Judith Stuijt (j.stuijt@tenhavecm.com), Cornell Vernooij (c.vernooij@tenhavecm.com), Maarten Hendriks (m.hendriks@tenhavecm.com), Wouter ten Have (w.tenhave@tenhavecm.com) & Steven ten Have (s.tenhave@tenhavecm.com),

Biases in Organizational Change and Board Room Dynamics

Human thinking is not purely rational: it is characterized by numerous mental shortcuts and irrational thinking patterns. The systematic, non-random and predictable deviations from economic reality are called biases. Organizations are governed by humans that are all embodied with biased thinking. This makes organizations eminently prone to biased behavior - organizations, board room dynamics and change processes are therefore all impacted by biases. Contrary to the popular belief, we argue that biases do not necessarily have to be negative. It is useful to understand what types of biases appear in organizations and board rooms, and what these mean for organizational change and board room dynamics. To enrich and structure the existing knowledge concerning biases we analyzed and assessed thousands of peer reviewed journal articles and subsequently structured the most prominent biases using a practical and comprehensible framework[1]. To further expand our knowledge with practical insights from the perspective of board rooms, we interviewed 15 board members of varying Dutch Companies. This article comprises an overview of the pragmatic conclusions – from the assessment of scientific evidence, as well as, the interviews with board members – relevant to organizations, their board room dynamics and change.

Introduction

Decades ago, in particular between 1971 and 1979, Nobel Prize winner, Daniel Kahneman and Amos Tversky, two of the most influential thinkers on human decision making, put the traditional rational decision-making model up for discussion. They focused on social and cognitive systematic irrational deviations and put forward recognizable patterns in the judgment (errors) of humans. In his bestseller Thinking, Fast and Slow (2011), Kahneman describes: "I hope to enrich the vocabulary that people use when they talk about the judgements and choices of others, the company's new policies or a colleague's investment decisions". And, as we can conclude decades later, he and Tversky surely did. They enriched

[1] Based on the book: *'Organizational Behavior and Change Management: The Impact of Cognitive and Social Bias'. New York, NY: Routledge (to be published September 2022), by Cornell Vernooij, Judith Stuijt, Maarten Hendriks, Wouter ten Have & Steven ten Have*

our vocabulary with concepts such as groupthink, confirmation bias, framing and priming. These labels are used more and more often and are indispensable in thinking about human behavior these days.

To illustrate the popularity and felt relevance of biases for board room dynamics we point at a McKinsey survey of 800 corporate board directors regarding biases. The researchers found that reducing biases was the number one aspiration of high impact boards (Sibony, 2019). It seems to be that business leaders begin to realize that they should understand more and do something with their understanding about this phenomenon or concept, in their organizations, and for their own strategic decisions.

But how to understand this complex topic with its fragmented knowledge? What do insights from science as well as practice tell us? What will help organizations, their people and leaders to move further? To answer these questions we have analyzed and assessed over 10.000 scientific peer reviewed journal articles (see the book: *'Organizational Behavior and Change Management: The Impact of Cognitive and Social Bias'* - to be published September 2022, for an overview of conclusions). Subsequently and specifically for the scope of this article, we interviewed 15 board members. Based on the analysis of scientific journals and the interviews, in this article, we provide scientists and practitioners with the best available evidence, linking biases to organizational behavior, board room dynamics and change. First we will explain the relevance of biases in board rooms and organizations and the origins and workings of biases in general. Thereafter, we will clarify the method en model used for the structuring of the biases. Last but not least, we will provide the readers with an analysis of the experiences of board members and link this with practical reflections from the literature.

Biases in organizations and board rooms

Weick (1979) described an organization as *"a body of thought, thought by thinking thinkers"*. From this perspective, an organization is not a stable, objectively determined unit, but instead a dynamic, subjectively and intersubjectively determined network. This does not stroke with the common economic and business perspective on organizations, as organizations ought to perform objectively, resolutely, and effectively, based on their purpose — their economic or social remit — and to change where required (Bower, 2000). In addition to arbitrary and favorable circumstances, organizations need a clear and rational direction and the capacity in order to do so. Most of the organizational governance resides in the board room, which is also exclusively made up of humans. It is often believed that experienced and well-educated board

members will make rational, calculated decisions that are solely based on facts and figures. However, we believe that even the most experienced board members cannot escape millions of years of human evolution. Just like other members of organizations, groups, and sub-groups in collaborative settings, board members develop their own subjective or intersubjective social reality. This reality is formed by conscious or subconscious irrational thought processes and affects organizational decision making. A well-known example is groupthink, the phenomenon that occurs when a group with a strong social cohesion focuses on harmony and conformity at all costs, at the expense of self-reflection, self-criticism, and proper evaluation of alternatives and relevant facts that deviate from the chosen course. An example of groupthink comes from the management of the Coca Cola Company. In 2014 it asked their board to approve their proposed equity compensation plan. One of the board members was the now-famous American investor Warren Buffet, owning almost 10 percent of the company. Buffet disapproved the proposed plan, criticizing stock options and comparing them with 'lottery tickets'. Interestingly however, Buffet chose to abstain from voting either in favour or against the plan. His statement clearly illustrates the investors' desire to maintain the harmony of the group: "I love Coke. I love the management, I love the directors. So, I didn't want to vote no. It's kind of un-American to vote no at a Coke-meeting." Buffet also stated that this is often how it works, thereby addressing the persistent presence of groupthink within organisations: "I've never yet heard at any of the 19 boards I was on, anybody say in the meeting they were against a compensation plan' (Sibony, 2019). As shown by this example, biases can affect even the most rational experts and board members. It is therefore essential for organizations to have a comprehensive understanding of the workings and effects of biases.

The bias blind spot

Before we start diving deeper into the workings and attributions regarding several biases relevant for organizational change and board room dynamics, we find it crucial to elaborate on the meta-bias that fosters all biases, the so-called ‘bias blind spot’. The bias blind spot causes people to believe they are less biased in their judgements than others. The term, named after the visual blind spot, was introduced by social psychologist Emily Pronin and her colleagues Daniel Lin and Lee David Ross in 2002. Kahneman once said: “We can be blind to the obvious and we are also blind to our blindness. When someone is blind to ones’ own biases one cannot change or influence their own biased behavior”. Creating awareness of biased behavior in a person is the first step in reducing the possible negative effects of biases.

It is our aim to help managers, advisors, employees and everyone related to organizations to recognize and perhaps prevent the negative sides of biases, respond to biased behavior or use biases to their advantage. Shown biased behavior must be understood and handled with respect. Attention to biases and other distortions in our thinking will lead to a better understanding of behavior in organizations and board rooms.

The evolutionary origin of biases

To fully understand the workings from biases and its origins in the human brain we must first go back thousands of years. From an evolutionary point of view, the cognitive capabilities of humans compensated for a lack of strength, speed and claws. However, with great cognitive power comes great energy consumption. The brain's neural computation is a metabolically very costly process. The human brain adapted itself therefore to use the available energy as efficient as possible. The evolved brain nowadays uses in rest only a measly 20 watts, which is much less than a glowing lightbulb. To put this in perspective, with current technology it is estimated that a supercomputer that is 1000 times as powerful as the best supercomputer in existence with an energy input stemming from a fully operating nuclear power plant, would have equal abilities to the human brain (Furber, 2012). Biases are one of the important evolutionary energy saving measures that help our brain to use the available energy as efficient as possible and are therefore crucial to our survival and day to day functioning.

Biases help to quickly assess and respond in (social) situations without using too much of the brains valuable processing power. They are part of the fast, effortless, and irrational system 1 thinking, introduced by Daniel Kahneman (Kahneman, 2011). Kahneman introduced two systems of thinking, system 1 and system 2. System 1 thinking happens automatic and unconscious and can be seen as the automatic pilot of human thinking. We use system 1 when driving a car on an empty road, solve 2+2=? or read a text of a billboard. System 2 however is slow, rational, effortful, calculating and conscious. System 2 is used when you direct your focus to a deliberate task such as solving a puzzle, trying to remember what you did last weekend or when riding a bike for the first time. To save energy humans do most of their thinking in system 1. Automatic thinking is an efficient process that makes it possible to save up your full focus and energy for important matters that require attention. The brain's energy consumption would simply be inconceivably high if a person has to consciously register all details in its surroundings and when every choice has to be meticulously calculated.

Evolution takes millions of years, modern society however develops in an exceedingly high pace, which could make the human brain as such, outdated. Biases can be seen as evolutionary collateral damage of something that was once a very useful built-in script. It can be said that humans have a built-in margin of error that is evolutionary acceptable if compared with the upside of biases. When humans were hunter gatherers, survival was their main priority. For example, it was a near death sentence for earlier humans to get kicked out of a tribe and live the life of a lone wanderer. It was therefore evolutionary beneficial to maintain harmony and conformity in the group and be overly agreeable. This is related to the bias of groupthink as discussed before. However, current society values critical thinking and creativity related to decision making processes in organizations and board rooms. Consequently, it is requested from, board members, managers and employees, to convey a multitude of perspectives and challenge the status quo. The modern-day focus on diversity in organizations, is a good example of the desire to bring different perspectives to the table.

'Negative bias about bias'

With "preoccupation" and "prejudice", the most common translations of bias illustrate the 'negative bias about bias'. The also used and more neutral translation of bias 'tendency', can be seen as an exception. Biases are generally seen as cognitive errors or are described as irrational, erroneous lines of thought in humans. All-in-all, not very positive or constructive. However, biases, as biological or society-based bundles of knowledge and experience, do or can have positive effects. There is a positive side to biases as a product and factor of biological and social processes. Therefore, we must not only look at biases in a negative way. It seems wiser and more helpful to approach and 'manage' biases in a nuanced, appreciative, and balanced way. If biases are negative, then this is mainly related to excess influence towards one end of the spectrum. For instance, conformity to a group is in basis a good thing. Learning from each other, and adapting to each other, increasing efficiency and speed, can be important basic elements for the survival, functioning, and performance of groups. Nevertheless, when an individual loses its own opinion and identity, it becomes problematic. In addition, a bias can also be undesirable due to the obsolescence or absence of a function of once-useful routines and mechanisms, the evolutionary remnants rest deep in our brain (Vroon, 1989). Biases are after all, mental shortcuts formed through millions of years of evolution. If biases were not useful for human survival the responsible genes would have not been conveyed to next generations.

Using biases to our advantage

One could compare biases to medicines; in the right dose they can help humans thrive, but you must be careful not to overdose, or underdose. Therefore, it is, as said before, essential to approach biases in an appreciative and balanced manner and not solely condemn them. In addition, biases also help to make organizational and board room behavior more predictable. Human behavior is in principle unpredictable, but understanding the tendencies that all humans bear, helps to understand and subsequently reshape certain unwanted behaviors in organizations and board rooms. When biases are properly understood, they can contribute to the efficiency, speed, pragmatism, and risk management as well as explain, predict, and manage the consistency and perseverance of organizations and organizational change. It is difficult, or even impossible, to persuade people in organizations to go along with a plan or concept, even if there are clear benefits or gains for those people. Understanding their cognitive biases increases the chances of successfully influencing them. A useful example is the "outcome bias". The intended or actual result of a change process can be high-value in the form of a more customer-focused and socially responsible organization. That outlook may persuade some of the employees involved to exhibit the desired behavior as they understand that a direct, increased material reward will be waiting. The "salience bias" is a different example. This bias teaches us that it may be more effective to limit the arguments for a desired change to only a few factors that are particularly relevant to the organizational members involved. In other words, as a change actor, you may reach your goal sooner by emphasizing the two benefits of the desired change that are relevant rather than providing a correct but drawn out and 'uninteresting' presentation of the change.

Method and model: Social motives underlying biases

For our research for the book *'Organizational Behavior and Change Management: The Impact of Cognitive and Social Bias',* we have first assessed a 'longlist' of more than 100 social psychological biases by using the criteria of prominence, relevance and evidence. Not all of these biases were considered as primary biases, e.g., biases appraised by scientific and popular literature as the most prominent in human thinking and social behavior and for which a reasonable amount evidence is found in scientific literature. A primary bias also has to be relevant for organizational behavior, in particular from the perspective of change management. Based on these inclusion criteria, 29 primary biases (see Table 1) were included. We have reviewed the available scientific literature of these biases by Rapid

Evidence Assessments (REA's). REA's are the preferred method for reviewing evidence in Evidence-Based Management, because they are transparent, verifiable and reproducible. These REA's address a focused question through a methodology that identifies the most relevant studies and only includes those studies that meet explicit quality and relevance criteria as determined by several researchers (Higgins & Green, 2006; Petticrew & Roberts, 2006). Using this methodology we have reviewed over 10.000 articles to create a clear understanding of the existing scientific knowledge concerning these biases.

In addition, we have also organized and structured the 29 biases with the help of the *core social motives* by Fiske (2004): "Fundamental, underlying psychological processes that impel people's thinking, feeling, and behaving in situations involving other people." This pertains to the following five motives: *belonging*, *understanding*, *controlling*, *trusting*, and *enhancing self*. The model (see Figure 1) gives the relative position, relationship or interaction and interdependency of the five core social motives and the underlying biases. This categorization is not 'absolute'; we have looked for the best fit. Several biases are relevant for or related to more than one core social motive. For example, system justification bias (the tendency to maintain our social systems -and our attendant norms, rules and social structures—and see them as legitimate, even when confronted with information suggesting the opposite) is located in the chapter on 'belonging', but clearly also strongly relates to 'trusting'. By combining these motives with the types of biases that may appear in organizations, board room dynamics and change, we gain more insight into cognitive patterns and understand what they can mean for organizations and board rooms.

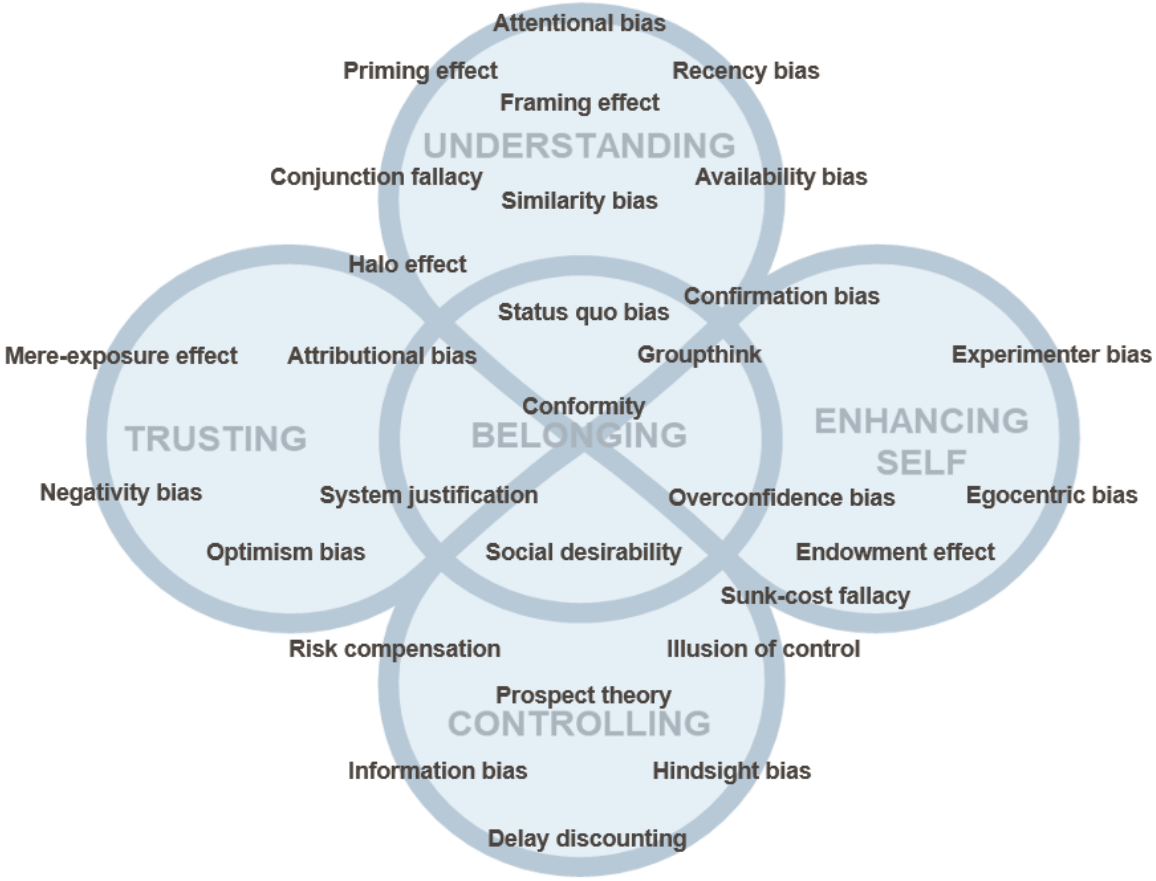

Figure 1. The 29 primary biases plotted on the five core social motives

In short, the five core social motives are as follows:

- *Belonging* is the central core social motive: the idea that people want stable relationships with others as this will enable them to survive both psychologically as well as physically. The need for social belonging is a building block for good collaboration and for decision-making. Examples of biases that are connected to the need to belong are the status quo bias and groupthink.

- *Understanding* refers to the motivation of people to understand, predict, and give meaning to their environment. This means that people want to understand the rationale behind a proposed organizational change. What is the (strategic) reasoning and what is the ultimate goal of the organization or the change. Biases related to understanding show us that understanding is not all done on a rational basis, but that more cognitive processes play a large part in understanding and accepting change. The attentional bias and the framing effect are cognitive biases that are related to understanding.

- *Controlling* is the need for perceived contingency between behavior and outcomes. A certain sense of control urges people to improve or learn from past or present situations, in order to increase their control even further. In times of organizational change, people may experience that their existing sense of control and competence is challenged or threatened. Examples of biases related to controlling are the illusion of control and hyperbolic discounting.
- *Trusting* is the need to see "the world" or personal context as a benevolent, safe place. In organizational terms, trusting refers to trust in the organization and its participants, especially when there is an upcoming change. Unlike understanding and controlling, trusting has an affective character. People generally want a social environment that can be characterized as sympathetic, good-natured, reliable, and open. In situations of change, the fulfilment of that need may be frustrated. Trust takes years to build, but only a second to shatter. Examples of biases related to trusting are the mere exposure effect and the optimism bias.
- *Self-enhancing* is the need to view the self as basically worthy or improvable and refers to self-confidence, a positive self-image, or being motivated to develop and improve the self. Furthermore, self-enhancement helps to maintain the position in the group and the group has the potential to enhance the self as well. This motive contributes to people being able to live with themselves, but sometimes lead to a mock existence, to keeping up appearances. Within the organizational and change contexts self-enhancement can be impactful in for example increasing the effectiveness of individuals on their own, but also in teams and organizations. Biases related to this motive are egocentric bias, overconfidence effect and confirmation bias.

The motives can be seen as interrelated, in positive or negative ways, in terms of synergies or trade-offs and antagonisms. One can imagine that there is a synergy between understanding and controlling, that a lack of trust can hamper a feeling of belongingness and that there could be a trade-off between controlling and trusting. From the perspective of the social animal and its biotope, the group (being a family, a team, etc.) or organization (being a company, a society, etc.), the motives cannot be separated in real life. They are interrelated and interdependent, together constituting the connective being that the social animal is in a dynamic way defining its biotope, its social environment in maybe even a more dynamic way.

Table 1. Overview of primary biases per core social motive

Belonging	
Bias	*What does this bias say?*
Conformity	People tend to convergence their thoughts, feelings, or behavior toward a social or group norm
Groupthink	Groups tend to have the desire to maintain harmony and conformity in the group
Social desirability bias	People tend to report their behaviors in a manner that will be viewed favorably by others
Status quo bias	People are prone to have a clear preference for the current state of affairs
System justification bias	People have a tendency to maintain their social systems -and their attendant norms, rules and social structures—and see them as legitimate, even when confronted with information suggesting the opposite
Understanding	
Bias	*What does this bias say*
Attentional bias	People tend to be selective in the information they attend to
Availability bias	People judge the frequency of prevalence of events by the ease with which relevant instances come to mind
Conjunction fallacy	People tend to assume that multiple specific conditions are more probable than a simple generic one
Framing effect	The way in which a message is presented to people influences perceptions, evaluations and decisions
Priming effect	The introduction of one stimulus influences how people perceive and respond to a subsequent stimulus
Recency bias	People are prone to give more weight to recently presented information over earlier presented information
Halo effect	Positive impressions of a stimulus in one area positively influence perceptions of that stimulus in other areas
Similarity bias	People evaluate others perceived to be similar to themselves in a more favorable light
Controlling	
Bias	*What does this bias say?*
Illusion of control	People have the tendency to overestimate the degree of control over events that are in fact uncontrollable
Hindsight bias	People tend to overestimate their foresight knowledge of an event after the event occurs
Information bias	People have the tendency to seek information, even when it cannot affect the outcome
Risk compensation	People are prone to display more risk-taking behavior when safety measures are in place

Prospect theory	People tend to prefer avoiding losses to acquiring equivalent gains in decision making
Delay discounting	People have the tendency to prefer smaller immediate rewards over larger later rewards

Trusting	
Bias	*What does this bias say?*
Mere-exposure effect	People have the tendency to develop preferences for things they are familiar with
Negativity bias	People are prone to to give more weight to negative information compared to positive information
Optimism bias	People tend to perceive they are more likely to experience positive events compared to others
Attributional bias	People tend to make systematic errors when assigning causes to behavior of themselves and others

Enhancing-self	
Bias	*What does this bias say?*
Egocentric bias	People tend to rely on their own perspective and to have a higher opinion of themselves than reflects reality
Overconfidence effect	People tend to be overbearing regarding the accuracy of their judgments or their abilities
Confirmation bias	People are prone to prefer information that is consistent with their own prior beliefs and expectations
Experimenter bias	Experimenters or observers tend to influence their participants, data or outcomes
Endowment effect	People have the tendency to attach a higher value to objects more when they own these objects
Sunk-cost fallacy	People are prone to continue an endeavor once an investment in money, effort, or time has been made

On each and every of the primary biases, there are many interesting conclusions drawn from the assessment of scientific evidence, being meaningful for application in organizational and change management practice. For the scope of an article, including all these conclusions is simply not possible. For a complete overview we therefore we refer to *'Organizational Behavior and Change Management: The Impact of Cognitive and Social Bias'*. For the scope of this article we combined the findings from the interviews with board room members with important findings from our assessment of scientific evidence for the context of board rooms.

Interviews with board members

We have researched the existence and practical impact of the biases in board room environments by interviewing 15 experienced board members. The interviews took place physically with a duration of 90 minutes. During the interviews, at least two of our researchers were present. The interviews were semi-structured. After a brief explanation of the goal and structure of the interview, our previous research on biases and some specific findings regarding biases (an overview of the 29 biases was shared with the board members via e-mail on beforehand) the researchers asked the board members about their positive and negative experiences in board room dynamics, and the mechanisms underlying these dynamics, e.g. the social and cognitive biases.

For the scope of this article, we combined the findings from these interviews with the most important findings from our assessment of scientific evidence for the context of board rooms. The amount of pluses '+' or minuses '–' that is shown gives an indication of the level of probability influencing human behavior specified after our assessment of the scientific journals (see also corresponding footnotes). We have linked the biases to relevant quotes and incorporated practical reflections from scientific research when relevant. To structure our findings we have organized and categorized the most noticeable findings from the interviews bases on the model shown in Figure 1. We will start with elaborating some general findings concerning biases in board rooms, thereafter we will elaborate on biases (per category of the model) that were prominent during the interviews.

Biases: a hot, but hard to handle topic

Understanding and preventing biases is seen by board members as a topic of crucial relevance and importance. A large majority of the interviewed board members stress that they should devote more time and resources to the better understanding of biases. Recognizing (individual and group) biases and discussing it in a constructive way is, although, easier said than done. Recognizing biases in the board room or in individual board members, requires board members to be open and vulnerable. Therefore, board members indicate that a supportive environment is needed in the board room. This environment is not experienced in all cases by the interviewed board members. In practice they see that board members indicate to the topic of biases as being 'soft' and not something that is applicable for their board or themselves. Board members also indicate that they find it easier to see biases with other board members then their own biases. This endorses the importance of the blind spot bias. Board members

said it would be helpful if '*someone would hold up a mirror to them*', so that they become aware of their own behavior. In addition, it is said that "*discuss concrete examples of how biases could or would have been influential in past decision-making*" would be a constructive way to reflect on the past performance of the board room. The interviews also showed that the sprawl of biases can be overwhelming and confusing, this could hinder the addressing of biases in practice. Board members indicate that a comprehensible overview of bias and a cohesive framework, would be helpful. This seems to be experienced as a prerequisite to have a discussion in the board room about the behavior related to biases. The board members see added value in using the core social motives as a framework, "*It makes the application of or intervention on biases more accessible and adequate*". During the interviews a large number of biases were explicitly and implicitly mentioned and seen as recognizable as influencing board room dynamics. Board members indicated that it would be helpful, also for their own understanding, to have an overview of the biases relevant for board rooms and the specified examples. Based on the interviews, the following section sheds light on how board members perceive and experience biased thinking and behaviour in board rooms.

Conformity (+++)[2] and groupthink (++)[3] in board rooms (belonging)

The majority of boardroom members that were interviewed explicitly or implicitly mentioned conformity and groupthink as some of the most pronounced biases. Conformity states that people tend to converge their thoughts, feelings or behaviour toward a social or group norm. Groupthink is the social psychological phenomenon that occurs when groups make faulty decisions because of the desire to maintain harmony and conformity in the group. Board members gave various examples where board rooms converge their opinions at the expense of critical thinking. *"In the board we find it important to have a working atmosphere that provides security and comfort .. I trust my fellow board members on their expertise (for example HR, finance, etc.), "I wouldn't want to interfere: we are a team, in which we trust each other's judgement and do not doubt each other… However, it does upset me sometimes how we all tend to go along with the most popular opinion or belief without discussing alternative options (…) This impedes critical thinking and reduces the overall quality of our decision-making"*. Another board room member added: "*While I believe some level of conformity within board rooms can be helpful in maintaining a positive morale and helps us*

[2] Based on the findings of our REA it is shown that conformity affects human behavior.
[3] Based on the findings of our REA it is likely that groupthink affects human behavior.

to 'march to the same drummer', it also makes us prone to faulty decisions because we don't consider all available and relevant information."

Boardroom members acknowledged that the influence conformity and groupthink does not limit itself to board room dynamics, but can also be seen in the broader organisational context. As one board members described: "*Oftentimes, when there is some sort of dissatisfaction amongst organizational members, these people transfer their opinions to other people, causing dissatisfaction to spread within the organization. This is because people have a strong tendency to conform and team-up."* This effect of conformity can have large negative consequences for the organization and for the work satisfaction of employees.

Some of the board members had suggestions to minimize the effects of too much conformity and groupthink in board rooms. One board room member gave the example of a supervisory board that continuously invited one or two neutral observers to their board meetings to ensure the consideration of alternative options before making a final decision on a certain topic.

In line with this reasoning and the suggestions of other board members, we describe some practical reflections to decrease the level of conformity and groupthink (based on empirical research): firstly, board rooms could consider appointing a devil's advocate: someone who takes a position they do not necessarily agree with (on rotating basis). Someone who asks some of the tough questions necessary to create some dissent and stimulate the formulation of alternative ideas and opinions. This stimulates constructive conflict, improving group decision-making. Another strategy is not allowing individuals to express their preferences in advance and to plan open sessions to reconsider alternatives. In addition, stimulating honest consideration of all alternatives and forming subgroups to allow a more detailed discussion could be helpful (ten Have et al., 2019). This last advice is however hard in practice, because as one board member says, "*Most board decisions are already constructed and promoted due to informal organizational politics*."

Egocentric bias (+)[4], overconfidence effect (+)[5] and confirmation bias (+)[6] in board rooms (enhancing-self)

The need to self-enhance, as the fundamental need to improve the self and to feel self-confident, is highly relevant for board room dynamics. One of the biases stemming from this core social motive is the egocentric bias. According to this bias, people tend to rely mainly on their own perspective when making judgements and to have a better opinion of oneself than is reflected by reality. According to the interviewed board members, this overuse of one's own perspective and unreasonably high opinion of oneself acts as a barrier to effective collaboration and social interaction in board rooms: "*Sadly, some board members tend to take their own perspective as leading and also project their own perspective on other board members. By doing so, they create a blind spot for the needs and concerns of others, making effective collaboration harder to achieve.*"

A bias closely linked to the egocentric bias is the confirmation bias. Whereas the egocentric bias concerns the tendency to think better of ourselves (e.g., to have a better opinion of oneself than is reflected by reality), the confirmation bias concerns the tendency to think better of and enhance our own beliefs. According to the confirmation bias, people are more prone to seek out, interpret, favour and recall information that is consistent with their prior beliefs and expectations. Most of the interviewed board members acknowledge the confirmation bias as one of the most prevalent biases in board rooms. People solely seeking information supporting their existing opinions, whilst ignoring all information pointing to the contrary, are thus not uncommon in board room dynamics. *"It amazes me how firmly board members can stick to their own opinions, even when there is objective data suggesting the opposite: board members do not let the data do the talking on its own, but interpret the data confirming their own ideas. Apparently, it is easier for people to disregard alternative perspectives than to adapt their own existing beliefs."* One board room member noted the importance of treating these people carefully and taking them seriously: "*I think it is very important not to immediately break down their reasoning, because when you do, they will*

[4] Based on the findings of our REA it could be that egocentric bias affects human behavior, but we must be cautious to draw definite conclusions.
[5] Based on the findings of our REA it could be that overconfidence effect affects human behavior, but we must be cautious to draw definite conclusions.
[6] Based on the findings of our REA it could be that confirmation bias affects human behavior, but we must be cautious to draw definite conclusions.

surely dismiss everything you will say, or they will use it to even strengthen their original believe more. Instead, you have to first carefully listen to them."

The overconfidence effect, another bias related to the core social motive of self-enhancing, was also mentioned often during the interviews. The overconfidence effect (or 'overconfidence bias') is described as a bias whereby individuals tend to be overbearing regarding the accuracy of their judgments or their abilities. People that fall victim to the overconfidence effect feel less inhibition regarding their own capabilities or judgments and, can as a consequence, make inaccurate or wrong decisions.

In the interviews, board members gave various examples that are illustrative of how the overconfidence effect exerts itself in board room dynamics. "*When I was a member of the board, there was one clear rule in the board room: 'your opinion only counts if you've been working for the organization for at least [an X amount of] years*." The board room member further explained how this rule stimulated overconfidence of members who were higher up in the hierarchy. Another board room member added that this overconfidence led these more experienced board members to dismiss other opinions, since they considered their own experience to be sufficient.

One of the board members mentioned an important personal characteristic that could help to diminish the overconfidence effect: "*Humility is one of the core competences of a good board room member. You should be eager to learn and to never stop improving yourself"*. However, it seems to be precisely this characteristic that is sometimes contrary to the (actual or ascribed) competences of a board room member. As one board room member pointed out: "*In order to be a board room member, having enough self-esteem is essential. However, paradoxically, overconfidence could have serious risks." S*cientific research does indeed point out that there is a fine line between having high self-esteem and overconfidence, as research shows that people with high self-esteem might be more susceptible to be overly confident regarding their judgements and abilities (Cristofaro et al., 2020). Since these are personality traits, they are considered very hard to influence in an absolute way.

However, we do have some practical reflections for board rooms for countering biases to maintain our self-image like the confirmation bias, the overconfident effect and the egocentric bias, based on scientific findings. The key is to ensure that analytical and critical processing takes place, for example through subgroup discussions, in which in-depth explanation can be given and questions can be answered. In addition, appointing a devil's

advocate might be helpful (ten Have et al., 2019). In this way, board members are forced to take a step back from their own perspective as a reference point and to consider alternative ideas.

The illusion of control (++)[7] and prospect theory (++)[8] in board rooms (controlling)

The need to control (the need for perceived contingency between behavior and outcomes) and its underlying biases are highly relevant for board room dynamics, specifically for risk-taking and decision-making. Interestingly, biases stemming from the need to control can lead to either risk-seeking behavior in board rooms (illusion of control) or risk-aversive behavior (prospect theory), as illustrated by the various examples of the interviewed board members.

The overarching bias stemming from the need to control is the illusion of control, which can be understood as the tendency to overestimate the degree of control over events that are in essence uncontrollable. Interviewed board members recognized the illusion of control in board room dynamics, specifically in the context of organizational forecasting and goalsetting, with all the consequences that entails: "*Whilst in reality, the future is ambiguous and uncontrollable, board members usually think they do have control over future events. This false belief of 'being in control of the situation' leads them to be overly confident in their organizational forecasts and inaccurately assess potential risks".*

Another board room member adds: "*By assuming they have full control over organizational outcomes, board room member usually set overly ambitious targets and unattainable goals. As a result, goals and objectives are not reached, and board members [and employees] are left feeling upset and disappointed. I wish board members could focus more on aspects they do have control over instead of wasting their time on non-controllable things."*

Another bias that was recognizable to board members was the prospect theory. This theory states that people tend to prefer avoiding losses compared to acquiring equivalent gains, which is illustrated by the well-known phrase 'losses loom larger then gains'. According to the interviewed board members, a vast amount of board members are risk averse because they can legally be held responsible for their deeds and decisions. '*Board members want to prevent making the wrong decisions. The stakes are high and the consequences are not to be overlooked, which is probably why risk-aversive thinking and behaviour is specifically pronounced in board room dynamics'*. Risk aversive thinking and behaviour in board rooms

[7] Based on the findings of our REA it is likely that the illusion of control affects human behavior.
[8] Based on the findings of our REA it is likely that the prospect theory affects human behavior.

could also be linked to status maintenance and reputation management, according to one of the interviewed board members: '*Oftentimes, board members are afraid to ask for clarification when they do not understand something. They are afraid that admitting that they don't understand something will make them look incompetent and would harm their reputation. However, if board members would dare to ask questions if they do not understand something, this could be extraordinarily beneficial for the quality of decision making'.*

The framing effect (++)[9] and similarity bias (+/-)[10] in board rooms (understanding)

The need of people to understand, predict, and give meaning to their environment is universal and omnipresent in social interactions, and thus important for board room dynamics. As a bias related to the core social motive of understanding, the framing effect states that the way in which certain information is presented ('framed') influences people's perceptions, evaluations and decisions. People in board rooms are susceptible for the framing effect, for example in social interactions. Specifically, board members tend to mentally 'frame' each other based on demographic variables, expertise, status and position "*As a member of the board, you are likely to be 'framed' by other members because of your position. This happens in the broader organizational context as well: employees perceive- and treat you in some sort of way purely based on your job title or position, without ever having interacted with you. For example, as a CEO employees think you won't have time to listen to their concerns because of your busy schedule."*

This last observation regarding employee perception of board members relates to another type of bias: the similarity bias. The basic notion of this bias is that people are tended to prefer others who are similar to them compared to people they perceive to be less similar. Translating this to the organizational context, employees could feel less similar to board members (compared to, for example, their colleagues), solely based on their different positions within the organization. One board room member suggested the following to combat this: "*Sadly, the reality is that board members are often either in their own office or at meetings outside of their office. However, you have to show yourself on the work floor and be visible to employees. As a board room member, you are more likely to be acknowledged when people can actually see you and get to know you."* One board room member confirmed: *"People generally want leaders thar are not too dissimilar to themselves."* This solution to

[9] Based on the findings of our REA it is likely that the framing effect affects human behavior.
[10] Based on the findings of our REA there are signs that similarity bias affects human behavior but no clear conclusion can (yet) be drawn based on scientific literature.

seem more similar is also part of another bias, the mere exposure effect (+++). If employees are more exposed to board members they are likely to develop a positive attribution towards these board members. Visibility of board members on the work floor or via online channels is therefore key.

Many boards are aware of the similarity bias and have installed procedures to create more diversity in their boards, in terms of demographic background like age, race and gender. *'We have made sure that our board consists of a diverse pool of professionals: men, women, younger people, older people, etc. By doing so, we hope to achieve more creative and innovative ideas, which, in my opinion, would be more difficult if board members were more similar'.*

Adding to this a board member pointed out that, "*We can force diversity at the top of our organization, but if we do not understand and change the root cause and structure that fostered the lack of diversity at the top, we cannot reap the benefits of diversity and make lasting changes*." Another board members also states that "*When people have worked in the same organisation for a long period of time, they are likely to share the same experiences, successes and obstacles. As a result, they will likely form the same attitudes, believe the same stories and develop a preference for the same 'similar other'* " (conformity bias). This is also recognized by other board members as well: '*In our board we are all at least working 8 years in organization X: we should ask ourselves how diverse are we, and if we say we embrace diversity, be honest with ourselves, do really we act upon it?'.* Instead of merely selecting people with diverse backgrounds, organizations could focus more on 'cognitive diversity' in their boards, e.g., including members with diverse skills, perspectives and areas of expertise. By ensuring sufficient cognitive diversity, the boards are able to make decisions based on valuable contributions of different experts on their own areas of expertise. In this way, more alternative ideas and opinions can be shared and evaluated than if boardroom members would be highly similar to each other.

The optimism bias (+++)[11] and attributional bias (++)[12] in board rooms (trusting)

People have a fundamental need to trust others and to see the world as a benevolent place. Whilst essentially being a productive and healthy motive, this tendency to trust could lead to biased thinking and behaviour, also, in board room dynamics. Optimism bias as the human

[11] Based on the findings of our REA it is shown that optimism bias affects human behavior
[12] Based on the findings of our REA it is likely that the attributional bias affects human behavior

tendency to perceive we are more likely to experience positive events compared to others. This was seen by board members as one of the most recognizable bias in board room dynamics. Individuals or groups being influenced by the optimism bias run the risk of overestimating benefits or financial gains of a certain choice, whilst underestimating potential risks or costs. As such, board rooms falling prey for the optimism bias are inclined to engage in high-risk decision making and venture into loss-making activities. The interviewed board members confirmed that optimism bias is specifically present in (financial and investment) decision-making processes, "*Board members can certainly have unrealistic expectations of financial growth and success or their organization, and this overly optimistic thinking certainly has an impact on financial and investment decisions. Sadly, our board has invested in loss-making activities because of board members' unbridled optimism'.*"

Scientific evidence indicates that providing fixed procedures and guidelines could be helpful in reducing the unwanted consequences of too much optimism in board rooms. Specifically, forming concrete action plans that specify when, where, and how to act in order to reach goals, with built-in thresholds, seem particularly helpful (Koole and van 't Spijker, 2000).

A second bias stemming from the need to trust is the attributional bias. Attributional biases are biases referring to the systematic errors that people make when assigning causes to behaviour of themselves and others. People are motivated to find causes for the behaviour of others, but they are prone to make errors in assigning these causes. Board members acknowledge these attributional biases to impact social dynamics in board rooms: '*We make many assumptions about each other's behaviours, which are usually unfounded. Interestingly, in explaining the behaviour of others, we focus on personal characteristics, without taking into account contextual factors.* They also underline the importance of opening the discussion on these misconceptions: *'Board room dynamics are continuously affected by misconceptions and unfounded judgements regarding each other's behaviours. If board rooms could find a way to discuss this in an honest and constructive way, I think it would help not only the boards, but also their organizations immensely.'* A board room says that instead of acting based on assumptions "*You should test your assumption by simply asking the others view on certain matters*"

Final remarks

As been shown by previous and our own research, biases play a, not to be underestimated, role in board rooms and board room dynamics. Board members try to act as considerate and

rational as possible in the interest of the organization, but they cannot change the fact that they are human. Millions of years of evolution are ingrained in the human brain that give humans and thus board members their irrational reality. Being aware of and understanding biases that show up in board rooms is the first step to counter potential negative effects and to turn biases to our advantage, something that is seen by board members as of crucial relevance and importance, although experienced to be hard to bring into practice. By providing a comprehensible overview of biases and a cohesive framework, we help bridge the gap between available knowledge in the academic field and the practice in board rooms. At the same time we believe there is still large potential to make the application of or intervention on biases more accessible and adequate. We hope that our research will motivate researchers to 'dive deeper' into biases and the specific context of board rooms dynamics. In addition, we look at experience of practitioners as an important source of evidence, that from a researcher's as well as a practitioner's perspective, needs further exploration. Through reflection by practitioners and with the help of scientists, the evidence can be made available and provided to other practitioners.

Reference List

Barends, E., & Rousseau, D. M. (2018). *Evidence-based management: How to use evidence to make better organizational decisions.* Kogan Page Publishers.

Cristofaro, M., Giardino, P. L., & Leoni, L. (2020). The Influence of Core Self-Evaluationson Group Decision Making Processes: A Laboratory Experiment. *Administrative Sciences*, *10*(2), 29, 1-16. https://doi.org/10.3390/admsci10020029

Fiske, S. T. (2004). *Social beings: Core motives in social psychology*. John Wiley & Sons.

Furber, S. (2012). To build a brain. IEEE Spectrum, 49(8), 44–49. https://doi.org/10.1109/mspec.2012.6247562 Kahneman 2011

Higgins, J. P., & Green, S. (2006*). Cochrane handbook for systematic reviews of interventions 4.2. 6* [updated September 2006]. The cochrane library, 4, 2006.

Kahneman, D. (2011). *Thinking, Fast and Slow*. Farrar, Straus & Giroux Inc.

Koole, S., & Van't Spijker, M. (2000). Overcoming the planning fallacy through willpower: effects of implementation intentions on actual and predicted task-completion times. *European Journal of Social Psychology*, *30*(6), 873–888. https://doi.org/10.1002/1099-0992(200011/12)30:6<873::AID-EJSP22>3.0.CO;2-U

Petticrew, M., & Roberts, H. (2006). *Systematic reviews in the social sciences: A practical guide.* Blackwell Publishing.

Pronin, E., Lin, D. Y., & Ross, L. (2002). The Bias Blind Spot: Perceptions of Bias in Self Versus Others. *Personality and Social Psychology Bulletin*, *28*(3), 369–381. https://doi.org/10.1177/0146167202286008

Sibony, O. (2019). *You're About to Make a Terrible Mistake: How Biases Distort Decision-Making and What You Can Do to Fight Them*. Little, Brown Spark.Bower, 2000

ten Have, S., Rijsman, J., ten Have, W., & Westhof, J. (2019). *The Social Psychology of Change Management: Theories and an Evidence-based Perspective on Social and Organizational Beings*. Routledge.

Vroon, P. (1989). *Tranen van de krokodil*. Amsterdam: Ambo/Anthos Uitgevers.

Weick, K.E. (1979). *The social psychology of organizing*. McGraw-Hill.