptance (Gavetti et al. 2012). Cyert and March (1992) assume that organizations factor its problems into local sub-problems and delegate authority to resolve them (local rationality). By assigning the resolution process to organizational sub-units, organizations need to assure that the resolution process is consistent with the organizational system (Cyert and March 1992). This consistency is, on the one hand, supported by acceptable level criteria, which replace a demanding local optimization (Augier and March 2008; Cyert and March 1992). On the other hand, solving problems sequentially rather than simultaneously increases consistency of the conflict resolution process (Augier and March 2008). However, a comprehensive resolution is almost impossible, and therefore, organizational goal conflicts are usually inevitable (Cyert and March 1992).

With the formulation of these four relational concepts, Cyert and March (1963) fundamentally contribute to the understanding of organizational behavior and decision-making. Applying these concepts to specific organizational actions, as well as reactions to both external changes and emerging challenges, should help to create a more realistic theoretical approach.

## 4 Method and sample

In order to conduct a systematic literature review on BTF research, we followed David and Han's (2004) and Konlechner and Ambrosini's (2019) approach. Thereby, we adhered to Denyer and Neely's (2004) recommendations for explicit and reproducible criteria for searching and selecting studies. Furthermore, we followed Tranfield and colleagues' (2003) stages for conducting systematic reviews.

We used Business Source Complete (via EBSCO) as database for the systematic search process. To guarantee a high quality of considered articles, we only included top-ranked, peer-reviewed journals.<sup>2</sup> Our aim was to uncover literature that describes firm behavior and specific organizational decisions that can be explained more realistically by the application of the four relational concepts. Therefore, we initially searched for studies that mention the terms *behavioral theory of the firm*, *btf*, *btof*, *quasi resolution of conflict*, *uncertainty avoidance*, *problemistic search*, or *organizational learning* in the title or abstract. To ensure a direct reference to Cyert and March's theoretical foundation (all editions of the book), studies that contain one of the relational concepts in title or abstract were only considered if at least one of these terms were found in the text (including references): *behavioral theory of the firm*, *btf*, or *btof*. As a result, the preliminary sample included 146

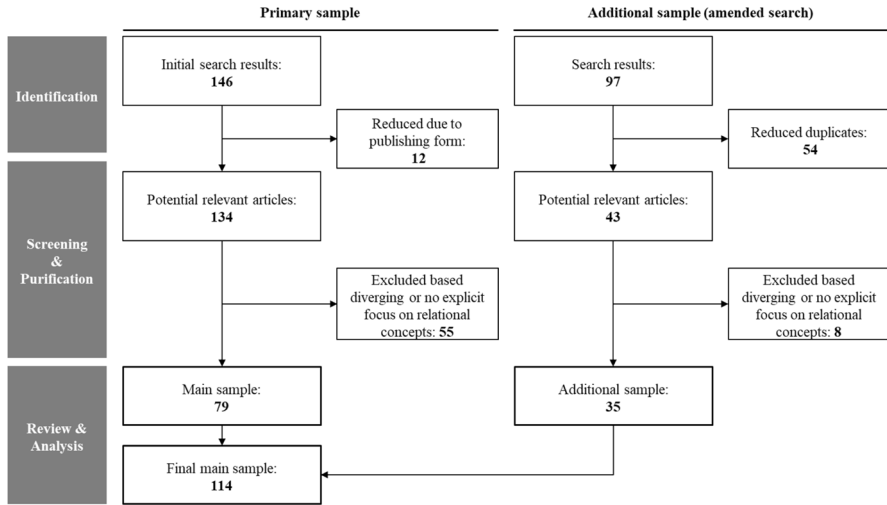
<sup>2</sup> The VHB-JOURQUAL3 ranking, a journal ranking published by the German Academic Association for Business Research, serves as an indicator for journal quality (Graf-Vlachy et al. 2020; Komander & König 2022). Only journals of the first two categories (A+, A) in the fields *General Business Studies* (ABWL) and *Organizational Studies and Human Resources* (ORG / PERS) are chosen as sources.



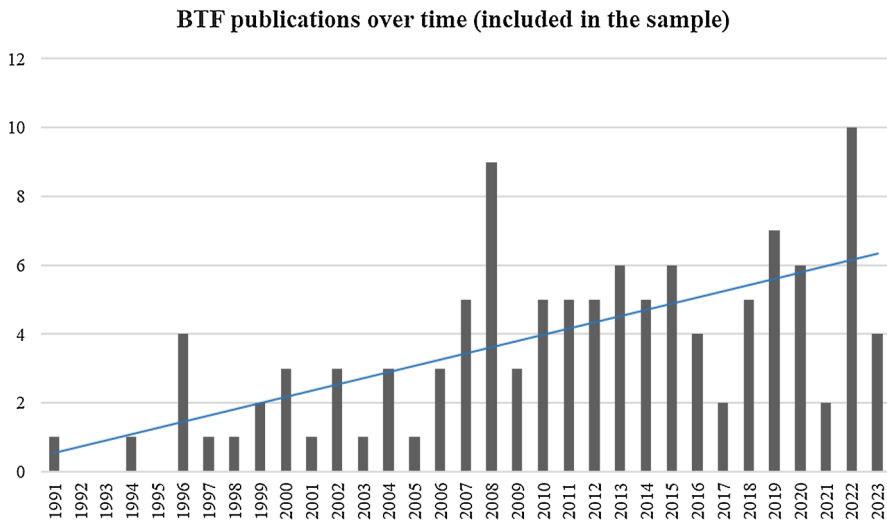
articles published between 1963 and July 2023. We excluded twelve articles due to their publishing form. Most of them were short and general book reviews in direct response to the publication of 'A Behavioral Theory of the Firm' 1963. We then scanned the remaining 134 abstracts to confirm their relevance. We excluded three further articles with an apparently diverging focus. In the final step, we read the full paper and dismissed 52 articles that did not explicitly focus on (a) relational concept(s) and its/their application on organizational decision-making. This procedure led to a first sample of 79 studies that empirically or theoretically investigate firm behavior through the lenses of BTF's relational concepts. However, during the literature search, we recognized that not all scholarly work rooted in Cyert and March's (1963) BTF used exactly their original terminology. Some authors referred to problemistic search as problem-driven search (Arrfelt et al. 2013), others called it problem-oriented search (Greve 1998). Furthermore, with performance feedback, a literature stream emerged that uses problemistic search and organizational learning as foundational concepts to explain firm behavior. To ensure that our sample covered these heterogeneous terminologies, we executed a second search looking for the terms *aspiration\**, *performance feedback*, *attainment discrepance\**, *problem-driven search*, and *problem-oriented search* in title and abstract. In the second search process, we made sure that the studies relate directly to BTF. This procedure resulted in 97 potential studies for the sample, of which 54 overlapped with the first sample. We scanned abstracts and read full text of the remaining 43 studies, applying the same criteria employed during the first search process. This step eliminated eight articles. Combining both samples, we used a final literature sample of 114 articles as the basis for our investigations. From the 114 articles, 108 were identified as empirical, four as theoretical, and two combined both perspectives. 97 of the empirical studies included a purely quantitative approach while eight applied a computer simulation and one combined a quantitative approach with a computer simulation. Two of the quantitative studies simultaneously employed a qualitative approach within their research design. Following Su and Junge's (2023) approach, we illustrate the search process and results in Fig. 2.

The articles included in our final sample were published in eleven journals. With 34 occurrences, *Organization Science* was the most strongly represented journal in our sample, followed by the *Academy of Management Journal* with 27. Furthermore, Fig. 3 shows the publication trend and the chronological distribution of the 114 publications. Since the early nineties, publications on BFT and specific relational concepts have increased constantly. Although the first publication of Cyert and March's work appeared in 1963, studies relating to BTF and specific relational concepts began to evolve in the early nineties and have increased constantly since then. Compared to the large number of papers citing BTF in general, studies relating to one of BTF's relational concepts appear relatively sparse. The reason can be seen in the broad applicability of BTF, as its core ideas and principles of BTF have influenced a great body of management and organizational studies. James March explains that "I think some of the ideas in BTF seem to me to have this quality of being little ideas with power that you can use in a lot of different situations" (Liu et al. 2015, p. 153). For example, Deb et al. (2017) argue based on BTF that slack enables adaption and innovation for a better firm performance without explicitly





**Fig. 2** Flowchart of systematic search



**Fig. 3** Publication trend over time

mentioning relevant relational concepts, such as problemistic search or organizational learning. Thus, research building on specific relational concepts belongs to the wider impact of BTF.

To analyze and synthesize the findings, we applied a narrative approach. Narrative reviews are viewed as valuable when “attempting to link together many studies on different topics, either for purposes of reinterpretation or interconnection” (Baumeister and Leary 1997, p. 312). Due to the multitude of research directions

of the relational concepts, this approach seems to be best suited. We used four categories, encompassing independent variable, dependent variable, relational concept, and organizational decision areas, to structure the results of the review and analysis process. With these categories, we show the assignment to the corresponding relational concept, reveal patterns in organizational decisions, and compare the operationalization of the variables used. Appendix provides an overview of the analyzed journal articles including the key findings in the respective categories.

## 5 Application of BTF's concepts in literature

The major share of studies in our sample focuses on one or two relational concepts. The only exception is the conceptual study by Dew and colleagues (2008) which considers all four relational concepts and applies their meaning in an entrepreneurial setting. Most studies (61) center around problemistic search and its implication for organizations. This is followed by 33 studies that can be assigned to organizational learning literature. Nine studies connect problemistic search and organizational learning. Nine do not directly name one of the relational concepts but focus on aspiration levels, which build on the logic of problemistic search and organizational learning. One study (Cyert et al. 1996) uses the concept uncertainty avoidance to show that managers prefer higher short-term payouts even if they are associated with costs of dividend cuts in the future. We find that the relational concepts are mainly applied to seven decision areas: general decisions of *organizational change and adaption*, and specific decision areas of *innovation*, *R&D search*, *expansion decisions*, *acquisitions and resource decisions*, *organizational network decisions*, and *corporate fraud*.

### 5.1 Organizational change and adaption

A number of studies explore organizational behavior that is associated with change and adaption in general without specifying the concrete adaptive actions. Miller and Chen (1994) initially show that poor performance of a firm in relation to its aspiration levels leads to a problem-driven search (problemistic search). Since a firm's managers want to explore the causes of the problem, tactical changes like changing prices or devising an advertising campaign are typical responses (Miller and Chen 1994). Confirming these results, Ketchen and Palmer (1999) find that firms that underperform in comparison to their peers are more likely to initiate strategic changes, such as addition and deletion of new technologies or services. Park (2007) examines the direction of strategic changes and find that a firm's strategic convergence towards other firms decreases when the firm's performance increases relative to its aspiration level. In turn, strategic convergence of the focal firm towards its peer group increases when performance is below its social aspiration level (Park 2007). Thereby, aspiration levels "can be updated with different speeds, depending on how quickly decision-makers accommodate to performance that diverges from their aspiration level" (Greve 2002, p. 1). Overall, BTF's

arguments are strongly supported in diverse industry settings including railroads (Baum and Dahlin 2007), airlines (Miller and Chen 1994), hospitals (Ketchen and Palmer 1999), radio markets (Greve 1998), and within mutual funds (Kacperczyk et al. 2015).

## 5.2 Innovation

Several studies focus on organizational decisions or behaviors that result in a more or less innovative outcome. Looking at new product introductions from an organizational learning perspective, Katila and Ahuja (2002) show that the degree of prior search depth is curvilinearly related to the absolute number of new products. In contrast, prior search scope has a linear relationship with the number of new products introduced by a firm (Katila and Ahuja 2002). Despite depth and scope, the timing of ‘innovation search’ has a strong effect on new product frequency and innovativeness. Firms with the attempt to stay one step ahead of their competitors introduce products with a higher degree of innovation than firms, which follow and learn from their competitors (Katila and Chen 2008). Moreover, Greve’s (2003a) investigations of innovation launches among Japanese shipbuilding firms clearly shows that problemistic search is a key driver of firm innovations. By using the conceptual logic of organizational learning and problemistic search, the majority of the studies in this topic area are associated with performance feedback literature. More precisely, they investigate the influence of performance below aspirations on firm innovations, such as new product introductions (Gaba and Joseph 2013; Mulotte 2014) or process introductions (KC et al. 2013), firms’ motivations to pursue radical technologies (Eggers and Kaul 2018), or number (Khanna et al. 2016), scope, and depth (Yu et al. 2019) of successful patent applications. Eggers and Suh (2019), however, demonstrate that prior experience in the domain starkly influences the effect of negative performance feedback. Negative feedback in new domains more often results in withdrawal toward better-known domains, and hence, missing potential opportunities (Eggers and Suh 2019).

## 5.3 R&D search

Another prominent decision area related to organizational change and innovation is R&D search or intensity. R&D investment decisions inherently bear a level of risk due to the uncertainty in their desired performance outcomes (Palmer and Wiseman 1999). Most of the studies associated with R&D search directly use problemistic search as an antecedent to explain changes in R&D behavior. When performance is below aspiration level, a further performance decline leads to an increase in R&D intensity (Rudy and Johnson 2016). Chrisman and Patel (2012) find that family firms (compared to non-family firms) exhibit a smaller variability of R&D investments due to their long-term orientation. Organizational search is also driven by information interpretation and conveyance of a firm’s top managers (Fang et al. 2014). However, not only perception influences a top manager’s reaction to R&D search on performance feedback, different types of CEO power (Blagoeva et al. 2020),

CEO promotion and prevention focus (Mount and Baer 2022), as well as CEO stock option grants (Lim and McCann 2014) likewise do. Blagoeva et al. (2020) examine the causes of different CEO reactions to inconsistencies between performance feedback and performance prospects and linked this with the power of the CEO. They find that CEOs engaged in less R&D search when they had more structural power or ownership power and engaged in more R&D search when they had a high level of prestige power (Blagoeva et al. 2020). Furthermore, Lim and McCann (2014) demonstrate that high values of CEO stock option grants decreased a firm's R&D intensity. This suggests that CEOs in poorly performing firms may be already facing personal compensation and employment risks, which weakens their overall risk attitude towards the R&D expenditure of the firm (Lim and McCann 2014). These results show the complexity of situational and individual factors that have multiple different interdependencies within its influence on R&D search.

Besides CEO influences, the extent of a firm's R&D search intensity depends on the distance below aspiration levels (Chen & Miller 2007). On the one hand, if performance falls below aspirations, R&D search intensity will first rise, while on the other hand, search efforts will decrease, as a firm approaches bankruptcy (far below aspirations) (Chen and Miller 2007). Based on these outcomes, the authors propose a framework with more than one reference point and an inverted U-shape relationship. Organizational responsiveness varies with the focus of attention, which in turn depends on organizations' situations (Ocasio 1997). Besides performance situations, Vissa and colleagues (2010) find that organizational form influences focus of attention, and therefore organizational response in form of R&D search. In their study, business group affiliates are more focused on a historical comparison (historical aspiration levels) for R&D search than a social comparison (social aspiration levels). In contrast, Ye and colleagues (2021) argue that performance below social aspiration (compared to historical aspiration) leads to more innovative search. Furthermore, organizational slack is found to have a significant positive effect on R&D search intensity (Chen 2008; Salge 2011). In conclusion, adaptations in R&D behaviors are often considered as solutions to underperformance and subsequent problematic search (Rhee et al. 2019).

## 5.4 Expansion decisions

The problematic search argumentation (problem-driven decision-making) is often used to explain organizational expansion within a certain market (Audia and Greve 2006), the entry in a new market (Ref and Shapira 2017), or offshoring decisions (e.g., Elia et al. 2022). For example, Barreto (2012) examine firm's decision about the extent and selection of branch openings based on performance feedbacks. In contrast to the predictions of the BTF, Audia and Greve (2006) find that the further firm performance falls below its aspiration level, the lower its tendency for factory expansion (as a measure for risk-taking). Managers of small firms interpret a decline in performance even worse than managers of large firms, as the heightened anxiety about organizational failure and survival in small firms provokes a more risk-averse response (Audia and Greve 2006). In contrast, Greve (2008) uncovers that the

further an organization performs below its social aspiration level, the faster it grows. Joining this active debate and combining both of the above-stated perspectives, Ref and Shapira (2017) provide empirical evidence that a firm's probability of entering a new market first increases as its performance falls below or rises above aspiration levels. After a certain point this relationship decreases, showing an inverted U-shape relationship (Ref and Shapira 2017).

Some studies take an organizational learning perspective to investigate antecedents of either organizational failure or success during the internationalization process. Dencker et al. (2009) find that pre-entry management experience and knowledge of the business activity increase a firm's survival time in a new market. Moreover, early-stage business planning decreases firm survival whereas product-line change is associated with an increase in survival time (Dencker et al. 2009). Examining the market entry and possible subsequent exit from the Brazilian telecommunications market, Perkins (2014) provided evidence that prior internationalization experience in a host country that has a comparable institutional environment as the home country, has a positive effect on the time to failure. However, Musaji et al. (2020, p. 205) indicated that even with prior experience, it takes about 19 decisions during a new market entry to get to the learning curve, which is defined as the "point after which performance trends reliably positive".

## 5.5 Acquisitions and resource decisions

Some studies investigate the impact of performance feedback, and hence problemistic search, on organizational decisions that cover acquisitions (Haleblian et al. 2006; Kuusela et al. 2017), allocations (Arrfelt et al. 2013; Baumann et al. 2019), and investments of resources (Bromiley 1991; Smulowitz et al. 2020; Washburn and Bromiley 2012; Zhang and Gong 2018). Iyer and Miller (2008) state that performance feedback has a significant influence on a firm's propensity to engage in acquisitions. They find that the threat of a bankruptcy inhibits acquisitions and the acquisition hazard rate increased as performance improved up to aspirations (Iyer and Miller 2008). Kuusela et al. (2017) show that firms respond to negative performance feedback close to aspirations more often by resource-consuming acquisitions. However, performance far below aspiration levels increases the tendency of resource-freeing divestments (Kuusela et al. 2017). Furthermore, financial slack acts as a moderator on this relationship (Kuusela et al. 2017). Looking at responses to positive performance feedback, Vidal and Mitchell (2015) find that firms appear to use divestitures in a 'complementary Penrose effect'. This term is used to describe how "divestitures can free resources that firms can reinvest as they focus on new opportunities, which can help the firms maintain their performance gains" (Vidal and Mitchell 2015, p. 1106). Solely applying historical aspirations, Desai (2016) does not support the hypothesis that negative performance feedback is a cause of service line divestitures of for-profit hospitals in California. He further argues using social aspiration level in addition to historical aspirations does not lead to more information about the decisions (Desai 2016). Conversely, Kim and colleagues

(2015) show that the use of historical or social comparisons significantly influences a firm's acquisition behavior.

Furthermore, other studies find that performances below aspirational level lead to adaptations of resource allocations (Busenbark et al. 2022; Desai 2008), capital expenditures (Schumacher et al. 2020), or simply higher utilization of slack resources (Bromiley 1991; V. Titus et al. 2022), believing that these resource investments will improve future performance. Some studies demonstrate the impact of performance discrepancies on human resources decisions. For example, Ertug and Castellucci (2013) show that organizations with a low product quality relative to their aspirations are likely to recruit human resources with an above average previous performance. Additionally, they find that organizations with low-revenue performance relative to their aspirations have a higher tendency to recruit high-status human resources (measured as number of awards and honors) (Ertug and Castellucci 2013). In terms of top management composition, firms tend to select board-level member with higher expertise diversity and lower ascriptive (such as gender, race or ethnicity) diversity in order to facilitate effective solution search and decision-making when performances are below the aspired level (Jung et al. 2023).

## 5.6 Organizational network decisions

Research also indicates that problemistic search and organizational learning can impact the initiation and dissolution of interorganizational relationships. Whereas Baum et al. (2005) show that firms with a rising gap between performance and aspirations are more likely to engage in non-local ties, Shipilov et al. (2011) observe that these ties are additionally more often of a status-homophilous nature in situations that greatly diverge from historical aspirational levels. In context of make-or-ally decisions, Ren and colleagues (2022) find a U-shaped relationship between historical alliance performance and the likelihood of independent new product introductions, i.e., reduction of previous alliances. The decision of maintaining or dissolving alliances (e.g., by turning to acquisitions) does not only depend on the performance discrepancy to aspiration level but also on how firms attribute the failure or success of existing alliances (Lee et al. 2023). Focusing on vertical relationships, Clough and Piezunka (2020) investigate the influence of vicarious performance feedback on dissolution decisions with a supplier. Despite the impact of own performance relative to aspiration levels, the authors find that firms monitor the performance of comparable organizations when evaluating suppliers (Clough and Piezunka 2020). After an episode of negative historical performance feedback of the competitor, the focal firm has a higher tendency to dissolve the relationship with its supplier (Clough and Piezunka 2020).

## 5.7 Corporate fraud

Harris and Bromiley (2007) demonstrate the relevance of problemistic search in the context of corporate fraud, which represents a potential response of organizations to performances below aspiration. Extremely low firm performance relative to social

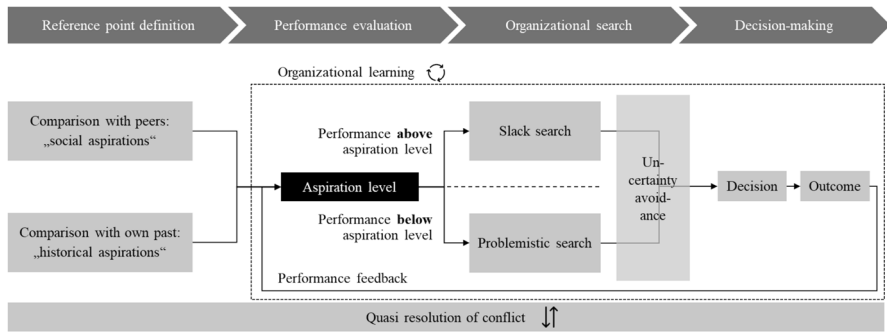
aspiration levels substantially increases the firm's propensity of financial misrepresentation (Harris and Bromiley 2007). While firms with performance close to average industry performance strive to achieve aspiration levels via legitimate means, firms performing far below their aspirations are more willing to accept the risk of illegal solutions to overcome this performance shortfall (Harris and Bromiley 2007). Focusing on positive performance feedback, Mishina and colleagues (2010) discover a positive relationship between performance above social aspirations and the likelihood of corporate fraud. However, the authors also show that negative performance feedback decreases the likelihood of corporate fraud, especially for prominent firms (Mishina et al. 2010). A cause of these contrasting results might be the difference in database (voluntary restatement of firm financial earnings in a Government Accountability Office (GAO) report vs. involvement in illegal incident as reported in news), as "the results from empirical tests [on financial misconduct] can depend on which database is accessed" (Karpoff et al. 2017, p. 129).

## 6 Towards an integrative process framework of BTF's concepts

Our review identifies a vast number of studies drawing on BTF's relational concepts of problemistic search and organizational learning in different organizational setting and decision areas. Both concepts are applied to organizational adaption in a generic way (e.g., Miller and Chen 1994; Park 2007) or in more specific forms, such as innovations (e.g., Gaba and Joseph 2013; Greve 2003a), R&D search (e.g., Blagoeva et al. 2020; Rudy and Johnson 2016), or market expansions (e.g., Audia and Greve 2006; Ref and Shapira 2017). More precisely, extant research focuses on the relationship of a firm's performance to aspiration level and the outcomes of specific adaptations (e.g., R&D intensity, product introductions, or other investments). This relationship is influenced by characteristics of the aspiration level (social vs. historical, distance to aspiration level), individual (e.g., CEO power, stock options, etc.) and situational factors (e.g., slack resources).

In contrast, the other two relational concepts, uncertainty avoidance and quasi-resolution of conflicts, seem underrepresented in the extant study. There are two possible reasons for this development. First, the research on uncertainty avoidance and organizational conflicts is partially diverged from BTF and uses other theories and definitions. A large body of literature (e.g., Bertrand and Lumineau 2016; Debus et al. 2012; Hamann et al. 2022) centering around uncertainty avoidance refer to Hofstede (2001), who introduces uncertainty avoidance as one of five dimensions of culture. In fact, Hofstede's concept of uncertainty avoidance also builds on BTF and its explanation of how organizations avoid uncertainties. Similarly, organizational conflicts are examined in various research streams, such as conflict management (e.g., Pondy 1967), organizational behavior (e.g., Salvato and Rerup 2018), and intergroup relations (e.g., DiBenigno 2018), in which BTF is mentioned as one among many other theoretical underpinnings. The concept of conflict is by nature a general social phenomenon, to which a large body of theoretical explanations exists (e.g., Cosier and Rose 1977; March and Simon 1958; Pondy 1966; Thomas and Schmidt 1976). Thus, BTF's idea of unresolved conflict has not become a dominant





**Fig. 4** Integrative processual framework of BTF's relational concepts

theory in the relevant literature. Second, uncertainty avoidance and quasi resolution of conflicts are treated as a latent construct rather than a primary concept in studies on BFT. Unlike problemistic search and organizational learning, which are applied as central mechanisms of organizational decision-making, the two underrepresented relational concepts can be seen as underlying principles or assumptions, which set the boundary conditions for organizational search. For example, a firm's risk-taking behavior as a response to uncertainty avoidance is also considered as impacting factor in studies focusing on problemistic search and organizational learning (e.g., Audia and Greve 2006; Eggers and Suh 2019; Lim and McCann 2014). The majority of the strategic actions are associated with risk-taking behavior. Firm acquisitions, investments in R&D, or new market entries always bear the risk of possible uncertain outcomes, and hence represent a risky choice (Desai 2008). In similar vein, quasi resolution of conflict is viewed as prerequisite for stable firm performances (Reus et al. 2016), budget allocation (Weber 1965), acquisitions and other investments (Carter 1971).

How can all relational concepts be leveraged holistically for a more realistic and comprehensive prediction of organizational decision-making? The four relational concepts are interrelated rather than stand-alone concepts that are independently applicable to different decision areas. It seems more appropriate to follow a process-based view on them. Based on the original framework of Cyert and March (1992) and taking into account all further research developments, we link the four complementary concepts to an integrative processual framework for a more comprehensive explanation of organizational decision-making (see Fig. 4). Starting with the definition of a reference point, organizations set a satisfactory goal and aspiration level for their future performance outcomes. Based on the performance evaluation compared to the aspiration level, organizations engage in organizational search for performance-increasing options. The decision for specific options will lead to respective performance outcomes which serve as feedback for the definition of aspiration level and performance evaluation.

Organizational decisions are not driven by profit maximization (as neoclassical theory assumed) (Cyert and March 1992). Instead of achieving absolute levels of performance, they seek a reference point, i.e., historical and / or social aspiration

level (Cyert and March 1992; March and Shapira 1992; Ref and Shapira 2017). While many studies use a weighted average model of social and historical aspiration levels (e.g., Eggers and Kaul 2018; Hong 2019), others solely include one of them for their investigations (e.g., Desai 2016; Eggers and Suh 2019). A firm's formation of their aspiration level also depends on the environmental condition and the locus of attention (Berchicci and Tarakci 2022). In a volatile environment, firms weigh historical aspiration more than social aspiration (Berchicci and Tarakci 2022). Firms with a locus of attention at their upper management tend to choose social aspirations over historical aspirations (Berchicci and Tarakci 2022). Whether the choice of historical or social aspiration will lead to different organizational decisions and outcomes remains contradictorily discussed in the literature (Desai 2016; Kim et al. 2015).

The aspiration level serves as reference point against which performances are evaluated. Depending on the discrepancy of current performance compared to the aspiration level, organizations follow two different paths of adaption. Performance below aspiration level, i.e., negative performance feedback, stimulates problemistic search, and thus triggers multiple strategic actions taken by an organization (Greve 2003a). With those strategic actions, firms try to improve their performance in order to exceed or at least meet their future aspirations. In contrast, performance above aspiration levels stimulates slack search, a search process that is associated with the excess of resources (Greve 2003b; Palmer and Wiseman 1999). In addition, the distance to aspiration level plays an important role for the subsequent search and decisions (Chen and Miller 2007). If the performance is far below the aspirational level, i.e., close to organizational failure (e.g., bankruptcy), firms often shift their focus of attention from aspiration level to survival point and reduce their problemistic search activities (Ref and Shapira 2017). In other words, companies no longer try to achieve their aspiration level with future performance but to secure their survival. Thus, organizational survival is considered as a boundary condition for any search to take place (Audia and Greve 2006; Iyer and Miller 2008). By applying these two reference points (failure point and aspiration level), some studies reveal a U-shape relationship between and strategic decisions, such as R&D search and market expansions (Chen and Miller 2007; Ref and Shapira 2017). Both forms of organizational search, problemistic and slack search, represent the two alternative reactions of organizations to performance feedback.

Organizational search, and ultimately decision-making, is subject to a firm's level of uncertainty avoidance that determines the time horizon (short- or long-term) and the location (range of solution space) of the search activities (Cyert and March 1992). For example, technological choices are subject to technological uncertainty of deterioration and market uncertainty in terms of changing customer preferences (Dong 2021). Uncertainty avoidance can be seen as a boundary setter for the decision-making process and is tied to a firm's risk-taking behavior, i.e., the willingness to accept risks of concrete losses associated with uncertainties (Cyert and March 1992). Risk-taking hinges on the predefined aspiration level. Although BTF proposes that performance below aspiration levels triggers the need for improvement, and thus stimulates risk-taking (Cyert and March 1992; Hu et al. 2022; Mount and Baer 2022), other researchers show a more

differentiated view on risk-taking in relation to multiple reference points. March and Shapira (1992) propose two reference points (failure and success reference point) in the context of risk-taking behavior related to aspiration levels. Hu et al. (2011) add a third reference point. Firms performing below / above aspiration levels (first reference point) are risk seeking / averse. (Hu et al. 2011). Yet, firms again become risk adverse at very low performance levels, from their failure point (second reference point) downwards (Hu et al. 2011). At very high levels of performance relative to a firm's aspiration level, precisely, upwards from its success point (third reference point), a firm's risk seeking behavior increases (Hu et al. 2011). In addition to performance relative to aspiration level, risky decisions also depend on the magnitude and the likelihood of potential gain associated with the decision alternative (Sobrepere i Profitós et al. 2022).

The outcome of decisions serves as performance feedback for a new iteration of goal and aspiration level definition. This recurring loop of adaption and evaluation results in a constant process of organizational learning. Over time, organizations gain experiences in various areas, such as acquisition (Haleblian et al. 2006), R&D (Powell et al. 1996), market entry (Dencker et al. 2009), or operations (Baum and Dahlin 2007), which influence the subsequent organizational search process and uncertainty perception. Hence, the concepts of problemistic search (also slack search) and organizational learning are interwoven with the literature of performance feedback which is one of the major intellectual achievements originating from BTF to explain various organizational decisions. Positive performance feedback (above aspiration) confirms the validity of previous search and outcomes. Negative performance feedback is perceived as an undesirable performance gap (below aspiration), and hence endangers organizations' survival (Desai 2008). Organizations process performance feedback based on their predefined aspirations and their beliefs to derive and choose action alternatives (Keil et al. 2022). Joseph and Gaba (2015) examine the effect of ambiguous (weakly correlated historical and social aspirations), inconsistent (negatively correlated), and consistent (positively correlated) performance feedback on new product introductions. They find that inconsistent and consistent performance feedback both have a positive effect on a firm's product introductions, whereas ambiguous feedback reduces the firm's responsiveness (Joseph and Gaba 2015). Ambiguous feedback can limit the perceived need for change among managers, and thus, result in misalignments in the execution of strategic actions (Joseph and Gaba 2015). The appraisal of the negative and positive feedback hinges on the experience and specialization of the decision-makers in the relevant area (e.g., Gaba et al. 2023).

Throughout the entire decision-making process, organizations face conflicts emerging from different interests of its members and subunits which influence the organizational goal setting and search process (Carter 1971; Cyert and March 1992). Therefore, they need to build coalitions and make compromises to achieve a consensual decision at the organizational level. Hu and colleagues (2023) find that firms performing below their aspirations reduce the ascriptive diversity among the board members in order to build consensus and avoid conflicts. How conflicts among organizational subunits influence the aspiration level definition, performance

evaluation, and organizational search remains poorly investigated in the empirical and conceptual work of BTF-based decision-making.

## 7 Future research directions

A myriad of studies applied the BTF's relational concepts of problemistic search and organizational learning in a multitude of different organizational settings and decisions. This shows the tremendous explanatory power, and therefore the influence of Cyert and March's (1963) behavioral ideas. However, we see promising research opportunities to create a more holistic picture in examining (1) the interrelations among the relational concepts, (2) the choice and operationalization of aspiration level, (3) the type and measurement of performance, and (4) the types of organizations.

### 7.1 Interrelations among the relational concepts

Our literature review shows that the extant literature predominantly applies the relational concepts of problemistic search and organizational learning to explain various organizational decisions, while the other two concepts quasi resolution of conflict and uncertainty avoidance are only implicitly considered or not mentioned at all. In line with the original intention of Cyert and March (1992), we see the necessity for future research to investigate all four relational concepts as a whole and their interrelations in order to understand and predict organizations' decision-making process in depth.

Problemistic search and organizational learning are both antecedents to strategic decisions, e.g., market expansion (Barreto 2012; Dencker et al. 2009; Musaji et al. 2020; Ref and Shapira 2017). However, organizational learning may have a moderating effect on the relationship between problemistic search and market expansion. For example, Ref and Shapira (2017) show an inverted U-shape relationship between positive and negative deviation from aspiration level and market expansion. The tipping point of the inverted U-shape relationship may be shifted by organizational learning effects, as previous experience in internationalization enhances firms' confidence in their expansion endeavor (Dencker et al. 2009; Musaji et al. 2020).

Furthermore, the performance relative to aspiration level triggers problemistic search and results in organizational learning (Cyert and March 1992). March (1991) introduces two different facets of organizational learning: exploitation and exploration. The former refers to the refinement of matured solutions, while the latter focus on new possibilities (March 1991). The balance of exploration and exploitation is later defined as organizational ambidexterity (Tushman and O'Reilly 1996). Extant

literature reveals that problemistic search drives innovation and market expansion (Gaba and Joseph 2013; Ref and Shapira 2017; Ye et al. 2021), which can be perceived as an explorative behavior. In order to increase their performance, organizations may also undertake exploitative actions (e.g., improvements of existing products). Future scholars should investigate how the performance relative to aspiration impacts the choice between exploration and exploitation, i.e., organizational ambidexterity. In addition, decision areas focusing on exploitative actions, such as downsizing, product refinements, and other efficiency enhancements, need to be investigated through the lens of BTF.

Future research needs to investigate the role of quasi resolution of conflict in the decision-making processes. The decision power resides in a few decision makers (e.g., CEO) with different monetary incentives (e.g., stock options) than the other organizational member (Blagoeva et al. 2020; Lim and McCann 2014). Top managers need to align strategic decisions with various stakeholders within the organization and seek coalitions for the implementation to achieve performance improvements. At the same time, conflicting interests of organizational units may compromise the organizational search of performance-enhancing solutions and dismiss radical but promising solutions at the first place. Making compromises is neither inherently bad nor good. The question is under which circumstances quasi resolution of conflict serves as an enabler or an inhibitor for effective decisions. The mechanisms of conflict resolution in the decision-making process remain largely unexplored.

The concept of uncertainty avoidance may also have a moderating effect on the organizational search and decisions-making. Facing the imperfect knowledge of the environment, organizations tend to rely on existing processes and routines or search for solutions in their neighborhood (Cyert and March 1992). This uncertainty-avoiding behavior may limit the problemistic or slack search (e.g., product innovations, market expansions) which involves capital investment with uncertain payback. However, many studies show that performances below aspiration level enhance risk-taking behavior of firms (Miller and Chen 2004; Palmer and Wiseman 1999; Schumacher et al. 2020). At some point, performances under aspiration level and the resulting need for performance improvement may overcome firm's uncertainty-avoiding attitude. Future research needs to delve deeper into the relationship between performance relative to aspiration level, uncertainty avoidance, and organizational search.

## 7.2 Choice and operationalization of aspiration level

BTF research distinguish between social and historical aspiration level and applies different operationalizations in empirical investigations. This heterogeneity limits

the comparison, generalization, and transferability of BTF-related research findings. We urge future research to examine the contextual factors, which determines the choice of either social, historical, or both aspiration levels, and to standardize the operationalizations based on the choice.

The choice of social and historical aspiration can make a significant difference in the subsequent decision making process, as the information about peers' performance are imperfect and ambiguous (Kim et al. 2015). Future research needs to investigate the internal and external factors, which influence the choice of social and / or historical aspiration levels. Depending on a firm's decision area and top executives' characteristics, the composition of aspiration levels can vary and lead to different decision outcomes (Hu et al. 2023). Specific decision areas, such as innovation or acquisition, may require a stronger focus on historical or social aspiration level. For example, Ye and colleagues (2021) show a significant difference in a firm's innovative search depending on the use of historical or social comparisons. While using historical aspiration level provides confidence for subsequent acquisitions, social comparisons exhibit a certain level of ambiguity and uncertainty, which can lead to hesitance in further acquisition activities (Kim et al. 2015). Vissa et al. (2010) posit that business group affiliates are more focused on historical rather than social comparison when making R&D investment decisions.

Beyond the organizational boundary, stakeholders, macroeconomic factors, industry characteristics, competition, and other environmental conditions may increase the applicability of a certain aspiration model. For example, in the entrepreneurial context historical performance data can be scarce. Start-ups would necessarily need to take performances of their peers into account when defining their own aspiration level. Some recent studies show that analysts' expectations provide input for a firm's aspiration level and drive their subsequent decisions (e.g., Bascle and Jung 2023; Busenbark et al. 2022). Future scholars need to include the influence of various stakeholders on the choice of aspiration levels. Furthermore, the causes of underperformance may play a significant role in the choice of social or historical aspiration level. Performance drops can be the consequences of unexpected events (e.g., pandemic, natural disasters, or financial crisis), which affects a wide range of firms (Su and Junge 2023). Facing the same adverse circumstances, firms focus on recovery to the pre-adversity performance level, and hence, tend to use own historical performance as reference point. In similar vein, firms weigh historical aspirations more than social aspirations when facing environmental volatility (Berchicci and Tarakci 2022). Conversely, if a firm's underperformance is attributed to the poor competitiveness with existing products, services, or business model, social comparisons among peers within the same industry and customer segments seem more reasonable.

The existing literature mainly applies three different operationalization of aspiration level. The first is a separate model of aspirations based on either past

performance (historical aspirations), performance of comparable firms within the same industry (social aspirations), or a mixture of both. Internal and external reference points are seen as independent impact factors (Bromiley and Harris 2014), and therefore are specified as those. The second is a weighted average model of historical and social aspirations. Whereas prior studies generally agree on a higher impact of social aspirations, the extent of the weighting is not at all consistent. Referring to Greve (2003b), Wennberg and Holmquist (2008) apply a ten percent weighting for historical aspirations and respectively ninety percent for social aspirations. By testing their model with other weightings (0.2/0.8; 0.3/0.7), they yield similar results (Wennberg and Holmquist 2008). Following Greve (2003a), O'Brien and David (2014) constructed their final measure of aspiration levels with twenty percent of the historical and eighty percent of the social aspirations. The third measurement option is a switching model, which incorporates the switch "of attention from the external to the internal reference point" (Bromiley and Harris 2014, p. 340). Several studies (Bromiley 1991; Deephouse and Wiseman 2000; Park 2007; Wiseman and Bromiley 1996) argue that firms performing above industry average are more likely to focus on their historical aspiration level, whereas firms performing below their peers are more likely to rely upon their social aspiration levels. In an effort to standardize the model specification of aspiration levels, Bromiley and Harris (2014) empirically compared and supported the superiority of a separate model over a switching model of aspirations. Additionally, they demonstrated that a separate model and a switching model yield more robust results than a weighted average model of historical and social aspirations (Bromiley and Harris 2014).

Moreover, Moliterno and colleagues (2014) question the operationalization of social aspirations as the mean performance of an industry. However, firms may aspire higher performance level than merely the industry average. Future research should consider alternative references (e.g., top performer of an industry, performance of most visible competitors) for the definition of social aspiration level depending on a firm's strategy.

### 7.3 Type and measurement of performance

The operationalization of aspirations is tied to specific performance measurement. We observe various performance indicators across extant BTF studies. Among others, ROA (Desai 2016), market share (Shipilov et al. 2011), stock return and sales growth (Zhang and Gong 2018), citation by a patent (Eggers and Kaul 2018), and operating profit margin (Gaba and Joseph 2013) are used as performance measure. This choice of performance measurement is always made with consideration of the industry context as well as decision area, and therefore mainly plausible. Nonetheless, different forms of performance indicators will yield different results. A consistent performance measure for specific decision area will contribute to more robust



findings. Furthermore, many performance indicators are included in the top executives' incentives (e.g., stock options). Thus, performance feedback can be influenced by individual goals and preferences of top managers. Future research needs to consider the potential moderating or mediating effects of individual factors, such as preferences and incentives, in the performance feedback.

The vast majority of BTF research draws on financial performance. few scientific explanations exist about the influence of social performance (e.g., Nason et al. 2018; Wang et al. 2022). Social performance is defined as voluntary business actions with social impact (Schuler and Cording 2006). Thus, social performance feedback refers to of discrepancy between stakeholders' expectations and the firm's actual social contributions (Nason et al. 2018). Firms interpret negative social performance feedback as a threat to its legitimacy, thereby increasing social investments (Nason et al. 2018). They also posited that firms interpret positive social performance feedback as a threat to efficiency, which will result in a reduction of investments in social performance activities (Nason et al. 2018). Within the growing body of wrongdoing and CSR literature, future research might empirically verify the existence of a social performance reference point and its impact on subsequent decision-making. Future research should provide approaches to operationalize social performance reference points, especially when facing social performance expectations held by heterogeneous stakeholder.

## 7.4 Type of organization

Cyert and March (1992) explicitly stated that the BTF's predictions, developed concepts and the entire framework is solely applicable for large multi-business firms. Nonetheless, Dew et al. (2008) transferred key ideas of the BTF to an entrepreneurial context, accordingly establishing the behavioral theory of the entrepreneurial firm (BTEF). They constituted that the four relational concepts of the BTF cannot simply be transferred into entrepreneurial theory (effectuation) due to different theoretical assumptions, such as transforming environments or vague goal definitions (Dew et al. 2008). In entrepreneurial context, decision-making may reside with the founder(s) due to the smaller size of the organization. Thus, individual characteristics or personality traits of top executives can influence the appraisal of performance feedback and subsequent decisions (Hu et al. 2023). Future BTF research may also benefit from insights of the Upper Echelons Theory.

Chrisman and Patel (2012) investigate the R&D investments of family firms drawing on the behavioral agency model. Due to their long-term orientation, family firms show increased R&D investment when performing under aspiration level (Chrisman and Patel 2012). Building on Chrisman and Patel's work, Sciascia and colleagues (2015) extend these findings to the context of small- and medium-sized enterprises (SMEs). The same logic can be applied to other types of organizations. For example, employee-owned organizations exhibit stronger shared interests and

commitment to the organizational wealth (Lampel et al. 2014). Under these circumstances, they are more likely to make decisions aiming at long-term rather than short-term performance improvements. Furthermore, we see that the purpose and culture of the organization (profit vs. social impact) will have an impact on problemistic search and decision-making processes (e.g., O'Brien and David 2014). Non-profit organizations may react less sensitive to negative (financial) performance feedback or generally use other performance dimensions (e.g., social performance) when defining their aspiration level. In addition, firms with a philanthropic purpose and / or stronger common interests may also foster the resolution of conflicts as well as the formation of coalitions, which accelerate the decision-making process. In short, the heterogeneous characteristics of different organization types merit more attention when examining decision-making behavior based on BTF.

## 8 Conclusion

During the sixty years since publication of 'A Behavioral Theory of the Firm' (BTF) (Cyert and March 1963), its underlying ideas and concepts have been influential for the explanation and the prediction of organizational decision-making. Previous studies examine decision-making mainly by applying one of BTF's relational concepts rather than taking a holistic view on all concepts. Additionally, different terminologies used across the literature impede a clear view on the applications of BTF in the decision-making processes. The objective of our review was to generate insights into different decision areas studied in the light of BTF and provide a more cohesive approach of its four relational concepts.

We identified seven decision areas, in which BTF and at least one of its relational concepts served as theoretical underpinning and found an unbalanced application of the four relational concepts. Furthermore, we revealed the ambiguous operationalizations of aspiration level and performance feedback in the extant literature. Paving the way towards future anniversaries, we encourage research to focus on the interrelations among the relational concepts in decision-making processes. Additionally, we urge a comprehensive investigation of the influence of different types and operationalizations of aspiration level as well as the underlying performance measurements. Lastly, the applicability of BTF on other types of organizations merit further attention.

## Appendix

See Table 1.

**Table 1** Journal articles included in the systematic literature review

References	Independent variable	Dependent variable	Relational concept	Organizational decision area
Arrfelt et al. (2013)	Performance (ROA) relative to aspiration levels (historical and social; internal and external), slack	Capital allocation efficiency: over- and underinvestment	Problemistic search	Acquisitions and resource decisions
Arthur and Aiman-Smith (2001)	Time, time squared, payout, employment	Suggestions	Organizational learning	Employee participation
Audia and Greve (2006)	Performance (ROE, ROA, ROS) relative to aspiration levels	Factory expansion (as a measure for risk taking)	Problemistic search	Expansion decisions
Barkema et al. (1997)	Longevity (number of years a venture persisted) as performance measure	Cultural distance to the host country from the Netherlands (Kogut and Singh's (1988) index); experience with each of four types of affiliation	Organizational learning	Expansion decisions
Barreto (2012)	Market attractiveness relative to the market reference point (status quo) (multiplying market population by market per-capita income and subsequently dividing the result by the supply component)	Market expansion (extent and selection of branch openings)	Problemistic search	Expansion decisions
Bascle and Jung (2023)	Earnings management, aspiration levels (historical and social, earnings per share)	Meet analyst expectations, changes in analyst forecast, cumulative excess returns, (non-)core asset divestitures	Organizational learning	Acquisitions and resource decisions
Baum and Dahlin (2007)	Operating and accident experience; social and historical aspiration performance	Railroad's accident cost per operating mile	Organizational learning	Organizational change and adaptation

**Table 1** (continued)

References	Independent variable	Dependent variable	Relational concept	Organizational decision area
Baum et al. (2000)	A series of Euclidean distance-based measures (local search, similarity, trait-based imitation)	A chain's probability of acquiring another nursing home	Organizational learning	Acquisitions and resource decisions
Baum et al. (2005)	Performance (market share and status as Bonacich's centrality measure) relative to aspiration levels (social and historical)	Proportion of a bank's syndicates initiated in each year that were nonlocal	Problemistic search, organizational learning	Organizational network decisions
Baumann et al. (2019)	Business unit performance relative to its aspirations	Firm performance	Problemistic search, organizational learning	Acquisitions and resource decisions
Berchicci and Tarakci (2022)	Environmental volatility, locus of attention	Attention rules	Organizational learning	–
Blagoeva et al. (2020)	Inconsistency between performance feedback and performance prospects	R&D search (ratio of R&D spending to sales)	Problemistic search	R&D search
Boyle and Shapira (2012)	Aspiration point focus, survival point focus	Total resources (number of points)	–	Acquisitions and resource decisions
Bromiley (1991)	Performance (ROA) relative to aspiration levels (historical and social), slack	Risk (ex ante uncertainty of a firm's earnings stream; variance in security analysts' forecasts of income)	–	Acquisitions and resource decisions
Busenbark et al. (2022)	Analyst performance projections	Allocation deviation	Problemistic search	Acquisitions and resource decisions
Chen (2008)	Performance (ROA) relative to aspiration levels (weighted average model), slack, performance expectation, performance target	Search intensity (R&D expenditures divided by sales)	Problemistic search	R&D search

**Table 1** (continued)

References	Independent variable	Dependent variable	Relational concept	Organizational decision area
Chen and Miller (2007)	Performance (ROA) relative to aspiration levels (separate model), Altman's Z, slack	R&D search (ratio of R&D spending to sales)	Problemistic search	R&D search
Chrisman and Patel (2012)	Performance (ROA) aspiration gaps (historical and social); family firm (binary); family involvement	R&D investment; R&D variability (multiplicative heteroskedasticity approach)	Problemistic search	R&D search
Clough and Piezunka (2020)	Focal and vicarious performance-aspiration gap (performance = total number of points scored in the World Championship; weighted average model)	Dissolution of tie at the constructor-supplier-year level	Problemistic search, organizational learning	Organizational network decisions
Cyert et al. (1996)	Current investment, dividend payouts, return on capital	Future dividend changes	Uncertainty avoidance	Acquisitions and resource decisions
Deephouse and Wiseman (2000)	Aspiration-expectations gap	Income stream risk (standard deviation of earnings forecasts)	Problemistic search	–
Dencker et al. (2009)	Pre-entry knowledge of the business activity, pre-entry management experience, early-stage business planning, product-line change	Survival time	Organizational learning	Expansion decisions
Desai (2008)	Performance (ROA) relative to aspiration levels, operating experience, legitimacy, firm age	Managerial risk taking (capacity expansions and contractions)	Organizational learning	Acquisitions and resource decisions

**Table 1** (continued)

References	Independent variable	Dependent variable	Relational concept	Organizational decision area
Desai (2016)	Performance (ROA) relative to aspiration levels (historical only), board size, board turnover, board equity ownership	Service line divestitures	Problemistic search	Acquisitions and resource decisions
Desai (2015)	Failure concentration (distribution of patient deaths across procedures performed by different surgeons at the hospital)	Hospital quality (risk-adjusted mortality rate)	Organizational learning	Learning from failures
Dew et al. (2008)	–	–	All	Entrepreneurship
Dong (2021)	–	–	Problemistic search	Organizational change and adaptation
Eggers and Kaul (2018)	Performance (citation by a patent) relative to aspirations (social and historical, weighted average model)	Radical inventions (citation by a patent)	Problemistic search	Innovation
Eggers and Suh (2019)	Performance (net cash inflows) of a new fund relative to aspiration level (social only)	Firm performance (net cash inflows)	Problemistic search, organizational learning	Innovation
Elia et al. (2022)	Negative market discrepancy size, positive market discrepancy size, market location-specific anchor bias	Local solution, distant solution (offshoring, both dummy variables)	Problemistic search	Expansion decisions

**Table 1** (continued)

References	Independent variable	Dependent variable	Relational concept	Organizational decision area
Ertug and Castellucci (2013)	Player status (information on awards and team-selection honors), player reputation (average performance during the previous three seasons), product quality relative to aspirations, revenues relative to aspirations (both only historical)	Team product quality (performance), team revenues (ticket income), preference for high-reputation/high-status resource providers, player salary	Problemistic search	Acquisitions and resource decisions
Fang (2012)	–	–	Organizational learning	Organizational change and adaption
Fang et al. (2014)	–	–	Organizational learning	Organizational search
Fang et al. (2010)	Interpersonal network structure	Organizational-level performance	Organizational learning	Organizational change and adaption
Gaba and Joseph (2013)	Performance (operating profit margin) relative to aspiration levels	New product introductions	Problemistic search	Innovation
Gaba et al. (2023)	Performance (fund's one-year risk adjusted return) below aspirations (social and historical, weighted average model), experience level, experience specialization	Change in investment portfolio: annual turnover ratio, change in total risk, change in portfolio concentration	Organizational learning	Acquisitions and resource decisions
Greve (2003a, b)	Performance relative to aspiration levels, organizational slack	R&D intensity (research and development expenditures divided by sales), innovation launches	Problemistic search	Innovation
Greve (2008)	Performance (loss ratio) relative to aspiration levels	Organizational size	Problemistic search	Expansion decisions



**Table 1** (continued)

References	Independent variable	Dependent variable	Relational concept	Organizational decision area
Greve (1998)	Performance (audience share) relative to aspirations (social and historical)	Changes in format or production	Problemistic search, organizational learning	Organizational change and adaption
Greve (2002)	Historical aspiration updating (performance = market share)	Format changes	–	Organizational change and adaption
Haleblian et al. (2006)	Acquisition experience, focal acquisition performance	Likelihood of making a subsequent acquisition	Organizational learning	Acquisitions and resource decisions
Harris and Bromiley (2007)	Incentive compensation (value of options), performance (ROA) relative to aspirations (social and historical, separate model)	Financial misrepresentation (restatement)	Problemistic search	Corporate fraud
Haunschild and Rhee (2004)	Cumulative production, cumulative voluntary and involuntary recalls, generalism and specialism	Annual number of severe recalls	Organizational learning	Product recalls
He and Wong (2004)	Exploration and exploitation (eight Likert-scale items)	Sales growth rate	Organizational learning	Innovation
Hong (2019)	Performance (grading) relative to aspirations (social and historical)	Performance	Problemistic search, organizational learning	Innovation
Hu et al. (2011)	–	–	Problemistic search	–

**Table 1** (continued)

References	Independent variable	Dependent variable	Relational concept	Organizational decision area
Hu et al. (2023)	Performance (ROA) relative to aspirations (social and historical, weighted average model)	Different organizational change by using five proxies: R&D intensity, sum of capital expenditure, R&D and acquisitions, strategic nonconformity, corporate change in diversification, change in resource allocation	Problemistic search	Organizational change and adaption
Hu et al. (2022)	Performance (ROI) relative to aspirations (social only), brokerage, centrality	Early-stage investment	Problemistic search	Organizational network decisions
Iyer and Miller (2008)	Attainment discrepancy (ROA, social and historical), distance from bankruptcy (Altman's Z-score), slack	Acquisition hazard rate	Problemistic search	Acquisitions and resource decisions
Jordan and Audia (2012)	–	–	Problemistic search, organizational learning	Learning from failures
Joseph and Gaba (2015)	Performance (market share) relative to aspiration levels, performance-aspirations correlations	New product introductions	Problemistic search	Innovation
Joseph et al. (2016)	Performance (quarterly sales at the device level) relative to aspirations (historical only), centralization, oversight	Phaseout of a product	Problemistic search	Acquisitions and resource decisions
Jung et al. (2023)	Performance (ROA) relative to aspirations (social and historical, weighted average model)	Board expertise diversity, board ascriptive diversity	Problemistic search	Acquisitions and resource decisions

**Table 1** (continued)

References	Independent variable	Dependent variable	Relational concept	Organizational decision area
Kacperczyk et al. (2015)	Internal social performance feedback, external (other funds outside the firm within the same fund category) social performance feedback	Change (fund turnover, concentration change, and load change), risk (fund returns: systematic risk, non-systematic risk, and total risk)	Problemistic search	Organizational change and adaption
Katila and Ahuja (2002)	Search depth (patents)	Number of new products	Organizational learning	Innovation
Katila and Chen (2008)	Innovation search, head-start variables, catch-up variables, in-sync variables	Product frequency, product innovativeness	Organizational learning	Innovation
KC et al. (2013)	Cumulative experience (volume of minimally invasive procedures performed by surgeon)	Success or failure (die or survive)	Organizational learning	Innovation
Keil et al. (2022)	Previous period's payoff	Firm subsequently chose to switch arms	Problemistic search	–
Ketchen and Palmer (1999)	Performance (occupancy, defined as hospital in-patient days divided by total bed days available) relative to aspiration levels	Hospital actions (changes in the profile of services)	Problemistic search	Organizational change and adaption
Khanna et al. (2016)	Quantity, timing, and relative importance of small failures (patents that were discontinued)	R&D output (number of successful patent applications), quality of R&D output (total number of citations to all successful patents)	Organizational learning	Innovation

**Table 1** (continued)

References	Independent variable	Dependent variable	Relational concept	Organizational decision area
Kim et al. (2015)	Performance (acquisition performance: cumulative abnormal returns) relative to aspiration levels (social and historical)	Acquisition hazard rate	Problemistic search, organizational learning	Acquisitions and resource decisions
Kim et al. (2009)	Success experience (unusually strong performance), recovery experience (overcome a financial distress and return to normal level of performance)	Unobserved hazard rate of failure (liquidated or merged with another bank)	Organizational learning	Organizational change and adaptation
Knudsen (2008)	–	–	–	–
Kuusela et al. (2017)	Performance (ROA) relative to aspiration levels (separate model), financial slack	Annual acquisition rate and divestment rate	Problemistic search	Acquisitions and resource decisions
Lee et al. (2023)	Alliance performance (cumulative abnormal returns), alliance performance feedback (based on social aspiration level), number of alliance partners, alliance experience of partners, alliance performance variability	Unobserved hazard rate for a firm that used an alliance at $t$ to change to an acquisition at $t+1$	Organizational learning	Organizational network decisions
Lehman and Hahn (2013)	Performance (offensive team's score) relative to aspiration levels (opponent's score plus one point), within-period momentum, across-period momentum	Risk taking (offensive team's choice of play on a fourth down)	Problemistic search	–

**Table 1** (continued)

References	Independent variable	Dependent variable	Relational concept	Organizational decision area
Lehman et al. (2011)	Performance (offensive team's score) relative to aspiration level (opponent's score plus one point), deadline proximity	Risk taking (offensive team's choice of play on a fourth down)	Problemistic search	–
Lim and McCann (2014)	Performance (ROA) relative to aspiration levels	R&D intensity (R&D expenditures divided by sales)	Problemistic search	R&D search
Lucas et al. (2018)	Performance (net sales growth) relative to aspiration levels	R&D intensity change (R&D investments / net sales)	Problemistic search	R&D search
Madsen (2013)	Performance (profitability, operating margin,) relative to aspiration levels (historical only)	Accident count	Problemistic search	Organizational safety
Madsen and Desai (2010)	Success and failure experience (prior successful and unsuccessful launches)	Failed launch	Organizational learning	Learning from failures
Matta and McGuire (2008)	Variance of historical returns, unsystematic downside risk, previous firm performance, value of CEO equity holdings	Reduction in CEO equity holdings	Problemistic search	–
Mezias et al. (2002)	Previous aspiration, attainment discrepancy, social comparison	Current aspiration level (the target for sales of certificates of deposit)	Problemistic search	Goal setting
Miller and Chen (1994)	Tactical and strategic actions, performance (operating revenue per available seat mile flown)	Competitive inertia (activity index)	Organizational learning	Organizational change and adaptation

**Table 1** (continued)

References	Independent variable	Dependent variable	Relational concept	Organizational decision area
Miller and Chen (2004)	Bankruptcy risk (Altman's Z-score), performance (ROA and market-to-book ratio) relative to aspiration levels	Risk (standard deviation of ROA based on quarterly data over a two-year period)	–	–
Miller and Leiblein (1996)	Risk (performance shortfalls relative to an aspiration level), organizational slack	ROA	Problemistic search	Goal setting
Miller and Lin (2010)	–	–	–	Organizational culture
Mishina et al. (2010)	Performance (ROA) relative to aspiration levels (social only; same results as combined measure), stock price performance relative to external expectations, prominence (Fortune's Most Admired Companies list)	Corporate illegality	Organizational learning	Corporate fraud
Moliterno et al. (2014)	Performance relative to aspiration levels (total points and rank)	Organizational change (lineup change and coach change)	Problemistic search	Organizational change and adaptation
Monteiro et al. (2008)	Knowledge flows, ratings of focal subsidiary capabilities, communication frequency	Subsidiary performance	Problemistic search	Expansion decisions
Mount and Baer (2022)	CEO promotion focus, CEO prevention focus, performance (ROA) below and above aspirations (historical only)	Strategic risk-taking (R&D expenditures, capital expenditures, and acquisition expenditures)	Problemistic search	–

**Table 1** (continued)

References	Independent variable	Dependent variable	Relational concept	Organizational decision area
Mulotte (2014)	Same-NPI-mode experience (number of times a firm has used a mode since its entry into a particular area of business)	NPI performance (cumulative unit sales)	Organizational learning	Innovation
Musaji et al. (2020)	Accumulated experience, pace, performance variance	Long-term performance (daily transaction volume)	Organizational learning	Expansion decisions
Nason et al. (2018)	–	–	Problemistic search	Corporate social responsibility
Palmer and Wiseman (1999)	Attainment discrepancy	Managerial risk taking (R&D expenditures, diversification), organizational risk (variance in ROA)	Problemistic search	R&D search
Park (2007)	Performance (ROA) relative to aspiration levels, target firm's performance relative to focal firm's performance	Strategic Convergence-Divergence (convergence-divergence index)	Problemistic search	Organizational change and adaption
Perkins (2014)	Regulatory distance, home-country effects, host-country effects	Time to failure event (a firm's exit from Brazil)	Organizational learning	Expansion decisions
Plambeck and Weber (2009)	Ambivalence (positive and negative evaluations of an issue, similarity-intensity model (SIM))	Organizational action	Problemistic search	Organizational change and adaption
Powell et al. (1996)	Collaborative R&D experience	Number of R&D ties, number of ties of each type, network portfolio diversity, central connectivity	Organizational learning	Innovation



Table 1 (continued)

References	Independent variable	Dependent variable	Relational concept	Organizational decision area
Ref and Shapira (2017)	Performance (ROA) relative to aspiration levels (historical only)	Entry into new markets (product and geographic)	Problemistic search	Expansion decisions
Ren et al. (2022)	Alliance performance (historical and social), alliance to independence (binary)	New product introduction (binary), subsequent NPI performance (cumulative number of units sold)	Problemistic search	Organizational network decisions
Rhee and Kim (2015)	Exploitative competence, exploratory competence, aspiration adaption	Performance	Organizational learning	Organizational change and adaption
Rhee et al. (2019)	Group-level managerial attention (chairman's letter to group members), performance (ROA) below aspiration levels (combined model), group-level cognitive accessibility	R&D search (R&D expenditures)	Problemistic search	R&D search
Rudy and Johnson (2016)	Performance (ROA) relative to aspiration levels (combined model)	Change in total lobbying activity, change in R&D intensity (R&D expenditures divided by sales)	Problemistic search	R&D search
Salge (2011)	Performance relative to aspiration level (service quality, hospital standardized mortality ratio, social only), organizational slack, regulatory endorsement	Innovative search intensity (R&D intensity, number of ongoing R&D projects per 100 employees)	Problemistic search	R&D search

**Table 1** (continued)

References	Independent variable	Dependent variable	Relational concept	Organizational decision area
Schumacher et al. (2020)	Performance (ROA) relative to aspiration levels (weighted average model), CEO overconfidence (media portrayals, personal investment portfolios)	Risk taking (capital expenditure and the firm's long-term debt), threat of bankruptcy (Altman's Z-score)	Problemistic search	Acquisitions and resource decisions
Schwab (2007)	Firm-Team (FT) practice, performance feedback, external network size comparison	Change in (FT) size next season	Organizational learning	Innovation
Shipilov et al. (2011)	Performance (market share) relative to aspiration levels	Initiating status-homophilous and status-heterophilous ties (status difference: Bonacich's centrality as status score)	Problemistic search	Organizational network decisions
Sitkin et al. (2011)	–	–	Organizational learning	Goal setting
Smulowitz et al. (2020)	Performance (ROA) relative to aspiration levels (separate model)	Credit risk (allowance for loan-losses/total assets, provision for loan losses/total assets, net loan charge-offs/total assets)	–	Acquisitions and resource decisions
Sobrepere i Profitós et al. (2022)	Attainment discrepancy (difference in points), magnitude of outcomes (yard line / distance to end zone), likelihood of outcomes (yards to advance necessary for first down)	Risk-taking (choice of fourth-down)	Problemistic search	–
Sørensen and Stuart (2000)	Firm age, environmental change, firm size	Patent-based measures of innovation	Organizational learning	Innovation
Titus et al. (2022)	Performance (ROA) relative to aspirations (social and historical, weighted average model), domestic ownership	Unabsorbed slack, absorbed slack, potential slack	–	Acquisitions and resource decisions

**Table 1** (continued)

References	Independent variable	Dependent variable	Relational concept	Organizational decision area
Titus et al. (2018)	Social disapproval (negative media coverage), focus of media coverage, performance (ROA) relative to aspiration levels (switching model), firm size	Scrutiny-hazarding action (resource development, resource access)	Problemistic search	Acquisitions and resource decisions
Vidal and Mitchell (2015)	Performance (ROA) relative to aspiration levels (historical only)	Count of divestitures (and value of divestitures)	–	Acquisitions and resource decisions
Vissa et al. (2010)	Performance (ROA) relative to aspiration levels	Market search intensity, R&D intensity (ratio of total R&D expenses to revenues)	Problemistic search	R&D search
Wang et al. (2022)	Discrepancy in social performance	Ratio of visuals to donation events	Problemistic search	Organizational change and adaptation
Wezel and Saka-Helmhout (2006)	Team level aspirations, environmental estimates measuring competitors' behavior	Yearly number of core players changed, team performance improvement (considered in conjunction with the initiated change)	Problemistic search	Organizational change and adaptation
Wiseman and Bromiley (1996)	Performance (ROA) relative to aspiration level, expectations (earnings forecasts produced by securities analysts), slack, organizational decline (fractional change in firm assets)	Risk (income stream uncertainty)	Problemistic search	–
Xu et al. (2019)	Performance (ROA) relative to aspiration levels (separate model)	Bribery expenditure (entertainment and travel expenses), R&D intensity (firm's R&D expenditure divided by its sales minus industry R&D intensity)	Problemistic search	Corporate fraud

**Table 1** (continued)

References	Independent variable	Dependent variable	Relational concept	Organizational decision area
Ye et al. (2021)	Peer performance feedback <sub>t-1</sub> , historical performance feedback <sub>t-1</sub> (both ROA)	Peer performance feedback <sub>t</sub> , historical performance feedback <sub>t</sub> (both ROA), innovative search (R&D expenditure divided by total sales)	Problemistic search	R&D search
Yu et al. (2019)	Performance (ROA) relative to aspiration levels (social only)	Innovative search magnitude (change in R&D expenditures), scope (new citations/total citations), and depth (citation repetition count/total citations)	Problemistic search, organizational learning	Innovation
Zhang and Gong (2018)	Earnings pressure, performance (stock return and sales growth) relative to aspiration levels	Strategic investments (R&D, advertising, and capital expenditures)	Problemistic search	Acquisitions and resource decisions
Zhang and Greve (2019)	Potential state coalition, performance (ROA) relative to aspiration levels	Type of acquisition (internal, state-bridged, and market-oriented), nature of acquisition (asset-transactions, minority share acquisitions, and majority control acquisitions), state-bank loan	Problemistic search	Acquisitions and resource decisions

**Funding** Open Access funding enabled and organized by Projekt DEAL. We did not receive any funding.

**Data availability** This SLR is based on the searched and analyzed articles. The search process is transparently and reliably described in the method section. All used articles are named in the appendix. Beyond, no further data was used.

## Declarations

**Conflict of interest** We are not aware of any conflicts of interest.

**Open Access** This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

## References

- Argote L, Greve HR (2007) A Behavioral Theory of the Firm—40 years and counting: introduction and impact. *Organ Sci* 18(3):337–349. <https://doi.org/10.1287/orsc.1070.0280>
- Arrfelt M, Wiseman RM, Hult GTM (2013) Looking backward instead of forward: aspiration-driven influences on the efficiency of the capital allocation process. *Acad Manag J* 56(4):1081–1103. <https://doi.org/10.5465/amj.2010.0879>
- Arthur JB, Aiman-Smith L (2001) Gainsharing and organizational learning: an analysis of employee suggestions over time. *Acad Manag J* 44(4):737–754
- Audia PG, Greve HR (2006) Less likely to fail: Low performance, firm size, and factory expansion in the shipbuilding industry. *Manag Sci* 52(1):83–94. <https://doi.org/10.1287/mnsc.1050.0446>
- Augier M, March JG (2008) A retrospective look at A Behavioral Theory of the Firm. *J Econ Behav Organ* 66(1):1–6. <https://doi.org/10.1016/j.jebo.2008.01.005>
- Barkema HG, Shenkar O, Vermeulen F, Bell JHJ (1997) Working abroad, working with others: how firms learn to operate international joint ventures. *Acad Manag J* 40(2):426–442
- Barreto I (2012) A behavioral theory of market expansion based on the opportunity prospects rule. *Organ Sci* 23(4):1008–1023. <https://doi.org/10.1287/orsc.1110.0674>
- Bascle G, Jung J (2023) Caught in an expectations trap: risks of giving securities analysts what they expect. *Organ Sci* 34(1):176–196. <https://doi.org/10.1287/orsc.2021.1569>
- Baum JAC, Dahlin KB (2007) Aspiration performance and railroads' patterns of learning from train wrecks and crashes. *Organ Sci* 18(3):368–385. <https://doi.org/10.1287/orsc.1060.0239>
- Baum JAC, Li SX, Usher JM (2000) Making the next move: how experiential and vicarious learning shape the locations of chains' acquisitions. *Adm Sci Q* 45(4):766–801. <https://doi.org/10.2307/2667019>
- Baum JAC, Rowley TJ, Shipilov AV, Chuang Y-T (2005) Dancing with strangers: aspiration performance and the search for underwriting syndicate partners. *Adm Sci Q* 50(4):536–575. <https://doi.org/10.2307/j.ctt1t89df7.11>
- Baumann O, Eggers JP, Stieglitz N (2019) Colleagues and competitors: how internal social comparisons shape organizational search and adaptation. *Adm Sci Q* 64(2):275–309. <https://doi.org/10.1177/0001839218766310>
- Baumeister RF, Leary MR (1997) Writing narrative literature reviews. *Rev Gen Psychol* 1(3):311–320. <https://doi.org/10.1037/1089-2680.1.3.311>
- Berchicci L, Tarakci M (2022) Aspiration formation and attention rules. *Strateg Manag J* 43(8):1575–1601. <https://doi.org/10.1002/smj.3371>

- Bertrand O, Lumineau F (2016) Partners in crime: the effects of diversity on the longevity of cartels. *Acad Manag J* 59(3):983–1008. <https://doi.org/10.5465/amj.2013.1209>
- Blagoeva RR, Mom TJM, Jansen JJP, George G (2020) Problem-solving or self-enhancement? A power perspective on how CEOs affect R&D search in the face of inconsistent feedback. *Acad Manag J* 63(2):332–355. <https://doi.org/10.5465/amj.2017.0999>
- Boyle E, Shapira Z (2012) The liability of leading: Battling aspiration and survival goals in the “Jeopardy!” tournament of champions. *Organ Sci* 23(4):1100–1113. <https://doi.org/10.1287/orsc.1110.0690>
- Bromiley P (1991) Testing a causal model of corporate risk taking and performance. *Acad Manag J* 34(1):37–59
- Bromiley P, Harris JD (2014) A comparison of alternative measures of organizational aspirations. *Strateg Manag J* 35(3):338–357. <https://doi.org/10.1002/smj.2191>
- Busenbark JR, Semadeni M, Arrfelt M, Withers MC (2022) Corporate-level influences on internal capital allocation: the role of financial analyst performance projections. *Strateg Manag J* 43(1):180–209. <https://doi.org/10.1002/smj.3331>
- Carter EE (1971) The behavioral theory of the firm and top-level corporate decisions. *Adm Sci Q* 16(4):413–429
- Chen W-R (2008) Determinants of firms’ backward- and forward-looking R&D search behavior. *Organ Sci* 19(4):609–622. <https://doi.org/10.1287/orsc.1070.0320>
- Chen W-R, Miller KD (2007) Situational and institutional determinants of firms’ R&D search intensity. *Strateg Manag J* 28(4):369–381. <https://doi.org/10.1002/smj.594>
- Chrisman JJ, Patel PC (2012) Variations in R&D investments of family and nonfamily firms: behavioral agency and myopic loss aversion perspectives. *Acad Manag J* 55(4):976–997. <https://doi.org/10.5465/amj.2011.0211>
- Clough DR, Piezunka H (2020) Tie dissolution in market networks: a theory of vicarious performance feedback. *Adm Sci Q* 65(4):972–1017. <https://doi.org/10.1177/0001839219899606>
- Cosier RA, Rose GL (1977) Cognitive conflict and goal conflict effects on task performance. *Organ Behav Hum Perform* 19(2):378–391. [https://doi.org/10.1016/0030-5073\(77\)90071-X](https://doi.org/10.1016/0030-5073(77)90071-X)
- Cyert RM, Kang SH, Kumar P (1996) Managerial objectives and firm dividend policy: a behavioral theory and empirical evidence. *J Econ Behav Organ* 31(2):157–174. [https://doi.org/10.1016/S0167-2681\(96\)00897-9](https://doi.org/10.1016/S0167-2681(96)00897-9)
- Cyert RM, March JG (1963) A behavioral theory of the firm. Prentice Hall
- Cyert RM, March JG (1992) A behavioral theory of the firm, 2nd edn. Blackwell, Cambridge
- David RJ, Han SK (2004) A systematic assessment of the empirical support for transaction cost economics. *Strateg Manag J* 25(1):39–58. <https://doi.org/10.1002/smj.359>
- Deb P, David P, O’Brien J (2017) When is cash good or bad for firm performance? *Strateg Manag J* 38(2):436–454. <https://doi.org/10.1002/smj.2486>
- Debus ME, Probst TM, König CJ, Kleinmann M (2012) Catch me if I fall! Enacted uncertainty avoidance and the social safety net as country-level moderators in the job insecurity–job attitudes link. *J Appl Psychol* 97(3):690–698. <https://doi.org/10.1037/a0027832>
- Deephouse DL, Wiseman RM (2000) Comparing alternative explanations for accounting risk-return relations. *J Econ Behav Organ* 42(4):463–482. [https://doi.org/10.1016/S0167-2681\(00\)00100-1](https://doi.org/10.1016/S0167-2681(00)00100-1)
- Dencker JC, Gruber M, Shah SK (2009) Pre-entry knowledge, learning, and the survival of new firms. *Organ Sci* 20(3):516–537. <https://doi.org/10.1287/orsc.1080.0387>
- Denyer D, Neely A (2004) Introduction to special issue: innovation and productivity performance in the UK. *Int J Manag Rev* 5–6(3–4):131–135. <https://doi.org/10.1111/j.1460-8545.2004.00100.x>
- Desai VM (2008) Constrained growth: how experience, legitimacy, and age influence risk taking in organizations. *Organ Sci* 19(4):594–608. <https://doi.org/10.1287/orsc.1070.0335>
- Desai VM (2015) Learning through the distribution of failures within an organization: evidence from heart bypass surgery performance. *Acad Manag J* 58(4):1032–1050. <https://doi.org/10.5465/amj.2013.0949>
- Desai VM (2016) The behavioral theory of the (governed) firm: Corporate board influences on organizations’ responses to performance shortfalls. *Acad Manag J* 59(3):860–879. <https://doi.org/10.5465/amj.2013.0948>
- Dew N, Read S, Sarasvathy SD, Wiltbank R (2008) Outlines of a behavioral theory of the entrepreneurial firm. *J Econ Behav Organ* 66(1):37–59. <https://doi.org/10.1016/j.jebo.2006.10.008>

- DiBenigno J (2018) Anchored personalization in managing goal conflict between professional groups: the case of U.S. army mental health care. *Adm Sci Q* 63(3):526–569. <https://doi.org/10.1177/0001839217714024>
- Dong JQ (2021) Technological choices under uncertainty: does organizational aspiration matter? *Strateg Manag J* 42(5):898–916. <https://doi.org/10.1002/smj.3253>
- Eggers JP, Kaul A (2018) Motivation and ability? A behavioral perspective on the pursuit of radical invention in multi-technology incumbents. *Acad Manag J* 61(1):67–93. <https://doi.org/10.5465/amj.2015.1123>
- Eggers JP, Suh JH (2019) Experience and behavior: how negative feedback in new versus experienced domains affects firm action and subsequent performance. *Acad Manag J* 62(2):309–334. <https://doi.org/10.5465/amj.2017.0046>
- Elia S, Goerzen A, Piscitello L, Valentino A (2022) Re-evaluating the offshoring decision: a behavioural approach to the role of performance discrepancy. *J Manag Stud*. <https://doi.org/10.1111/joms.12857>
- Ertug G, Castellucci F (2013) Getting what you need: how reputation and status affect team performance, hiring, and salaries in the NBA. *Acad Manag J* 56(2):407–431
- Fang C (2012) Organizational learning as credit assignment: a model and two experiments. *Organ Sci* 23(6):1717–1732. <https://doi.org/10.1287/orsc.1110.0710>
- Fang C, Kim J-HJ, Milliken FJ (2014) When bad news is sugarcoated: information distortion, organizational search and the behavioral theory of the firm. *Strateg Manag J* 35(8):1186–1201. <https://doi.org/10.1002/smj.2146>
- Fang C, Lee J, Schilling MA (2010) Balancing exploration and exploitation through structural design: the isolation of subgroups and organizational learning. *Organ Sci* 21(3):625–642. <https://doi.org/10.1287/orsc.1090.0468>
- Gaba V, Joseph J (2013) Corporate structure and performance feedback: aspirations and adaptation in M-form Firms. *Organ Sci* 24(4):1102–1119. <https://doi.org/10.2139/ssrn.2098560>
- Gaba V, Lee S, Meyer-Doyle P, Zhao-Ding A (2023) Prior experience of managers and maladaptive responses to performance feedback: evidence from mutual funds. *Organ Sci* 34(2):894–915. <https://doi.org/10.1287/orsc.2022.1605>
- Gavetti G, Greve HR, Levinthal DA, Ocasio W (2012) The behavioral theory of the firm: assessment and prospects. *Acad Manag Ann* 6(1):1–40. <https://doi.org/10.5465/19416520.2012.656841>
- Gavetti G, Levinthal DA, Ocasio W (2007) Neo-Carnegie: the Carnegie school's past, present, and reconstructing for the future. *Organ Sci* 18(3):523–536. <https://doi.org/10.1287/orsc.1070.0277>
- Graf-Vlachy L, Oliver AG, Banfield R, König A, Bundy J (2020) Media coverage of firms: background, integration, and directions for future research. *J Manag* 46(1):36–69. <https://doi.org/10.1177/0149206319864155>
- Greve HR (1998) Performance, aspirations, and risky organizational change. *Adm Sci Q* 43(1):58–86
- Greve HR (2002) Sticky aspirations: organizational time perspective and competitiveness. *Organ Sci* 13(1):1–17. <https://doi.org/10.1287/orsc.13.1.1.540>
- Greve HR (2003a) A behavioral theory of R&D expenditures and innovations: evidence from shipbuilding. *Acad Manag J* 46(6):685–702
- Greve HR (2003b) Organizational learning from performance feedback. University Press, Cambridge
- Greve HR (2008) A Behavioral theory of firm growth: sequential attention to size and performance goals. *Acad Manag J* 51(3):476–494. <https://doi.org/10.5465/AMJ.2008.32625975>
- Haleblian J, Kim JY, Rajagopalan N (2006) The influence of acquisition experience and performance on acquisition behavior: evidence from the U.S. commercial banking industry. *Acad Manag J* 49(2):357–370. <https://doi.org/10.5465/AMJ.2006.20786083>
- Hamann PM, Halw O, Guenther TW (2022) Meta-analysis of the corporate planning–organizational performance relationship: a research note. *Strateg Manag J*. <https://doi.org/10.1002/smj.3476>
- Harris JD, Bromiley P (2007) Incentives to cheat: The influence of executive compensation and firm performance on financial misrepresentation. *Organ Sci* 18(3):350–367. <https://doi.org/10.1287/orsc.1060.0241>
- Haunschild PR, Rhee M (2004) The role of volition in organizational learning: the case of automotive product recalls. *Manag Sci* 50(11):1545–1560. <https://doi.org/10.1287/mnsc.1040.0219>
- He Z-L, Wong P-K (2004) Exploration versus exploitation: an empirical test of the ambidexterity hypothesis. *Organ Sci* 15(4):481–494. <https://doi.org/10.1287/orsc.1040.0078>
- Hofstede G (2001) Culture's consequences: comparing values, behaviors, institutions and organizations across nations. Sage Publications, Thousand Oaks

- Hong S (2019) A behavioral model of public organizations: Bounded rationality, performance feedback, and negativity bias. *J Public Adm Res Theory* 29(1):1–17. <https://doi.org/10.1093/jopart/muy048>
- Hu S, Blettner D, Bettis RA (2011) Adaptive aspirations: performance consequences of risk preferences at extremes and alternative reference groups. *Strateg Manag J* 32(13):1426–1436. <https://doi.org/10.1002/smj.960>
- Hu S, Gentry RJ, Quigley TJ, Boivie S (2023) Who's in the driver's seat? Exploring firm-level versus CEO-level effects on problemistic search. *J Manag* 49(4):1187–1212. <https://doi.org/10.1177/01492063211063823>
- Hu S, Gu Q, Xia J (2022) Problemistic search of the embedded firm: the joint effects of performance feedback and network positions on venture capital firms' risk taking. *Organ Sci* 33(5):1889–1908. <https://doi.org/10.1287/ORSC.2021.1513>
- Iyer DN, Miller KD (2008) Performance feedback, slack, and the timing of acquisitions. *Acad Manag J* 51(4):808–822. <https://doi.org/10.5465/AMJ.2008.33666024>
- Jordan AH, Audia PG (2012) Self-enhancement and learning from performance feedback. *Acad Manag Rev* 37(2):211–231
- Joseph J, Gaba V (2015) The fog of feedback: Ambiguity and firm responses to multiple aspiration levels. *Strateg Manag J* 36(13):1960–1978. <https://doi.org/10.1002/smj.2333>
- Joseph J, Klingebiel R, Wilson AJ (2016) Organizational structure and performance feedback: centralization, aspirations, and termination decisions. *Organ Sci* 27(5):1065–1083. <https://doi.org/10.1287/orsc.2016.1076>
- Jung HJ, Lee YG, Park SH (2023) Just diverse among themselves: how does negative performance feedback affect boards' expertise versus ascriptive diversity? *Organ Sci* 34(2):657–679. <https://doi.org/10.1287/orsc.2022.1595>
- Kacperczyk A, Beckman CM, Moliterno TP (2015) Disentangling risk and change: internal and external social comparison in the mutual fund industry. *Adm Sci Q* 60(2):228–262. <https://doi.org/10.1177/0001839214566297>
- Karpoff JM, Koester A, Lee DS, Martin GS (2017) Proxies and databases in financial misconduct research. *Acc Rev* 92(6):129–163. <https://doi.org/10.2308/accr-51766>
- Katila R, Ahuja G (2002) Something old, something new: a longitudinal study of search behavior and new product introduction. *Acad Manag J* 45(6):1183–1194
- Katila R, Chen EL (2008) Effects of search timing on innovation: the value of not being in sync with rivals. *Adm Sci Q* 53(4):593–625. <https://doi.org/10.2189/asqu.53.4.593>
- Kc D, Staats BR, Gino F (2013) Learning from my success and from others' failure: evidence from minimally invasive cardiac surgery. *Manag Sci* 59(11):2435–2449. <https://doi.org/10.1287/mnsc.2013.1720>
- Keil T, Posen HE, Workiewicz M (2022) Aspirations, beliefs and a new idea: building on March's other model of performance feedback. *Acad Manag Rev*. <https://doi.org/10.5465/amr.2020.0233>
- Ketchen DJ, Palmer TB (1999) Strategic responses to poor organizational performance: a test of competing perspectives. *J Manag* 25(5):683–706. <https://doi.org/10.1177/014920639902500504>
- Khanna R, Guler I, Nerkar A (2016) Fail often, fail big, and fail fast? Learning from small failures and R&D performance in the pharmaceutical industry. *Acad Manag J* 59(2):436–459. <https://doi.org/10.5465/amj.2013.1109>
- Kim J-Y, Kim J-Y, Miner AS (2009) Organizational learning from extreme performance experience: the impact of success and recovery experience. *Organ Sci* 20(6):958–978. <https://doi.org/10.1287/orsc.2009.20.6.958>
- Kim JY, Finkelstein S, Halebian J (2015) All aspirations are not created equal: the differential effects of historical and social aspirations on acquisition behavior. *Acad Manag J* 58(5):1361–1388
- Knudsen T (2008) Reference groups and variable risk strategies. *J Econ Behav Organ* 66(1):22–36. <https://doi.org/10.1016/j.jebo.2007.02.004>
- Komander V, König A (2022) Organizations on stage: organizational research and the performing arts. *Manag Rev Q*. <https://doi.org/10.1007/s11301-022-00301-9>
- Konlechner S, Ambrosini V (2019) Issues and trends in causal ambiguity research: a review and assessment. *J Manag* 45(6):2352–2386. <https://doi.org/10.1177/0149206319836163>
- Kuusela P, Keil T, Maula M (2017) Driven by aspirations, but in what direction? Performance shortfalls, slack resources, and resource-consuming versus resource-freeing organizational change. *Strateg Manag J* 38(5):1101–1120. <https://doi.org/10.1002/smj.2544>
- Lampel J, Bhalla A, Jha PP (2014) Does governance confer organisational resilience? Evidence from UK employee owned businesses. *Eur Manag J* 32(1):66–72. <https://doi.org/10.1016/j.emj.2013.06.009>



- Lee J, Lee JM, Kim JY (2023) The role of attribution in learning from performance feedback: behavioral perspective on the choice between alliances and acquisitions. *Acad Manag J* 66(2):578–603. <https://doi.org/10.5465/amj.2019.1293>
- Lehman DW, Hahn J (2013) Momentum and organizational risk taking: evidence from the National Football League. *Manag Sci* 59(4):852–868. <https://doi.org/10.1287/mnsc.1120.1574>
- Lehman DW, Hahn J, Ramanujam R, Alge BJ (2011) The dynamics of the performance-risk relationship within a performance period: the moderating role of deadline proximity. *Organ Sci* 22(6):1613–1630. <https://doi.org/10.1287/orsc.1100.0626>
- Lim ENK, McCann BT (2014) Performance feedback and firm risk taking: the moderating effects of CEO and outside director stock options. *Organ Sci* 25(1):262–282. <https://doi.org/10.1287/orsc.2013.0830>
- Liu C, Maslach D, Desai V, Madsen P (2015) The first 50 years and the next 50 years of A Behavioral Theory of the Firm. *J Manag Inq* 24(2):149–155. <https://doi.org/10.1177/1056492614548487>
- Lucas GJM, Knoblen J, Meeus MTH (2018) Contradictory yet coherent? Inconsistency in performance feedback and R&D investment change. *J Manag* 44(2):658–681. <https://doi.org/10.1177/0149206315584821>
- Madsen PM (2013) Perils and profits: a reexamination of the link between profitability and safety in U.S. aviation. *J Manag* 39(3):763–791. <https://doi.org/10.1177/0149206310396374>
- Madsen PM, Desai V (2010) Failing to learn? the effects of failure and success on organizational learning in the global orbital launch vehicle industry. *Acad Manag J* 53(3):451–476. <https://doi.org/10.5465/amj.2010.51467631>
- March JG (1991) Exploration and exploitation in organizational learning. *Organ Sci* 2(1):71–87. <https://doi.org/10.1287/orsc.2.1.71>
- March JG, Shapira Z (1992) Variable risk preferences and the focus of attention. *Psychol Rev* 99(1):172–183
- March JG, Simon HA (1958) *Organizations*. Wiley, Hoboken
- Matta E, McGuire J (2008) Too risky to hold? The effect of downside risk, accumulated equity wealth, and firm performance on CEO equity reduction. *Organ Sci* 19(4):567–580. <https://doi.org/10.1287/orsc.1070.0334>
- Mezias SJ, Chen YR, Murphy PR, Schaffer RH (2002) Aspiration-level adaptation in an American financial services organization: a field study. *Manage Sci* 48(10):1285–1300. <https://doi.org/10.1287/mnsc.48.10.1285.277>
- Miller D, Chen M-J (1994) Sources and consequences of competitive inertia: a study of the U.S. airline industry. *Adm Sci O* 39(1):1–23
- Miller KD, Chen WR (2004) Variable organizational risk preferences: tests of the March-Shapira model. *Acad Manag J* 47:105–115
- Miller KD, Leiblein MJ (1996) Corporate risk-return relations: Returns variability versus downside risk. *Acad Manag J* 39(1):91–122
- Miller KD, Lin S-J (2010) Different truths in different worlds. *Organ Sci* 21(1):97–114. <https://doi.org/10.1287/orsc>
- Mishina Y, Dykes B, Block E, Pollock T (2010) Why “good” firms do bad things: the effects of high aspirations, high expectations, and prominence on the incidence of corporate illegality. *Acad Manag J* 53(4):701–722. <https://doi.org/10.5465/amj.2010.52814578>
- Molitero TP, Beck N, Beckman CM, Meyer M (2014) Knowing your place: social performance feedback in good times and bad times. *Organ Sci* 25(6):1684–1702. <https://doi.org/10.1287/orsc.2014.0923>
- Monteiro LF, Arvidsson N, Birkinshaw J (2008) Knowledge flows within multinational corporations: explaining subsidiary isolation and its performance implications. *Organ Sci* 19(1):90–107. <https://doi.org/10.1287/orsc.1070.0264>
- Mount MP, Baer M (2022) CEOs’ regulatory focus and risk-taking when firms perform below and above the bar. *J Manag* 48(7):1980–2008. <https://doi.org/10.1177/01492063211016029>
- Mulotte L (2014) Do experience effects vary across governance modes? Evidence from new product introduction in the global aircraft industry, 1948–2000. *Organ Sci* 25(3):757–775. <https://doi.org/10.1287/orsc.2013.0862>
- Musaji S, Schulze WS, De Castro JO (2020) How long does it take to get to the learning curve? *Acad Manag J* 63(1):205–223. <https://doi.org/10.5465/amj.2017.1145>
- Nason RS, Bacq S, Gras D (2018) A behavioral theory of social performance: social identity and stakeholder expectations. *Acad Manag Rev* 43(2):259–283

- O'Brien JP, David P (2014) Reciprocity and R&D search: applying the behavioral theory of the firm to a communitarian context. *Strateg Manag J* 35(4):550–565. <https://doi.org/10.1002/smj.2105>
- Ocasio W (1997) Towards an attention-based view of the firm. *Strateg Manag J* 18:187–206
- Palmer TB, Wiseman RM (1999) Decoupling risk taking from income stream uncertainty: a holistic model of risk. *Strateg Manag J* 20(11):1037–1062. [https://doi.org/10.1002/\(SICI\)1097-0266\(199911\)20:11%3c1037::AID-SMJ67%3e3.0.CO;2-2](https://doi.org/10.1002/(SICI)1097-0266(199911)20:11%3c1037::AID-SMJ67%3e3.0.CO;2-2)
- Park KM (2007) Antecedents of convergence and divergence in strategic positioning: the effects of performance and aspiration on the direction of strategic change. *Organ Sci* 18(3):386–402. <https://doi.org/10.1287/orsc.1060.0240>
- Perkins SE (2014) When does prior experience pay? Institutional experience and the multinational corporation. *Adm Sci Q* 59(1):145–181. <https://doi.org/10.1177/0001839214523603>
- Plambeck N, Weber K (2009) CEO ambivalence and responses to strategic issues. *Organ Sci* 20(6):993–1010. <https://doi.org/10.1287/orsc.1090.0471>
- Pondy LR (1966) A systems theory of organizational conflict. *Acad Manag J* 9(3):246–256. <https://doi.org/10.2307/255122>
- Pondy LR (1967) Organizational conflict: concepts and models. *Adm Sci Q* 12(2):296. <https://doi.org/10.2307/2391553>
- Powell WW, Koput KW, Smith-Doerr L (1996) Interorganizational collaboration and the locus of innovation: networks of learning in biotechnology. *Adm Sci Q* 41(1):116–145
- Ref O, Shapira Z (2017) Entering new markets: The effect of performance feedback near aspiration and well below and above it. *Strateg Manag J* 38(7):1416–1434. <https://doi.org/10.1002/smj.2561>
- Ren CR, Mulotte L, Dussauge P, Anand J (2022) Alliance performance and subsequent make-or-alloy choices: evidence from the aircraft manufacturing industry. *Strateg Manag J* 43(11):2382–2413. <https://doi.org/10.1002/smj.3410>
- Reus TH, Lamont BT, Ellis KM (2016) A darker side of knowledge transfer following international acquisitions. *Strateg Manag J* 37(5):932–944. <https://doi.org/10.1002/smj.2373>
- Rhee L, Ocasio W, Kim TH (2019) Performance feedback in hierarchical business groups: the cross-level effects of cognitive accessibility on R&D search behavior. *Organ Sci* 30(1):51–69. <https://doi.org/10.1287/orsc.2018.1237>
- Rhee M, Kim T (2015) Great vessels take a long time to mature: early success traps and competences in exploitation and exploration. *Organ Sci* 26(1):180–197. <https://doi.org/10.1287/orsc.2013.0892>
- Rudy BC, Johnson AF (2016) Performance, aspirations, and market versus nonmarket investment. *J Manag* 42(4):936–959. <https://doi.org/10.1177/0149206313503017>
- Salge TO (2011) A behavioral model of innovative search: evidence from public hospital services. *J Publ Adm Res Theory* 21(1):181–210. <https://doi.org/10.1093/jopart/muq017>
- Salvato C, Rerup C (2018) Routine regulation: balancing conflicting goals in organizational routines. *Adm Sci Q* 63(1):170–209. <https://doi.org/10.1177/0001839217707738>
- Schneider SL (1992) Framing and conflict: Aspiration level contingency, the status quo, and current theories of risky choice. *J Exp Psychol Learn Mem Cogn* 18(5):1040–1057. <https://doi.org/10.1037/0278-7393.18.5.1040>
- Schuler DA, Cording M (2006) A corporate social performance-corporate financial performance behavioral model for consumers. *Acad Manag Rev* 31(3):540–558. <https://doi.org/10.5465/amr.2006.21318916>
- Schumacher C, Keck S, Tang W (2020) Biased interpretation of performance feedback: the role of CEO overconfidence. *Strateg Manag J* 41(6):1139–1165. <https://doi.org/10.1002/smj.3138>
- Schwab A (2007) Incremental organizational learning from multilevel information sources: evidence for cross-level interactions. *Organ Sci* 18(2):233–251
- Sciascia S, Nordqvist M, Mazzola P, De Massis A (2015) Family ownership and R&D intensity in small- and medium-sized firms. *J Prod Innov Manag* 32(3):349–360. <https://doi.org/10.1111/jpim.12204>
- Shipilov AV, Li SX, Greve HR (2011) The prince and the pauper: search and brokerage in the initiation of status-heterophilous ties. *Organ Sci* 22(6):1418–1434. <https://doi.org/10.1287/orsc.1100.0594>
- Simon HA (1947) Administrative behavior: a study of decision-making processes in administrative organization. Macmillan, New York
- Sitkin SB, See KE, Miller CC, Lawless MW, Carton AM (2011) The paradox of stretch goals: organizations in pursuit of the seemingly impossible. *Acad Manag Rev* 36(3):544–566. <https://doi.org/10.5465/amr.2008.0038>

- Smulowitz SJ, Rousseau HE, Bromiley P (2020) The behavioral theory of the (community-oriented) firm: The differing response of community-oriented firms to performance relative to aspirations. *Strateg Manag J* 41(6):1023–1053. <https://doi.org/10.1002/smj.3123>
- Sobreperé i Profitós X, Keil T, Kuusela P (2022) The two blades of the scissors: performance feedback and intrinsic attributes in organizational risk taking. *Adm Sci Q* 67(4):1012–1048. <https://doi.org/10.1177/00018392221117996>
- Sørensen JB, Stuart TE (2000) Aging obsolescence and organizational innovation. *Adm Sci Q* 45(1):81–112. <https://doi.org/10.2307/2666980>
- Su W, Junge S (2023) Unlocking the recipe for organizational resilience: a review and future research directions. *Eur Manag J*. <https://doi.org/10.1016/j.emj.2023.03.002>
- Thomas KW, Schmidt WH (1976) A survey of managerial interests with respect to conflict. *Acad Manag J* 19(2):315–318. <https://doi.org/10.2307/255781>
- Titus VK, Parker O, Erin Bass A (2018) Ripping off the band-aid: scrutiny bundling in the wake of social disapproval. *Acad Manag J* 61(2):637–660. <https://doi.org/10.5465/amj.2016.0435>
- Titus V, O'Brien JP, Dixit J (2022) Does performance breed slack? Ownership as a contingency to the performance feedback and slack relationship. *J Manag* 48(5):1270–1298. <https://doi.org/10.1177/01492063211014263>
- Tranfield D, Denyer D, Smart P (2003) Towards a methodology for developing evidence-informed management knowledge by means of systematic review. *Br J Manag* 14(3):207–222. <https://doi.org/10.1111/1467-8551.00375>
- Tushman ML, O'Reilly CA (1996) Ambidextrous organizations: managing evolutionary and revolutionary Change. *Calif Manag Rev* 38(4):8–29. <https://doi.org/10.2307/41165852>
- Vidal E, Mitchell W (2015) Adding by subtracting: the relationship between performance feedback and resource reconfiguration through divestitures. *Organ Sci* 26(4):1101–1118. <https://doi.org/10.1287/orsc.2015.0981>
- Vissa B, Greve HR, Chen WR (2010) Business group affiliation and firm search behavior in India: responsiveness and focus of attention. *Organ Sci* 21(3):696–712. <https://doi.org/10.1287/orsc.1090.0475>
- Wang H, Jia M, Xiang Y, Lan Y (2022) Social performance feedback and firm communication strategy. In: *Journal of management*, vol 48(8). <https://doi.org/10.1177/01492063211042266>
- Washburn M, Bromiley P (2012) Comparing aspiration models: the role of selective attention. *J Manage Stud* 49(5):896–917. <https://doi.org/10.1111/j.1467-6486.2011.01033.x>
- Weber CE (1965) Intraorganizational decision processes influencing the EDP staff budget. *Manage Sci* 12(4):69–93
- Wennberg K, Holmquist C (2008) Problemistic search and international entrepreneurship. *Eur Manag J* 26(6):441–454
- Wezel FC, Saka-Helmhout A (2006) Antecedents and consequences of organizational change: “Institutionalizing” the behavioral theory of the firm. *Organ Stud* 27(2):265–286. <https://doi.org/10.1177/0170840605057670>
- Wiseman RM, Bromiley P (1996) Toward a model of risk in declining organizations: an empirical examination of risk, performance and decline. *Organ Sci* 7(5):524–543. <https://doi.org/10.1287/orsc.7.5.524>
- Xu D, Zhou KZ, Du F (2019) Deviant versus aspirational risk taking: the effects of performance feedback on bribery expenditure and R&D intensity. *Acad Manag J* 62(4):1226–1251. <https://doi.org/10.5465/amj.2016.0749>
- Ye Y, Yu W, Nason R (2021) Performance feedback persistence: comparative effects of historical versus peer performance feedback on innovative search. *J Manag* 47(4):1053–1081. <https://doi.org/10.1177/0149206320916225>
- Yu W, Minniti M, Nason R (2019) Underperformance duration and innovative search: evidence from the high-tech manufacturing industry. *Strateg Manag J* 40(5):836–861. <https://doi.org/10.1002/smj.2988>
- Zhang CM, Greve HR (2019) Dominant coalitions directing acquisitions: different decision makers, different decisions. *Acad Manag J* 62(1):44–65. <https://doi.org/10.5465/amj.2017.0323>
- Zhang Y, Gong Y (2018) Stock return or sales growth? Multiple performance feedback and strategic investments under securities analysts' earnings pressure. *J Manag Stud* 55(8):1356–1385. <https://doi.org/10.1111/joms.12392>