

No cover
image
available

The Oxford Handbook of Corporate Law and Governance, Second Edition

(In Progress)

Wolf-Georg Ringe (ed.), Jeffrey N. Gordon (ed.)

<https://doi.org/10.1093/oxfordhb/9780192888006.001.0001>

Published: 22 April 2025 -

Online ISBN: 9780191982118

Print ISBN: 9780192888006

Search in this book

CHAPTER

Behavioral Perspectives on Corporate Law and Corporate Governance

Geneviève Helleringer

<https://doi.org/10.1093/oxfordhb/9780192888006.013.0009>

Published: 22 July 2025

Abstract

This chapter examines the evolution of behavioral insights in corporate law and governance, emphasizing a shift from traditional rational choice models to nuanced understandings of human decision-making. It highlights the first two waves of behavioral research: the initial focus on documenting deviations from rationality and a subsequent integration of psychological findings into predictive frameworks. The emerging third wave challenges earlier approaches by rejecting the classification of decision-making anomalies as "mistakes," instead emphasizing human adaptability to complex, uncertain environments. Specific behavioral biases, such as bounded rationality and ethics, significantly impact corporate actors, including boards, executives, and investors, shaping governance outcomes. Finally, the chapter critiques the field's methodological limitations while underscoring its potential to reshape legal norms and governance practices by incorporating a richer understanding of human and institutional dynamics.

Keywords: [corporate law](#), [governance](#), [rational choice](#), [human decision-making](#), [behavioral biases](#), [legal norms](#), [decision-making anomalies](#)

Subject: [Law and Politics](#), [Company and Commercial Law](#), [Law](#)

Series: [Oxford Handbooks](#)

Collection: [Oxford Handbooks Online](#)

1 Introduction

The “behavioral quidam,” with her rich utility function, is more likeable if less impressive than the “neo-classical superstar,” also known as “homo economicus.” The latter has however traditionally dominated corporate law reasoning. Economic actors have been assumed to display consistent and self-interested preferences,¹ to acquire the optimal amount of information, and to engage in flawless cost-benefit computations thanks to her unlimited cognitive abilities.² Since the late 1990s, law, including corporate law and corporate governance, has enlarged its interdisciplinary engagement beyond Economics and opened to Psychology,³ and to the continuously developing findings of research on human behavior.⁴

Describing what is going on requires a perspective that goes beyond the “straitjacket of strict rational-choice assumptions.”⁵ Real corporate people, either as individuals or as groups, mostly do not form beliefs based on all the information that would be needed to perform a fault-proof reasoning, and rarely tend to optimize their economic decisions. Rather, they cope and reach decisions in an incremental manner influenced by corporate culture and ethical concerns.

The behavioral analysis of law involves two main methods. One relies on established insights from psychology or other behavioral sciences, the other engages in the collection of empirical data, including by conducting experiments.⁶ As a discipline, (corporate) law and behavioral studies have evolved in successive “waves.” The “initial wave” established “a laundry list of departures from rational choice”⁷ and did not have the ambition to offer any systematic explanation. Since the early 2000s, a “second wave” has consolidated insights and more importantly added parameters to standard rational theories to record behavioral findings “anomalies”. On this basis, fresh predictions can be computed. Behavioral empirical data are often described as documenting “flaws” in human cognition,⁸ conducive to decisions that are biased from an informational, value maximizing,⁹ or ethical standpoint,¹⁰ and should be labelled as “mistakes.”¹¹ Corporate culture and the decisions made in the context of organizations, whether by individuals or bodies such as boards or committees, may typically be accounted for under models documenting the deviations from solutions offered by deliberative rational choices. This perspective has been fruitful and provided a wealth of findings regarding possible decisional flaws and opportunities for wrongdoing by boards and individual directors, investors, and investors’ advisors, and executives. The behavioral perspective represents an essential stream in criminology, including in relation to white-collar crimes.¹² It has supported analyses of statutory changes in the default rule putting to the test contractarian predictions inspired by the Coasian theorem.¹³ It has also supported the analysis of decisions relating to regulatory interventions. For example, the widely adopted requirement to “comply or explain” in relationship with corporate governance codes can in itself, in my view, be theorized as a “nudge” theory, a libertarian paternalist enterprise whereby private and public actors attempt to modify the choice architecture of people or organizations to move them in directions that will improve them.¹⁴ The expression “comply or explain,” rather than a more neutral “apply or explain,” framed the default as the more desirable option. The default set in the corporate governance code itself serves as a reference point: agreeing on a lower bar will be seen as a loss by some and gain by others, and since losses loom larger than gains according to the prospect theory,¹⁵ gap in evaluations are expected, reinforcing the stickiness of the default.

A reconception establishing distance from a narrow understanding of rationality, and critical of the categorization popularized by Tversky and Kahneman of observed behaviors as “mistakes,”¹⁶ has recently become more prominent.¹⁷ This “third wave” recognizes that, because the world of business, economics, and finance is not governed by unchanging scientific laws, there is no objectively “right” answer to discover through a rational process of statistical inferences. Different people will make different legitimate assessments and arrive at different logical conclusions based on the same facts. Another oversight from the second wave is that individuals often do not – and cannot – optimize. But this does not necessarily means that they are irrational and victims of “biases” outlining deviation from superior “rational” behaviors. As stressed by the economist John Kay and Mervyn King:

Many so-called “biases” are responses to the complex world of radical uncertainty... Humans are successful at adapting to the environment in which they find themselves, and have not evolved to perform rapid calculations of well-defined problems at which computer excel. This is because the problems which humans face [such as] conducting international trade negotiations, are not well-defined problems amenable to rapid calculation.¹⁸

Many corporate decisions, especially those with a social or affective component, are made in a condition of “uncertainty”: it is impossible to model hiring or large-scale strategic business decisions. It is also next to impossible to assess after the fact whether it was the optimal decision to make. Decision-making under uncertainty cannot be the same as decision-making under “risk” as one can no longer rely on assigning probabilities and deliberate, logical, information processing, to support “analytico-rational” beliefs.¹⁹ Other, intuitive-experiential, tools, such as narratives are then legitimately relied upon to provide sufficient faith or conviction to act.²⁰ Directors and corporate executive, like humans, indeed face “situations” rather than problems:²¹ this distinction is particularly operative as artificial intelligence (AI), which is a powerful problem-solver, develops.

The “third wave” remains rather marginal in the corporate law literature.²² That the field resists putting into question the paradigm of the rational model actors is not surprising when one takes into consideration the historical significance and acceptance of the agency, informational, and more generally the standard micro-economic framework in the academic approach of corporate law and corporate governance. At least light has been shed on how the “second wave” focuses on a narrow range of problems because of its methodology centered on measuring decision-makers’ deviation from axiomatic rationality. This still-emerging line of research has opened to possible fresh enquiries, but only slowly develops and very much in the shadow of the towering pioneering legacy of Tversky and Kahneman and their “TK model.” This chapter will therefore first and foremost chart the rich perspective on corporate law and governance under the TK-model and its focus on deviations from axiomatic rationality.

This chapter will explore what behavioral legal analysis has brought to corporate law and corporate governance so far, dispel possible misconceptions, and sketch future promising research avenues.

Section 2 discusses behavioral economics research on imperfect information and decision-making. It presents the relationship between “bounded rationality” and risks of ill-judged executive, monitoring, or other business decisions. It also sketches more recent studies on the corporate risks entailed by “bounded ethics.” Of special interest from a policy perspective are the risks of corporate wrongdoing by corporate agents attached to doing good and to being perceived as good people. This section stresses that, while behavioral economics tends to focus on individual behaviors, corporate culture and corporate communication from and to executives as well as involving employees, interact with such behavior. Any effective deterrence strategy must take into account how, in addition to formal sanctions and the social discourse that relies on the expressive channel of norms,²³ what explains organizational misconduct may sometimes be found in individuals’ desire to perceive themselves and to be perceived as ethical, as well as the role of emotional reactions.

Section 3 assesses what insights behavioral economics has so far offered on the behavior of by various corporate constituencies. It further considers commonplace but (I will suggest) often misguided efforts to justify how these insights call for corporate law reform proposals. Section 3 also documents how judicial assessment of wrongful behavior by corporate individuals or collective entities would benefit from a behaviorally informed description of motivations.

Section 4 considers what I consider existential challenges for the field. The fact that the bulk of the research lacks predictive and explanatory validity dwarfs the potency of the Law and Behavioral Science approach. It is a limitation it shares with Law and Economics. But there are also differences. The oversimplification of economic models and their internal validity represents a methodological strength in” designing rigorous models.

However, simplified designs weaken the external validity of experiments aiming to capture how humans actually reason and behave. In addition, while the skepticism of the behavioral approach to the achievements of unconstrained contractual freedom makes it regulation-friendly, little reliable policy guidance can be inferred from it, overshadowing its influence. The experimental dimension of the discipline is further encumbered by the traditional design challenges and external validity.

Section 5 makes the case that these issues do not mean that the behavioral approach lacks the potential to flourish. Most recently, behavioral analysis of law has initiated a reassessment that provides a positive agenda for the field and the opportunity for the definition of scientific methods and ambitions.

Section 6 concludes by pointing towards possible directions for fruitful developments. It highlights the research potential of a key emerging subject matter for behavioral legal studies: the interaction between automated agents and people, and the redefinition prompted by AI of what rational responses to situation are.

2. Frameworks for Corporate Governance Risk Analysis

Fifty years of research have documented how available information, cognitive ability, and time limitations constrain how people make decisions. In particular, human ability to engage into computational reasoning is limited. Though other interpretations are possible,²⁴ this has given support to the Second Wave's view that humans miss out in a predictable way on rational decisions that would yield the maximum benefit.²⁵ This applies to individual directors, officers, and shareholders as well as collective bodies such as corporate boards and committees. Behavioral analysis of corporate law and governance collects experimental evidence of "deviations" from optimal choices. The task then becomes one of developing recommendations for ways to correct these deviations.

The scope of the analysis of human boundaries and their consequences has expanded. Behavioral economics has been concerned with people's limited ability to make economically rational decisions, possibly unintentionally overlooking their self-interest in a way that neo-classical economics does not anticipate. More recently, behavioral ethics has evidenced people's inability to fully recognize the moral aspects of their behavior, while thinking of themselves and wanting to be thought of as morally good actors. This has led to a recognition—in the same deviation vein from a fact of the matter—that "bounded ethicality" is also at play.²⁶

The behavioral approach sheds light on risks that are ignored by traditional corporate governance. Identifiable streams of work, with distinct methodology and ambitions, have started to coalesce. Just as the inaugural "bounded rationality" framework has recognized the limits of supposedly rational behavior, so too the further "bounded ethicality" framework documents that the intention of behaving ethically may mask conduct that is, in effect and outcome, unethical.

There are reasons to recognize that both frameworks' focus on deviation and mistakes on behalf of the decision-maker gives too much credit to the axiomatic type of rationality, though it is only relevant in specific contexts that are not representative of the diversity of human issues. However, the bounded rationality and bounded ethicality frameworks dominate the field and the following sections present the work done in that spirit.

2.1 The Bounded Rationality Framework

2.1.1 Partial Observations and Suboptimal Decision-Making

Decision-making requires the use of scarce resources for four purposes: (1) observation, and selective taking in of information; (2) memory, and the storage of information; (3) computation, and the manipulation of information; and (4) communication, and the transmission of information. In economic parlance, the first two stages relate to the capture of information and formation of beliefs; the latter two relate to making judgments.²⁷

The dual-process model, popularized by Kahneman's best-selling book, *Thinking, Fast and Slow*, built on his research with Tversky. This psychological model differentiates between two types of reasoning. Most judgments and decisions in life are intuitive, performed by "System 1" which is fast, automatic, largely effortless, emotional, and can operate on parallel levels. Those decisions can however be overridden by "System 2" thinking which is slow, controlled effortful, rule governed, and emotionally neutral.²⁸

According to this line of experimental research, System 1 is prone to predictable biases and other limitations when compared with the rational and cost-benefit analysis model, which is paradigmatic in the corporate context.²⁹ When activated, System 1 can harm an individual's self-interest because the pros and cons are not fully calculated. Consequently, the individual displays biases relating to his or her predilections based on the availability heuristics: for example, because of media coverage, the risk of a terrorist act may be (incorrectly) perceived as greater than the risk of a stroke. Other well-recognized phenomena are: confirmation bias; overconfidence bias; attribution bias; valuation biases (such as loss aversion, endowment effect, status quo, or framing impact); and social signals heuristics (such as expert recommendation impact, reactive devaluation, anchoring availability bias).

System 2 is, however, also likely to concoct post hoc justifications for decisions. In other words, both Systems 1 and 2 may lead to decisions that are later regretted. A more recent version of the dual-process model suggest that corrective deliberation happens mostly when multiple "factions" of intuitions compete and System 2 acts as an arbitrator.³⁰ In the end, reality is complex and Simon suggested to recognize that market actors very much "satisfice" at the interplay between sufficing and satisfying.³¹

2.1.2 Relevance

The bounded nature of rationality has relevance for corporations because the biases described above will impact many of the tasks and optimization of resources that corporate governance seeks to embrace. This is true, whether these tasks relate to monitoring corporate hygiene (e.g., internal risk control, financial statement) or performance, approving a strategic direction and risks, or dealing with executives (appointment, dismissal, remuneration, separation of roles executives and non-executives) and stakeholders. In all these instances, directors make decisions on behalf of shareholders. The expectation is that directors will strive for well-informed, careful, and systematic assessments. However, all the usual cognitive limitations are likely to be present, compounded by group dynamics.³² CULTURE – EVA PIECE In addition, not all decisions require reasoning based on quantifiable information and analysis. Some require more intuition, and should therefore also be supported [REFERENCE GIGERENZER].

2.2 The Bounded Ethicality Framework

The ethical dimension of decision-making has received growing attention for the past two decades. It has been increasingly recognized that beyond judgment and decision-making, “perceptual, cognitive, and social cognitive processes are bounded in similar, systematic ways that lead to gaps in observation and errors in decision making.”³³ Behavioral ethics research has provided evidence for/revealed mental processes that disconnect actual behaviors and the evaluation of these behaviors by their authors. While directors intend to behave ethically and are willing to sacrifice their own interest for the benefit of others, psychological distortions, such as ethical self-concept maintenance, may lead these very individuals to adopt behaviors that in fact maximize their self-interest.³⁴ Psychological biases enable them to maintain an untouched view of their ethics even if they promote their materialistic self-interest.³⁵

“Moral fatigue” captures the insight that more cognitive resources are needed for ethical than for unethical behavior: depletion leads to increased cheating.³⁶ Though more deliberation time increases honesty in response,³⁷ the pressure and the competition that characterize the corporate environment limit this opportunity. Furthermore, unethical behavior appears to correspond to intuitive automatic behavior, at least when there are no clear victims,³⁸ which is the case when directors make decisions that will harm shareholders unknown to them

In addition, interests and motivations have an impact on memory, perception, and other basic cognitive skills. They can create truthful “moral forgetting,”³⁹ whereby forgetting what one has done, or been told, allows one to maintain the belief of having acted ethically. In practice, this process affects physiological responses, like vision: in ambiguous settings, an individual’s attention shifts toward selected information.⁴⁰

Importantly, ethical initial behavior does not necessarily lead to consistent more positive behavior. It may also lead to less positive behavior. This is more likely to be observed when individuals think concretely (versus abstractly), or focus on progress (versus commitment and underlying values).⁴¹ The self-serving tendency can be observed supported by a motivated narrative based on consequences, and fairness that enables the individuals to maintain a coherent and positive view of their own self,⁴² and justify “why they do it.”⁴³ Moral self-licensing is at play.⁴⁴ It impacts the cognitive processes such as the visual perception, memory, and selection and categorization of available information to make sense of the world, in what has been described as “motivated cognition.”⁴⁵ As a consequence, the meaning of the behavior is seen through a licensing lens and no longer seems immoral.⁴⁶ An explanation is that acquired “moral credentials” cast light on the present behavior. Typically, when a director faces a decision that is ambiguous in terms of ethicality, disambiguation will be in line with past behavior. For example, when two explanations compete (e.g., firing a CEO because of sexism or racism versus her incompetence), past behavior that is not sexist or racist can invalidate the present illegitimate explanation in the mind of the decisionmaker, and support their confidence in the legitimacy of their present decision.

A separate form of moral licensing derives from an entitlement to engage in immoral behavior thanks to credit gained in past moral behavior. Like a moral bank account, past good deeds establish more credits that can be used to purchase the right to do bad deeds with impunity.⁴⁷

More generally, in a state of “moral dissonance” where individuals are at least partially aware of their wrongdoing, they will find justification for their decisions. Moral credit is one form. There are others. For example, a director might recognize that he or she is exploiting a conflict of interest to achieve a personal benefit but may excuse the behavior by reasoning that is a limited benefit, that it is merited by hard work, or that it seems that everyone does it.⁴⁸ Self-deception also affects the way in which individuals assess their own actions and motives and leads them to believe that they act more ethically than they actually do.⁴⁹

Justifications come more easily when the rules are vague and uncertain. Ambiguity in contractual provisions or vagueness built into legal standards such as “fairness” typically provide moral wiggle-room: provided they can

find an ethical interpretation of their behavior,⁵⁰ individuals are able to maintain their ethical self-conception.⁵¹ Experiments show that promisors are more likely to adopt a self-serving interpretation of ambiguous contractual provisions when facing losses than they do when facing gains.⁵² That vagueness exacerbates wrongdoing and promotes self-interest stands in contrast to conventional economic analysis that postulates that greater uncertainty with the same expected sanction should increase deterrence and limit wrongdoing.⁵³

This is even true of non-executive directors, who are supposed to be free of bias in favor for the company and, indirectly their own benefit. Paradoxically, research shows that although individuals who are defined, either by themselves or by others, as “objective” may also more be likely to reach a decision that promotes their self-interest without being aware of their actual non-ethical motivation.⁵⁴ It has been suggested that contrasting behavior can be observed depending on whether the ethical characteristic is framed as evidence of commitment versus progress towards a goal. If “exercising objective judgement” is framed as a label and a commitment, it is likely to prompt consistency in future behavior. By contrast, if it is framed as progress toward the goal of being objective, the agent may act as if licensed (and switch to other goals, like maximizing individual gains).⁵⁵

The well-researched observation that people misbehave only to the extent that they can maintain their self-conception of being honest⁵⁶ is not incompatible with people acting on a conflict of interest. It is possible to avoid recognizing that there is a conflict at all,⁵⁷ especially since conflicts of interests can be not monetary but more subtle, like favoring a friend. Along these lines, gains to others,⁵⁸ or gains shared with others,⁵⁹ are more powerful than one’s own gain in prompting agents to commit wrongdoing. Keeping the benefit to others, or the intent to save one’s company, as the main motivator enables a person to maintain their ethical self-conception while engaging in unethical behaviors.⁶⁰ Sam Bankman-Fried, the founder of crypto exchange FTX who was sentenced to 25 years in prison in 2024 for fraud, provides the example of an individual who seemingly engaged in unethical activities while deluding himself he was going to use the gains to help others.⁶¹ More generally organizational misconduct is prone to salient pro-social justification, as it often benefits the company and fellow employees.⁶²

Corporate culture, and the shared understanding of what is right and what is wrong that it conveys, has a similar potential corrupting effect. People rely on intuitive decision-making processes to make most decisions, and organizations influence them by shaping the decision-making environment.⁶³ For instance, at Enron, striking deals was given higher value than fulfilling the resulting contracts: deal-makers had “managing director” titles mimicking Wall Street investment bankers, while persons in the role of fulfilling the contracts were referred to as part of the “butt-crack business.”⁶⁴ It may be noted that the rational-choice paradigm may account for the way corporate culture impacts behavior:⁶⁵ an organization’s culture is likely to shape its incentive structure, and indirectly facilitate unethical behaviors.⁶⁶ From a behavioral and institutional perspective, what attracts attention is how the shaping takes place. Corporate social and moral norms are not primarily sculpted by expressive law:

companies are the dominant institutions in their employees’ daily lives and have the greatest ability to affect the decision-making environment in which their employees decide whether to engage in organizational misconduct.⁶⁷

This section has described the way in which bounded rationality hinders the likelihood that a decision will maximize the economic interests of the decision maker or the constituency an agent represents. This resonates with the mandate of corporate directors to pursue the success of the company, and establishes the existence of possible hurdles that should legitimately be addressed. However, the fact that rationality is bounded in the way it operates does not provide any assessment of the ethical validity of a decision. On this front, the behavioral ethics approach, and the notion of bounded ethics, ruptures traditional economics, though it is notable that analyses of the incentive structures in the context of ethical decisions, and assessment of the quality of

judgment in terms of “biases” and “deviations” as compared to an optimal solution, remain prominent in the legal literature on the topic. The departure may therefore not be radical.

3 Behavioral Studies On Main Corporate Constituencies

This section offers an overview of the literature on behavioral findings as to various corporate actors. These insights result in part from empirical or experimental studies geared towards the corporate environment, and in part from more theoretical endeavors to apply more general findings to the specific business environment. The findings are largely reported in a rational choice framework, focusing on biases and deviation as compared to optimal rational and ethical behaviors. Authors in the field sometimes stress the importance of their work as a guide to judicial assessment of behavior. This is particularly justified when judges are able to rely on behavioral insights to better assess the reality of the motivation, which is instrumental to allocate liability and decide remedies. More often, however, authors highlight the policy implications of their findings: a cautionary eye may be required here for reasons developed in section 4.

3.1 Board

Board members interact and make decisions as a group, which is significant from a behavioral perspective given the specificities of group dynamics. In addition, the role of non-executive directors also calls for specific behavioral observations, regarding conflicts of interest in particular.

3.1.1 Collective Decision-Maker

Board decisions need to be the product of an exchange of views.⁶⁸ A successful board operates as a team. There are arguments to support the view that this form of organization favours a particularly high level of rationality in the decision-making. And the positive side, higher levels of critical evaluative judgments and group synergies are able to improve the quality of the decision at a level superior to that which the best individuals in the group could achieve.⁶⁹ This has led to the congratulatory comment that “corporations are well-served by group decision-making at the top.”⁷⁰

However, it is also documented that homogeneity in the group will endanger these benefits as phenomena known as “group think” and “polarization” creep in.⁷¹ Biases are reinforced rather than challenged when the composition of the group is uniform. As a consequence, mistakes are validated rather than exposed.⁷² This phenomenon is stronger the more uniform the group is in terms of racial, gender, and class composition: insulation and homogeneity strongly correlate with defective decision-making.⁷³ This observation is presented as pointing in favor of more diverse boards that encourages dissent and challenge.⁷⁴ There is some evidence that opening boards to women has a positive effect on the group dynamics as male directors attend more board meetings when the board is more gender diverse,⁷⁵ as well as on the quality of deliberation⁷⁶ by empowering “constructive dissent” that can lead to “board unity,” which is “essential to setting a clear strategic direction and to overseeing risk and resources.”⁷⁷ Female directors, some research suggests, are also more active and independent in monitoring management, more likely to engage with the stakeholders, to show more attention to risk oversight and control, more likely to be concerned with social responsibility.⁷⁸

It is also worth noting that gender and racial diversity are hardly the only kinds of pluralism likely to be effective in debiasing board decisions and protecting against groupthink. Class differences may trump racial and gender differences as proxies for distinctiveness of perspective.⁷⁹ Hence the suggestion that broadening the board (even by way of mandatory rules) to include directors elected by employees and other stakeholders would improve board deliberation.⁸⁰ Some business leaders, for example, have suggested that the resilience of Germany in the face of the global financial crisis is owing, at least in part, to German companies’ inclusion of

employee representatives on supervisory boards. But behavioral research is quite thin in this area, with insights coming from extrapolating from behavioral research regarding political differences among members of groups, the creation of in-group identity, and the salience of the tendency for reciprocity.⁸¹

It remains the case that the benefits of diversity will have to be measured against the possible costs of diversity, including a less streamlined decision-making process and less intragroup trust, at least initially.⁸² A balance may be found with “enough diversity to encourage the sharing of information and active consideration of alternatives, but enough collegiality to sustain mutual commitment and make consensus-reaching practicable.”⁸³

In addition, from a behavioral ethics perspective, the value of the group dynamic needs to be paired with a mechanism that protects the integrity of the decisions. Though individuals who are observed are less likely to cheat and more likely to conform,⁸⁴ there are converging findings showing that group behavior features specific characteristics. Unethical behaviors are more likely when the setting is collective and the observed behaviour is a group behavior.⁸⁵ This can be explained at different levels. First the possibility of having one’s action observed decreases within a group,⁸⁶ and groups tend to operate in silos shielded from outside influence.⁸⁷ Secondly, group deliberation appears to be conducive of more arguments likely to justify dishonesty.⁸⁸ Thirdly, there is more opportunity for “ethical free riding,” understood as benefitting from other people’s rule-violating behavior, and letting them take the responsibility without violating the rule oneself.⁸⁹ In addition, pursuant to the “pay-off commonality” principle,⁹⁰ people, including corporate agents, are more likely to be emancipated from their principles or mandates when actions benefit third parties, including stakeholders, in the corporate setting.⁹¹

These elements qualify the view that “internal team governance structures act as a substitute both for external monitoring by a hierarch and for legal sanctions.”⁹² They call for preserving the board’s group dynamic, but also for imposing individualized responsibility. Increasing the responsibility assigned to individuals would (according to this view) also increase personal accountability for the board’s decisions, with possibly individualized responsibility based on expertise.⁹³ In a litigation setting, counter- and cross-action in responsibility for breach of the duty of loyalty among board members could also be contemplated,⁹⁴ knowing that, though opinions go director by director, breach of the duty of care is usually understood as a collective breach.⁹⁵

3.1.2 Independent Directors

Though the appointment of independent directors has become a staple of good governance to limit conflicts of interest and misappropriation of corporate assets, empirical evidence as to their impact on the performance of the company is unclear.⁹⁶ While the economic explanation usually rests on the limited monitoring these non-executive directors can provide for want of precise information on operations, a behavioral explanation is also plausible. Because of the definition of independence, subtle conflicts of interest may persist. When group members are challenged by non-group members (e.g., shareholders), the group members tend to defend and defer to their fellow group members.⁹⁷ Whether they are independent directors or not, they are board members. Such subtle conflicts will probably not be noticed by the independent directors, who will probably not even intend to promote their or their group’s personal interest while nevertheless giving in to the conflict.⁹⁸

Typically, relying on “grey” directors who hold managerial positions in other firms, but who are not insiders of the firms in which they sit on the boards, does not pass the scrutiny of behavioral ethics findings.⁹⁹ Such directors tend to display a sympathy for, and some degree of solidarity with, the group to which they belong¹⁰⁰ as well as some sense of solidarity. “In contrast with insiders, who are aware of their inherent tendency to side with management and can therefore consciously impose internal restraints on such support, ‘grey’ directors lack such awareness and may end up weakening the monitoring of management.”¹⁰¹

It is noteworthy that independence and professionalism have been described as aggravating factors: the self-perception of “objectivity” tends to mask the conflict of interest for the individual.¹⁰²

Also noteworthy is the tendency to defer to authority figures, which may explain the low level of monitoring and challenges by the board of powerful CEOs.¹⁰³ More generally, there are various psychological traits such as contrarian nature, or the absence thereof, that makes it difficult to provide an objective examination on management.¹⁰⁴ In addition, where there is no obviously identifiable “victim”, or the victim is too remote to be clearly in focus, the susceptibility to wrongdoing is increased.¹⁰⁵ One possible way of improving the situations is, therefore, to encourage ties and interactions between independent directors and minority shareholders.

3.2 Investors and Investors’ Advisors

While recent experimental studies have focused on shareholder’s inclination to support environment, social, and governance (ESG) provisions,¹⁰⁶ the bulk of the literature focuses on the investment stage and on investors’ advisors.¹⁰⁷

3.2.1 Overconfidence

Irrational overconfidence occurs when one erroneously believes in inflated chances of success arising from any particular decision. The reasons for this bias include the tendency of humans to underestimate the likelihood of small risks, to overestimate the likelihood of salient risks, and to misjudge risks due to confirmation bias (that leads us to ignore facts that do not match our preconceptions, and to give more importance to those that do).¹⁰⁸

The predominance and persistence of favorable recommendations by sell-side securities analysts is an example of this phenomenon.¹⁰⁹ From a non-behavioral perspective, this tendency is understood as being driven by a vested interest on the part of the analysts and the companies whose stock is being pushed, or the analysts’ hope of endearing themselves with issuers in the hope of gaining business. From a behavioral perspective, the tendency may be understood in terms of natural selection: the issuer may provide privileged access to information to an analyst who is enthusiastic about its stock. As a consequence, the analyst’s positive recommendation will be more visible and followed, benefitting the issuer.

Both perspectives may be relevant but they each call for different policy interventions. If the traditional conflict-of-interest explanation predominates, the law should focus on regulatory disclosure of conflict requirements (knowing that behavioral issues also plague disclosures)¹¹⁰. If these measures fare poorly, it means that the cause is not so much a conflict of interest but rather a matter of overconfidence. An overly optimistic analyst is not being dishonest, yet might be wrongly accused of conflict of interest. A proper regulatory response would then be to rely more on educating all parties so that they are aware of the dangers of overly favorable recommendations.

3.2.2 Disclosures

Behavioral research has documented the ways in which disclosure does not achieve what rational-choice theory would assume. Humans are easily overwhelmed by information and the potential benefits of disclosure can be neutralized by information overload.¹¹¹ Typically the amount of data released in ordinary financial disclosures can overwhelm most unsophisticated investors.¹¹²

In addition, other behavioral traits also undermine the effect of disclosures. First, investors frequently engage in herd behavior in markets: rather than using their rational analysis of available information, they follow the decisions of other investors.¹¹³ Irrational risk tolerance is another example of a human bias that undermines the efficiency of disclosure as a means of protecting the interests of consumers.¹¹⁴

Furthermore, once financial advisors have given disclosure of their conflict of interest, they may experience moral license to act more selfishly—while investors might feel they ought to follow the recommendation in order not to demonstrate distrust towards the person who has been candid about the conflict.¹¹⁵

3.2.3 Independence

Glass Lewis and Institutional Shareholder Services, to name two of the largest, are proxy advisory firms that provide advice to institutional investors on voting, and in parallel advise firms in respect of which the voting occurs. Recommendations, either to vote with the management or to support an activist's proposal, may raise suspicion, as such firms have historically found themselves in a textbook conflict of interest.¹¹⁶ The SEC in the US and the Shareholders' Right Directive II in the EU have tried to overcome the tension created by the prospect of a (more lucrative) job at a hedge fund, which represents a plausible incentive for proxy firm analysts to tilt the voting direction towards the funds. Regulating extensively this revolving door mechanism would have been vain, but using a pragmatic approach, recommendations of proxy firms are not to be given weight when used as evidence in court.

3.3 Executives

The law and behavioral studies literature has mainly focused on two traits: managers' overconfidence and confirmation bias, both usually characterized as a distortion from rational decision-making. Some dissenting voices have stressed that the characteristic may be normal and valued by shareholders when it comes to top executives.¹¹⁷ The debate on the nature of the corporate purpose has opened up to a large number of studies documenting behavioral aspects of stakeholderism.

3.3.1 Overconfidence

Research has shown how executives' decisions may be impacted by overconfidence,¹¹⁸ with more risks taken in the executives' own investments and the decisions made for their companies.¹¹⁹ As stated by Avishalom Tor, it also "helps explain the volume, type, and financing of mergers and acquisitions activity" and is "linked to aggressive accounting and an increased likelihood of financial misreporting."¹²⁰

Corporate finance literature has empirically established that, connected with this observation regarding overconfidence, managers have a tendency to pursue empire-building in mergers and acquisitions, even if this is value-reducing.¹²¹ Another piece of evidence of managers' overconfidence based on empirical data is their failure to diversify their options in their company stocks.¹²²

3.3.2 Confirmation Bias

Confirmation bias is likely to impair executives' assessment of the strategic position of their firm. It regularly combines with overconfidence,¹²³ leading executives to become "heavily invested in those beliefs, and hence disinclined to seek out information that would suggest that they might be wrong."¹²⁴ Some infamous business decisions derived from erroneous managerial perceptions such as the early financial difficulties of Euro Disney Paris in the 1990s caused by an overestimation of potential attendance;¹²⁵ fraud allegations at Apple, TimeWarner, and Polaroid;¹²⁶ and the general "underperformance of companies undertaking mergers."¹²⁷

It has been suggested that courts should be able to scrutinize serious defects in the decision-making, even when the managerial decisions were informed and not self-interested.¹²⁸ Paring down the business judgment rule may however chill risk-taking. It may however be recognized that extreme negligence, potentially rising to the level of willful blindness, should be actionable under the duty of oversight.

3.3.3 Conflicts of Interest

Behavioral studies have identified a tendency to promote self-interest when the behavior will benefit others as well. This phenomenon is illustrated by the debates on corporate purpose and its transformation into an aspirational “mission-purpose”. The mission-purpose is informed by the reason for a corporation’s existence while bonding employees, as well as external stakeholders to the company.¹²⁹ Such multi-faceted corporate purpose opens up justifications for a range of decisions, without concrete criteria to choose among them. There are many ways to maximize utility and the multiplicity of legitimate purposes creates possible zones of insulation for managers to make decisions while being held to a legal standard of accountability.¹³⁰ Pursuant to behavioral insights, such open-endedness may lead management to find justifications to choose a path aligned with self-interest but sub-optimal for the firm.

This also applies in situations where agents will engage in wrongdoing out of loyalty to the firm. A famous illustration is the Volkswagen “Diesel-gate” scandal: engineers and executives set up a device that enabled the car to switch to a “virtuous” mode of low emission and high fuel consumption whenever the regulator’s highly specific test pattern was identified.¹³¹ Executives did not directly benefit from their wrongdoing but explained they acted out of loyalty to the firm, a temptation that is magnified in a competitive environment.¹³² A similar story can be told about Boeing and the 737 Max scandal.¹³³

It should of course be recognized that bright-line rules are not always possible, but it may be possible to set up ex ante mechanisms (authorization or catalogue¹³⁴) rather than relying on ex post liability mechanisms. It also appears that corporations should be able to sanction their agents for wrongdoing in order to discourage misplaced loyalty.¹³⁵

4 Challenges

That the behavioral approach has since its inception suffered from some limitations is widely acknowledged. Is the depth of these limitations such that they undermine the entire field? I believe this is not the case but the behavioral legal analysis would benefit from a better-grounded methodology, and from more clearly identified limits to its regulatory guidance power.

4.1 Methods

The effort of behavioral legal analysts to replace standard microeconomic assumptions with more realistic, yet still simple assumptions, has led to unsatisfactory trade-offs.

4.1.1 Oversimplification of Behavioral Insights

The most damaging compromise resides in the adoption of an oversimplified view of human judgment and decision-making.¹³⁶ Many studies embrace vague labels rather than delve into the multiple psychological processes and other non-psychological factors that may cause or account for behaviors. What may in part explain the situation is that the majority peer-reviewers for legal journals publishing behavioral studies are trained as economists and do not rate mediation analyses. The Tversky–Kahneman model and the opposition between Systems 1 and 2 has become a staple assumption, when it is only one model among others, such as the fast and frugal heuristics heralded by Gerd Gigerenzer,¹³⁷ the fuzzy trace theory, etc.

In any event, behavioral lawyers are mainly consumers of scientific evidence: they build models on the basis of behavioral tendencies revealed by empirical studies, rather than on specific empirical data. This approach offers tremendous flexibility to make hypotheses but also requires further empirical validation. Otherwise,

extrapolation is too hazardous, which limits the chances that the prescriptions will have the desired effect. Claims that are presented as descriptive often ignore heterogeneity in the studied group, interactions among variables, emphasize the existence of an effect (over the size of effects) and their practical significance while too often leaving the external validity unquestioned. Even when researchers are engaged in experimental studies, the replicability of the findings has not always been given the attention it requires to establish scientific credibility.¹³⁸ It should however be stressed that in the last decade pre-registration following a pilot study has become the norm: this means that researchers in effect do replicate and, in any event, give others the opportunity to check and replicate.

4.1.2 From Economic to Behavioral Perspective

A good proportion of the academics active in the field of behavioral analysis of law are trained as economists who have embraced behavioral economics to bring more realism to law and economics but have not engaged in a broad re-appreciation.¹³⁹ How does that translate? Behavioral economists, while focusing on exceptions, have not jettisoned a basic economic orientation based on “rationality” narrowed down to rational choice theory, including cost-benefit calculations. Hence this literature mostly taps into cognitive psychology research to develop explanations of how calculations can go wrong in predictable ways, causing participants to engage in mistakes or wrongdoing that is not in their objective self-interest. While the human rationality assumption is sound, the economic approach is inherently reductive as compared to the reality of the human experience. Though behavioral law and economics was supposed to bring more realism to law and economics, “the worldview in which people are either making mistakes or getting it right isn’t much more realistic than the one in which people are always getting it right.”¹⁴⁰

First, social, cultural, and identity dimensions need to be taken into account to reflect how people see the world: there is no unique version of “reality,” as sometimes assumed in economic reasoning. It is now increasingly acknowledged that people assess the degree to which an intended behavior is coherent with cultural norms, values, and beliefs, and it is also assumed that people have internalized these social norms, values, and beliefs in their utility function. However, a more nuanced approach to the behavioral insights leads to the observation that people’s deliberations around social norms, values, and beliefs are not assimilable with the rational choice-theory model. Social, cultural, and identity norms largely shape the perception of the world and the way to think about it.¹⁴¹ There is no consensus among car drivers as to what a “lemon” is. For some car lovers, a vehicle may be assessed as low-quality or defective because some of the original upholstery and fitting have been replaced and are not “original,” while people primarily interested in using the car to facilitate their travel may merely focus on mechanical performance.

Second, a fundamental blind spot is that humans face a different kind of problems. Very much in a law and (behavioral) economic tradition, studies focus on the decision-making to respond to already framed “problems” that assume a “correct” understanding of the world and “categorization” of the facts. By contrast, and now recognized by the nascent third wave of law and behavioral studies, human beings face “situations” and may frame “problems” such as how to expand a business while retaining an information corporate culture, based on a different understanding of the world and priorities.

Third, human rationality is more diverse than the economic quantitative approach. Communicative rationality and the capacity to engage in argumentation, or abductive reasoning and making decisions on the basis of reasonable beliefs, are particularly useful when information is limited and does not lend itself to probabilistic inferences. They are valuable to decide on aspects of the corporate strategy, or the terms of an international sale agreement,

4.1.3 A Methodological Gap

In the end, a long-standing challenge for the behavioral perspective is to navigate the legacy of its relationship with the law and economics approach. This question is in itself a critical avenue of epistemological research that has not been much investigated, and goes beyond the behavioral work relating to corporate law and corporate governance. It is particularly acute in that field because of the centrality of economic and financial reasoning. While behavioral economics has an established methodology and identified publication outlets, as have experimental psychology and behavioral organization studies, behavioral legal analysis research uneasily navigates between these three poles. It has not yet developed as a distinct recognized discipline.¹⁴² This limits the attraction of the field for researchers, and therefore also constricts its role and its impact in the scientific conversation.

Clarify the assumptions of the behavioral legal approach would represent a crucial initial step towards scientific autonomy. The behavioral ethics branch of law and behavioral studies has distanced itself from the economic approach and has accepted the assumption that good people nevertheless do evil things. In addition, it could be recognized as a basis that normal people do deliberate over many decisions but in a manner that is quite different from that of the theoretical economic rational man,¹⁴³ and towards purposes that are not necessarily—and should not necessarily be—those identified in the economic approach. A second step might be define the main ambitions of the field (e.g., assessing proposal for institutional interventions) and to design discipline-specific empirical and experimental methods by capitalizing on more mature disciplines.

The approach suggested here would embrace the profound normality of observed behaviors, including illegal, unethical, or socially irresponsible behaviors, in and by corporate organizations. It could lead to the development of a behavioral paradigm based on well-intentioned, boundedly rational corporate actors whose behavior is shaped by the social context over time.

4.2 Policy Implications

4.2.1 A Neutral Agenda

In contrast with economic rationality and its deregulatory normative agenda,¹⁴⁴ the behavioral approach does not discourage regulation. “As behavioralism has gained traction in the legal academy, the principal implication of its rise is the erosion of this antiregulatory, libertarian presumption.”¹⁴⁵

Also, in contrast with the economic analysis that offers a normative perspective towards welfare maximization in a position to steer legal reforms, the behavioral approach in itself does not.¹⁴⁶ This latter approach can however provide insights about how to create an environment most conducive to decisions supporting certain values or goals, independently established or selected.

4.2.2 Limited Guidance Power

How does this double neutrality combine with policy guidance power? “We can be sure that an antiregulatory, libertarian presumption is undeserved, but we are much less sure of the contours of the analytical space now open to us, and what to do within it.”¹⁴⁷ This puzzle is particularly challenging in corporate governance matters because of three main factors.

First, business secrecy makes it particularly difficult to observe decision-makers in action and to assess the precise behavioral issues that would need addressing. There are only few field studies of decisions in economic settings,¹⁴⁸ and economic studies of boards have often neglected actual board behavior.¹⁴⁹

Secondly, individual differences in behavior can be large and depend on a host of factors, that will be difficult to know in the abstract. This makes the question of which behaviors are to be encouraged a difficult one unless one resorts to prescribing “rationality” as a social norm specifically associated with the market and the corporate environment. The assumption, often made, is that in this context, people’s best strategic response is to maximize.¹⁵⁰ But is it in fact true that those who are temperamentally more “economically rational”—more like, in other words, the economists’ paradigm—do better in the business world than others? If that were empirically true, it would suggest that economic “rationality” is always the successful strategy, undermining behavioral experiments that suggest otherwise.¹⁵¹ On the contrary (successful) corporate leaders are prone to greater cognitive errors than the general population with regard to overconfidence, sunk cost bias (an attachment to past decisions, even when wrong), and attribution error (assuming success comes from one’s own doing rather than luck).¹⁵² Also, because of the nature of competitive tournaments for promotion and financial gain, overconfidence may be “highly adaptive” within the corporate setting.¹⁵³

Thirdly, it would be a methodological error to confuse research hypotheses, models and policymaking. Models are mere tools to generate hypotheses for empirical testing.¹⁵⁴ Models are expected to be driven by new data and theory. These findings lead to the revision of the assumptions (such as the rational actor model) underlying the model. However, even models that are more realistic remain tentative claims, not authoritative ones.

Regarding existing legal norms, the behavioral approach may be descriptive or geared towards assessment of the impact and quality of the norm. As to future norms, can behavioral findings support legislative efforts by providing guidance in crafting more effective public policy?¹⁵⁵ One has to recognize that there is a lack of empirical evidence to support the claim that a behavioral approach has in practice led to legislation or regulation that more consistently achieves the purpose for which it was enacted. A similar observation may be made about mandatory disclosures and many other policy interventions based on economic models. Their effectiveness receives little scrutiny, which illustrates the fourth factor: the prevalence of the economic perspective¹⁵⁶ and its status of social norm. The economic perspective thus frames practices as well as perceptions of what ought to be, sidelining alternative perspectives. Economic models and analyses are useful tools to point to some risks, but other problems escape this approach.

The work of trendsetters like the economists Daniel Shiller and Robert Thaler has created a more favorable environment for the evolution of this dimension of our social norms, and for a more widespread recognition of the behavioral perspective.¹⁵⁷ The development of AI may be an additional factor, given the computational revolution it enables and the question it raises about the originality of human rational reasoning.

5 AI and Future Research

As a concluding testimony to the relevance of the behavioral approach, I will briefly discuss an emerging and important avenue of research: the interaction between AI and mindful people able to process its output at a cognitive and emotional level. The field of corporate law and corporate governance lends itself to a multitude of enquiries as to whether AI is there to assist with deciding or are delegated to make decisions themselves. Novel issues are raised by the question of how to enforce the requirement that directors have a duty to make informed and reasonable decisions in the best interest of the company and how to apply business judgment rules to such AI-assisted or AI-made decisions. And this is not only because the criteria to discharge the duty of care may include using AI data-analysis to form “reasonably informed” decisions¹⁵⁸ and that there might be behavioral resistance (coined as “algorithm aversion”) more pronounced in certain settings than others,¹⁵⁹ but also because decision-makers may be required to enroll AI to correct for well-known biases (such as confirmation bias and hyperbolic discounting) and even, in a personalized fashion, for specific ones they are more prone to suffer from themselves.¹⁶⁰

The shift to algorithm appreciation appears to hinge on whether people are able to adjust the recommendations of AI—to be contrasted with the tendency of humans to over-rely on AI,¹⁶¹ only matched by human visceral inability to correct mistakes induced by automation bias and to properly monitor AI.¹⁶² In other words, a key issue is how to work with AI in “co-intelligence”:¹⁶³ do AI tools assist, advise, or have an autonomous function? How do automated agents and mindful people, who process their output at a cognitive and emotional level, interact? Work on this area remains limited, but some empirical or experimental studies show little human ability at mixing AI-based information and more traditional reasoning, and a tendency to fully rely on AI-generated advice, especially for number-heavy questions.¹⁶⁴

To engage with these questions, it is necessary to remind oneself of empirical behavioral data.¹⁶⁵ Herbert Simon (*Sciences of the Artificial*, 1969) already noted: “natural science is knowledge about natural objects and phenomena. We ask whether there cannot also be ‘artificial’ science – knowledge about artificial objects and phenomena.” More recently, as AI models, whether based on regression, decision trees, neural networks, etc. have become ubiquitous, their complexity and opacity has become clear, along with the difficulty of estimating their effect on individuals and society. It has been recognized that “animal and human behaviors cannot be fully understood without the study of the contexts in which behaviors occur. Machine behavior similarly cannot be fully understood without the integrated study of algorithms and the social environments in which algorithms operate.”¹⁶⁶

Nevertheless, some insights have been gained weight over the past decade. A first documented lesson is that humans interact with AI-automated agents (AA) in social ways, though differently than with humans. The difference pertains to the fact that emotional and social responses are reduced. Two consequences derive from this observation. First, a lower level of emotional engagement is conducive to more logical decisions, more in line with economic rationality. Typically, reactive devaluation, a bias described in Tversky and Kahneman’s work, is less likely to undermine the value attributed to an AA assessment. Second, a lesser emotional involvement is also expected to decrease inhibitions towards unethical behaviors.¹⁶⁷ Mis-reporting to the board of recommendations in a self-serving manner might therefore be more frequent than when recommendation emanates from human consultants. More generally, introduction of AI in social systems alters human beliefs and behaviors, and also creates new problems while solving others (e.g., algorithms can alter distributional outcomes – see example of dating algorithm) and the social fabric (see news report algorithms).

In practice, most AI systems coexist with humans in a complex hybrid system. A structuring distinction distinguishes between two roles for AI: to support decision-making (assistance), or to draw a conclusion on a given issue itself (delegation).¹⁶⁸ AI-assisted decisions rely on sources of information that are augmented by the additional insights AI brings to the table. The basis for the decision is therefore more diverse, integrating not only the experience and perception of the decision-makers, and “hand and paper” analysis of executives in charge, but also larger trends based on big data. By contrast, AI-made decisions entail a homogeneous method of analysis.

It is worth noting that AI assistance in decision-making, and the use of information collected and directly reported by AI-AA, may be impaired by what has been termed “algorithm aversion.”¹⁶⁹ It is not currently clear whether this behavioral resistance is reduced when generative AI is harnessed to provide an interaction that mimics the human one. What has been documented is that when AI comes on board, performance drops, because processes and routines are disrupted: only high-skilled humans and AI working together are high-performing.¹⁷⁰

The shift to algorithm appreciation is impacted by human preferences for or against use of algorithms. There is a documented reluctance to use AI in social or moral contexts. Meanwhile acceptance is increased in contexts that are perceived as more analytical or objective.¹⁷¹ Financial decisions are therefore made in a more receptive context than decisions relating to human resources and decisions as to hiring or firing a senior executive.

The effectiveness of AI in assisting decision-making appears to hinge on whether people are able to fine-tune and interpret the recommendations of AAs. However, studies document a general tendency of humans to trust (and therefore to over-rely¹⁷²) on AAs in the process of making decisions,¹⁷³ which calls for a strict oversight of the manner in which the AI data are used. The danger in this context comes from what has been described as a basic human inability to correct mistakes induced by automation bias and to properly monitor AAs.¹⁷⁴ It may therefore be expected that expertise will develop on this matter, and that companies will be able to purchase capacities to monitor and question AI.

Targeted training of directors and officers appears therefore be necessary to manage and use AI information in a manner that is productive as well as compatible with the independence expected from board members to meet the fiduciary duty of independence¹⁷⁵ or, in other jurisdictions, not to risk engaging in conducts amounting to negligence.

The question whether shareholders may impose on board directors the duty to fully delegate AI decision-making on certain issues (a move that might be understood as undermining the role of the board) is worth asking, especially in light of the Delaware *Moelis* case (notwithstanding the fact that it may appear as a hazardous risk-free change in governance).

It remains to be seen whether the progress in AI modeling of corporate behaviors not merely represents a newly updated paradigm, but, as in the case of behavioral finance, makes traditional questions obsolescent, and opens a new era. In any event, it is likely that the sophisticated probabilistic rational inferences AI allows is mostly adapted to a risky environment

Risky and uncertain environments differ from one another. While probabilities and predictions are meaningful to inform decisions under risk, this is not the case when there is no relevant data and limited possibility to learn from the past. In connection with the hiring of executives, for example, research shows there is 70% unexplained variance in performance prediction.¹⁷⁶ The corollary is that in this matter, decisions have to rely on another ground to be “reasonable.” Guessing a pattern (“overfit”) when data are noisy represents another danger and induces a false sense of security.¹⁷⁷ The now well-recognized occurrences of AI hallucinations represents yet another limit to the reliability of AI beyond well-defined and controlled usages. Such aporia underlines the place to be reserved for non-computational grounds for decision-making, and supports the use of intuition for some corporate decisions.

Looking to the future, while AI has pushed frontiers, the domain of calculability remains an open question, as well as the parts – if any – of human experience, in the corporate context in particular, that cannot be reduced to calculations.

The practical implication is that additional expertise will also be needed to choose between the various tools available, for optimal results. This includes supplementing the engineering mindset with a more philosophical oriented one. The first reason for this is that the question “Can you code?” is already becoming “Can you get the best code out of your AI by asking the right question?”¹⁷⁸ The second reason is that it may for instance be useful to remind corporate decision-makers of the strength of statistical machines at solving well-defined problems, as well as of their weakness at defining the very problems to solve in the context of a complex corporate situation. “Deep artificial neural networks are statistical machines that analyse correlations between pattern of pixels or other inputs, and they work best in stable, well-defined worlds [where large amount of data are available]. Yet the more ill-defined a problem is and the more uncertainty exists, the less successful statistical machines are.”¹⁷⁹ However, human behaviour is a key source of uncertainty: algorithms predicting attraction to romantic partners or crime recidivism do not perform better than the opinions of “lay” people.¹⁸⁰

In order to avoid a reductionist perspective, companies may develop a culture whereby corporate board members are invited, and, for more impact, incentivized, to make use of all different types of rationalities: science, reason,¹⁸¹ but also intuition and imagination.¹⁸² As already stressed, big data supposes a set of data to

analyse, which is typical of the risk management approach. In cases where there is no such data set, for example in relationship with unprecedented geopolitical developments impacting the value chain, another approach is called for. Such an alternative method may, for instance, rely on expertise at the board level, supported by a more “intuitive” style understood as supported by a feeling based on long experience, that appears quickly in one’s consciousness and whose underlying rationale is unconscious.¹⁸³

Corporate law and corporate governance scholarship strives to explain legal decision-making, to calibrate incentives, to justify its values and means. Behavioral insights are relevant to these descriptive, prescriptive, and normative perspectives. They offer explanatory insights (e.g., corporate people follow legal guidance because they believe that not doing so would be wrong, not only because of the possible sanctions). They offer prescriptive insights (e.g., a weaker sanction with higher enforcement rate leads to higher compliance than the reverse combination). They also offer normative insights (e.g., if director’s liability is not linked to the severity of the harm, and coherence is a value of the legal system, then the liability regime is flawed). Importantly, corporate decision-making requires various narratives and types of rationality in an environment that is not only risky, but also uncertain from some perspectives, and enriched by its institutional, social, and cultural dimensions.

Acknowledgment

I thank for generous and helpful comments Claire Hill, Hajin Kim, Eva Michaler, as well as Patrick Corrigan, Luca Enriques, Yaron Nili, Eric Talley, and other participants at the BYU-LSE-UW 2024 Corporate Law Roundtable.

Notes

- 1 Law and economics scholars do not dispute that human preferences are more diverse than the clear and quantifiable assumptions about individual preferences that are embedded in their reductionist models, which in turn enable to generate simpler predictions that are testable. However, the exploration of “actual” human preferences is generally left to psychologists, even if there are exceptions, e.g., Samuel Bowles, *The Moral Economy: Why Good Incentives Are No Substitute for Good Citizens*, Yale University Press, 2016. It is worth noting that psychologists rarely discuss “preferences,” and focus on “decisions,” “choices,” “beliefs,” and “attitudes”: from their perspective, a “choice” does not necessarily reveal a “preference.” See Tess Wilkinson-Ryan, “Psychology and the New Private Law,” in Andrew Gold et al. (eds.), *The Oxford Handbook of the New Private Law*, pp. 125–142, esp. pp. 126–127.
- 2 For a classical description, see Gary Becker, *The Economic Approach to Human Behavior* (1976): “all human behavior can be viewed as involving participants who maximize their utility from a stable set of preferences and accumulate an optimal amount of information and other inputs in a variety of markets.”
- 3 The seminal programmatic book is *Behavioral Law & Economics* (Cass Sunstein ed., 2000).
- 4 Psychology includes cognitive studies (i.e. the study of mental processes, of “thinking”), as well as observations of behaviors relating to judgment or decision-making. It also encompasses social psychology (i.e. the study of the role of other people on mental states and behaviors) and insights on interpersonal interactions in social cognition and social psychology experiments, as well as cross-cultural studies that have some elements in common with sociology and cultural anthropology. As has been noted “in all these, there is much—perhaps too much—for legal scholars to think about as potentially useful behavioral traits.” See Donald C. Langevoort, *Behavioral Approaches to Corporate Law*, in *Research Handbook on the Economics of Corporate Law* (Claire A. Hill & Brett H. McDonnell eds., 2012) 442.
- 5 Russel Korobkin, *What Comes After Victory For Behavioral Law And Economics?* ILL. L. R. 1653 (2011), at 1655.
- 6 Recent alarms as to the value of experimental studies invite one to stress that, like in any empirical science, the quality of the insights directly derives from the discernment in the choice of data to collect, the integrity in the data collection, and

the methodology applied to analyze the data, as well as the restraint in the conclusions drawn.

- 7 See Colin Camerer et al., *Regulation for Conservatives: Behavioral Economics and the Case for "Asymmetric Paternalism"* 151 U. PA. L. REV. 1211 (2003) at 1215–16.
- 8 The number of recorded biases keeps increasing: "noise" is one latest documented. Daniel Kahneman, Olivier Sibony & Cass Sunstein, *Noise: A Flaw in Human Judgement* (2021).
- 9 Judgment and decision-making is a field that approaches questions from normative, prescriptive and descriptive perspectives. The current field developed in reaction to work by cognitive psychologists in the 1950's and 1960's who assessed whether various idealized (mathematical) models such as information theory expected-utility theory or the Bayesian probability theory, described actual performance. After it was suggested that people were Bayesian but conservative, Kahneman and Tversky reported experiments and noted that "man is apparently not a conservative Bayesian: he is not Bayesian at all." They proposed that people make probability judgement based on a rule of thumb (heuristic) called "representativeness," typically for judging the probability of drawing a red ball from an urn, people examine the evidence and judge its similarity to different possible proportions.
- 10 See Yuval Feldman, *The Law of Good People: Challenging States' Ability to Regulate Human Behavior* 3 (2018).
- 11 Claire Hill, *Beyond Mistakes: The Next Wave of Behavioral Law and Economics*, 29 QUEEN'S L.J. 563 (2004).
- 12 E.g., Eugene Soltes, *Why They Do It: Inside the Mind of the White-Collar Criminal* (2016), an enquiry about why, beyond greed, money and fame, successful senior executives engage in myopic conduct and poor decision-making that get them convicted for white-collar crimes, based on interviews with about 50 former executives. Complex and multifaceted organizational and psychological factors appear to contribute to business malfeasance, including risk-taking personality, perceived common practice and other-regarding justifications to bridge cognitive dissonance, sense of entitlement, of overconfidence and of immunity from punishment, slippery slope behavior.
- 13 Marco Becht & Yuliya Kamisarenka, "Loyalty Shares with Tenure Voting: Does the Default Rule Matter? Evidence from the Loi Florange Experiment," 63 J.L. & ECON. 473 (2020), testing the contractarian theory in the context of a natural experiment whereby the default switched from a one-share-one vote regime to to tenure voting in France.
- 14 Theorized by Robert Thaler & Cass Sunstein, *Nudge: Improving Decisions about health, wealth and happiness* (2008).
- 15 See Daniel Kahneman and Amos Tversky, "The Framing of Decisions and The Psychology of Choice," 211 *Science* 453 (1981). The Prospect Theory Value Function plots the perceived value of an outcome (its subjective utility) against its objective value (in a currency). The S-shape of the graph shows (i) declining marginal changes in utility away from the reference point and (ii) a steeper value curve for losses than gains (loss aversion) ».
- 16 Typically, Gerd Gigerenzer has stepped away from "biases" and focused on how people make decisions in practice using limited information. He has evidenced the value of rules of thumb and other simple heuristics, termed "fast and frugal"; see Gerd Gigerenzer, *Striking a Blow for Sanity in Theories of Rationality*, in, *Models of Man: Essays in Memory of Herbert A. Simon* (M. Augier & J.G. March eds., 2004): Gerd Gigerenzer, *The Intelligence of Intuition* (2023). See also Gerd Gigerenzer, Peter M. Todd & ABC Research Group, *Simple Heuristics That Make Us Smart* (1989); see also Arie W. Kruglanski & Gerd Gigerenzer, *Intuitive and Deliberate Judgments Are Based on Common Principles*, 118(1) *PSYCHOLOGICAL REVIEW* 97 (2011).
- 17 See, e.g., Claire Hill, *A Positive Agenda for Behavioral Law and Economics*, 3 *COGNITIVE CRITIQUE* 85 (2011).
- 18 John Kay AND Mervyn King, *Radical Uncertainty: Decision-Making for an Unknowable Future* (2020) at 16–17.
- 19 See Eva Micheler, *Company Law: A Real Entity Theory* 18–36 (2021) for an overview. See also David Gindis & Eva Micheler, *Institutional Theory for Corporate Law*, working paper, 2024.
- 20 E.g., David Tuckett's descriptive Conviction Narrative Theory in David Tuckett, *Minding the Markets: An Emotional Finance View of Financial Instability* (2011).
- 21 Daniel Andler, *Intelligence artificielle, intelligence humaine : La double énigme* (Gallimard, 2023).
- 22 See however Claire Hill, *Beyond Mistakes: The Next Wave of Behavioral Law and Economics*, 29 QUEEN'S L.J. 563 (2004); Claire Hill, *Tribes and Temperament: Two Underappreciated Determinants of Market Behavior, Motivations and Beliefs*, in

- Hidden Fallacies in Corporate Law and Financial Regulation (Alexandra Andhov, Claire Hill & Saule Omarova eds., forthcoming). See also Micheler, *supra* note 17, highlighting how individual decision-making is impacted in the context of a collective organization.
- 23 See Jennifer Arlen and Lewis A. Kornhauser, “Battle for Our Souls: A Psychological Justification for Corporate and Individual Liability for Organizational Misconduct,” 2023 *Illinois Law Review*, 673, esp. pp. 677–678.
 - 24 On the adaptation of human abilities to the bulk of human issues and the fact that they are not computable, see section 4.
 - 25 For a summary of the relative role of normative perspectives (grounded in philosophical and mathematical arguments and used as standards for evaluation), descriptive ones (based on empirical psychology, allowing to call bias systematic (rather than random) deviation from normative model: bias to choose default options over other solutions that are normatively equal or better, see Genevieve Helleringer, Behavioral perspectives in Default Rules (Birke Häcker & Johannes Ungerer eds., forthcoming) and prescriptive ones (designed for improvement and related to design and practice: they include “decision architecture” or nudges to help people make the normatively better choice, see Thaler & Sunstein, *supra* note 13 (2008)). See also Jonathan Baron, *Heuristics and Biases*, in *The Oxford Handbook Of Behavioral Economics And The Law* (Eyal Zamir & Doron Teichman eds., 2014) 3, 4–10.
 - 26 See FELDMAN, *supra* note 11.
 - 27 See Roy Radner, *Bounded Rationality, Indeterminacy, and the Theory of the Firm*, 106 *ECON. J.* 1360, 1363 (1996).
 - 28 Daniel Kahneman, *A Perspective on Judgement and Choice: Mapping Bounded Rationality*, 58 (9) *AMERICAN PSYCHOLOGIST* 697–720.
 - 29 Which itself is not immune to criticism: some decisions are better than others, but it is a fallacy to believe there is one optimal decision: every decision entails choices as to which factors are maximized under the constraints. This is the justification for the business judgment rule: give freedom to make a healthy decision, with a reasonable expense of resources—what can really be scrutinized are the efforts to make a given solution, once chose, work.
 - 30 Bence Bago, Jean-François Bonnefon & Wim De Ney, *Intuition Rather Than Deliberation Determines Selfish and Prosocial Choices*, 150 *J. EXP. PSYCH.: GEN.* 1081 (2021).
 - 31 Herbert Simon, *Rational Choice and the Structure of the Environment*, 63 *PSYCH. REV.* 129 (1956).
 - 32 Literature on whether groups help or hurt decisions is mixed. REFERENCES TO ADD
 - 33 Dolly Chugh, Max H. Bazerman & Mahzarin R. Banaji, *Bounded ethicality as a Psychological Barrier to Recognizing Conflicts of Interest*, in *Conflicts of Interest: Challenges and Solutions in Business, Law, Medicine and Public Policy* 74, 75, 90–91 (Don A. Moore, Daylian, M. Cain, George Loewenstein & Max H. Bazerman eds., 2005).
 - 34 See FELDMAN, *supra* note 11, at 1–22.
 - 35 See Nina Mazar, On Amir & Dan Ariely, *The Dishonesty of Honest People: A Theory of Self-Concept Maintenance*, 45 *J. MARKETING RESEARCH* 633, 633–34 (2008).
 - 36 See Francesca Gino, Maurice E. Schweitzer, Nicole L. Mead & Dan Ariely, *Unable to Resist Temptation: How Self-Control Depletion Promotes Unethical Behavior*, 115 *ORG. BEHAV. HUM. DECISION PROCESSES* 191, 192 (2011). See also Nicole E. Ruedy & Maurice E. Schweitzer, *In the Moment: The Effect of Mindfulness on Ethical Decision Making*, 95 *J. BUS. ETHICS* 73, 80–83 (2010) (a higher level of mindfulness correlates with less cheating).
 - 37 See Shaul Shalvi, Ori Eldar & Yoella Bereby-Meyer, *Honesty Requires Time (and Lack of Justifications)*, 23 *PSYCH. SCI.* 1264, 1269 (2012) (“[B]eing able to deliberate led people to restrict how much they lied or avoid lying altogether. People can behave in an ethical way—they just need time”).
 - 38 Nils C. Köbis, Bruno Verschuere, Yoella Bereby-Meyer, David Rand & Shaul Shalvi, *Intuitive Honesty Versus Dishonesty: Meta-Analytic Evidence*, 14 *PERSPS. ON PSYCH. SCI.* 778, 791 (2019); David G. Rand, Joshua D. Greene & Martin A. Nowak, *Spontaneous Giving and Calculated Greed*, 489 *NATURE* 427, 428–29 (2012) (showing that people’s immediate response is

- more cooperative than their reflective response). See also FELDMAN, *supra* note 11, at 45–46 (discussing the literature on cooperation based on intuition reasoning).
- 39 See Lisa L. Shu, Francesca Gino & Max H. Bazerman, *Dishonest Deed, Clear Conscience: When Cheating Leads to Moral Disengagement and Motivated Forgetting*, 37 PERSONALITY & SOC. PSYCH. BULL. 330, 344 (2011) (bad behavior motivates moral leniency and leads to the strategic forgetting of moral rules).
- 40 For example: an ambiguous dice is thrown, and participants required to determine its location closer or further away from a cross, which distance impacts their remuneration as subjects, see Andrea Pittarello, Margarita Leib, Tom Gordon-Hecker & Shaul Shalvi, *Justifications Shape Ethical Blind Spots*, 26 PSYCH. SCI. 794, 795 (2015).
- 41 See Elizabeth Mullen and Benoît Monin, “Consistency versus Licensing Effects of Past Moral Behavior,” *Ann. Rev. Psychol.* 2016, 67: 363–385.
- 42 For an account see Nina Mazar, On Amri & Dan Ariely, *The Dishonesty of honest people: A theory of self-concept maintenance* 45(6) J. MARKETING RESEARCH 633, 633–44 (2008); Max H. Bazerman & Ann I. Tenbrunsel, *Blind Spots: Why We Fail To Do What’s Right and What To Do About It* (2011). See also Mahzarin R. Banaji & Anthony G. Greenwald, *Blind Spot: Hidden Biases of Good People* (2013).
- 43 In Eugene Soltes, *Why They Do it: Inside the Mind of The White-Collar Criminal* (2016), the author draws from interviews with about 50 former US executives who have been sentenced to jail.
- 44 Anna C. Merritt, Daniel A. Effron, Benoit Monin, “Moral Self-Licensing: When Being Good Frees Us to Be Bad,” *Social and Personality Psychology Compass* 4/5 (2010) 344–357.
- 45 Ziva Kunda, *The case for motivated reasoning* 108(3) PSYCH. BULL. 480 (1990). See also Claire A. Hill, *Beyond Mistakes: The Next Wave of Behavioural Law and Economics*, 29 QUEEN’S L.J. 563 (2004), underscoring that there is no one correct sense to be made of the world, though it is an implicit assumption in the second wave of behavioral law and economics.
- 46 Anna C. Merritt, Daniel A. Effron, Benoit Monin, “Moral Self-Licensing: When Being Good Frees Us to Be Bad,” *Social and Personality Psychology Compass* 4/5 (2010) 344–357, esp. 349–350. This explanation is steeped in the tradition of causal attribution. Good deeds change the meaning of subsequent behavior.
- 47 *Ibid.*
- 48 See Alain Cohn, Ernst Fehr & Michel A. Maréchal, *Business Culture and Dishonesty in the Banking Industry*, 516 NATURE 86 (2014): subjects participated in a task in which they could increase their earnings by behaving dishonestly: making the bank employees’ professional identity more salient induced many of them to cheat. In a further study, Alain Cohn, Ernst Fehr & Michel A. Maréchal, *Do Professional Norms in the Banking Industry Favor Risk-Taking?*, 20 REV. FIN. STUD. 3801 (2017), evidenced that bank employees took significantly less risk when their professional identity was primed. Authors acknowledged that the combined results of the two studies “raise the question whether the problem of excessive risk-taking is associated with problematic ethical norms rather than problematic norms about risk-taking.”
- 49 See Doly Chughn, Max H. Bazerman & Mahzarin R. Banaji, *Bounded Ethicality as a Psychological Barrier to Recognizing Conflicts of Interest* 74 in *Conflicts of interest: Challenges and solutions in business law, medicine, and public policy* (Don A. Moore et al. eds., 2005).
- 50 Jason Dana, Roberto A. Weber & Jason Xi Kuang, *Exploiting Moral Wiggle Room: Experiments Demonstrating an Illusory Preference for Fairness*, 33 ECON. THEORY 67, 69, 77–78 (2007) (a series of experiments that examined a game in which a “dictator” could choose a payoff of \$5 or \$6, matched with an uncertain payoff of either \$1 or \$5 to the opposing player, generated by an external lottery. Before choosing the payoffs, “dictators” were given a chance to see the lottery results, so they would know the implication for the opposing player. Most “dictators” chose not to receive this information. The authors interpreted this preference as an inclination for “moral wiggle room” enabling each person to construct the facts).
- 51 Yuval Feldman, Amos Schurr & Doron Teichman, *Reference Points and Contractual Choices: An Experimental Examination*, 10 J. EMPIRICAL LEGAL STUD. 512, 532–34 (2013) (prospect theory reflects the way parties to contracts interpret vague obligations).
- 52 *Id.* at 533: “When people are in the realm of losses, they tend to interpret their contractual obligations more selfishly,

whereas when they are in the domain of gains, they are more likely to interpret their obligations in a more cooperative fashion”.

- 53 Nuno Garoupa, *Behavioral Economic Analysis of Crime: A Critical Review*, 15 EUR. J. L. & ECON. 5, 9–10 (2003) (“[I]n the classical law and economics, individuals bear a risk premium because there is a probability of sanctioning between zero and one. In the behavioral approach, individuals also bear an ambiguity premium due to the fact that the probability of being sanctioned is itself uncertain.”).
- 54 See generally Emily Pronin, Thomas Gilovich & Lee Ross, *Objectivity in the Eye of the Beholder: Divergent Perceptions of Bias in Self Versus Others*, 111 PSYCH. REV. 781 (2004); Joyce Ehrlinger, Thomas Gilovich & Lee Ross, *Peering into the Bias Blind Spot: People’s Assessments of Bias in Themselves and Others*, 31 PERSONALITY SOC. PSYCH. BULL. 680 (2005). For a broader account of the problem with people’s inability to recognize the problems in their own decision-making process, see generally Carol Tavris & Elliot Aronson, *Mistakes Were Made (But Not By Me): Why We Justify Foolish Beliefs, Bad Decisions, And Hurtful Acts* (2015).
- 55 Anna C. Merritt, Daniel A. Effron, Benoit Monin, “Moral Self-Licensing: When Being Good Frees Us to Be Bad,” *Social and Personality Psychology Compass* 4/5 (2010) 344–357, esp. 350.
- 56 Yuval Feldman & Eliran Halali, *Regulating “Good” People in Subtle Conflicts of Interest Situations*, 154 J. BUS. ETHICS 65, 67, 70, 75–77 (2019) (participants were told they would be rehired if the employer was satisfied with their evaluation of the testing center. This caused them to give higher evaluations of the center). Eyal Zamir & Raanan Sulitzeanu-Kenan, *Explaining Self-Interested Behavior of Public-Spirited Policy Makers*, 78 PUB. ADMIN. REV. 579, 580 (2017) (“[W]hen a conflict of interest is clear and unmistakable, officials are more likely to recognize and control their automatic tendency to advance their own interests. Thus, it is the less obvious cases of conflict of interest that pose a greater threat to a well-functioning public administration.”).
- 57 See James Heyman & Dan Ariely, *Effort for Payment: A Tale of Two Markets*, 15 PSYCH. SCI. 787, 787, 793 (2004) (establishing the co-existence of a monetary and a social markets).
- 58 Francesca Gino & Lamar Pierce, *Dishonesty in the Name of Equity*, 20 PSYCH. SCI. 1153, 1157–59 (2009) (individuals grading others’ performance tended to inflate the performance of solvers who had just lost in a lottery just before, and this, even if this decreased their own payment as graders).
- 59 Scott S. Wiltermuth, *Cheating More when the Spoils Are Split*, 115 ORG. BEHAV. & HUM. DECISION PROCESSES 157, 166 (2011) (“[P]eople may actually be more likely to behave unethically when they do not capture all the benefits that the unethical behavior yields.”).
- 60 Ann E. Tenbrunsel & David M. Messick, *Ethical Fading: The Role of Self-Deception in Unethical Behavior*, 17 SOC. JUST. RSCH. 223, 228–29 (2004) (suggesting a former tech CEO believed his fraudulent behavior was “appropriate” because it was intended to help the company).
- 61 See Joe Miller, “FTX Founder Sam Bankman-Fried sentenced to 25 years in prison for fraud,” *Financial Times*, March 28, 2024 available at <https://www.ft.com/content/e4528411-eb3c-4fdc-8ebd-4132149b1924>
- 62 See Jennifer Arlen and Reinier Kraakman, “Controlling Corporate Misconduct : An Analysis of Corporate Liability Regimes,” 72 NYU L Rev 687 (1997), at 704.
- 63 See Jennifer Arlen and Lewis A. Kornhauser, “Battle for Our Souls : A Psychological Justification for Corporate and Individual Liability for Organizational Misconduct,” (2023) *University of Illinois Law Review* 673–730.
- 64 Kurt Eichenwald, *Conspiracy of Fools: A True Story* 183 (2005); Claire Hill, “A personality theory of white collar criminals, near criminals, and others involved in bad corporate actions (and what law should do about it),” 11 L. & FIN. MARKETS REV. 75 (2017).
- 65 This is true, even if the organizational cultural explanation is regularly set in opposition to the rational choice one, see R.R. Sims and J. Brinkmann, *Enron Ethics (Or: Culture Matters More than Codes)*, 45 J. BUS. ETHICS 243 (2003).
- 66 See Donald Palmer, *Normal Organizational Wrongdoing: A Critical Analysis of Theories of Misconduct in and by Organizations* (2012) 85.

- 67 See Jennifer Arlen and Lewis A. Kornhauser, “Battle for Our Souls : A Psychological Justification for Corporate and Individual Liability for Organizational Misconduct,” (2023) *University of Illinois Law Review* 673–730 at 707.
- 68 See commentary of Model Bus. Corp. Act. Ann. §8:20 at 8-120.
- 69 Tamar Kugler, Edgar E. Klauel & Martin G. Kocher, “Are Groups more Rational than Individuals? A Review of Interactive Decision Making in Groups,” CESifo Working Paper n°3701 (2012).
- 70 Stephen M. Bainbridge, “*Why a Board? Group Decision-Making in Corporate Governance*,” 55 *VAND. L. REV.* 1, at 54 (2019).
- 71 On these concepts, see Reid Hastie & Cass Sunstein, *Wiser: Getting Beyond Groupthink to make groups smarter* (2005).
- 72 Marleen O’Connor, *The Enron Board: The Perils of Groupthink*, 71 *U. CIN. L. REV.* 1233 (2003).
- 73 Cass Sunstein, *Why Societies Need Dissent* (2003). See also Christine Jolls & Cass Sunstein, *Debiasing through law*, 35 *J. LEGAL STUD.* 199 (2006) at 218: “erroneous judgments often result when deliberations are undertaken by like-minded people.”
- 74 Kent Greenfield, *The End of Contractarianism? Behavioral Economics and the Law of Corporation*, in *The Oxford Handbook of Behavioral Economics and the Law* (Eyal Zamir and Doron Teichman eds., 2014).
- 75 Renée B. Adams & Daniel Ferreira, *Women in the Boardroom and Their Impact on Governance and Performance*, 94 *J. FIN. ECON.* 291 (2009).
- 76 Ronald J. Burke & Susan Vinnicombe, *Women on Corporate Boards of Directors: International Issues and Opportunities*, in *Women on Corporate Boards of Directors: International Research and Practice* (Susan Vinnicombe et al. eds., 2008); Quinetta M. Robertson & Hyeon Jeong Park, *Examining the Link between Diversity and Firm Performance: The Effects of Diversity Reputation and Leader Racial Diversity*, 32 *GROUP & ORG. MGMT.* 548 (2007).
- 77 David Brown, Deborah L. Brown & Vanessa Anastasopoulos, *Women on Boards: Not Just the Right Thing ... But the “Bright” Thing*. Conference Board of Canada, 5 (2002)
- 78 *Id.*
- 79 Lisa M. Fairfax, *The Bottom Line on Board Diversity: A Cost-Benefit Analysis of the Business Rationales for Diversity on Corporate Boards*, 2005 *WIS. L. REV.* 795 (2005) at 824 and 842.
- 80 See Kent Greenfield, *The stakeholder strategy*, *DEMOCRACY, J. IDEAS*, 26 (2012). See also David G. Yosifon, *The Consumer Interest in Corporate Law*, 43 *U.C. DAVIS L. REV.* 253 (2009).
- 81 Greenfield, *supra* note 60.
- 82 Donald C. Langevoort, “*The Human Nature of Corporate Boards: Law, Norms, and the Unintended Consequences of Independence And Accountability*,” 89 *GEORGETOWN L. J.* 797 (2001).
- 83 *Id.* at 810.
- 84 Robert Cialdini & Noah Goldstein, “*Social Influence: Compliance and Conformity*,” 55 *Annual Rev. Psych.* 591 (2004).
- 85 See Matthias Sutter, “*Deception Through Telling the Truth?! Experimental Evidence from Individuals and Teams*,” 119 *ECON. J.* 47, 57 (2009) (observing “more deception through sophisticated truth-telling by teams than by individuals”); Ori Weisel & Shaul Shalvi, “*The Collaborative Roots of Corruption*,” 112 *PROC. NAT’L ACAD. SCIS. U.S.* 10651, 10655 (2015) (“A collaborative setting led people to engage in excessive dishonest behavior”).
- 86 Martin G. Kocher, Simeon Schudy & Lisa Spantig, “*I Lie? We Lie! Why? Experimental Evidence on a Dishonesty Shift in Groups*,” 64 *MGMT SCI.* 3995 (2018) at 3996. Meanwhile, the willingness to punish others for norm violations increases when the punishment is observable to others: Robert Kursban, Peter DeScioli, Erin O’Brien, “*Audience Effects on Moralistic Punishment*,” 28 *Evolution & Human Behavior* 75 (2007).
- 87 Geert Hofstede, *Culture’s Consequences; Comparing Values, Behavior, Institutions, and Organizations Across Nations* 397–400 (2nd ed. 2001). For a case study on bankers’ collectively myopia, see Claire A. Hill & Richard W. Painter, *Better*

Bankers, Better Banks: Promoting Good Business Through Contractual Commitment 108–24 (2015).

- 88 Kocher, Schudy & Spantig, *supra* note 71, at 4004–05: experiment in which a die is rolled and a payment awarded based on the number that is reported. The deliberation process in the group setting, through the exchange of moral views and arguments, generated greater justification for dishonesty in reporting than in the individual setting where individuals were asked to write down their thoughts before reporting.
- 89 Jörg Gross, Margarita Leib, Theo Offerman & Shaul Shalvi, “*Ethical Free Riding: When Honest People Find Dishonest Partners*,” 29 PSYCH. SCI. 1956, 1957 (2018).
- 90 Kocher, Schudy & Spantig *supra* note 71, at 3998.
- 91 See Claire Hill, Brett McDonnell & Aaron Stenz, “*Bad Agent, Good Citizen?*,” 88 FORDHAM L. REV. 1631 (2020).
- 92 Stephen M. Bainbridge, “*Why a Board? Group Decision-Making in Corporate Governance*,” 55 VANDERBILT L. REV. 1, 55 (2019). See also Stephen Bainbridge, *The Board of Directors* (describing the development and importance of the board of directors in Anglo-American law). See also Stephen M. Bainbridge, “*Why a Board? Group Decision-Making in Corporate Governance*,” 55 VANDERBILT L. REV. 1 (2019), noting that while corporations are hierarchical institutions, “at the apex of the hierarchy is a collegial body that functions mainly by consensus” (at 3) and analyzing data collected in experimental settings, which the author finds show “important similarities to board decision making” (at 3) as supporting the view that “groups often make better decisions than individuals” (at 3).
- 93 Feldman & Halali, *supra* note 46, at 1148.
- 94 Asaf Eckstein & Gideon Parchomovsky, “*Toward a Horizontal Fiduciary Duty in Corporate Law*,” 104 CORNELL L. REV. 803, 841–47 (2019).
- 95 See Darian M. Ibrahim, “*Individual or Collective Liability for Corporate Directors?*” 93 IOWA L. REV. 929 (2008) (violations of the duty of care involve the entire board, while violations of the duty of loyalty tend to pertain to the directors that benefited from related party transaction).
- 96 See, e.g., Renée B. Adams, “*Boards, and the Directors Who Sit on Them*,” in *The Handbook of the Economics of Corporate Governance* 291 (Benjamin Hermalin & Michael Wiesbach eds., 2017); Olubunmi Faleye, “*The Downside to Full Board Independence*,” 58 MIT SLOAN MGMT REV. 87 (2017).
- 97 Margaret M. Blair and Lynn A. Stout, “*Trust, Trustworthiness and the Behavioral Foundations of Corporate Law*,” 149 U. PENN. L. REV. 1735–1810 (2001).
- 98 See Claire A. Hill & Yaron Nili, “*Independence Reconceived*,” 2 COLUMBIA L. REV. 589–674 (2023).
- 99 Langevoort, *supra* note 68, at 800.
- 100 Blair & Stout, *supra* note 82: when group members (e.g., board members) are challenged by non-group members (e.g., shareholders), group members tend to defend and defer to their fellow group members.
- 101 Feldman & Halali, *supra* note 46.
- 102 *Id.* at 76 (willingness to promote their self-interest is not without limit: no inclination for writing things that are obviously biased).
- 103 Randall Morck, “*Behavioral Finance in Corporate Governance: Economics and Ethics of the Devil’s Advocate*,” 12 J. MGMT. GOVERNANCE 179–200 (2008).
- 104 Claire A. Hill & Brett McDonnell, “*Disney, Good Faith, and Structural Bias*,” 32 J. CORP. L. 833–64 (2007).
- 105 Amitai Amir, Tehila Kogut & Yoella Bereby-Meyer, “*Careful Cheating: People Cheat Groups Rather than Individuals*,” 7 FRONTIERS PSYCH. 1, 6 (2016).
- 106 See, e.g., Hajin Kim, “*Can Mandating Corporate Social Responsibility Backfire?*” 18 J. EMPIRICAL LEGAL STUD. 189 (2021). See also Hajin Kim, “*Expecting Corporate Prosociality*,” 53 *The Journal of Legal Studies* 2 (2024) (stakeholders’ expectations

- can alter corporate profits: Stakeholders taught to believe that corporations cannot and should not sacrifice profits for society will be less willing to reward and punish corporations for their societal impacts. Firms will then have less incentive to care about their social impacts.)
- 107 Making the point that US securities law has developed a behavioral template for investors when they make their investment decision), but that corporate law has greatly developed this type of template for shareholders in their ongoing business relationships, Patrick Corrigan, “*Do the Securities Laws Actually Protect Investors (and How)? Lessons from SPACs*,” 101(4) WASHINGTON U. L. REV. (2024).
- 108 Daniel Kahneman & Amos Tversky, “*On the Psychology of Prediction*,” 80 PSYCH. REV. 237–51 (1973).
- 109 Jill E. Fisch & Hillary A. Sale, “*The Securities Analyst as Agent: Rethinking the Regulation of Analysts*,” 88 L. REV. 1035–97 (2003).
- 110 See below 3.2.2.
- 111 Troy A. Paredes, “*Blinded by the Light: Information Overload and Its Consequences for Securities Regulation*,” 81 WASHINGTON U. L. Q. 417–86 (2003); Geneviève Helleringer & Anne-Lise Sibony, 23 COLUMBIA J. EUR. L. 607, 623, 626 (2017). See also Omri Ben-Shahar & Carl Schneider, *More Than You Wanted to Know: The Failure of Mandated Disclosures* (2014).
- 112 Steven M. Davidoff and Claire A. Hill, “*Limits of Disclosure*,” 36 SEATTLE U. L. REV. 599 (2013).
- 113 Stephen M. Bainbridge, “*Mandatory Disclosure: A Behavioral Analysis*,” 68 U. CINCINNATI L. REV. 1023–60 (2000).
- 114 Stephen J. Choi & Adam C. Pritchard, “*Behavioral Economics and the SEC*,” 56 STANFORD L. REV. 1–73 (2003).
- 115 Daylian Cain, George Loewenstein & Don A. Moore, “*The Dirt on Coming Clean: Perverse Effects of Disclosing Conflicts of Interest*,” 34 J. LEGAL STUD. 1–25 (2005).
- 116 Asaf Eckstein, “*Skin in the Game for Credit Rating Agencies and Proxy Advisors: Reality Meets Theory*,” 7 HARV. BUS. L. REV. 230–31 (2017).
- 117 Assaf Hamdani & Kobi Kastiel, “*Superstar CEOs and Corporate Law*,” WASHINGTON U. L. REV. (2023) (forthcoming) stressing the role played by the belief that a CEO, and only this individual CEO, has what it takes to produce superior returns for shareholders. See earlier Zohar Goshen & Assaf Hamdani, “*Corporate Control and Idiosyncratic Vision*,” 125 YALE L. J. 560 (2015–2016).
- 118 Stephen P. Ferris, Narayanan Jayaraman & Sanjiv Sabherwal, “*CEO Overconfidence and International Merger and Acquisition Activity*,” 48 J. FIN. & QUANTITATIVE ANALYSIS 137–64 (2013); Wen I. Chuang & Bong Soo Lee, “*An Empirical Evaluation of the Overconfidence Hypothesis*,” 30 J. BANK. FIN. 2489–515 (2006).
- 119 Avishalom Tor, “*The Methodology of the Behavioral Analysis of Law*,” 4 HAIFA L. REV. 237 (2008).
- 120 *Id.* at 297.
- 121 See for a recent example Donald D Bergh, Ronna, Powell & Yan Zhao, “*Another Look at the Managerial Entrenchment Hypothesis of Acquisitions: A Replication of Humphery Jenner*,” J. MGMT. SCIENTIFIC REPORTS (2024) 1–38 and the references cited. See also Richard Fairchild, “*Managerial Overconfidence, Moral Hazard Problems, and Excessive-Cycle Debt Sensitivity*,” 6 INVEST MGMT FIN. INNOV. 35–42 (2009).
- 122 See, e.g., Joon Mah, Lee, Jung Chul Park & Guoli Chen, “*A Cognitive Perspective on Real Options Investment: CEO Overconfidence*,” 44 STRAT. MGMT 1084 (2023).
- 123 Hanjo Hamann, “*Unpacking the Board: A Comparative and Empirical Perspective on Groups in Corporate Decision-Making*,” 11 BERKELEY BUS. L.J. 1 (2013).
- 124 Langevoort, *supra* note 68, at 803.
- 125 Kath Hall, “*Looking beneath the Surface: The Impact of Psychology on Corporate Decision Making*,” 49 MANAGERIAL LAW 93 (2007).

- 126 Donald C. Langevoort, “*Organized Illusions: A Behavioral Theory of Why Corporations Mislead Stock Market Investors (and Cause Other Social Harms)*,” 146 U. PA. L. REV. 101 (1997).
- 127 Stefano DellaVigna, “*Psychology and Economics: Evidence from the Field*,” 47 J. ECON. LIT. 342 (2009).
- 128 Greenfield, *supra* note 60, at 526.
- 129 David Kershaw & Edmund Schuster, “*The Purposive Transformation of Corporate Law*,” 69 AM. J. COMP. L. 478 (2021).
- 130 *Id.*
- 131 John Armour, “*Volkswagen’s Emission Scandal: Lessons for Corporate Governance?*,” OXFORD BUS. L. BLOG (2016) Part (1) available at <https://blogs.law.ox.ac.uk/business-law-blog/blog/2016/05/volkswagen’s-emissions-scandal-lessons-corporate-governance-part-1> and Part 2 available at <https://blogs.law.ox.ac.uk/business-law-blog/blog/2016/05/volkswagen’s-emissions-scandal-lessons-corporate-governance-part-2>.
- 132 See more generally about directors and shareholders’ misplaced loyalty, Andrew Gold, “*Pernicious Loyalty*,” 62 WM. & MARY L. REV. 1187 (2021) at 1196.
- 133 Two 737 Max crashed a few months apart: pilots were unable to regain control of the planes due to the flight control system operating with a new component compensating for heavier engines and automatically turning down the nose of the plane to avoid stalling. Internal Boeing messages and emails include, among many other illustrations of the effort to hide from the regulator what was understood to be substandard work on the 737 Max project, - “I just Jedi mind tricked this fools. I should be given \$1000 every time I take one of these calls. I save this company a sick amount of
.
- What did you convince them of?
- To simply produce an email from me to the DCGA [an unnamed national aviation regulator] that states all the airlines and regulators that accept only the MAX CBT [basic training] to make them feel stupid about trying to require any additional training requirements.”
- Referring to the Federal Aviation Authority, the US regulator that certified the plane as safe to fly (April 2017) commented: “I’ll be shocked if the FAA passes this turd.” 2018: “I still haven’t been forgiven by God for the covering up I did last year.” See <https://www.theguardian.com/business/2020/jan/10/737-max-scandal-the-internal-boeing-messages-and-emails>, last accessed on April 20, 2024.
- 134 Gideon Parchomovsky & Alex Stein, “*Catalogs*,” 115 COLUMBIA L. REV. 165, 190 (2015) (“catalogs offer the legal system the certainty and predictability of rules and the flexibility of standards.”).
- 135 FELDMAN, *supra* note 11, at 1167.
- 136 Gregory Mitchell, “*The Price of Abstraction*,” in Research Handbook on Behavioral Law & Economics (Joshua C. Teitelbaum & Kathryn Zeiler eds., 2018).
- 137 See Gerd Gigerenzer and Peter M. Todd, “Fast and Frugal Heuristics. The Adaptive Toolbox,” pp. 3–34 in Gerd Gigerenzer, Peter P. Todd, and the ABD Research Group, Simple Heuristics That Make Us Smart, Oxford University Press 1999.
- 138 See failing to reproduce the results of the Cohn et al. 2014 experiment (Cohn et al., *supra* note 39): Z. Rahwan, E. Yoeli & B. Fasolo, “*Heterogeneity in Banker Culture and Its Influence on Dishonesty*,” 575 NATURE 345 (2019) and the underlying methodological pitfalls M.A. Vranka and P. Houdek, “*Many Faces of Bankers’ Identity: How (Not) to Study Dishonesty*,” 6 FRONT. PSYCHOL. 302 (2015)
- 139 The seminal reference volume Eyal Zamir & Doron Teichman (eds.), The Oxford Handbook of Behavioral Economics and the Law (2014) illustrates this characteristic.
- 140 Hill, *supra* note 18.

- 141 See Palmer, *supra* note 52, at 88. See also work on identity as belonging and as an influence on perception, e.g., G.A. Akerlof & R.E. Kranton, “*Economics and Identity*,” 115 Q. J. ECON., 715 (2000); T Sharot et al., “*How Personal Experience Modulates the Neural Circuitry of Memories of September 11*,” 104 PROC. NAT’L. ACAD. SCI. 389 (2007). See also the Cultural Cognition Project at Yale which addresses how cultural values shape public risk perceptions and related policy beliefs (<http://www.culturalcognition.net>).
- 142 On the genesis of the behavioral law & economics approach, see Thomas S. Ulen, “*European and American Perspectives on Behavioral Law and Economics*,” in *European Perspectives on Behavioral Law and Economics* (Klaus Mathis ed., 2015) 3, at 4.
- 143 The economist Andrei Shleifer, pivoting in that direction, has lately supported the development of “cognitive economics”. See his STIRCERD Atkinson Lecture at the LSE on November 9, 2023, <https://www.youtube.com/watch?v=L52VygELewg>.
- 144 See Klausner in this volume.
- 145 Korobkin, *supra* note 6.
- 146 See Avishalom Tor, “*The Methodology of the Behavioral Analysis of Law*,” 4 HAIFA L. REV. 237 (2008) at 314–25 (behavioral analysis of law is normatively neutral because the approach is not committed to any specific legal goal or value system; this neutrality puts the behavioral approach in a position to help generate normative conclusions when evaluating the law based on normative criteria such as justice or welfare).
- 147 See Greenfield, *supra* note 60, at 524.
- 148 Stefano DellaVigna, “*Psychology and Economics: Evidence from the Field*,” 47 J. ECON. LIT. 315 (2009).
- 149 Hans van Ees, Jonas Gabrielsson & Morten Huse, “*Toward a Behavioral Theory of Boards and Corporate Governance*,” 17 CORPORATE GOVERNANCE: AN INTERNAT. REV. 307 (2009).
- 150 See Hugo Mercier & Dan Sperber, *The Enigma of Reason* (2017).
- 151 See *infra* section 3.2.2 and *supra* note 95 on managers’ information overload.
- 152 Langevoort, *supra* note 5.
- 153 *Id.*
- 154 See Simon Deakin, “*Rational Choice and Its Limits for the Solution of Social and Legal Problems: Three Questions for Behavioral Law and Economics*,” in *Theories of Choice* (Stefan Grundmann & Philipp Hacker, eds., 2021).
- 155 On the potentialities of the behavioral analysis of law, see Avishalom Tor, “*The Next Generation of Behavioral Law and Economics*,” in *European Perspectives on Behavioral Law and Economics* (Klaus Mathis ed., 2015) 17.
- 156 Of which the principal-agent model is an example.
- 157 On the tools to change social norms and the role of trend-setters, see Cristina Bicchieri, *Norms in the Wild. How to Diagnose, Measure, and Change Social Norms* (Oxford University Press 2017), chapters 4 and 5.
- 158 See Genevieve Helleringer & Florian Möslin, “*Towards a Corporate AI Judgment Rule*,” Online U. CHI. L. REV. https://lawreview.uchicago.edu/sites/default/files/2025-01/Helleringer%20%26%20Moeslein_AI%20%26%20The%20Business%20Judgment%20Rule_0.pdf.
- 159 According to a meta review of 138 studies by Marina Chugunova & Daniela Sele, “*We and It: An interdisciplinary review of the experimental evidence on how humans interact with machines*,” 99 J. BEHAV. & EXPERIMENTAL ECON. 101897 (2022), algorithm aversion appears stronger in ethical decision-making, due to the perception that machines cannot account for human individuality.
- 160 See Geneviève Helleringer, “*Consumer Finance 3.0. Behavioral insights, Big Data and Digital Technologies*,” in *The Law of Autonomous Systems* 51 (Nikkita Aggarwal et al. eds., 2019).
- 161 *Id.* at 101908.

- 162 *Id.* at 101906.
- 163 See Ethan Mollick, *Co-Intelligence. Living and Working with AI*, Penguin Random House 2024.
- 164 See Marina Chugunova, Daniele Sele, “*We and It: An interdisciplinary review of the experimental evidence of how humans interact with machines*,” *Journal of Behavioral and Experimental Economics* 99(2022) 101897.
- 165 In support of an interdisciplinary field of study, concerned with intelligence machines as a class of actors with particular behavioral patterns and ecology, treating machine’s behaviour from an empirical perspective, see Iyad Rahwan, Manuel Cerbian, Nick Obradovich, “Machine Behaviour,” *Nature* 2019 vol 568 p. 477.
- 166 Iyad Rahwan, Manuel Cerbian, Nick Obradovich, “Machine Behaviour,” *Nature* 2019 vol 568 p. 477, at 477.
- 167 See Marina Chugunova, Daniela Sele, “*We and It: An Interdisciplinary Review of the Experimental Evidence on How Humans Interact with Machines*,” *J’L OF BEHAVIORAL AND EXPERIMENTAL ECONOMICS* 99 (2022) section 2 and references cited.
- 168 See Chugunova and Daniela Sele, n. 168 *supra*, section 3 and references cited.
- 169 According to a meta-review of 138 studies by Chugunova and Sele, n. 172 *supra*, algorithm aversion appears stronger in ethical decision-making, due to the perception that machines cannot account for human individuality.
- 170 Bruce Kogut, Fabrizio Dell’Acqua and Patryck Perkowski, [2024 title - to check]
- 171 See Chugunova and Sele, n. 168 *supra*, section 2 and references cited.
- 172 Johansen, S. T., Selart, M., Espedal, B., & Grønhaug, K. (2014). “Trusting Is for Doing: On Goals, Mindsets, and Trust,” in *FINT/EIASM workshop on trust within and between organizations*. Coventry <https://nbn-resolving.org/urn:nbn:de:0168-ssoar-418532>).
- 173 *Ibid.*, at 101908.
- 174 *Ibid.*, at 101906.
- 175 See e.g., UK Companies Act §173 Duty to Exercise Independent Judgment, which codifies the principle under which directors must exercise their powers without subordinating them to the will of others, whether by delegation or otherwise (unless authorised by or under the constitution to do so).
- 176 Shenghua Luan, Jochen Reb, Gerd Gigerenzer, “*Ecological Rationality: Fast-and-Frugal Heuristics for Managerial Decision Making Under Uncertainty*,” *Academy of Management Journal* 2019, vol 62, n°6 1735–1759, at 1736.
- 177 See Daniel Kahneman, Olivier Sibony, Cass Sunstein, *Noise. A Flaw in Human Judgment*, William Collins, 2021.
- 178 Marco Argenti, “Why Engineers Should Study Philosophy”, *Harvard Business Review* April 16, 2024.
- 179 See Gerd Gigerenzer, *The Intelligence of Intuition*, Cambridge University Press, 2023, p. 82.
- 180 Gerd Gigerenzer, *How to Stay Smart in a Smart World: Why Human Intelligence Still Beats Algorithms*, Cambridge, MA, MIT Press.
- 181 Understood as a linear way of thinking, seeking chains of causation, which makes sense in a local environment: see Iain McGilchrist, *The Matter with Things: Our Brains, Our Delusions and the Unmaking of the World*, Perspectiva Press, 2022, p. 547.
- 182 *Ibid.*
- 183 See Gerd Gigerenzer, *The Intelligence of Intuition*, Cambridge University Press, 2023, p. 3.