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The Structuration of Moral Capital and Unethical Behavior: When the Organization Hits an Ethical Meltdown

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Abstract

Recent research depicts the intra-organizational spreading of unethical behavior from different theoretical perspectives. However, no theory accounts for the dynamic social interplay between the individual and the contextual level concerning the spreading of unethical behavior in organizations. Furthermore, there is a lack of concepts covering internal causes and exogenous shocks that can lead to an incremental or sudden spreading of unethical behavior in organizations. This shortcoming limits the practical understanding of business ethics management by not considering the cause and effect between the different levels of analysis and their development over time. This dissertation developed the theory of *The Structuration of Moral Capital and Unethical Behavior* and an empirically calibrated agent-based model to address the complication in the current research. Based on the outlined theory and considering the use case of goal-setting, a role play in an organization embedded in a web-based 3x3 between-subject design with 1762 participants was conducted. The central empirical results showed that the moral capital scenarios and moral disengagement failed to affect unethical behavior, whereas the goal difficulty provoked unethical behavior. Nonetheless, the key finding of the agent-based modeling was that even with minimal force, moral capital possesses a robust regulatory power to suppress the spreading of unethical behavior, whereas the predicted probabilities of hitting an ethical meltdown were significantly higher in the exogenous shock scenarios. The most crucial implication for business ethics management is establishing and maintaining moral capital as an organization's social structure to prevent the spreading of unethical behavior. Especially business ethics measures targeting an ethical organizational culture are prone to be most successful.

Ilma sinuta ei oleks suutnud ma seda teha.

Ma armastan sind, Monika.

Acknowledgment

The topic of this dissertation came to me in the context of the Volkswagen diesel scandal. I asked myself how unethical behavior could spread so extensively within a company. The result is the development of a theory that describes the social dynamics in the spreading processes of unethical behavior in organizations, which I applied in a study and a simulation model.

At this point, I would like to take the opportunity to thank those who supported me during the conceptualization and writing of this dissertation: First, I would like to thank Professor Michael Fallgatter, who exceptionally mentored me in developing the dissertation by providing extremely precious advice on the topic selection, weighting of topics, and numerous discussions. I would also like to thank Professor Dirk Temme and Professor Heiko Breitsohl, who provided me with various methodological insights into the conception of my research design. I would like to extend my thanks to Professor Stefan Diestel for his assistance in obtaining ethical approval for my study from the University of Wuppertal Ethics Commission. I would also like to thank Dr. Peter Feuerstein for helping me with data protection issues in the conducted study. Furthermore, I thank my colleagues for their willingness to engage in discussions and their valuable feedback. In particular, I would like to thank Nina Elberich, Ehsan Henftling, Fabian Otto, and Niklas Strunk for their appreciated recommendations. Also, I am incredibly grateful to Jürgen Freudl for his orthographical corrections.

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Contents

List of Abbreviations

A	Ability
ABM	Agent-Based Model or Agent-based Modeling
AME	Average Marginal Effect
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CI	Confidence Interval
df	degrees of freedom
DG	Difficult Goal
EC	Emphatic Concern
EE_{MN}	Empirical Expectations concerning a set of Moral Norms
EG	Easy Goal
EPQ	Exaggeration of Positive Qualities
GDPR	General Data Protection Regulation
GMDCS	German Moral Disengagement about Cheating Scale
GPMDS	German Propensity to Morally Disengage Scale
ICMD	Immoral Capital on Moral Disengagement
ICUB	Immoral Capital on Unethical Behavior
IMT	Impossible Mediation Test
KSE-G	Kurzskala Soziale Erwünschtheit-Gamma
LL	Lower Level

M Mean

MCMD Moral Capital on Moral Disengagement

MCUB Moral Capital on Unethical Behavior

MD Setting(s) with Moral Dilemma

Mdn Median

MDUB Moral Disengagement on Unethical Behavior

MFQ Moral Foundations Questionnaire

MG Moderate Goal

MN Set of Moral Norms

MNQ Minimization of Negative Qualities

NE_{MN} Normative Expectations concerning a set of Moral Norms

NMD Setting(s) with No Moral Dilemma

ODD Overview, Design concepts, Details

ORG Omnipotent Responsibility Guilt

PNB_{MN} Personal Normative Beliefs concerning a set of Moral Norms

PT Perspective Taking

REL Relativism

RMSEA Root Mean Square Error of Approximation

SD Standard Deviation

SE Standard Error

SEM Structural Equation Model or Structural Equation Modeling

SRMR Standardized Root Mean Square Residual

TOSCA Test Of Self-Conscious Affect

TRAPD Translation, Review, Adjudication, Pretesting, and Documentation

UL Upper Level

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1 Introduction

Maintaining ethical behavior in the organization as a standard practice can be challenging. Even though an organization can be moral across most of its workforce, unethical behavior can start only with a few bad apples that contaminate other individuals. After reaching a threshold of wrongdoers, an uncontrollable spreading of unethical behaviors can occur. In turn, it creates an organizational context as the bad barrel that even contaminates individuals who want to be ethical. In the long run, a dynamic interplay of individual characteristics and contextual factors might contribute to the spreading of unethical behavior until it becomes a standard practice among most organizational members. It is when the organization hits an ethical meltdown.

The spreading of unethical behavior within organizations refers to processes where one person's unethical behavior provokes other persons' unethical behaviors. The provocation of unethical behavior can occur directly or indirectly. The spreading of unethical behavior can be understood as the "increase over time in the number of acts of unethical behavior and in the number of actors involved in these acts" (Zuber, 2015, p. 151). In other words, unethical behavior can start with one or a few bad apples in an organization that diffuse to other employees. In the long run, spreading unethical behavior can comprise a particular dynamic. Internal causes can provoke initial unethical behaviors that incrementally spreads and leads to a bad barrel of many bad apples that, in turn, can have a feedback loop on individual behaviors, accelerating the spreading processes. Also, the dynamics in the spreading of unethical behavior can happen instantly due to exogenous shocks that influence the internal social system of an organization. Exogenous shocks are, by definition, a change of external variables that influence at least one endogenous variable (Englmann, 2007, p. 64). Specifically, organizations are exposed to an external environment comprising general influences such as politics, demographics, nature, financial market, and influences of the organizational domain such as stakeholders, unions, suppliers,

competitors, or customers (Fallgatter, 2020, p. 508) that may impact the spreading of unethical behavior in organization due to unexpected significant events.

Ignoring the relevance of the dynamic spreading of unethical behavior in the workplace is hazardous because it can inflict adverse effects on a broad range of domains, such as on external and internal factors of the organization. To name a few for the external view, neglecting ethical concerns can threaten organizations' financial performance (Jacobs & Singhal, 2020; Orlitzky, Schmidt, & Rynes, 2003), increase legal risks (Aichner, Coletti, Jacob, & Wilken, 2020), create evironmental damages (Cole, 2007; Oldenkamp, van Zelm, & Huijbregts, 2016; Sulemana & Kpienbaareh, 2020), ruin the organization's reputation, and inflict worse access to the capital market (Fombrun & Shanley, 1990). For the internal level, research shows that unethical behavior can, for instance, increase turnover intention, reduce group creativity and job satisfaction (Valentine & Fleischman, 2018; Valentine, Godkin, Fleischman, & Kidwell, 2011), harm the well-being of employees in the organization (Ahmad, Sohal, & Wolfram Cox, 2020), undermine organizational commitment (Kancharla & Dadhich, 2020), lower job performance (Jaramillo, Mulki, & Solomon, 2006), and can create challenges to attract employees with ethical preferences (Sims & Kroeck, 1994). Also, unethical behaviors can entail further consequences for the employees, such as psychological stress (Hogh, Hansen, Mikkelsen, & Persson, 2012; Nabe-Nielsen et al., 2017), sleeplessness (Elovainio, Kivimaki, Vahtera, Keltikangas-Jarvinen, & Virtanen, 2003), depressions and sickness absence (Eib, Bernhard-Oettel, Hanson, & Leineweber, 2018). All these internal level factors can hurt the cooperative efficiency in the value-creation process that can mirror the organization's perception in the external environment. Overall, unethical behavior sets the long-term competitive advantage of organizations at stake (Jurkiewicz & Morozov, 2014). Therefore, understanding the spreading of unethical behavior is essential to provide appropriate remedies in the management of business ethics.

In recent decades, organizational researchers have thoroughly investigated unethical behavior in organizations. In descriptive ethics, unethical organizational behavior refers to studying ethical decisions and behaviors in the work context (Treviño, den Nieuwenboer, & Kish-Gephart, 2014, p. 636). Unethical behavior is any action classified as "morally unacceptable to the larger community" (T. M. Jones, 1991, p. 367). More specifically, unethical behaviors in organizations are any actions

of “organizational members [that] violates widely accepted (societal) moral norms” (Kish-Gephart, Harrison, & Trevño, 2010, p. 2). Furthermore, the well-known work of Treviño and Youngblood (1990) claimed that the “bad apples” and “bad barrels” (p. 378) could contribute to unethical behavior. Accordingly, the bad apples perspective focuses on the individual level where unethical behavior is due to the amoral character (Treviño & Youngblood, 1990, p. 378). Individual characteristics usually refer to stable traits, dispositions or other individual differences that affect behaviors (Reis & Holmes, 2012, p. 65). In the domain of unethical organizational behavior, it can refer to, for instance, cognitive moral development (T. M. Jones, 1991), Machiavellianism (Nelson & Gilbertson, 1991), locus of control (Treviño, 1986), or idealism and relativism concerning ethical issues (Forsyth, 1980). While traditional research streams refer to rational models of ethical reasoning (T. M. Jones, 1991; Kohlberg, 1981; Piaget, 1932; Rest, 1986), other focus on cognitive biases and the bounded ethicality in forming moral judgments such as the process of moral disengagement (Bandura, 2016; Detert, Treviño, & Sweitzer, 2008), the slippery-slope effect (Gino & Bazerman, 2009), moral cleansing, or moral self-licensing (Sachdeva, Iliev, & Medin, 2009). In contrast, the bad barrel perspective proposes that unethical behavior is due to contextual or situational organizational factors (Treviño & Youngblood, 1990, p. 378). The situation captures any contextual circumstances, conditions, states, and entities in the environment that may constrain or promote the individual’s behavior (Reis & Holmes, 2012, p. 64). In terms of unethical behavior, it usually refers to organizational characteristics such as the code of conduct and its enforcement (McCabe, Trevino, & Butterfield, 1996), social influence such as leadership and peer behaviors (Treviño et al., 2014, pp. 642–645), the ethical culture of an organization (Treviño & Nelson, 2017, pp. 158–217), the implementation of tournament incentives (Conrads, Irlenbusch, Rilke, Schielke, & Walkowitz, 2014; Haß, Müller, & Vergauwe, 2015), the inappropriate usage of high-performance goal-setting (Welsh, Baer, Sessions, & Garud, 2020), or to specific designs of the organizational structure such as size or the division of labor (Gabbioneta, Greenwood, Mazzola, & Minoja, 2013, p. 485). Meta-analytic evidence confirms that both bad apples and bad barrels can provoke unethical behavior in the workplace (Kish-Gephart et al., 2010).

Recent research depicts the intra-organizational spreading of unethical behavior from different perspectives. Normalization of collective corruption in organizations (Ashforth & Vikas, 2003; Brief, Buttram, & Dukerich, 2001), typology of organization-level corruption (Pinto, Leana, & Pil, 2008), escalation of deception (Fleming & Zyglidopoulos, 2008), downward corruption spirals (Den Nieuwenboer & Kaptein, 2008), social network approaches of unethical behavior (Brass, Butterfield, & Skaggs, 1998; Zuber, 2015), and the percolation theory (Kim & Lee, 2021). Models of the inter-organizational spreading of unethical behavior that also includes stakeholders or entities outside of an organization (see, for instance, Yu, Kang, and Rhodes, 2020) are not the focus of this outline.

Normalization of collective corruption in organizations (Ashforth & Vikas, 2003; Brief et al., 2001) refers to the core idea that corrupt behavior initiated by a few members of a group or a collective can, over time, turn into a collective norm in an organization (Spicer, 2009, p. 834). The normalization happens through institutionalization, rationalization, and newcomers' socialization. Significantly, the process of institutionalization is a slippery slope of three phases where initial acts of corruption can lead to the embedding of corruption in structure and processes. Also, an unethical organizational culture may emerge at this point. Finally, corruption becomes habitual, insofar that corruption becomes normative and an unquestioned routine to solve organizational problems (Ashforth & Vikas, 2003, pp. 3–5). The process usually starts at the superior level, inciting employees to engage in unethical acts. Finally, collective corruption finds its institutionalization as common organizational practices and routines (Brief et al., 2001, p. 473). Subsequently, institutionalized unethical practices and routines are an important context factor that can foster further unethical behavior of organizational members (Castro, Phillips, & Ansari, 2020, p. 30). Palmer coined the normalization of corruption as a process model because it describes the spreading of unethical behaviors concerning social interactions, starting from a few organizational participants that diffuse to others. Such initial unethical acts can start at every organizational hierarchy (Palmer, 2008, pp. 111–114). The general idea of the process models to describe the spreading of unethical behavior also applies to the following models.

Pinto et al. (2008) followed a more nuanced approach by describing the spreading of unethical behavior as a two-type typology. They differentiate between

an organization of corrupted individuals and a corrupt organization. The first refers to a significant number of individuals acting unethically for their benefit. An organization of corrupted individuals describes an emergent bottom-up phenomenon where initial acts of unethical behaviors become widespread as a contagion process over time through social interactions in a continuous, gradual, more unconscientious, and slow way. Once a critical threshold is passed, the organization entails a composition of corrupted individuals. In contrast, a corrupt organization describes a group collusively acting together to gain benefits for the organization. It is a top-down phenomenon that usually originates in a group of top executives who conduct corrupt actions that trickle down to other organizational stakeholders (Pinto et al., 2008, pp.688–694).

Another process model explains the spreading of unethical behavior as the escalation of deception in organizations (Fleming & Zyglidopoulos, 2008). Accordingly, the spreading of unethical behavior throughout the organization is a chain of events: undetected initial deception eases further deception, increases the severity of deception, the pervasiveness of deception, and finally becomes an organizational-level phenomenon. Once deception has reached or has become an organizational-level phenomenon, it becomes a feedback loop that can reinforce all other stages of deception. Also, organizational complexity, understood as labor division, can increase all stages of the escalation deception process and eases the reasons for rationalizing unethical actions. For instance, a fragmented division of labor can reduce the individual's feeling about their moral responsibility because one may not see contributing with a minor moral violation to the bigger picture of deception. Also, a fragmented differentiation can reduce transparency and, subsequently, prevent formal control systems from working well, increasing the severity of unethical actions. However, other factors can reduce the chances of the escalation process. Accordingly, a well-designed formal control system can increase detection and reduce deception incentives. Also, the corporate code of ethics should increase detection chances by others or make moral rationalizations more difficult for the employees (Fleming & Zyglidopoulos, 2008, pp. 893–845).

The model of organizational dynamics of corruption by Den Nieuwenboer and Kaptein (2008) builts upon the fraud triangle (Cressey, 1950) and the social identity theory (Tajfel & Turner, 1979). Den Nieuwenboer and Kaptein (2008) explained

the spreading of unethical acts in companies with organizational factors. They label these organizational factors as downward spirals of three types: divergent norms, pressures, and opportunities. First, unethical norms can develop due to the social identity of the own in-group. Specifically, individuals have a desire for positive distinctiveness to the out-group. However, this can lead to socially accepted ethical norms eroding while the group does not recognize them. In the long run, the group can lose touch with generally accepted moral norms. The second downward spiral of pressure describes an organizational environment where demand for performance is prevalent. Accordingly, performance pressure can threaten the individual's status when failing to achieve performance goals. To preserve their status, individuals' chances of engaging in corruptive behavior intensify with every corruptive cycle. Also, it is amplified by colleagues with such actions. Third, the downward spiral of opportunity entails the chances of getting caught or punished. It heavily relies on managers' prototypical behaviors regarding how they react to corrupt behaviors or engage in such behaviors. Once the prototype gives sufficient bad examples, such behaviors become more acceptable, and the spreading of unethical behavior in the organizations increases the speed (Den Nieuwenboer & Kaptein, 2008, pp.137–140).

Next, Brass et al. (1998) pioneered establishing the social network approach to explain the spreading of unethical behavior in organizations. Accordingly, the social network approach depicts interpersonal relationships between individuals and how they possibly interact in the effects of individual and organizational factors on unethical behavior. Also, their social network approach explains how the combination of types (e.g., strong or weak ties between actors within a network) and structures (e.g., a structural hole between two actors in the network) of relationship configurations can lead to social contagion processes. For instance, individuals with strong ties have more frequent interaction increasing the likelihood that both will adopt similar attitudes towards unethical behavior compared to individuals with weak ties. The network approach extends the differential association theory, which states that unethical behavior is learned in interaction within intimate personal groups (Sutherland & Cressey, 1978, p. 80). Another explanation refers to social comparison effects. Although individuals may not be directly linked, they compare relevant others in a similar position in the network and may, therefore, adopt similar

attitudes (Brass et al., 1998, pp. 16–25). Building on Brass et al.'s idea, Zuber (2015) introduced the dynamic social network perspective, which includes cognitive mechanisms leading to specific behavioral reactions, how social relationships can change after unethical acts, and how this impacts further acts of unethical behaviors. Also, she considers victims' reactions and their impacts on the spread of unethical behavior, not only perpetrators and observers as in previous network approaches. In sum, researchers developed various conceptual and empirical social network approaches that take different units of analysis into account (Vaccaro, Santana, & Wood, 2009, p. 442).

The percolation theory is another form of social network analysis and describes the formation of collective corruption as an ongoing social interaction within a specific social structure of an organization (Kim & Lee, 2021). The term percolation originates from natural sciences and describes how fluids go through the structure of porous materials. Analogous social processes refer to information flow between individuals about corruption activities, which considers the social structure and social interactions. A minimum requirement for spreading collective corruption is a trustful dyadic relationship. Specifically, collective corruption starts with one focal actor who has the opportunity to initiate a corruptive act. Social interaction begins with the initiator of corruption sharing ideas or actions about corruption with a receiver, who can give feedback. Also, the initiator will constantly update future preferences about unethical actions. The updating depends on three factors: the own achievement from corruption, the risk of getting caught, and the receiver's positive or negative feedback about such actions. Finally, the spreading occurs because the receiver may adopt such practices from the initiator and goes through a similar updating mechanism about the preference to engage in corruption. Hence, percolation may describe the spreading of unethical behavior as an ongoing reinforcing or weakening feedback loop and can capture how collective corruption is formed over time (Kim & Lee, 2021, pp. 3–12).

Although there are various theoretical concepts about the intra-organizational spreading of unethical behavior, no theory accounts for the social dynamic interplay between the individual and the contextual level that could lead to the spreading of unethical behavior in organizations. Social dynamics refer to the study of individual interactions that take individual behavior, group phenomena, and sequential

feedback loops into account (Durlauf & Young, 2001, p. 1). Also, there is a lack of concepts that cover internal causes that can lead to an incremental spreading and external causes of exogenous shocks to organizations that can induce a sudden spreading of unethical behavior. In other words, work on the dynamic processes of the interactions between bad apples and good apples that emerge to a bad barrel incrementally and how exogenous shocks may impact these interactions are missing. Most of the mentioned concepts concerning the spreading of unethical behavior in organizations refer to group-level processes (Zuber, 2015, p. 151) and stay vague on the specific interactions between individuals and the resulting emergence as a whole organizational phenomenon and the feedback loop on individual behavior and interactions. Exceptions are social network concepts that explain the spreading of unethical behavior in a network, starting from individual unethical behavior that can spread to the whole organization. A general drawback of network analysis is that cause and effect between the interplay of the individual and the contextual level tend to be unclear. The explanation of individual behaviors is usually derived from the structural configuration of the network without considering the motivations of the actors and the influence of norms in the system to form such relationships (Fuhse & Mützel, 2011, p. 1072). The major disadvantage of the percolation theory is its analogy to physical laws because it predefines the social structure as a two-dimensional grid where the relationship and information flow between actors only exists when they are spatial neighbors (F. Schweitzer, 2021, p. 3). Moreover, different approaches in social network analysis led to ambiguous theory development about the diffusion mechanism of unethical behavior in organizations. Therefore, social network approaches have not progressed considerably (Wang, Pi, & Pan, 2017, p. 5). Empirically, because unethical behavior is a delicate topic in organizations, studying the spreading of unethical behavior with quantitative methods is challenging. It may explain why almost no quantitative work about the spreading mechanisms exists (Nekovee & Pinto, 2019, p. 340) and only computational simulation approaches were conducted to systematically explore such mechanisms under various assumptions (J. S. Davis & Pesch, 2013; Kim & Lee, 2021; Nekovee & Pinto, 2019; Wang et al., 2017).

The concern with the current theoretical knowledge about the spreading mechanisms of unethical behavior is that it could limit the practical understanding

of business ethics management. There is no doubt that business ethics measures in various areas, such as organizational culture, authority structures, leadership, policy, organizational change, or human resource development, are effective in preventing unethical behavior and its spread. However, due to an incomplete picture, this might not be valid for any circumstance. A holistic understanding requires a systematic consideration of cause and effect between the different levels of analysis and their development over time. For example, considering human resource development, the scientific effectiveness of various ethics training is predominantly assessed as improving rational ethical judgments (Kreismann & Talaulicar, 2021, p. 78). However, they could have severe drawbacks for long-term effectiveness because they neglect the spreading process of unethical behavior and its complex dynamics. Gaining knowledge about the spreading of unethical behavior may have important practical consequences for organizations, as a clear understanding of the mechanisms and the dynamics could assist corporate ethics management in developing sustainable measures to prevent an ethical meltdown in the long run.

This dissertation attempts to answer the following research question to address the complication with the current knowledge concerning the spreading of unethical behavior in organizations and its social dynamics: *When does the interplay between the individual and the contextual level in organizations lead to the hit of an ethical meltdown?* The organization hits an ethical meltdown when unethical behavior among the workforce is a common social practice, and organizational values and norms are present, contradicting the common ground of morality. The ethical meltdown reflects an endstate of a prior dynamic spreading process of unethical behavior. Therefore, the research question aims to develop explanations for the spreading mechanisms of unethical behavior and under which circumstances it can culminate in an unethical organization's end state. A theoretical model linking individual decision processes to engage in unethical behavior embedded in the contextual level of moral capital with a temporal component will be provided to explain the dynamic spreading processes. Based on Haidt (2012, p. 341) and Kluver, Frazier, and Haidt (2014, p. 154), moral capital will be defined as the degree to which organizational members have a consensus about values, norms, and social practices that correspond with the societal ground of morality, thereby enabling the organizational community to suppress or regulate unethical behavior. With

respect to Giddens (1984), the theory is labeled as *The Structuration of Moral Capital and Unethical Behavior*, which states that unethical behavior and moral capital recursively influence one another. The apparent counterparts in the wording of moral capital *and* unethical behavior should capture the tension between moral capital and unethical behavior. It is a constant battle of mutual negative influence over time, and the outcome of which will prevail depends on its social dynamics. It will be illustrated that moral capital is an element of an organization's social structure and a source of behavioral ethical control. It is further described that the behavioral ethical control of moral capital is limited due to internal organizational causes coming from unintended consequences of actions and from external factors in the form of exogenous shocks. It will be explained in more detail that internal causes could affect moral capital incrementally and exogenous shocks more promptly.

Moreover, the dissertation will not stay solely on theoretical grounds as it will follow a computer-aided development of theories. An Agent-Based Model (ABM) is programmed on the bases of selected parts of the outlined theory to investigate its social dynamics. The ABM will also focus on exploring critical thresholds for when the spreading of unethical behavior within an organization leads to an ethical meltdown from internal causes and exogenous shocks. ABM is prone to model processes of structural changes (North & Macal, 2007, p. 93) by considering the heterogeneity of individual characteristics (Wilensky & Rand, 2015, p. 32). Also, the ABM is calibrated with empirical data. Together with the calibration, it allows to systematically change the parameter effect values in what-if experiments to inspect possible outcomes of the social system under different conditions (Van Bavel & Grow, 2017, pp. 9–10). Moreover, ABM can help to test theories for which data is not entirely available (Van Bavel & Grow, 2017, p. 9), which in particular applies to observing in real-time spreading processes of unethical behaviors in an organization.

Chapter 2 will depict conceptual definitions of the term ethics and business ethics and is followed by a claim to prefer the concept of descriptive over normative ethics in organizations. Afterward, a precise definition of unethical behavior in terms of descriptive ethics will be given. The prerequisite to understanding the concept of moral capital in detail requires laying ground with the three-layer approach of morality based on the theory of social norms (Bicchieri, 2006, 2017) and the moral

foundations theory (Graham et al., 2013, 2018). It is followed by a comparison between the concepts of moral capital and organizational culture to determine their relatedness. *Chapter 3* explains the structuration of moral capital and unethical behavior in detail and will state that these depicted elements have two levels of investigation: moral capital on the macro-level and unethical behavior on the micro-level. Structuration theory (Giddens, 1984) and the macro-micro-macro scheme from the methodological individualism perspective (Coleman, 1990; Hedström & Swedberg, 1998; Kalter & Kroneberg, 2014) help to understand the dynamic process between the contextual and individual levels. *Chapter 4* depicts an empirically calibrated ABM under various scenarios to find critical thresholds for the spreading of unethical behavior in organizations concerning internal causes and exogenous shocks. To enrich the ABM with data and parameters concerning a realistic use case, an experiment on the relationship between goal-setting as common practice in organizations (Kleingeld, van Mierlo, and Arends, 2011, p. 1289; Lunenburg, 2011, p. 1) and unethical behavior (Nagel, Patel, Rothstein, & Watts, 2021) in a fictitious organization was conducted. T The results of the experiment and the ABM are discussed, and limitations are shown. Finally, in *Chapter 5* the dissertation is summarized, and an outlook for further research possibilities is given.

The first key contribution of the dissertation is to offer a novel theoretical approach with the theory of *The Structuration of Moral Capital and Unethical Behavior* in explaining the spreading of unethical behavior and its social dynamics in an organization. The development of the alternative theoretical perspective rests on longstanding sociological and social-psychological concepts that have not yet been introduced to the research field of spreading unethical behavior in organizations. Specifically, the theory explains the dynamic mechanisms between social structure and unethical behavior in organizations over time. With this, a clarified and revised concept of moral capital as a social structure element is introduced, systematically capturing individuals' profound moral and psychological roots and actions concerning others. Moreover, another contribution lies in the connectivity of the theory to equation modeling and ABM, which can enhance scientific knowledge concerning the dynamics of unethical behavior in organizations.

The second key contribution to the research field of the spreading of unethical behavior and its social dynamics is an empirically calibrated ABM. According to

previous simulation efforts, it is probably the first simulation that is based on real data and that allows calculating predicted probabilities of critical thresholds of when the organization hits an ethical meltdown, in particular, for internal causes that may lead to an incremental spreading and for exogenous shocks that may lead to an accelerated spreading of unethical behavior. Also, the ABM contributes insights into the fragility of ethical, social systems over time.

A minor but relevant contribution resides in the experiment calibrating the ABM. As a result, a contribution to the field of goal-setting and unethical behavior will be given. Significantly, the present experiment is the first to include contextual variables of moral capital and the measurement of ability as a statistical moderator in the relationship between goal-setting and unethical behavior. Next, it is the first study applying the so-called Impossible Mediation Test (IMT) (Yeager & Krosnick, 2017) to account for confounding bias between the conceptualized mediator moral disengagement and the dependent variable of unethical behavior in the research field of goal-setting and unethical behavior. Also, it is the first study holding specificity of the goal constant and investigating the direct effects of varying goal difficulty levels on unethical behavior. Moreover, no previous study has calculated Average Marginal Effects (AMEs) for the primary goal-setting variables affecting unethical behavior in experimental designs.

A further minor but relevant contribution resides in the translation of the Moral Disengagement about Cheating scale (Shu, Gino, & Bazerman, 2011) and Propensity to Morally Disengage scale (Moore, Detert, Treviño, Baker, & Mayer, 2012) to German with the team application of TRAPD (Translation, Review, Adjudication, Pretesting, and Documentation) procedure (Harkness, 2003, p. 38). Based on pretesting, the present study gives first information concerning the validity of these scales in German.

A final remark is that the outline of the dissertation focuses on profit organizations with value-creation activities. The distinct feature is that profit organizations are pressured to primarily generate profits for their owners or shareholders which may induce particular motives regarding the engagement in unethical conduct. Although unethical behavior is also an issue in non-profit organizations or governmental agencies, they have different purposes and intra-organizational restrictions

than profit organizations. They are, therefore, only partly comparable. Nevertheless, with some restrictions, the arguments of the following outline are also transferable to any organizational form.

Conceptual Definitions

2

2.1 Ethics

The term *ethics* has its roots in the Greek word *ethos*, which means *usual seat* and describes where one lives and is at home. Ethos then reached the meaning of morally appropriate behavior, which corresponds to what has become the norm and the law in the own region through habit, tradition, and convention (Rich & Enderle, 2006, p. 11). Nowadays, ethics refer not merely to habits, traditions, and conventions but to practical philosophy, which distinguishes ethics into three subdomains: normative ethics, descriptive ethics, and meta-ethics (Höffe, 1997, pp. 66–67).

Normative ethics is a discipline of the reason with which philosophers elaborate principles of right actions according to a logical argumentation line. These principles are the bases for deriving normative prescriptions for deciding which kind of behavior in specific is right or wrong. Normative ethics, therefore, defines which behaviors are appropriate. It also claims to critically question the rightness of actual morality (Hämäläinen, 2016, p. 2; Höffe, 1997, p. 66; Rich & Enderle, 2006, p. 19; Treviño & Nelson, 2017, p. 38). Prominent normative approaches are utilitarianism, deontology, and discourse ethics. Utilitarianism considers actions ethical as long as the consequences maximize benefits for the majority, irrespective of the means (Bentham, 1789; Mill, 1863). In contrast, deontology, which is obligation-based ethics, focuses on the means and not the ends of actions (Kant, 1785; Rawls, 1999). According to Kant (1785, p. 52), actions are ethical as long as individuals can consider their actions to become a general law, or according to Rawls (1999) justice can only emerge when the rule negotiation happens under the "veil of ignorance" (p. 118). Another relevant approach is discourse ethics. Discourse ethics focuses on attaining consent about principles by possibly including all affected individuals in a rule-guided discourse and under a domination-free dialogue (Apel, 1988; Habermas, 1991).

Contrary, researchers in the realm of *descriptive ethics* – or the synonymous term *behavioral ethics* (Wittmer, 2018, p. 882) – empirically investigate the actual morality of individuals. Descriptive ethics has its origin in the influential theory of cognitive moral development by Piaget (1932) and Kohlberg (1981), which triggered a wide variety of subsequent research activities that found their manifestation in groundbreaking models such as in the ethical decision framework (Rest, 1986), the person-situation interaction approach (Treviño, 1986), or the moral issue characteristics scheme (T. M. Jones, 1991). The definition of the term *morality* is not straightforwardly possible due to competing perspectives (Haidt, 2008, p. 65), but it captures how individuals ought to relate to each other (Graham et al., 2013, p. 59) and differs fundamentally from what normative ethics proposes (De Cremer & Vandekerckhove, 2017, pp. 439–441). Hence, at this point, morality is regarded as a specific repertoire of actual moral norms in a given society that guides individuals' actions (Bicchieri, 2017, p. 31) and takes the underlying social and psychological processes that lead to how individuals make decisions in specific situations into account (Bazerman & Gino, 2012, p. 90; Treviño & Nelson, 2017, pp. 72–88). Therefore, morality and moral norms are synonymous descriptions of the same phenomena. In essence, descriptive ethics depict "individual behavior that is subject to or judged according to generally accepted moral norms of behavior [...][and] is primarily concerned with explaining individual behavior that occurs in the context of larger social prescriptions." (Treviño, Weaver, & Reynolds, 2006, p. 952).

Finally, *meta-ethics* evaluates the language of ethics in the form of its semantic meanings and the formal-logical correctness of, especially, normative statements. Hence, there is an overlap and no clear demarcation between meta-ethics and the other ethics approaches (Rich & Enderle, 2006, p. 20). However, meta-ethics is not of further interest here because normative and descriptive ethics are the most relevant approaches researchers and practitioners currently apply in the realm of business ethics (see, for instance, Treviño & Nelson, 2017).

2.2 Business Ethics

Business ethics addresses organizations engaging in value-creation activities. It describes the capacity to appropriately respond to different competing ethical requirements and expectations that stakeholders face in their daily interactions within

complex environments (Painter-Morland, 2008, p. 3). However, capturing the precise meaning of business ethics is not straightforward because there is no agreement on what this discipline should entail (Capaldi, 2018, p. 38). The issue with business ethics is that this term itself has different meanings rooted in different competing perspectives (see, for instance, Heath, Kaldis, & Marcoux, 2018), and there is no unifying theoretical framework that researchers apply in this realm (Cowton & Haase, 2008, p. 1). Lewis (1985) even overdrew this issue by stating that defining business ethics is like "nail[ing] jello to a wall" (p. 382). Hence, it is not the aim to give a complete solution to the definitional issues of business ethics. As a working conceptualization, a general and a more specific threefold perspective will give some clarification.

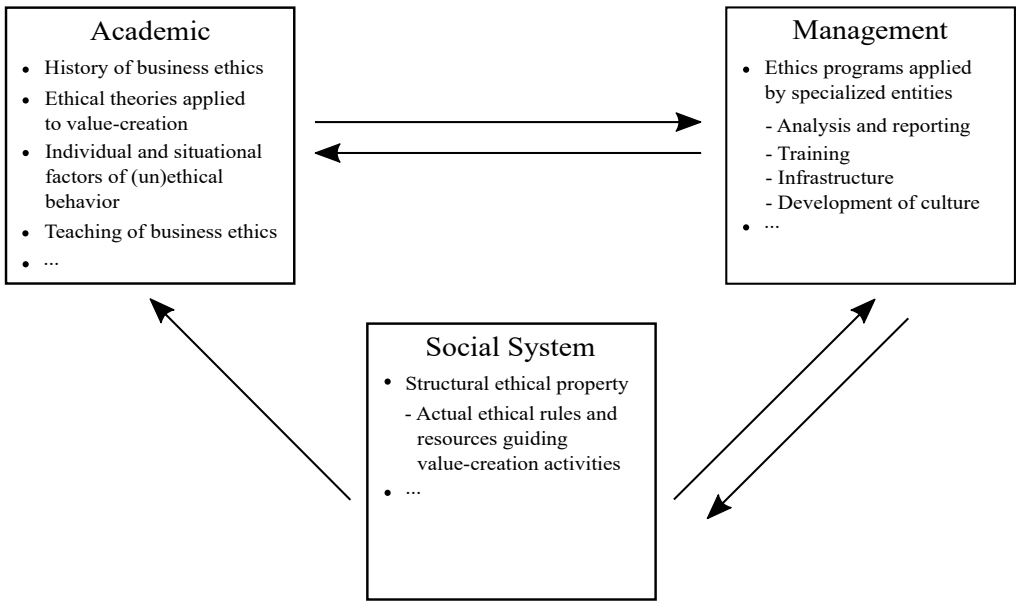
Generally speaking, business ethics entails moral rules, ethical principles, standards, and codes that contain guidelines for the behavior in specific situations in business organizations (Ferrell, Fraedrich, & Ferrell, 2011, p. 7; Lewis, 1985, p. 382) and consists of applying ethics to business organizations (San-Jose & Retolaza, 2018, p. 2). Hence, business ethics may describe individual behavior and its control concerning normative or descriptive ethics to ensure a sustainable value-creation process. Sustainable value-creation can be understood as increasing the probability of an organization's long-term existence by avoiding damage to its stakeholders in the specific and general environment, thereby reducing the risks of its decline.

Furthermore, although implementing or applying business ethics considerations can entail costs, organizations can profit from being ethical in the long run. For instance, organizations seek to increase the legal compliance of their organizational members to avoid legal compensation costs (Painter-Morland, 2008, p. 44;Treviño & Nelson, 2017, pp. 345–346). Organizations may want to improve their reputation to signal product and service quality in order to increase sales, to be able to charge higher prices, to better access to the capital market, or to improve their employer attractiveness (Fombrun & Shanley, 1990, p. 233). Also, organizations want to avoid externalities that can entail regulatory backlashes by the government, such as the U.S. Sarbanes-Oxley Act as a reaction to severe balance forgery of companies like Enron and Worldcom (Treviño & Nelson, 2017, p. 347).

The *threefold perspective* characterizes business ethics as more nuanced as an academic discipline, a management approach, and a property of the social system of business organizations (see Figure 2.1). Although a clear delimitation within and between these approaches is hardly possible, it can give hints as to which components constitute the realm of business ethics. Also, it is not the goal to draw an exhaustive list within the business ethics categories but a draft where other elements can be added, indicated by the illustrations' points (...).

Figure 2.1

Business Ethics from a Threefold Perspective



- The *academic discipline* of business ethics is a field of study. It may include the depiction of its history (Mees, 2018), ethical theories applied to commercial activities (Capaldi, 2018), the understanding of individual and situational factors that influence (un)ethical behavior in organizations (Church, Gaa, Nainar, & Shehata, 2005; Treviño, 1986), and the teaching of business ethics in an academic setting (Gates, Agle, & Williams, 2018).
- The *management approach* includes the active usage of planned ethics programs within organizations to obtain a sustainable value-creation. Specialized entities such as departments, external consulting agencies, and internal or external ethics agents usually conduct such ethics programs. In particular,

ethics programs can consist of management activities covering analysis and reporting, training, and infrastructure. Analysis and reporting may include implementing risk analysis, ethical audits, and reports for internal or external purposes. Training can consist of general ethics training and communication or developing leadership commitment to ethics. The aspect of infrastructure may cover the areas of ethical compliance standards, ethics compliance offices, discipline and reward systems, and whistleblowing lines (Painter-Morland, 2008, p. 47). Also, the mentioned programs can be subsumed to influence and develop the informal and formal part of an ethical organizational culture (see, for instance, Treviño, Butterfield, & McCabe, 1998). However, suppose practitioners create ethics programs only for window-dressing to meet corporate governance requirements, legal compliance, or to obtain a fictitious reputation. In that case, such ethics programs do not fall into this business ethics category. Many business scandals showed that this notion of business ethics does not provide long-term sustainable value-creation. One reason is that the probability of gaining ethical spillover effects on the external environment resides in mirroring organizational members' internal ethical actions. These internal ethical actions can better support the notion of long-term sustainable value-creation. Hence, only management programs that actively aim to address the social system's ethical property fall under this business ethics category. Also, unplanned positive or negative ethical influences due to the non-existence of any ethical programs or as side-effects from other management activities are excluded from this perspective. Unplanned influences are subject to emergent processes within the organization's social system.

- In allusion to structuration theory (Giddens, 1984), the specification of the *social system* of an organization may account for the degree of actual ethical value-creation activities. In particular, the degree of ethical actions depends on the social system's structural property. A social system's structural property consists of collective rules and resources that can guide how employees conduct actions in a specific way (see Chapter 3). The more ethical these rules and resources are, the higher the probability of ethical value-creation activities and, in turn, the higher the social system's structural ethical property.

The three perspectives of business ethics are interrelated, whereas the social system is the main target of interest for scientists and practitioners. On the one hand, scientists try to investigate the real phenomena of such social systems and current management practices by gaining information through observation with reactive or non-reactive methods (represented by $\nwarrow\!/\leftarrow$). Based on the evidence, they derive implications for business ethics management ($\rightarrow$). On the other hand, practitioners who manage business ethics try either evidence-based or with other approaches to influence the property of the social system concerning ethical behavior ($\swarrow$) and receive feedback about the effectiveness of specific ethics programs ($\nearrow$). Hence, the academic discipline only indirectly influences how to manage the social system, if at all.

Finally, in this outline, the depiction of business ethics will concentrate on the academic viewpoint and the social systems in theorizing and investigating unethical behavior and its dynamics in organizations. Findings based on the previous will give further implications for the management of business ethics and how to effectively design the social systems of organizations to reduce the probability of incidences and the spreading of unethical behaviors. The next question is whether to focus on normative or descriptive ethics as the underlying school of thought to sharpen the concept of business ethics.

2.3 Claim for Descriptive Business Ethics

The claim in the dissertation is to favor the descriptive approach in applying business ethics. However, applying descriptive approaches to business ethics is itself a normative statement. The claim for using descriptive business ethics results from the following drawbacks of normative approaches and the advantages of descriptive approaches when depicting business ethics.

The application of normative ethics to business started around the 1970s (Mees, 2018, p. 15) and is nowadays strongly present due to its longstanding history. For instance, Ulrich (2008, pp. 427–499) combined several normative approaches, such as deontological and discourse ethics, and applied them to the business ethics context. Treviño and Nelson (2017, pp. 38–153) provided suggestions on how to combine teleological and deontological approaches to managing business ethics

in their principle-based ethics section, G. R. Jones (2013, p. 68) exhibited the utilitarian, moral rights, and justice model to give implications for business decision-making processes, and Fryer (2011, pp. 37–56) applied normative approaches for the understanding of organizational leadership. Indeed, normative approaches are helpful, for instance, to solve ethical dilemmas where an actor is ethically obligated to do A and ethically obligated to do B but cannot do both (Gowans, 1987, p. 3), or for the settlement of interests between several stakeholders of an organization (Freeman, 1994). Thus there is no doubt about the merits of reasonably respected ethical philosophers and usability for business ethics.

However, depicting business ethics with normative approaches is also problematic. For instance, according to the Impossibility Theorem, utilitarianism has an issue with the social aggregation of individual preferences (Arrow, 1986, pp. 31–33), or the Kantian principle does not lead to precise instructions for actions (Luhmann, 2008, p. 197). Moreover, the normative approaches could offer mutually exclusive solutions to the same ethical problem. There is no overall principle in which approach is superior to the other. Such as to layoff, some employees might have negative consequences for a few but positive consequences for the survival of an organization and positive consequences for the majority of the employees, who can keep their jobs (utilitarian approach). However, layoffs violate the obligation to act in a way that prevents harm to anyone and can, therefore, not become a general law (deontological approach). Another crucial issue with normative approaches in the business context is the underlying assumption of a rational-thinking individual. Nevertheless, there is ample evidence that individuals do not think rationally in terms of normative approaches in daily interactions (De Cremer & Vandekerckhove, 2017, pp. 439–441) and instead have bounded ethicality (Bazerman & Gino, 2012; Zhang, Fletcher, Gino, & Bazerman, 2015). In summary, normative approaches entail some hindrances concerning business ethics because of their issues with practicability and their neglect of actual psychological and sociological mechanisms that influence unethical behavior in organizations.

Instead, focusing on descriptive ethics can circumvent the obstacles that come along with normative approaches. Descriptive ethics goes beyond the reflective mode of principles and can give further implications on how to design the property of the organizational social system to prevent unethical behavior. As De Cremer

and Vandekerckhove (2017) pointed out, there is a need to integrate behavioral ethics into business ethics approaches to understand better how "individuals process morality information and its flaws and how they do this in the larger social setting" (p. 441). Hence, descriptive business ethics draws a more realistic picture of human nature and is prone to prevent unethical behavior in organizations more effectively. In addition, a further advantage of descriptive ethics is that they exclude philosophical elaborations about normative principles (Barsky, 2008, p. 65) and can let off researchers and managers from the shackle that comes along with normative approaches.

However, applying descriptive approaches to the business context has an *is-should* implication that needs a further explicit argument. In particular, researchers in descriptive ethics try to unveil what morality and its associations with actions *is*. Under the umbrella of descriptive ethics, implications from the academic perspective to the management approach and the application of ethics programs to the social system entail normative statements on how morality in the social system *should* be. However, the social community establishes which moral standards are the basis, not researchers or managers. As shown later, the moral foundations theory (see section 2.5.2) can give further information about actual moral norms as the societal basis where business ethics can attach its paradigm to depict unethical behavior in organizations.

2.4 Unethical Behavior in Organizations

The definition of unethical behavior in this outline will rely on the descriptive approach. Herefore, the definition of unethical behavior by T. M. Jones (1991) captured the idea of descriptive ethics well because he defines general unethical behavior as actions that individuals in a broader community perceive as "morally unacceptable" (p. 367). Hence, unethical behaviors are those actions that violate moral norms in a given social context. In the specific, unethical behavior in organizations is any action of "organizational members [that] violates widely accepted (societal) moral norms" (Kish-Gephart et al., 2010, p. 2). Hence, the community outside of the organization is the social reference of morality that defines unethical behavior within the organization. Therefore, the moral norm reference for unethical behavior does not end at the organization's boundary. Morality within the organization must

be permanently embedded in a broader society. Kluver et al. (2014) coined this the "common norm standard" (p. 154).

Moreover, the descriptive definition of unethical behavior has the advantage of getting better access to the social system better when managing business ethics. Specifically, it allows setting the focus on individual factors (e.g., processes of moral cognition, ego strength, or locus of control), situational factors (e.g., the moral intensity of an ethical issue or the organizational culture), and their interaction that promote or prevent unethical behavior in organizations (Bass & Hebert, 1995; Church et al., 2005; Treviño, 1986). All these aspects are considered essential factors for the ethical quality of relationships within the organization.

Furthermore, the adjectives *unethical* and *immoral* can be considered synonymous in the paradigm of descriptive ethics, which is not the case in the paradigm of normative ethics. In descriptive ethics, the focus of ethics is on actual morality. Therefore, both unethical and immoral behavior can address the disapproval of morally unacceptable behaviors to the broader community. In normative ethics, the focus of ethics is on normative prescriptions. Because actual morality is not the primary basis of normative ethics, the adjectives unethical and immoral are defined not to be synonymous. Only the adjective unethical describes which behaviors comply with normative principles. Table 2.1 summarizes this assumption.

Table 2.1

Categorization of Unethical and Immoral Behavior by the Discipline of Ethics

Actions/approach	Normative ethics	Descriptive ethics
Unethical behavior	Apply	Apply
Immoral behavior	Not apply	Apply

Before depicting morality, a few remarks are given on the difference between unethical and counterproductive behavior and the common ground between illegal and unethical behavior. First, counterproductive behavior is the deviance from organizational norms, such as wasting company resources or intentionally working slowly (Robinson & Bennett, 1995, p. 568), it could be unethical behavior, but this is not necessarily deviance from moral norms and does not perfectly equal unethical behavior. Second, Treviño and Nelson (2017, pp. 21–22) compared unethical behavior and illegal behavior in a Venn diagram which shows that both concepts

do not entirely overlap. For instance, lying to a colleague by withholding vital information to gain a promotion advantage is unethical but not coded in law as illegal. On the other hand, harming someone by stealing is unethical and coded in law as illegal behavior. Under some circumstances, illegal behavior might not be unethical. The abolition of §219a, which prohibited explicit advertising for abortion counseling, was not repealed until March 2022. Medical personnel and organizations could face legal conflict if they offered such services. However, the zeitgeist of the majority of the German population saw it as not immoral for a significantly more extended period before that. Another example is the lobbying practices of pharmaceutical companies to get authorization for specific pesticides which people suspected of causing cancer. Therefore, illegal behavior is considered unethical only if a violation of morality's moral norms occurs.

2.5 Morality

In order to get an augmented view of how to understand and manage business ethics, a particular concept of morality is needed because morality represents the core of descriptive ethics. However, researchers in organizational behavioral ethics rely on a single instance of morality, such as violating moral norms like dishonesty, lying, cheating, fraud, deception, stealing, theft, sabotage, or misrepresentations in financial reports. Also, researchers usually depict ethical behavior as compliance with moral norms through, e.g., honesty, compliance with laws, charitable giving, or whistle-blowing (Barsky, 2008, pp. 65–66; Clor-Proell, Kaplan, & Proell, 2015, p. 773; Gino & Bazerman, 2009, p. 709; Kish-Gephart et al., 2010, p. 2; M. E. Schweitzer, Ordóñez, & Douma, 2004, p. 423; Treviño et al., 2006, p. 952; Welsh & Ordóñez, 2014b, p. 80). However, it is important to depict the particularity of moral norms because this can provide a generic understanding of possible evaluation standards for unethical behavior, the psychological mechanism behind it, and its variations between different cultural contexts. Also, being generic allows not being too tied to specific moral norms. Otherwise, it entails the risk of missing relevant aspects of ethical concerns.

However, the definition of morality is one of the oldest debates in history, and there are many competing perspectives on what morality should entail (Haidt, 2008, p. 65). As mentioned before, morality was regarded as a specific repertoire

of actual moral norms in a given society (Bicchieri, 2017, p. 31). The outline will extend this view by depicting morality under the theory of social norms (Bicchieri, 2006, 2017), the moral foundations theory (Graham et al., 2013, 2018), and the relationship between the moral foundations and moral norms to define a profound concept of morality. The advantage of using these two theories is that the theory of social norms has good operationalizability by explicitly unfolding moral norms into a personal and social component. Also, it can give further information about how personal and social elements of moral standards can relate to each other to motivate ethical or unethical actions in organizations. The moral foundations theory can be a generic extension of the theory of social norms, offering a further explanation for the deeper psychological structure of morality in the form of broader moral categories and moral values. These categories and values are prone to capture classes of moral norms without being tied to specific circumstances.

The following working definition of morality will be proposed to obtain an overarching common ground for its understanding. The working definition for this outline relies on the concepts of T. M. Jones (1991), Kish-Gephart et al. (2010), Bicchieri (2017), and Graham et al. (2013):

> *Morality is a set of particular rules in the form of a shared and accepted set of moral norms in a broader community. Moral norms consist of personal normative beliefs and mutually consistent social expectations about actions that a sufficiently large subset of individuals in a given community considers appropriate, thereby affecting and guiding their behaviors. Whereas moral norms are context-specific, moral foundations and moral values are the underlying generic concepts that capture classes of moral norms.*

According to the definition, morality consists of three aspects: moral norms, moral values, and moral foundations. Therefore, these elements of morality will be presented in general in the following two sections. First, moral norms are unfolded with the theory of social norms (see section 2.5.1). Second, the moral foundations theory (see section 2.5.2) describes the concepts of moral foundations and the corresponding moral values. Afterward, these elements of morality are piled up

into a *three-layer concept of morality* (see section 2.5.3) and will be discussed with a particular focus on the organizational context on the normative level.

2.5.1 Theory of Social Norms

According to the theory of social norms, morality is a set of specific rules in the form of shared moral norms, which are codes of conduct for behaviors that directly and indirectly affect others (Bicchieri, 2017, p. 31). A moral norm consists of a personal normative belief, which many individuals in a given society may share through mutually consistent social expectations. A personal normative belief is a preference for specific conducts and the conviction about their appropriateness (e.g., I/others should not commit balance forgery to obtain a goal). Social expectations consist, on the one hand, of empirical expectations about the actual behaviors of others in a reference network (e.g., I believe that others do not commit balance forgery to obtain a goal). On the other hand, social expectations entail normative expectations about other people's personal normative beliefs in the reference network (e.g., I believe that others prefer that I/one should not commit balance forgery to obtain a goal) (Bicchieri, 2017, p. 71). This concept overlaps with Bandura's (2016, p. 26) perspective of considering moral norms as an intrapersonal matter embedded in relationships with others.

A crucial point in the theory of social norms is the concept of social conditionality. Social conditionality states that individuals follow norms only when they realize they are expected to do so by a critical number of others. Moreover, social conditionality differentiates norms further into social and moral norms. Accordingly, an expectation is a primary motivation to act according to social norms. In contrast, a personal normative belief is a primary motivation to act according to moral norms. Hence, even though moral norms are shared, the primary pressure to comply with moral norms originates from the individual. In contrast, others in a reference network play a minor role in compliance with moral norms. Thus, Bicchieri (2017) stated that "the fact that they share a moral belief does not imply that their choice is influenced by their social expectations. Their preferences are not socially conditional: They would prefer not to harm innocents no matter what" (p. 72).

However, there are also arguments to relax the idea of social conditionality concerning moral norms. Of course, in their very nature, moral norms do not have

to be socially conditional. Hence, personal normative belief about a moral norm can guide behavior irrespective of corresponding social expectations. Nevertheless, under certain circumstances, social expectations demand to follow moral norms. Because once individuals morally disengage (Bandura, 2016) or attach different relevancies to moral norms due to different cultural backgrounds, the perception of the expectations of others concerning moral norms can contribute to its compliance. The reason is that the violation of moral norms triggers strong emotional reactions among others and is, therefore, to a great extent, subject to criticism and punishments to bring individuals back in line (Haidt, 2001, p. 817). Therefore, different forces might exist to act in line with moral norms, either from personal preferences, social pressure, or both simultaneously. Hence, moral norms can but must not be socially conditional for motivating ethical behavior. The concept of moral capital in organizations will capture this more precisely with two forces of compliance on organizational members' ethical actions (see section 2.6).

2.5.2 Moral Foundations Theory

The moral foundations theory builds on the evolutionary psychology perspective. In the evolution paradigm, morality results from the process of natural selection. It has the function of fitting into the demands of the social environment. Hence, the theory defines morality over its function: to suppress or regulate ethical behavior in a social context for the sake of survival. Furthermore, individuals are equipped with several moral segments regulating and identifying ethical behaviors. These moral segments are the so-called moral foundations and reflect that due to evolution, several foundations appeared in order to face different environmental challenges. Furthermore, moral foundations are considered innate docking stations in the brain. The relevancies of the moral foundations are formed through socialization in cultural contexts and are, therefore, highly dependent on environmental influences (Graham et al., 2013, 2018).

Moral foundations are broader categories, whereas each module is bipolar by categorizing specific behaviors in the continuum of ethical to unethical. Hence, the names of the moral foundations indicate the extremes of the bipolar continua. The so far most well-identified foundations are fairness-cheating, care-harm, loyalty-betrayal, authority-subversion, and purity-degradation (Graham et al., 2018, pp. 212–

213). Moral foundations are based on generic functionalities and are not restricted to specific content areas such as justice, rights, or welfare. Therefore, their functions can define and further characterize the different foundations (Graham et al., 2011, 368; Graham et al., 2013, pp. 67–71; Haidt, 2012, p. 146). The functional definitions are short and capable of including a broad range of ethical concerns:

- *Fairness-cheating* addresses reciprocal altruism to gain benevolent exchanges in cooperations of non-kin relationships. Individuals observe the behavior of others, and if they detect cheating behavior, they prefer to interact with other exchange partners.
- *Care-harm* depicts the protection of vulnerable others in order to ensure psychological and physiological integrity.
- *Loyalty-betrayal* has the function of fostering cooperation in order to form cohesive in-groups to better compete with other coalitions.
- *Authority-subversion* refers to accepting authorities to support beneficial relationships within hierarchies.
- *Purity-degradation* characterizes the avoidance of contagious diseases.

According to the moral foundations theory, every moral foundation is linked to specific emotional reactions triggered if an individual recognizes unethical behavior (Haidt, 2012, p. 124). Emotions associated with fairness-cheating are gratitude towards the benefactor, anger for the cheater, and potentially guilt for unfair actions. Such emotions are triggered, for example, if someone cheats, deceives, or rips off an advantage at the cost of an exchange partner. Associated emotions in the care-harm foundation are empathy for the victim and anger towards the perpetrator. This foundation triggers the emotion of empathy with an individual who suffers from any cruel or hurting action and causes anger towards the perpetrator who inflicted the harm. In loyalty-betrayal, the emotions are pride towards the in-group and rage towards traitors if the group faces a threat or a challenge. Authority-subversion can inflict a degree of respect that involves emotional responses such as fear toward higher-ranked individuals. Finally, purity-degradation is associated with the emotion of disgust when exposed to diseases or the waste of resources (Graham et al., 2013, p. 68). However, current evidence questions the assumption of the moral foundations theory concerning foundational specific emotions. Instead, the link between the foundations with specific emotional reactions is ambiguous. Empathy and disgust

are the only emotions that are foundational specific emotions insofar as they are mostly linked to care-harm and purity-degradation, respectively, as predicted by theory (Landmann & Hess, 2018, pp. 4–7).

Furthermore, the moral foundations theory relies on the social intuitionist model (Graham et al., 2013, pp. 66–67). The central statement of the social intuitionist model is the idea of the "gut feelings in the mind" (Haidt, 2001, p. 825), which means that moral intuitions appear automatically and immediately in the conscientiousness of moral judgment when an individual is confronted with a moral issue (Haidt, 2001, p. 818). Moral intuitions ensure quick orientations and responses to moral issues of different kinds in the social environment. Therefore, moral intuitions are a kind of heuristics (Sinnott-Armstrong, Young, & Chushman, 2010, pp. 255 ff.) because they are mental shortcuts containing emotional valences towards the evaluation object that directly influence moral judgments (Haidt, 2001, p. 818). Emotional valences are ascribed emotional reactions to evaluation objects and expressed as positive or negative feelings such as "this event is good or bad for me" (Ellsworth, 1994, p. 152). Moral foundations theory specifies moral foundations and their attached emotional valences, which arise contingent on the present moral issue (Graham et al., 2013; Landmann & Hess, 2018). Therefore, moral reasoning is not the main driving force for moral judgment but rather a post hoc rationalization to reflect a moral intuition and justify a moral judgment. A complicated moral issue can trigger various emotional valences, leading to contradictory moral judgments. Moral reasoning can then help to reflect moral intuitions until a moral judgment becomes more favored than another does. Moreover, the social part of the *social* intuitionist model describes the possibility of influencing the moral intuitions of others by communicating moral reasoning deliberations. Thus, recognizing a moral issue can heavily rely on social exchanges (Haidt, 2001, p. 819). For instance, peers in the organization can either give further hints on whether the conduct was unethical or even may talk down particular moral issues, thereby shaping moral intuitions and corresponding moral judgment of others.

On top of the moral foundations, moral values are a further layer of morality. Values are general beliefs about "desirable modes, means and ends of actions" (Kluckhohn, 1951, p. 395). Applied to situations, they can be considered a guideline to evaluate and select behaviors and events and have relative importance (Schwartz

& Bilsky, 1987, p. 551). Moral values are a subset of a range of values where the desirability of actions addresses benefits that individuals can provide to other individuals (Kekes, 1993, p. 44). Furthermore, moral values are developed cultural terms for these moral foundations to express normative ideals in a given cultural context. Specifically, these normative ideals address a set of ethically appropriate actions that point to the moral foundations and their corresponding emotional reactions. Moral values within the fairness-cheating foundations are fairness, justice, or trustworthiness. The normative ideals that are just, fair, and trustworthy express, for instance, that a person is known to be a reliable exchange partner, which fosters efficient cooperation. Analogously, in the care-harm foundation, individuals perceive others who look after the well-being of vulnerable others as kind or caring. Furthermore, moral values in the domain of loyalty-betrayal are patriotism and self-sacrifice for the benefit of the group. Authority-subversion entails moral values of obedience and deference, and purity-degradation is associated with moral values of temperance, chastity, piety, and cleanliness (Graham et al., 2013, p. 68).

Moreover, due to its multiple categories, the moral foundations theory is a concept of moral pluralism (Graham et al., 2013, p. 67). Concepts of moral pluralism can explain within and between variances of the relevancies of moral concerns that can lead to conflicts about them (Kekes, 1993, pp. 60–63). One reason is that individuals assign relative importance to moral values (Schwartz & Bilsky, 1987, p. 551), which may come substantially from different socialization contexts. Different socialization contexts can cause, for instance, some individuals to prefer the foundations of fairness-cheating and care-harm. In contrast, other individuals may rely on all five moral foundations. Subsequently, conflicts could appear because each side does not understand the different relevance of the moral foundations of the other (Graham, Haidt, & Nosek, 2009; Haidt & Graham, 2007).

Empirically, the moral foundations theory is operationalized in the Moral Foundations Questionnaire (MFQ), which incorporates the generic nature of the moral foundations. First, the MFQ has acceptable evidence for its reliability, construct, and predictive validity based on a predominantly North American sample (Graham et al., 2011, pp. 371–380). Other researchers replicated the MFQ findings with various samples from different countries (Davies, Sibley, & Liu, 2014; Metayer & Pahlavan, 2014; Yilmaz, Harma, Bahcekapili, & Cesur, 2016). Second, the items reflect the

generic nature of the moral foundations as they do not specify what individuals precisely perceive as their ethics. Therefore, the MFQ can capture various moral concerns without being too tied to a cultural context or a specific situation. This feature lowers the risk of missing relevant moral issues. It emphasizes the descriptive view on ethics, which leaves it up to a certain point open what individuals precisely construct as their ethical reality. For instance, one item for fairness-cheating states "whether or not someone acted unfairly" (Graham et al., 2011, p. 385), which addresses the fairness foundation without saying what individuals exactly perceive as fair.

Central Criticism of the Moral Foundations Theory

Even though the moral foundations have reasonable theoretical assumptions and ample empirical evidence for the validity of the dimensions (Davies et al., 2014; Graham et al., 2011; Metayer & Pahlavan, 2014; Yilmaz et al., 2016), researchers raised concerns about the theory. The main criticisms address the innateness due to the lack of congruence with morality in neuroscience (Suhler & Churchland, 2011), its pluralistic modules (Gray & Keeney, 2015a, 2015b; Gray, Schein, & Ward, 2014; Gray, Young, & Waytz, 2012; C. Schein & Gray, 2015), not appropriately capturing political ideologies (Janoff-Bulman & Carnes, 2016; Kugler, Jost, & Noorbaloochi, 2014; Sinn & Hayes, 2017; K. B. Smith, Alford, Hibbing, Martin, & Hatemi, 2017), or issues with scalar measurement invariances in the MFQ (see Graham et al., 2011) when comparing black with caucasian students (D. E. Davis et al., 2016). Supporters of the moral foundations theory replied to most of these criticisms, such as with the argument of an incommensurable school of thought or with methodological concerns like the inadequate use of the MFQ in erroneous research designs (see Graham, 2015; Graham et al., 2013; Haidt, 2013, 2015, 2016; Haidt & Joseph, 2011; Koleva & Haidt, 2012).

One of the most controversial points is the social intuitionist approach in the moral foundations theory. Specifically, it is the debate about the relation of moral intuitions to moral reasoning and their impact on the processing of moral judgment (Narvaez, 2008; Pizarro & Bloom, 2003; Stets, 2016; Turiel, 2014). Highlighting cognitive processes of moral judgment is relevant because, according to the ethical decision-making model by T. M. Jones (1991, p. 379), moral judgment can play an

essential role in the conduct and classification of unethical behavior. Understanding moral judgment processes and their flaws in the organizational context may allow the management to develop ethical expertise (Provis, 2017, p. 14). Taking the issue of the processing of moral judgment into account could give important guidance on how management programs could be designed to change the property of the organizational social system more effectively.

Researchers in favor of the moral rationalists model depict the forming of moral judgment with a focus on moral reasoning (T. M. Jones, 1991; Kish-Gephart et al., 2010; Kohlberg, 1969; Rest, 1986; Treviño, 1986; Treviño et al., 2006). Moral rationalist models have a long tradition and have substantially impacted behavioral ethics research. Although there is ample empirical support for moral rationalist models, researchers obtain their evidence by applying difficult moral dilemmas that trigger conscious moral reasoning (Weaver, Reynolds, & Brown, 2014, pp. 102–103). However, moral reasoning is slow and cognitively expensive when evaluating all aspects of a moral issue to form moral judgments. Objective moral reasoning to form a moral judgment can work only under limited conditions, such as when confronted with a hypothetical ethical dilemma with enough time to find a solution. Employees are normally confronted with less obvious moral dilemmas or with the issue of whether or not to be compliant with not conflicting moral norms. Therefore, the social intuitionist model emphasizes that due to limited cognitive capacities, individuals have a primacy to use moral intuitions as information for their moral judgments, and moral judgment leads to moral reasoning as a reflective link to a moral intuition (Haidt, 2001, pp. 815–819). There is empirical support for this theoretical claim (Egorov, Verdorfer, & Peus, 2019, p. 820).

Dual-processing or parallel-competitive models combine both perspectives. The *dual-processing model*, such as the default-interventionist model, describes that heuristics are the default and under some circumstances (e.g., the novelty of the issue, cognitive ability, time), reasoning may intervene to revise or replace the heuristic response (Evans, 2006, pp. 381 ff.). Moreover, moral reasoning can transfer to intuition through practice and experience (Evans, 2008, p. 271). The *parallel-competitive model* assumes that both cognitive systems work simultaneously, which can have additive effects on judgments or result in conflicts that individuals solve by, e.g., offsetting one cognitive system (E. R. Smith & DeCoster, 2000, p. 119).

Provis (2017, pp. 6–13) suggested that moral intuitions reduce organizational complexity when forming moral judgments, while this can lead to biased moral judgments. However, retro- and prospective individual reasoning, social discussions, and feedback can improve this mechanism.

Ultimately, the debate about the relationship between moral intuition, moral reasoning, and their primacy for moral judgments is still on stage (Hodgkinson & Sadler-Smith, 2018; Stets, 2016). Thus, the following working concept will capture the core characteristics of the processing of moral judgment:

> *A moral intuition in the organizational environment serves as a complexity reduction for moral judgment. Moral intuitions are innate reactions of the moral foundations concerning basic classes of actions. These intuitions can be influenced by experiences containing retro- and prospective individual moral reasoning, social exchanges through communication, and feedback regarding one's expressed moral judgment.*

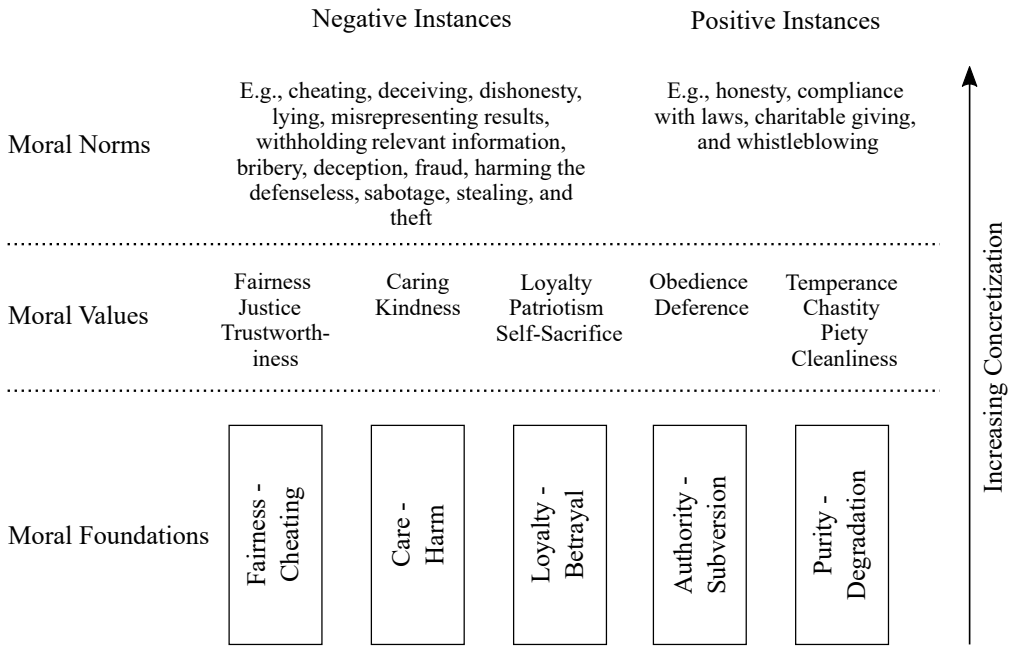
2.5.3 Three-Layer Concept of Morality

The moral foundations theory does not explicitly comprise moral norms in general or organizational moral norms in specific, although it would be reasonable to connect both. Moral values are the main bridging point between moral foundations and moral norms: Moral values arise from the moral foundations and are the basis for moral norms. The reason is that norms are realizations of values in the form of social expectations (Baurmann, Brennan, Goodin, & Southwood, 2010, pp. 9–10). Piling these elements up results in a concept of morality as a three-layer approach. Figure 2.2 captures the idea of the moral foundations, moral values, and moral norms as a three-layer concept for the understanding of morality in general, but with a focus on the organizational context on the normative level.

The particular relevancies of the moral foundations and corresponding moral values rely on a society in which moral norms are socially constructed. The exact specification of moral norms also builds on the societal basis but is more context-specific. Hence, the context of moral norms can be changed according to the research interest. Moreover, the layers represent an increasing concretization from the general to the specific. Moral foundations are generic classes, moral values expressions of normative ideals, and moral norms are a further precision, either as negative or

Figure 2.2

Three-Layer Concept of Morality with a Focus on the Organizational Context on the Normative Level



Note. Own illustration based on Graham et al. (2013, 2018) and organizational behavioral ethics literature.

positive instances from these normative ideals concerning a context. A negative instance of a moral norm is the personal normative belief and the social expectation of how one *should not* behave, whereas a positive instance means how one *should* behave in specific situations. Essentially, the term morality – initially defined as a shared and accepted set of moral norms in a broader community (see section 2.4) – is here refined through the more profound psychological roots in the form of the underlying moral values and foundations.

The top layer in Figure 2.2 shows possible moral norms that researchers in behavioral ethics use to operationalize unethical organizational behavior as the violation of negative or compliance with positive instances of moral norms. The depicted moral norms are specific to the organizational context, which a meta-analytic study of unethical decisions at work by Kish-Gephart et al. (2010), two review articles about behavioral ethics research by Treviño et al. (2006) and Treviño et al. (2014), and the current goal-setting and unethical behavior research reveal (see Barsky, 2008, 2011; Clor-Proell et al., 2015; Keith, 2018; Niven & Healy,

2016; Ordóñez & Welsh, 2015; M. E. Schweitzer et al., 2004; Welsh, Bush, Thiel, & Bonner, 2019; Welsh & Ordóñez, 2014b). For example, a negative instance captures the personal normative belief and social expectations that one should not steal organizational resources or overstate performance levels about the outcome of a goal. A positive instance could be blowing the whistle if someone notices severe misconduct by colleagues or executives.

Although it is not always straightforward to align all moral norms to specific moral values, it is noticeable that these organizational moral norms primarily address the foundations of fairness-cheating and care-harm. For example, dishonesty, lying, or cheating are negative instances of moral norms and may address moral values of fairness or trustworthiness and, in turn, the fairness-cheating foundation. In contrast, charitable giving and whistleblowing are positive instances of moral norms and may belong to kindness and caring and, in turn, to the care-harm foundation. One reason for the focus on these foundations might be that the concept of care-harm has been primarily depicted in moral theories (Gerlach, Teodorescu, & Hertwig, 2019, p. 1) and that dishonesty has become a research area of behavioral ethics in its right (Reynolds, 2006, p. 234). Moreover, most of the behavioral ethics researchers reside in WEIRD (Western, educated, industrialized, rich, and democratic) countries, where prominent business scandals usually refer to the foundations of fairness-cheating and care-harm (Kluver et al., 2014, p. 154). It can further explain why they preferably investigate morality in the fairness-cheating and care-harm dimensions.

Under the umbrella of descriptive ethics, the three-layer concept of morality can serve as a normative framework for business ethics concerning the academic, management, and social structure approach to suppress incidences and spread unethical behavior among the workforce. The reason is that this understanding of morality relies on academically identified psychological mechanisms that management can address on several conceptual levels. For instance, moral pluralism allows the identification and evaluation of different relevancies of moral concerns and possible heterogeneity among the workforce and associated conflicts. Also, addressing the moral foundations among the workforce may succeed by addressing moral values or norms. It is possible to work only on the normative level as long as it addresses the underlying foundational background. Hence, the probability of management programs shaping the true ethicality of an organization's social structure may increase.

Subsequently, the management's influence on an organization's social structure to suppress the spreading of unethical behavior can become more effective.

Finally, the three-layer concept of morality needs further precision while focusing on business ethics, especially within organizational boundaries. The simple enumeration of the moral norms mentioned above is not sufficient. A concept of behavioral control mechanisms by the moral self-concept and others within an organization is necessary to complete the picture. Therefore, the following section extends morality within an organization with the concept of *Moral Capital* to highlight social and self-regulative control mechanisms within organizations.

2.6 Moral Capital

The term *capital* in business usually refers to resources owned by organizations and used to produce goods and services (Ratnapala, 2003, p. 241). Such resources depict, among others, financial capital such as cash, earnings, losses, and debts or capital as financial equivalents such as equities, goodwill, fixed, or current assets. Another usage in this context refers to resources as human capital, such as skills and competencies, which individuals can acquire through education and on-the-job training measures that influence their productivity and, subsequently, their return on earnings (Becker, 1995). These depicted understandings of capital in the business context come close to the understanding of Bourdieu (1984), who regarded economic capital, for instance, as land, property, industrial and commercial profits, wages, salaries, or stock returns, and education not in the sense of skills and productivity, but in the sense of incorporated cultural capital. Nevertheless, Bourdieu (1984) depicted economic capital only as one kind of capital. He used the term capital rather as a generic concept to describe the social relations of individuals within social systems. In this sense, capital can be understood as financial or human resources and as describing the structural properties of social systems within organizations.

The term *moral capital* in scientific literature has various usages and meanings, and there is no unifying concept. The common ground in using moral capital is that all concepts refer more or less to moral values and norms and vary the point of view. For instance, researchers depict moral capital as a moral stance or an individual reputational resource (Dal Bo & Tervio, 2013; Gowricharn, 2004; Kane,

2001; Ratnapala, 2003; Sherman, 2006; Silverstein, Conroy, & Gans, 2012; Swartz, 2009), as the production of the moral superiority of nations in wars (Przybylowicz & JanMohamed, 1991), in terms of institutions as agencies of moral regulation (Galston & Wasserman, 1996; Valverde, 1994), as an organizational reputational resource to reduce transaction costs (Bryant, 2005; Dressler, 2017; Godfrey, 2005; Ratnapala, 2003), or implicitly as a structural property of a social system (Jaye, Young, Egan, & Williamson, 2018; Rosenberg, 1990).

Especially, Haidt (2012, p. 445) coined the term moral capital explicitly as a structural property of a social system, and Kluver et al. (2014, p. 154) further specified moral capital within the boundaries of an organization as an organizational resource that may have the power to suppress unethical behavior. Specifically, moral capital can be considered as consent among organizational members about values, norms, and corresponding practices based on the moral foundations (Haidt, 2012, p. 341). Moral capital as the social structure influences how individuals in an organization can carry out value-creation activities, for instance, either at all costs by harming specific stakeholders or with moral concerns to prevent harm to the stakeholders in joint organizational efforts. Thus, moral foundations as an individual factor of moral cognition have to transcend to shared organizational moral values and moral norms as a situational variable to speak about the existence of moral capital. Hence, the exceptional feature of moral capital compared to other moral capital concepts lies in its close connection to the moral foundations, which can give further implications for reducing unethical behavior in organizations.

The idea of moral capital by Haidt (2012) and Kluver et al. (2014) has not been broadly recognized in behavioral business ethics literature. Although ample empirical evidence exists for the moral foundations (Davies et al., 2014; Graham et al., 2011; Metayer & Pahlavan, 2014; Yilmaz et al., 2016), there is, to the author's knowledge, no empirical work explicitly depicting moral capital within organizations. A few exceptions depict their concept of moral capital theoretically, for instance, concerning building employment relationships (Lopes, 2018), ethical decision-making for sustainable and responsible investments (Pilaj, 2017), or as a normative standard in behavioral ethics research to classify unethical behavior (Fortin, Nadisic, Bell, Crawshaw, & Cropanzano, 2016). The low popularity of moral capital may be because there might be definitional imprecisions and an unclear

distinction compared to similar concepts, such as ethical culture in organizations in the outlines of Haidt (2012) and Kluver et al. (2014). Therefore, the following sections provide a precision of the concept, proposing a draft of a conceptual framework and discussing how moral capital relates to the concept of organizational culture in organizations.

2.6.1 Precision of the Concept

The procedure to precise the concept of moral capital is to discuss definitional issues and highlight key factors concerning the content and function of moral capital to suppress unethical behavior in organizations. Haidt (2012) initially defined moral capital as "the degree to which a community possesses interlocking sets of values, virtues, norms, practices, identities, institutions, and technologies that mesh well with the evolved psychological mechanisms and thereby enable the community to suppress or regulate selfishness and make cooperation possible" (p. 341). Thus, existing moral capital can suppress unethical behavior within organizations (Kluver et al., 2014, p. 154). Firstly, the content of moral capital offers several factors with a broad focus that makes it murky which factors matter most regarding unethical behavior. A suggestion is to focus on moral values (a synonym to virtues, see Graham et al., 2009, p. 1030), moral norms, and resulting practices because moral values are fundamental normative ideals of morality (Graham et al., 2013, p. 69), and moral norms offer powerful guidance for ethical behavior (Treviño & Nelson, 2017, pp. 189–190). Both directly address the psychological mechanisms, which are the moral foundations such as fairness-cheating or care-harm (Kluver et al., 2014, p. 154; Graham et al., 2013, pp. 67 ff.). Restricting the content to moral values, moral norms, and resulting practices makes the core concept of moral capital more clear. However, it does not exclude connections to other constructs, e.g., to corresponding institutions or technologies within organizations.

The most intense definitional discussion criticizes the lack of precision in the function of moral capital, which is to foster ethical behavior by suppressing selfishness and making cooperation possible (Kluver et al., 2014, p. 154). Kluver et al. (2014, p. 151) admitted that "self-interested behavior and unethical behavior are not necessarily synonymous". Moreover, Lu, Zhang, Rucker, and Galinsky (2018, p. 466) offered a more comprehensive view of (un-)ethical behavior concerning

(un-)selfishness. On the one hand, selfish behavior is unethical if self-beneficial motives drive the conduct to not comply with moral norms, e.g., pretending to have reached a goal to get an appreciation or a monetary reward. Unselfish behavior is unethical if other-beneficial motives drive the conduct that disregards moral norms, for instance, misstatements in financial reports to achieve tax advantages for the organization. On the other hand, selfish and unselfish behavior can be ethical as long as self- and other-beneficial motives of the conduct do not offend moral norms. An example of selfish and ethical behavior might be to put all efforts into one's career for a higher salary, enabling one to afford luxury goods for oneself with no negative consequences for others. An example of unselfish and ethical behavior might be volunteering in a soup kitchen in the context of an organization's corporate social responsibility program to provide benefits to vulnerable others in need.

The cooperative element of moral capital's function is also imprecise for the following reasons. The definition by Haidt (2012, p. 341) suggests that selfish behavior is the opposite of cooperation and that the first is unethical and the last is ethical behavior. However, collusive cooperation, such as ripping off financial benefits for the organization at the cost of other stakeholders, is unselfish and cooperative simultaneously and as contrary to ethical behavior as it could be. Also, being uncooperative in collusive cooperation is ethical. In addition, being uncooperative could be counterproductive behavior without violating moral norms, such as intentionally working slowly (Robinson & Bennett, 1995, p. 568). Hence, selfishness and cooperation are important in classifying unethical behavior. However, as shown, selfishness and uncooperative activities may also address ethical behavior under specific circumstances.

Finally, reducing moral capital to its essential elements can sharpen its definition. That consists of moral values, moral norms, corresponding social practices, and the function of suppressing unethical behavior. Accordingly, the following definition of moral capital applies:

> *Moral capital is the degree to which organizational members have a consensus about values, norms, and social practices that correspond with the moral foundations, thereby enabling the organizational community to suppress or regulate unethical behavior.*

2.6.2 Draft of a Framework

The moral capital framework is a further precision from the previously depicted three-layer concept of morality (see Figure 2.2). It can be understood as a draft, capturing various relationships, and is open to further theoretical developments. Indeed, moral capital is, to some extent, the morality of an organization. However, the difference between moral capital to the previously defined three-layer morality concept refers to three crucial prerequisites. Firstly, moral capital takes the reference network in the *boundaries of an organization* into account. However, this is not sufficient and requires further enhancement. As mentioned before, the community outside of the organization is the social reference of morality that defines unethical behavior within the reference network of the organization. Hence, the second prerequisite is that moral capital has to correspond to some degree with the *common norm standard*, i.e., with prevailing ethical norms that are widely recognized (Kluver et al., 2014, p. 154) to reflect societal beliefs about morality where the organization is embedded. Therefore, the assumption about the common norm standard leads to the third prerequisite: There has to be a high *within-group agreement* about the relevancies of the underlying selected *moral foundations*. It reflects the general societal moral basis among a sufficiently large subset of organizational members to speak about the existence of moral capital. The agreement increases the chances of suppressing unethical behavior. Given the mentioned points, organizational moral values and context-dependent moral norms can emerge, which reflect ethical normative control mechanisms within organizations.

Furthermore, the moral capital framework focuses on the normative level that highlights self-regulation and social control mechanisms within organizations. The asset of this is that the framework can rely on the theory of social norms (Bicchieri, 2006, 2017), thereby allowing to take advantage to unfold moral norms in the individual component of self-regulation (Bandura, 2016) and the social component of control (Coleman, 1990) concerning ethical behavior in a social system of an organization. Hence, forces to comply with moral norms may arise from personal normative beliefs, social expectations, or both.

Focusing on the normative level does not neglect the moral foundations and moral values because the nature of moral norms always originates from a deeper

psychological basis. Hence, moral norms can be investigated as either abstract placeholders or with precise reference to the underlying psychological roots. Also, the focus on the normative level does not exclude the possibility of business ethics management to tackle moral foundations and corresponding moral values directly. However, the deeper levels are more blurred and, therefore, more challenging to grasp than moral norms.

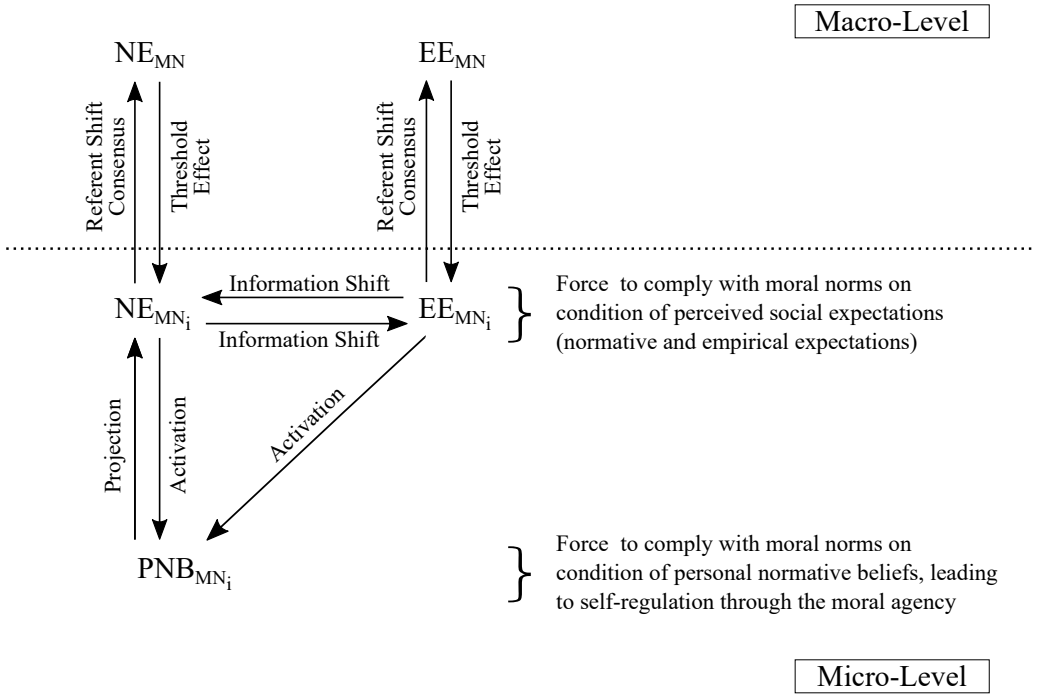
Next, the concept includes a theoretical bridge to connect morality's psychological mechanisms on the micro-level and its relation to the macro-level. However, there is no agreement about the precise definitions of the terms micro- and macro. A broad meaning refers to that micro depicts smaller entities than suggested by the macro-level (Wippler & Lindenberg, 1987, p. 135). Micro-level usually refers to individual entities, whereas macro-level refers to a collection of individual entities. It is generic insofar as it can stand for a group, department, or organization's whole social system. It has to be made explicit according to the research interest and in line with the arguments.

Figure 2.3 summarizes the core conception of the moral capital framework and its function to suppress unethical behavior in organizations in a formalized manner to improve precision in the arguments. First, a set of moral norms (MN) are behavioral rules - specifically, instances of moral values and the underlying moral foundations - that apply to settings where there is no moral dilemma (type NMD). Settings of type NMD refer to all settings where a moral norm violation can or does take place with an ethical alternative. For instance, due to a challenging goal, one may want to cheat by misstating achieved performance levels. The setting is that one has the option to either violate the moral norm of honesty, such as to lie, or to be honest such as to admit goal failure. Settings of type NMD are opposed to settings with a conflicting moral dilemma (type MD). That is to say, the decision to comply with one moral norm may violate another. For instance, such a setting would be a manager giving promotion to a good friend who is not the best candidate. It is a conflict between the moral value of justice towards candidates that are better qualified for the position and the moral value of loyalty towards the friend. Excluding situations of type MD better serves the descriptive definition of unethical behavior in an organization since a moral dilemma implies that any chosen alternative is, in one part, unethical, violating either one or the other moral norm. Accordingly, the

descriptive definition of unethical behavior describes rather situations of type NMD of whether to comply or not comply with a moral norm.

Figure 2.3

The Concept of Moral Capital in Organizations and the Forces of Compliance



Note. NE = Normative expectations, EE = Empirical expectations, PNB = Personal normative beliefs, MN = Set of moral norms, i = Individual.

Furthermore, on the micro-level, the individual, denoted with i, has a personal normative belief PNB_{MN_i} that could lead to:

- Self-regulation, i.e., i prefers to comply with MN in NMD and may self-sanction non-compliant behavior of i
- Alter-regulation, i.e., i prefers others to comply with MN in NMD and may sanction others for the violation of MN in NMD

Perceived social expectations are the individuals' *perceptions* about the macro-level and not the macro-level itself. A perceived social expectation consists of a normative expectation NE_{MN_i} and an empirical expectation EE_{MN_i}:

- NE_{MN_i} includes the belief of i
  - that a sufficiently large subset of organizational members expect i (and others) to comply with MN in NMD

  - that a sufficiently large subset of organizational members may sanction i (and others) for the violation of MN in NMD

- EE_{MN_i} includes the belief of i
  - that a sufficiently large subset of organizational members comply with MN in NMD

On the macro-level, aggregated social expectations, i.e., normative expectations NE_{MN} and empirical expectations EE_{MN} describe mutually consistent perceived social expectations among a sufficiently large subset of organizational members. Aggregated social expectations are not denoted with i since it is a higher-level phenomenon derived from many individuals. The determination of "sufficiently large" is an empirical question. It captures the idea that there are different beliefs among i about the actual number of organizational members on the macro-level who have mutually consistent perceived social expectations. Moreover, there are also different thresholds among i concerning the specific size of organizational members to recognize that there are social expectations (Bicchieri, 2006, p. 12)

Moral capital can strongly impact compliance with moral standards because it has two forces on organizational members' actions. One force for compliance is due to the self-regulative aspect of personal normative beliefs PNB_{MN_i}. The reason is that personal normative beliefs are prone to be closely related to individuals' moral agency. Personal normative beliefs could provide the foundation for moral agency, whereas moral agency turns personal normative beliefs into action. Specifically, moral agency is an individuals' psychological self-regulation capability to compare one's conduct with their own internalized moral norms and to adjust their behaviors (Bandura, 1991a). The own personal normative beliefs are the bases for internalized moral norms and can be the standard for self-regulatory mechanisms. In particular, the self-regulation mechanism consists of three main functions that regulate the behavior: self-monitoring, self-evaluation, and affective self-reaction (Bandura, 1991a, pp. 68–70). In this case, self-monitoring is an observation of the own thoughts, specifically the anticipation of a moral norm violation, such as lying. Afterward, the individual evaluates the anticipated conduct regarding the own moral standards and derives a judgment about the moral appropriateness of the intended action, which reflects the personal normative belief. The discrepancy between internalized moral standards

and thoughts triggers affective self-reactions, which are intense self-sanctions in the form of negative emotions like guilt, which is, among other emotions, an essential emotional valence in the moral foundations theory (see Graham et al., 2013, p. 68). In turn, these affective reactions lead to a revision of initially intended unethical conduct by instead choosing ethical over unethical actions to reduce the discrepancy between moral standards and intended actions (Bandura, 2016, p. 4).

The other force of compliance depends on perceived social expectations. Normative expectations NE_{MN_i} and empirical expectations EE_{MN_i} have a substantial impact on decision-making and the conduct of employees for the following reasons. NE_{MN_i} is the belief of i that others in the reference network expect i to comply with MN in NMD and are entitled to have control over the actions of i by using various sanctioning mechanisms. NE_{MN_i} has, therefore, a demanding nature. Observed, experienced, or anticipated sanctions may refrain i out of fear of engaging in unethical behavior if i believes that a sufficiently large subset of organizational members can sanction i. However, this does not mean others in the reference network will sanction transgressive behavior. It might be enough that i believes that a sufficiently large subset of organizational members is at least capable and possibly willing to sanction i (Bicchieri, 2006, p. 15). In addition, normative expectations NE_{MN_i} includes the belief of i that these normative expectations towards i also apply to others in the reference network.

Empirical expectations EE_{MN_i} give a force for compliance because observing specific common practices provides information for i about the appropriateness of actions to coordinate activities and how to solve organizational problems. The force for compliance concerning perceived empirical expectations has an orientational character. Therefore, following such practices may come from a desire of i to reduce the complexity of ambiguous situations (Bicchieri, 2006, pp. 29–30; Bicchieri, 2017, p. 18). Expected practices that correspond with a particular set of moral norms MN may even lower the probability that i questions such practices because of their fit with the moral foundations. Therefore, i may intuitively imitate such practices.

The next question is which force of compliance is superior, and what might be their combined effect? Researchers cannot precisely answer this issue because there is no consensus on what precisely distinguishes social expectations from

individual moral norms (Dunning, Anderson, Schlösser, Ehlebracht, & Fetchenhauer, 2014, p. 125). Empirical evidence about the relative importance of normative over empirical expectations to comply with moral norms is mixed on the perceived social expectation level. For instance, there is evidence from laboratory experiments that either the presence of normative (Raihani & McAuliffe, 2014, p. 10) or empirical expectations (Bicchieri & Xiao, 2009, p. 201) can predict compliant behavior. Also, the relationship between perceived social expectations and personal normative beliefs is not straightforward. Social punishments may have a strong force for compliance, because of their adverse effects, for instance, being a target of gossiping or receiving warning notices for unethical behavior. However, social sanctioning has limits as an external force for compliance because individuals can hide unethical behavior, which then becomes unnoticed by the social environment. Despite the possibility of engaging in unethical behavior secretly, not all individuals violate moral norms. Accordingly, self-regulation must significantly guide moral behavior (Bandura, 1991b, pp. 277–278).

The concept of moral capital supposes a strong regulation of ethical behavior if personal normative beliefs are salient among a sufficiently large subset of organizational members and that perceived social expectation serves as a guard for its activation. Also, perceived social expectations and personal normative beliefs alone may refrain individuals from engaging in unethical behavior. For instance, if an employee in a given organization has activated moral standards, there is no need for social control coming from social expectations. However, social expectations could serve as a safety net to bring individuals back in line if some individuals were unaware of the morality of various situations or were already morally disengaged from moral standards and tried to engage in unethical behavior. Social expectations are also relevant for organizational newcomers to learn the ropes via socialization tactics (G. R. Jones, 1986). Furthermore, personal normative beliefs may contribute to perceived social expectations because individuals potentially carry the societal basis of morality that can emerge to mutually consistent social expectations. Therefore, the interrelation from the depicted constructs in Figure 2.3 may have the capacity to stabilize each other either *directly* or *indirectly* and hence, the structural ethical property of a social system.

Direct effects on NE_{MN_i}: The influence on normative expectations NE_{MN_i} can be threefold, consisting of a projection, information shift, and a threshold effect. First, because i has personal normative beliefs PNB_{MN}, she or he may attribute it to normative beliefs of others in the reference network. This process is similar to the concept of projection, where individuals use the information about their traits as a piece of information about the traits of others (Baumeister, Dale, & Sommer, 1998, p. 1090). Hence, because i may have a preference for alter-regulation and hence, possibly would like others to comply with MN and may sanction them, i also believes that others want i (and others) to comply and may sanction i (and others). Second, according to Bicchieri (2010, p. 302), individuals may infer empirical information to normative expectations (and vice versa) if this is the only information available. In this case, i observes ethical practices from others over a specific time in the reference network, such as being honest in goal statements. i may then refer information from empirical expectations EE_{MN_i} to information about normative expectations NE_{MN_i}. Third, the actual number of organizational members with mutually consistent NE_{MN} increases the likelihood that the threshold of i - which varies among all i - is reached to perceive the information about MN in NE_{MN_i}. For instance, a sufficiently large subset of organizational members may express their expectations concerning the appropriateness of conduct, thereby influencing the moral intuition of i (Haidt, 2001, p. 819). Also, i could experience relevant network members sanctioned transgressive behaviors, further contributing to the formation of NE_{MN_i}.

Direct effects on EE_{MN_i}: The mechanisms influencing empirical expectations EE_{MN_i} are twofold. Individuals may infer normative expectations as information about empirical expectations if this is the only information available (Bicchieri, 2010, p. 302). Normative expectations NE_{MN_i} can influence EE_{MN_i}, because the perception of i what others approve and sanction, i may expect that others will behave compliant with MN in settings of type NMD. The threshold effect from EE_{MN} implies that the bigger the extent of compliant peer behaviors, the higher the chances that i can observe that organizational members act under MN and, by that, contribute to the formation of EE_{MN_i}. In addition, there is no direct effect of PNB_{MN_i} on EE_{MN_i}, because the preference for specific conducts and the conviction about their appropriateness is a normative conception that does impact perceived normative expectations but not directly the belief about the actual compliant behaviors of others.

Direct effects on PNB_{MN_i}: The influence of the reference network can contribute to personal normative beliefs insofar that it can activate the own convictions concerning moral standards. Especially, by observing other examples of ethical acting can make internalized moral standards salient (Gino, Gu, & Zhong, 2009, pp. 393–394) and influence the relevance of moral standards (Bandura, 1991b, p. 278). Activated moral norms are then the bases for self-regulatory mechanisms of the moral agency (Bandura, 2016, pp. 4–6), which may increase moral self-control and, thereby, the force for compliance. Concerning empirical expectations EE_{MN_i}, i has observed from his own experiences or role models that compliant behaviors successfully solved organizational problems, which could activate the personal belief of i concerning moral standards. Concerning normative expectations, they may support the activation of personal normative beliefs due to the observation of i that others were sanctioned for violating moral norms or expressing their expectations. Hence, observation from own experiences and role models can reinforce moral standards' relevancies and, thereby, the self-regulation of moral action. Once moral norms are activated and salient, the likelihood increases that moral agency is activated to regulate ethical behavior.

Direct effects on EE_{MN} and NE_{MN}: Empirical expectations EE_{MN_i} and normative expectations NE_{MN_i} represent the perceptions of what others believe. Its aggregation is an analogous construct but on the macro-level consisting of many individuals with similar perceptions. Here, the referent-shift consensus model (Chan, 1998, pp. 238–239) can apply. It refers to individuals believing what others in the organization perceive and if there is a within-group consensus about such beliefs. In other words, the referent-shift consensus model represents the degree of mutual consistency concerning social expectations. Specifically, normative and empirical expectations of i are beliefs of i about what others expect or do concerning MN in NMD. Subsequently, a high within-group agreement about normative and empirical expectations among i represents the mutual consistency of such expectations on the macro-level.

The advantage of the conceptual framework lies not only in the specification of direct but also in the several *indirect effects*. For instance, there may be an indirect effect of normative expectations NE_{MN} on the macro-level on empirical expectations EE_{MN_i} on the micro-level. A high within-group agreement about NE_{MN} increases the chances that i recognizes NE_{MN_i}, which in turn is a piece of information for

EE_{MN_i}. Another example is the indirect effect of personal normative beliefs PNB_{MN_i} on EE_{MN}. Once moral standards are highly salient, individuals project it as a NE_{MN_i}, which may serve as information about EE_{MN_i}. EE_{MN_i}, in turn, contributes to the referent-shift consensus of EE_{MN}. Furthermore, a high within-group agreement about empirical expectations EE_{MN} can then contribute to stabilizing EE_{MN_i} as a feedback loop. Although not all possible indirect relations are discussed here, they may also apply. However, the moral capital framework allows drawing several indirect relations and represents the possibility of capturing complex effects.

Finally, a discussion about social practices in the context of moral capital is still missing. As initially stated, social practices have to correspond with moral foundations. Therefore, social practices are all actions that contribute to the stability of norms and values that refer to moral foundations. The primary substance of moral norms is expectations about others, but these expectations can only exist or emerge due to specific social practices. Social practices in this context are specific actions such as enforcing sanctions or compliance with moral standards. Hence, social practices are extensions of normative and empirical expectations insofar as they go beyond mere expectations into de facto actions. However, social practices may also transmit moral norms and values over cultural artifacts such as myths, stories, or rituals. Hence, social practices and the whole concept of moral capital show several parallels to the concept of organizational culture.

2.6.3 In the Domain of Organizational Culture

Moral capital is not a distinct concept compared to organizational culture because it can be depicted as the property of a social system or organizational culture. It is just a different point of view, whereas this outline will focus on the social system's perspective due to the more precise idea of the interplay of social structure and action. Nevertheless, discussing moral capital in terms of a general concept of organizational culture (E. H. Schein, 2004) and with a particular focus on ethics (Treviño et al., 1998) is necessary to augment this concept's understanding. Hence, this section's further outline will clarify the central argument that moral capital is the informal part of an ethical organizational culture and a fundamental source of ethical behavioral control.

A general central concept of organizational culture with apparent links to moral capital refers to E. H. Schein (2004). He defined organizational culture as "a pattern of shared basic assumptions that was learned by a group as it solved its problems of external adaptation and internal integration" (E. H. Schein, 2004, p. 17). His concept captures organizational cultures with two essential functions and a complementary three-level approach with the basic assumptions as the crucial underlying cultural level covered by values, norms, and artifacts. The first function of organizational culture is to adapt to the external environment's demands to ensure the organization's survival. The second function is the integration of internal processes and the internal relationships of the group members to maintain the capacity to adapt to the environment continuously (E. H. Schein, 2004, pp. 87–111). The first and most profound level of organizational culture is *basic assumptions*. They are taken-for-granted notions about reality in a group and are unconscious and implicit, and guide individuals' behavior in a given organization. These assumptions emerge from repeated actions that have proved suitable for solving organizational problems. It guides individuals in understanding, thinking, and feeling about organizational issues in daily interactions. Basic assumptions can refer to a group's notion of how, for instance, time, space, human nature, and relationships between individuals are considered the unquestioned truth about the world. It is crucial that the way of value-creation activities reflects the notion of truth that organizational members have. For instance, a group in an organization may have the basic assumption that harming any individual is unthinkable, which manifests in their behavior when creating value for the organization. Furthermore, basic assumptions are the source of the second level of *shared values and behavioral norms*. The second level is more explicit than the first because it reflects the basic assumptions in concrete values and behavioral standards. It can guide individuals on how to behave in various situations because desired states and expectations can be articulated, such as the value of caring about the weak or behavioral standards such as not harming any stakeholder. Finally, the third level of *artifacts* comprises any visible product of the group, such as de facto actions and how they use and generate myths, stories, rituals, language, and behaviors that point to the more profound levels of organizational culture. It manifests the second level of organizational culture. For example, there are stories in the organization about the CEO who once gave an emotional speech in an assembly

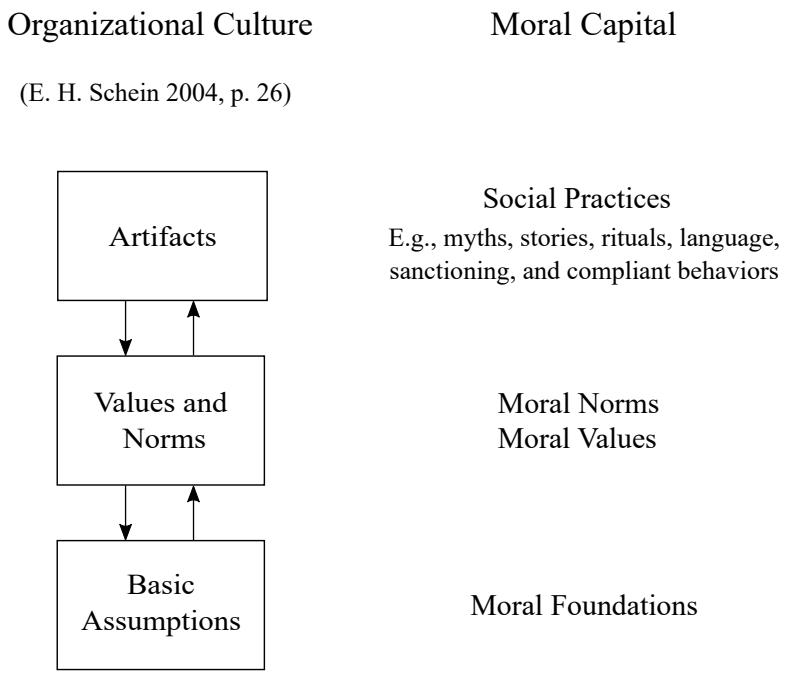
about how important it is to take care of the suppliers by ensuring human working conditions, which gives organizational members an orientation about desired actions. Moreover, it is crucial to decipher the pattern of basic assumptions to interpret the artifacts correctly. Understanding these basic assumptions is also mandatory for the credibility one can give to attributed values and behavioral norms. However, deciphering it from outsiders is challenging (E. H. Schein, 2004, pp. 25–37).

The relation of moral capital concerning the organizational culture concept by E. H. Schein (2004) revealed the following (see Figure 2.4): The moral foundations can refer to shared tacit, taken-for-granted underlying basic assumptions in an organization on how to solve organizational problems. Organizational moral values and norms arising from the moral foundations can refer to the second level. According to the previous outline, moral norms include normative and empirical expectations besides personal normative beliefs. Social practices of moral capital are visible products of the artifactual level of organizational culture. Specifically, social practices can include direct sanctioning and compliant peer behaviors to strengthen the normative and empirical expectations of moral norms. Also, social practices can include any other action stabilizing moral norms and values through, for instance, myths, stories, rituals, and language.

Treviño et al. (1998) introduced a more specialized concept of organizational culture focusing on ethics and split it into a formal and informal ethical behavioral control system. First, a formal control system includes institutionalized entities, for instance, codes of ethics, expected leadership styles, authority structures, and reward systems contingent on specific behaviors. It directly corresponds with the artifactual level of E. H. Schein's organizational culture. Second, an informal system consists of factors like ethical norms, peer behavior, myths, stories, rituals, and language that can foster ethical behavior (Treviño and Nelson, 2017, p. 161; Treviño et al., 1998, pp. 451–452). The informal system elements such as peer behaviors, myths, stories, rituals, language, and all other social practices refer to the artifactual level. Ethical norms of the informal ethical system correspond with the second level of organizational culture. Third, there is no direct connection concerning the basic assumptions in the framework of Treviño et al. (1998). A profound enhancement was to include basic ethical assumptions as an additional informal system element

Figure 2.4

Comparison of the Concepts of Organizational Culture and Moral Capital



of an ethical culture. Considering everything, the formal system only refers to the artifactual level, whereas the informal system can refer to all three levels.

Considering these arguments reveals that the elements of moral capital can primarily be aligned with the informal system of an organization's ethical culture. It is clearly at moral foundations, moral values, and moral norms. The alignment of social practices is more ambiguous. For instance, social practices can manifest in a formal reward system that uniformly sanctions specific behaviors to support moral norms. However, regarding moral capital, sanctioning mechanisms predominantly refer to the self and normative social control of a sufficient subset of organizational members and are not formal. If any, formal system elements are only a reflection but not the inner essence of moral capital and reside on the artifactual level only. Also, formal rules often contradict the appropriate development of informal norms. They are only helpful if they align with the informal system elements (Treviño & Nelson, 2017, pp. 162–189). Therefore, moral capital will be considered a particular property

of organizational culture, focusing on ethics and the informal system. Formal systems are only relevant if they reflect existent moral capital on the artifactual level.

Crucial at this point is to assess differences in the impact of the formal or informal system on behavioral ethical control when assessing an organizational culture, which can have implications for the potential effectiveness of moral capital. In general, an organizational culture's informal system is the crucial source of how individuals interact or expect to interact with each other, not the formal one (Bazerman & Tenbrunsel, 2012, p. 103). Also, Deal and Kennedy (1982, pp. 14–15) viewed values as a central aspect of corporate culture and a system of informal rules that strongly influence workplace behaviors. For instance, norms strongly impact individual behavior in organizations, capable of supporting an ethical or unethical culture (Treviño & Nelson, 2017, p. 189). Therefore, moral capital, as the informal ethical organizational culture, is more promising than the formal system in developing or maintaining organizational culture to foster ethical compliance.

E. H. Schein (2004, pp. 28–29) proposed that affecting organizational culture is most promising when employees are convinced that following specific espoused beliefs solves organizational problems. Then, it is more probable that these beliefs will be reflected in organizational values and norms in the long run. Moreover, it can transform into a basic underlying assumption and, in turn, find an expression on the artifactual level. Hence, one implication for the management of moral capital is to convince employees with beliefs that moral values and norms can contribute to problem-solving issues, which can strengthen organizational moral foundations. Once moral capital is established in the deeper roots of organizational culture, it can serve as the fundamental source of ethical behavioral control. Though success is not for granted and may take a very long time.

In contrast, formal system elements such as a code of ethics have only a minor effect on ethical decisions (Kish-Gephart et al., 2010, p. 15). For example, Enron had a detailed code of ethics of about 62 pages and pretended, among other things, to maintain relationships with its stakeholders with "honesty, candor, and fairness" (Enron Corporation, 2000, p. 12). In the end, it was just window dressing and not part of the informal system as underlying basic assumptions and did, therefore, not prevent the downfall of Enron. The problem with the formal system is usually the

assumption about individuals as amoral utility maximizers that do not always act in the principal's interests in organizations, as described in the well-known principal-agent problem by Jensen and Meckling (1976). It leads to the design of reward, authority, and heavy monitoring systems to reduce but, ultimately, even increase the chances for unethical behavior. The reasons are multifaceted, but for instance, surveillance and control systems are a signal of distrust towards the employees that could reduce their sense of autonomy and their intrinsic motivation not to act in an opportunistic manner (Ghoshal, 2005, p. 85; Langevoort, 2017, p. 967). Also, formal ethics programs can lead to a narrow view of goal accomplishment, neglecting other aspects of the value-creation process. It can provoke a shift of the awareness on cost-benefit analysis for compliance over noncompliance, engagement in risky behavior, and focus on extrinsic motivation (Bazerman & Tenbrunsel, 2012, pp. 103–113). As Ghoshal (2005) claimed, "if we really wish to reinstitute ethical or moral concerns in the practice of management, we have to first reinstitute them in our mainstream theory"(p. 87). For this reason, it has become clear that formal system elements that only reside on the artifactual level with no deeper cultural anchoring are not supposed to be effective in controlling ethical behaviors.

Beyond any doubt, moral capital can serve as an alternative explanation to practitioners' longstanding perspective of organizational compliance cultures as "agency costs and fiduciary responsibilities" (Langevoort, 2017, p. 939). The focus on the formal system has not proven to prevent corporate scandals effectively. Moral capital's exceptional feature is its close connection to the individuals' moral foundations and the analogy on the organizational level. It can give further linkages to understand, explain, and predict unethical organizational behavior to create effective cultural compliance systems.

Finally, implementing or maintaining moral capital is not a straightforward endeavor. Moral capital, as a particular property of organizational culture, is an emergent phenomenon difficult to capture or manage. Moral capital is not a static snapshot or a mere sum of individual social expectations but rather a complex and delicate changing phenomenon that arises from the dynamics of the cooperative interactions of organizational members. For instance, mutually consistent social expectations from the macro-level concerning moral norms can emerge due to moral practices that, in turn, strengthen organizational moral norms. Organizational

moral norms can then contribute to individuals adhering to moral practices. The opposite situation would be that unethical practices among a sufficiently large subset of organizational members replace social expectations about moral norms with unethical organizational norms. A downward spiral of unethical behavior and the destruction and difficult recovery of moral capital might result. Therefore, the following chapter drafts a scheme to systematically explain the interplay of moral capital and unethical behavior and its dynamics.

3 The Structuration of Moral Capital and Unethical Behavior

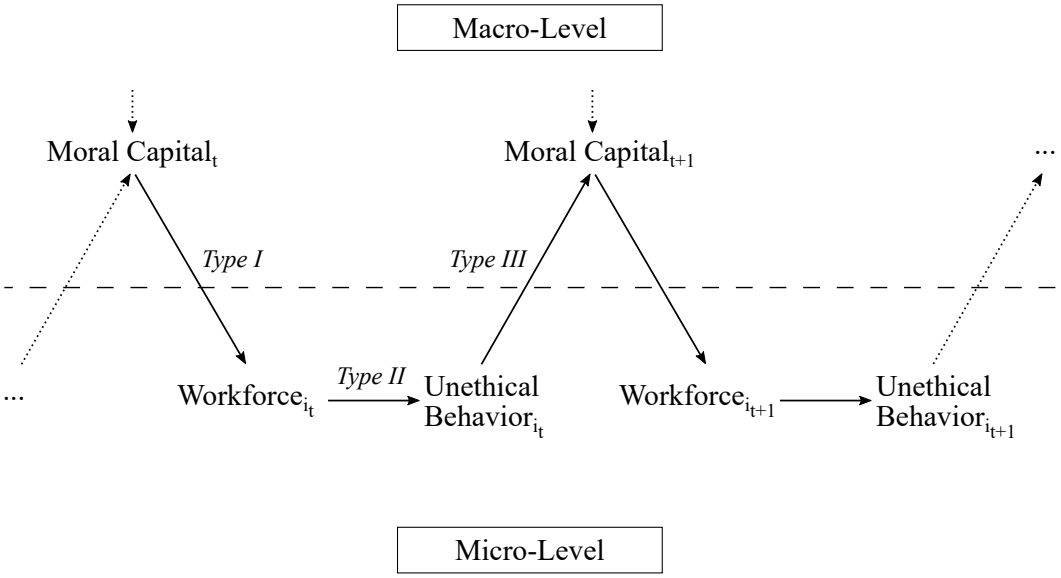
The ultimate goal of this chapter is to outline a theoretical model that can explain when the interplay between the individual and the contextual level in organizations over time leads to the spreading of unethical behavior and, finally, to the hit of an ethical meltdown. The core argument in this section states that moral capital as a social structure element negatively impacts unethical behavior and that unethical behavior diminishes moral capital. In other words, moral capital and unethical behavior recursively and negatively influence one another over time, which may, under specific circumstances, result in an ethical meltdown of the organization. Therefore, the theory is labeled as *The Structuration of Moral Capital and Unethical Behavior*.

The main background explanation for the following outline refers to the structuration theory (Giddens, 1984) and is supplemented with the methodological individualism (Coleman, 1990). Structuration theory alone is considered too complex for its application in empirical research (Pozzebon & Pinsonneault, 2005, p. 1355). Thus, structuration theory is essential as an overarching theoretical umbrella, whereas methodological individualism can serve as precision to give a basis for empirical analysis and social simulation approaches. Both have a longstanding tradition in sociology and cope with the issue of combining individual social actions on the micro-level and aggregated phenomena on the macro-level. Structuration theory and methodological individualism conceptualize social phenomena from different but similar perspectives. The first offers an explanation from a social system perspective and the second offers explanations of collective phenomena over individual social actions.

Figure 3.1 combines all previous pivotal concepts into the central model: the structuration of moral capital and unethical behavior in organizations. There are two levels of analysis: macro- and micro-level. Micro-level refers to individual entities,

Figure 3.1

Structuration of Moral Capital and Unethical Behavior in Organizations



whereas macro-level refers to a collection of individual entities. In this outline, the term macro-level is generic and can represent a group, department, or organization's whole social system. It has to be made explicit according to the research interest and in the line of the arguments. Furthermore, there are three precise mechanisms: Type I, II, and III as a reiterating scheme over time. *Type I mechanism* refers to bridge assumptions that explain how macro-level situations affect individuals on the micro-level (Wippler & Lindenberg, 1987, p. 145). *Type II mechanism* refers to theoretical assumptions about micro-level circumstances that might lead the individual to show typical behavior (Kalter & Kroneberg, 2014, p. 99). *Type III mechanism* refers to the micro-macro link and consists of transformation rules (Kalter & Kroneberg, 2014, p. 99). These mechanisms may explain how contextual circumstances of moral capital affect individuals' state of mind leading to unethical behavior that transforms into the macro phenomenon of moral capital. In addition, moral capital is exposed to external environmental effects, illustrated with arrows pointing to moral capital from above. Finally, i and t denote individual and timepoint, respectively.

The wording of moral capital *and* unethical behavior seems to show a contradiction. However, it should capture the tension that moral capital describes the

moral community of an organization, which is an ethical, social control system that can suppress or regulate unethical behavior. On the one hand, moral capital and ethical behavior presuppose one another. It is the ideal case of a stable, ethical social system. The other perspective is that moral capital can negatively affect unethical behavior, but unethical behavior can also negatively affect moral capital. Unlike the structuration theory, moral capital and unethical behavior do not only recursively presuppose one another. Primarily, they negatively presuppose each other. It is to say, they stay in a negative recursive relationship. It is a constant battle of mutual negative influence over time. The outcome of which will prevail depends on its social dynamics.

Social dynamics refers to the study of individual interactions that take individual behavior, group phenomena, and their sequential feedback loops into account (Durlauf & Young, 2001, p. 1). Also, the study of social dynamics claims that processes of social changes must always be explained by considering the entire individual relationships to unveil possible causal effects of changes (Fuchs-Heinritz, 2007, p. 149). In order to consider the necessary relationships and causal directions, Figure 3.1 shows the dynamic social interplay between moral capital and unethical behavior as a reiterating scheme over time. In addition, the feedback loops are operationalized in that the output of moral capital serves as an input for future states of moral capital. It is the negative recursion. Accordingly, the structuration of moral capital and unethical behavior and its precision in a variant of methodological individualism can explain whether an organization's ethical community can sustain or hit an ethical meltdown over time.

The social dynamic of moral capital and ethical behavior is a draft of an ideal case where moral capital and ethical behavior influence one another. In such situations, the organization's social system may be stable, and the ethical community may sustain itself over a long period. Moral capital and ethical behavior can stabilize because repeated practices are taken-for-granted routines in daily interactions. Also, they are robust if they are also constantly sanctioned and rewarded. However, just because an organization has moral capital with some stability does not guarantee it will stay like this. Another development can happen that an initial ethical organization can change to an unethical one because of the spreading of unethical behavior until the organization hits an ethical meltdown.

The following section depicts the core characteristics of structuration theory and the essential idea of methodological individualism. The next perspective in section 3.2 describes the ideal case of the interplay between moral capital and *e*thical behavior that can sustain a moral community over time. The interplay between moral capital and *un*ethical behavior, as the deviation of the ideal case, is the content in section 3.3.

3.1 Structuration Theory and Methodological Individualism

The theory of structuration refers to the work of Giddens (1984). The theory's core statement builds upon the theorem of the "duality of structure", which means that "rules and resources drawn upon in the production and reproduction of social action are at the same time the means of system reproduction" (Giddens, 1984, p. 19). Put more simply, the quote says that social action and social structure presuppose one another, i.e., social structure is the base for and also the outcome of social actions. Clarifying the concepts of social structure, property of social systems, and structuration supports an augmented understanding of Giddens's idea.

Social structure is a set of collective rules and resources that give individuals in a social system orientation on acting in specific situations. Social structure is a memory trace or the knowledge that gives individuals orientation on conducting their actions in specific situations. Its manifestation exists only as instances in social practices. Moreover, the social structure is the *property of a social system*. A social system is a collection of specific relationships between actors. These relationships are reproduced through social practices that arise from specific rules and resources (Giddens, 1984, p. 25).

Rules relevant to the theory of structuration have to contribute to the reproduction of social practices, i.e., the occurrence of social practices has to have specific stability to bind space and time in a social system. Hence, rules are relevant only if they lead to social practices that have an institutionalized feature. Giddens classified rules into four binary categories: intensive versus shallow, tacit versus discursive, informal versus formalized, and weakley sanctioned versus strongly sanctioned. Giddens described intensive rules as constantly called upon in daily work, whereas shallow rules only have a minor impact on social actions. Most rules in the pro-

duction and reproduction of social actions are tacit. The discursive formulation explicates tacit rules and can lead to their questioning and change. Formal rules are explicitly codified, for instance, as laws, but Giddens emphasized that even informal rules that are not explicitly codified may also strongly impact social actions. Furthermore, Giddens discussed sanctions in terms of informal over formal rules. Accordingly, formal rules are most strongly sanctioned, whereas informal rules can also have strong sanctions in various forms in daily interactions. Finally, Giddens labeled rules and derived practices with the most robust stability in the time-space dimension as institutions (Giddens, 1984, pp. 17–25).

Resources are of two kinds and stay in an essential relationship to power: allocative and authoritative. Allocative resources have an economic character and refer to objects such as goods and materials. Authoritative resources have a political character and refer to the command over persons (Giddens, 1984, p. 33). The specific distribution and utilization of such resources lead to power. Giddens (1979, p. 69) differs in his conceptualization of power from Weber (1976, p. 28) because he also considered the collective and does not solely refer to individuals asserting their will over others even in the face of resistance. Giddens (1979) conceptualized power in two ways regarding the duality of structure. First, power is the capability or the transformative capacity on the individual level to influence processes or affairs in interactions. Second, power as domination is a quality of a social system. Specifically, power relations in social systems are relations of autonomy and dependence. Third and foremost, transformative capacity and domination recursively influence one another. Furthermore, resources are not equally distributed and usually lead to the reproduction of social practices and maintaining existing power relations between individuals and on the social system level. Specific sanction mechanisms are associated with both resources to maintain the system: the application of coercing and inducement (Giddens, 1979, pp. 91–94). Also, Giddens rejected the notion of equating structure solely with constraint because he recognized that structure also enables and facilitates action (Giddens, 1984, p. 25). Together, rules give orientation and resources and power the capacity for specific actions. Concerning moral capital, social practices are, for instance, compliant behaviors and the use of sanctions that affect the production and reproduction of the social system concerning the moral foundations.

Structuration is a continuous process and refers to the conditions that lead to stability or the change of the social system. Crucial for structuration are the elements in the duality of structure, i.e., the rules, resources, and the corresponding interactions between individuals (Giddens, 1984, p. 25). Accordingly, the interactions between individuals are the source of reproduction and the source of the production of social systems. On the one hand, reproduction refers to the stability of the social system and consists of repeating practices that are taken-for-granted routines in daily interactions. These routines are most robust for reproduction when they are sanctioned or rewarded. On the other hand, the production of social systems includes the chances of social changes. The sources for social change can occur from unintended consequences of actions and external influences that lead to a de-routinization, which is a questioning of taken-for-granted interactions with the replacement of new kinds of interactions. Unintended consequences affect the social system gradually in an incremental way. In contrast, external influences lead to more sudden changes in the social system. External influencers can arise from ecological transmutations, natural disasters, or setting up a dependence relation or conflicts between communities with different cultural backgrounds. Especially the compositions of different cultural backgrounds can lead to different interpretations of norms and possibly to their denial (Giddens, 1979, pp. 218–221).

Although (Giddens, 1984, p. 25) combined individual actions within a broader social system and its interplay, he refused to use the terms micro- and macro-level. Accordingly, he had two reasons. First, the binary categorization in micro and macro implies that researchers have to investigate either one or the other, which may imply that one perspective is more important. Second, the distinction between these two levels may lead to a different division of labor within science when investigating social phenomena with competing perspectives that lead to incorrect conclusions. However, both levels are inseparably combined (Giddens, 1984, pp. 139–140). Giddens preferd to differentiate between face-to-face interactions and interactions with others who are physically and temporally absent (Giddens, 1979, p. 25).

Concerning *methodological individualism*, the work of Schumpeter (1909) indicates that he was not an explicit advocate of individualism as a method. However, he acknowledged that economic concepts could be depicted as a whole or a result of individual economic actions (Schumpeter, 1909, pp. 92–94). Also, Popper (1957,

p. 135) recognized methodological individualism insofar as social theory must be constructed on individuals. A primary stream of methodological individualism is the macro-micro-macro scheme of Coleman (1990, pp. 19–21), which explains transitions from the collective level to individual social actions that transform into collective phenomena. Further development of methodological individualism refers to the reiterating macro-micro-macro scheme to explain social processes and their dynamic social interplay over time (Kalter & Kroneberg, 2014, pp. 103–104). The advantage of methodological individualism is that it is a prototype of mechanism-based explanations in analytical sociology. It can provide a detailed model which links precisely one state or event with another (Hedström & Swedberg, 1998, p. 12).

However, Giddens considered methodological individualism as one-sided and insufficient to focus on the individual level explaining collective phenomena (Giddens, 1984, pp. 213-221). A crucial reason for his refusal of methodological individualism is that Giddens belongs to poststructuralism's school of thought. Like structuralism, poststructuralism refers to theories that capture social structure effects. In addition, poststructuralism also takes the possibility of social change and the focus on acting agents within these structures into account (Weik & Lang, 2003, pp. 25–45). However, he admitted that both concepts are not alternatives and that the "debate between the two sides is an empty one" (Giddens, 1984, p. 220).

Therefore, structuration theory and methodological individualism are considered not to be incommensurable but supplementary. It can enhance the understanding of the relationship between individuals and the social structure. Also, it is prone to capture the dynamic interplay between moral capital and unethical behavior. Hence, it allows accounting for the explanation for the collective phenomena of moral capital by focusing on the dynamic social interactions among individuals and explicating cause and effect between the individual and the situation. Also, it allows to consider reiterating social processes between the macro-, and the micro-level and is not limited to static one-time situations (Kalter & Kroneberg, 2014, p. 104).

In addition, it is crucial achieving plausible explanations for dynamic social processes because individual interactions produce complex collective phenomena which cannot be derived from only one configuration of the actors and their attributes (Kalter & Kroneberg, 2014, p. 105). Therefore, the weak assumption of

methodological individualism has to be accounted for. The weak assumption states that certain macro-level states must be given as a starting point to derive possible consequences for future developments (Hedström & Swedberg, 1998, p. 13). Admittedly, there are uncountable histories of organizations with different initial starting points about the ethicality of their social structure. It could depend on many factors, such as the world view of the founders, the business environment, organizational structure, property rights, or human resources that contributed to the emergence of the ethicality of an organization or the time point of observation. However, according to the weak assumption of methodological individualism, taking an initial macro-state as given can significantly improve the precision of explaining the mechanisms in dynamic social processes (Hedström & Swedberg, 1998, p. 13). Accordingly, the starting point in the subsequent description is an organization with high moral capital.

Finally, a weak variant of methodological individualism also allows considering unexplained social phenomena as a component of the explanation, i.e., it is sufficient to explain parts of social phenomena without taking all possible reasons into account (Hedström & Swedberg, 1998, p. 12). Also, simple and realistic micro-level assumptions that consider interactions among actors are of importance (Hedström and Swedberg, 1998, pp. 12–13; Kalter and Kroneberg, 2014, p. 105). However, what could be now the ideal case to sustain a moral community over time?

3.2 The Ideal Case: Moral Capital and Ethical Behavior

The ideal case for an organization is that sufficient moral capital can sustain a moral community over time by promoting ethical behavior that contributes to the stability of moral capital. Concerning weak methodological individualism, the following example assumes organizations with high moral capital as the initial starting point. It is the initial situation where an organization has a highly ethical social structure. Hence, the ensuing mechanisms of Type I, II, and III may apply:

Recalling Type I mechanism, it refers to the bridge assumption explaining how a macro-level state affects individuals (Wippler & Lindenberg, 1987, p. 145). The macro-level refers to moral capital. Moral capital is an element and a particular property of a social system of an organization because moral capital is a specific

interlocking set of moral norms and practices shared in a group and is, therefore, prone to have an impact on promoting specific behaviors among employees. The main reason is that moral capital impacts mental states concerning social control and self-regulation mechanisms. In allusion to structuration theory, moral capital is a memory trace that gives orientation to acting. Concerning social control, existent moral capital on the macro-level consists of mutually consistent perceived empirical and normative expectations among a sufficiently large subset of organizational members concerning morally appropriate behaviors. At this point comes the bridge assumption: In the case of existing moral capital in terms of mutually consistent social expectations, it will be more likely that a threshold effect (chances to observe morally compliant behaviors of many others) will affect the individual's perception that there is a high within-group agreement about specific moral norms. In other words, the bridge from macro- to micro is that high moral capital increases the likelihood that the perceived moral capital in the individuals' minds is also high. The perception of these social expectations may come from widespread social practices such as compliant behaviors, sanctioning practices, myths, stories, and rituals according to moral foundations that individuals experience or observe. Also, individuals may infer normative expectations from empirical information and vice versa if this is the only information available (Bicchieri, 2010, p. 302). Furthermore, moral capital can influence personal normative beliefs over perceived social expectations. For instance, perceived empirical expectations may activate or increase the saliency of personal normative beliefs concerning moral standards due to examples that successfully solved organizational practices by staying in the zone of ethical acceptance. In addition, normative expectations may support the activation of personal normative beliefs due to examples that received sanctions in case of norm violations. In turn, moral capital is a memory trace among individuals that gives them orientation on how to go further with their actions concerning specific moral situations.

Type II mechanism refers to the micro-level and circumstances that can lead the individual to show a specific behavior (Kalter & Kroneberg, 2014, p. 99). Suppose the situation that the mental state is influenced by moral capital insofar as social expectations are perceived and personal normative beliefs are activated. Both aspects can then unfold the two forces of compliance with moral standards. Ethical behavior is then a reflection of the two forces of compliance with moral capital

for the following reasons: First, the social component of control in the form of possible sanctions by others affects the chances of ethical behavior. Suppose an individual perceives normative expectations such that a sufficiently large subset of organizational members will sanction or are at least capable of sanctioning for misconduct. In that case, the workforce may refrain from fear of not showing unethical behavior (Bicchieri, 2006, p. 15). Also, perceived empirical expectations have an orientational character, where the individual follows compliant practices to reduce complexity in ambiguous situations (Bicchieri, 2006, pp. 29–30; Bicchieri, 2017, p. 18). Second, suppose personal normative beliefs about moral standards concerning the moral foundations are salient. In that case, the self-regulation system of the individuals' moral agency may lead to ethical behavior instead of unethical behavior. As mentioned in section 2.6.2, the moral agency is a psychological self-regulation system that supports individuals to act according to their moral standards. The difference to other self-regulation situations refers to the self-reactions to moral conduct, which is more intense (Bandura, 1991b, p. 277). Furthermore, there are two aspects of moral agency, i.e., it can have an inhibitive and proactive form. Specifically, the inhibitive form refers to the avoidance of immoral actions, whereas the proactive form refers to any actions to support others' well-being or fight against immoral practices (Bandura, 2016, pp. 1–2). Precisely, moral agency leads to self-monitoring of the own thoughts concerning the anticipated violations of moral standards. The individual determines whether a discrepancy exists between the monitored intended action and the own moral standards. If the discrepancy is too high, emotional self-reactions such as guilt can lead to revision and prevention of such behaviors. The resulting action might be that the individual selects ethical over unethical behavior to reduce the inconsistency between the intended unethical action and the personal moral belief (Bandura, 2016, p. 4). Also, further effects between perceived social expectations and personal normative beliefs (see section 2.6.2) reducing the extent of unethical behavior may apply.

Type III mechanism refers to transformation rules and links micro- and macro-level (Kalter & Kroneberg, 2014, p. 99). It explains how individual behavior transforms or contributes to the macro phenomenon of moral capital. Moral capital on the macro-level consists of a sufficiently large subset of individuals with mutually consistent perceived social expectations concerning a repertoire of moral norms. If

these expectations have a high within-group agreement, the transformation rule for aggregating the individual level to moral capital is the referent-shift consensus (Chan, 1998, pp. 238–239). Recalling structuration theory, individual actions and social structure recursively presuppose one another. The social structure consists of rules and resources where specific social practices arise that confirm and stabilize the social structure. These practices can include compliant behaviors, sanctioning, myths, stories, rituals, or the language in value-creation activities concerning moral norms that refer to the moral foundations. Such repetitive social practices are visible products and taken-for-granted routines in daily interactions within an organization. Therefore, moral capital resides on the macro-level and consists of mutually consistent perceived empirical and normative expectations. In other words, moral capital is an aggregation of many individual perceptions or beliefs that others in the reference network have for social expectations concerning moral norms. Crucial is the assumption that high mutuality comes into existence when there is a widespread application of social practices on the individual level that correspond with moral norms. Suppose many individuals behave ethically in many situations. This contributes to the stability of moral capital because it confirms and stabilizes moral capital as the existing social structure.

The distribution of allocative and authoritative resources plays an essential role in social practices. Resources allow applying social practices that have a transformative capacity (or power) in interactions. Specifically, the distribution of resources leads to how force and inducement in interactions can be carried out, affecting the social structure's quality. In other words, coercing someone to do something can stay for negative sanctioning capacities and inducements for positive sanctioning capacities, like rewarding someone's behavior. Both leaders and subordinates have access to resources they can use in interactions, sustaining an ethical community over time. For instance, leaders have the legitimation to apply tough sanctions such as laying off employees or notice a warning when they detect unethical behavior to bring individuals back in line. A leader can use inducements to hold out the prospect of promotion if an individual shows integrity and has worked in an exemplary manner. Also, employees may have sanctioning capacities by disapproving unethical behavior of peers, such as showing dislike, reporting unethical behaviors to leaders, or gossiping. In addition, employees can also give rewards such as sharing important

information, supporting daily job activities, or offering to join their friendship circle. Moreover, concerning the "dialectic of control" (Giddens, 1984, p. 16), subordinates may also have resources to influence the actions of their leaders.

The previous arguments are summarized and illustrated with the following example: Initially, there is high moral capital on the macro-level. It means that there is a sufficiently large subset of organizational members that share the perception about the existence of social expectations that are genuinely connected to the moral foundations. It promotes ethical behavior, stabilizing mutually consistent social expectations on the macro-level. A real-life example may be that leaders may communicate to maximize sales within the boundaries of ethical concerns, serving as information for normative expectations. Hence, the workforce knows which behavior is in the zone of ethical acceptance. In turn, normative expectations among employees are confirmed, and personal normative beliefs are salient with their implications on the moral agency self-regulation mechanisms. The action of the leaders within the zone of ethical acceptance was triggered by rules and resources that correspond to the moral foundations. The behavior of the leader also triggers further actions of employees, in particular, striving them to stay within the bounds of ethical acceptance while pursuing their goals. In turn, such actions could support the perception of empirical expectations among others and the workforce with its effects on normative expectations and personal normative beliefs. It contributes to the within-group agreement on the macro-level and stabilizes moral capital over time.

Finally, the depicted mechanisms show, on an abstract level, the ideal case of social processes on how an ethical community can sustain itself over time. The dynamic interplay of moral capital as the social structure and ethical behavior as the social practices can maintain the stability of the ethical social system. Specifically, ethical practices are derived from moral rules and related resources, i.e., form the social structure and thereby reproduce and stabilize the ethical quality of relationships between the actors in the social system, as Giddens (1984) coined it in the "duality of structure" (p. 19). Also, moral capital promotes ethical behavior over the two forces of compliance by supporting the perception of social expectations and affecting the self-regulation system of individuals' moral agency. However, although a moral community can sustain itself over time, it does not exclude the possibility

that unethical behavior and the spreading of unethical behavior can occur until the organization hits an ethical meltdown.

3.3 When the Organization Hits an Ethical Meltdown

This section explains the dynamic spreading of unethical behavior by considering internal causes and exogenous shocks that may change an ethical organization to the situation where it hits an ethical meltdown. The organization hits an ethical meltdown when organizational values and norms are present contrary to the moral foundations, and unethical behavior is a common social practice. The ethical meltdown describes an end state of an undesirable development of an organization that transformed from an ethical to an unethical organization. The term meltdown reflects that the organization is far from the societal common ground of morality. The consequence is that not moral but immoral capital is present. In other words, moral capital represents shared moral values and norms with corresponding ethical practices, which can switch to immoral capital, where shared values, norms, and corresponding practices are contradict the moral foundations. Such ethical meltdown situations are dangerous because they are difficult or even impossible to reverse. It is accompanied by the fact that the organization is threatened because it faces severe consequences such as the loss of reputation and competitive advantages, legal issues and high compensation payments, withdrawal of capital by investors, high turnovers, or even its decline. As Nekovee and Pinto (2019) got to the point, once unethical behavior spreads, "the organization will almost certainly decay and die, resulting in enormous social and economic costs" (p. 340).

How can the change in a social system toward an ethical meltdown occur now? Regarding Giddens, there are two essential sources for social change: internal and external causes. Internal causes come from unintended consequences of actions and are incremental. The second cause of change is external, which may lead to a quicker de-routinization of taken-for-granted routines (Giddens, 1979, pp. 219–220). Concerning structuration, an ethical social system has stability to some degree but can also change for the worse. In other words, incremental causes from unintended consequences of actions can gradually erode ethical practices and moral values. Also, a sudden shock to the social system can quickly lead to the spreading of unethical behavior. Later, the spreading of unethical behavior gains momentum until the

organization hits an ethical meltdown. Therefore, in the following, the differentiation of social changes as incremental, coming from unintended consequences and quick changes coming from external influences as shocks, will be used to illustrate the dynamics of the spreading of unethical behavior.

It is crucial to consider essential psychological processes that may have a significant relationship to both kinds of social changes: It is proposed to consider the individuals' cognitive process of moral disengagement. *Moral disengagement* refers to a cognitive bias where individuals can normalize unethical behavior, thereby switching off their moral agency. Precisely, they adjust their self-regulation system insofar that they can switch off self-sanctions when engaging in unethical behavior (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996, pp. 364–365). There are other psychological concepts of cognitive bias in ethical processing. However, moral disengagement is a key concept in behavioral ethics as it can explain how individuals reconstruct their cognitions as they perceive their unethical acts as not morally permissible anymore. Also, it relates to many other ethical cognitive biases in ethics research (Martin, Kish-Gephart, & Detert, 2014, p. 3). For instance, Moore et al. (2012, p. 20) could empirically demonstrate that moral disengagement has various relationships to relevant constructs in its nomological network. Moreover, moral disengagement can be regarded as a relatively stable cognitive orientation but is also prone to be affected by contextual factors in the environment (Moore, 2015, p. 202). It may reflect that the nature of moral agency and morality is rooted in social cognitive theory, where behavior is always in an interplay with personal, behavioral, and environmental determinants (Bandura, 2016, pp. 6–12). Therefore, moral disengagement is considered to be, on the one hand, a relatively stable trait that accounts for individual differences. On the other hand, moral disengagement can be considered a state affected by various situational effects.

Precisely, there is a set of specific mechanisms of moral disengagement with which individuals can reconstruct their unethical behavior so that they do not see it as morally wrong anymore. According to Bandura, there are several loci where the mechanisms of moral disengagement can operate: the behavior, the agent who conducts the unethical act, the consequences, and the victim concerning unethical behavior (Bandura, 2016, p. 3). All loci are generic in that they can happen in various real-life examples and organizational settings. Even though all mechanisms may

apply in various situations, not all but a few selected mechanisms will be integrated into the theoretical outline as examples to illustrate possible effects. However, all mechanisms are presented to provide a complete picture of moral disengagement.

The behavioral locus comprises the mechanisms of moral justification, euphemistic language, and advantageous comparison. *Moral justification* refers to the justification of unethical means but focuses on a possible positive outcome. In other words, a virtuous end justifies dirty means (Bandura, 2016, p. 49). For instance, a workforce rationalizes cheating on customers, arguing that it is for the organization's good. *Euphemistic language* describes the rationalization tactic of psychologically separating perpetrators from their unethical actions. Precisely, using sanitized words makes unethical acts sound not awful, allowing them more easily to be conducted (Bandura, 2016, p. 53). Instead of betraying customers with false information about the product quality, a workforce could label it as bending the truth. The *advantageous comparison* refers to setting up a relationship with other actions that are worse than the initial unethical action. In light of the contrast, the intended action looks much better than it is (Bandura, 2016, p. 56). Suppose a workforce buys resources from a specific country with child labor and may have moral concerns about his actions' righteousness. To make it sound advantageous, he could claim that a competitor buys similar resources in countries where child labor is worse than in their own buying place. Contrasting such situations makes the unethical act seemingly less harmful, thereby switching off moral agency concerns.

The agency locus of moral disengagement contains mechanisms of displacement and the diffusion of responsibility. The *displacement of responsibility* describes situations where individuals acknowledge the unethicality of their conduct but try to reduce their responsibility for the harm they caused (Bandura, 2016, p. 58). For instance, blaming others for their misconduct could be a typical rationalization mechanism, such as when a leader sets a difficult goal and an employee uses unethical methods to obtain the goal. As a rationalizer, she can claim that applying unethical methods is appropriate because of the overly tricky goal set by the leader. *Diffusion of responsibility* refers to harmful acts in groups. In such situations, an individual can rationalize that the group causes actual harm, and his role is relatively minor (Bandura, 2016, p. 62). An example of the diffusion of responsibility mechanisms

could be a workforce claiming to downplay its responsibility in producing lethal weapons.

Concerning the locus of the consequences of permissible conduct, *disregarding, distorting, or denying the harm* of unethical behavior may apply. Individuals can try to circumvent their moral self-regulation by giving little weight, ignoring or refusing the harm of their actions. When they act alone and cannot evade their responsibility, individuals are prone to minimize their harm with arguments or even discredit facts about their misconduct. Especially if the harm induced is not directly visible, it gets easier to engage in unethical behavior, thereby morally disengaging by ignoring the inflicted consequences (Bandura, 2016, pp. 64–65). For instance, a workforce takes all credit for the work of others. He is then rewarded with a promotion in the job position and salary at the expense of others. The workforce could rationalize his behavior by downplaying the harmful effects by claiming that he was promoted because of other excellent performances in the past. Another example is that top executives who command middle-level managers to lay off employees to save costs can more easily disregard their inflicted consequences because they are not directly confronted with the dismissed employees.

The last mechanisms operate on the harm a victim experiences from unethical conduct and comprises dehumanization and attribution of blame. *Dehumanization* is to denying the human qualities of others. Once a person is dehumanized, it is easier to justify unethical behavior toward the victim (Bandura, 2016, p. 84). For instance, a colleague at work is considered an evil person with various negative qualities. At this moment, the colleague is degraded in his humanity. Once the person is dehumanized, bullying him at work could operate cognitively without self-censure. *Attribution of blame* refers to making external circumstances responsible that force someone to act unethically. It is a reversal of the perpetrator and victim's roles. One moral disengagement strategy is to take out another person's reaction in a sequence of conflicts as the initial provocation to justify own unethical acts towards the other person (Bandura, 2016, pp. 89–90). One example could be a workforce that does not support a colleague in a current project. Suppose the real purpose of rejecting support is because the colleague gave no support in a previous project. Instead of referring to a previous event, the colleague could see the initial provocation in the

current situation, allowing him to justify unethical behavior towards the workforce as retaliation.

Setting the mechanisms of moral disengagement in relation to structuration theory completes the missing puzzle in the picture. It can explain how an initial organization with high moral capital can develop towards an ethical meltdown, incrementally or suddenly.

Incremental Change and Ethical Meltdown

Suppose the initial organization with high moral capital and corresponding ethical practices. This kind of social system has its stability because routines and taken-for-granted practices align with shared and accepted moral norms in the organization. Moral capital has two possible forces for compliance because of the individuals' perceived social expectations and the activated moral agency. These regulatory processes of possible social sanctions and self-regulation with self-sanctions may prevent the spreading of unethical behavior and may sustain an ethical community. However, it does not mean unethical behavior does not happen at all. The question is whether moral capital is strong enough to contain the spreading of unethical behavior.

The spreading of unethical behavior starts with actions with unintended consequences and accelerates over several cycles of the interplay between the macro- and micro-levels. Indeed, any action referring to moral capital is an instance of moral capital and the means for reproducing moral capital. However, any instance of moral capital is also a possible source of modification of moral capital. This kind can cause a change in the social system incrementally. Mechanisms of Type I, II, and III illustrate such a development.

Concerning the Type I mechanism: In the case of existent moral capital, there are mutually consistent social expectations on the macro-level. The bridge assumption is the threshold effect from the macro-level of moral capital to the perceived social expectations in the individuals' minds. Giddens would label it as a memory trace of the social structure. Hence, moral capital lays the ground to affect unethical behavior negatively. So far, so good.

Crucial is now the mechanism of Type II on the individual level. An individual may act with social practices that are an instance of moral capital and correspond

with mutually consistent social expectations. However, this could also lead to an unintended consequence of unethical behavior. There are many such examples, but suppose a typical illustration in value-creation activities. A supervisor may communicate to subordinates to increase sales to maximize the company's profit. The demand aligns with existing moral norms in the organization. Hence, there is no violation of shared accepted moral standards with the leader's demand. The supervisor may even expect his subordinates to act in the zone of ethical acceptance as the mutually consistent expectations imply. Nevertheless, now comes the crux. It could be very challenging for some subordinates to fulfill the supervisor's demand with taken-for-granted practices. Even though the supervisor's task has no unethical qualities, an unintended consequence on the individual level could be unethical behavior to obtain the goal. However, strong moral capital restraints most employees from engaging in unethical behavior because of the two forces of compliance. Yet, individuals have to overcome the two forces of compliance.

In principle, there may be two causes in overcoming the two forces of compliance: Moral disengagement (Bandura et al., 1996) is the basic overcoming mechanism, and behavioral regularities of others a further acceleration. The first possible key factor for overcoming the two forces of compliance is the mechanism of moral disengagement *and* its effect on perceived social expectations. Let us now return to the example of fulfilling the leader's request to maximize the sales target. The subordinate intends to behave unethically to fulfill the leader's request. To overcome his moral agency, he could use various mechanisms of moral disengagement. For instance, he could displace responsibility to justify his unethical conduct. As a result, the subordinate could claim that the leader put too much pressure on him, thereby making the supervisor responsible for his unethical actions. Another rationalizer could be moral justification. The subordinate could argue that using unethical methods is reasonable because it is only a means to the important end for the organization's good. Concerning euphemistic language, the subordinate could label his unethical methods as taking a shortcut and sanitizing his reprehensible conduct. Advantage comparison could play a role if the employee sets his actions to other competitors known for having questionable business practices to put his unethical actions in a better light. In these situations, the subordinate could rationalize his

unethical conduct and could free himself from self-sanctions, thereby circumventing his personal normative beliefs.

Next, once moral disengagement circumvents personal normative beliefs, it may impact the perceived social expectations contrary to personal normative beliefs. Significantly, the projection effect on normative expectations may take place. The subordinate may use rationalization as information about the expectations of other individuals. Because the subordinate may have, from his perspective, a legitimate reason to engage in unethical behavior, the subordinate may believe that others may see his rationalizations also as a legitimate exception and may not regard it as behavior to sanction. Moreover, an information shift from normative to empirical expectations can happen. The reconstructed perceived normative expectation can serve as information for empirical expectation. Specifically, the subordinate may believe that others also may use unethical behaviors in such situations or are in a similar situation with the same thoughts. Once the perceived social expectations are reconstructed due to moral disengagement, overcoming the two forces of compliance is completed, and unethical behavior can occur as an unintended consequence.

The second possible key factor for overcoming the two forces of compliance may come from unethical behavioral regularities of others *and* their effects on perceived normative expectations and personal normative beliefs. It may accelerate the ongoing incremental change of the social structure. In general, the occurrence of repeated behaviors of others can increase the familiarity and predictability of behavioral patterns, which can evolve into a normative force (Przepiorka, Szekely, Andrighetto, Diekmann, & Tummolini, 2022, p. 2). In particular, once a critical threshold of a sufficiently large subset of others who overcame the forces of compliance, their repeated unethical actions may alter the perceived empirical expectations among individuals who have not yet overcome the forces of compliance. As unethical behavioral regularities become more and more common in solving organizational problems, an information shift can happen among individuals that have not yet overcome the forces of compliance. Specifically, it may alter their perceived normative expectations that a sufficiently large subset of organizational members now expect and may not sanction such unethical behaviors. Also, the altered perceived normative and empirical expectations could activate various moral disengagement mechanisms, thereby reducing the saliency of personal normative beliefs.

Concerning the Type III mechanism: If one individual or some individuals in a similar situation parallelly conduct unethical behavior as unintended consequences, a gradual change in moral capital on the macro-level can occur. However, a gradual change occurs if the unethical behavior is detected only, not sanctioned by others, and accepted as a means to solve organizational problems. Sanctioning as a common social practice is an instance of the moral capital that resides on the macro-level. An individual's unnoticed and secretly unethical behavior is irrelevant here as long as unethical behavior stays a single non-detectable incidence with no effects on the social structure. Nevertheless, once the transgressor is detected and sanctioned by others, the mutual consistency of moral capital is maintained. The moral norm violator serves as a deterrent role model for others because he received punishment for leaving the zone of ethical acceptance. The informal behavioral control system is strong, especially in companies with high moral capital. Assuming moral capital as a set of informal rules in a social system may imply strong sanctions in various forms (Giddens, 1984, p. 23) to push back unethical behavior and bring the individual back in line.

On the contrary, it is crucial to consider now under which circumstances unethical behavior is not sanctioned in the transformation from the micro- to the macro-level. Crucial is that the moral norm transgressor might convince peers or close relationships with his rationalization tactics. The moral norm violator may influence the self-regulation system of the moral agency of others. Precisely, an individual can influence the moral reasoning processing of others. Recognizing a moral problem can depend strongly on social exchanges (Haidt, 2001, p. 819). Also, the norm violator may use various allocative or authoritative resources to influence such interactions. In such situations, the norm violator confirms his unethical methods as acceptable for the future and serves as a role model for others to solve organizational problems. Observing successful role models can significantly change the estimation of being sanctioned for unethical behavior. Also, it supports social learning that can change the perceived normative and empirical expectations concerning moral norms (Gino et al., 2009, pp. 393–394). Another explanation is that others in a similar situation also apply unethical methods. They may see their own unethical conduct due to their rationalization mechanism and projection to others as legitimate and may not regard it as sanctionable behavior. Altogether, once

the unethical conduct was accepted as a means to solve organizational problems, it incrementally changed the within-group agreement about moral norms and had subsequent effects in later periods. The memory trace of the social structure among a few individuals has changed. Thus, the mutual consistency of social expectations concerning moral norms became smaller in timepoint t + 1 than in t.

The interplay of moral capital and unethical behavior is a reiterating cycle of three Types I, II, and III, that may lead to an incremental erosion of the moral system over time. Once the mutual consistency of moral capital is weakened, it may affect individuals' perception of social expectations in the subsequent period and increase the likelihood of spreading unethical behavior, further weakening moral capital. As Zuber (2015) describes, the spreading of unethical behavior is an "increase over time in the number of acts of unethical behavior and in the number of actors involved in these acts" (p. 151). Accordingly, the more individuals apply unethical actions, the more individuals serve as successful role models for solving organizational problems and thereby influencing others to apply unsound methods. Also, the chances for collaboration in unethical acts may increase. The consequence is a higher chance that the perceived social expectations concerning the moral foundations may erode and be replaced with unethical norms and practices. It is to say that the social structure may change insofar that moral norms and corresponding social practices will become more and more absent.

However, there must be a constant tackle of moral capital with unethical behavior by more individuals until a specific critical threshold is met, where an unstoppable spreading of unethical behavior occurs until the organization hits an ethical meltdown. The question of when the threshold for the uncontrollable spreading of unethical behavior is met depends on a critical number of accepted moral norm violators, the strengths of the two forces of compliance, and the overcoming of both. Ultimately, it is not a theoretical question of how the critical thresholds must be to overcome moral capital and hit an ethical meltdown in the long run. Critical threshold issues will be depicted with the ABM in so-called what-if experiments (see chapter 4.2).

Exogenous Shocks and Ethical Meltdown

Next to internal causes leading to unintended consequences and incremental changes, external influences suddenly affecting the quality or the stability of the organization's initial ethical system are of importance. In macroeconomics, they are called exogenous shocks. Exogenous shocks are, by definition, a change of external variables that influence at least one endogenous variable (Englmann, 2007, p. 64). It precisely means for the organization an "unanticipated, low-likelihood event stemming from the external environment and entailing disruptive changes with potentially existence-threatening consequences" (Röglinger et al., 2022, p. 670). Hence, influences from the external environment that can heavily tackle the stability or suddenly change the quality of moral capital inside the organization can be regarded as exogenous shocks. The arrow pointing from above on moral capital in Figure 3.1 represents possible external effects on moral capital, comprising environmental effects and exogenous shocks. According to the theoretical model, exogenous shocks usually first impact social expectations and, subsequently or at the same time, the saliency of personal normative beliefs. Exogenous shocks may be able to wipe out the consistency of perceived social expectations concerning moral norms and heavily tackle the individuals' moral agency. Especially exogenous shocks put a significant extra force to overcome the forces of compliance.Compared to incremental changes, shocking effects on moral capital primarily impact mechanisms of Type I, with subsequent effects on Types II and III being sudden and more profound than the unintended consequences of actions leading to incremental changes.

Specifically, organizations are exposed to an external environment comprising general influences such as politics, demographics, nature, financial market, and influences of the organizational domain such as stakeholders, unions, suppliers, competitors, or customers (Fallgatter, 2020, p. 508). However, which external influences are of importance here? According to Giddens (1979, p. 220), ecological transmutations, natural disasters, setting up a relation of dependence, or conflicts between communities with different cultural backgrounds are relevant to induce exogenous shocks. They can lead to a sudden change in a social system.

First, ecological transmutations or natural disasters could be consequences of climate change, pandemic situations, wars, or sanctions that affect heavily taken-

for-granted routines in organizations. Also, economic changes can be relevant, such as technological discontinuity (Anderson & Tushman, 1990) and innovation due to creative destructions (Schumpeter, 1934). Due to such an exogenous shock, current business models could no longer work, and taken-for-granted routines could not be sufficient anymore to carry out value-creation activities. For instance, scarce environmental resources could become unavailable. In order to survive, many members of the social system may set aside moral norms and adjust current practices that could be contrary to the moral foundations. To justify the increased regularities of unethical practices, individuals could apply various moral disengagement mechanisms that are affected by environmental effects. For instance, individuals could morally rationalize acting for the organization's good, thereby applying the moral justification mechanism. Attribution of blame could reverse perpetrator and victim in a sudden economic change to justify someone to use unfair methods such as bribery to secure scarce resources. In addition, the exogenous shock could increase the number of individuals involved in unethical acts relatively quickly. In turn, it contributes to a quicker acceleration in spreading unethical behavior as in the incremental change scenario because unethical behavioral regularities emerge faster and more easily, affecting the perceived empirical expectations and thereby scooping out the consistency of perceived normative expectations concerning moral capital.

Second, setting up a new dependence relationship could be a tremendous shock for the existing domination of a social system. A change in the dependence relationships means that individuals' degrees of autonomy and interdependencies are modified. Specifically, allocative and authoritative resources could be reshuffled, impacting all individuals' power in their interactions. Thereby, applying previous social practices to support ethical interactions with the new power distribution may disappear, i.e., individuals may question and abolish the prevailing domination in the social system. Especially individuals with their newly equipped power resources may use them to coerce others to focus on other things as to the morality of actions, thereby leading to overcoming the initial forces of compliance concerning their social expectations. In turn, individuals could be forced to reduce their attention toward their personal normative beliefs. Such shocks could lead to a relatively quick increase in unethical behavioral regularities, accelerating the impact on the change of perceived normative expectations and tackling personal normative beliefs

with moral disengagement mechanisms. Consequently, the ethical quality of the social system may change towards an ethical meltdown. Suppose the following organizational example for a new dependence relationship that may induce an exogenous shock. The supervisory board implements a new CEO to increase the organization's performance. However, it turns out that the CEO has entirely different beliefs than the organization's members about which norms in the value creation process are essential. The CEO could prefer norms and social practices that may be beneficial to increase profit but are also contrary to the moral foundations. To improve organizational performance, the CEO could change the existing distribution of allocative and authoritative resources among the workforce, such as changing the vertical organizational structure, restructuring the division of work in the value-creation process, and adjusting property rights. Also, the CEO could sanction initial taken-for-granted ethical routines that may lower the performance and reward practices improving the performance but are at least doubtful. The workforce carrying out unethical activities may apply various moral disengagement mechanisms to rationalize their unethical practices and overcome self-regulation based on their normative beliefs. An obvious rationalizer is a moral disengagement at the agency locus, such as displacement of responsibility by claiming that the CEO forced them to act unsoundly. Also, due to the increased number of individuals applying the new unethical practices, the perceptions of what can be expected as taken-for-granted practices are thus shifting. Of course, it should not be ignored that such interventions can give rise to resistance among the workforce, and breaking the resistance requires a high degree of coercion. However, the fact that the CEO acts in a way that induces a shock to the social system could make individuals more susceptible to giving up their resistance. In the end and a relatively short period, the spreading of unethical behavior boosts over the subsequent cycles in the interplay between the micro- and macro-level.

Third, external shocks from conflicts between communities due to their different cultural backgrounds are profound. Communities with different basic assumptions, values, and norms concerning the moral foundations may have problems deciphering each other's taken-for-granted social practices. Also, cultural conflicts are existential about which community will prevail. Regarding organizations, acquisitions and mergers could count as an example where two companies with different

organizational cultural backgrounds can induce a clash of different basic assumptions, values, and social expectations. Suppose the acquiring company has low moral capital, and the acquired company has solid moral capital. Integrating the acquired company into the existing organizational social structure may result in a sudden shock for the members of the acquired company. Similar to the example in the previous paragraph, acquisitions and mergers also go along with the change of dependence relationships because the acquiring company controls allocative and authoritative resources to determine how to conduct value-creation activities. The members of the acquiring company could question and attack the way of acting and thinking of the acquired company. They could reward desired and sanction undesired behaviors from their perspective, thereby changing social practices, moral norms, values, and basic assumptions of the initial moral organization. Likewise, members of the acquiring company could serve as role models for solving organizational problems with morally unsound methods, increasing unethical behavioral regularities and, thereby, influencing the perceived social expectations and the application of various moral disengagement mechanisms among the members of the acquired company. In the end, they may support the sudden decrease in moral capital with consequential effects on spreading unethical behavior among the members of the acquired company. However, the sizes of both companies, the specification of both social systems and the intended organizational structure may play an essential role in how such acquisitions and mergers may affect the ethical meltdown of an initially moral organization.

To sum it up succinctly, exogenous shocks can inflict a sudden tackle on moral capital, i.e., an immediate change in the within-group agreement concerning moral norms that could disable the community from suppressing unethical behavior leading to the unstoppable spreading of unethical behavior. The question of when the critical threshold for the uncontrollable spreading of unethical behavior under an exogenous shock occurs depends on the capability of an organizational social system to balance out such an external effect. Precisely, it depends on whether the compliance forces are strong enough to intercept an uncontrollable spreading in the dynamics between the individual and contextual levels. Critical threshold issues will be depicted with the ABM in so-called what-if experiments (see Chapter 4.2).

4 Empirically Calibrated Agent-Based Modeling

The primary purpose of this chapter is to explore, based on ABM, the dynamics and critical thresholds for internal organizational causes and exogenous shocks that may lead to the spreading of unethical behavior up to an ethical meltdown over time. The ABM aims to model the potential spreading of unethical behavior that arises from unintended consequences of actions and exogenous shocks. The first is supposed to be internal and induce an incremental, and the latter is considered external, inducing a sudden structural change in the social system of an organization. The construction of the ABM was built upon the theoretical outline of the interplay of moral capital and unethical behavior over time and was enriched with empirical data and parameters of an online experiment. In addition, available evidence from other scientific sources complemented the calibration.

ABM is a computer simulation approach that comprises agents as entities with heterogeneous characteristics and the interaction between these agents within an environment over time (Epstein, 2006, pp. 6–7). In contrast to equation-based models, ABM is prone to model processes of structural changes (North & Macal, 2007, p. 93) by taking the heterogeneity of individual characteristics into account (Wilensky & Rand, 2015, p. 32). Significantly, the ABM method is adequate to simulate mechanism-based assumptions such as the macro-micro-macro model (Kalter & Kroneberg, 2014, p. 105). Agents are adaptive actors who influence each other through interactions that generate various patterns of macro phenomena (Harrison, Zhiang Lin, Carroll, & Carley, 2007, pp. 1237–1238). Also, a pattern of macro phenomena could give downward feedback to agents that may consequently adapt their behaviors, leading to further social system evolution (Courgeau, Bijak, Franck, & Silverman, 2017, p. 38). Crucial for ABM is that it can be calibrated with empirical data and allows a systematic change in the parameter effect values in what-if experiments to inspect possible outcomes of the social system under different

conditions (Van Bavel & Grow, 2017, pp. 9–10). As North and Macal (2007) stated, ABM can "show how the repeated application of diverse individual processes results in both system-level and individual-level outcomes, providing a link between the micro- and macro-behaviors of the system" (p. 93).

Another important reason for ABM is that it can support testing theories for which data is not entirely available (Van Bavel & Grow, 2017, p. 9). In particular, unethical behavior is a delicate topic in organizations. Empirically investigating the spreading of unethical behavior and deriving causal conclusions has high restrictions. Suppose asking the management board of an organization to study unethical behavior among all organizational members and factors that may contribute to the possible spreading of unethical behavior. It would lead to a self-selection bias of very ethical organizations and to a rejection of such a request where organizations may have concerns about having a clean slate, or that dubious method could be brought to light. Also, investigating such a delicate topic could lead to a Hawthrone-Effect insofar that participants of the study in the organization would change their behavior because they know to be under observation. Indirect observation is also problematic because unethical methods would be concealed and veiled for outsiders. Often, spreading unethical behavior in organizations is only a post-hoc explanation when scandals already emerged.

The question is, which empirical data may be suitable to obtain an adequate empirical calibrated ABM? It is intended to calibrate the ABM with a parsimonious online experiment concerning the Type I and II mechanisms (see Figure 3.1), whereas the Type III mechanism is captured with a simulation. It is especially empirically evaluated how contextual effects of moral capital may impact individual behavior and how unethical behavior arises from unintended consequences of actions. Especially for the latter, many theories concerning value-creation activities that lead to unethical behavior as unintended consequences can fill in the blanks in the theory of the structuration of moral capital and unethical behavior. For two reasons, goal-setting theory (Locke & Latham, 1990) is chosen to fill in the blanks. First, goal-setting theory is a highly relevant real-life example widely applied in value-creation activities within business organizations (Kleingeld et al., 2011, p. 1289; Lunenburg, 2011, p. 1). Second, recent research has shown that goal-setting may induce unethical behavior as an unintended consequence (see, for instance, Nagel et al., 2021).

Accordingly, the following sections illustrate the goal-setting theory's core characteristics, followed by a literature overview of key empirical findings between goal-setting and unethical behavior. The primary aim of the literature overview was to create a basis for the empirical calibration of the ABM. Specifically, the overview shows central issues in this field of study and is embedded as a use case for the overarching theoretical assumptions of moral capital and unethical behavior. Building upon the theory of the structuration of moral capital and unethical behavior, hypotheses were drawn, a corresponding online experiment was designed, conducted, statistically evaluated, and experimental findings discussed. Finally, ABMs were carried out where the experimental parameters served as an input for the calibration. The simulation results are the topic of the final discussion and limitation sections.

4.1 Experimental Study for the Calibration

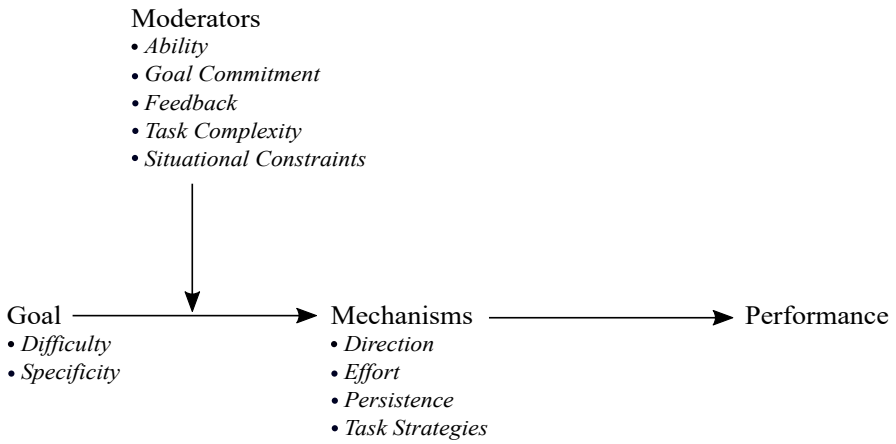
4.1.1 Core Characteristics of Goal-Setting Theory

Goal-setting is a process theory of motivation with ample evidence for its motivational effects (Latham, 2016, p. 3). The origin of the goal-setting theory goes back to the first formulation by Locke (1968), and leading scholars in this field regard it as one of the most relevant and useful theories of motivation to increase performance (Miner, 2003, pp. 251–260). Also, goal-setting is economically valuable for companies that apply such practices (Schmidt, 2013, p. 17).

The goal-setting theory describes the relationship between the concept of a *goal* and the concept of *performance*. It explains it over specific mechanisms and moderators (see Figure 4.1). The term goal refers to a predefined and desired performance level for a particular task within a certain period (Locke & Latham, 1990, p. 26). Furthermore, the term goal focuses on the desired results, whereas tasks refer to the means or the required behavior to obtain a goal (Locke & Latham, 1990, p. 8). As the outcome variable of goal-setting, the term performance describes the actual attainment compared to the desired goal level (Dwight, 1999, p. 258). In addition, goal-setting can refer to assigned or personal goals with various effects on performance (Locke & Latham, 1990, pp. 71 f.). The dissertation focuses on assigned goals in organizations because there is substantial evidence that individuals

Figure 4.1

Core Characteristics of Goal-Setting Theory



Note. Own illustration based on Locke and Latham (1990).

usually accept assigned goals (Locke & Latham, 1990, p. 72) and to reflect the fact that employees expect to execute assigned goals as long as the demands are within the "zone of indifference" (Barnard, 1956, p. 7).

Key messages

The key messages of the goal-setting theory are twofold: First, there is a linear relationship between goal difficulty and performance (Locke & Latham, 1990, p. 28). Goal difficulty is the probability of reaching a goal level (Locke, Chah, Harrison, & Lustgarten, 1989, p. 271). Goal difficulty is, therefore, a concept of the relationship between an individual and a task attached to a likelihood. The reason for the likelihood of performance is that individuals vary in their ability and experience in how they can accomplish a given task. Hence, the same task may be for some individuals easy and others more difficult, resulting in variance in performance, especially within higher difficulty levels. Although, on average, the higher the goal level, the less likely its attainment (Locke & Latham, 1991, p. 214), even individuals with lower abilities perform higher under difficult than easy goals (Locke & Latham, 1990, p. 208).

Second, specific and difficult goals motivate individuals to higher performance than vague and difficult goals, vague and easy goals, or no goals. Specificity is the concreteness of the goal, varying from vague to specific. Mainly, researchers

in goal-setting usually apply the dichotomous comparison of specific and difficult versus do-your-best goals. Do-your-best goals refer to goals that are also difficult but vague in their specificity. The reason for the performance difference is that vague goals are ambiguous and have a broader interpretative room for individuals to define their desired goal level, which usually results in lower personal goals and corresponding effort (Locke & Latham, 1991, p. 215).

Mechanisms

The mechanisms mediate the goal-performance relationship (Locke & Latham, 2013, p. 6.). The mechanisms are the explanation for why setting a goal has an impact on performance. Setting goals activates the direction toward a target with effort, persistence, and the use of task strategies. The first three mediators of direction, effort, and persistence correspond to the standard definition of work motivation (Blau, 1993, p. 152). In goal-setting theory, the directional mechanism focuses attention on goal-relevant activities and activates knowledge and skills to attain the goal. Effort is the central mechanism why higher goal difficulties lead to higher performance: Effort is the arousal and intensity of the motivation (Locke & Latham, 2002, pp. 706 f.), and individuals usually adjust their level of effort concerning the goal difficulty to obtain a goal level (Locke & Latham, 1991, p. 214). Persistence is the time spent to achieve the goal, which can vary along with the duration and the pace of conducting relevant activities (Locke & Latham, 2002, pp. 706–707). Strategies are the execution of a plan in order to attain a goal. Task strategies are a further precision in describing the usage and allocation of personal resources to complete an assignment (Wood, Whelan, Sojo, & Wong, 2013, p. 95). Individuals call task strategies either from existing knowledge and skills or from discovering new ones (Locke & Latham, 2002, p. 707). Especially, there is meta-analytical evidence for the mediating role of task-specific strategies and strategy development (Wood et al., 2013, p. 104). *Task-specific* strategies are the knowledge individuals can directly apply to familiar tasks, thereby accessing previously worked strategies or using specific instructions. *Strategy development* describes the effort to develop or refine a task-specific strategy to obtain the necessary knowledge to obtain a goal (Wood et al., 2013, p. 96).

However, the mechanisms of direction, effort, and persistence are nowadays only theoretically attractive. One reason is that these mechanisms are empirically difficult to measure simultaneously. Another reason is that there is already sufficient evidence for the various effects of goals on the mechanisms of direction and effort from the early stages of goal-setting research (Wood et al., 2013, p. 90). Furthermore, these mechanisms are less relevant to investigate the goal-performance relationship because if direction, effort, and persistence are partialled out, and task strategies are held constant, there will be no residual effects from goals on performance (Locke & Latham, 1990, p. 95). In other words, if a goal does not inflict performance, one can take it for granted that these mechanisms are not at work. Measuring task strategies in empirical research is only necessary if the task to attain the goal is complex to identify the usage and development of effective task strategies (Locke & Latham, 1990, p. 349).

The notion of task strategies has several implications for differentiating between two goal types: learning and performance goals. The main difference between learning and performance goals is the different framing of the instruction to learn and develop new strategies or focus on the performance (Seijts & Latham, 2005, p. 128). On the one hand, learning goals aim to improve the mechanisms of the goal-performance relationship, i.e., to enhance the repertoire of strategies. On the other hand, performance goals aim to increase the outcome concerning a goal and rely on the preexisting knowledge state (Latham, Seijts, & Crim, 2008, p. 221). If individuals are familiar with a task to attain the goal, they can either access relevant or related knowledge and skills and can, therefore, rely on task-specific strategies. Individuals conduct deliberate planning and strategy development if the task is new. Especially if the task is complicated, do-your-best goals with learning new strategies are advisable because individuals who first learn appropriate strategies to master complex tasks may enhance their performance in subsequent periods (Locke & Latham, 2002, pp. 707–708).

Moderators

Researchers investigate the moderators of the goal-performance relationship, usually without observing the mechanisms if they are not of particular interest. The most prominent moderators are ability, commitment, feedback, task complexity, and

situational constraints (Locke and Latham, 1990, p. 257; Locke and Latham, 2013, pp. 6–9). Subsequently, the goal-performance relationship varies concerning the specification of these moderators.

In goal-setting research, the definition of the moderator *ability* varies across studies. In general, researchers refer to ability as knowledge, facts an individual knows, skills, what an individual can do, aptitude, the learning potential or achievement, and what a person has accomplished in a period (Sackett, Lievens, Van Iddekinge, & Kuncel, 2017, p. 256). Also, researchers use the concept of *cognitive ability*. They define cognitive ability either as intelligence (Latham et al., 2008, p. 222), the task-performing capacity that involves the manipulation, calling, and evaluation of information (Seijts & Crim, 2009, p. 344), or the capacity to use and learn job-relevant knowledge (Van Iddekinge, Aguinis, Mackey, & DeOrtentiis, 2018, p. 250). For instance, measuring ability as the achievement in practical trials reveals a positive interaction effect of ability and difficulty on performance: The higher the ability, the stronger the goal effect on performance in the range of moderate to difficult goal levels (Locke & Latham, 1990, p. 208). Seijts and Crim (2009, p. 350) could confirm this relationship when measuring cognitive ability with the Wonderlic Cognitive Ability Test. However, the linear relationship between difficulty and performance levels off for all individuals who reach the limits of their ability, especially in the range of impossible goals (Locke, 1982, p. 513). Furthermore, Latham et al. (2008, p. 226) found a negative interaction effect of cognitive ability and goal difficulty on performance under learning goals. The results reveal that learning goals are more beneficial for individuals with lower cognitive abilities, i.e., the relative performance gain from easy to difficult learning goals is higher for individuals with lower than for individuals with higher cognitive abilities. However, on average, individuals with higher cognitive abilities intuitively possess the required knowledge and outperform individuals with lower cognitive abilities in all goal levels.

The moderator *goal commitment* is an individual's attachment to a goal (Locke & Latham, 1990, p. 125). An overarching definition to capture the critical characteristics of goal commitment is a volitional psychological bond towards the goal that describes the dedication and responsibility for a target (Klein, Cooper, & Monahan, 2013, pp. 65–66). A meta-analytic study supports the notion that goal commitment moderates the relationship between goal difficulty and performance insofar that the

relationship for individuals with a high goal commitment is stronger than for those with lower goal commitment (Klein, Wesson, Hollenbeck, & Alge, 1999, p. 889). Two main factors influence goal commitment: the importance of a goal and self-efficacy (Locke & Latham, 2002, pp. 707–708). Factors impacting goal commitment over the importance of a goal are, for instance, authority, monetary incentives, role modeling, or public goal statements (Locke & Latham, 2013, p. 7). Self-efficacy is the positive belief and confidence about the own capabilities (Bandura, 1991b, p. 257). Therefore, although individuals have similar skills, they may perform differently on the same task when their self-efficacy varies (Bandura, 1997, p. 37). Self-efficacy increases, for example, with adequate training, persuasive communication, or messages with inspiring visions (Locke & Latham, 2002, pp. 707–708).

The next moderator, *feedback*, is the knowledge of results and can give further information on how individuals perform on a given task (Hackman & Oldham, 1976, p. 258). This information can lead to adjusting the goal mechanisms to enhance or maintain performant activities (Locke & Latham, 2013, p. 7). Specifically, feedback can reveal the discrepancy between the progress and the desired end state, which affects the further adjustment of effort, persistence, and the evaluation of current task strategies to obtain the goal. A meta-analysis study supports this claim that feedback affects performance compared to goal-setting conditions without provided feedback. It holds for various goal difficulty and complexity levels of goals (Neubert, 1998, p. 329). Furthermore, feedback sources can rely on the task or other feedback agents. The feedback can either stem from the task as self-monitoring about the current progress or from external feedback agents either personally or impersonally (Hackman and Oldham, 1975, p. 162; Neubert, 1998, p. 333).

Task complexity refers to the number of actions required to obtain a goal and as the dynamic relationships of several task inputs and outcomes (Wood, 1986, pp. 66). This definition has been one of the most famous concepts of task complexity since then (Hærem, Pentland, & Miller, 2015, p. 447). Wood, Mento, and Locke (1987) summarized the task complexity levels from various tasks on a scale of one to 10 in their meta-analysis. The tasks with lower complexity require reaction time, brainstorming, or simple arithmetic. Task complexity in the medium range is, for instance, working in production work, whereas a task with a higher complexity refers to supervision, science, or engineering. With increasing task complexity, the effect of

goal difficulty on performance decreases. The reason is that a high task complexity can go beyond the currently available capabilities, and effective task strategies must first be developed (Wood et al., 1987, pp. 418-420). Hence, performance will suffer when individuals are assigned performance goals with highly complex tasks for which they do not have the proper task strategies. Since increasing performance requires individuals to focus on developing appropriate task strategies to increase mastery and performance in subsequent periods (Seijts & Latham, 2005, p. 126).

Situational constraints refer to circumstances where individuals are inhibited from using their abilities or transforming motivation into performance. Empirically, there is a negative interaction effect of goal difficulty and situational constraints on performance, i.e., goal difficulty significantly affects performance within the low situational constraint condition. In contrast, goal difficulty does not significantly affect performance under high situational constraints (Peters, Chassie, Lindholm, O'Connor, & Kline, 1982, p. 16). Situational constraints typically entail, for instance, a lack of information, problems with tools, equipment, materials, supplies, or interruptions in the goal-striving process (Sonnentag & Starzyk, 2015, p. 811). However, several factors may reduce situational constraints to increase performance: The organization must provide sufficient technical and financial resources and establish formal and informal systems that support adequate goal-setting practices. Moreover, supervisors should give, if needed, immediate support, avoid setting conflicting goals, and refrain from pressuring individuals with increasingly difficult goals (Borgogni & Dello Russo, 2013, p. 272). Furthermore, individuals highly committed to a difficult goal and a well-equipped self-efficacy try to mobilize resources to overcome obstacles that situational constraints induce as far as possible (Locke & Latham, 1990, p. 223).

4.1.2 Goal-Setting and Unethical Behavior

Although the motivational effects of appropriate goal-setting are undoubted, newer research indicates that goal-setting can provoke unethical behavior as an unintended consequence. One of the pioneer findings of the relationship between goal-setting and unethical behavior refers to M. E. Schweitzer et al. (2004), which inspired a whole series of further studies. Their main argument refers to social cognitive theory (Bandura, 1991b) and the model of deception (Lewicki, 1983). M. E. Schweitzer et al. (2004) argued that successful goal attainment creates psychological rewards

such as positive self-evaluation and higher self-satisfaction. Concerning goal-setting, they further stated that the claiming of reaching a goal in case of goal failure creates similar rewards as in the case of reaching the goal and has a higher utility than admitting goal failure, which produces psychological costs. The central finding in their experiment is that individuals who did not meet their goals were likelier to engage in unethical behavior than individuals in the do-your-best condition. The relationship between goal-setting and unethical behavior was even stronger when individuals missed their goals only by a small amount. Participants did not cheat significantly more when economic incentives were added to the goals (M. E. Schweitzer et al., 2004, pp. 423–429).

Barsky (2011) suggested that participation in goal-setting may interact with the relationship between moral disengagement and unethical behavior. Thereby, Barsky focused on moral justification and displacement of responsibility because he regarded these two moral disengagement mechanisms with the most plausible relationship to goal-setting in the working context. In his correlational study with cross-sectional data, he found that participation in goal-setting is negatively related to unethical behavior and may decrease the effect of moral justification on unethical behavior. Through participation, the rationalization of justifying unethical methods in obtaining the goal diminished, whereas participation did not attenuate the effect of displacement of responsibility on unethical behavior (Barsky, 2011, pp. 62–70).

Welsh and Ordóñez (2014a) theorized in allusion to Barsky (2008) that high-performance goals can distract an individual's attention from his or her moral standards reducing the tendency to classify morally ambiguous situations as unethical and thereby increasing unethical behavior. In addition, they suggested that subconscious priming with ethical content (ethical or unethical) may reduce unethical behavior in high-performance goal situations. The experimental study could confirm their hypotheses (Welsh & Ordóñez, 2014a, pp. 727–736).

In another study, Welsh and Ordóñez (2014b) set their research focus on the relationship between consecutive performance goals and unethical behavior by taking depletion as a mediator into account. Accordingly, individuals have a limited capacity for self-regulation resources concerning their moral behavior. Consecutive performance goals should lead to depletion insofar that these self-

regulatory resources become exhausted in the goal attainment process. In future tasks, self-control concerning moral standards may decrease, increasing the chances of dishonesty. In an experimental design, they confronted their participants with consecutive high-performance, low-performance, decreasing, increasing, and do-your-best goals. Results indicate that, in particular, consecutive high-performance goals produced the highest depletion rates and incidences of unethical behavior. They found support for their proposed model that depletion mediates the relation between consecutive goals and unethical behavior. Also, the relationship is moderated by the number of consecutive goals (Welsh & Ordóñez, 2014b, pp. 80–86). However, Keith (2018) could not replicate these findings with a German sample.

Clor-Proell et al. (2015) suggested that goal difficulty and promotion availability affect unethical behavior interactively. According to Clor-Proell et al., difficult goals signal the employer's unfairness and increase the willingness for retribution and ease the rationalization to engage in unethical behavior. However, having a prospect of promotion available can offset the perception of difficult goals as unfair because promotion availability serves as additional information that the employer possibly rewards the attainment of difficult goals. The experimental study revealed that while there was no main effect of goal difficulty on fraud, goal difficulty and promotion availability interacted with unethical behavior (Clor-Proell et al., 2015, pp. 774–783).

Niven and Healy (2016) set their focus on moral disengagement as a trait that may lead to individual differences in unethical behavior in goal-setting. Niven and Healy differentiated unethical behavior in the goal-attainment process and unethical behavior around the outcome of the goal. On the one hand, one of their main argument concerning unethical behavior in the goal attainment process refers to Barsky (2008). Specifically, individuals set their awareness on the goal and are distracted from considering morality. Also, individuals may frame issues concerning the goal, thereby narrowing their consideration concerning moral standards (Sonenshein, 2007). On the other hand, like M. E. Schweitzer et al. (2004) did, Niven and Healy (2016) referred to social cognitive theory (Bandura, 1991b) and the model of deception (Lewicki, 1983) to explain unethical behavior around the outcome of the goal. Accordingly, individuals make a psychological cost-benefit calculation of admitting goal failure compared to claim goal completion (Niven &

Healy, 2016, pp. 116–117). An experimental study revealed that specific and difficult goals, compared to the do-your-best goal, could provoke unethical behavior in goal attainment. Moral justification did not moderate this relationship significantly. In contrast, specific and challenging goals did not significantly lead to unethical behavior around the outcome of the goal. However, moral justification moderated this relationship, insofar as individuals with a high dispositional tendency for moral disengagement behave unethically around the outcome of a goal (Niven & Healy, 2016, p. 123). It leads to the conclusion that individuals with moral disengagement as a high dispositional tendency are more prone to apply unethical behavior in goal-setting situations.

Welsh et al. (2019) took a closer look at the effects of the goal type, goal difficulty, and prevention focus concerning unethical behavior. They differentiated goal types into learning and performance goals. They suggested that prevention focus mediates the goal type effect on unethical behavior and that goal difficulty moderates the effect of goal type on prevention focus. Accordingly, prevention focus is an avoidance-based orientation that refers to individuals' loss aversions. Their main argument is that only performance goals affect prevention focus. Performance goals define an external achievement level, meaning that goal failure implies a potential loss. In contrast, learning goals do not define such an external achievement level because such goals refer to personal improvements on the task. Hence, difficult goals should only increase the effect of performance goals on prevention focus. Also, only in performance goal situations does prevention focus affects unethical behavior since individuals try to avoid losses and are willing to engage in unethical behavior to obtain the goal (Welsh et al., 2019, pp. 16–17). They could find empirical support for their proposed theoretical model in one field study and three experiments.

Welsh et al. (2020) further investigated the role of goal commitment and moral disengagement concerning unethical behavior in goal-setting. They proposed that goal difficulty impacts state moral disengagement, whereas this relationship is moderated by goal commitment. Also, moral disengagement mediates the relationship between goal difficulty on unethical behavior. Accordingly, a challenging goal may motivate individuals to a high degree because goal success is related to several personal or organizational benefits. However, such motivational forces may increase the chances for moral disengagement because the associated benefits in case of goal

success may provide justifications to apply unethical methods. Furthermore, high goal commitment increases the motivation to obtain the goal. Subsequently, goal commitment may also increase the effect of difficult goals on moral disengagement. The main result supported the theoretical assumptions by showing that the indirect effect of difficult goals on unethical behavior through moral disengagement was significant only when high goal commitment was present (Welsh et al., 2020, pp. 2–9).

Finally, Nagel et al. (2021) evaluated the effects of incentive structure and loss-aversion concerning goal-setting and unethical behavior. Nagel et al. referred to prospect theory (Kahneman & Tversky, 1979). Accordingly, framing goal failure as a loss of payoffs may lead to a higher chance of unethical behavior. Results from an experiment revealed that incentive structure had no significant main effect on unethical behavior. However, there was support for an interaction effect insofar as that under a piece-rate system in a loss-framing, individuals engaged more in unethical behavior than under a lump sum payoff scheme. In contrast, in a gain-framing, individuals engaged more in unethical behavior under a lump sum payoff than in a piece-rate system. The explanation was that due to loss aversion, individuals are willing to take greater risks when they can lose their wages in prospect and, thereby, are more likely to apply unethical behavior (Nagel et al., 2021, pp. 5–12).

Central Issues

First, none of the depicted studies considers the organizational context systematically. The studies refer solely to the individual level by focusing on psychological mechanisms that can lead to unethical behavior in the goal-setting process by not considering the bad barrel perspective. Embedding goal-setting and the unintended consequences of unethical behavior into a broader social system of an organization may promise further insights. Especially, embedding goal-setting and unethical behavior into the dynamic interplay of moral capital and unethical behavior is prone to illustrate the dynamic spreading of unethical behavior in organizations adequately. Specifically, goal-setting can trigger incremental changes within the organization's social system. Moreover, alone or in combination with potential exogenou shocks, it could potentially provoke an ethical meltdown in the long run.

Second, the property of moral disengagement in goal attainment differs in studies. Whereas Barsky (2011) and Niven and Healy (2016) conceptualized moral disengagement as a dispositional tendency and moderating variable, Welsh et al. (2020) considered moral disengagement as a state and a mediator variable. Therefore and as mentioned before, moral disengagement can be understood as a trait and a state affected by situational effects. Moore (2015, p. 201) stated that the conceptualization of moral disengagement refers to how it is empirically tested: Moral disengagement as a trait or as a state should be tested as a moderator or mediator, respectively. However, no studies hypothesized moral disengagement in one study as both a trait and a state variable, although personal and environmental determinants could simultaneously influence moral agency (Bandura, 2016, pp. 6–12).

Third, the studies of Welsh and Ordóñez (2014b), Welsh et al. (2019), and Welsh et al. (2020) assumed a mediation effect in their studies. The relationship between goal difficulty and unethical behavior is totally mediated either by depletion, prevention focus, or moral disengagement, respectively. All studies used experiments, and causal conclusions from goal manipulation on the mediator are valid. However, their study designs do not allow for deriving causal conclusions from the mediator regarding the dependent variable of unethical behavior. These depicted studies refer to Preacher and Hayes' (2004) bootstrapping method in order to derive statistical conclusions about (conditional) mediation effects. However, such tests can yield invalid mediation claims due to correlated residuals, i.e., confounding bias from the mediator towards the dependent variable can not be canceled out (Yeager & Krosnick, 2017, p. 16). In order to claim causal mediation effects requires more sophisticated study designs and can not be compensated solely with statistical methods. Promising candidates are, for instance, the instrumental-variable estimation (Antonakis, Bendaha, Jacquart, & Lalive, 2014, pp. 107–109), parallel encouragement design (Imai, Tingley, & Yamamoto, 2013, pp. 19–21), or the IMT (Yeager & Krosnick, 2017).

Fourth, no study in this field explicitly formulated and empirically tested a hypothesis concerning a direct effect of goal difficulty on unethical behavior. Although statistical evidence in the previous studies is available, some studies hypothesized a mediator between goal difficulty and unethical behavior (Welsh et al., 2020; Welsh & Ordóñez, 2014b), and others goal difficulty as a moderator (Clor-Proell et al.,

2015; Welsh et al., 2019). Only M. E. Schweitzer et al. (2004), Welsh and Ordóñez (2014a), and Niven and Healy (2016) came close by hypothesizing the direct effects of difficult goals over do-your-best goals on unethical behavior. However, as mentioned before, researchers in goal-setting usually apply the dichotomous comparison of specific and difficult versus do-your-best goals. However, do-your-best goals refer to goals that are also difficult but vague in their specificity. In contrast, goal difficulty is conceptualized as easy, moderate, and difficult and may reflect that 90%, 50%, and 10% in a given sample can usually obtain the goal (Locke & Latham, 1990, p. 349), respectively. All these goals are specific but only vary in their difficulty. Hence, a simple baseline hypothesis, holding specificity constant and varying goal difficulty, could complete the picture concerning goal-setting and unethical behavior.

Fifth, Latham (2016, p. 6) criticized that M. E. Schweitzer et al. (2004) did not consider the moderator ability. Inspecting the study of M. E. Schweitzer et al. (2004, see p. 424) revealed that they did not use the results of the practice rounds as a measure of ability in their statistical analysis. It would have corresponded with the procedure of Locke (1982, p. 512) and Mento, Locke, and Klein (1992, p. 396). Nevertheless, not only M. E. Schweitzer et al. (2004) but all depicted studies did not control for ability in their primary analysis. Ability is a highly relevant moderator in the relationship between goal difficulty and performance. Especially, high ability boosts performance in the range of moderate to difficult goals (Locke & Latham, 1990, p. 208). However, the linear relationship between difficulty and performance levels off for individuals who reach their limits of ability (Locke, 1982, p. 513). It indicates that difficult goals may be impossible for some individuals to obtain and thereby increases the chances of unethical behavior. It does not mean that individuals with lower abilities tend to engage more in unethical behavior than individuals with higher abilities. Goal difficulty has to be considered in relation to ability, i.e., goals can be set so tough that even individuals with a high ability reach their limits and may perceive the goal as impossible, thereby increasing their chances for unethical behavior. Most of the depicted studies set difficult goals at the cutoff of the 90^{th} percentile, which means that only 10% of the participants could obtain the goal. This cutoff value refers to Appendix C on page 349 of the book by Locke and Latham (1990) to ensure enough variance in laboratory settings. However, even in successful randomization, individual differences of ability may still be prone to

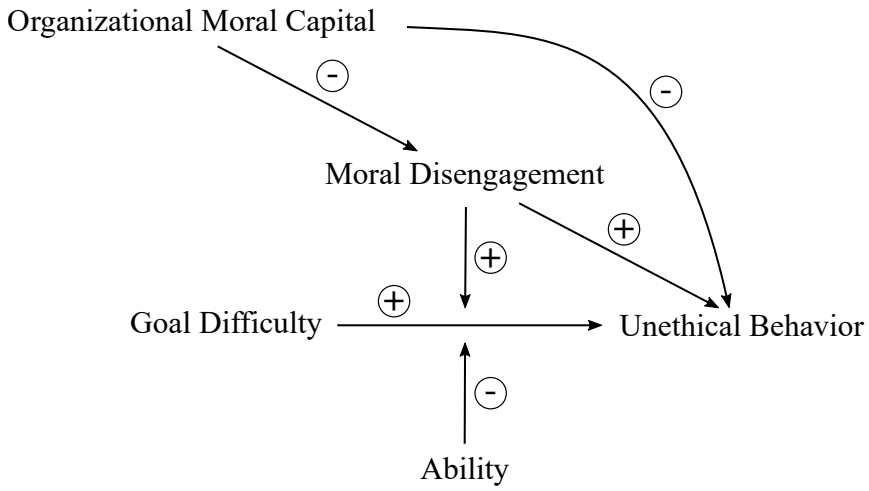
produce error variance when testing goal effects and thereby making the test less powerful (Locke & Latham, 1990, p. 347). Put simply, the effects of ability can not wholly be randomized away. Therefore, Locke and Latham (1990, p. 347)) advised explicitly controlling for ability in goal-setting experiments is crucial.

Finally, Latham and Locke (2009) assumed in the study of M. E. Schweitzer et al. (2004) a confounding effect triggered by adding monetary incentives to the experiment. Consequently, unethical behavior can not be unambiguously attached to their experimental goal-setting design (Latham & Locke, 2009, pp. 18–19). Indeed, the relationship between goal-setting, monetary incentives, performance, and unethical behavior is controversial. Locke (2004) assessed various incentive systems concerning goal-setting and concluded that appropriate incentive designs in goal-setting may increase performance and that cheating can happen under any incentive scheme (Locke, 2004, pp. 130–132). On the one hand, empirical findings support the notion that under specific circumstances, monetary incentives can increase goal-setting performance (Chong & Leung, 2018; Lee, Locke, & Phan, 1997; Mowen, Middlemist, & Luther, 1982). However, on the other hand, Cadsby, Song, and Tapon (2010) found that goal-based compensation pay systems encourage more unethical behavior than linear piece-rate and tournament compensation pay systems (Cadsby et al., 2010, pp. 14–25). Also, a recent study by Nagel et al. (2021) showed that a piece-rate pay system in a loss framing might increase the likelihood of engaging in unethical behavior in goal-setting situations (Nagel et al., 2021, p. 11). Moreover, Locke (2019) admitted that no validated model for ideally linking monetary incentives to goals exists. Also, adding monetary incentives increases the risk of unethical behavior and has to be contained with a culture of honesty and integrity (Locke, 2019, pp. 2–3). Hence, adding monetary incentives to goal-setting may increase performance, but it entails various risks concerning unethical behavior. Ultimately, there is ample evidence that unleashing the motivational effects of goal-setting does not necessarily require monetary incentive schemes. Therefore, it is suggested not to tie any monetary incentive schemes to goal-setting in the present study to avoid any related confounding issues.

4.1.3 Hypotheses

The proposed hypotheses are based on the theoretical outline of the theory of the structuration of moral capital and unethical behavior and central issues in the field of study concerning goal-setting and unethical behavior that can be realized in a parsimonious experiment (see Figure 4.2). The hypotheses refer to Type I and Type II mechanisms in the structuration of moral capital and unethical behavior. In contrast, the Type III mechanism is due to its complicated emerging character excluded in the experiment and later captured in the ABM. Therefore, the hypotheses

Figure 4.2
Research Model and Hypotheses



are differentiated into macro-micro-level and micro-level hypotheses. Alternative labels are organizational-individual-level and individual-level hypotheses, respectively. Organizational-individual-level comprises the effects of organizational moral capital on the individual level. With this, perceived moral capital is the essential bridge explanation for the effects of organizational moral capital on the self-regulation of moral disengagement and unethical behavior. The effect of organizational moral capital on unethical behavior is partly mediated through moral disengagement as a state. Furthermore, individual-level hypotheses cover the effects of goal-setting on unethical behavior. Also, the effect of goal difficulty on unethical behavior is

supposed to be moderated by moral disengagement as a trait and the ability of the individuals.

Organizational-Individual-Level Hypotheses

A bridge assumption is required for the organizational-individual-level hypotheses to connect organizational moral capital with the individual level: Existent moral capital on the macro-level affects the mental state of perceived moral capital. Specifically, organizational moral capital comprises mutually consistent social expectations concerning moral norms. It could be more likely that a threshold effect will affect the individual's perception of a high within-group agreement about specific moral norms. The perception of these moral norms may arise from common social practices in an organization, such as sanctioning practices, compliant behaviors, stories, myths, and rituals that correspond with moral foundations that individuals experience or observe. It results in perceived moral capital in the individual's mind. Significantly, once normative expectations are perceived, it may pressure individuals to act in line with moral norms even though the individual does not assign any personal relevance to moral norms. Specifically, perceived normative expectations may contribute to the impression of the individual that a sufficiently large subset of organizational members may expect the individual to comply with moral norms and may sanction the individual in case of moral norm violation. Out of fear, the individual likes to refrain from sanctions and therefore tries to comply with moral norms (Bicchieri, 2006, p. 15). Also, perceived empirical expectations, i.e., that a sufficiently large subset of organizational members comply with moral norms, give the individual orientation in ambiguous situations on how to act. Because the individual has the desire to reduce complexity in value-creation activities, she or he might adopt such practices followed by the majority and thereby reduces the chance of engaging in unethical behavior (Bicchieri, 2006, pp. 29–30; Bicchieri, 2017, p. 18). Forces of compliance on the condition of perceived empirical and normative expectations triggered by organizational moral capital may affect not acting unethically. Therefore, the first hypothesis assumes the bridge assumption of perceived social expectations between organizational moral capital and the behavioral consequence of unethical behavior. Accordingly, the first hypothesis is:

- *H1a: The higher the organizational moral capital, the lower the extent to engage in unethical behavior.*

The degree of moral capital may contribute over perceived social expectations to the saliency of moral standards and hence, to the activation of the self-regulation system of moral agency and deactivation of moral disengagement. It is a prerequisite for the effect of the force of compliance on the condition of personal normative beliefs. Due to the observation of examples, personal normative beliefs for self-regulation can be influenced (Bandura, 1977, p. 46), and the ethical actions of others can make moral standards more salient (Gino et al., 2009, pp. 393–394). Examples of perceived normative expectations refer to role models that received sanctions for moral norm violations. Examples according to perceived empirical expectations refer to role models that comply with moral norms in value creation activities and successfully solve organizational problems with practices within the zone of ethical acceptance. Thus, personal normative beliefs concerning moral standards become activated and salient. Subsequently, self-regulation concerning moral agency is more likely due to activated and salient moral standards. Specifically, anticipating moral norm violation triggers affective self-reactions such as guilt (Bandura, 2016, p. 4). Due to activated moral agency, which is influenced by the environment through perceived moral capital, it may become more difficult to disengage from moral self-regulation and to free oneself from self-sanctions. Therefore, the second organizational-individual-level hypothesis comprises organizational moral capital as a situational variable that affects moral disengagement over perceived social expectations as a state:

- *H1b: The higher the organizational moral capital, the lower the activation of moral disengagement.*

Furthermore, moral standards do not always function as regulators of ethical behavior. According to Bandura et al. (1996, p. 364), there are several cognitive mechanisms where self-sanctions can be circumvented to overcome self-regulative control in order to engage in unethical behavior. Evidence shows that moral disengagement and unethical behavior stay in a positive relationship (see, for instance, Moore et al., 2012). However, perceived moral capital may decrease the activation of moral disengagement by making personal normative beliefs active and salient, ac-

tivating moral self-regulation. Hence, perceived moral capital may indirectly reduce the positive effect of moral disengagement on unethical behavior. Also, moral disengagement describes a cognitive process between contextual factors and an outcome. Once moral disengagement is considered a process, it can be understood as a mediator (Moore, 2015, p. 202). Accordingly, the third organizational-individual-level hypothesis is:

- *H1c: Moral disengagement mediates the relationship between organizational moral capital and unethical behavior insofar that organizational moral capital has a negative indirect effect on unethical behavior through moral disengagement.*

Individual-Level Hypotheses

According to Locke and Latham (1990, p. 28), difficult goals motivate individuals to achieve higher performance than easy goals. Moreover, even if a goal is considered very difficult or even unattainable does not reduce the motivation to obtain the goal (Roose & Williams, 2018, p. 23). Even though individuals are highly motivated, there are two arguments why difficult goals may also provoke unethical behavior: a cost-benefit calculation and the recognition of unethical behavior. First, very difficult goals may increase the chance of goal failure, which may also increase the psychological utility of unethical behavior. Concerning social cognitive theory, goals specify the conditional requirements for positive self-appraisals (Bandura, 1991b, p. 260). However, missing a goal and admitting it may also increase psychological costs, such as lower self-evaluation and -satisfaction. Accordingly, individuals may use a cost-benefit calculation concerning unethical behavior to reach the goal. Unethical behavior in claiming goal completion may have a higher utility because it results in similar positive self-appraisals like obtaining the goal (M. E. Schweitzer et al., 2004, p. 423). Second, difficult goals may narrow attention to the goal-attainment process, thereby distracting attention from recognizing moral standards in behavioral regulation. Subsequently, the tendency to recognize potential moral norm violations may decrease (Barsky, 2008, p. 69). Hence, very difficult goals may provoke unethical behavior. The first individual-level hypothesis is a Type II mechanism and was not formulated in previous studies explicitly in this direct relationship and is:

- *H2a: The higher the goal difficulty, the greater the extent to engage in unethical behavior.*

The effect of goal difficulty on unethical behavior may vary concerning moral disengagement as a trait. Relevant rationalization tactics of moral disengagement in goal-directed work behavior may refer, for instance, to moral justification and displacement of responsibility (Barsky, 2011, p. 62). First, individuals may have the propensity to justify unethical behavior with the argument that they act for valued purposes, such as for the organization's good. Second, individuals may deny their responsibility because the assignment of difficult goals goes beyond their control, making it easier for them to blame others for their wrongdoing. As a result, moral disengagement may affect the cost-benefit calculation of engaging in unethical behavior. Not only admitting goal failure may produce psychological costs, but also the violation of moral standards for engaging in unethical behavior through self-sanctions, which may inhibit the application of morally unsound behavior. However, moral disengagement may reduce the costs of self-sanctions for anticipated moral norm violation, thereby aligning a higher weight to the psychological benefits of claiming goal completion. In addition, the propensity to morally disengage may support the reduced attention concerning moral standards by lessening or even completely switching off psychological self-sanctions for anticipated moral norm violations. Once moral disengagement is considered a trait, it can be modeled as a moderator (Moore, 2015, p. 202). Hence, the second Type II individual-level hypothesis is:

- *H2b: Moral disengagement moderates the relationship between goal difficulty and unethical behavior. Precisely, moral disengagement strengthens the positive relationship between goal difficulty and unethical behavior.*

Finally, the higher the ability, the stronger the goal effect on performance at moderate to difficult goal levels (Locke & Latham, 1990, p. 208), whereas the linear relationship of difficulty and performance levels off for individuals who reach the limits of their ability (Locke, 1982, p. 513). Accordingly, individuals with a greater ability have a higher chance of obtaining the goal and, therefore, have less need to engage in unethical behavior and corresponding cost-benefit calculations. Also, individuals with a higher ability do not have to focus their cognitive capacity solely on the goal-attainment process, thereby allowing them to consider moral standards in their actions. In situations where goals are easy, the ability has less of a discriminating impact on the effect of goals on unethical behavior because

individuals with lower and higher abilities can potentially obtain easy goals. Hence, the third Type II individual-level hypothesis is:

- *H2c: Ability moderates the relationship between goal difficulty and unethical behavior. Especially, ability reduces the positive relationship between goal difficulty and unethical behavior in the range of moderate to difficult goals.*

4.1.4 Ethics Commission and Data Protection

The University of Wuppertal Ethics Commission approved the following online experimental study before its conduction (reference number: MS/AH 200303 Langer). Thus, the study meets the requirements of the ethical principles of the Declaration of Helsinki, the German Psychological Society, and the Association of German Professional Psychologists. These ethical guidelines are adapted from the American Psychological Association and represent the Meta-Code of Ethics of the European Federation of Psychologists Associations. Therefore, the study also corresponds to international scientific and ethical standards. Accordingly, psychological studies must be designed concerning human dignity, integrity, safety, well-being, and minimum risk exposure. A crucial requirement is that individuals give informed consent to participate in the study (BDP & DPGs, 2016, pp. 7–24).

Informed consent ensures that individuals consciously agree to participate in the study voluntarily. Herefore, participants have to get information about the purpose and the duration of the study. They must also be clear of their right to refuse or to withdraw their consent and participation at any time with no consequences. Researchers should provide information about any risks and the expected knowledge gained from the research. Further, ensuring confidentiality, anonymity, and its limits, contact options to ask questions at any time are mandatory requirements. Also, the height of the incentives for participation should not counteract their voluntariness to participate. Finally, if the study contains deceptive elements, as in the following study, participants are not fully informed about the purpose of the study before their participation. Researchers have to clarify the deception no later than the end of the data collection, allowing participants to withdraw their data (BDP & DPGs, 2016, pp. 24–25).

An integral part of the proposal to the ethics committee is the assurance that the data protection issues correspond to legal regulations. Therefore, the official

data protection officer of the University of Wuppertal evaluated the study concerning the data collection tool, the place of data storage, the acquisition of the sample from SoSci Panel (Leiner, 2016), and the information provided to participants about data protection measurements and the data usage. After some required minor adjustments, the data officer approved that all legal requirements were met.

Because data collection is due to a dissertation, data issues fall potentially under the so-called General Data Protection Regulation (GDPR). Hence, the researcher is personally responsible for data protection violations. Technically, the data collection tool settings were set to a minimum insofar as no metadata was collected. During the online survey, participants were pseudonymized by SoSci Panel through participation identifiers and corresponding online links. After the end of the survey, SoSci-Panel deletes the pseudonymization IDs (SoSci Panel, 2020) with the consequence that the data is anonymous. By this point, the data does not fall under the GDPR anymore. However, this does not exclude the obligation of the researcher to treat the data confidentially.

4.1.5 Method and Measures

The experiment was administered as a web-based online questionnaire with the tool SoSci Survey in Germany in the German language. The experiment consists of 3 (moral capital, immoral capital, control) x 3 (easy, moderate, difficult goal) factorial between-subject design with random assignment. Also, to assess causal mediation effects according to hypothesis H1c, a second version of the experiment was built on the principles of the IMT (Yeager & Krosnick, 2017) (*Note:* See sequence plans for the conventional and impossible orders in Figure A.1 in Appendix A).

The online experiment was designed as a role-play to conceal the real purpose of the study in order to reduce social desirability effects concerning unethical behavior. The experimental situations were presented as images with descriptions and conversations in speech bubbles to understand the role-play better. Importantly, all materials were constructed and pretested in German among German-speaking audiences (due to description purposes, all materials are also shown in the English language). In the following, all methods and measures are presented in the sequence of the primary storyline of the role-play with their corresponding results from pilot testing. Also, the web survey was primarily designed to be answered on computers.

However, its functions were also checked on a smartphone since answering web surveys with a smartphone is very common (Callegaro, Lozar Manfreda, & Vehovar, 2015, p. 196). Due to its parsimonious design elements, the survey worked well on both devices.

Ability

After providing the general study information and their consent to participate, individuals were said to start their role-play. They should imagine themselves as employees of a fictitious advertising company where human creativity is essential. Therefore, they had to attend creativity training. Herefore, the workshop trainer showed on a flip chart the upcoming task, which she presented as the "200 km/h creativity technique" (*Note:* See Figure B.1 in Appendix B). The technique's name was inspired by Monahan (2002), who coined the term "100 MPH Thinking" (p. 90). It refers to a brainstorming technique to collect as many ideas as possible in a short amount of time. The name of the initial technique was adjusted to fit a German audience better. However, the creativity training only served as a cover to make the role-play sound more credible. The real purpose was to measure participants' abilities and to get familiar with the later experimental goal-setting task. The ability measurement was constructed as in the experiments of Locke (1982, p. 512) and Mento et al. (1992, p. 396). Specifically, participants were asked to list as many uses as possible for a common object within one minute. As Mento et al. (1992) did, a wire coat hanger (*Note:* See Figure B.2 in Appendix B) was presented on the next page, and participants had the opportunity to type as many usages as possible within one minute into a text box. In addition, the instruction made it clear that every idea counted. They should note key points only and separate their ideas with a comma. Significantly, separation with a comma was necessary, allowing programmed assisted counting of noted uses.

Moral Capital Scenarios

After creativity training, participants entered the moral capital scenarios. Specifically, there was a moral and an immoral capital scenario and one control group where no information concerning moral capital was presented. When speaking of moral capital scenarios in the plural, it comprises the moral and immoral scenarios. The moral capital scenario should represent an endpoint on a higher level, the control

condition a neutral position, and the immoral capital scenario an endpoint on the lower level of a moral capital continuum. It should reflect the fact that every moral foundation comprises a bipolar continuum. The moral and immoral capital scenarios were constructed to represent a work situation where moral norms should be highly valued in the company in contrast to a situation where moral norms should be highly disregarded. Specifically, the moral and immoral capital scenarios should prime perceived empirical expectations. Recalling the previous outline, if perceived empirical expectations are the only information available, individuals may infer them as information about normative expectations. Both may have activating or deactivating effects on personal normative beliefs.

The moral capital scenarios were designed as a third-party observation about moral compliance and violations insofar that the participant may interpret the information about moral capital due to the behavior of others in the reference network. The main idea to transmit information about the third-party observation of moral behaviors refers to Clifford, Iyengar, Cabeza, and Sinnott-Armstrong (2015), who constructed several general vignettes based on the moral foundations as a judgment of third-party moral violations. Specifically, a conversation in a work situation was constructed in a way as to prime perceived empirical expectations of the participant concerning existing or non-existing moral norms in the organization with its possible forces to prevent or promote unethical behavior. According to Gunia, Wang, Huang, Wang, and Murnighan, exposing individuals to a moral or immoral conversation could affect whether they tell the truth or lie in their actions, respectively (Gunia et al., 2012, p. 23). Especially in the immoral capital scenario, observing a peer from one's in-group behaving unethically plays a crucial role in influencing the likelihood that participants will also act unethically. It is because, according to social identity theory, identification with in-group members is higher than with out-group members. Their behaviors are prone to be considered a standard for the empirical expectation that may increase unethical behavior (Gino et al., 2009, p. 394). Therefore, the work situation comprises a conversation between colleagues in an in-group of the observing participant. In order to create a realistic scenario in the work context, the topic of the conversation was a pad expense report based on the idea of G. E. Jones and Kavanagh (1996, p. 516).

Furthermore, the conversations about the pad expense report were designed to represent the endpoints of the fairness-cheating dimension of the moral foundations (Graham et al., 2018, p. 212) that made up the moral and immoral capital scenarios, respectively. The pad expense report was concentrated on fairness-cheating for the following three reasons: First, focusing on one dimension reduces the complexity and supports the parsimoniousness of the experiment. Second, fairness-cheating is considered one of the most relevant moral foundations in the Western context (Kluver et al., 2014, p. 154). Third, the moral capital scenarios may better affect the dependent variable of unethical behavior, which is operationalized as cheating behavior.

The operationalization of the moral capital scenarios focusing on fairness-cheating is based on the MFQ (Graham et al., 2011). The moral relevance items were considered sufficient to construct the moral capital scenarios because they capture abstract moral information that can be transferred to various situations. The initial contents of the fairness items address the fairness of actions ("Whether or not someone acted unfairly"), fairness of treatment ("Whether or not some people were treated differently from others"), and rights ("Whether or not someone was denied his or her rights") (Graham et al., 2011, p. 368). Specifically, participants had to observe a work situation in the experiment built on these items' content. Herefore, the contents of the items were further embedded into the conversation about the pad expense report to represent the endpoints of fairness and cheating and, thereby, a moral and immoral capital scenario. The fairness of action content comprises the moral endpoint where fraud is absent and the immoral endpoint where fraud is a common practice. Fairness of treatment was constructed as favoritism is absent on the moral side or common practice on the immoral side. Rights were created in the moral capital scenario as no denial of rights and in the immoral scenario as the denial of rights as a common practice in an organization (*Note:* See the complete German version of the moral and immoral capital scenarios in Figure C.1 in Appendix C).

Continuing the storyline, participants get the information that during the day, they observe a conversation between two of their colleagues with whom one is acquainted and getting along well. In the moral capital scenario, information was provided to show participants that there exist organizational moral norms (for

illustrative issues, parenthesis in both moral capital scenarios show the reference to the MFQ or the particular intention for each sentence):

> *Colleague A: You rounded up the cab costs with 50 Euros much too generously, although the correct amount is 42 Euros (no fraud). None of us does it that way (emphasizing that it is not a common practice). You will get away with it because all expense costs are accepted without exact controls (no denial of rights). However, we all have a responsibility to the company. Therefore, you should not take personal advantage (no favoritism). Colleague B: That was an oversight. I will revise my expense report again. Thank you.*

In the immoral capital scenario, information was provided to show participants that cheating norms are present and that moral norms are not highly valued in the organization:

> *Colleague A: I'll show you how to make your expense report more beneficial (fraud). Many of us add a few euros here and there (emphasizing that it is a common practice). I'll also put in a good word for you, then your expense report will be handled with more goodwill than others (favoritism). Otherwise, even well-justified expense claims may be rejected at first (denial of rights). Colleague B: Thanks for putting in a good word for me. I will revisit my expense report.*

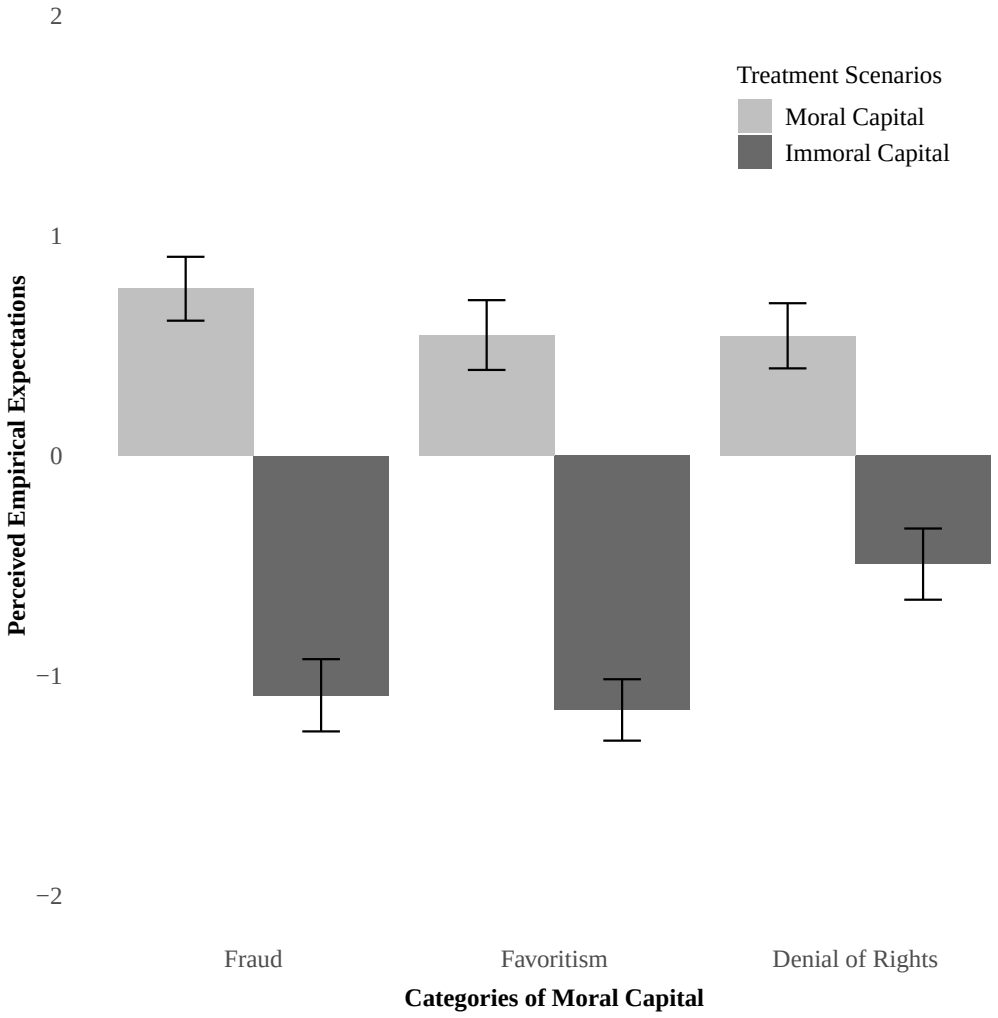
The moral and immoral capital scenarios were pretested among 135 students of a master and a bachelor business management lecture at the University of Wuppertal (55% female; $M_{age} = 23.92$, $Mdn_{age} = 23$, $SD_{age} = 4.84$, pairwise deletion, five cases were completely missing and excluded prior to analysis). The pretest consists of an experimental within-subject design. Before starting their lecture, students were asked to participate in a smartphone-based questionnaire voluntarily, and after data collection, their answers were anonymous. Also, they had the chance to participate in a lottery to win a voucher for an online shop. Herefore, students could access the password-protected questionnaire via an individualized QR-Code or link. Access codes were randomly given to the students prior to the experiment. Students were instructed to imagine watching two fictitious working situations in two companies with two different names. It was emphasized because only the conversation content

between the moral and immoral capital scenarios differed. The different company names should help to discriminate the two scenarios better and to ensure that they paid attention to the conversation's details. After presenting the scenarios, students were asked to assess each company's corporate culture by only considering the presented conversations in the working situations. In the questionnaire, they had the opportunity to assess on a rating scale whether they perceived fraud, favoritism, and denial of rights as standard practices in the concerning company.

Results indicate that students could significantly perceive a difference between the two treatments concerning the moral and immoral capital scenario (see Figure 4.3). Specifically, higher scores in perceived empirical expectations indicate that fraud, favoritism, and denial of rights were perceived as unacceptable practices in the organization, suggesting that moral norms were highly valued in the company. In contrast, negative scores concerning perceived empirical expectations express that fraud, favoritism, and denial of rights was perceived as standard practices in the organization, thereby suggesting that moral norms are highly disregarded in the company. Moreover, the absolute perception scores for the immoral capital scenario were greater than the absolute perception scores in the moral capital scenario for fraud and favoritism, except for the denial of rights, which showed similar absolute scores. It corresponds with the "bad is stronger than good" phenomenon, which could be observed in various psychological domains (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001, p. 354). Especially, dishonest behaviors influence impressions more than honest ones (Baumeister et al., 2001, p. 347). In addition, the two scenarios were shown in a random order to avoid sequence effects in the questionnaire. Finally, sequence effects due to the within-subject design could be excluded because a linear mixed model fitted by restricted maximum likelihood (Bates, Mächler, Bolker, & Walker, 2015) showed in the fixed effects that the scenarios but not the sequences significantly affected the perceptions for each moral capital category (*Note:* See calculations in the R-script in electronic-Appendix I).

Figure 4.3

Effects of Moral Capital Scenarios on Perceived Empirical Expectations



Note. Students were asked whether they perceive that fraud, favoritism, and denial of rights are common practices in each moral capital scenario. Assessment of the moral capital scenarios was rated on a 5-point Likert scale from strongly disagree (-2), disagree (-1), neither disagree nor agree (0), agree (+1) to strongly agree (+2). Results are inversely recoded. Error bars show 95% CI. n = 135, pairwise deletion.

German Moral Disengagement about Cheating Scale

Below the moral capital scenario or in the control group without moral capital, participants had the opportunity to give a response to a moral disengagement scale. Concerning the dependent variable of unethical behavior, participants could rate a specialized moral disengagement scale focusing on cheating (Shu et al., 2011). The scale assesses rationalization tactics in order to justify cheating behavior. Because no German-translated and validated version of the moral disengagement about cheating scale by Shu et al. (2011) was available, a translation to the German Moral Disengagement about Cheating scale (GMDCS) with validation was required. Therefore, the team application of the TRAPD procedure from Harkness (2003, p. 38) was conducted to translate the scale. In addition, in their study, Shu et al. (2011) used their moral disengagement scale primarily as a state affected by exogenous variables. However, it does not exclude that moral disengagement also comprises a dispositional tendency. An obvious conceptual distinction of moral disengagement as a state or a trait is difficult to make. Also, it would contradict the notion of the social cognitive theory, where personal and environmental factors influence each other (Bandura, 2016, p. 7). Therefore, the general Propensity to Morally Disengage scale from Moore et al. (2012, p. 6), primarily constructed as a trait predicting various consequences, was also translated to the German Propensity to Morally Disengage scale (GPMDS) for validating the GMDCS.

The parallel translation within the TRAPD procedure was applied (Harkness, 2003, p. 38). Herefore, two professional translators were hired to translate the items independently to German, their strongest language. Before translating, translators were briefed and received a translation form with detailed instructions concerning the required translation. The instruction in the translator form was based on Harkness (2003, p. 45) and the guidelines of the European Social Survey Organization (Dorer, 2018). For instance, the form includes information about the target audience, the purpose of the translation, which level of literacy, text's tone, clarity, fluency, and degrees of freedom permitted in the translations. Also, instruction was given to avoid ambiguity and unintended connotations in the translation. Translators were said to document any thoughts, such as problems, alternatives, and uncertainties, during the translation. After translation, an online meeting was set up where the author of the dissertation had the role of the reviewer and adjudicator. All translations were

reviewed and discussed together. In the end, the team agreed on a final version of the items (*Note:* See the documentation of the translation in electronic-Appendix I, the final translations of the items for the GMDCS and GPMDS are also presented in Appendix D and E).

The translated scales were pretested among the bachelor students who also rated the moral capital scenarios in their questionnaire to provide evidence for their scientific quality criteria in German. The pretest was insufficient to provide a complete picture of the reliabilities and validities of the German versions of the moral disengagement scales. However, it can show whether there are at least first indications concerning these quality criteria. Table 4.1 shows in the round brackets the corresponding reliability scores. Especially GMDCS and the GPMDS showed acceptable McDonald's ω of .88 and .70, respectively. In Table 4.1 not shown, Cornbach's α revealed values of .77 and .59, respectively. However, McDonald's ω is considered to be more appropriate than α, because the first does not require the strict assumption of τ-equivalence (equal factor loadings for all items) and, therefore, tends not to underestimate the reliabilities (Trizano-Hermosilla & Alvarado, 2016, pp. 1–2).

Table 4.1

Means, Standard Deviations, Correlations, and Reliabilities among German Scales in the Nomological Network of Moral Disengagement

Variable	*M*	*SD*	1	2	3	4	5	6	7	8
1. GMDCS	0.03	1.05	(.88)							
2. GPMDS	2.73	0.72	.40***	(.70)						
3. PT	3.56	0.66	−.21†	−.24*	(.75)					
4. EC	3.59	0.65	−.29*	−.25*	.62***	(.79)				
5. REL	5.37	1.06	.12	.25*	.06	.04	(.80)			
6. ORG	3.85	0.68	−.22†	.04	.26*	.52***	.26*	(.84)		
7. EPQ	2.77	0.59	.04	−.11	.18	.23*	−.02	.08	(.39)	
8. MNQ	1.34	0.77	.32**	.31**	−.34**	−.33**	.29*	−.24*	−.36**	(.57)

Note. †p ≤ 0.1. *p ≤ .05. **p ≤ .01. ***p ≤ .001. All scales were measured with numeric rating schemes as in the original references, ranges of each scale are shown in square brackets: GMDCS = German Moral Disengagement about Cheating scale [-3 – +3], GPMDS = German Propensity to Morally Disengage scale [1 – 7], PT = Perspective Taking [1 – 5], EC = Emphatic Concern [1 – 5], REL = Relativism [1 – 9], ORG = Omnipotent Responsibility Guilt [1 – 5], EPQ = Exaggeration of Positive Qualities [0 – 4], MNQ = Minimization of Negative Qualities [0 – 4]. Items within each scale were shown in random order. M and SD are used to represent mean and standard deviation, respectively. Values in round brackets represent McDonald's ω. n = 74, pairwise deletion.

Both moral disengagement scales were set to each other and other constructs within their nomological network to obtain information concerning their construct validity in German. The selection of relevant constructs concerning the nomological network of moral disengagement refers to the identification of Moore et al. (2012), who validated the English version of the propensity to morally disengage scale. Moore et al. (2012, p. 6) detected three relevant categories concerning the nomological network of moral disengagement: moral personality traits, moral reasoning abilities, and dispositional moral emotions, which also apply to the GMDCS. For each category, they found a corresponding list of relevant constructs. However, the present validation does not include all constructs as in the study of Moore et al. (2012) because the pretest should be as parsimonious as possible. Therefore, one corresponding scale was used for each relevant category with a validated German available equivalent. Table 4.1 shows the intercorrelation of the mean values of both scales within their nomological landscape. Considerably, moral disengagement conceptualized as a state and trait considerably correlated with .40, demonstrating their similarities and indications of convergent validity.

The Interpersonal Reactivity Index (M. Davis, 1983) was used for the category of moral personality traits. Specifically, the index assesses individual differences in empathy. The German equivalent refers to Paulus (2009, 2016). The subscales Perspective Taking (PT) and Emphatic Concern (EC) are particularly relevant within the index. PT refers to the tendency to take the psychological perspective of another person. EC measures the tendency to have feelings towards others in need, such as sympathy or concern (M. Davis, 1983, pp. 113–114). Moral disengagement should stay in a negative relationship with PT and EC (Moore et al., 2012, p. 20). Both moral disengagement scales correlated negatively with PT and EC. However, the GMDCS did not reach the traditional level of significance ($p \leq 0.1$).

In order to assess moral reasoning abilities, the subscale Relativism (REL) within the Ethic Position Questionnaire (Forsyth, 1980) was essential. With this, the German equivalent from Strack and Gennerich (2007) was used. REL reflects the extent to which an individual refuses moral principles when judging morally relevant content (Forsyth, 1980, p. 175). According to Moore et al. (2012, p. 26), REL should be positively correlated with moral disengagement. As in the study of

Moore et al. (2012), the GPMDS positively related to REL. However, GMDCS had no significant correlational relationship to REL.

In order to capture dispositional moral emotions, Moore et al. (2012, p. 26) used the Test of Self-Conscious Affect (TOSCA) (J. P. Tangney, Wagner, & Gramzow, 1989) in order to obtain a measure for dispositional guilt. Dispositional guilt is an emotion and a negative self-evaluation of specific behaviors such as harming someone and has, therefore, very often a moral character (J. Tangney, 1990, pp. 102–103). However, the German version of the guilt dimension in the TOSCA does not show acceptable reliability and has poor indications of validity (Rüsch et al., 2007, pp. 322–324). Therefore, a promising alternative meeting the scientific quality criteria is the German short version of the Interpersonal Guilt scale (Albani et al., 2002; O'Connor, Berry, Weiss, Bush, & Sampson, 1997). Especially, the subscale Omnipotent Responsibility Guilt (ORG) was taken because it measures the overemphasis of individuals to feel responsible for the well-being of others (O'Connor et al., 1997, p. 76). According to Moore et al. (2012, p. 29), guilt was expected to be negatively correlated with moral disengagement. Whereas the GMDCS had the expected direction of the relationship, statistical significance was only obtained at a 10% level. This result could be because the ORG scale was designed to assess guilt on a pathological level, which could have diminished the intended relationship.

Scales containing moral content are prone to social desirability bias. Therefore, Moore et al. (2012) checked for social desirability effects with a short version of the Marlowe-Crowne scale (Strahan & Gerbasi, 1972). A German short, reliable, and valid measure of social desirability is the Kurzskala Soziale Erwünschtheit-Gamma (KSE-G) (Kemper, Beierlein, & Bensch, 2012). The scale assesses the gamma factor of a social desirability trait. The gamma factor of social desirability measures the individual propensity to give oneself positive self-descriptions, such as to deny socially undesirable qualities and ascribe positive attributes to oneself. Individuals with a high gamma factor tend to give morally biased responses in questionnaires in order to present themselves in a better light. The KSE-G captures two aspects of the gamma factor of social desirability: the Exaggeration of Positive Qualities (EPQ) and the Minimization of Negative Qualities (MNQ) (Kemper et al., 2012, pp. 7–8). To avoid severe moral response bias, social desirability should not be highly correlated with the moral disengagement scales (Moore et al., 2012, p. 16). Results indicate

that the EPQ had no significant relationship with both moral disengagement scales. The MNQ scale stayed in a positive relationship with both moral disengagement scales. However, the strength of their relationship was on an acceptable level, indicating not a severe bias of social desirability. However, these results must be cautiously interpreted because the EPQ scale showed a poor ω of .39, and the MNQ scale has a mediocre ω of .57. The initial validation study of Kemper et al. (2012, p. 18) showed a much better ω of .71 and .78, respectively.

Next, the results of a Confirmatory Factor Analysis (CFA) indicate first information about the construct validity of a scale (Levine, 2005, pp. 336–337). Estimating the GMDCS in a CFA with maximum likelihood showed acceptable fit measures of $\chi^2(9, n = 74) = 9.20$ with $p = .419$, Root Mean Square Error of Approximation (RMSEA) (90% CI) = .017 [.000, .133], Standardized Root Mean Square Residual (SRMR) = .047, and Comparative Fit Index (CFI) = .998. However, it should be noted that the RMSEA is imprecise, as indicated by the large confidence interval (CI). It was probably caused by the small sample size and degrees of freedom (Kenny, Kaniskan, & McCoach, 2015, pp. 498–500) and is, therefore, not an adequate fit measure in this context.

These results supported the decision that the GMDCS could be rolled out in the primary study. Indeed, the scale still has to prove itself in the main study. However, the GMDCS showed not perfect but reasonable indications concerning its validation properties and had excellent reliability in the pilot study. The imperfections of the nomological validation can be mitigated for the following reasons: The English version of the moral disengagement about cheating scale was content validated among 25 expert ratings about the topics of the items and with a correlative prediction of unethical behavior among 61 business students (Shu et al., 2011, p. 334). Therefore, directly comparing both validation procedures was impossible to assess whether the German validation results were decisively insufficient. Also, the German version used a more challenging validation approach of convergent and nomological validation. Moreover, the GPMDS showed similar results as in the initial validation study in Moore et al. (2012), making convergent validity with the GMDCS more credible. Finally, the CFA provided additional information about the construct validity.

Goal-Setting Instruction and Assignment

Emphasis was placed on transmitting the goal-setting instruction in a warm and friendly manner. According to Latham, Erez, and Locke, an adequate tone could increase perceived supportiveness in goal-setting (Latham et al., 1988, p. 755). Moreover, it was assumed that rude and strict instruction could narrow the zone of indifference when assigned to a goal, undermining effects on the motivational force. Hereby, the role play continued. It was said to the participants that their supervisor approached and greeted them in a friendly way. It was further introduced that the supervisor was excited as he had heard about the creativity training. Therefore, the supervisor assigned a brainstorming task where participants had to find a specified number of uses for a common good. Besides the cover of the creativity story, the instruction is based on a typical formulation in goal-setting studies (see, for instance, Latham et al., 1988, p. 755):

> *I would like to learn more about your new skills in the 200km/h creativity technique. I will now give you a product photo. Please name * possible uses for the product within 1 minute. This goal is difficult but attainable. Please show me your result later as I must attend a meeting now.* (* indicates a placeholder for 4 = easy, 7 = moderate, or 12 = difficult goal, see for details Figure F.1 in Appendix F)

After the instructions were given, participants could enter the next page, where they had the opportunity to list as many uses within one minute for a rubber tire (*Note:* See Figure F.2 in Appendix F) in a text box as the goal demanded from them. With this, a countdown of one minute appeared, showing participants the remaining time. As in the practical trial, participants were reminded to use key points and separate their uses with a comma to allow programmed assisted counting. After the time elapsed, participants were automatically referred to the next page.

The task was the same as in the study of Mento et al. (1992), which let students brainstorm uses for a rubber tire within one minute. Also, the three goal difficulties levels were adopted from this study (see p. 396). All goals were specific. Only the goal difficulty varied. The goal difficulty levels range from easy, moderate, to difficult. The three difficulty levels reflect that only 10%, 50%, or 90% of participants can obtain the goal, ensuring enough variance in laboratory goal-setting studies

(Locke & Latham, 1990, p. 349). In addition, the brainstorming task has low task complexity (Wood et al., 1987, p. 418) to unleash the motivational force and avoid a reduced goal-performance relationship.

The goal-setting procedure was pilot tested with the ability measurement in a German-speaking sample to assess whether the instructions led to the expected performance outcomes in an online setting and within the embedded cover story of the creativity in an advertisement company. Furthermore, the pretest sample should provide insights into how to develop a computer-assisted text cleaning procedure for the open text field in the main study. Although instructions were clear to separate the uses with a comma, most but not all participants would do so for various reasons.

The sample was obtained from clickworker.de. Clickworker.de provides a participant pool where respondents can be recruited and paid to attend online surveys. The platform is similar to Amazon's Mechanical Turk. Thomas and Clifford (2017) could show in their review that the quality of survey data in such a participant pool is similar to data generated in a laboratory setting. Recruitment works by placing a public request within the online pool. Respondents were offered €1.25 to voluntarily and self-selectively participate in the survey. Participants were required to be between 18 to 75 years old and to know the German language.

One hundred five respondents participated in the pretest study, whereas nine cases gave no answers and were excluded prior to analysis. The wrong punctations were manually adjusted to detect common mistakes (*Note:* The original and adjusted answers can be inspected in the data in electronic-Appendix II). Surprisingly, the given answers were of excellent quality insofar as only minor adjustments of the punctations were needed to achieve the required format. One respondent named the same usage multiple times, which were collapsed into one single use. As Locke (1982, p. 512) did, the quality of the answers was ignored, and only entirely irrelevant responses were excluded. As a result, three cases showed irrelevant answers and were also excluded prior to analysis, resulting in a final sample of 93 participants (65% male, 34% female, 1% divers; $M_{age} = 37.54$, $Mdn_{age} = 36$, $SD_{age} = 11.44$). Besides one missing value, 90% of the participants claimed having work experience, indicating that most of the respondents could adequately imagine themselves in the cover story.

Table 4.2 shows the hierarchical regression results for the goal-difficulty levels and ability on performance (left-hand side of the table). Results demonstrate what goal-setting theory predicts. Model 1 shows that higher goal difficulty levels affected performance more than easy goals. Model 2 shows that also ability had a direct effect on performance. Moreover, Model 3 shows that ability is a moderator in the relationship between goal difficulty on performance insofar as ability increased the goal difficulty performance relationship. Also, the proportion of explained variance was exceptionally high, ranging from 33% to 53%. Overall, the pretest results indicate that the construction of the goal-setting online experiment provoked an appropriate motivational force for performance and measurement of ability.

Table 4.2

Hierarchical Regression of Goal Difficulty on Performance and Cheating in the Pretest

	Performance			Cheating		
Predictors	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Moderate goal (7 uses)	1.03*	1.18**	−0.46	0.35	0.39	0.38
	(0.42)	(0.37)	(0.85)	(0.35)	(0.35)	(0.83)
Difficult goal (12 uses)	2.65***	2.56***	0.43	0.84*	0.81*	−0.17
	(0.40)	(0.36)	(0.77)	(0.34)	(0.34)	(0.75)
Ability		0.39***	0.08		0.12	0.02
		(0.80)	(0.12)		(0.07)	(0.12)
Moderate goal x ability			0.42*			0.00
			(0.21)			(0.20)
Difficult goal x ability			0.52**			0.24
			(0.17)			(0.16)
(Intercept)	3.97***	2.40***	3.64***	0.13	−0.34	0.06
	(0.29)	(0.40)	(0.55)	(0.25)	(0.38)	(0.54)
R^2	0.33	0.48	0.53	0.06	0.09	0.12
Adjusted R^2	0.32	0.46	0.51	0.04	0.06	0.07
F-test	22.37***	27.33***	19.96***	3.12*	2.99*	2.33*

Note. †p ≤ .1. *p ≤ .05. **p ≤ .01. ***p ≤ .001. The reference category is the easy goal condition with four uses. Unstandardized regression coefficients are shown. Round brackets include standard errors. 30, 29, and 34 participants were in the easy, moderate, and difficult goal conditions, total n = 93.

Unethical Behavior

At the top of the next page, participants were reminded of the expected goal level from the supervisor. Below the reminder, they see a text box with their initial input from the previous page. They were said to check their given answers concerning spelling mistakes before they could finally store and hand in their answers to their supervisor by clicking the submit button. It corresponds with the cover story that the

supervisor had to go to a meeting and requested to hand in the results later, giving a realistic opportunity for cheating. Hence, the spelling correction section was only a cover. It allowed the participants to assess the final performance by counting the uses, if not wholly done during the performance measurement, and adding more uses in case of goal failure with no time pressure. However, the first answers were stored unbeknownst to participants, allowing for the detection of added words in the spelling correction section and a comparison with the initial performance. Adding more words to the spelling correction page, as initially obtained in the goal-setting situation, was considered cheating and unethical behavior because it requires a conscious action to add more uses, as initially noted. Hence, the calculated difference between the original performance and added uses in the spelling correction section is considered an objective measure of cheating and unethical behavior. The idea of the word-checking procedure is similar to the online experiment of Niven and Healy, where participants had to check their solutions of an anagram task with a dictionary and where they could overstate the number how many solutions they found (Niven & Healy, 2016, pp. 120–121). Overstating performance has direct analogs to an organizational situation. Many organizations allow their employees to self-report the number of hours they worked, which can be subject to misuse (M. E. Schweitzer et al., 2004, p. 426). Also, operationalizing unethical behavior as cheating stays in line with the fact that it is common to investigate unethical behavior in experiments as dishonesty (Gerlach et al., 2019).

One remark concerning miscounting is crucial. In the present study, individuals did not have to report their performance as a number, eliminating a miscounting bias. Even if participants miscounted their initial performance as insufficient and added uses, although they had already obtained their goals, it was cheating. The same applied to those participants who counted the number correctly in their performance but wanted to claim overperformance and added more uses. Even though unveiling the intention is not possible, both actions were considered unethical.

Since the transition from an unethical intention to unethical behavior could be relatively minor compared to an actual work situation, a note was presented below the spelling correction text box, showing what others supposedly have frequently found as uses for the rubber tire. The list was invented and only contained apparent uses. This additional note should reduce the threshold from initial unethical

intentions to unethical behavior. The number of uses others supposedly found corresponded to the goal difficulty levels, i.e., in an easy, moderate, and difficult goal condition, it was shown four, seven, and 12 uses, respectively. However, one can argue that this additional information could bias unethical behavior because it can seduce participants to copy these notes into their spelling correction text box without effort. Nevertheless, copying and pasting these uses and claiming them as one's own performance requires a conscious action and is based on the decisions made by the participants. Hence, the argument of temptation should therefore not apply.

In the pretest with the clickworker.de sample, 21 out of 93 participants overstated their performance by adding more words than the initially obtained in the performance section. Three participants deleted one possible usage in the correction section compared to the performance section. Inspecting the three cases revealed that participants were overly honest because they started but not finished to list the final use. However, having a thought and starting to list the final use was considered a valid use correction in the data. The extent of unethical behavior was calculated as the difference between the frequency of possible usages in the correction section and the performance section in the goal-setting task.

Table 4.2 shows the hierarchical regression results of the pretest with the effects of the goal-difficulty levels and ability to cheat (right-hand side of the table). Results demonstrate that a difficult goal led to unethical behavior in Model 1. It is the first preliminary evidence for hypothesis H2a. Adding ability in Model 2 did not change the main effect of goal difficulty on cheating. The interaction between ability with moderate and difficult goals showed no significant effects, implicating no preliminary evidence for hypothesis H2c. The proportion of explained variance ranged from 6% to 12%. Although in Model 3, no variable had an effect, the F-test was significant. The significant F-test could probably be attributed to multicollinearity issues resulting from the small sample size. Without going into detail, an inspection of the variance inflation factors could support this notion since four of the five regression terms had a variance inflation factor between 7.50 and 8.03. However, these results indicate that the present experimental online study design can objectively and statistically assess the effects of goal-setting on cheating and unethical behavior.

Correcting for Confounding Bias: The Impossible Mediation Test

The effect of the mediator moral disengagement on unethical behavior is open to confounding bias because the mediator is only a measured variable with an assumed effect on the dependent variable and not a manipulated variable itself. Such designs leave it unclear whether a third unobserved variable may cause variances of the mediator and the dependent variable (Yeager & Krosnick, 2017, p. 3).

In order to check for a confounding bias, Yeager and Krosnick (2017) suggested applying the IMT in such experimental designs. The IMT requires two experimental designs within one study: the conventional and the impossible presentation of the study materials. The experimental materials are presented in the temporal sequence in the conventional order condition as the causality is intended. In the impossible order condition, the outcome variable is measured before the treatment manipulation and the mediator's measurement. Hence, a causal effect of the mediator on the dependent variable must be impossible. Crucial, any residual covariance between the mediator and the dependent variable has to have existed before the experiment. The residual covariance in the impossible order allows for capturing any existing confounding bias between the mediator and the outcome variable. The residual covariance of the impossible order can then be used to constrain the residual covariance between the mediator and the outcome variable in the conventional order. Possible confounding bias in the conventional order should then be eliminated. If the corrected effect of the mediator on the outcome in the conventional order stays significantly different from zero, there is support for a causal mediation effect (Yeager & Krosnick, 2017, pp. 6–17). The essential idea of the IMT rests on the temporal reversibility assumption (Holland, 1986, p. 948). According to Yeager and Krosnick (2017), temporal reversibility means that residual covariance between the mediator and the outcome is independent of when the outcome variable is measured (Yeager & Krosnick, 2017, p. 9).

Applying the IMT to the study designs led to the abovementioned conventional order. In the impossible order condition, ability, performance, and unethical behavior were measured first. Afterward, perceived moral capital was manipulated, and moral disengagement was measured (*Note:* See sequence plan for the impossible order in Figure A.1 in Appendix A). Following the approach, the initial 3 x 3 between-subjects

experiment was duplicated to present a conventional and an impossible order of the study design. This resulted in 12 different treatment conditions to which individuals were randomly assigned.

Finally, it was decided to favor the IMT compared to the instrumental variable approach (Antonakis et al., 2014, pp. 107–109), and the parallel encouragement design (Imai et al., 2013, pp. 19–21) for the following reasons: The significant advantage of using the IMT is that it allows taking care of the confounding bias by only adjusting the presentation of the study materials and thereby still ensuring a parsimonious study design. The trade-off is that the required sample size increases by two. However, identifying appropriate instrumental variables correlated to an endogenous predictor but not to the error term of the outcome is quite difficult to realize in practice (Podsakoff, MacKenzie, & Podsakoff, 2012, p. 564; Antonakis, Bendahan, Jacquart, & Lalive, 2010, pp. 1103–1104). Also, in parallel encouragement designs, it is challenging to adequately manipulate the mediator, especially if the mediator is a complex psychological construct (Bullock & Green, 2021, p. 14).

Demographics, Debriefing, Informed Consent, and Lottery

Next, demographic information such as age, sex, and formal education was collected. After the demographics section, participants were debriefed, and the real purpose of the study was revealed. Participants were explicitly informed that the correction section was placed to detect their possible cheating behavior. After the debriefing, individuals were fully informed about the purpose of the study and were asked to give their final consent to use their anonymous data for scientific research. Also, participants could deny their consent and request their data's removal. Finally, as announced at the beginning of the study, respondents could leave their e-mail addresses to participate in a lottery, winning one of six vouchers of €25 for an online shop. E-mail addresses were stored in another location than the survey data to ensure anonymity.

Manipulation Checks

There were no manipulation checks included in the primary study because including manipulation checks can lead to cues about the real purpose of the study (Hauser, Ellsworth, & Gonzalez, 2018, p. 4), to unwanted demand effects (Lonati, Quiroga, Zehnder, & Antonakis, 2018, p. 21), and reactivity issues (Ejelöv & Luke, 2020,

p. 7). Also, manipulation checks can produce undesired effects such as reversing, enhancing, or interacting with the manipulation and introduce other measurement errors (Hauser et al., 2018, pp. 4–6). Putting the manipulation check at the end avoids interactions with the manipulation and the dependent variable. However, it can also produce demand effects if participants realize the real purpose of the experiment afterward and thereby change their response patterns (Lonati et al., 2018, p. 22). Furthermore, manipulation checks at the end could be prone to recall biases or affected by both the manipulation and the manipulation check, thereby questioning the validity of the manipulation check (Hauser et al., 2018, pp. 6–7). Finally, waving manipulation checks in the main study supported a parsimonious study design.

In order to forego the risk of introducing additional biases in the experiment, it is recommended to check the effectiveness of manipulations in pilot research (Hauser et al., 2018, pp. 7–8; Lonati et al., 2018, p. 22; Ejelöv and Luke, 2020, p. 7). As shown in separate samples, the moral capital scenarios produced the desired perceived empirical expectations, the results for ability showed that the respondents clearly understood the instructions, and the manipulation of goal-setting showed the expected effects on performance and cheating.

4.1.6 Sample Size Planning, Sample, and Inference

The sample size planning was based on the Test of Not-Closed Fit concerning the RMSEA (MacCallum, Browne, & Sugawara, 1996, pp. 138-139). The sample size determination was assessed with a prior power analysis associated with a statistical power of 95% and upon a preliminary path model. It resulted in 1386 participants, split up equally to the conventional and impossible order conditions (*Note:* See details for calculations of the sample size planning in Appendix G). Later, the analysis strategy was changed to use Structural Equation Modeling (SEM) to better account for measurement errors in the GMDCS, resulting in different model specifications than initially used to determine the required sample size. However, the statistical power did not shift to the disadvantage. Due to the larger number of degrees of freedom and the realized sample size, post hoc statistical power reached 100% for all SEMs in the primary analysis. In other words, given that the proposed models have acceptable model fits, it is very certain that the null hypotheses of poor model

fit (RMSEA H_0: $\varepsilon_0 \geq .10$) in favor of adequate model fit (RMSEA H_a: $\varepsilon_a = .05$) will be rejected accurately.

A sample from SoSci Panel was drawn to test the proposed hypotheses. The SoSci Panel was founded in 2009 and is a non-commercial convenience sample of participants who like to participate in scientific surveys. Submitted questionnaires have to undergo a peer-review process to ensure the quality standards of the surveys (Leiner, 2016, pp. 373–374). The eligibility criteria to participate in this investigation is to be employed, at least 18 years old, and to live in Germany. Employed individuals were chosen because of their working experience. These individuals may better put themselves into experimental scenarios. It is also assumed that those living in Germany understand sufficient German for this study. The age criterion ensures that the consent to participate is not affected by parental custody rights and supports a certain degree of experience and maturity of the respondents. Furthermore, due to technical reasons, the providers of the SoSci Panel could not give exact information about the population size in their panel having the required eligibility criteria. Nevertheless, the population can roughly be estimated. The SoSci Panel includes around 63.000 participants living in Germany. Concerning available data in the whole sample, 51% were employed, and approximately 98% were older than 20 years (SoSci Panel, 2022b). Moreover, members were selected when they had not received more than four invitations within a year (SoSci Panel, 2022a).

The providers of the SoSci Panel drew a survey population of 6997 participants who met the predefined eligibility criteria. The final survey sample includeds 1762 individuals who gave informed consent to participate in their study and use their anonymous data for scientific analysis. Exclusive to the final survey sample, nine participants disagreed with using their data after the real purpose of the study was revealed. Hence, the data of these individuals were deleted. The sample had a response rate of approximately 25%. According to the providers of the SoSci Panel, the sample exceeds the expected response rate of 20% by five percentage points. This high response rate may be due to the topic of the experiment and the fact that the survey took place during the first corona lockdown phase in Germany in March 2020. Due to missing data, the number of cases may vary in the subsequent analysis. In addition, at the end of the survey, participants rated the questionnaire over the average compared to other surveys in the SoSci Panel (*Note:* See Appendix H).

The demographic distributions revealed the following. Approximately 63% were female, 37% male and less than one percent were divers. The surplus of female participants reflects the overweight of females in the SoSci Panel of 59% (SoSci Panel, 2022b). Concerning age, irregular entries with negative ages, numbers below 18 years, and outliers (ages $>$ 1.5 x interquartile range above the third quartile, see Marmolejo-Ramos and Tian, 2010, p. 38) were removed. Participants were on average M_{age} = 42.65 years old with a median and a standard deviation of Mdn_{age} = 41 and SD_{age} = 11.82, respectively. Also, there was a low variance concerning formal education because 96.08% of the participants had very high formal education. Whereas 74.73% had a university degree, 21.35% had high school graduation. 3.92% of the participants had secondary education or less. In the SoSci Panel, 47% have a university degree, and 36% have high school graduation (SoSci Panel, 2022b). Hence, university degrees were overrepresented in the sample, whereas high school graduation and lower formal education levels were underrepresented compared to the initial distribution in the SoSci Panel.

Finally, using a convenience sample for an experiment has essential implications for statistical inferential generalizations. Using a convenience sample for experiments is unproblematic due to the random assignment to the treatment groups. Then inference statistics can inform with a specific probability that treatment and not another factor caused an effect. In addition, drawing a random sample from a predefined set of individuals and assigning them to an experiment allows deriving the existence of causal effects and its actual effect size within a population attached to a probability (Lang, 1996, pp. 424–428). Nevertheless, the statistical inference was focused on deriving conclusions concerning the experiment's causal effects. With some limitations, it is possible to infer effect sizes found in the experiment to actual effect sizes in the SoSci Panel concerning the individuals with the specified eligibility criteria. A statistical generalization of the results beyond the SoSci Panel is impossible and can rely only on logical inference.

4.1.7 Computer-Assisted Text Cleaning

Before the primary analysis in the following chapter, data preparation of ability, performance, and unethical behavior was required to transfer qualitative text data into a numeric variable to assess their relationship quantitatively. Recalling the

experimental procedure, participants had to write down and correct their uses in an open text field for the ability test, goal-setting task, and spelling correction section. Crucial, participants were told to separate the uses with a comma, allowing to automatically count the different uses with the software R. Although most participants followed the instructions, some used different or no punctions. Hence, before the automatic counting, it was essential to ensure that commas between uses were set correctly and, if necessary, to carry out an adjustment carefully without changing the participants' intention as best as possible. The adjustment criteria to check and correct the comma's place was developed in an iterative process by checking all answers. Specifically, the scheme was developed with a one-by-one inspection by stacking every use split by a comma and checking whether the use was meaningful or mistakenly separated.

Moreover, the punctuation adjustment procedure was implemented over a set of R functions. Pattern matching and replacing regular expressions and character strings were primarily used. First, linebreaks were replaced with commas, and all letters were set to lower to ease inspection and application of the text cleaning procedure. Next, removal and replacement of wrong punctations took place. For instance, hyphens, dots, and semicolons between uses were changed with a comma. Before, dots between standard abbreviations (such as "z.B.", "bspw.","etc.") and dots between numbered bullet points were deleted to not mistakenly change a dot into a comma and thereby not to inflate the number of uses artificially. Commas as the last character in the open text field were deleted. Finally, multiple whitespace characters were collapsed to single whitespace, and leading and trailing whitespace characters were removed to ease inspection. Next, commas were added to cases where participants used no separation punctuation. It was also further checked for cases where the automatic replacement of a dot with a comma was inappropriate. Also, commas were removed before or replaced with conjunctions where participants used them to specify or separate a possible usage. Cases that did not fall under any iterative developed scheme were adjusted in a miscellaneous section. Even though inter-rater reliability was not established, reproducibility could be ensured insofar that all changes in the text data were documented (*Note:* See original and adjusted data and the corresponding text cleaning R-script to reproduce these adjustment procedures in electronic-Appendix III).

4.1.8 Results

The results section depicts first the word counting of the given uses in the ability, performance, and spelling correction section. Second, it was checked how the goal-setting task in terms of the expected performance worked and to what extent participants engaged in unethical behavior, followed by evaluating the descriptive statistics and reliability of the GMDCS. Next, SEMs were examined to assess the proposed hypotheses concerning the combined effects of ability, goal difficulty, organizational moral capital, and the interaction effects of goal difficulty with the ability and moral disengagement on unethical behavior. Also, indications for the temporal reversibility assumptions and the confounding error between moral disengagement and unethical behavior were accounted for. Furthermore, due to the high imbalance of sex, possible interactions with sex were checked. Also, due to the use of multiple group comparisons, issues of measurement invariance of the GMDCS were addressed. In addition, to obtain average probability points for unethical behavior for further calibration purposes of the ABM, the AMEs for each central variable were calculated.

Word Counting

Since quantity was the main criterion for the responses, the quality of the answers was ignored (see Locke, 1982, p. 512), and all thinkable uses or words that could be set into the context of the product photos were allowed. However, only cases including obvious irrelevant answers were excluded, which applied to 21 cases (7 complete irrelevant answers, 14 irrelevant responses within uses). Although some respondents said more or less similar uses, no respondent said precisely the same uses multiple times. In order to be as least as restrictive as possible, words about uses that were not completed or even a single letter were considered in favor of having a thought about a use and, therefore, also counted as a valid response. It was only a vanishingly small percentage of responses noting down only two or fewer letters in ability (approx. 0.5%), goal-setting task (approx. 0.5%), and the spelling correction section (approx. 0.1%). In addition, if respondents started to note the last use in the performance section and completed it in the cheating section, it was considered a borderline case and not classified as unethical behavior.

Technically, the word counting procedure was that the content of each open text field was split by the commas participants put between the uses, transferred to a list, and with a lapply-function the frequencies of non-empty characters were returned. Word counting revealed that participants all together listed 8127 uses in the ability test (M = 4.61, Mdn = 4, SD = 1.99), 9916 uses in the goal-setting section (M = 5.63, Mdn = 5, SD = 1.92), and 10333 uses in the spelling correction section (M = 5.91, Mdn = 6, SD = 2.16).

Performance and Unethical Behavior

Initially, a hierarchical regression analysis was carried out to check whether the effects of goal setting and ability on performance worked as goal setting theory predicts. Table 4.3 shows in Model 1 that the moderate and difficult goal levels significantly predicted performance with an explained variance of 19%. Adding ability in Model 2 increased the explained variance substantially to 33% and showed the expected positive significant effect on performance. Model 3 includes the interaction of ability with the goal difficulty levels, which also had the expected positive significant effects on performance. It increased the explained variance to 36%. In other words, the participants' ability positively moderated the effects of the goal difficulty levels on performances. Table 4.3 demonstrates that the goal-setting procedure worked as expected. Considering the conventional order, 4.7%, 60.3%, and 97.3% did not reach their goals in the easy, moderate, and difficult goal conditions. The goal attainment in the impossible order was very similar, with 8.1%, 64.3%, and 97.3% for easy, moderate, and difficult goals. In the entire sample, 6.4%, 62.3%, and 97.3% did not reach their goals, respectively. In addition, the survey orders did not affect goal setting on performance.

The extent of unethical behavior was constructed as the difference between the frequency of uses in the spelling correction and the performance section in the goal-setting task. Figure 4.4 summarizes the results for performance and unethical behavior. The results were split into those participants that were honest and those who were not honest in the spelling correction section. Because participants acted honestly or dishonestly in a role-play of an employee, the left and the right-hand side are labeled as "honest employees" and "cheating employees", respectively. Next to the regression results in Table 4.3, the figure demonstrates that the goal assignment

Table 4.3

Hierarchical Regression of Goal Difficulty and Ability on Performance

Predictors	Model 1	Model 2	Model 3
Moderate goal (7 uses)	1.37***	1.40***	0.26
	(0.10)	(0.09)	(0.23)
Difficult goal (12 uses)	1.97***	1.95***	−0.06
	(0.10)	(0.09)	(0.22)
Ability		0.36***	0.13***
		(0.02)	(0.03)
Moderate goal x ability			0.25***
			(0.05)
Difficult goal x ability			0.43***
			(0.04)
Impossible survey order	0.02	0.03	0.06
	(0.08)	(0.08)	(0.07)
(Intercept)	4.51***	2.83***	3.88***
	(0.08)	(0.11)	(0.16)
R^2	0.19	0.33	0.36
Adjusted R^2	0.19	0.33	0.36
F-test	133.9***	213.8***	166.3***

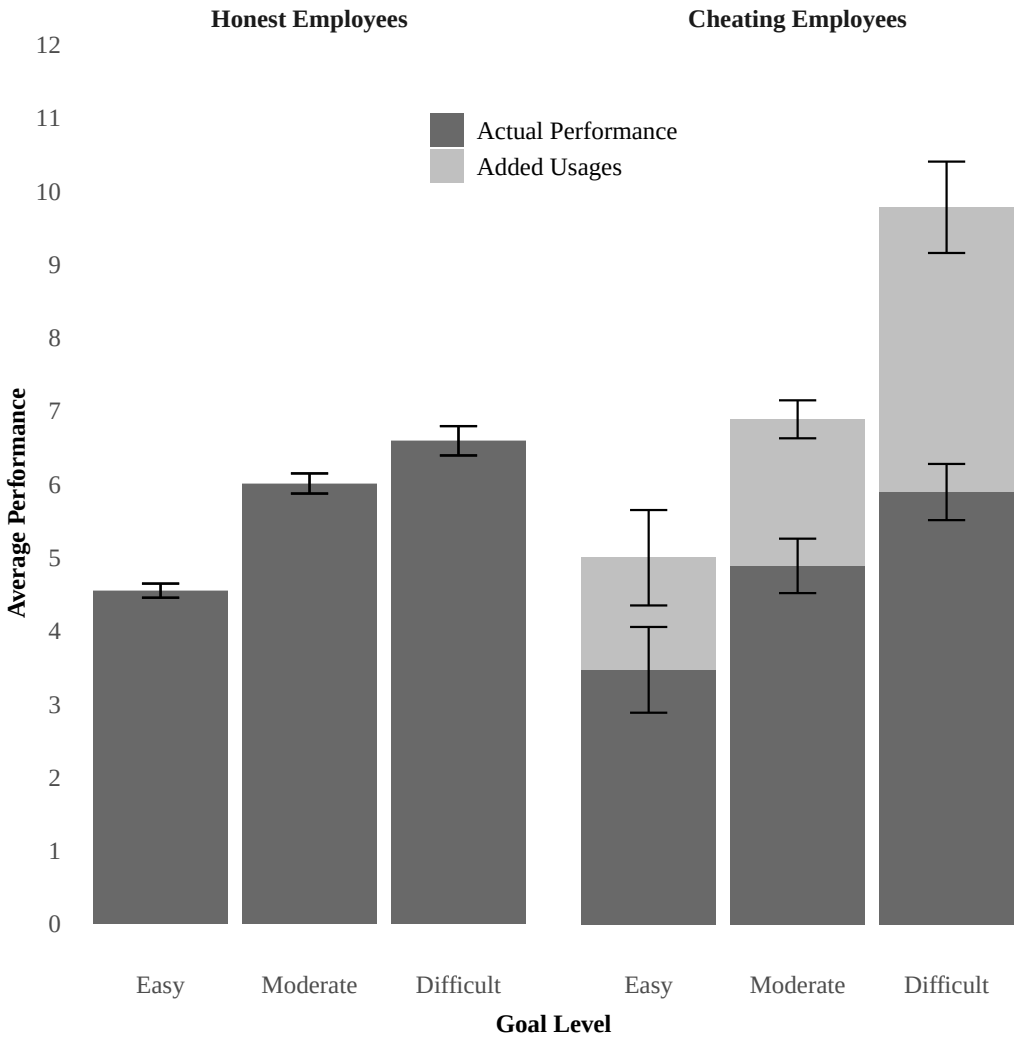
Note. †p ≤ .1. *p ≤ .05. **p ≤ .01. ***p ≤ .001. The reference category for goal difficulty is the easy goal condition with four uses. The reference category for the impossible survey order is the conventional survey order. Unstandardized regression coefficients are shown. Round brackets include standard errors. 594, 586, and 582 participants were in the easy, moderate, and difficult goal conditions, N = 1762.

unleashed the motivational effects of goal-setting and worked as expected. Honest and cheating employees performed both according to the goal level to which they were assigned. Also, the non-overlapping error bars, representing the 95% CIs, indicate significant performance differences between the goal levels. Hence, the higher the goal difficulty, the higher the performance.

By checking the actual performance in Figure 4.4, cheating employees performed lower than honest employees across all goal levels on average. Interestingly, cheating employees outperformed honest employees in all goal levels by only checking the spelling correcting section. Furthermore, inspecting the number of uses in the performance and spelling correction section, cheating employees added, on average, 1.53, 2, and 3.89 words to their actual performance in the easy, moderate, and difficult goal levels, respectively. The 95% CIs indicate that the added uses for the easy and moderate goal levels were, on average, not significantly different. In contrast,

Figure 4.4

Performance Reporting of Honest and Cheating Employees Differentiated by Goal Level



Note. Error bars show 95% CI. n honest employees (easy, moderate, difficult) = 577, 523, 495. n cheating employees (easy, moderate, difficult) = 17, 63, 87. All employees N = 1762.

the 95% CIs imply that the added uses in the difficult goal level differed significantly from those in the lower goal levels (the light gray bar must be conceptually placed on a level to compare the CIs). In addition, considering the entire sample, 2.9%, 10.8%, and 14.9% cheated within the easy, moderate, and difficult goal conditions, respectively (conventional order, 2.3%, 10.6%, and 13.1%; impossible order 3.4%, 10.9%, and 16.8%). These results support H2a: The higher the goal difficulty, the higher the extent of engaging in unethical behavior, i.e., in the number of employees engaging in unethical behavior and the number of words added.

Fifty-six participants underperformed in the spelling correction section, i.e., they provided fewer uses in the spelling correction section than in the initial goal-setting task. After inspecting these cases, most overperformers artificially restricted their output to the required number of uses in the spelling correction section or by deleting an unfinished word. Underperformers can be assumed to be overly honest in the spelling correction section. Hence, participants who restricted their output in the spelling correction section were set to the frequency of uses initially obtained in the goal-setting task, indicating neutral behavior.

In sum, 1595 participants correctly stated their performance, whereas 167 participants overclaimed their initial performance, resulting in approximately 9.5% of the participants engaging in unethical behavior. Also, the answers of those individuals who gave more uses in the spelling correction section than in the performance section were checked. By checking every single answer, it was clear that participants actively added more uses than they initially obtained in the goal-setting section, ruling out any procedural or analytical mistake.

Descriptive Statistics and Reliability of the GMDCS

The GMDCS (M = -0.13, Mdn = -0.20, SD = 1.05) shows an acceptable McDonald's ω of .73 and a mediocre Cronbach's α of .66, indicating τ-inequivalence.

Structural Equation Modeling

SEM with maximum likelihood requires multivariate normality concerning the outcome variables. It includes that all univariate distributions and any bivariate distributions of the variables in the model are normal (Kline, 2016, p. 74). Kline (2016) recommended inspecting the skewness and kurtosis of the univariate frequency distributions of all variables to obtain hints on whether the data is, in combination, severely non-normally distributed. As a rule of thumb, a skew index greater than |3| and a kurtosis index greater than |10| are considered to show severe deviations of normality (Kline, 2016, pp. 76–77). Inspecting the data revealed that all variables show acceptable values in their skew and kurtosis indices, except the skew index for the factor scores of the GMDCS with a value of 4.64, indicating to affect multivariate non-normality. Ignoring non-normality issues could lead to underestimated standard errors (Maydeu-Olivares, 2017, p. 5) and erroneous conclusions about the significance levels. Hence, in estimating the SEMs, maximum likelihood with robust

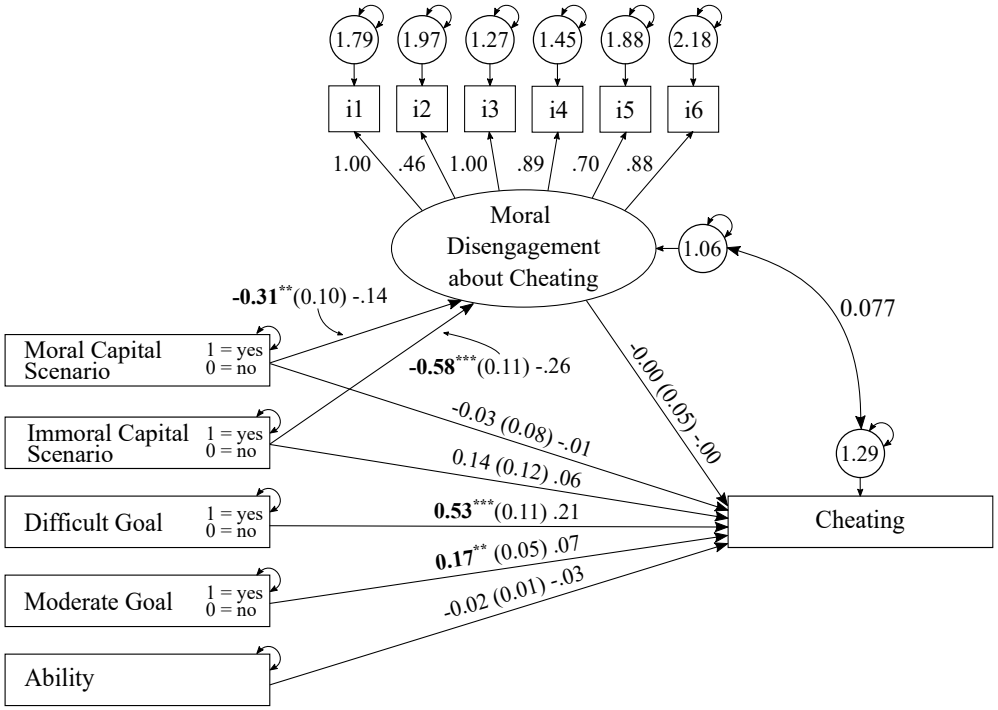
standard errors was used as a conservative method to cover indicated non-normality issues concerning the latent dimension of the GMDCS.

A test of the temporal reversibility assumption concerning the IMT was required. Temporal reversibility means that the residual correlation between the mediator and the outcome must be independent of when the outcome variable is measured. Temporal reversibility can be tested indirectly by checking whether the mediator's variance and the manipulation's effect on the mediator are the same across the conventional and impossible survey order conditions (Yeager & Krosnick, 2017, pp. 9–13). The Brown-Forsythe Test (M. B. Brown & Forsythe, 1974) was conducted to assess variance homogeneity. The test suggested that the variances of the factor scores of GMDCS across the two survey orders were equal ($F_{BF}(1,1751.80) = 0.073$, $p = 0.788$). Also, a SEM with robust standard errors was estimated for the whole data with the interaction effects of the moral capital scenarios by the survey order next to their main effects. The results show that the main effect of the survey order (B = 0.108, SE = 0.099, p = .275, $\beta = .052$) and the interactions terms of the moral capital scenario with the survey orders (B = -0.205, SE = 0.135, p = .128, $\beta = -.075$) and the immoral capital scenario with the survey orders (B = -0.060, SE = 0.138, p = .663, $\beta = -.022$) were not significant in predicting the factor scores of the GMDCS. Hence, these results indicate the presence of temporal reversibility.

SEMs 1 and 2 were estimated to assess the proposed hypotheses, and SEM 3 accounted for possible sex differences (*Note:* See all covariance-variance matrices for these models are available in Appendix I for the conventional and corresponding impossible orders). Figure 4.5 shows SEM 1 with the combined effects of moral capital, moral disengagement about cheating, goal difficulty, and ability on cheating. The organizational-individual-level hypotheses comprise H1a, H1b, and H1c. H1a states that the higher the organizational moral capital from immoral, neutral to moral, the lower the extent to engage in unethical behavior. The moral capital scenario had a negative estimate (B = -0.033, SE = 0.079, p = .671, $\beta = -.014$), and the immoral capital scenario a positive estimate on cheating (B = 0.139, SE = 0.118, p = .237, $\beta = .056$) in comparison to the control condition, where no moral capital information was shown. The directions of the estimations were as expected. However, both estimates were insignificant, indicating that the first hypothesis H1a does not hold.

Figure 4.5

SEM 1: Effects of Perceived Moral Capital, Moral Disengagement, and Goal-Setting on Cheating Behavior Corrected for Confounding Bias



Note. †p ≤ .1. *p ≤ .05. **p ≤ .01. ***p ≤ .001. The sequence of results in regression paths: unstandardized estimates, standard errors in round brackets, standardized estimates. Factor loadings are unstandardized. The reference category comprises easy goal and the control condition with no moral capital treatment. i = item of the German Moral Disengagement about Cheating scale (GMDCS). $\chi^2(42, n = 878) = 143.62$***, RMSEA (90% CI) = .053 [.044, .063], SRMR = .037, CFI = .89, robust statistics. Estimation method: maximum likelihood with robust standard errors. n conventional order = 878 (impossible order = 876).

Concerning hypothesis H1b, the immoral capital scenario should have a positive and the moral capital scenario a negative effect on moral disengagement. As expected, the moral capital scenario showed a negative effect on moral disengagement (B = -0.314, SE = 0.102, p = .002, β= -.140). Contrary to expectation, the immoral capital scenario also showed a significant negative effect on moral disengagement (B = -0.579, SE = 0.109, p = .000, β= -.257). Considering the standardized estimates, immoral capital showed a negative effect approximately twice as high as the moral capital scenario. Accordingly, hypothesis H1b did not hold by considering immoral capital on the lowest level, the neutral scenario between, and moral capital on the highest level of a moral capital continuum.

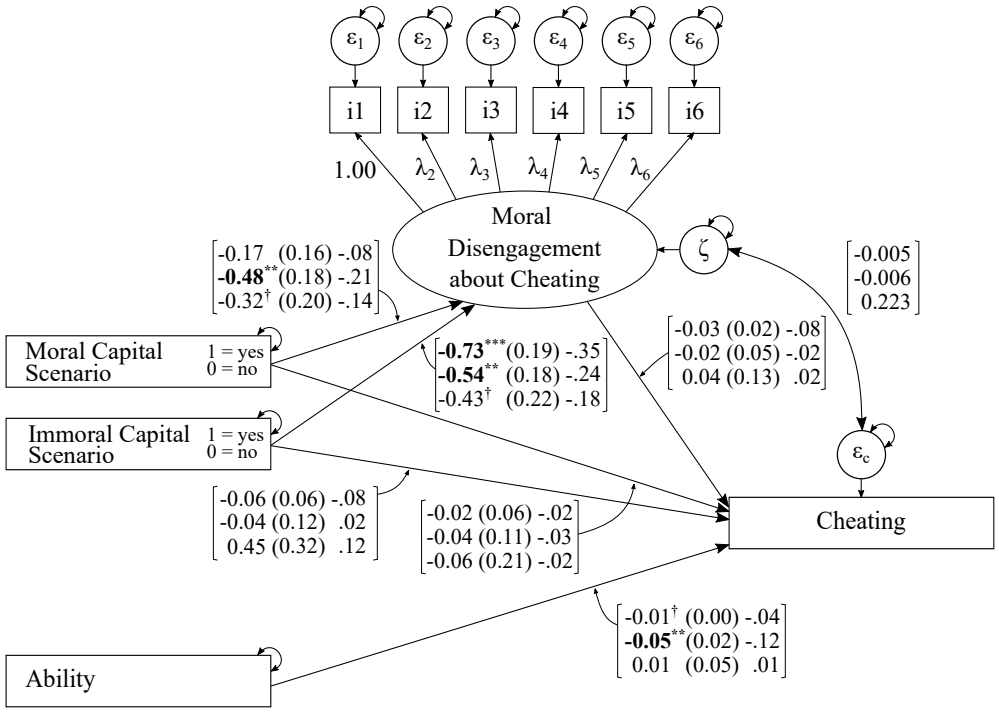
Hypothesis H1c considers the mediation between moral capital and unethical behavior through moral disengagement. Hence, the moral capital scenarios should cause changes in moral disengagement, which in turn should lead to changes in cheating behavior. As shown in Figure 4.5, the moral capital scenario caused an expected negative change and immoral capital also caused an unexpected negative change in moral disengagement. Nevertheless, no significant effect different from zero of moral disengagement on cheating behavior could be detected after correcting for possible confounding effects with the residual covariances of the impossible order condition (B = -0.004, SE = 0.052, p = .935, β= -.004). Also, without correcting the possible confounding with the residual covariance from the impossible order, the effect of moral disengagement on cheating in the conventional order was zero. Hence, hypothesis H1c concerning a mediation between moral capital on unethical behavior over moral disengagement in SEM 1 found no support.

Next, the individual-level hypothesis H2a that the higher the goal difficulty, the higher the extent of unethical behavior found support. As shown in Figure 4.5, the most difficult goal level had a significant positive effect on unethical behavior compared to the reference category (B = 0.525, SE = 0.110, p = .000, β= .213). Also, a moderate goal showed a positive effect on the degree of unethical behavior (B = 0.168, SE = 0.049, p = .001, β= .068).

Hypothesis H2b and H2c consider that the effect of goal difficulty and unethical behavior is moderated by moral disengagement and ability. Herefore SEM 2 in Figure 4.6 was estimated. Accordingly, a multigroup comparison by goal difficulty levels was conducted to assess the extent of interaction between goal level with moral disengagement and goal level with the ability on cheating. Inspecting the effects of moral disengagement and the ability to cheat across the three difficulty groups could reveal possible interaction effects. Also, confounding biases between moral disengagement and unethical behavior were corrected for each goal difficulty level with the corresponding impossible orders. Again, without correcting the possible confoundings with the residual covariances from the impossible orders, the effects of moral disengagement on cheating in the conventional order were zero for all groups. The results in SEM 2 show no interaction effect of moral disengagement with goal difficulty, indicating no support for hypothesis H2b. However, SEM 2 shows that in the moderate goal level, ability significantly negatively affected cheating (B

Figure 4.6

SEM 2: Interaction Effects of Goal-Difficulty with Moral Disengagement and Ability on Cheating Behavior Corrected for Confounding Bias



Note. †p ≤ .1. *p ≤ .05. **p ≤ .01. ***p ≤ .001. Rows in regression and covariance vectors: 1st row = easy goal, 2nd row = moderate goal, 3rd row = difficult goal. The sequence of results in regression paths: unstandardized estimates, standard errors in round brackets, standardized estimates. Factor loadings are unstandardized. The reference category comprises the control condition with no moral capital treatment. i = item of the German Moral Disengagement about Cheating scale (GMDCS). $\varepsilon_{1,2,3,4,5,6}$ (easy) = 2.19, 2.01, 1.21, 1.55, 1.86, 2.31. $\varepsilon_{1,2,3,4,5,6}$ (moderate) = 1.41, 1.89, 1.36, 1.46, 1.80, 1.94. $\varepsilon_{1,2,3,4,5,6}$ (difficult) = 1.72, 1.97, 1.22, 1.31, 1.96, 2.18. $\lambda_{2,3,4,5,6}$ (easy) = .53, 1.25, .97, .79, .92. $\lambda_{2,3,4,5,6}$ (moderate) = .52, .85, .92, .77, .87. $\lambda_{2,3,4,5,6}$ (difficult) = .34, .89, .78, .55, .86. ζ (easy, moderate, difficult) = 0.87, 1.09, 1.25. ε_c (easy, moderate, difficult) = 0.12, 0.42, 3.21. $\chi^2(90, n = 878) = 189.65$***, RMSEA (90% CI) = .062 [.050, .074], SRMR = .045, CFI = .89, robust statistics. Estimation method: maximum likelihood with robust standard errors. n easy = 299 (impossible order = 294), n moderate = 291 (impossible order = 292), n difficult = 288 (impossible order = 290).

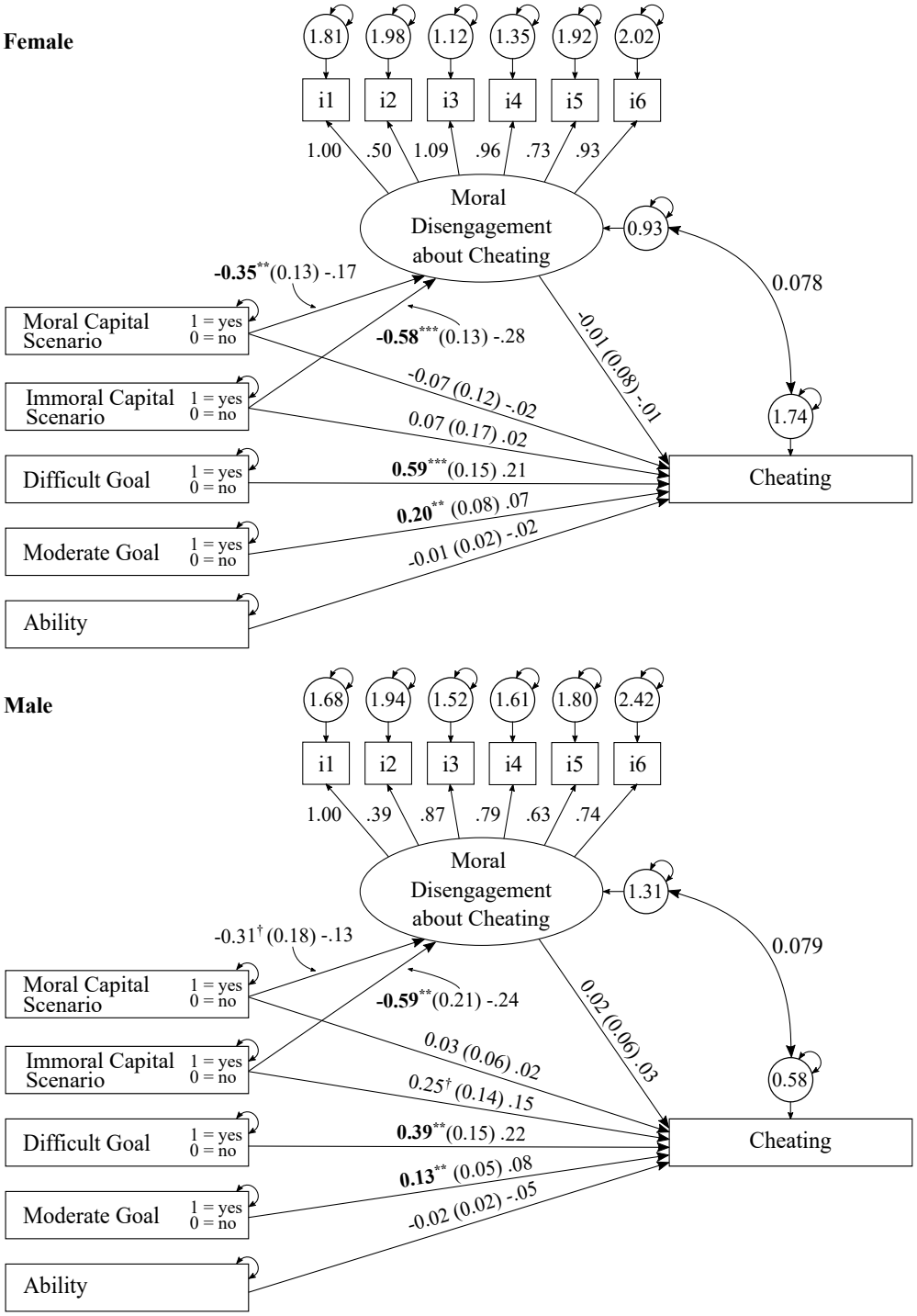
= -0.048, SE = 0.017, p = .005, β= -.124), although there is no main effect of ability in cheating in SEM 1 (B = -0.015, SE = 0.014, p = .305, β= -.026). Results indicate partial support for hypothesis H2c, i.e., in the moderate goal condition, ability reduced the positive relationship between a moderate goal and unethical behavior. However, in the difficult goal level, the ability did not affect reducing unethical behavior.

Furthermore, although the goal difficulty levels could not interact with the effects of the moral capital scenarios on moral disengagement due to the temporal sequence in the conventional order, the moral capital scenario had a significant negative effect on moral disengagement only in the moderate goal level (B = -0.475, SE = 0.180, p = .008, β= -.208). In the difficult goal level, an effect of the moral capital scenario on moral disengagement could be detected but only at a 10% significance level (B = -0.324, SE = 0.196, p = .099, β= -.135). The immoral capital scenario negatively affected moral disengagement in the easy and moderate goal difficulty levels, but only at a 10% significance level in the difficult goal level (B = -0.425, SE = 0.220, p = .053, β= -.176).

The group comparison in SEM 3 between female and male participants in Figure 4.7 indicates that male participants deviated from the main pattern of the results in SEM 1. Whereas female participants had the same pattern of effects across all variables, male participants also had a direct effect of the moral capital scenario on moral disengagement but only at a 10% significance level (B = -0.313, SE = 0.181, p = .084, β= -.126). For men, at a 5% significance level, there was only a negative effect of the immoral capital scenario on moral disengagement compared to the reference category no moral capital information (B = -0.590, SE = 0.205, p = .004, β= -.236). Crucial, there was a positive effect of the immoral capital scenario on cheating behavior for men at a 10% significance level (B = 0.252, SE = 0.142, p = .076, β= .149), although it exceeded traditional significance levels. Based on a 10% significance level, it can be said that the immoral capital scenario for male participants affected a change in cheating behavior as predicted. Nevertheless, the immoral capital effect has limited validity due to the increased error probability. However, maximum likelihood with robust standard errors was used to address non-normality issues with the GMDCS. It is a penalty for the significance. The significance of the immoral capital scenario for men would be on a 5% level if estimated without

Figure 4.7

SEM 3: Interaction Effects of Sex with Moral Capital, Moral Disengagement, and Goal-Setting on Cheating Behavior Corrected for Confounding Bias



Note. †p ≤ .1. *p ≤ .05. **p ≤ .01. ***p ≤ .001. The sequence of results in regression paths: unstandardized estimates, standard errors in round brackets, standardized estimates. Factor loadings are unstandardized. The reference category comprises easy goal and the control condition with no moral capital treatment. i = item of the German Moral Disengagement about Cheating scale (GMDCS). $\chi^2(84, n = 870) = 184.35$***, RMSEA (90% CI) = .052 [.042, .063], SRMR = .039, CFI = .90, robust statistics. Estimation method: maximum likelihood with robust standard errors. n (female) = 536 (impossible order = 561), n (male) = 334 (impossible order = 312).

robust standard errors. Like in models 1 and 2, possible confoundings were corrected with the residual covariances from the impossible orders. Nevertheless, even without the correction, the effects of moral disengagement on cheating in the conventional order were already insignificant in women and men.

A supplemental regression analysis was carried out to check whether the extent to engage in cheating behavior concerning the goal difficulty levels and sex differed significantly under the control of the survey order. The regression results showed a significant negative interaction between the difficult goal level and men, indicating that the extent of cheating behavior in difficult goals was lower in men than in women. The survey order did not show any difference in cheating behavior (*Note:* Supplemental regression results were not exhibited. Calculations can be found in the R-script in electronic-Appendix III).

Next, the gobal fit measures of the models indicate a mixed picture. Inspecting the χ^2 of the models 1, 2, and 3, all test statistics failed the exact-fit test because the corresponding p-values were smaller than the 5% significance level. In contrast, the absolute fit indices RMSEA and SRMR showed fair values. The RMSEA point estimates of .053, .062, and .052 were not ideal but reasonable because they do not exceed values of .08 (Browne & Cudeck, 1993, p. 239). Also, the point estimates of the RMSEA were within an acceptable range of the CIs. According to the upper bounds of the CIs across all models, the maximum value was .074 in SEM 2. Therefore, the poor-fit hypothesis of a RMSEA $\geq$ .10 (Kline, 2016, p. 275) could be rejected for all models. The SRMR showed acceptable values of .037, .045, and .039, all smaller than .10, indicating no badness in the model fit (Kline, 2016, p. 278). However, the incremental fit index CFI showed that the models are only 89%, 89%, and 90% better than the baseline models, missing the desired level of 95% (Hu & Bentler, 1999, p. 27).

According to Kline (2016), correlation residuals $> |.10|$ are meaningful to possibly indicate evidence for considerable model-data misfit (Kline, 2016, p. 278). Hence, a local fit inspection of correlation residuals to understand the discrepancy between the model's predicted values and the observed data correlations revealed the following (*Note:* Correlation residuals for all models are available in Appendix I): It is particularly striking that the most meaningful correlations of the residuals

across all models were between the indicator variables of the GMDCS. The number of meaningful absolute correlation residuals ranged from six to 10 across all models. Also, ability showed relatively many meaningful correlation residuals with the indicator variables of the GMDCS, ranging from one to six across all models. Specifically, whereas ability in the impossible SEM 1, impossible SEM 3 for males, and conventional SEM 3 for females had only one meaningful residual correlation with an indicator of the GMDCS, ability in the conventional and impossible SEM 2 had three to five meaningful correlation residuals with the indicator variables across the three difficulty levels. Concerning sex, men had six meaningful correlation residuals between ability and the indicators in the conventional SEM 3, whereas women had three meaningful correlation residuals with the indicators of the GMDCS in the impossible SEM 3. Next, cheating showed almost no meaningful correlations, except in the conventional SEM 2 in the moderate and difficult goal conditions, where cheating had each one meaningful correlation with one item of the GMDCS. In the impossible SEM 2 and the difficult goal condition, cheating had two meaningful correlation residuals with the indicator variables. Concerning goal-setting, only the difficult goal level for men in the impossible SEM 3 had one meaningful residual correlation with the indicator variable of the GMDCS. In sum, local fit inspection showed that SEM 2 had the highest model-data misfit which was also reflected in its global fit measures that were the worst compared to SEMs 1 and 3. Finally, the many meaningful correlation residuals between the indicator variables of the GMDCS showed the most significant source of the model-data misfit. Global fit measures of a CFA with GMDCS items supported the indication of a misfit by having doubtful fit properties ($\chi^2(9, n = 1754) = 148.49$ with $p = .000$, RMSEA (90% CI) = .099 [.086, .114], SRMR = .049, CFI = .91, robust statistics).

Measurement Invariance Testing of the GMDCS

Measurement invariance testing was necessary to complete the picture because the GMDCS was used across multiple conditions in the primary analysis. Measurement invariance refers to a scale's capability to measure the same attribute under different conditions (Horn & Mcardle, 1992, p. 117). Different conditions can refer to time points, methods of data collection, membership of a specific population (Meade & Lautenschlager, 2004, p. 361), or any procedural differences in data collection (Temme & Hildebrandt, 2009, p. 2; Kline, 2016, p. 398). Measurement non-invariance implies that a construct may have different meanings between groups or between different measurement occasions (Putnick & Bornstein, 2016, p. 1), and it may be doubtful to measure a construct unbiased across different conditions (T. A. Brown, 2015, p. 3). Also, with measurement invariance, there is an unclear basis to draw appropriate inferences from the scale (Kline, 2016, p. 396).

Results in Table 4.4 summarizes the measurement invariance testing with multiple group CFA. Measurement invariance was of interest for the conventional and impossible order, the three moral capital conditions, the three goal-setting treatments, and between female and male participants. Concerning the most basic invariance of equal configural form, the χ^2 statistics exceeded the critical threshold of a significant value, the RMSEA showed poor fit values, and the CFI was below the required level of .95 (Hu & Bentler, 1999, p. 27). Only the SRMR indicated an acceptable model fit across the different conditions. Suppose one would nevertheless assume that configural invariance was present because SRMR and CFI were not quite clear. In that case, the χ^2_{diff} test indicated strict measurement invariance across the conventional and impossible order and the easy, moderate, and difficult goal conditions because the GMDCS had equal factor loadings, indicator intercepts, and comparable indicator error variances across groups. Weak measurement invariance could not be established across the moral capital conditions and sex. However, according to most global fit measures, it was more than doubtful that the GMDCS was invariant even at an elementary level.

Table 4.4

Tests of Measurement Invariance of GMDCS in Different Conditions

Invariance model	χ^2	df	χ^2_{diff}	Δdf	RMSEA (90% CI)	SRMR	CFI
Conventional and impossible order condition							
1. Equal form	178.19	18			.100 [.086, .115]	.044	.91
2. Equal factor loadings	182.56	23	4.04	5	.088 [.076, .101]	.046	.91
3. Equal indicator intercepts	185.86	28	3.30	5	.080 [.068, .091]	.047	.91
4. Equal indicator error variances	194.10	34	6.99	6	.073 [.062, .083]	.048	.91
Moral capital, immoral capital, and control condition							
1. Equal form	184.67	27			.099 [.085, .114]	.045	.91
2. Equal factor loadings	220.87	37	33.94***	10	.091 [.079, .104]	.056	.89
Easy, moderate, and difficult goal condition							
1. Equal form	187.28	27			.100 [.086, .115]	.045	.91
2. Equal factor loadings	200.37	37	12.07	10	.086 [.074, .099]	.050	.91
3. Equal indicator intercepts	213.05	47	12.67	10	.077 [.066, .088]	.052	.91
4. Equal indicator error variances	223.77	59	8.98	12	.068 [.058, .078]	.053	.91
Female and male							
1. Equal form	168.08	18			.097 [.083, .112]	.044	.92
2. Equal factor loadings	184.07	23	14.58*	5	.089 [.077, .102]	.049	.91

Note. †p ≤ .1. *p ≤ .05. **p ≤ .01. ***p ≤ .001. χ^2_{diff} is a robust difference test based on two standard χ^2–statistics (Satorra & Bentler, 2001), fit measures are robust. Estimation method: Maximum likelihood with robust standard errors. N = 1762, listwise deletion in each invariance model.

Average Marginal Effects on Cheating Behavior

AMEs were calculated to obtain probability points for how the main variables affected cheating behavior. Table 4.5 shows that goal difficulty and sex led to significant probability differences in engaging in unethical behavior. The probability of engaging in unethical behavior with a moderate goal compared to an easy goal was, on average, 8.4 percentage points higher. On average, participants in the difficult goal level had a 10.4 percentage points higher probability of engaging in unethical behavior than participants in the easy goal condition. Next, men had a 4.8 percentage points lower probability of engaging in unethical behavior than women. Increasing ability by one unit reduced the mean probability of engaging in unethical behavior by 0.8 percentage points, though only at a 10% significance level. The moral and immoral capital scenarios and the factor scores of the GMDCS did not affect the probability of engaging in unethical behavior. However, the more conservative measure of McFaddens' and the normed measure of Nagelkeres' Pseudo-R^2 supports the evidence that the model in Table 4.5 had predictive information concerning unethical behavior. In addition, a supplemental AME model with interactions of goal difficulty with the ability and the mean values of the GMDCS did not show any significant moderating effects. Moreover, a supplemental AME model comprising all participants from the conventional and impossible order did not show significant interaction effects between the goal difficulty levels and the survey orders on cheating. Accordingly,

Table 4.5

Average Marginal Effects on Cheating Behavior in the Conventional Order

Variable	AME	SE	95% CI		p
			LL	UL	
Moral capital scenario	.016	.023	−.028	.060	.475
Immoral capital scenario	.023	.023	−.021	.068	.306
Difficult goal (12 uses)	.104***	.022	.062	.146	.000
Moderate goal (7 uses)	.084***	.020	.044	.124	.000
Ability	−.008†	.005	−.018	.001	.092
GMDCS (factor scores)	.007	.011	−.014	.028	.629
Men	−.048**	.018	−.083	−.012	.009

Note. †$p \leq .1$. *$p \leq .05$. **$p \leq .01$. ***$p \leq .001$. Reference categories of categorial dependent variables: control condition for moral capital, easy goal (4 uses) for goal difficulty, women for men. GMDCS (mean) = Mean value of German Moral Disengagement about Cheating scale. Pseudo-R^2 McFadden, and Nagelkerke (Cragg & Uhler) = .085, and .109. n = 874.

the AME of sex on cheating across the whole sample stayed the same. In contrast, the ability effect was not robust enough in the whole sample since it was no longer significant on a 10% level (*Note:* The supplemental AME models with the interaction effects were not exhibited. Supplemental calculations can be found in the R-script in electronic-Appendix III).

4.1.9 Discussion

The primary objective of the experiment was to create a basis for the empirical calibration of the ABM. To do so, an experimental study was designed that covered central issues in the research field of goal-setting and unethical behavior and embedded it in the theory of the structuration of moral capital and unethical behavior. The results of the experimental study provided no support for the direct effects of organizational moral capital on unethical behavior. Organizational immoral capital directly affected unethical behavior as predicted only for men at a 10% significance level. Also, no mediation of moral disengagement between moral capital and unethical behavior was found. However, there is empirical evidence for unethical behavior as an unintended consequence of goal-setting. In the following discussion, the most pivotal findings were examined concerning (1) moral capital effects on unethical behavior, (2) moral capital effects on moral disengagement, (3) the discussion of moral disengagement as a mediator, (4) and goal-setting related results including the moderation with moral disengagement and ability.

(1) It was hypothesized that the higher the organizational moral capital, the lower the extent to engage in unethical behavior. The moral capital scenarios were operationalized with organizational moral and immoral capital to reflect the bipolar nature of the moral foundations (Graham et al., 2018, p. 212). The aim was to prime perceived empirical expectations concerning whether moral norms according to the fairness-cheating foundation are present or absent in the given organization over a third-party observation. It should affect the forces of compliance with moral norms with the consequence of whether or not to engage in unethical behavior. Although the moral capital scenarios affected the perceived empirical expectations as expected in the pilot study, no direct effects on cheating across all participants were found in the primary experiment. These findings stay in contrast to current evidence. The moral capital scenarios were built upon the pad

expense conversation of G. E. Jones and Kavanagh (1996). Although unethical intention does not equal unethical behavior, their results indicate that peer influence can affect the intention to cheat in the pad expense reporting (G. E. Jones & Kavanagh, 1996, pp. 518–520). Also, Zhao, Zhang, and Xu (2019) found that the higher the degree of perceived empirical expectations about the existence of corruption positively affects the own corruption intentions (Zhao et al., 2019, p. 99). Bicchieri and Xiao (2009) provided evidence that perceived empirical expectations of individuals about the fairness behavior of others affected the fairness of their own decisions (Bicchieri & Xiao, 2009, pp. 200–201). Gunia et al. (2012) determined that exposing individuals to a moral conversation made ethical behavior more likely, while exposing individuals to an immoral conversation made unethical behavior more likely (Gunia et al., 2012, p. 23). Furthermore, Gerlach et al. (2019) found in their meta-analysis that making normative cues salient substantially and negatively affected cheating behavior in experiments (Gerlach et al., 2019, pp. 5–18). Also, Colquitt et al. (2013) identified in their meta-analysis negative correlations between perceived organizational justice and workplace misconduct (Colquitt et al., 2013, p. 209), whereas both concepts are not equal but show similarities with the moral capital fairness scenario and unethical behavior. Likewise, Bedi and Schat (2013) found in a meta-analysis that perceived organizational politics, conceptualized as self-interested behavior that harms others and comparable to the immoral capital scenario, positively relates to counterproductive work behavior (Bedi & Schat, 2013, p. 252). However, Ogunfowora, Nguyen, Steel, and Hwang (2022) demonstrated in their meta-analytic path model that the effect of perceived organizational justice was not significant, whereas perceived organizational politics still showed a positive effect on workplace misconduct (Ogunfowora et al., 2022, pp. 750–758). Moreover, considering moral capital as a particular property of an ethical organizational culture, Kish-Gephart et al. (2010) found in their meta-analysis that among several field studies, ethical culture negatively relates to unethical behavior (Kish-Gephart et al., 2010, p. 18).

The reasons why the moral and immoral capital scenarios in the present study failed to affect the ethicality of the behaviors as expected and the evidence suggests are unclear. A reasonable explanation could be that the priming of perceived empirical expectations was, on average, not present in the cheating section because the

goal-setting procedure between the moral capital scenarios and unethical behavior requires substantial motivational resources that may lead to tunnel vision. It could have forced out the saliency of the (un-)ethical content of the (im-)moral capital scenarios at the end of the experiment. Hence, it raises the question of whether the combined presentation of contextual information and the goal assignment did not fit well enough to identify the proposed relationship. Another reason could be that participants could act unethically with the impression of being unobserved, possibly canceling out the effects of whether the colleagues were fair or unfair. A further critical concern could have been demand effects (Lonati et al., 2018, p. 21). Perhaps, the moral capital scenarios made the ethical content so salient that it might have revealed the study's actual purpose not to all but to some participants, systematically biased their responses and thereby, on average, leveling out any contextual effects on cheating. However, comparing cheating behavior with the impossible order where no contextual information was shown before goal setting, participants did not significantly cheat differently in the extent or the probability. Although it can not be ruled out entirely, it indicates that a demand effect could not have systematically affected the participants in the conventional order. Nevertheless, the most crucial reason could be that moral capital is a complex emerging phenomenon that affects individuals over a more extended period through learning and socialization mechanisms. Accordingly, it could be difficult to manipulate such a phenomenon in a short experimental design and to infer causal effects, which is supported by the fact that Kish-Gephart et al. (2010) found their effects of ethical culture on ethical behavior from field studies only (Kish-Gephart et al., 2010, p. 18). It raises further the question of the ecological validity of the present study to draw definite conclusions. Considering current empirical evidence, it is more likely that experimental design issues may be accountable for the missing support for hypothesis H1a and not a misspecified assumed relationship.

Besides the missing support for the entire sample population, the immoral capital scenario had the expected positive effect on cheating in men. However, it existed only at a 10% significance level. Hereby, one has to bear in mind that maximum likelihood with robust standard errors was used to address non-normality issues with the GMDCS. It is a further penalty for the significance. The significance would be on a 5% level if estimated without robust standard errors. Supposing

that the effect of the immoral capital scenario is present but not for women may indicate issues with the design of the scenarios. The scenario exhibits two men discussing the pad expense report. The aim was to present two colleagues with whom one is acquainted, representing an in-group to the participants. It should increase the chance that they identify with their colleagues with the consequence that they consider their behavior as standard, which they may adopt to their unethical behavior in the spelling-correction section. The explanation refers to Gino et al. (2009), who could show in their experiment that participants observing unethical behavior in the in-group were also prone to engage in unethical behavior (Gino et al., 2009, pp. 394–397). However, because only men were involved in the pad expense conversation, women could have attributed it to a typical sex-related behavior and did not identify with their colleagues as male participants possibly did. A reason why the moral capital scenario did not work in men could be the notion of the positive-negative asymmetry of "bad is stronger than good" (Baumeister et al., 2001, p. 354) phenomenon. It may explain that the priming with the immoral capital scenario was strong enough to overcome the tunnel vision in the goal-setting task, whereas the moral capital scenario might have been too weak that the saliency of the ethical content could overcome the goal-setting procedure.

(2) It was supposed that the moral capital scenarios should affect the moral disengagement about cheating. Specifically, the organizational moral capital scenario should affect moral disengagement negatively, and the immoral organizational capital scenario should positively affect moral disengagement. Unfortunately, both moral capital scenarios affected moral disengagement negatively, with the immoral scenario stronger than the moral one. Whereas the moral capital scenario worked as hypothesized, immoral capital affected moral disengagement contrary to expectation. Hence, hypothesis H1b was partly refused. Considering prior research, the observed effects of the moral capital scenarios on moral disengagement were doubtful but not entirely unexplainable. On the one hand, similar concepts as moral capital showed the expected relationships with moral disengagement. Ogunfowora et al. (2022) could show in their meta-analysis that perceived organizational justice has a negative relationship with moral disengagement. Moreover, although both measures are not directly comparable, the estimated population correlation corrected for unreliability with $\bar{\rho}$ = -.15 (95% CI = [-.23, -0.06]) (Ogunfowora et al., 2022, p. 758) has a

similar effect size as the standardized estimate of the moral capital scenario from SEM 1 with $\beta = -.14$ (95% CI = [-.23, -0.05]). However, perceived organizational politics stays in a positive relationship with moral disengagement (Ogunfowora et al., 2022, p. 758), which is contrary to the negative effects of the immoral capital scenario on moral disengagement. It goes along with Zhao et al. (2019), who found out that the degree of perceived descriptive norms, operationalized as the perception of the frequency of corruptive behavior, positively affects moral disengagement (Zhao et al., 2019, p. 99). On the other hand, alternative explanations exist for why both moral capital scenarios negatively affected moral disengagement. It corresponds with Welsh and Ordóñez (2014a), who could show that priming ethical or unethical content led to unethical behavior in a goal-setting experiment. They explained that both contents are prone to activate moral schemas regardless of whether they are ethical or unethical (Welsh & Ordóñez, 2014a, p. 727). Also, the negative effect of the immoral capital scenario could be that making unethical behavior salient can lead individuals to pay greater attention to their moral standards (Gino et al., 2009, p. 394). Subsequently, both scenarios activated the saliency of moral standards, reducing the activation of moral disengagement. Furthermore, an explanation of why the immoral capital scenario had a stronger negative effect on moral disengagement than the moral capital scenario could be that the violation of moral norms triggers more substantial emotional reactions (Haidt, 2001, p. 817) and to the "bad is stronger than good" (Baumeister et al., 2001, p. 354) phenomenon.

Another critical concern is the storyline and the short period of the experiment. It could not have been sufficient for participants to perceive the colleagues in the pad expense report as in-group members with whom they identify well. Mainly, they encounter them for the first time in a delicate situation making the out-group members in the first place. Suppose one observes that individuals in the out-group commit unethical behavior. In that case, normative standards are more likely to become salient, and one wishes to distance oneself from the moral norm violators to maintain a positive social identity (Gino et al., 2009, p. 394). Hence, the observation of non-in-group individuals with whom one did not identify in the immoral capital scenario could have led to the activation of moral standards and not moral disengagement.

(3) It was assumed that moral disengagement positively affects cheating and mediates the relationship between organizational moral capital and unethical behavior, implying that moral capital has a negative indirect effect on cheating through moral disengagement. An IMT (Yeager & Krosnick, 2017) was conducted to prove a causal mediation. Herefore, a second experiment in another sample was carried out where the sequence of the experimental content was changed (*Note:* See sequence plan for the impossible order in Figure A.1 in Appendix A). After constraining the residual covariance between moral disengagement and unethical behavior in the conventional order with the residual covariance from the impossible order, no significant effect different from zero was found. It indicates no causal mediation effect between the moral capital scenarios and unethical behavior through moral disengagement. Thus hypothesis H1c was rejected. In the impossible order, the residual covariance between moral disengagement and unethical behavior must have captured severe confounding bias. An alternative explanation is that the missing causal mediation could be because both moral capital scenarios negatively affected moral disengagement, possibly leveling out moral disengagement's effects on unethical behavior. Another rationale for the missing mediation could also be due to demand effects (Lonati et al., 2018, p. 21). The moral capital scenarios and the wording in the GMDCS could have made it evident not for all but for some participants that cheating comprised the study's hypothesis. It could have systematically biased their cheating behavior in the conventional order so that any possible mediation effects were diminished prior to the confounding correction. It could explain why no mediation effects were found in the conventional order before correcting for confounding bias. However, because cheating was not significantly different in the impossible survey order, demand effects could not have affected all participants in the conventional order. Nonetheless, to the authors' knowledge, no study is available that could demonstrate a causal mediation between ethical, contextual factors and unethical behavior through moral disengagement with profound mediation models such as instrumental-variable estimation (Antonakis et al., 2014, pp. 107–109), parallel encouragement design (Imai et al., 2013, pp. 19–21), or the IMT (Yeager & Krosnick, 2017). Statistical but not causal evidence for the mediation of moral disengagement between contextual factors and unethical intention can be found in the study of Zhao et al. (2019). In their path analysis, perceived descriptive norms

about corruption behavior was partly mediated through moral disengagement (Zhao et al., 2019, p. 97). Comparing this with Ogunfowora et al. (2022), they found in their meta-analytic path analysis that perceived organizational politics had a positive indirect effect on workplace misconduct through moral disengagement. Although perceived organizational justice showed a negative bivariate relationship with moral disengagement, their path analysis revealed that perceived organizational justice also had a positive indirect effect on workplace misconduct through moral disengagement (Ogunfowora et al., 2022, pp. 758–760), indicating the possibility of an omitted variable bias or substantial correlations between several independent variables in their model. Thus, their path analysis findings also contrast hypothesis H1c in the present study. Since statistical associations in other studies with similar constructs indicate a mediation between moral capital and unethical behavior through moral disengagement, further research is required to shed light on this relationship.

(4) The goal-setting assignment and its predicted effects on unethical behavior was a clear case. It could be demonstrated that moderate and difficult goals significantly and positively affected cheating behavior around the performance outcome among the whole sample population. Hence, hypothesis H2a found full support. It contributes further support to current evidence that goal-setting can lead to unethical behavior (Barsky, 2011; Clor-Proell et al., 2015; Nagel et al., 2021; Niven & Healy, 2016; M. E. Schweitzer et al., 2004; Welsh et al., 2020, 2019; Welsh & Ordóñez, 2014a, 2014b). Moreover, the present study is the first which used the prominent task of listing uses for a common object from Locke (1982) and Mento et al. (1992) for detecting unethical behavior. Also, to the authors' knowledge, it is the first study that calculated averaged marginal effects of engaging in unethical behavior. Thus, if individuals are assigned difficult goals, it unleashes motivation and leads to higher performance compared to moderate or easy goals, as ample empirical evidence supports (Locke & Latham, 2013). Nevertheless, if individuals had the opportunity, it increased the mean probability and the extent that they could cheat in moderate or difficult goal levels in such experimental designs.

It was further hypothesized that considering moral disengagement as a trait positively moderates the effect of the goal difficulty levels on cheating behavior. Hypothesis H2b found no statistical support. No goal level showed any significant interaction with moral disengagement in cheating behavior. Perhaps, difficult goals

required so many attentional resources that the participants were distracted from recognizing any moral violations (Barsky, 2008, p. 69) because they focused on their positive self-appraisal claiming goal completion (M. E. Schweitzer et al., 2004, p. 423). The results stay in contrast with Niven and Healy (2016), who found the interaction that individuals with a higher propensity for moral disengagement are more prone to apply unethical behavior in goal-setting (Niven & Healy, 2016, p. 123). Furthermore, Welsh et al. (2020) found not a causal but a statistical mediation effect of moral disengagement between goal difficulty level and unethical behavior (Welsh et al., 2020, p. 7). Also, Barsky (2011) could show in his correlational study that participation in the goal assignment reduces the relationship of moral justification on unethical behavior (Barsky, 2011, p. 70). Whether it is better to conceptualize moral disengagement as a trait or a state affecting unethical behavior does not hold. First, the GMDCS is strongly related to the GPMDS (see Table 4.1), and Ogunfowora et al. (2022) could find in their meta-analysis that there were no statistical differences for trait and state moral disengagement predicting workplace misconduct (Ogunfowora et al., 2022, p. 763). Considering the present results and the mixed findings in previous research draws an unclear picture of moral disengagement in goal-setting. Thus, more research is needed to determine the role of moral disengagement in goal-setting and unethical behavior.

To the authors' knowledge, the present study is the first to include the measurement of ability as a statistical moderator in the relationship between goal-setting and unethical behavior. The primary concern for including ability should address the issue raised by Latham (2016, p. 6), who criticized M. E. Schweitzer et al. (2004) for not controlling for ability in their experiments. Latham argued that controlling for ability is mandatory when setting difficult goals in experiments. Therefore, the ability was added. The measurement of ability, the tasks, and the goal difficulty levels were based on the study of Mento et al. (1992). Controlling for ability did not change the main effect of the goal difficulty levels on unethical behavior. Hence, the critics raised by Latham (2016) found empirically no support. However, ability had no main effect on unethical behavior in the present study but a significant interaction effect with the moderate goal level. Specifically, in moderate goals, ability significantly reduced the extent of unethical behavior. Hence, hypothesis H2c found partly support that ability negatively impacts the relationship between goal-setting

and unethical behavior in the moderate difficulty range. Considering probability, the ability had no robust AME on the incidence of unethical behavior, only on a 10% significance level in the conventional order condition and no effect in the whole sample population. The degree of ability seemed not to affect the incidence of whether to engage in unethical behavior. However, it indicates that individuals with higher ability have less need to engage to a greater extent in unethical behavior at moderate goal levels because, on average, they perform better and come closer to the required performance level. In difficult goal levels, ability had no reducing effects on the extent of cheating behavior because perhaps difficult goals exceeded the ability of most of the participants, so it could not contribute to reducing the extent of cheating behavior. It is important to emphasize that the chosen goal difficulty levels, although taken from a prominent study of goal-setting research (Mento et al., 1992), could motivate but also induce cheating behavior. According to Locke and Latham (1990), an easy, moderate, and difficult goal should be set at the 10^{th}, 50^{th}, and 90^{th} percentile in experiments, which means that 90%, 50%, and only 10% of the participants could obtain the goal, respectively, to ensure enough variance (Locke & Latham, 1990, p. 349). With this, the present results in the whole sample showed that easy goals were slightly too easy, where 93.6% reached their goals. In contrast, moderate and difficult goals showed that only 37.7% and 2.7% reached their goals, indicating that the higher goals were too difficult for the present sample. Ideally, goals should be adjusted each time concerning the ability of present individuals in order to be still motivating but better achievable with the consequence of reducing the need to engage in unethical behavior.

It was remarkable that the extent to engage in unethical behavior in difficult goals in men was lower than in women. Also, the AME of engaging in unethical behavior was lower for men than women. It contrasts with Kish-Gephart et al. (2010), who found in their meta-analysis that men engage slightly to a greater degree in unethical behavior than women (Kish-Gephart et al., 2010, p. 13). Also, Gerlach et al. (2019) showed in their meta-analysis that men were somewhat more dishonest than women (Gerlach et al., 2019, p. 14). Perhaps, unknown experimental design characteristics were responsible for women showing higher effects on cheating behavior than men. Another reason could be due to the sample characteristics of the SoSci panel. Maybe the sample includes over proportionately more women being

prone to act unethically. It could be further strengthened by the fact that women outnumbered men in the sample (63% were female, 37% were male). However, considering ample evidence from previous findings, reasonable explanations for the present sex-related results are puzzling.

In summary, the present experimental study did show the expected goal-setting on unethical behavior as an unintended consequence. However, macro-micro-level effects of the moral capital scenarios on individual cheating behavior could not be found. On the one hand, the experiment's arrangement and design, including the operationalization of the moral capital scenarios in combination with the GMDCS, could not have led to the expected results. On the other hand, it could be that it might have been challenging to prime moral capital in such an experimental setting. Moral capital is an emerging phenomenon that originates over a more extended period through ongoing interactions between individuals and several socialization mechanisms. However, considering current and previous research with similar constructs raises doubts about the missing direct effectiveness of the moral capital scenarios on unethical behavior and the indirect effects of moral disengagement on unethical behavior. Thus, it seems unlikely that the current null results are due to a misconception of the theory of the structuration of moral capital and unethical behavior. What is only clear is that there was high statistical uncertainty about the effectiveness of the moral capital scenarios and moral disengagement on unethical behavior in the present experimental goal-setting context.

4.1.10 Limitations

These results must be interpreted with caution because several limitations should be considered. The first limitation refers to the moral capital scenarios and the arrangement with the GMDCS. Perhaps it was not sufficient to construct the moral capital scenarios conversation solely based on the fairness items of the MFQ. Thus, the moral capital scenarios should be designed differently in future studies, comprise more dimensions of the moral foundations, and go beyond an item-related construction concerning the MFQ. Also, measuring the GMDCS below the moral capital scenarios might have been seen as a rating of the moral capital scenarios and not a measurement of the own state or trait of moral disengagement. Perhaps, the

measurement of moral disengagement in future studies should be placed closely but not directly below the moral capital scenarios.

Although the GMDCS indicated in the pilot testing acceptable psychometrical properties, the scale could not prove itself in the main study. The GMDCS showed the most significant source of the model-data misfit by having substantial intercorrelated residuals, indicating either sampling errors or an omitted variable bias (Cortina, 2002, p. 351). Moreover, the GMDCS did not show measurement invariance, even in its configural form. It implies that the GMDCS may have different meanings for different survey conditions. Thus, instead of the same, different concepts are compared (Temme & Hildebrandt, 2009, p. 10). However, these poor psychometrical properties could have introduced an additional bias to the GMDCS and the overall results. In addition, cultural differences may also play a role in answering these items. The scale was initially developed for the United States in English. Although the scale was transferred to a German audience with the team application of TRAPD (Harkness, 2003, p. 38) and set into relation to its German nomological network may not have eliminated cultural differences in rating such scales. Hence, future studies should consider more thorough intercultural differences using moral disengagement measurements in German-speaking populations.

The convenience sample of the SoSci Panel might also include limitations. The SoSci panel consists of a higher proportion of highly educated participants (SoSci Panel, 2022b), which was also reflected in the sample. Although randomization should equal biases from individual characteristics in the experimental design, it might not have been sufficient to reduce education-related biases. Also, participants voluntarily signed up to participate regularly in scientific surveys from the SoSci Panel. People who volunteer to participate in surveys systematically differ from non-volunteers on various dimensions. For instance, they have higher education, higher social-class status, are more intelligent, and have a higher need for social approval, women are more likely to volunteer than men, and volunteers tend to be more altruistic than non-volunteers (Rosenthal & Rosnow, 2009, pp. 830–831). Hence, their education, the surplus of women, volunteering, and familiarity with participating in various scientific surveys may have introduced several systematic biases that might have affected unexpected results concerning the effects of the

moral capital scenarios and the GMDCS. Therefore, future studies should consider a more heterogeneous sample from other sources.

The following limitation refers to the experimental study as a self-administered web survey. With this, it was impossible to control the survey situation, such as the survey place and the circumstances under which participants filled out their survey (Schnell, 2019, p. 302). Also, device effects on the experimental results, such as using a smartphone or a notebook, could have introduced additional variances that were not accounted for. For instance, the length of answers with a smartphone to open-ended text questions showed shorter answers or fewer characters than answering such questions on a computer (Callegaro et al., 2015, pp. 196–199). Automatically detecting the device is technically possible. However, device information was not collected due to data protection issues concerning the GDPR. However, future studies might ask respondents on a voluntary basis what kind of device they use to answer the web survey. Another option would be to conduct the experiment in a controlled laboratory setting to ensure constant circumstances.

The final limitation comprises ecological validity. It might be questionable whether participants in the experimental study who should put themselves in an artificial role-play would also cheat in similar situations in their working place since various factors could contribute to unethical behavior. For instance, the probability of being caught, the consequences of unethical behavior to others and its awareness, the moral intensity of the unethical conduct, and the inclusion of monetary incentives could make a difference. Also, as Latham (2016) pointed out, goals set in the field may reflect the values of the supervisors and the organizational culture. Accordingly, goal-setting is a common technique to increase performance but could also be misused (Latham, 2016, p. 6). Hence, goal-setting in the field relates to various circumstances that can lead to unethical behavior. Hence, more laboratory experimental studies in combination with field studies are required to identify goal-setting-related circumstances and their effects on unethical behavior.

4.2 Agent-Based Modelling

The model description of the ABM follows the ODD (Overview, Design concepts, Details) protocol (Grimm et al., 2006, 2020). The ODD protocol gives a standardized

template to describe an ABM. It ensures comparability, comprehensibility, and reproducibility. After the model description, the conducted simulation scenarios are explained, followed by the simulation's results, discussion, and limitations.

4.2.1 Overview

Purpose and Patterns

The purpose of the ABM is to understand the proposed dynamics of moral capital and unethical behavior over time until an organization hits an ethical meltdown. Also, it should provide answers to critical thresholds for when the spreading of unethical behavior within an organization leads to an ethical meltdown. The model is a simplification of reality and does not replicate any empirical, observable system. However, its objective is to examine key structural elements and critical thresholds of parameter coefficients under which an initially ethical organization with high moral capital runs into an ethical meltdown, i.e., when an uncontrollable spreading of unethical behavior occurs until it becomes a widespread common practice in an organization. Herefore, two perspectives of social changes regarding Giddens (1979, pp. 219–220) are taken into account: 1. incremental change coming from unintended consequences of usual value-creation activities with the management method of goal-setting, 2. sudden changes coming from exogenous shocks.

For this ABM, three general patterns as the criteria for its usefulness are defined: The first refers to creating a baseline model calibrated with parameter coefficients from the previous experimental study. It should approximately reproduce the fraction of unethical behavior found in the experiment. The second pattern refers to parameter configurations in the ABM where a fraction of unethical behavior remains stable over time. The third pattern refers to parameter configurations where the fraction of unethical behavior increases over time until the organization hits an ethical meltdown.

Entities, State Variables, and Scales

The model entities entail an organizational space and employees. State variables are elementary insofar as they cannot be calculated from other state variables (Grimm et al., 2010, p. 2763). It is mentioned because the variable memory trace of perceived empirical expectations is based on various other state variables and

is of central relevance but not mentioned in this paragraph. Nevertheless, the state variables for the organizational space are two spatial coordinates that indicate the location of their center. State variables of employees comprise identification number, position in the organization, heading direction, assigned goal difficulty level, ability, moral disengagement, probability of engaging in unethical behavior, a binary state of whether to engage in unethical behavior, and a perception radius of their environment (see Table 4.6).

Table 4.6

Entities and their Characteristics in the Agent-Based Model

Entities	State variables	Range and type	Static or dynamic
Organizational space			
	y-coordinate	[-25 .. 25][a], integer	static
	x-coordinate	[-25 .. 25][a], integer	static
Employees			
	Identification number	{0, 1, 2, . . . , 876}, integer	static
	Position (x-coordinate, y-coordinate)	([-25, 25], [-25, 25])[a], float	dynamic
	Heading direction	[0°, 360°], float	dynamic
	Assigned goal difficulty level	{1, 2, 3}[b], integer	synamic[c]
	Ability for goal attaintment	{0, 1, 2, . . . , 15}, integer	static
	Moral disengagement	[0, 1], float	dynamic
	Probability of unethical behavior	[0, 1], float	dynamic
	Engagement in unethical behavior	{0, 1}[d], binary	dynamic
	Perception radius	{5, 6, 7, . . . , 10}[a], integer	static

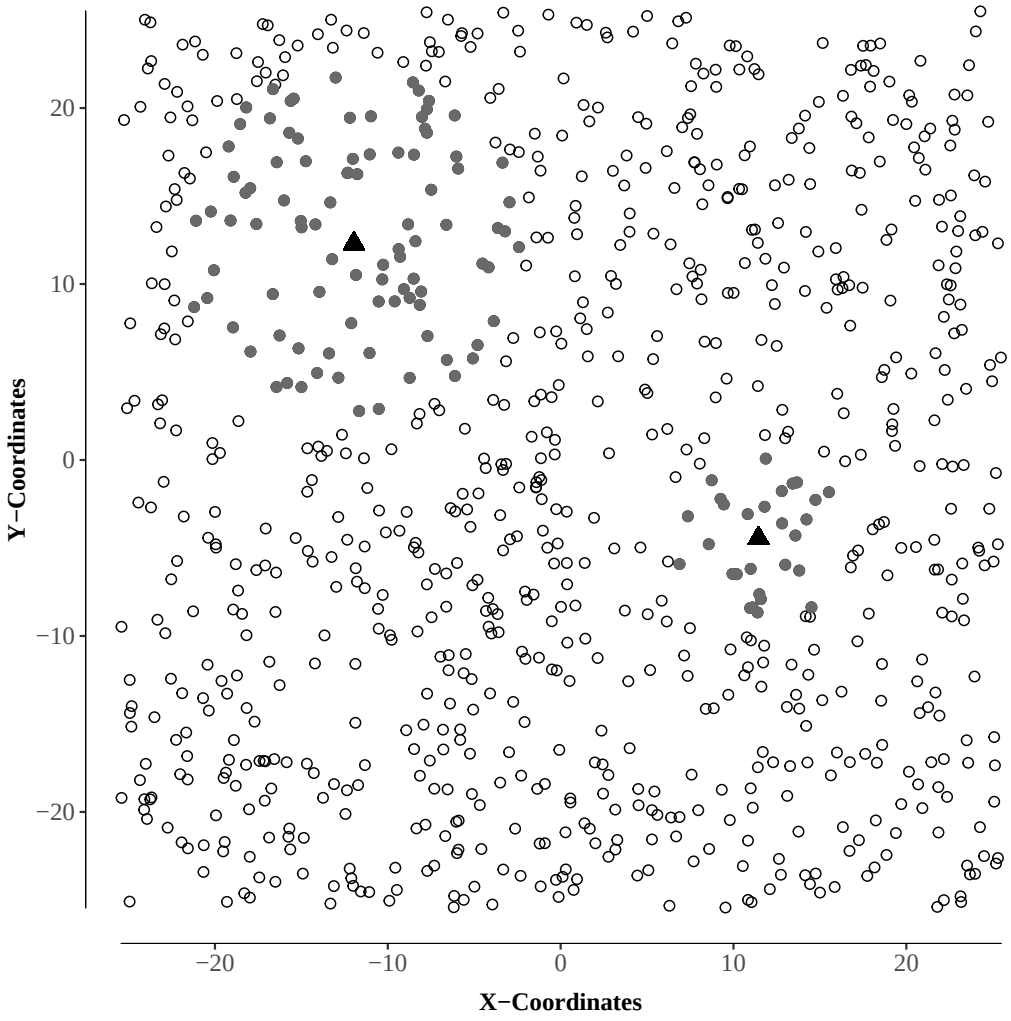
Note. a: One unit represents a social-spatial distance metric. b: 1 = easy, 2 = moderate, 3 = difficult. c: Static because difficult goal levels are assigned only from time points 50 to 150 in the exogenous goal shock scenario. Dynamic because the three-goal difficulty levels are randomly assigned at each time step in the incremental change scenario. d: 0 = no, 1 = yes.

The organizational space is a social-spatial environment comprising an intersection of a physical area and the organization (Poutanen, 2021, p. 56). Also, defining a workplace as a delineated area is problematic because workplaces and how employees interact encompass various possibilities (Dale & Burrell, 2007, p. 2). For instance, social-spatial encounters should represent any interaction in the organization, whether physical, by phone, or digital. Hence, because the simulation area comprised a social-spatial environment and not only a physical space, assigning a concrete distance metric was useless. Accordingly, the organizational space was specified as a two-dimensional rectangular, where one unit represents one social-spatial distance metric. The dimensionality of the organizational space allowed the agents to randomly and continuously move along the x- and y-axes. The borders of the organization's space were toroidal so that two opposite ends of the organization

were adjacent, creating an infinite space where the employees were randomly placed (see Figure 4.8).

Figure 4.8

Initial Employees in the Organizational Space with Varying Perception Radiuses



Note. Two exemplary employees are emphasized with a solid black triangle, respectively. Their peers in their corresponding perceptions radiuses are highlighted in grey.

Time was modeled on a discrete scale. One time step unit is an abstract placeholder since the ABM simplifies reality, not replicating any empirical, observable system. However, it is reasonable to consider the time steps in an extended temporal resolution because changes in organizational social systems evolve over a more extended period, such as organizational scandals were only the end state of a long previous development. Even though exogenous shocks entail a disruptive change, their consequences also could last over an extended time horizon. In addition, a

cultural change in an organization as a response to different environmental and competitive pressures may take several years (Cameron & Quinn, 2011, p. 68). Hence, a time step unit could mean a month, and one complete simulation run could comprise 150 months, representing 12.5 years. However, the time dimension should not be taken too literally and only serve as a plausible orientation.

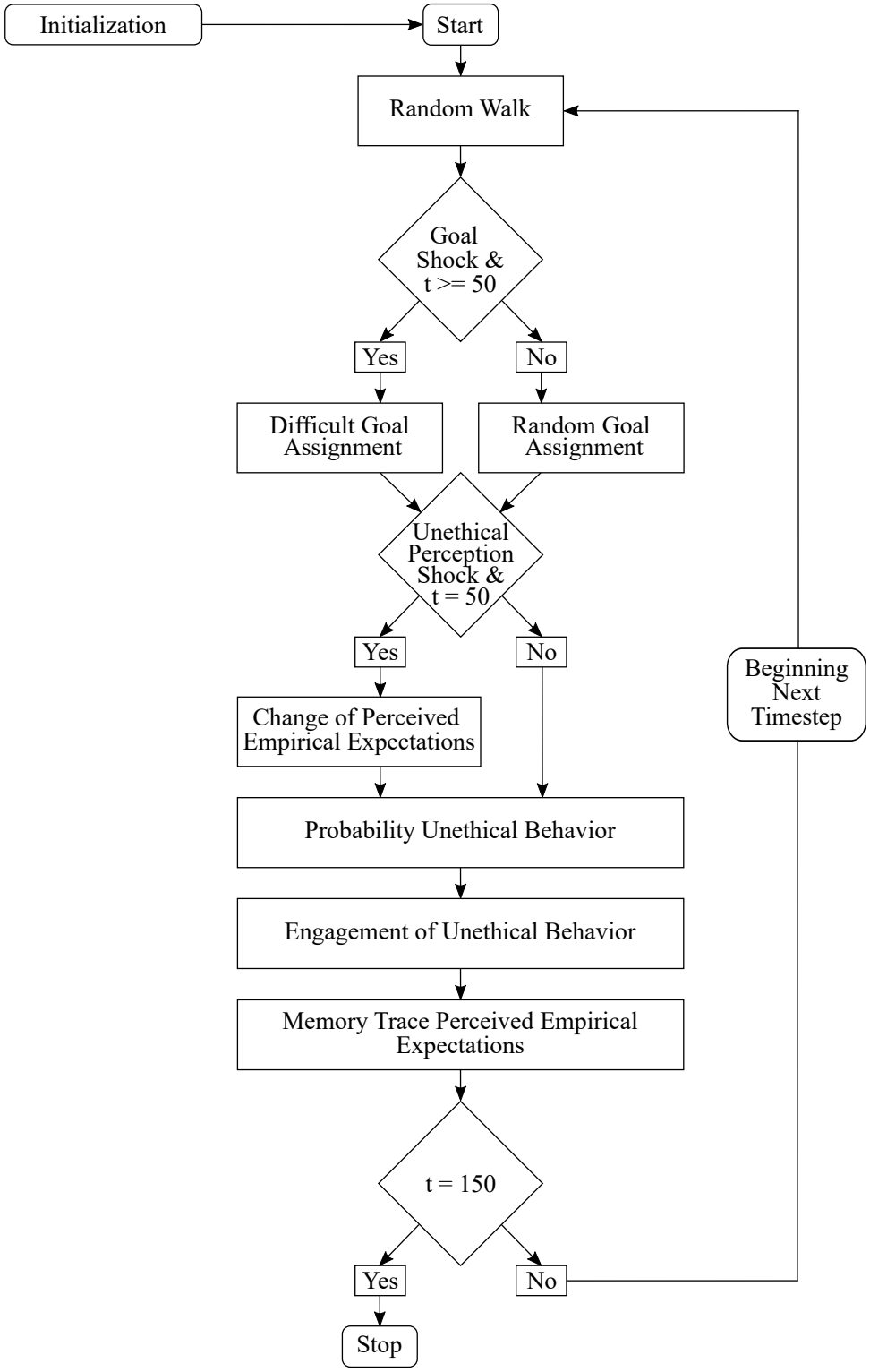
Additionally, the simulation was limited to 150-time steps for several reasons. Simulating various periods determined that 150-time steps were sufficient to achieve the desired level of accuracy and convergence in the ABM. Furthermore, a shorter time frame enhanced the clarity and understandability of the results. Also, continuing the simulation would not yield any significant new insights. The simulations reached a point where the results were adequate to address the research question at hand.

Process Overview and Scheduling

During one time step, a discrete timing clock regulated employees' actions. The general process overview and the schedule are illustrated in Figure 4.9. One ABM followed a path that refers to an incremental change scenario (1st and 2nd flow chart path decision: no, no), whereas two ABMs followed other paths that refer to two distinct exogenous shock scenarios: goal difficulty shock (1st and 2nd flow chart path decision: yes, no) and unethical perception shock (1st and 2nd flow chart path decision: no, yes) scenarios. In one time step, the following processes happened concerning the incremental change scenario: 1. Employees randomly walked in the organizational space by one social-spatial distance unit by updating their heading direction and position (see submodel *random walk* below for more details). 2. Employees were randomly assigned a goal difficulty level (see submodel *random goal assignment* below for more details). 3. Afterward, their probability of engaging in unethical behavior was updated (see submodel *probability of unethical behavior* below for more details). 4. After updating the probability of engaging in unethical behavior, the formed probability of unethical behavior affected their decision to engage or not to engage in unethical behavior (see submodel *engagement in unethical behavior* below for more details). 5. Then, employees updated their perceived empirical expectations, i.e., they stored the proportions of ethical and unethical behavior in their perception radiuses in t (see submodel *memory trace perceived empirical expectations* below for more details). 6. Finally, the values of

Figure 4.9

Flow Chart of the ABM



the dynamic state variables of the employees were stored and used in the next time step.

The two exogenous shock scenarios had the same flow as the incremental change scenario but some distinct features. Specifically, in the goal difficulty shock scenario, employees were assigned difficult goals only in t = 50 to 150. In contrast, in the unethical perception shock scenario, a perception bias as a sudden, one-time change in the perceived empirical expectations occurred among all employees. Specifically, the perceived fraction of unethical behavior among all employees increased with a constant change. In contrast, the fraction of perceived ethical behavior decreased with the corresponding change constant among all employees at t = 50. With this, the change constant affected the subsequent probabilities and the engagement in unethical behavior in the subsequent periods.

4.2.2 Design Concepts

Basic Principles

The crucial principle for designing the ABM was to map central aspects of the theory of the structuration of moral capital and unethical behavior outlined in Chapter 3. Herefore, the mechanisms of simplified aspects of Types I, II, and III, and their reiterating sequence were of central design importance. On the one hand, moral capital and unethical behavior should recursively influence each other and keep each other in check, resulting in a stable social system. On the other hand, the most relevant was the programming of the tackle between moral capital and unethical behavior until, under various conditions, an unstoppable spreading of unethical behavior could occur. Also, changes in the social system should arise incrementally from unintended consequences of actions or exogenous shocks.

Recalling the Type I mechanism, it refers to bridge assumptions about how macro-level situations affect individuals on the micro-level (Wippler & Lindenberg, 1987, p. 145). Specifically, the type I mechanism is the effect of moral capital as an element of the social structure of an organization that affects the individuals' perception in the corresponding organizational environment. According to Giddens (1984, p. 25), a social structure is a memory trace or the knowledge that gives individuals orientation on how to conduct their actions in specific situations. Its manifestation exists only as instances in social practices. Hence, ethical and unethical

behavior could become social practices and are instances of moral and immoral capital that reflect the social structure of an organizational environment. Due to reasons of simplification, the ABM incorporated memory traces of moral capital in the form of perceived empirical expectations. Observing specific common practices could inform the employees about the appropriateness of actions to coordinate activities and how to solve organizational problems. Perceived empirical expectations have an orientational character, where the individual follows predominant practices to reduce complexity in ambiguous situations. Also, observing such practices can strengthen the impression of present behavioral regularities, impacting perceived empirical expectations that conceptually could affect the normative expectations and personal normative beliefs (see Figure 2.3). Hence, the agents' perception of ethical and unethical behavior in their social-spatial proximity should represent behavioral regularities affecting their predominant social expectations.

Considering the Type II mechanism, it involves assumptions about micro-level circumstances that might prompt individuals to exhibit typical behavior (Kalter & Kroneberg, 2014, p. 99). Herefore, the typical behavior of the agents in the model was whether or not to engage in unethical behavior. Specifically, the Type II mechanism was based on the memory traces of perceived social expectations, moral disengagement, and a common value-creation activity of goal-setting mechanisms, including ability, affecting the decision to engage in unethical behavior.

Type III mechanism involves the micro-macro link and consists of transformation rules (Kalter & Kroneberg, 2014, p. 99). In the ABM, it was implemented that after the behavioral decision to engage in unethical behavior, all employees checked within their perception radiuses the behavioral regularities in applying social practices. Concretely, the individuals saved the proportions of ethical and unethical behavior in their surroundings as their memory traces for the next iteration. The fraction of ethical behavior within the overlapping perception radiuses of all employees should represent the within-group agreement concerning moral norms over the corresponding social practices in the value-creation activities. It should conceptually stay for a referent-shift consensus (Chan, 1998, pp. 238–239), i.e., a degree of within-group consensus among all employees concerning a higher level construct of moral capital.

A further design principle was to consider central relationships as depicted in the research model (see Figure 4.2) for the calibration and the designing of the ABM. Thus, central direct and indirect contextual and individual effects contributing to the probabilities of engaging in unethical behavior were considered relevant to investigating the theoretically outlined dynamics between the macro- and micro-level over time. Accordingly, it was focused on perceived empirical expectations with their direct and indirect effects through moral disengagement on unethical behavior, next to goal-setting effects on unethical behavior. To simplify the simulation, the interaction effects of moral disengagement and ability with the goal difficulty levels, as well as sex-related differences, were excluded from the ABM design. Thus, the parameter effect coefficients found in the experiment from SEM 1 (see Figure 4.5), in combination with the AMEs except for sex (see Table 4.5), were implemented in a baseline model as they were (whether or not significant) and systematically varied in the what-if experiments.

The final design principle referred to the forces of compliance and their overcoming. Overcoming the forces of compliance was conceptualized with behavioral regularities affecting the perceived empirical expectations that, in turn, affect moral disengagement. Perceived empirical expectations of ethical behavior should represent one force of compliance, and perceived empirical expectations concerning unethical behavior should represent the counterforce. The forces of compliance coming from personal normative belief were modeled only implicitly in their degree of deactivation through moral disengagement. The advantage of the final design principle is that it reduces the model's complexity and allows for focusing, amongst other factors, on the contribution of social expectations and moral disengagement to spreading unethical behavior. In addition, the initial source of unethical behavior from unintended consequences of actions was goal-setting to challenge the mechanisms of the forces of compliance. It was implemented as a use case to have a typical value-creation activity leading to unethical behavior.

Emergence

The key outcome of the model is the fraction of unethical behavior in the organizational space over time and among all employees. The outcome emerged from how employees were affected by moral capital's social structure and their value-creation

activities over time. Also, exogenous shocks impacted the critical outcome. Furthermore, the emergence of an ethical meltdown was considered when the fraction of unethical behavior reached the value of one. Values closely below could also indicate an ethical meltdown, but the extreme value was chosen to differentiate from other cases. It clearly represents an end state of an undesirable development of an organization that transformed from an ethical to an unethical organization where unethical behavior became a common social practice and hit the ethical meltdown.

Furthermore, capturing the moral capital construct in the present simulation on a higher level would be to retrieve the mutual consistency of perceived empirical expectations. It would correspond with the referent-shift consensus model (Chan, 1998, pp. 238–239), which refers to individuals believing what others in the organization perceive and if there is a within-group consensus about such beliefs. Hence, calculating the perceived empirical expectations of each individual and aggregating all individuals' perceptions with a specific algorithm would have been theoretically more accurate. However, since perceived empirical expectations are based on actual ethical or unethical behaviors, displaying the proportion of ethical and unethical actions was considered more intuitive. Also, the proportions of ethical and unethical behaviors reflect the mutual consistency of the expectations if the values are very high or low. Therefore, the proportions of ethical and unethical behavior were the key metric to assess implications concerning the emergence of the system's social structure.

Adaption

The ABM has one adaptive behavior: Employees could decide whether or not to engage in unethical behavior via indirect objective-seeking. Indirect objective-seeking means that the agents are given rules on when to show a specific behavior (Railsback & Grimm, 2019, p. 42). The module affecting engagement in unethical behavior was the probability of unethical behavior. The probability of unethical behavior is the probability of success in deciding whether to engage in unethical behavior (see submodel *engagement in unethical behavior* below for more details). The probability of unethical behavior relied on the following contextual and individual variables: their memory trace of perceived empirical expectations concerning ethical and unethical behavior (operationalized as the fraction of ethical and unethical behavior in

their perception radius in t = t - 1), the goal difficulty level, moral disengagement, and their ability (see submodel *probability of unethical behavior* below for more details).

Learning

The probability of engaging in unethical behavior depended on the employees' experiences. Specifically, employees learned from their peers through observing behavioral regularities how to successfully solve organizational problems with either ethical or unethical methods, in t = t - 1. It is a simplified implementation of social learning which can change the perceived empirical expectations concerning moral norms (Gino et al., 2009, pp. 393–394). These experiences were the memory trace in the form of the proportions of ethical and unethical behavior in their perception radiuses. It affected the formation of the probability of unethical behavior in t.

Sensing

Within their perception radiuses, each agent could sense how many of their peers committed ethical or unethical behavior and calculate the corresponding proportions of ethical and unethical behavior in the surrounding. Hence, agents had a part but not a complete overview of the organizational space. The perception radius comprised a social-spatial distance metric that varied between the employees. It reflects that employees have different thresholds concerning the specific size of organizational members to recognize that there are social expectations (Bicchieri, 2006, p. 12). In other words, employees have varying beliefs about the number of organizational members who share the same social expectations concerning specific moral norms.

In Figure 4.8, two exemplary employees with the highest perception radius of 10 spatial-distance units in the upper left area of the figure and the employee with the lowest perception radius of five spatial-distance units in the lower right area are shown. The focal agents are emphasized with a solid black triangle, and their peers in their radiuses are highlighted in grey. Both agents had a different perception range of their social-spatial environment that formed their memory trace differently.

Interaction

Indirect interaction occurred through social influence between employees. An employee gradually adapted the probability of engaging in unethical behavior according to the proportions of ethical and unethical behavior in his or her perception radius in t = t - 1.

Stochasticity

Stochasticity was used to express sources of variability in the exercise of unethical behavior that are unknown. The following aspects of the model include stochastic processes: In the initialization of the model, employees' positions in the organizational space, their heading, and their perception radiuses (see initialization below) were randomly assigned. During a simulation, the movement of the agents involved a random process in changing their heading (see submodel *random walk* below for more details). Also, the goal assignments were based on a random process (see submodel *random goal assignment* below for more details). Furthermore, the factors that affected the probability and engagement in unethical behavior included various stochasticity processes (see submodels *probability of unethical behavior* and *engagement in unethical behavior* below for more details).

Observation

To fully understand the behavior of the ABM, except the heading and its change, all static and dynamic state variables and their changes in each time step were recorded in data frames and lists. Also, the binary key metric *engagement in unethical behavior* among all employees in each time step was recorded. Crucial, the fraction of unethical behavior in the organizational space over time was calculated based on the engagement of unethical behavior.

4.2.3 Details

Initialization

The ABM was conducted in R (version 4.2.2) using RStudio Server (version 2022.12.0 +353) with the latest NetLogoR package (version 3.11). The advantage of NetLogoR is that it can spatially run ABM using only the R environment (Bauduin, McIntire, & Chubaty, 2019, p. 1841). Since the spatial simulation required a lot of computational resources, the simulation was conducted on a Linux server (Ubuntu version 18.04.6

LTS) with eight CPU cores. Also, computations were parallelized on the CPU cores to speed up the simulations (*Note:* Instructions on how to run the entire ABM, required R-scripts, and the simulation output data can be found in electronic-Appendix IV).

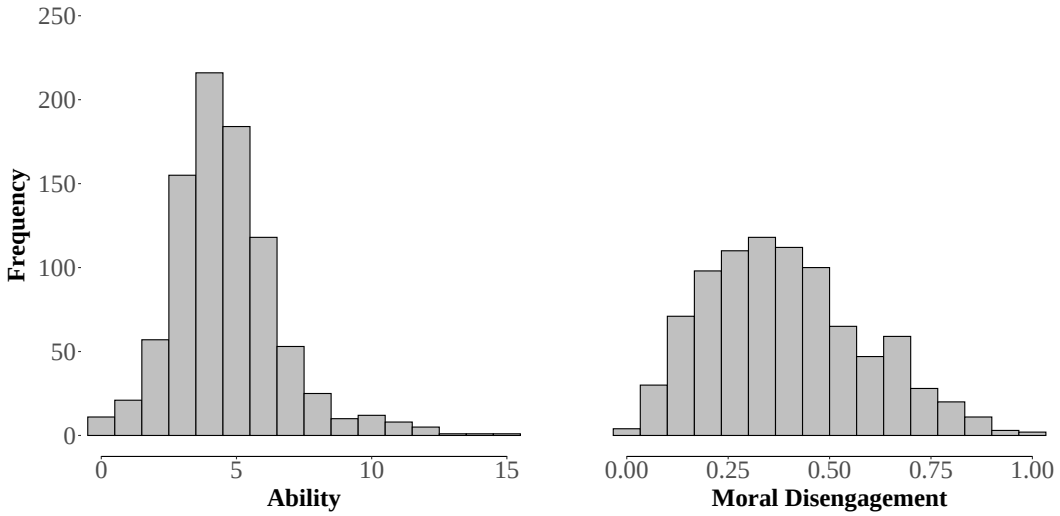
The simulation aimed to understand the effects of processes happening after the initialization. Hence, the initial setup of the ABM was the same across all scenarios. It corresponds with methodological individualism's weak assumption that certain macro-level states have to be given as a starting point to derive possible consequences for future developments (Hedström & Swedberg, 1998, p. 13). Subsequently, the initial setup of the model comprised an organization with high moral capital where no unethical behavior was present. Hence, the proportions of ethical and unethical behavior in all memory traces among all employees were set to one and zero, respectively. Next, in t = 0, 878 employees were created and randomly placed in the organizational space (see initial employees in the organizational space in Figure 4.8). The initial number of employees represents the frequency of the participants from the experimental study in the conventional order from the SEM 1 (see Figure 4.5) and the AME model (see Table 4.5) in Chapter 4.1.8. With this, a random heading direction was assigned to them. The initial position and heading of the employees were randomly assigned but conducted under a random number generation (R-function *set.seed* = 1) to ensure the reproducibility of the initial state. After, the organizational space size was chosen regarding the number of employees to produce and population density, where employees could interact with each other through regular encounters in various social-spatial settings over time, resulting in an area of 50 x 50 = 2500 social-spatial distance unit^2. The perception radiuses were randomly assigned from a uniform distribution in a range from five to 10. The random assignments of the perception radiuses also followed a random number generation (*set.seed* = 1). The chosen radius ranges are subjective, but they were reasonable since they ensured enough variability in sensing the proportions of ethical or unethical behaviors insofar that employees with a perception radius of 10 had a four times higher overview than employees with a perception radius of five. In addition, the initial goal difficulty level, probability of engaging in unethical behavior, and engagement in unethical behavior were set to zero.

Finally, individual ability and moral disengagement characteristics were retrieved from empirical distributions in the previous experiment (see Figure 4.10).

Ability was adopted as in the original data and comprises the task-performing capacity to create different usages for a wire coat hanger within one minute (see for details experiment in Chapter 4.1). Moral disengagement was conceptualized as the opposite of the proactive or inhibitive form of moral agency (Bandura, 1999, p. 194). Hence, moral disengagement should have, if not activated, no, and if activated, positive effects on the probability of unethical behavior. Accordingly, the degree of (de-)activation was contingent on previous behavioral regularities concerning ethical or unethical behavior. However, the factor scores of moral disengagement included negative values that would result in counterintuitive effects. For instance, a positive parameter effect coefficient with a negative factor score of moral disengagement would negatively impact unethical behavior. Another example is that a negative parameter effect coefficient with a negative factor score of moral disengagement would positively impact unethical behavior. Therefore, the factor scores of moral disengagement were rescaled with a min-max normalization, resulting in a value range of zero to one to model no or positive effects of moral disengagement. Also, the right-skewed distribution of the moral disengagement scale indicates that the initial employees have lower values to rationalize unethical behavior.

Figure 4.10

Frequency Distribution of Ability and Moral Disengagement for the Initialization of the Agent-Based Model



Note. Measures of central tendencies: Ability (M = 4.63, Mdn = 4, SD = 2.03). Moral disengagement values represent min-max normalized factor scores (M = 0.39, Mdn = 0.37, SD = 0.19). n = 878.

Input Data

The model did not include any external input data representing time-varying processes.

Submodel: Random Walk

In every time step, the employees changed their angles of the heading direction within a range of -50° to 50° and walked by one social-spatial distance unit. The value change ranges of the heading directions were chosen to avoid permanent pirouette rotations and ensure smooth walking directions through the organizational space.

Submodel: Random Goal Assignment

In each time step, each employee had the same probability of being assigned either an easy (1), moderate (2), or difficult (3) goal. It can be formalized as $P_i(\{1, 2, 3\}) = 1/3$. Technically, the goal assignment for all employees in each time step occurred simultaneously. A vector was generated over a simple random sampling procedure with replacement with equal probability weights for obtaining each goal difficulty level.

Submodel: Probability of Unethical Behavior

The probability of unethical behavior was the main submodel and comprised several features each employee applied during every time step. It can be summarized with the following formula, whereas i denotes an employee-specific value in time step t:

- Probability of unethical behavior$_i$ = basic probability$_i^2$ + probability from perceived empirical expectations$_i$ + probability from goal-setting$_i$ + probability from moral disengagement$_i$ + probability from ability$_i$

First, creating a basic probability of unethical behavior for each employee from the previous time step was crucial since it allowed modeling a developing character of the ABM. The basic probability was operationalized as a memory trace, precisely, as the fraction of unethical behavior in the perception radius from t = t - 1. The basic probability was squared to model that a higher fraction of unethical behavior in the memory trace had a disproportional higher effect on the probability of unethical behavior than a lower fraction.

Second, the probability from perceived empirical expectations should simulate possible direct effects of moral and immoral capital and their constant battle on affecting unethical behavior. It should reflect the assimilation of the own behavior by observing specific behavioral regularities from others. Specifically, these regularities should represent common practices about the appropriateness of actions to coordinate activities and how to solve organizational problems. Thus, the following formula applies, whereas MCUB stays for the probability effects of moral capital and ICUB stays for the probability effects of immoral capital on unethical behavior.

- Probability from perceived empirical expectations$_i$ = β_{MCUB_i} * (memory trace: fraction of *ethical* behavior in perception radius t = t - 1)$_i$ + β_{ICUB_i} * (memory trace: fraction of *unethical* behavior in perception radius t = t - 1)$_i$

Third, concerning the probability from goal-setting, each goal difficulty level had a specific contribution to the probability of unethical behavior. Conceptually, the probability of engaging in unethical behavior from the easy goal difficulty level was assigned to all employees as a baseline and is therefore not denoted with an i. In addition, if the moderate and difficult goal levels were assigned, these probabilities were added to the probability from the easy goal difficulty level. With this, EG stays for the easy goal, MG for the moderate goal, and DG for a difficult goal:

- Probability from goal setting$_i$ = β_{EG} + β_{MG_i} * MG$_i$ + β_{DG_i} * DG$_i$

Fourth, moral disengagement also contributed to the probability of engaging in unethical behavior. However, before this, perceived moral and immoral capital from the previous time step updated the value of moral disengagement before it affected the probability of engaging in unethical behavior. Perceived moral and immoral capital affecting moral disengagement refers to the memory traces concerning the perceived empirical expectations, precisely the proportions of ethical and unethical behavior within the perception radius in the previous time point. It is expressed with the following two formulas, whereas MCMD stays for moral capital on moral disengagement, ICMD for immoral capital on moral disengagement, and MDUB stays for moral disengagement on unethical behavior:

- Moral disengagement$_i$ = (moral disengagement in t = t - 1)$_i$ + β_{MCMD_i} * (memory trace: fraction of *ethical* behavior in perception radius t = t - 1)$_i$ +

β_{ICMD_i} * (memory trace: fraction of *unethical* behavior in perception radius t = t - 1)$_i$

- If the moral disengagement$_i$ value was greater than one or lower than zero, it was adjusted to be one and zero, respectively.
- Probability from moral disengagement$_i$ = β_{MDUB_i} * moral disengagement$_i$

Fifth, the ability also affected the probability of engaging in unethical behavior, where A stays for ability:

- Probability from ability$_i$ = β_{A_i} * ability$_i$

Finally, after the composition of the probability of unethical behavior, the agents checked whether the value exceeded one or fell below zero. Accordingly, the value was adjusted within the allowed range of one to zero.

Submodel: Engagement in Unethical Behavior

The engagement in unethical behavior was based on the probability of unethical behavior as the success probability in deciding whether to engage in unethical behavior. It was realized with a binomial distribution that takes the probability of unethical behavior as the success probability in one trial, in each time step, and for each individual into account. It can be formalized as follows:

- Engagement in unethical behavior$_i$ = probability of unethical behavior$_i$ $\in$ [0, 1]

Submodel: Memory Trace Perceived Empirical Expectations

The memory trace of perceived empirical expectations was constructed from the proportions of ethical and unethical behavior in the perception radius of i in t. Herefore, in the immediate surrounding of each employee, specifically within the area of (perception radius)$_i^2$ * π, employees recognized which employees engaged in unethical behavior (see two exemplary perception radiuses in the organizational space in Figure 4.8). Herefore, each employee created a one-way table at the end of the time step, calculating and storing the proportions of all employees in their perception radius engaging or not engaging in unethical behavior. It should represent the Type III mechanisms, where individuals' various behaviors and combined memories about it emerge into a macro-level phenomenon.

4.2.4 Incremental Change Scenario

The implementation of incremental social changes, because of unintended consequences of actions, is based on the goal-setting theory with its unintended consequences of unethical behavior (Nagel et al., 2021, p. 11). Herefore, parameter coefficients in a *baseline* and various parameter coefficient combinations in *what-if experiments* were implemented to investigate incremental changes' dynamics (see Table 4.7). The main idea behind what-if experiments is to investigate what would happen to the social system if the parameter effect coefficients had specific other values compared to the baseline.

Table 4.7

Parameter Effect Coefficients in the Simulation Scenarios

	Baseline		What-if	
	LL	UL	LL	UL
β_{EG}	.02	.02		
β_{MG}	.04	.12		
β_{DC}	.06	.15		
β_{MCMD}	−.23	−.05		
β_{ICMD}	−.34	−.17	.29[a]	.50[a]
β_{MDUB}	−.01	.03	.05	.149
			.15	.249
			.25	.349
			.35	.449
			.45	.549
β_{A}	−.02	.00		
β_{MCUB}	−.03	.06	−.074	−.025
			−.124	−.075
			−.174	−.125
			−.224	−.175
			−.274	−.225
β_{ICUB}	−.02	.07	.05	.149
			.15	.249
			.25	.349
			.35	.449
			.45	.549

Note. EG = Easy goal, MG = Moderate goal, DG = Difficult goal, MCMD = Moral capital on moral disengagement, ICMD = Immoral capital on moral disengagement, MDUB = Moral disengagement on unethical behavior, A = Ability, MCUB = Moral capital on unethical behavior, ICUB = Immoral capital on unethical behavior. a = Lower and upper bound of the 95% CI of the estimated population correlation corrected for unreliability $\bar{\rho}$ of perceived organizational politics on moral disengagement (Ogunfowora et al., 2022, p. 758).

The baseline model includes parameter effect coefficients found in the experiment, irrespective of their significance. Specifically, the parameter effect coefficients

refer primarily to the AME coefficients found in the AME model (see Table 4.5) and to standardized contextual effect coefficients of the moral and immoral capital scenarios on moral disengagement of the SEM 1 (see Figure 4.5). Concerning the AME model, the easy goal condition is the reference without an explicit marginal effect. Therefore and for simplification reasons, the fraction of cheating individuals within the easy goal condition in the experiment in the conventional order was used as an effect coefficient. It is crucial that except for β_{EG}, where the effect value is the same for the lower and upper levels, the effect coefficients were included not as point estimates but with their 95% CIs. Specifically, a random deviation within the CI was drawn for each employee for every effect coefficient. It was realized with the R-function *runif*.

The what-if experiments include most parameter effect coefficients as in the baseline model but deviated in four out of nine effect coefficients. Reasonable alternative effect coefficients for β_{ICMD}, β_{MCUB}, β_{ICUB}, and β_{MDUB} were implemented to overcome implausibility and insignificance issues with these parameters. The effect coefficient of ability was kept since it was at least significant on a 10% level. Considering β_{ICMD} for the what-if experiments, the immoral capital scenario did not negatively but positively affect moral disengagement in SEM 1. It was contrary to expectation and argued that the immoral capital scenario could have unintendedly activated moral schemas because of the research design (see for details discussion in Chapter 4.1.9). The unreasonable effectiveness of immoral capital on moral disengagement was replaced with a similar concept affecting moral disengagement. Specifically, the meta-analytic effect size of organizational politics on moral disengagement (Ogunfowora et al., 2022, p. 758) was considered an adequate replacement. Herefore, the lower and upper bounds of the 95% CI of the estimated population correlation $\bar{\rho}$ for perceived organizational politics on moral disengagement were used. Next, considering the insignificant AMEs of β_{MCUB}, β_{ICUB}, and β_{MDUB} in the AME model, plausible effect coefficient values were implemented since no similar empirical effect values were available. Reflecting on the "bad is stronger than good" phenomenon (Baumeister et al., 2001, p. 354), it was assumed as an approximation that the absolute value of the parameter effects of moral capital on unethical behavior (β_{MCUB}) should be in the negative value range half in size than the absolute value of the parameter effects of immoral capital on unethical

behavior (β_{ICUB}) in the positive value range. Therefore, it was decided to implement average probability effects for β_{MCUB} with values of -.05, -.1, -.15, -.2, and -.25. The random deviation for each employee ranged between the lower level of -.024 and the upper level of +.025 for each parameter effect value of β_{MCUB}. In contrast, the average probability effects of β_{ICUB} were implemented with .1, .2, .3, .4, and .5. The random deviation range for each employee for the lower level is -.05, and the upper level +.049 for each parameter effect value of β_{ICUB}. The latter effect values also applied to possible parameter effects of moral disengagement on unethical behavior (see the right-hand side of Table 4.7). Crucial, all possible effect coefficients were combinatorially varied to obtain a systematic variation. In total, the what-if experiments resulted in $5^3 = 125$ parameter effect combinations. Hence, whereas the baseline model required one simulation run with 150-time steps, the what-if experiments required 125 simulation runs, each with 150-time steps.

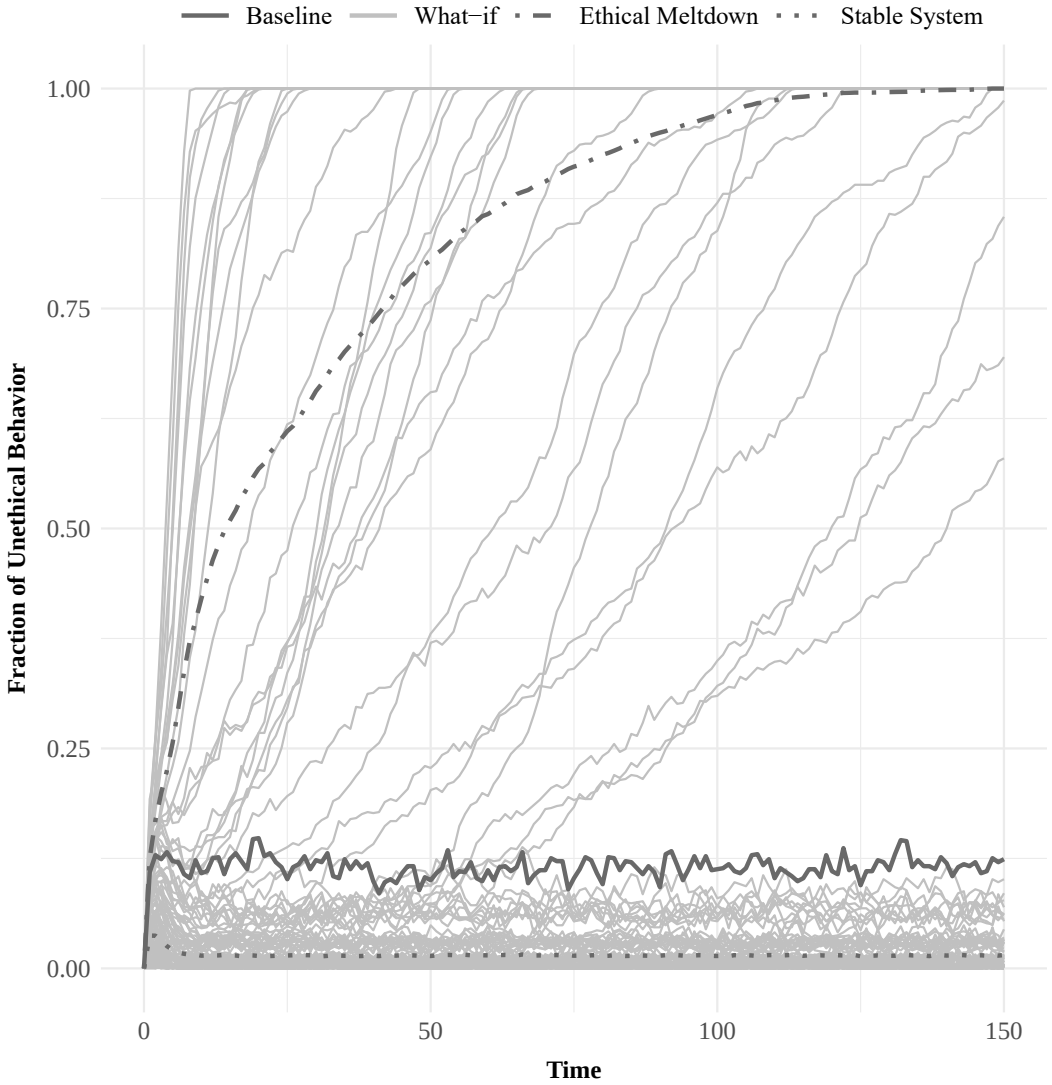
Figure 4.11 shows the simulation results for the baseline model and all 125 what-if parameter effect combinations. The figure shows on the x-axis the discrete time steps and on the y-axis the fraction of unethical behavior. Time t = 0 indicates the initial organization where all employees behave ethically. Also, their memory trace entailed in t = 0 that ethical practices are common in the organization. Hence initial contextual effects of unethical behaviors were zero. Concerning the baseline model in t = 1, the fraction of unethical behavior in the organizational space increased to 10.9% among the 878 employees in the organizational space. In the long run and within 150-time steps, the minimum and maximum fractions were .085 and .15, respectively, with $M = .12$, $Mdn = .11$, and $SD = 0.01$. In the experimental data, 8.5% of the 878 participants in the conventional order, included in Figure 4.5 and Table 4.5, cheated. Perhaps due to the design characteristics of the ABM and random processes (see stochasticity), the fraction of unethical behavior in the simulation was, on average, slightly higher but not substantially above compared to the experimental results. Hence, the model could approximately replicate the pattern of unethical behavior observed in the experiment over the entire run, indicating empirical validation of the ABM. However, it did not show an increasing dynamic toward an ethical meltdown because of the parameter effect values. Specifically, the contextual parameter effects of moral and immoral capital on moral disengagement were both in a negative value range (β_{MCMD} and β_{ICMD})

reducing moral disengagement in all regards. Also, the moral capital, immoral capital, and moral disengagement parameter effects on the probability of engaging in unethical behavior (β_{MCUB}, β_{ICUB}, and β_{MDUB}) were more or less in the same ranges, including values lower and greater than zero. Accordingly, the various effects could have kept themselves in balance resulting in a stable trend.

The light grey lines represent all 125 what-if experiments. One can imagine these what-if experiments better by thinking of 125 companies that differ in their parameter effect values. It shows that there is a wide variety of developments of

Figure 4.11

Simulation Results of the Incremental Change Scenario



Note. Dotted dashed and dotted bold lines represent averaged fractions of unethical behavior from selected what-if experiments. The ethical meltdown line includes 24, and the stable system 97 distinct parameter effect combinations.

the social system possible. Taking a closer look revealed two patterns. The first comprises 24 parameter effect combinations that led sooner or later exponentially to the hit of an ethical meltdown. Some combinations immediately increased among the 24 parameter effect combinations, whereas others increased at the beginning, leveled out in the following steps, but also increased exponentially in the long run. The dotted dashed dark grey line is the mean fraction of unethical behavior across all 24 parameter effect combinations that led to the hit of an ethical meltdown. On average, and with increasing time, the slope decreases for hitting the meltdown. In addition, four other parameter effect combinations also increased exponentially but did not hit the meltdown before the end of the simulation run. The second pattern comprises stable social systems. Parameter effect combinations were considered stable if they were equal to or lower in the fraction of unethical behavior than the baseline model in t = 150. The dotted dark grey line is the mean fraction of 97 parameter effect combinations that led to a stable social system. In the stable system, an initial increase in unethical behavior occurred after goal-setting was introduced. However, after approximately six-time steps, the social system was, on average, leveling out unethical behavior and holding it in check, whereas some stable systems were on a higher and some on a lower level. In sum, most parameter effect combinations created a stable social system, whereas comparably, only a few combinations were fragile enough to lead to an ethical meltdown.

4.2.5 Exogenous Shock Scenarios

The changes in the social system caused by exogenous shocks included two scenarios that could provide further insights concerning the dynamics in the spreading of unethical behavior. Various concrete examples of exogenous shocks are conceivable that can directly challenge taken-for-granted routines for value-creation activities. One exemplary shock scenario should represent the degree of difficulty of goals (goal shock). The other exemplary shock scenario should represent a technological discontinuity in the competitive environment that immediately leads to a biased perception of unethical behavior (unethical perception shock). In addition, both exogenous shock scenarios were applied to the baseline model and the what-if experiments.

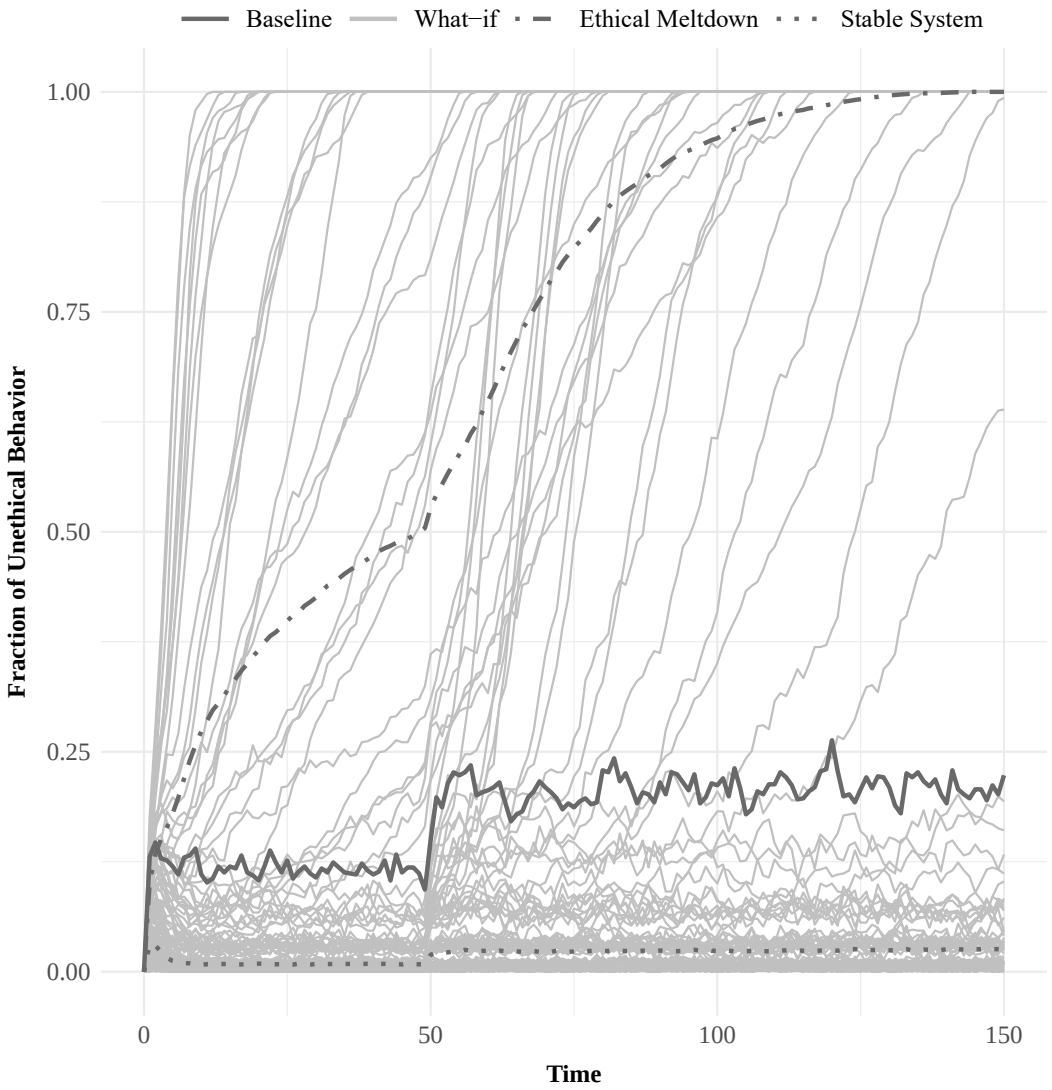
The goal shock scenario could express a new dependence relationship that may induce an exogenous shock. Specifically, a new CEO may enter the organization and changes the existing distribution of allocative and authoritative resources among the workforce with the demand to maximize profits at all costs. Herefore, all employees were suddenly assigned difficult goals only at t = 50 until the end of the time step at t = 150.

The unethical perception shock scenario could be inflicted by sudden environmental change, such as a technological discontinuity (Anderson & Tushman, 1990) that may threaten the organization's survival. The competitive environment could pressure the employees to outperform their rivals, thereby focusing on achieving results at any cost, which could lead to deprioritizing ethical behavior. As an immediate effect, employees could be subject to a perception bias insofar as they suddenly perceive, to a greater extent, unethical behavior, among others, as a means to overcome technological discontinuity in the competitive environment. Based on this assumption, it was implemented that their perception of the fraction of unethical behavior among all employees received a constant one-time increase of .50, in addition to the actual fraction of unethical behavior stored in their memory trace. The additional increase was included in t = 50 before the flow through the submodule *probability of unethical behavior* and *engagement in unethical behavior* to impact them directly.

Figure 4.12 shows the simulation results of the goal shock scenario. Concerning the baseline model, after assigning difficult goals only, the fraction of unethical behavior increased immediately from t = 49 to t = 50 from .09 to .15 and gained momentum until t = 53, reaching a fraction of .21. Afterward, the baseline model stayed with random fluctuations on a similar level for the rest of the time until t = 150. Concerning the what-if experiments, 40 parameter effect combinations led to the hit of an ethical meltdown, whereas 83 parameter effect combinations produced a stable social system. As in the incremental scenario, parameter effect combinations were defined to be stable if they were equal to or lower in the fraction of unethical behavior than the baseline model in t = 150. Two parameter effect combinations had an increasing trend, whereas one almost and the other did not hit the meltdown at the end. Considering the goal shock, more parameter effect combinations led to an ethical meltdown than the incremental change scenario, indicating an increased

Figure 4.12

Simulation Results of the Goal Shock Scenario

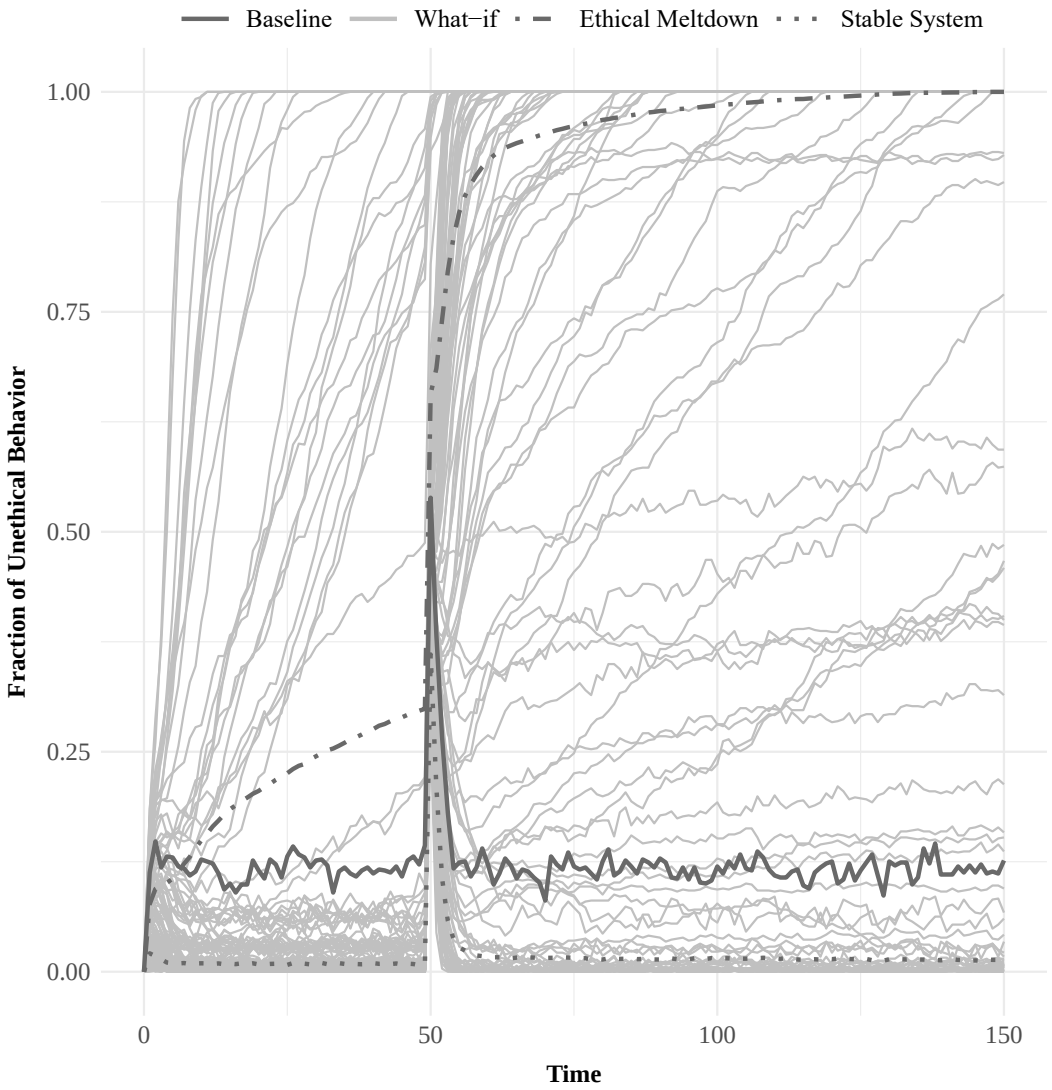


Note. Dotted dashed and dotted bold lines represent averaged fractions of unethical behavior from selected what-if experiments. The ethical meltdown line includes 40, and the stable system 83 distinct parameter effect combinations.

fragility. On average, the ethical meltdown line has a lower level up to t = 50 than in the incremental change scenario because it includes more parameter effect combinations that would not hit an ethical meltdown under a no-shock situation. However, after t = 50, the ethical meltdown line has a greater slope than the ethical meltdown line in the incremental scenario because more social systems tilt to the ceiling under the goal shock. In addition, after the goal shock, the stable social systems, on average, increased their unethical behavior level slightly but stayed stable until the end of the simulation run.

Figure 4.13

Simulation Results of the Unethical Perception Shock Scenario



Note. Dotted dashed and dotted bold lines represent averaged fractions of unethical behavior from selected what-if experiments. The ethical meltdown line includes 73, and the stable system 35 distinct parameter effect combinations.

Next, Figure 4.13 shows the simulation results of the unethical perception shock scenario. Considering the baseline model, the immediate increase in the perception of the fraction of unethical behavior instantly resulted in an increased fraction of actual unethical behavior. Specifically, the fraction of unethical behavior increased from .14 in t = 49 to .54 in t = 50. However, due to the parameter effect characteristics in the baseline model, the increased fraction of unethical behavior was leveled out quickly and reached the same level before the shock at t = 54 and stayed with random fluctuations on a similar level for the rest of the time until t =

150. Concerning the what-if experiments, parameter effect combinations hitting a meltdown outnumbered the parameter effect combinations that led to stable social systems. Seventy-three parameter effect combinations led to the ethical meltdown, whereas 35 distinct parameter effect combinations led to a stable system. Also, a social system was regarded as stable if it was equal to or lower in the fraction of unethical behavior than the baseline model in t = 150. Seventeen parameter effect combinations had an increasing trend or stayed over the baseline model and did not hit the meltdown within the simulation period. Considering the unethical perception shock scenario, more parameter effect combinations led to an ethical meltdown than the incremental and goal shock change scenario, indicating a further increased fragility. Until t = 50, the ethical meltdown line is lower than the meltdown line in the incremental change (see Figure 4.11) and goal shock scenario (see Figure 4.12) because it includes even more what-if parameter effect combinations that would not hit an ethical meltdown under the incremental and goal-shock situation, respectively. The ethical meltdown line in Figure 4.13 shot more directly to the ceiling from t = 50 compared to the other scenarios. In addition, after the unethical perception shock, the stable social systems, on average, increased to .36 in t = 50 but recovered quickly. However, on average, the stable systems stayed slightly on a higher level than they stayed before the shock.

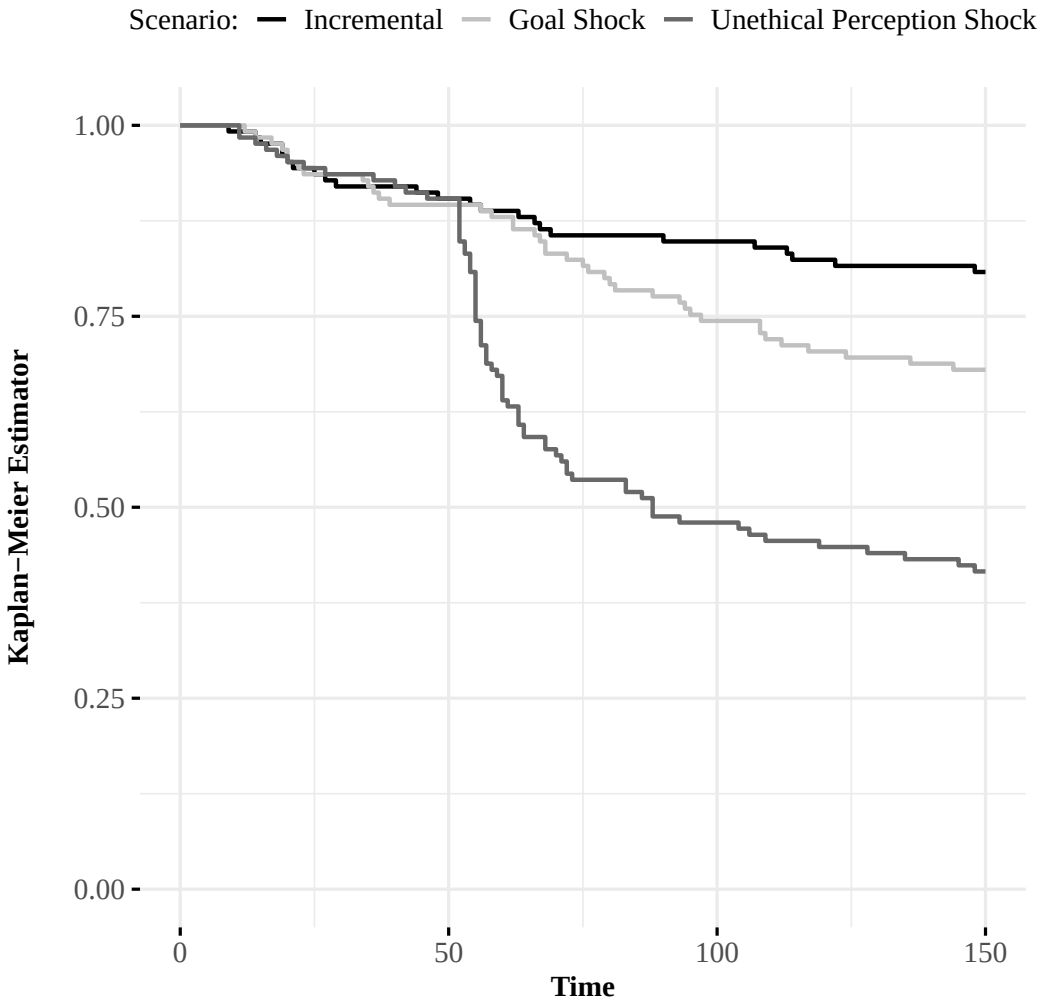
4.2.6 Critical Thresholds for the Ethical Meltdown

To get an overview concerning the critical thresholds, Kaplan-Meier Estimators were calculated to compare the rates of parameter effect combinations that led to an ethical meltdown among the three scenarios. A sensitivity analysis follows it, identifying, contingent on predicted probabilities, the critical thresholds for the parameter effect coefficients resulting in an ethical meltdown. The Kaplan-Meier Estimator is a non-parametric event-history procedure. It calculates at each point the fraction of remaining objects that have not experienced an event concerning all cases at the beginning. The remaining cases are subject to the event in further time points. Hence the Kaplan-Meier Estimator shows the remaining risk set at each point in time (Jäckle, 2018, pp. 13–14). Transferred to the simulation data, the Kaplan-Meier Estimator yielded the fraction of parameter effect combinations that

did not hit and survived an ethical meltdown but were still subject to it for each time point.

Figure 4.14

Kaplan-Meier Estimator for the Survival Rates of the Parameter Effect Combinations of the What-if Experiments under the Simulation Scenarios



Note. Each scenario includes 125 parameter effect combinations of the what-if experiments. The cases are artificially right-censored at $t > 150$.

Figure 4.14 shows the Kaplan-Meier estimators for each scenario. Each scenario comprises the what-if-experiments (the baseline model is not displayed here because it includes only one parameter effect combination that did not show any ethical meltdown trend). Specifically, the what-if experiments include 125 systematic parameter value effect combinations of moral disengagement on unethical behavior (β_{MDUB}), moral capital on unethical behavior (β_{MCUB}), and immoral capital on unethical behavior (β_{ICUB}) from Table 4.7. The figure demonstrates that up to

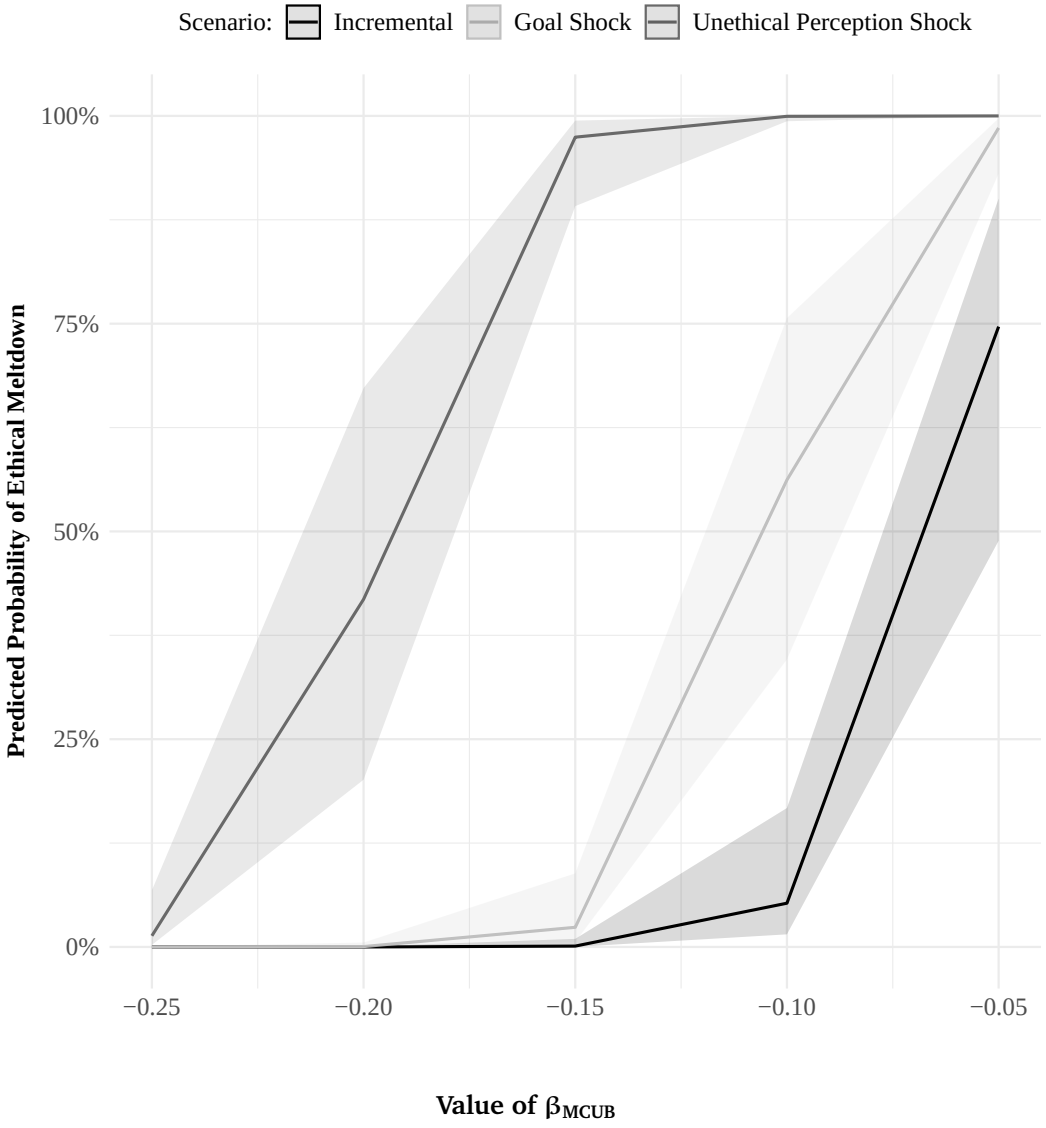
t = 50, no difference could be detected in survival rates of the parameter effect combinations. However, from t greater than 50, the survival rates of the parameter effect combinations in the goal shock scenario were lower than in the incremental change scenario. Furthermore, the survival rates of the parameter effect combinations in the unethical perception shock scenario had, in comparison to the other scenarios, a steep decline after t = 50 before the descent stabilized. At the end of the simulation runs, approximately 81%, 68%, and 42% of the parameter effect combinations "survived" or did not hit the ethical meltdown in the incremental, goal shock, and unethical perception shock scenarios, respectively. Also, the log-rank test indicates statistically significant differences in survival rates between these three scenarios ($\chi^2 = 45.7$, df = 2, $p < .001$). It implies that the fragility of parameter effect combinations increases depending on whether changes come from unintended consequences or exogenous shocks.

A sensitivity analysis examined the robustness of the ABM (Borgonovo, Pangallo, Rivkin, Rizzo, & Siggelkow, 2022, pp. 55–56) under various parameter effect combinations. The sensitivity analysis revealed critical thresholds of the parameter effect values leading to an uncontrollable spreading of unethical behavior. With this, predicted probabilities of all effect value ranges were estimated to identify critical thresholds for when the organization hit an ethical meltdown. Thus, logistic regression was estimated and transformed to predicted probabilities. The dependent binary variable is whether a parameter combination led to an ethical meltdown of the organization (yes = 1, no = 0). The independent variables comprise the three β-effects (MCUB = Moral capital on unethical behavior, ICUB = Immoral capital on unethical behavior, MDUB = Moral disengagement on unethical behavior) with their corresponding effect coefficients and a variable indicating the three scenarios (incremental, goal shock, unethical perception shock). Furthermore, only parameter effect combinations were included in the calculations that either hit the ethical meltdown or stayed as a stable system. In total, the logistic regression comprised 352 parameter effect combinations (initially, they were 125 parameter effect combinations x 3 scenarios = 375 parameter effect combinations). In addition, the middle values of the parameter effect coefficients in Table 4.7 were used to ease the interpretation.

Figure 4.15 shows the predicted probabilities of an ethical meltdown for all values of β_{MCUB}, i.e., the probabilities of a specific moral capital effect value for hitting an ethical meltdown while holding all other variables constant. As the

Figure 4.15

Values of Moral Capital Effects and Their Predicted Probabilities on Ethical Meltdown



Note. MCUB = Moral capital on unethical behavior. Shaded areas represent 95% CI.

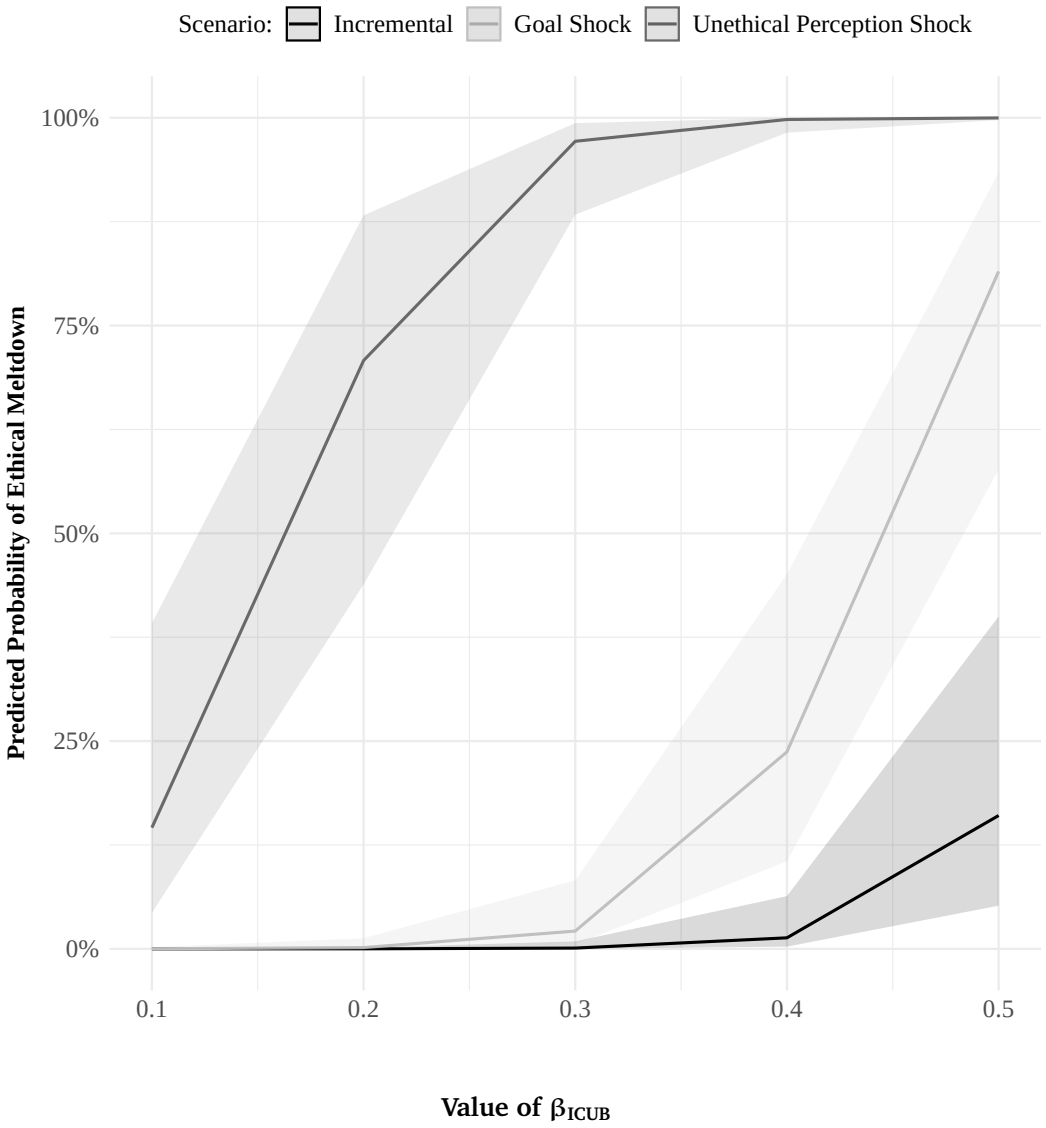
figure shows, up to a β_{MCUB} value of -.15, moral capital did not contribute to the hit of the ethical meltdown in the incremental change scenario. The same applies to the goal shock scenario, as indicated by the overlap of the 95% CIs. However, β_{MCUB} values of -.10 led to a predicted probability for an ethical meltdown of 5% and dramatically increased to 75% when β_{MCUB} had the value of -.05. In the goal shock

scenario, a change of β_{MCUB} from .-15 to -.10 and -.05 increased the probability from two to 56% and 99%, respectively. Considering the unethical perception shock scenario, the predicted probabilities were much higher. At β_{MCUB} = -.20, the probability was already 42%, and at -.15, it is 97%, and in the later values, the organization inevitably hit an ethical meltdown. In sum, when the following critical thresholds of the β_{MCUB} effect values were exceeded, the probabilities for an ethical meltdown increased tremendously: in the incremental change scenario at -.10, in the goal shock earlier at -.15, and in the unethical perception shock scenario already at the lowest value of -.25.

Figure 4.16 shows the predicted probabilities of an ethical meltdown for all values of β_{ICUB}, i.e., the probabilities of a specific immoral capital effect value for hitting an ethical meltdown by holding all other variables constant. For the incremental scenario, the figure shows, that the predicted probabilities until a β_{ICUB} of .30 were zero. The probabilities only increased from one to 16% for β_{ICUB} values of .40 to .50. The results look different for the goal shock scenario. Up to a threshold of .30, the predicted probability of β_{ICUB} to an ethical meltdown was almost zero. However, from β_{ICUB} .30 to .40, the probabilities increased from two to 24%. An enormous leap occurred from β_{ICUB} values greater than .40 to .50. The predicted probability for the hitting of an ethical meltdown increased from 24% to 82%. Next, the unethical perception shock scenario results revealed a completely different picture. Already from a β_{ICUB} = .10, the predicted probability was 15% and reached 71% and 97% in the effect values of .20 and .30, respectively. The hit for an ethical meltdown was sure from β_{ICUB} of .40. In essence, when the following critical thresholds of the β_{ICUB} effect values were exceeded, the probabilities for an ethical meltdown increased immensely: in the incremental change scenario at .40, in the goal shock earlier at .30, and in the unethical perception shock scenario already at the lowest value of .10.

Figure 4.17 shows the predicted probabilities of an ethical meltdown for all values of β_{MDUB}, i.e., the probabilities of a specific moral disengagement effect value for hitting an ethical meltdown while holding all other variables constant. The predicted probabilities of β_{MDUB} have a similar pattern as β_{ICUB}. The figure shows, for the incremental scenario, that the predicted probabilities until a β_{MDUB} of .30 were zero. The probabilities only increased from one to 10% for β_{MDUB} values of

Figure 4.16
Values of Immoral Capital Effects and Their Predicted Probabilities on Ethical Meltdown

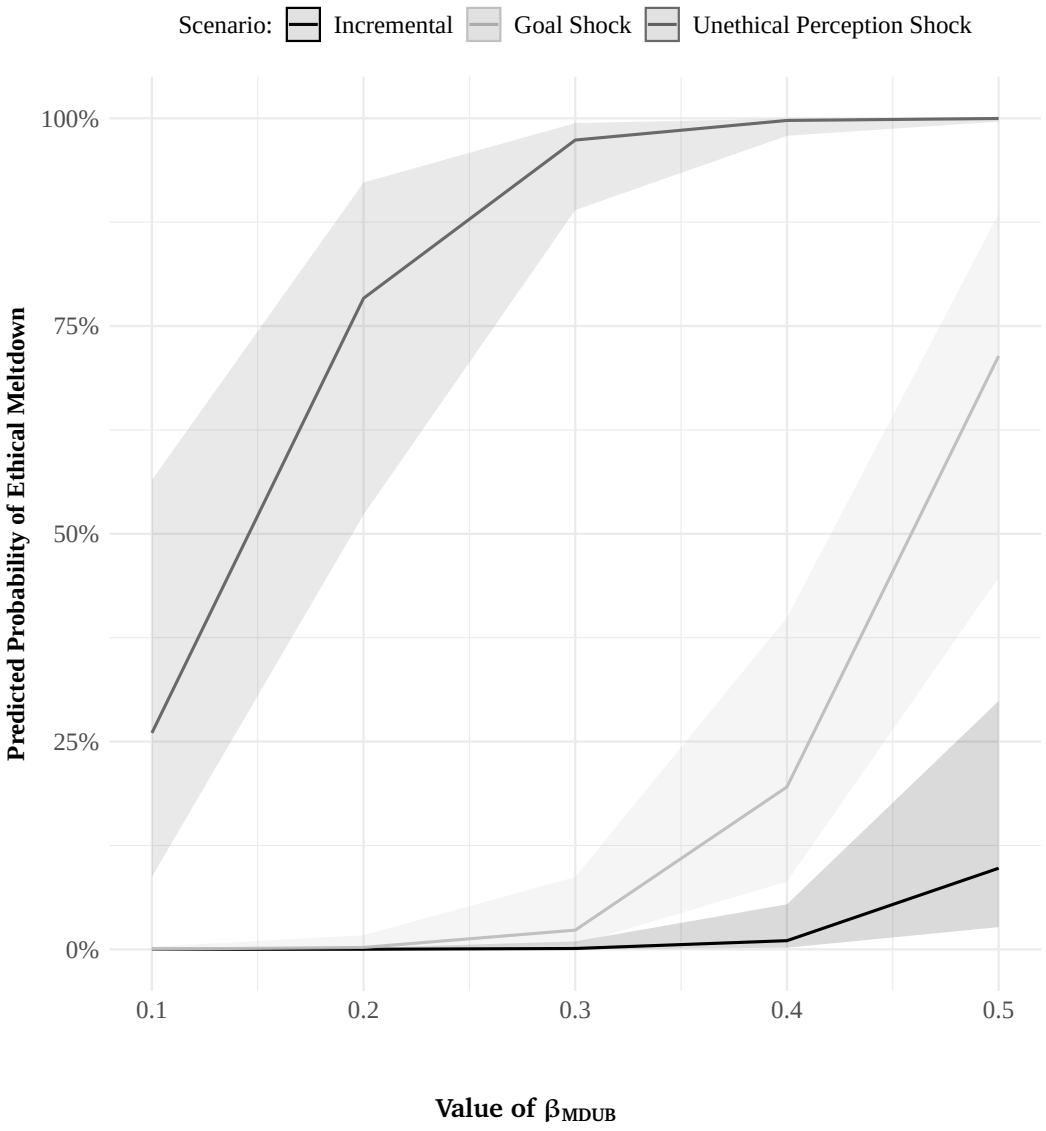


Note. ICUB = Immoral capital on unethical behavior. Shaded areas represent 95% CI.

.40 to .50. The probability predictions of the goal shock scenario differed. Up to a threshold of .30, the predicted probability of β_{MDUB} to an ethical meltdown was almost zero. However, from β_{MDUB} .30 to .40, the probabilities increased from two to 20%. From β_{MDUB} values greater than .40 to .50, the predicted probabilities increased from 20% to 71%. Furthermore, the unethical perception shock scenario results are also entirely different. From a β_{MDUB} = .10, the predicted probability was 26% reaching 78% and 97% in the effect values of .20 and .30, respectively. The hit for an ethical meltdown was certain from a β_{MDUB} value of .40 or greater.

Figure 4.17

Values of Moral Disengagement Effects and Their Predicted Probabilities on Ethical Meltdown



Note. MDUB = Moral disengagement on unethical behavior. Shaded areas represent 95% CI.

To sum up, when the following critical thresholds of the β_{MDUB} effect values were passed, the probabilities for an ethical meltdown increased very clearly: In the incremental change scenario at .40, in the goal shock earlier at .30, and in the unethical perception shock scenario already at the lowest value of .10.

In conclusion, it could be demonstrated that all three β-effects predicted the probabilities of hitting an ethical meltdown differently. The predicted probabilities of hitting an ethical meltdown were significantly higher for the unethical perception

shock, followed by the goal shock and incremental change scenarios. However, it stands out in particular that a smaller increase in the moral capital effect values β_{MCUB} led to higher predicted probabilities that an organization hits an ethical meltdown compared to the β_{ICUB} and β_{MDUB}. Although the absolute parameter effect ranges of moral capital were smaller than those from immoral capital and moral disengagement, it had, due to the initial ethicality of the organization, a powerful intercepting effect on the spreading of unethical behavior. In turn, immoral capital and moral disengagement required, in comparison, a higher increase in their absolute effect values to overcome the force of compliance coming from perceived empirical ethical expectations among a sufficiently large subset of organizational members.

4.2.7 Discussion

Using the developed theory of *The Structuration of Moral Capital and Unethical Behavior*, it was argued that the interplay between the individual and contextual level of moral capital could lead to the spreading of unethical behavior and the hit of an ethical meltdown, either incrementally from unintended internal causes or suddenly from exogenous shocks leading to a more quickly de-routinization of taken-for-granted routines. The results of the empirically calibrated ABM point to (1) enhancing the understanding of the spreading processes of unethical behavior and its dynamics and of when the organization hits an ethical meltdown, (2) the fragility of moral communities over time, (3) similarities but also differences in other simulation approaches, and (4) implications for the management of business ethics.

(1) The central research question was posed at the beginning of the dissertation, and it is now essential to be recapped. The central research question asked when the interplay between the individual and the contextual level in organizations leads to the hit of an ethical meltdown. The simulation results showed that the individual ethical and unethical behaviors contributed to a higher level phenomenon of moral capital and immoral capital. Moral and immoral capital was operationalized as the mutual consistency of perceived empirical expectations concerning ethical and unethical behavior. Unethical behavior regularities originated from goal-setting as an unintended consequence of value-creation activities, putting the social system's

ethical structure at risk. Precisely, unethical behavioral regularities contributed to the memory trace of perceived immoral capital among the employees and diminished, at the same time, the memory of perceived moral capital. In contrast, ethical behavior regularities contributed to the perceived moral capital and diminished, at the same time, perceived immoral capital. Thus, there was a constant tackle between ethical and unethical behavior regularities on a higher level with a feedback loop on the individual level affecting moral disengagement and subsequent behaviors over time. In some circumstances, the spreading of unethical behavior was held in check, and the social system stayed stable. In other circumstances, the spreading of unethical behavior prevailed, and the organization ran into an ethical meltdown. Accordingly, the simulation results confirmed the behaviors of the social system concerning the expectations of the underlying theoretical construct.

Considering the simulation results, it can be answered now when the organization hits an ethical meltdown. The occurrence of the ethical meltdown varied between the scenarios, and the specific parametric conditions. Critical thresholds were identified where the predicted probabilities of the hit of an ethical meltdown increased substantially.

Concerning the incremental change scenarios comprising internal causes, the baseline model included the effects of the parameter effect coefficients from the experiment as they were. Goal-setting increased unethical behavioral regularities but resulted in a stable interplay between the micro- and macro-level insofar that the parameter effect coefficients kept the social system in check in the long run. However, it was considered that parameter effects of immoral capital on moral disengagement, moral and immoral capital on unethical behavior, and moral disengagement on unethical behavior were implausible in the experiment and to current other research results (see discussion of the experimental results in Chapter 4.1.9). They were considered unsuitable for exploring the spreading mechanism of unethical behavior and its dynamics in ABM. Therefore, the what-if experiment included plausible, varied parameter value ranges. It revealed in the incremental change scenarios a central and clear-cut result: By considering an initial organization with a high degree of moral capital and by holding all other variables constant, the overcoming of the force of compliance coming from moral capital (memory traces of perceived empirical expectations based on *ethical* behavioral regularities), required in comparison a

higher increase in absolute effect values of both, immoral capital (memory traces of perceived empirical expectations based on *unethical* behavioral regularities) and moral disengagement. In most parameter effect value ranges of immoral capital and moral disengagement, moral capital could keep the spreading of unethical behavior with a relatively minor force in check, resulting in a stable social system most of the time. Only parameter effect coefficients of immoral capital and moral disengagement almost at the top end were prone to overcome the forces of compliance from perceived empirical expectations concerning ethical behavior, leading to the spreading of unethical behavior until the organization hit an ethical meltdown.

Compared to the incremental change scenarios, the dynamics of the spreading unethical behavior differed when considering the exogenous shock scenarios, and these dynamics also varied among the different shock scenarios. On the one hand, the goal shock scenario represented new dependence relationships that led to the assignment of difficult goals only. After the trigger of the goal shock, the fraction of unethical behavior increased in the baseline model but stayed stable over time on a higher level. Inspecting the goal shock under the what-if experiments revealed that, while holding all other variables constant, the force of compliance from perceived moral capital required a more negative effect value than in the incremental scenario to keep the spreading of unethical behavior in check. In contrast, lower positive parameter effect coefficients of perceived immoral capital and moral disengagement were sufficient to support the spreading of unethical behavior than in the incremental change scenario. In essence, within the goal shock scenario, a lower counterforce was required in overcoming the forces of compliance from moral capital compared to the incremental change scenarios. On the other hand, the unethical perception shock scenario represented a technological discontinuity, threatening the organization's survival. As an immediate effect, it was argued that employees were subject to a perception bias. Consequently, their perceptions of unethical behavior regularities increased suddenly. The primary outcome was that such a tremendous shock put the social system at high risk. The baseline model recovered relatively quickly and returned almost to the level of unethical behavior before the shock. However, considering the what-if experiments told another story. Especially by holding all variables constant, perceived moral capital could intercept the spreading of unethical behavior only at the bottom

end of the negative effect value range. In contrast, immoral capital and moral disengagement required a relatively minor positive effect value in overcoming the force of compliance. The organization hit an ethical meltdown under most of the parameter effect combinations in the unethical perception shock scenario.

(2) Considering the fragility of moral communities, the empirically calibrated ABM showed no all-in-one answer. It depended on the circumstances upon which the social system dynamics evolved. Haidt (2012) suggested once that "moral communities are fragile things, hard to build and easy to destroy" (p. 342). Besides, building a moral community might be a challenging endeavor. However, it was not part of the simulation as an initial moral community was set as given concerning the weak assumption of methodological individualism. Despite that, the fragility assumption of Haidt could not be followed unconditionally for the following reasons. Taking into account the "bad is stronger than good" (Baumeister et al., 2001, p. 354) phenomenon supports the fragility notion of Haidt at first glance. According to similar immoral and moral capital constructs, Ogunfowora et al. (2022, p. 759) also found in their meta-analysis that the positive impact of perceived organizational politics on moral disengagement had absolutely a higher value than the negative impact of perceived organizational justice on moral disengagement, indicating that the latter is only a modest deterrent. However, even though the bad-is-stronger-than-good phenomenon could likewise be observed in the pretest (effects of the moral and immoral capital scenarios on the participants' perception), in the primary experiment (effects of moral and immoral capital scenarios on moral disengagement), and the absolute moral capital effect values were clearly smaller than the absolute effect values of immoral capital and moral disengagement on unethical behavior, it does not necessarily imply that moral communities are fragile and easy to destroy. On the contrary, it seems that moral communities are relatively robust. It required an over proportionately high force to overcome the ethicality of the organizations because a mutual consensus among a sufficiently large subset in the number of individuals may have a solid regulative character to protect the ethicality of the social structure, even though the preventing effect coefficients of moral capital as such might be absolutely weaker than the counter effect coefficients. The predicted probability that the organization hit an ethical meltdown increased only dramatically when, while holding all other variables constant, the "bad" effects were at a top level, "good"

effects on the bottom end, and/or a tremendous exogenous shock was present. Only under these circumstances was the predicted probability high that the property of the social system could shift. Moreover, because no force of compliance from personal normative beliefs was explicitly implemented in the ABM emphasizes the behavioral control power of moral capital on the social expectation level.

(3) Comparing the present findings with other simulation studies depicting the spreading of unethical behavior revealed similarities in utilizing social influence, rationalizations, and probabilities of unethical behavior. Wang et al. (2017, pp. 273–288) took social learning theory (Bandura, 1977) and the social network perspective into account to explain how interpersonal diffusion mechanisms affect individuals' unethical tendencies. They calibrated their ABM with an effective coefficient of an empirical study that indicated the extent to which individuals' unethical tendencies are influenced by their colleagues. Their ABM revealed that the individual unethical tendency was affected by the unethical behavior of their colleagues, which was positively moderated by the network characteristics of density, closeness centrality, and group size. The present simulation did not follow a network approach, and the dependent variable was not individuals' unethical tendencies but actual unethical behaviors. However, observing behavioral regularities from colleagues was also one of the primary drivers for the diffusion of unethical behavior. It also represented a social learning mechanism by observing and adopting successful practices. Another important study for the comparison refers to Kim and Lee (2021, pp. 17–20). Based on their percolation theory, they found in their system dynamics simulation that actors can socially influence each other to promote the forming of collective corruption in organizations. Specifically, they found a lower susceptibility for the formation of collective corruption when particularly risk-averse individuals with a low initial preference for corruption and symmetrical dyadic power relationships were given. Mapping it with the present ABM revealed that the behavioral regularities of individuals were an effective mutual influence mechanism impacting the forming of unethical acts throughout the organization. Also, the probability of unethical behavior can be regarded as a preference for unethical behavior. Power was modeled implicitly by assigning goals from an undefined instance, representing a leader with various allocative and authoritative resources to enforce the assignment of goals within the zone of indifference. Next, J. S. Davis and Pesch (2013, pp. 470–476)

simulated an ABM based on the fraud triangle (Cressey, 1950) to explore fraud dynamics in an organization. Their primary variable affecting the dynamics of fraud was the individuals' attitude or rationalizing of fraud, which they specified as the function of social influence. In varying the impact of social influence on the agents' rationalization, their ABM yielded a stable social system for a low impact of social influence and extreme oscillating fluctuations in the frequency of unethical behavior in the moderate to substantial impact effect range of social influence. Considering the present ABM, moral disengagement was also a crucial rationalization mechanism designed as a function of social influence. Specifically, social influence was implemented as perceived moral and immoral capital affected by behavioral regularities concerning ethical and unethical behavior in the perception radiuses of the employees. The evolutions in the present ABM showed various developments, including random fluctuations. However, extreme oscillating fluctuations in the fraction of unethical behavior around a specific level were not found. Finally, Nekovee and Pinto (2019, pp. 340–344) explored with a Monte Carlo simulation study the spreading of unethical behavior by varying the vertical differentiation, the hierarchical level at which the initiators of corruption are located, the probability of becoming corrupted, and the number of whistle-blowers. Crucial for the comparison with the present ABM are their findings concerning the individual critical probability thresholds of becoming corrupted and its impact on when corruption pervades the organization. Considering various circumstances, corruption tended to spread from a probability of 32% among all employees. In the present ABM, unethical behavior was also based on individual probabilities. However, individual probabilities were not systematically varied and not set as given but were influenced by various antecedences. Also, the focus was not on investigating critical thresholds for individual probabilities. Instead, the critical thresholds for moral disengagement and moral and immoral capital effect coefficients were explored to give predicted probabilities for the hit of an ethical meltdown of the organizational social system.

(4) The question arises which implications or lessons could be learned for business ethics management. The previous outline culminated in the ABM focusing on business ethics from an academic and social systems viewpoint in theorizing and investigating unethical behavior and its dynamics in organizations. Specifically, insights were generated from the perspective of the academic discipline theoretically,

by the theory of the structuration of moral capital and unethical behavior, and by an empirically calibrated ABM concerning the organizational social system and its dynamics toward a possible ethical meltdown. Crucial is now which conclusion from the academic viewpoint towards the management of business ethics can be drawn to adequately affect the property of the social systems of organizations towards moral capital to prevent the possibility of an ethical meltdown in the long run.

Perhaps the most substantial command for business ethics management is establishing and maintaining moral capital as an organization's social structure. Even when moral capital has a relatively low parameter effect coefficient on preventing unethical behavior, incorporated as a social expectation among a sufficiently large subset of organizational members, it could unfold a strong behavioral control power in the long run. Not all organizations are saints, and unethical behavior will happen on any occasion. Crucial is to hold the probability of unethical behavior in check to avoid a dynamic spreading of unethical behavior that reinforces itself over time. The path to moral capital and its maintenance is diverse, and no clear one-size-fits-all solution can be applied equally to all organizations. However, of central importance is to establish mutually consistent social expectations about norms that rely on moral foundations. Also, constantly increasing the saliencies of personal normative beliefs is of relevance. Especially in daily business interactions, the workforce focuses on creating value, which may put pressure on them with the consequence of crowding out moral concerns. It is, therefore, of particular importance that management endeavors should counterbalance the crowding-out effects of morality with appropriate measures.

Accordingly, the appropriateness of business ethics management measures in various fields could depend on how they contribute to the ethical property of the social system. Recognizing individual interactions and their emergence to a higher level construct as the object of business ethics management may support overcoming the drawbacks in the long-term effectiveness of standard ethics measures, thereby supporting the organization's sustainable, ethical development. For instance, when implementing various ethics measures, practitioners should ask themselves how well they could strengthen normative and empirical expectations and support the moral agency, i.e., the self-regulation mechanisms concerning personal normative beliefs. Moreover, because moral capital is an inherent part of organizational culture,

business ethics measures are probably most effective in contributing to the ethical property of the social system by influencing the basic assumptions, moral values and norms, and the artifactual level. To do so, E. H. Schein (2004, pp. 28–29) suggested that influencing organizational culture is very promising by convincing employees that adhering to particular beliefs can solve organizational problems. It increases the likelihood that such beliefs will eventually become entrenched as organizational values and norms. When transferred to moral capital, demonstrating that adhering to moral values and norms related to the moral foundations helps in value-creation activities may contribute to establishing the moral foundations as the primary underlying assumption and may find its expression as social practices on the artifactual level. Also, in allusion to the "duality of structure" (Giddens, 1984, p. 19), establishing ethical, social practices corresponding with moral norms and foundations could serve as a means for producing moral capital, which then reproduces ethical, social actions. In the long run, moral capital and ethical, social practices could presuppose each other and prevail.

To translate the appropriateness of business ethics management measures into a concrete example, human resource development measures such as ethics training should not only aim to improve ethical judgment capabilities in a one-time session. Instead, ethics training could be designed by constantly integrating moral principles into daily value-creation activities, prone to improve the solution of organizational problems. It then probably better transforms into taken-for-granted routines that no longer require constant conscious deliberative thinking about the ethicality of actions. Especially, since people are subject to multiple cognitive biases, such as moral disengagement mechanisms to rationalize unethical behaviors and, thereby, able to overcome the forces of compliance and influence others to do so. With this, the utilization of social learning (Bandura, 1977) and the support in self-regulation (Bandura, 1991b) to improve moral agency may be advantageous. Also, considering moral pluralism and the heterogeneity of the moral relevancies among the workforce from different national or socialization backgrounds could be beneficial. Once moral capital is solid and the inherent part of the organization's social structure, i.e., as rules and resources that affect social practices, it may become less likely that incremental causes and external shocks could unleash the spreading of unethical behavior inasmuch that the organization hits an ethical meltdown.

4.2.8 Limitations

The present ABM is not free of limitations. The two major limitations refer to parameter and model uncertainties. Parameter uncertainty depicts the appropriate usage of parameters and the values of the parameters themselves to model real-world phenomena (McCulloch et al., 2022, p. 2). Even though the baseline ABM indicated empirical validation concerning the fraction of unethical behavior as in the experiment, parameter uncertainty remains because they were retrieved from a randomized control trial that primarily has internal validity. Moreover, even though the ABM helped to assess the dynamics in the spreading of unethical behavior, several insignificant and implausible parameter coefficients found in the experiment were replaced with reasonable value ranges and were not calibrated with empirical data. Hence, conclusions to real-world phenomena must be derived cautiously.

The following three limitations refer to the model uncertainties, i.e., the degree of difference between the ABM and the reality (Lei et al., 2020, p. 3). Crucial issues with model uncertainty in the present ABM primarily address how the decision processes to engage in unethical behavior were modeled. The decision to engage in unethical behavior represents a simplified version of the theory of the structuration of moral capital and unethical behavior. However, it's worth noting that the theory itself is also a simplification of reality, as it portrays a social phenomenon rather than a natural science phenomenon. The primary forces leading to the decision to engage in unethical behavior were based on observation, mimicking observational learning through the perception of behavioral regularities that affect empirical expectations and moral disengagement mechanisms. Nevertheless, the real-world algorithm to detect behavioral regularities is more complex. It depends on various heuristics and cognitive biases instead of calculating a one-way table of how many individuals engaged in unethical behavior based on a perception radius. Also, forces from normative expectations and personal normative beliefs, including the proactive or inhibitive form of the moral agency (Bandura, 1999, p. 194), were not explicitly modeled in the ABM.

Moreover, the ABM did not explicitly include the relationship between subordinates to superiors. Accordingly, no vertical differentiation was modeled. It was only implicitly modeled through the assignment of goals, representing a leader

with various allocative and authoritative resources to enforce the assignment of goals. However, explicitly modeling the hierarchy of the perpetrator could make a difference insofar as to whether lower subordinates or top management team members engage in unethical behavior and how the spreading mechanism within and between the hierarchies evolves. It could result in a different character of the organization's spreading mechanisms of unethical behavior.

Next, goal-setting as a source of unintended unethical behavior was only implemented in a single assignment of a work task by not considering any organizational structure characteristics. Also, parameter effect coefficients from goal-setting were based on a creativity task of low complexity conducted in a short period (Mento et al., 1992, p. 396). However, organizations in value-creation activities rely on collaboration among various organizational members with different goal types within different time frames. Hence, modeling collective, multiple, and different competing goals of various types and periods by considering vertical and horizontal differentiation in the division of labor could give further insights into how the spreading mechanisms could develop in organizations.

Finally, parameter and model uncertainties were unavoidable since an ABM is always imperfect. It is always a tradeoff between model simplicity and its relation to complex real-world systems. Only an approximation was possible.

Conclusion and Outlook

5

Recalling the central research question posted at the beginning of *when the interplay between the individual and the contextual level in organizations leads to the hit of an ethical meltdown* can be answered (1) theoretically and based on (2) empirically calibrated agent-based modeling. Afterward, the (3) generalizability of the results and the (4) implications for business ethics management are summarized, and (5) an outlook for future research opportunities is given.

(1) The developed theory of *The Structuration of Moral Capital and Unethical Behavior* was based on the structuration theory (Giddens, 1984) and methodological individualism (Coleman, 1990; Hedström & Swedberg, 1998; Kalter & Kroneberg, 2014). It provided a systematic explanation of the social dynamic interplay between the individual and the contextual level over time that can lead to the spreading of unethical behavior, which existing theoretical models have not considered. Accordingly, individual unethical behavior and moral capital as an element of the organizational social structure negatively influence one another. The theory could explain how from an initial ethical organization, the interplay between the individual micro-level and the contextual macro-level of moral capital can affect the spreading of unethical behavior in the organization until an end state of an ethical meltdown. The term meltdown reflected that unethical behavior became common and institutionalized as immoral capital in the organization. In particular, reiterating mechanisms between the macro- and micro-level were essential to describe the temporal evolution of the social systems' dynamics. The apparent contradiction in moral capital and unethical behavior should reflect their inherent conflict. The social dynamics at play determined the ultimate outcome of whether the organization hits an ethical meltdown. Crucial was that moral capital entails forces of compliance that have a substantial regulatory power to suppress unethical behavior, one force coming from social expectations concerning and the other from personal normative beliefs. The first entails social control mechanisms from normative and empirical expectations, i.e.,

what individuals perceive and what others expect and do. The second force relates to the moral agency (Bandura, 1991a), leading to self-regulation of moral action. Based on the outlined theory, the answer to the research question is that an initial ethical organization hits an ethical meltdown when the workforce can overcome these forces of compliance. It was possible due to moral disengagement mechanisms (Bandura et al., 1996) and unethical behavioral regularities affected by incremental social changes in the organization coming internally from unintended consequences of actions in value-creation activities or from exogenous shocks triggering sudden social changes in the organization.

Crucial conceptual definitions were given before developing the theory to answer the research question. In particular, a claim on applying descriptive ethics to the threefold perspective on business ethics was given, i.e., to the academic, management, and social systems' stance. Descriptive ethics was considered a field of study that depicts individuals' ethical behavior judged by others in a larger social context. It could release researchers and managers from the shackle imposed by traditional normative approaches. Subsequently, unethical behavior was defined as morally unacceptable by a larger community, and in an organizational context, it refers to actions that violate widely accepted societal moral norms (T. M. Jones, 1991; Kish-Gephart et al., 2010). Next, moral capital by Haidt (2012) was considered an essential property of an organization's social structure regulating unethical behavior. Due to definitional issues, the concept of moral capital was thoroughly examined, clarified, and a further developed working definition was given. Ultimately, moral capital was defined as the degree to which organizational members have shared values, norms, and social practices that correspond with the moral foundations, thereby enabling the organizational community to suppress or regulate unethical behavior. Moreover, the concept of moral capital was strongly related to morality, while morality was conceptualized using a three-layer approach with moral foundations reflecting the societal basis, moral values, and norms. The primary difference between moral capital and morality lies in that moral capital considers the reference network within the boundaries of an organization, must align with the common norm standard to reflect societal beliefs about morality within the organization's context, and requires high within-group agreement regarding the relevancies of the selected underlying moral foundations. Also, moral capital was

considered, in general, in the domain of organizational culture and, in specific, as an inherent informal part of an ethical organizational culture and a fundamental source of ethical behavioral control.

(2) Empirically calibrated agent-based modeling was designed to investigate the social dynamics in the interplay between moral capital on the macro-level and the individuals on the micro-level in an artificial organization. Specifically, the dynamics were explored by considering incremental social changes in the organization, coming internally from goal-setting with its unintended consequences of unethical behavior and from external, exogenous shocks. The agent-based model could show the expected dynamics between the micro- and macro-level insofar that a continuous tackle between individual ethical and unethical behavioral regularities contributed to a higher level phenomenon of moral capital and its counterpart of immoral capital. In turn, the emerged higher-level phenomenon had a feedback loop at the individual level impacting moral disengagement and subsequent behaviors over time. The baseline model could approximately replicate the pattern of unethical behavior observed in the experiment, indicating empirical validation of the agent-based model. Furthermore, critical thresholds based on what-if experiments and sensitivity analysis were found when the spreading of unethical behavior ultimately resulted in an ethical meltdown. Answering the research question based on the simulation revealed that the hit of an ethical meltdown varied between the incremental and exogenous social change scenarios and the specific parametric conditions. As a central result and by holding all other variables constant, the organization experienced an ethical meltdown during the incremental change scenario, when perceived moral capital (operationalized as individual perceptions about *ethical* behavioral regularities in their surroundings) had a relatively minor negative impact coefficient on unethical behavior while perceived immoral capital (operationalized as individual perceptions about *unethical* behavioral regularities in their surrounding) and moral disengagement were approaching their effectual top ends. Also, perceived moral capital could keep the spreading of unethical behavior with a relatively minor force in check, resulting in a stable social system most of the time. Meanwhile, the simulation results were entirely different in the exogenous shock scenario. On the one hand, perceived moral capital could prevent the spreading of unethical behavior with a relatively strong negative parameter effect coefficient at the negative bottom end. On

the other hand, perceived immoral capital and moral disengagement required a relatively minor positive effect coefficient in overcoming the force of compliance from perceived moral capital. During a tremendous exogenous shock, the organization hit an ethical meltdown in most parameter effect combinations.

In light of the fragility of moral communities, the ABM showed no definite answer as it depended on the circumstances upon which the organizational social system evolved. It was concluded that existing moral capital among most of the workforce in an organization could establish a solid regulatory character to preserve the ethicality of the social structure, despite stronger counter-effects from immoral capital and moral disengagement. Therefore, the statement of Haidt (2012, p. 342) that moral communities are fragile and easy to destroy could not be followed unconditionally. Instead, organizations with high moral capital were prone to be relatively robust, even though the moral capital parameter effect coefficients were relatively minor. It emphasized that moral capital could be a solid regulatory force keeping unethical behavior in check if the organization is not exposed to unexpected tremendous external effects.

Furthermore, the empirical calibration of the ABM relied on experimental study for obtaining parameter effect coefficients for the baseline model. Although the empirical findings were not all as expected, they were together with the descriptive characteristics of the sample essential to calibrate the agent-based model. A short experiment was implemented, including a role-play in an advertising company with moral and immoral capital scenarios, moral disengagement, and the relationship between goal-setting and unethical behavior. The moral capital scenarios were conceptualized as third-party observations of peers' moral compliance and violation of fairness as they debated whether to be honest or to cheat on a pad expense report. Also, goal-setting was chosen for this study as a use case due to its widespread use in value-creation activities within business organizations and its unintended consequences in inducing unethical behavior. The results contributed to the existing research in goal-setting and unethical behavior insofar that the experiment essentially confirmed the hypotheses that goal difficulty directly affects unethical behavior and that ability reduces the extent to engage in unethical behavior at the moderate goal difficulty level. Average marginal effects for the goal-setting characteristics could be obtained at least for the goal difficulty levels at a 5% significance level. However, in

the experimental study, the proposed direct effects of the moral capital scenarios on unethical behavior and moral disengagement, a causal mediation with the Impossible Mediation Test (Yeager & Krosnick, 2017) of the moral capital scenarios through moral disengagement on unethical behavior, and a moderation of the goal difficulty level effects on unethical behavior with moral disengagement could not be found.

Several conclusions regarding the unexpected empirical findings were drawn. Considering previous research, it was assumed that the unexpected effects of the moral capital scenarios were not due to a misspecification of the theory of the structuration of moral capital and unethical behavior. Instead, they resided perhaps methodologically in the experimental design, and that moral capital is a complex emerging phenomenon that may not be manipulated in such straightforward experimental designs. Specifically, various reasons for these unexpected results were discussed, for instance, arrangement of the materials, tunnel vision through the goal attainment, demand effects, or maintenance of a positive social identity since participants could not identify with the immoral capital scenario. Also, for the missing findings in the moderating role of moral disengagement between the goal difficulty effects on unethical behavior, it was speculated that participants were too distracted by the attentional demands in the goal striving to notice any moral violations. Furthermore, although the German Moral Disengagement about Cheating scale was translated from the English version (Shu et al., 2011) with a team application of TRAPD including parallel translation (Harkness, 2003) and showed nomological validity in pilot testing, the scale showed severe measurement invariance issues in the primary experiment. Likewise, the scale was the most significant source of the model-data misfit in the structural equation modeling, which could contribute to the present unexpected findings. In addition, the German Propensity to Morally Disengage scale retrieved from the English version (Moore et al., 2012) showed adequate nomological validity next to its purpose for validating the German Moral Disengagement about Cheating scale.

(3) The generalizability of the empirical study results and the agent-based model simulation were limited for the following reasons. On the one hand, concerning the empirical study results, it was unclear whether the present research findings could be generalized to other settings or populations beyond the specific conditions of the experiment. Specifically, the statistical inference was focused on deriving

conclusions concerning the experiment's causal effects. In addition, since the survey population was a random sample drawn from the SoSci Panel with specified eligibility criteria, generalizing the results beyond a particular population in the SoSci Panel was impossible and could rely only on logical inference. Moreover, considering the survey sample, their disproportionately high education, the surplus of women, their volunteering, and familiarity with participating in various scientific surveys may have introduced several systematic biases, limiting the generalizability of the results. Also, measurement invariance in the German Moral Disengagement about Cheating scale restricted the findings in drawing valid comparisons across different groups or settings. Cultural differences in the scale translation could perhaps not be eliminated, possibly questioning the suitability for the German audience. The ecological validity of the experimental results was also constrained since the experiment consisted of a straightforward randomized control trial, spotlighting internal validity for deriving causal effects. Various other factors were not examined, such as the probability of being caught, the consequences of unethical behavior to others and its awareness, the moral intensity of the unethical conduct, or monetary incentives. On the other hand, parameter and model uncertainties were detected concerning the agent-based model. Parameter uncertainties entailed that several insignificant and implausible parameter coefficients found in the experiment were replaced with reasonable value ranges but were not calibrated with empirical data. Model uncertainties comprised the modeling of decision processes to engage in unethical behavior. As a result, the decision to engage in unethical behavior represents a simplified version of the theory of the structuration of moral capital and unethical behavior, while the theory itself is also a simplification of reality. Also, the model was straightforward, not explicitly modeling organizational structure characteristics such as vertical and horizontal differentiation in combination with various goal-setting assignments, limiting the simulation results to attractive but basic conclusions. However, agent-based models are inherently imperfect due to the tradeoff between model simplicity and its relevance to complex real-world systems, leading to unavoidable parameter and model uncertainties.

(4) Based on the agent-based modeling results containing the theoretical outline and the empirical study, it was possible to conclude implications for business ethics management. Doing so can support overcoming the concern with the current

knowledge about the spreading mechanisms of unethical behavior for theoretical and practical understanding. Considering the cause and effect between the different levels of analysis and their temporal evolution, the most crucial implication for business ethics management is establishing and maintaining moral capital as an organization's social structure. Assuming that even a slight effect of moral capital can have a substantial behavioral regulative force in preventing the spreading of unethical behavior in the social system, it is worth working with the concept. With this, of central importance is to focus on individual interactions affecting the mutual consistency of social expectations and the saliencies of personal normative beliefs that rely on moral foundations and their combined impact on the higher-level construct of moral capital. Business ethics measures that target the organizational culture and influence basic assumptions, moral values, norms, and artifacts according to the moral foundations are likely to be most successful in contributing to the ethical property of the social system and thereby promoting ethical behavior. For instance, establishing social practices suitable for solving organizational problems and, at the same time, corresponding with moral norms and foundations could produce moral capital, which could then reproduce ethical social actions. In the long run, moral capital and ethical social practices could presuppose each other and prevail. However, the paths to moral capital and its maintenance are various, and no straightforward solution can be applied equally to all organizations as it depends on various circumstances. Nevertheless, understanding the human creature and its flaws in moral processing together with the organizational context may allow the management to develop business ethics measures to prevent more effectively the spreading of unethical behavior and the hit of an ethical meltdown in the long run.

(5) Considering future research needs, a comprehensive, constructive replication of the experimental design would help to clarify the unexpected relationship between moral capital, moral disengagement, and unethical behavior and its link to goal-setting. Specifically, it would be helpful to cover most of the weaknesses of the study by reconsidering, in particular, how the moral capital scenarios were operationalized and presented. Primarily, due to prior research identifying statistical mediation effects, further investigation is required to elucidate the causal mediation effect of moral capital through moral disengagement on unethical behavior. Another

crucial issue that needs to be clarified is the inconclusive results from past studies and the present investigation to understand the role of moral disengagement in goal-setting and unethical behavior. Equally promising is to recapitulate the validation of the German Moral Disengagement about Cheating scale or the consideration of an alternative moral disengagement scale. The German Propensity to Morally Disengagement scale could be a promising candidate. Moreover, going beyond the fairness-cheating foundation by considering care-harm, loyalty-betrayal, authority-subversion, or purity-degradation could give further insights into how moral capital as a concept of moral pluralism could operate in various circumstances.

Since the conducted agent-based model was very simple, further models can be built with more refined decision and interaction processes with a broader database to reduce parameter and model uncertainties. With this, numerous organizational design characteristics could be considered. Exogenous shocks could be operationalized at different levels and time points, and the incremental changes coming from unintended consequences of actions could come from sources other than goal-setting. However, an empirical database for calibrating the agent-based simulation must be retrieved or generated to explore the social dynamics under various conditions.

Another promising research opportunity is to explore theoretically and underpinned by empirical studies on how moral standards can be embedded in value-creation activities to better solve organizational problems in practice. With this, social practices could transfer to the basic assumptions and moral values and norms that correspond with the moral foundations. It could be most promising to embed moral principles in social practices as minimally as possible such that the workforce does not perceive this as a nuisance in everyday business interactions anymore. Therefore, it may be necessary to identify, evaluate, and conceptually enrich typical social practices in daily business interactions with moral principles. Additionally, the effectiveness of these practices in anchoring the moral principles in the organizational culture must be assessed.

Finally, the theory of the structuration of moral capital and unethical behavior is a generic umbrella. According to the research interest, it is open to any environmental influences, specification of the organizational system, and various individual decision processes engaging in unethical behavior. Also, specifying the macro level

from the team, department, or any organizational level is possible. Integrating essential organizational and individual characteristics could enhance knowledge concerning the dynamic spreading mechanisms of unethical behavior to understand better under which circumstances the organization hits an ethical meltdown.

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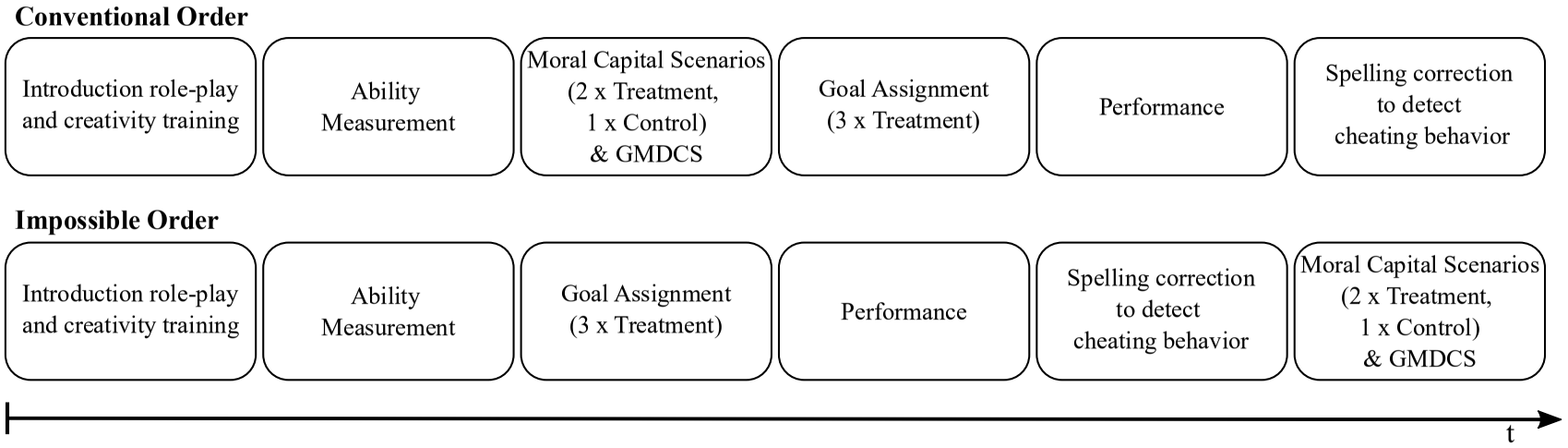
Appendices

Appendix A: Sequence Plans for the Experiment

Figure A.1

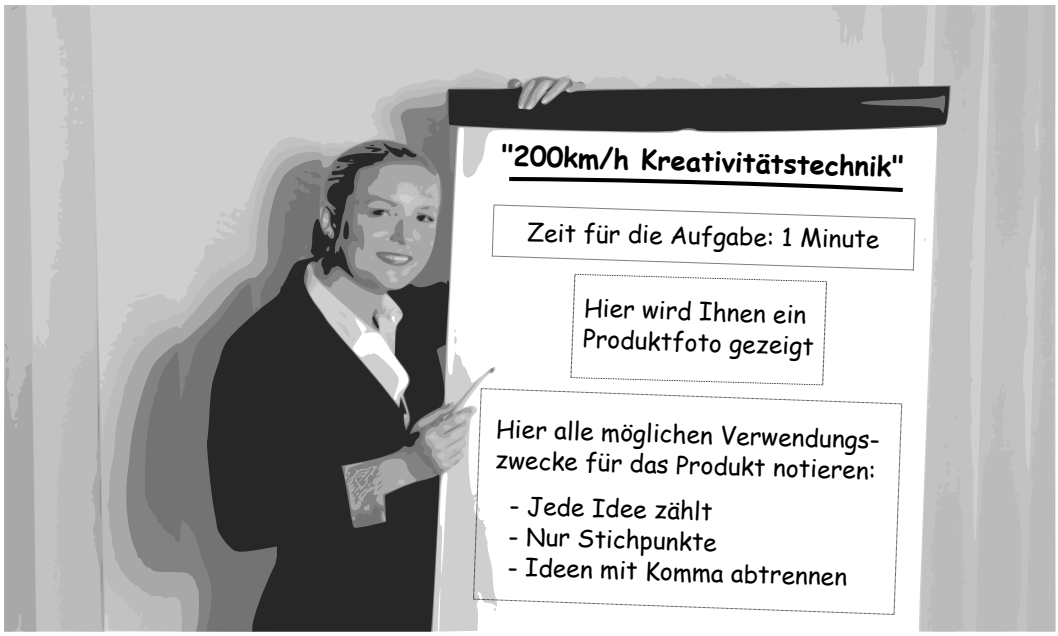
Sequence Plans for the Experiment



Note. GMDCS = German Moral Disengagement about Cheating scale.

Figure B.1

Instruction for Creativity Training as a Cover in Order to Assess Ability



Note. Translation of the German content in the flipchart: (header) 200 km/h creativity technique; (top) time for the task: 1 minute; (middle) here you are shown a product photo; (bottom) note down all possible usages for the product here, (bullet points) every idea counts, key points only, separate ideas with a comma.

Model photo: Colourbox.com, adapted version used with permission.

Figure B.2

Wire Coat Hanger Presented in the Creativity Training

Note. Photo: Colourbox.com, adapted version used with permission.

Figure C.1

Conversation between Colleagues for the Moral Capital Scenarios

Note. See the German input text below. Content in parenthesis shows the operationalization to the fairness-cheating dimension in allusion to the relevance items of the Moral Foundations Questionnaire (see Graham et al., 2011, p. 368) or the particular intention of each sentence. They are not shown in the experimental vignettes.

Moral Capital Scenario
Text colleague A: Du hast die Taxikosten mit 50 Euros viel zu großzügig aufgerundet, obwohl der richtige Betrag bei 42 Euros liegt (no fraud). Keiner von uns macht das so (emphasizing that it is common practice). Du wirst damit zwar durchkommen, da sämtliche Spesenkosten ohne genaue Kontrollen akzeptiert werden (no denial of rights). Wir haben aber alle eine Verantwortung für das Unternehmen. Daher solltest du dir keinen persönlichen Vorteil verschaffen (no favoritism). Text colleague B: Das war ein Versehen. Ich werde meine Spesenabrechnung nochmal überarbeiten. Danke dir.

Immoral Capital Scenario
Text Colleague A: Ich zeige dir, wie du deine Spesenabrechnung vorteilhafter erstellen kannst (fraud). Viele von uns fügen hier und da ein paar Euro hinzu (emphasizing that it is a common practice). Ich werde auch ein gutes Wort für dich einlegen, dann wird deine Abrechnung mit mehr Wohlwollen als bei anderen bearbeitet (favoritism). Sonst kann es passieren, dass sogar gut begründete Spesenausgaben zunächst abgelehnt werden (denial of rights). Text Colleague B: Danke, dass du ein gutes Wort für mich einlegst. Ich werde meine Spesenabrechnung nochmal überarbeiten.

Model photo: Colourbox.com, adapted version used with permission.

1. Anderen einen Schritt voraus zu sein ist manchmal wichtiger, als sich an die Regeln zu halten.
2. Regeln sollten flexibel genug sein, um sie an unterschiedliche Situationen anpassen zu können.
3. Mogeln ist in Ordnung, weil niemand dabei zu Schaden kommt.
4. Wenn andere etwas schummeln, dann ist es moralisch vertretbar, es auch zu tun.
5. Es ist in Ordnung, Abkürzungen zu nehmen, solange es nicht auf Kosten anderer geht.
6. Die Endergebnisse sind wichtiger als die Mittel, mit denen man diese Ergebnisse erreicht.

Note. Translated items are based on the English version of Shu et al. (2011, pp. 345–346). German instruction: Beziehen Sie bitte zu den folgenden Aussagen Stellung. "Stimme voll und ganz zu" bedeutet, dass die Aussage vollkommen Ihrer Meinung entspricht. "Stimme überhaupt nicht zu" bedeutet, dass die Aussage rein gar nichts mit Ihrer Meinung zu tun hat. Mit den Angaben dazwischen können Sie Ihre Meinung abstufen. (-3 = Stimme überhaupt nicht zu, +3 = Stimme voll und ganz zu).

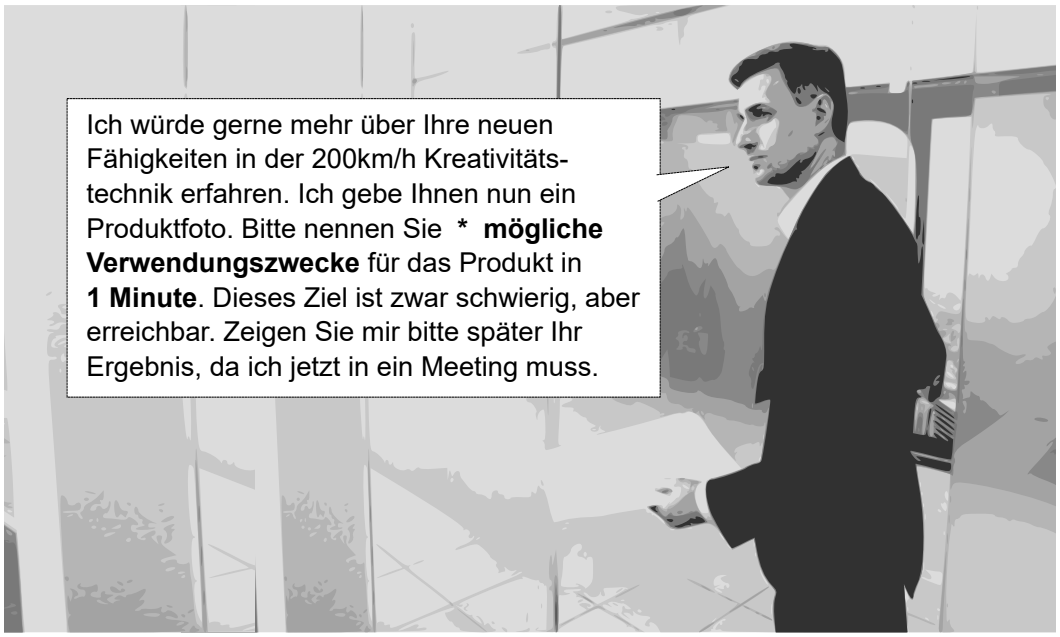
Appendix E: German Propensity to Morally Disengage Scale

1. Es ist schon in Ordnung, Behauptungen zu verbreiten, um diejenigen zu beschützen, die einem wirklich wichtig sind. (Moral Justification)
2. Etwas von jemandem auszuleihen, ohne diesen zuvor zu fragen, ist schon in Ordnung, solange man es wieder zurückgibt. (Euphemistic Labelling)
3. Wenn man bedenkt, wie manche Menschen sich selbst völlig falsch darstellen, ist es nicht so schlimm, seine eigenen Qualifikationen etwas zu beschönigen. (Advantageous Comparison)
4. Man sollte Menschen nicht für fragwürdiges Verhalten verantwortlich machen, wenn sie lediglich nach den Anweisungen einer Autoritätsperson gehandelt haben. (Displacement of Responsibility)
5. Man kann Menschen keine Vorwürfe für ein Verhalten machen, das eigentlich nicht ganz richtig ist, aber auch von allen anderen Freundinnen oder Freunden gezeigt wird. (Diffusion of Responsibility)
6. Es ist keine große Sache, Anerkennung für Ideen anzunehmen, die eigentlich nicht die eigenen sind. (Distortion of Consequences)
7. Manche Leute, die ziemlich emotionslos sind, muss man auch gröber behandeln. (Dehumanization)
8. Leute, die schlecht behandelt werden, haben das meistens aufgrund ihres eigenen Verhaltens verursacht. (Attribution of Blame)

Note. Translated items are based on the English version and the 8-item measure of Moore et al. (2012, pp. 47–48), texts in parenthesis indicate the concerning mechanism of moral disengagement. German instruction: Bitte geben Sie an, inwieweit Sie den folgenden Aussagen zustimmen. (1 = Stimme überhaupt nicht zu, 7 = Stimme voll und ganz zu).

Figure F.1

Goal-Setting Instruction for the Treatment Groups



Note. * represents a placeholder for the goal difficulty levels. There were three goal difficult conditions: 4 (easy), 7 (moderate), and 12 (difficult). Translation of the German content: I would like to learn more about your new skills in the 200km/h creativity technique. I will now give you a product photo. Please name * possible uses for the product within 1 minute. This goal is difficult but attainable. Please show me your result later as I must attend a meeting now.

Model Photo: Colourbox.com, adapted version used with permission.

Figure F.2

Rubber Tire Presented in the Goal-Setting Task

Note. Photo: Colourbox.com, adapted version used with permission.

Appendix G: Sample Size Planning

The parameter specification and the resulting sample size for the initial path model were as follows: The null hypothesis of RMSEA H_0: ε_0 was set to a level of $\geq .10$, which reflects a poor-fit hypothesis (Kline, 2016, p. 275). The alternative hypothesis is RMSEA H_a: $\varepsilon_a = .05$, indicating an adequate model fit (MacCallum et al., 1996, p. 135). With a traditional power level = .95, α= .05, and 7 degrees of freedom for the preliminary path model, the calculation yields a required sample size for the conventional order model of 693 participants.

The required sample size was increased by 2 to have a similar number of participants in the impossible order condition for correcting the confounding bias in the model of the conventional order condition. Also, Yeager and Krosnick (2017) had an equal number of participants in both order conditions by demonstrating the impossible mediation test. In total and based on the preliminary path model, 1386 participants should be recruited for the main study.

With the R-Package *semTools* (Jorgensen et al., 2022) the required sample size was calculated with the function *2*findRMSEAsamplesize(rmsea0 = .1, rmseaA = .05, df = 7, power = .95, alpha = .05)*.

Appendix H: Rating of the Questionnaire by the Sample

1648 sample participants rated the questionnaire on a semantic differential scale ranging from a positive rating of 1 to a negative rating of 5 on whether the questionnaire was interesting, entertaining, not too long, and written in an understandable language, concluding with an overall rating. Compared to 447 other surveys in the SoSci Panel, the questionnaire yielded results in almost all aspects over the average (interesting 1.7 vs. 2.0, entertaining 1.6 vs. 2.2, duration 1.4 vs. 2.0, understandable language 1.6 vs. 1.5, overall 1.7 vs. 1.9).

Appendix I: Sample Covariance-Variance and Correlation Residual Matrices

Table I.1

SEM 1: Sample Covariance-Variance Matrix in Conventional Order

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. i1	2.911											
2. i2	0.599	2.205										
3. i3	1.068	0.458	2.389									
4. i4	0.928	0.265	1.213	2.333								
5. i5	0.779	0.704	0.755	0.478	2.430							
6. i6	1.139	0.389	0.813	0.865	0.877	3.052						
7. Cheating	0.078	0.011	0.089	0.021	−0.007	0.020	1.345					
8. Moral capital	−0.028	0.047	−0.007	−0.016	0.024	−0.017	−0.023	0.221				
9. Immoral capital	−0.083	−0.110	−0.065	−0.081	−0.100	−0.085	0.035	−0.109	0.221			
10. Difficult goal	−0.010	0.000	−0.009	−0.018	−0.022	0.015	0.096	0.001	−0.001	0.220		
11. Moderate goal	−0.017	0.020	−0.023	0.012	0.012	−0.079	−0.021	−0.001	−0.001	−0.109	0.222	
12. Ability	−0.022	0.188	0.079	0.000	0.046	−0.216	−0.047	0.039	−0.028	0.036	−0.003	4.136

Note. i represents an item of the German Moral Disengagement about Cheating scale (GMDCS). n = 878.

Table I.2

SEM 1: Correlation Residuals in Conventional Order

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. i1	.000											
2. i2	.081	.000										
3. i3	−.049	−.059	.000									
4. i4	−.068	**−.196**	**.219**	.000								
5. i5	−.006	**.340**	−.029	**−.221**	.000							
6. i6	**.154**	−.067	**−.171**	−.013	**.185**	.000						
7. Cheating	.019	−.017	.030	−.032	−.049	−.033	−.001					
8. Moral capital	−.022	.050	.000	−.010	.029	−.011	.000	.000				
9. Immoral capital	.011	−.067	.028	.002	−.034	−.002	.000	.000	.000			
10. Difficult goal	−.010	.000	−.009	−.019	−.022	.015	−.001	.000	.000	.000		
11. Moderate goal	−.018	.020	−.024	.012	.012	−.080	−.001	.000	.000	.000	.000	
12. Ability	−.026	**.186**	.075	−.004	.043	**−.219**	.000	.000	.000	.000	.000	.000

Note. i represents an item of the German Moral Disengagement about Cheating scale (GMDCS). Absolute correlation residuals > .10 are highlighted in bold font. n = 878.

Table I.3

SEM 1: Sample Covariance-Variance Matrix in Impossible Order

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. i1	2.764											
2. i2	0.534	2.068										
3. i3	0.939	0.464	2.308									
4. i4	0.979	0.347	1.229	2.204								
5. i5	0.885	0.671	0.787	0.656	2.701							
6. i6	1.034	0.412	0.711	0.779	0.615	2.839						
7. Cheating	0.016	0.087	0.072	0.063	0.113	0.030	1.180					
8. Moral capital	−0.015	−0.036	−0.073	−0.049	−0.020	−0.015	0.025	0.224				
9. Immoral capital	−0.081	−0.061	−0.040	−0.085	−0.101	−0.090	0.003	−0.112	0.221			
10. Difficult goal	0.025	0.006	−0.004	0.019	−0.017	−0.012	0.102	−0.001	0.002	0.221		
11. Moderate goal	−0.011	0.002	−0.006	0.001	−0.010	−0.014	−0.020	0.002	−0.002	−0.110	0.222	
12. Ability	−0.002	0.127	0.028	−0.018	−0.106	0.084	−0.060	0.018	0.001	0.003	−0.037	3.807

Note. i represent an item of the German Moral Disengagement about Cheating scale (GMDCS). n = 876.

Table I.4

SEM 1: Correlation Residuals in Impossible Order

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. i1	−.002											
2. i2	.052	.000										
3. i3	**−.102**	−.045	−.002									
4. i4	−.044	**−.153**	**.149**	−.002								
5. i5	**.109**	**.292**	−.032	**−.149**	−.001							
6. i6	**.241**	.024	**−.126**	−.044	−.009	−.001						
7. Cheating	−.061	.049	−.009	−.017	.052	−.032	.000					
8. Moral capital	.031	−.013	−.024	−.001	.016	.022	.025	.000				
9. Immoral capital	−.003	−.023	.042	−.004	−.039	−.027	.002	.000	.000			
10. Difficult goal	.026	.007	−.003	.020	−.017	−.012	.000	.000	.000	.000		
11. Moderate goal	−.012	.002	−.006	.000	−.010	−.014	.000	.000	.000	.000	.000	
12. Ability	.008	**.132**	.039	−.008	−.098	.091	.001	.000	.000	.000	.000	.000

Note. i represent an item of the German Moral Disengagement about Cheating scale (GMDCS). Absolute correlation residuals > .10 are highlighted in bold font. n = 876.

Table I.5

SEM 2: Sample Covariance-Variance Matrix and Mean Values in Conventional Order Differentiated by Goal Difficulty Level

Variable	*M*	1	2	3	4	5	6	7	8	9	10
Easy goal condition											
1. i1	−0.839	3.158									
2. i2	1.251	0.692	2.282								
3. i3	−1.355	1.187	0.524	2.737							
4. i4	−1.659	0.825	0.199	1.429	2.466						
5. i5	1.344	0.871	0.850	0.861	0.451	2.460					
6. i6	−0.763	0.935	0.425	0.974	0.922	0.935	3.131				
7. Cheating	0.043	−0.007	0.036	−0.045	−0.022	−0.028	−0.034	0.122			
8. Moral capital	0.331	0.007	0.094	0.037	0.054	0.057	0.032	0.002	0.221		
9. Immoral capital	0.334	−0.131	−0.174	−0.156	−0.121	−0.149	−0.130	−0.008	−0.111	0.223	
10. Ability	4.532	−0.132	0.321	0.262	0.133	0.091	−0.059	−0.026	−0.019	−0.037	3.727
Moderate goal condition											
1. i1	−0.969	2.552									
2. i2	1.371	0.669	2.206								
3. i3	−1.519	0.937	0.495	2.174							
4. i4	−1.639	1.006	0.337	1.129	2.423						
5. i5	1.354	0.824	0.759	0.682	0.642	2.476					
6. i6	−1.189	1.126	0.458	0.630	0.872	0.960	2.792				
7. Cheating	0.203	0.004	−0.099	0.036	−0.028	−0.120	0.025	0.547			
8. Moral capital	0.326	−0.062	0.044	−0.040	−0.070	0.001	−0.059	−0.011	0.220		
9. Immoral capital	0.326	−0.038	−0.066	−0.044	−0.097	−0.091	−0.017	0.013	−0.107	0.220	
10. Ability	4.619	−0.071	0.348	0.094	−0.099	−0.222	−0.151	−0.174	−0.009	0.008	3.631
Difficult goal condition											
1. i1	−0.948	3.008									
2. i2	1.309	0.439	2.116								
3. i3	−1.476	1.063	0.362	2.229							
4. i4	−1.733	0.955	0.261	1.075	2.099						
5. i5	1.250	0.636	0.496	0.716	0.336	2.347					
6. i6	−0.903	1.339	0.307	0.796	0.807	0.740	3.136				
7. Cheating	0.559	0.266	0.088	0.308	0.139	0.159	0.085	3.281			
8. Moral capital	0.333	−0.031	0.001	−0.019	−0.034	0.014	−0.025	−0.061	0.222		
9. Immoral capital	0.326	−0.079	−0.087	0.006	−0.025	−0.057	−0.108	0.102	−0.109	0.220	
10. Ability	4.736	0.153	−0.116	−0.115	−0.030	0.281	−0.433	0.005	0.147	−0.053	5.048

Note. i represents an item of the German Moral Disengagement about Cheating scale (GMDCS). n(easy, moderate, difficult) = 299, 291, 288.

Table I.6

SEM 2: Correlation Residuals in Conventional Order Differentiated by Goal Difficulty Level

Variable	*M*	1	2	3	4	5	6	7	8	9	10
Easy goal condition											
1. i1	.000	.000									
2. i2	.000	**.181**	.000								
3. i3	.000	−.028	**−.118**	.000							
4. i4	.000	**−.118**	**−.299**	**.246**	.000						
5. i5	.000	**.106**	**.446**	−.098	**−.294**	.000					
6. i6	.000	.045	−.044	**−.142**	.056	**.232**	.000				
7. Cheating	.000	.017	.049	−.015	.002	−.009	−.012	.000			
8. Moral capital	.000	−.036	.072	−.017	.013	.023	−.008	.000	.000		
9. Immoral capital	.000	.012	−.099	.023	.018	−.036	.001	.000	.000	.000	
10. Ability	.000	**−.162**	**.305**	**.224**	**.103**	.067	−.087	−.002	.000	.000	.000
Moderate goal condition											
1. i1	.000	.000									
2. i2	.000	.071	.000								
3. i3	.000	−.031	−.010	.000							
4. i4	.000	−.046	**−.212**	**.239**	.000						
5. i5	.000	−.054	**.300**	−.060	**−.165**	.000					
6. i6	.000	**.136**	−.058	**−.206**	−.038	**.201**	.000				
7. Cheating	.000	.029	−.086	.057	−.006	**−.101**	.046	.000			
8. Moral capital	.000	−.014	.068	.000	−.026	.038	−.018	.000	.000		
9. Immoral capital	.000	.030	−.031	.013	−.035	−.040	.041	.000	.000	.000	
10. Ability	.000	−.071	**.348**	.094	−.100	**−.223**	**−.151**	.001	.000	.000	.000
Difficult goal condition											
1. i1	.000	.000									
2. i2	.000	.001	.000								
3. i3	.000	−.073	−.025	.000							
4. i4	.000	−.050	−.081	**.187**	.000						
5. i5	.000	−.068	**.256**	.093	**−.215**	.000					
6. i6	.000	**.228**	−.072	**−.186**	−.061	**.131**	.000				
7. Cheating	.000	.019	.004	.089	−.054	.024	**−.129**	.000			
8. Moral capital	.000	−.006	.010	.004	−.013	.028	−.003	.000	.000		
9. Immoral capital	.000	−.021	−.067	.058	.021	−.025	−.058	.000	.000	.000	
10. Ability	.000	**.178**	**−.108**	−.093	−.010	**.295**	**−.411**	−.005	.000	.000	.000

Note. i represents an item of the German Moral Disengagement about Cheating scale (GMDCS). Absolute correlation residuals > .10 are highlighted in bold font. n(easy, moderate, difficult) = 299, 291, 288.

Table I.7

SEM 2: Sample Covariance-Variance Matrix and Mean Values in Impossible Order Differentiated by Goal Difficulty Level

Variable	*M*	1	2	3	4	5	6	7	8	9	10
Easy goal condition											
1. i1	−0.932	2.512									
2. i2	1.310	0.632	2.336								
3. i3	−1.395	1.102	0.605	2.191							
4. i4	−1.711	0.803	0.431	1.151	2.001						
5. i5	1.296	0.796	0.810	0.746	0.591	2.691					
6. i6	−0.820	1.171	0.584	0.694	0.761	0.828	3.012				
7. Cheating	0.044	0.000	0.003	−0.003	−0.026	0.014	−0.015	0.069			
8. Moral capital	0.337	−0.009	−0.012	−0.034	0.001	0.040	−0.023	−0.005	0.223		
9. Immoral capital	0.330	−0.080	−0.078	−0.060	−0.143	−0.169	−0.131	0.006	−0.111	0.221	
10. Ability	4.701	0.116	0.321	−0.077	−0.073	−0.207	0.037	−0.017	0.053	0.010	4.142
Moderate goal condition											
1. i1	−0.925	2.693									
2. i2	1.342	0.300	1.801								
3. i3	−1.442	0.708	0.364	2.260							
4. i4	−1.651	1.111	0.158	1.017	2.200						
5. i5	1.185	0.811	0.420	0.698	0.672	2.466					
6. i6	−0.938	0.852	0.171	0.455	0.605	0.280	2.619				
7. Cheating	0.229	−0.055	−0.020	−0.015	−0.070	0.091	−0.021	0.608			
8. Moral capital	0.342	−0.033	−0.073	−0.088	−0.061	0.002	−0.038	0.024	0.225		
9. Immoral capital	0.325	−0.059	−0.005	−0.045	−0.083	−0.074	−0.133	0.014	−0.111	0.219	
10. Ability	4.486	0.100	0.015	0.328	0.162	0.054	0.391	−0.067	0.015	−0.018	3.613
Difficult goal condition											
1. i1	−0.814	3.083									
2. i2	1.355	0.668	2.064								
3. i3	−1.434	1.008	0.423	2.473							
4. i4	−1.597	1.018	0.450	1.524	2.406						
5. i5	1.162	1.056	0.787	0.915	0.714	2.936					
6. i6	−0.934	1.084	0.484	0.984	0.980	0.727	2.875				
7. Cheating	0.597	0.068	0.267	0.245	0.256	0.269	0.154	2.723			
8. Moral capital	0.334	−0.004	−0.022	−0.096	−0.087	−0.102	0.016	0.056	0.223		
9. Immoral capital	0.338	−0.104	−0.099	−0.015	−0.029	−0.058	−0.005	−0.015	−0.113	0.224	
10. Ability	4.607	−0.223	0.047	−0.171	−0.138	−0.174	−0.191	−0.079	−0.013	0.009	3.639

Note. i represents an item of the German Moral Disengagement about Cheating scale (GMDCS). n(easy, moderate, difficult) = 294, 292, 290.

Table I.8

SEM 2: Correlation Residuals in Impossible Order Differentiated by Goal Difficulty Level

Variable	*M*	1	2	3	4	5	6	7	8	9	10
Easy goal condition											
1. i1	.000	.000									
2. i2	.000	.002	.000								
3. i3	.000	.033	−.041	.000							
4. i4	.000	**−.133**	**−.136**	**.191**	.000						
5. i5	.000	−.010	**.322**	−.081	**−.134**	.000					
6. i6	.000	**.263**	.035	**−.238**	−.056	**.125**	.000				
7. Cheating	.000	.005	.006	.002	−.022	.018	−.011	.000			
8. Moral capital	.000	.002	−.005	−.022	.012	.049	−.013	−.004	.000		
9. Immoral capital	.000	.034	−.009	.057	−.041	−.081	−.032	.006	.000	.000	
10. Ability	.000	**.145**	**.338**	−.047	−.047	**−.185**	.062	.000	.000	.000	.000
Moderate goal condition											
1. i1	.000	.000									
2. i2	.000	.001	.000								
3. i3	.000	**−.178**	**.104**	.000							
4. i4	.000	.041	**−.156**	.086	.000						
5. i5	.000	.099	**.210**	.077	−.078	.000					
6. i6	.000	**.213**	−.017	−.100	−.066	**−.168**	.000				
7. Cheating	.000	−.049	−.019	−.010	−.064	.095	−.017	.000			
8. Moral capital	.000	.026	−.056	−.037	.000	.043	−.001	.024	.000		
9. Immoral capital	.000	.020	.018	.024	.000	−.018	−.083	.014	.000	.000	
10. Ability	.000	.097	.014	**.325**	**.159**	.052	**.389**	−.001	.000	.000	.000
Difficult goal condition											
1. i1	.000	−.004									
2. i2	.000	**.206**	−.001								
3. i3	.000	**−.138**	**−.160**	−.006							
4. i4	.000	−.091	**−.114**	**.125**	−.005						
5. i5	.000	**.288**	**.397**	−.053	**−.222**	−.002					
6. i6	.000	**.258**	.064	−.058	−.027	.030	−.003				
7. Cheating	.000	**−.155**	**.154**	−.036	−.016	.080	−.049	.001			
8. Moral capital	.000	.061	.011	−.014	−.008	−.048	.075	.055	.000		
9. Immoral capital	.000	−.070	−.082	.028	.013	−.029	.026	−.015	.000	.000	
10. Ability	.000	**−.226**	.045	**−.175**	**−.142**	**−.177**	**−.194**	−.029	.000	.000	.000

Note. i represents an item of the German Moral Disengagement about Cheating scale (GMDCS). Absolute correlation residuals > .10 are highlighted in bold font. n(easy, moderate, difficult) = 294, 292, 290.

Table I.9

SEM 3: Sample Covariance-Variance Matrix and Mean Values in Conventional Order Differentiated by Sex

Variable	*M*	1	2	3	4	5	6	7	8	9	10	11	12
Female													
1. i1	−1.009	2.797											
2. i2	1.257	0.592	2.228										
3. i3	−1.494	1.066	0.420	2.284									
4. i4	−1.707	0.837	0.337	1.225	2.259								
5. i5	1.174	0.634	0.722	0.722	0.548	2.446							
6. i6	−1.166	1.116	0.476	0.841	0.810	0.874	2.866						
7. Cheating	0.343	0.085	0.048	0.110	−0.024	0.013	0.044	1.800					
8. Moral capital	0.330	−0.044	0.061	−0.016	−0.011	0.038	−0.050	−0.026	0.221				
9. Immoral capital	0.336	−0.070	−0.114	−0.078	−0.083	−0.125	−0.075	0.025	−0.111	0.223			
10. Difficult goal	0.354	−0.004	−0.007	0.002	−0.016	−0.019	0.001	0.112	−0.007	−0.002	0.229		
11. Moderate goal	0.328	−0.032	0.012	−0.048	−0.007	−0.003	−0.072	−0.025	0.004	0.013	−0.116	0.221	
12. Ability	4.662	0.058	−0.014	0.038	0.082	0.008	−0.248	−0.033	−0.006	−0.015	0.028	0.003	3.892
Male													
1. i1	−0.743	3.047											
2. i2	1.380	0.612	2.152										
3. i3	−1.386	1.067	0.500	2.542									
4. i4	−1.626	1.044	0.139	1.183	2.462								
5. i5	1.542	0.965	0.647	0.784	0.351	2.350							
6. i6	−0.605	1.096	0.194	0.707	0.921	0.744	3.173						
7. Cheating	0.147	0.094	−0.029	0.075	0.104	0.007	0.050	0.622					
8. Moral capital	0.326	−0.006	0.014	−0.003	−0.032	−0.006	0.024	−0.018	0.220				
9. Immoral capital	0.323	−0.107	−0.105	−0.040	−0.076	−0.055	−0.092	0.048	−0.106	0.219			
10. Difficult goal	0.284	−0.013	0.018	−0.019	−0.023	−0.019	0.058	0.066	0.012	0.001	0.204		
11. Moderate goal	0.335	0.012	0.037	0.019	0.045	0.046	−0.088	−0.013	−0.008	−0.022	−0.095	0.223	
12. Ability	4.584	−0.147	0.488	0.133	−0.135	0.106	−0.171	−0.083	0.100	−0.054	0.047	−0.007	4.518

Note. i represents an item of the German Moral Disengagement about Cheating scale (GMDCS). n(female, male) = 536, 334.

Table I.10

SEM 3: Correlation Residuals in Conventional Order Differentiated by Sex

Variable	*M*	1	2	3	4	5	6	7	8	9	10	11	12
Female													
1. i1	.000	.000											
2. i2	.000	.096	.000										
3. i3	.000	−.006	**−.119**	.000									
4. i4	.000	**−.110**	**−.140**	**.194**	.000								
5. i5	.000	−.084	**.361**	−.060	**−.142**	.000							
6. i6	.000	**.201**	.015	**−.155**	−.070	**.207**	.000						
7. Cheating	.000	.019	.014	.038	−.088	−.035	−.018	−.001					
8. Moral capital	.000	−.031	.067	−.002	.002	.047	−.038	.000	.000				
9. Immoral capital	.000	.022	−.069	.021	.004	−.059	.010	.000	.000	.000			
10. Difficult goal	.000	−.007	−.009	−.002	−.019	−.021	−.002	−.001	.000	.000	.000		
11. Moderate goal	.000	−.024	.017	−.039	.002	.003	−.064	−.001	.000	.000	.000	.000	
12. Ability	.000	.047	−.019	.026	.071	.000	**−.259**	.000	.000	.000	.000	.000	.000
Male													
1. i1	.000	.000											
2. i2	.000	.079	.000										
3. i3	.000	**−.116**	.039	.000									
4. i4	.000	−.033	**−.280**	**.252**	.000								
5. i5	.000	.098	**.309**	.034	**−.332**	.000							
6. i6	.000	.079	**−.202**	**−.174**	**.119**	.099	.000						
7. Cheating	.000	.013	−.061	.004	.040	−.044	−.011	.000					
8. Moral capital	.000	.000	.016	.003	−.027	−.002	.029	.000	.000				
9. Immoral capital	.000	−.011	−.068	.043	.000	.005	−.020	.000	.000	.000			
10. Difficult goal	.000	−.009	.019	−.015	−.019	−.017	.061	.000	.000	.000	.000		
11. Moderate goal	.000	−.003	.031	.006	.033	.036	−.099	.000	.000	.000	.000	.000	
12. Ability	.000	**−.148**	**.487**	**.132**	**−.135**	**.105**	**−.171**	.000	.000	.000	.000	.000	.000

Note. i represents an item of the German Moral Disengagement about Cheating scale (GMDCS). Absolute correlation residuals > .10 are highlighted in bold font. n(female, male) = 536, 334.

Table I.11

SEM 3: Sample Covariance-Variance Matrix in Impossible Order Differentiated by Sex

Variable	*M*	1	2	3	4	5	6	7	8	9	10	11	12
Female													
1. i1	−0.936	2.695											
2. i2	1.346	0.571	2.076										
3. i3	−1.396	0.897	0.554	2.293									
4. i4	−1.649	0.947	0.394	1.387	2.196								
5. i5	1.087	0.928	0.727	0.929	0.747	2.800							
6. i6	−0.996	0.884	0.336	0.648	0.783	0.695	2.681						
7. Cheating	0.367	0.019	0.108	0.110	0.049	0.169	0.034	1.580					
8. Moral capital	0.344	−0.033	−0.048	−0.085	−0.067	−0.044	−0.033	0.023	0.226				
9. Immoral capital	0.316	−0.059	−0.075	−0.057	−0.073	−0.110	−0.090	0.002	−0.109	0.216			
10. Difficult goal	0.340	−0.020	0.048	0.017	0.018	0.050	0.004	−0.034	0.002	0.001	0.225		
11. Moderate goal	0.339	0.030	0.001	−0.005	0.029	−0.014	−0.023	0.131	0.010	−0.007	−0.115	0.224	
12. Ability	4.645	−0.040	0.121	0.029	0.035	−0.138	0.112	−0.118	0.028	−0.006	−0.070	0.033	3.926
Male													
1. i1	−0.808	2.860											
2. i2	1.314	0.468	2.068										
3. i3	−1.481	1.006	0.298	2.333									
4. i4	−1.667	1.058	0.261	0.955	2.216								
5. i5	1.439	0.784	0.583	0.554	0.507	2.464							
6. i6	−0.728	1.262	0.549	0.820	0.778	0.412	3.070						
7. Cheating	0.151	0.029	0.046	−0.004	0.088	0.062	0.062	0.442					
8. Moral capital	0.324	0.011	−0.018	−0.059	−0.021	0.028	0.011	0.025	0.219				
9. Immoral capital	0.362	−0.124	−0.034	−0.005	−0.105	−0.095	−0.095	0.010	−0.117	0.231			
10. Difficult goal	0.324	0.005	−0.079	−0.046	−0.028	−0.113	−0.040	0.003	0.001	−0.008	0.219		
11. Moderate goal	0.317	0.026	0.019	0.002	0.003	−0.021	0.016	0.048	−0.019	0.020	−0.103	0.217	
12. Ability	4.519	0.080	0.141	0.028	−0.103	−0.020	0.067	0.024	0.005	0.014	0.018	−0.056	3.609

Note. i represents an item of the German Moral Disengagement about Cheating scale (GMDCS). n(female, male) = 561, 312.

Table I.12

SEM 3: Correlation Residuals in Impossible Order Differentiated by Sex

Variable	*M*	1	2	3	4	5	6	7	8	9	10	11	12
Female													
1. i1	.000	−.001											
2. i2	.000	**.125**	.000										
3. i3	.000	**−.119**	−.026	−.002									
4. i4	.000	−.031	**−.165**	**.115**	−.002								
5. i5	.000	**.187**	**.305**	−.033	**−.181**	−.001							
6. i6	.000	**.262**	−.019	**−.159**	.005	**.106**	−.001						
7. Cheating	.000	−.057	.065	.010	−.047	.097	−.027	.001					
8. Moral capital	.000	.024	−.016	−.012	.003	.009	.011	.017	.000				
9. Immoral capital	.000	.005	−.038	.027	.008	−.048	−.039	.006	.000	.000			
10. Difficult goal	.000	−.018	.049	.020	.020	.052	.006	.001	.000	.000	.000		
11. Moderate goal	.000	.031	.001	−.003	.031	−.012	−.022	.001	.000	.000	.000	.000	
12. Ability	.000	−.029	**.127**	.043	.049	**−.128**	**.121**	.002	.000	.000	.000	.000	.000
Male													
1. i1	.000	−.006											
2. i2	.000	−.045	−.001										
3. i3	.000	−.053	−.080	−.003									
4. i4	.000	−.035	**−.130**	**.150**	−.004								
5. i5	.000	.033	**.314**	.000	−.064	−.002							
6. i6	.000	**.113**	**.138**	−.027	−.096	**−.189**	−.004						
7. Cheating	.000	−.049	.018	−.062	.028	.021	−.001	.000					
8. Moral capital	.000	.029	−.012	−.046	−.008	.037	.025	.031	.000				
9. Immoral capital	.000	−.015	.005	.075	−.022	−.038	−.008	.005	.000	.000			
10. Difficult goal	.000	.000	−.081	−.050	−.032	**−.116**	−.044	−.002	.000	.000	.000		
11. Moderate goal	.000	.031	.021	.006	.007	−.018	.020	.001	.000	.000	.000	.000	
12. Ability	.000	.092	**.146**	.037	−.093	−.013	.077	.002	.000	.000	.000	.000	.000

Note. i represents an item of the German Moral Disengagement about Cheating scale (GMDCS). Absolute correlation residuals > .10 are highlighted in bold font. n(female, male) = 561, 312.