



**IE UNIVERSIDAD**

**TESIS DOCTORAL / DOCTORAL  
DISSERTATION**

Ensayos sobre Ética, Juicios y Toma de Decisiones

Essays on Ethics, Decision Making and Judgment

Konstantina Tzini

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Doctoral Thesis Advisors: Dr. Kriti Jain & Dr. Matthias Seifert

*To my parents, Olga and Polychronis*

## **ABSTRACT**

The current thesis examines individual decision making and judgment in the domain of ethics and proposes an intervention to curb intentions to act unethically. Drawing from the idea that automatic processes largely prevail in our moral decision making and judgment, the first chapter examines one intervention – consequential reflection – and its effect on moral decision making and judgment. In four studies, I show that consequential reflection – based on the unpacking of consequences of indulging in unethical behavior – curbs intentions to indulge in unethical behavior but also results in harsher judgments of others’ unethical behavior. Different forms of unpacking the consequences of unethical behavior are examined and the mechanism through which consequential reflection operates is explored. Performance evaluation, an important contextual factor for employees, is the focus of the second chapter. In particular, I examine the effects of a popular system, relative performance evaluation, on exacerbating temptation to behave unethically as well as on expecting that other people will. In three studies I test those effects, while in two other studies I test the effectiveness of consequential reflection – introduced in the first chapter – within the context of relative performance evaluation. Finally, in the third chapter, I present three studies to examine the boundary conditions of consequential reflection and its effect on unethical behavior. I show that the preferred individual decision making style as well as the magnitude of rewards, play a role in the effectiveness of consequential reflection. Moreover, I compare consequential reflection with another popular intervention, honor codes.

## RESUMEN

La presente tesis examina la toma de decisiones y el juicio individuales en el campo de la ética y propone una intervención para frenar las intenciones de actuar de forma poco ética. En base a la idea de que los procesos automáticos prevalecen ampliamente en nuestra toma de decisiones y juicio morales, el primer capítulo examina una intervención – la reflexión consecuente – y su efecto en la toma de decisiones y el juicio morales. En cuatro estudios, muestro que la reflexión consecuente – basada en el desembalaje de consecuencias de comportarse de forma poco ética – frena las intenciones de caer en comportamientos poco éticos pero también da como resultado juicios más severos sobre el comportamiento poco ético de los demás. Se examinan diferentes formas de desembalar las consecuencias del comportamiento poco ético, y se explora el mecanismo mediante el que funciona la reflexión consecuente. La evaluación del desempeño, factor contextual importante para los empleados, es el foco del segundo capítulo. Particularmente, examino los efectos de un sistema popular, la evaluación del desempeño relativo, sobre la tentación exacerbada de comportarse de forma poco ética, así como sobre esperar que lo hagan otros. En tres estudios pongo a prueba esos efectos, mientras que en otros dos analizo la efectividad de la reflexión consecuente – introducida en el primer capítulo – en el contexto de la evaluación del desempeño relativo. Finalmente, en el tercer capítulo, presento tres estudios para examinar las condiciones marco de la reflexión consecuente y su efecto sobre el comportamiento poco ético. Muestro que el estilo de toma de decisiones individual preferido y la magnitud de las recompensas influyen en la efectividad de la reflexión consecuente. Además, comparo la reflexión consecuente con otra intervención popular, los códigos de honor.

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## Table of Contents

Introduction.....	1
Introducción.....	5
References.....	10
<i>Chapter 1: Consequential Reflection in Unpacking Unethical Behavior: Morality is in the Details.....</i>	<i>13</i>
1.1 Introduction.....	14
1.2 Automaticity and Unethical Behavior.....	16
1.3 Consequential Reflection: Unpacking the Decision to Indulge in Unethical Behavior.....	18
1.4 Studies Overview.....	21
1.5 Study 1: Cheating in the Exam.....	22
1.6 Study 2: Drug-safety Test.....	24
1.7 Study 3: Different Referents of the Consequences and Exploratory Mechanism.....	26
1.8 Study 4: Legal Judgment.....	31
1.9 General Discussion.....	33
References.....	37
Appendix A.....	43
Tables and Figures.....	48
<i>Chapter 2: Unethical Behavior under Relative Performance Evaluation: Evidence and Remedy.....</i>	<i>51</i>
2.1 Introduction.....	52
2.2 Relative Performance Evaluation.....	57

2.3 Study 1: Expectations about Other’s Unethical Behavior.....	60
2.4 Study 2: Actual Unethical Behavior.....	63
2.5 Consequential Reflection as a Remedy.....	68
2.6 Study 3: Consequential Reflection as a Remedy.....	71
2.7 Study 4: Judgment of Others.....	75
2.8 General Discussion.....	78
References.....	85
Appendix B.....	94
Figures and Tables.....	100
<i>Chapter 3: Boundary Conditions for Consequential Reflection as a Remedy to Unethical Behavior.....</i>	<i>105</i>
3.1 Introduction.....	106
3.2 Rational-Intuitive Decision Making Styles and Consequential Reflection.....	108
3.3 Study 1: Rational-Intuitive Decision making Styles.....	109
3.4 Honor Codes and Consequential Reflection.....	112
3.5 Study 2: Honor Codes and Consequential Reflection.....	113
3.6 Magnitude of Rewards.....	117
3.7 Study 3: Magnitude of Rewards.....	117
3.8 General Discussion.....	119
References.....	123
Appendix C.....	126
Tables and Figures.....	129
Conclusions.....	130

Conclusiones.....131

## **INTRODUCTION**

The research presented hereby, intends to enhance the understanding of the causal factors affecting decision making and judgment, specifically focusing in the domain of ethics, and to provide practical interventions in response. The three chapters examine influences to ethical judgment and decision making – lying on individual reasoning as well as on contextual factors – and propose implementable interventions, taking into account important boundary conditions.

Ethics, long concerned as the domain of philosophers tracing back to Plato's Republic and Aristotle's Nicomachean Ethics, has seen a burgeoning academic interest in the last decades especially focusing on behavioral ethics and ethical behavior in organizations (for reviews, see Bazerman & Sezer, 2016; Moore & Gino, 2015; Treviño, Weaver, & Reynolds, 2006). Drawing on those reviews, I briefly summarize the evolution of research in the domain of ethics and situate the framework the current study draws upon.

Early research in ethical behavior adopted a Kantian, rationalist approach in describing moral behavior, highlighting the role of individuals' control and cognition over their moral acts. Kohlberg's (1969) influential moral development theory, suggests that ethical reasoning evolves in stages (two stages at each of the preconventional, conventional, and principled level) as an individual's moral reasoning becomes more sophisticated over time. Rest (1986), extended Kohlberg's model, suggesting that ethical decision making and behavior involve moral awareness, moral judgment, moral intent, and finally, moral behavior. Building on Kohlberg's moral development theory, researchers started highlighting the role of the situation – apart from individual differences in moral reasoning – as a determinant of ethical behavior. Treviño's person-situation

interactionist model (1986), suggests that the individual's cognitive moral development interacts with individual variables (ego strength, field dependence, and locus of control) and situational variables (arising from the characteristics of the work, the immediate job context, and the organizational culture). Jones, developed an issue-contingent model (1991) highlighting the role of the issue's moral intensity (magnitude of consequences, social consensus, probability of effect, temporal immediacy, proximity, and concentration of effect) on ethical behavior. Importantly, although not the focus of his model, Jones (1991) also discussed the possible role of cognitive biases in the recognition of a moral issue and consequently on moral decision making.

Offering a distinct account from the rationalist tradition, Haidt (2001) theorized on the primacy of automatic, intuitive moral judgments. In his social intuitionist model, Haidt (2001) argues that moral judgments are based on quick, automatic evaluations and that reasoning and reflection serve for post-hoc rationalization of the (previously intuitive) moral judgments.

Recent research refers to "bounded ethicality" (Chugh, Banaji, & Bazerman, 2005), due to which people indulge in unethical behaviors that are inconsistent with their preferred ethics. More generally, a key idea from research on behavioral ethics is that unethical behavior largely occurs automatically outside of an individual's conscious awareness (e.g., Chugh & Kern, 2016; Kern & Chugh, 2009; Reynolds, 2006; Reynolds, Leavitt, & DeCelles, 2010; Sonenshein, 2007).

Recognizing that both intuitive and rational processes can come into play in moral judgments, Greene, reviews a series of supporting evidence of the dual-process theory in moral judgment, according to which "characteristically deontological judgments (i.e.

ones justified in terms of rights, duties, etc) are preferentially supported by automatic emotional responses, while characteristically consequentialist judgments (i.e. ones justified by impartial cost-benefit reasoning) are preferentially supported by conscious reasoning and allied processes of cognitive control” (p.699, 2014).

The current research, draws from the field of behavioral ethics and examines the role of automaticity in moral judgment and decision making, as well as the room for interventions based on more reflective reasoning. Moreover, the role of situational factors and individual differences is also examined. Those are the specific focus of each of the three chapters, as outlined below.

The first chapter, draws upon research on bounded ethicality (e.g., Chugh et al., 2005), systematic biases, and automatic processes that largely govern moral decision making and judgment. Responding to the call for intervening mechanisms to reduce unethical behavior in general and in the workplace specifically (e.g., Moore & Gino, 2013; 2015), I build upon support theory (Tversky & Koehler, 1994) to propose one such intervention – consequential reflection.

The second chapter focuses on an important contextual factor, performance evaluation. Relative performance evaluation, popular in the business and academic world, and its effects on exacerbating temptation to behave unethically are studied. The aim is to bring a behavioral light on the prevalent economic view regarding relative performance evaluation (Connelly, Tihanyi, Crook, & Gangloff, 2014). The comparative and competitive nature of relative performance evaluation is theorized as an important driver of unethical behavior. Accordingly, the intervention of consequential reflection –

introduced in the first chapter – is examined within the context of relative performance evaluation.

The third chapter, delves into the boundary conditions of consequential reflection and its effects on unethical behavior. Examining individual differences mapping on dual process theory (Evans & Stanovich, 2013; Stanovich & West, 2000) and establishing the unique mechanism through which consequential reflection operates, allows for better theoretical grounding of this intervention. Here, practical boundary conditions are tested as per the application of consequential reflection.

The three chapters share a common focus on ethics, decision making and judgment and a common methodological approach. In all studies, experimental designs are used, allowing for causal links to be established and for interventions to be properly tested.

Apart from the scholarly interest and relevance the topics of this research present, they are also of central interest to each individual decision maker, to managers which are responsible for taking important decisions also influencing other people, and to organizations that ultimately deal with individuals as stakeholders. Thus, this research aspires to contribute to a better understanding of ethical decision making and judgment and to also serve for reducing unethical behaviors in organizations and everyday life.

## INTRODUCCIÓN

La siguiente investigación tiene como propósito mejorar el entendimiento de los factores causales que afectan a la toma de decisiones y juicio, enfocándose principalmente en el campo de la ética, y proporcionar intervenciones prácticas a modo de respuesta. Los tres capítulos examinan las influencias que pesan sobre el juicio ético y la toma de decisiones – dependiendo tanto de razonamientos individuales como de factores contextuales – y proponen intervenciones implementables, tomando en consideración la importancia de los límites personales.

La ética, considerada dominio de filósofos desde la República de Platón y la ética nicomáquea de Aristóteles, es objeto de un creciente interés académico en las últimas décadas, principalmente con un enfoque en la ética del comportamiento y la ética de organizaciones (ver Bazerman y Sezer, 2016; Moore y Gino, 2015; Treviño, Weaver, y Reynolds, 2006). En base a esos estudios, hago un breve resumen de la evolución de la investigación en el campo de la ética y presento el esquema sobre el cual se basa el trabajo actual.

En el pasado, las investigaciones dentro del campo de la ética del comportamiento adoptaron un enfoque kantiano para describir el comportamiento moral, destacando el papel del control individual y del proceso cognitivo del propio individuo acerca de sus actos morales. La influyente teoría del desarrollo moral de Kohlberg (1969) propone que el razonamiento ético evoluciona en etapas (con dos estadios en cada uno de los niveles preconvencional, convencional y postconvencional) al ir evolucionando con el tiempo el razonamiento moral del individuo. Rest (1986) expandió el modelo de Kohlberg al proponer que la toma de decisiones y el comportamiento ético implican la conciencia

moral, el juicio moral, la motivación moral y, finalmente, el comportamiento moral. Al desarrollar la teoría del desarrollo moral de Kohlberg, los investigadores comenzaron a destacar el papel que juega la situación – aparte de las diferencias individuales de razonamiento moral – como determinante del comportamiento ético. El modelo interaccionista de persona-situación de Treviño (1986) propone que el desarrollo cognitivo moral del individuo interactúa con variables individuales (la fortaleza del ego, campo de dependencia y punto de control) y variables situacionales (que surgen de las características del trabajo, del contexto de trabajo inmediato y de la cultura organizacional). Jones desarrolló un modelo “contingente del asunto” (1991) en el que destaca el papel que juega la intensidad moral del tema (la magnitud de las consecuencias, el consenso social, la probabilidad de efecto, la inmediatez temporal, la proximidad y la concentración de efecto) en el comportamiento ético. Es notable que, aunque no sea el enfoque de su modelo, Jones (1991) también trató el posible papel de los sesgos cognitivos en el reconocimiento de un asunto moral y, en consecuencia, en la toma moral de decisiones.

Con un planteamiento alternativo a la tradición racionalista, Haidt (2001) teorizó sobre la primacía de los juicios morales automáticos e intuitivos. En su modelo intuicionista social, Haidt (2001) sostiene que los juicios morales se basan en evaluaciones rápidas y automáticas y que el razonamiento y la reflexión sirven para una racionalización post-hoc de los juicios morales a los que ya se había llegado de modo intuitivo.

Investigaciones recientes hacen referencia a la “eticidad limitada” (Chugh, Banaji y Bazerman, 2005), según la cual las personas ejecutan comportamientos no éticos que

contradican sus éticas personales. En términos más generales, un concepto clave en la investigación de la ética del comportamiento señala que el comportamiento poco ético suele darse de forma automática, al margen de la percepción consciente (por ej. Chugh y Kern, 2016; Kern y Chugh, 2009; Reynolds, 2006; Reynolds, Leavitt, y DeCelles, 2010; Sonenshein, 2007).

Al reconocer que en los juicios morales pueden entrar en juego tanto los procesos intuitivos como los racionales, Green analiza una serie de pruebas que apoyan la teoría del proceso dual del juicio moral, teoría según la cual los “juicios característicamente deontológicos (o sea, aquellos que se justifican en cuanto a derechos, deberes, etc.) obedecen principalmente a respuestas emocionales automáticas, mientras que los juicios consecuencialistas (es decir, aquellos que se justifican por un razonamiento imparcial de coste-beneficio) se apoyan principalmente en razonamientos conscientes y en los procesos aliados de control cognitivo” (p.699, 2014).

La investigación actual se basa en el campo de la ética del comportamiento y estudia el papel que juega la automaticidad en el juicio moral y en la toma de decisiones, además de la posibilidad de efectuar intervenciones basadas en un razonamiento más reflexivo. También examina el papel de factores situacionales y de diferencias individuales. Estos son los enfoques específicos de cada uno de los tres capítulos, como se describe más adelante.

El primer capítulo se basa en la investigación de la eticidad limitada (por ej. Chugh et al., 2005), los sesgos sistemáticos y los procesos automáticos que gobiernan, en gran medida, la toma moral de decisiones y juicios. Respondiendo a la necesidad de mecanismos de intervención para reducir los comportamientos no éticos en general y,

específicamente, en el lugar de trabajo (por ej., Moore y Gino, 2013; 2015), me baso en la teoría del apoyo (Tversky y Koehler, 1994) para proponer una intervención en concreto: la reflexión consecuenta.

El segundo capítulo se centra en un factor contextual importante, la evaluación del desempeño. Se estudia la evaluación del desempeño relativo, tan popular en los ámbitos empresarial y académico, y el consiguiente aumento de la tentación de actuar de una manera no ética. El objetivo es añadir una perspectiva conductual a la visión económica prevalente respecto a la evaluación del desempeño relativo (Connelly, Tihanyi, Crook y Gangloff, 2014). La naturaleza comparativa y competitiva de la evaluación del desempeño relativo se considera, en teoría, un impulsor importante del comportamiento no ético. Por consiguiente, se examina la intervención de la reflexión consecuenta – presentada en el primer capítulo – dentro del contexto de la evaluación del desempeño relativo.

El tercer capítulo profundiza en las condiciones límite de la reflexión consecuenta y sus efectos en el comportamiento no ético. El análisis de la forma en que las diferencias individuales afectan a la teoría del proceso dual (Evans y Stanovich, 2013; Stanovich y West, 2000) y el establecimiento de un mecanismo único con el que opera la reflexión consecuenta, permiten alcanzar una mejor base teórica para esta intervención. Aquí se examinan las condiciones límite prácticas en la aplicación del consecuencialismo racional.

Los tres capítulos comparten un enfoque común en la ética, en la toma de decisiones y juicio, así como en el planteamiento metodológico. En todos los casos estudiados se utilizan diseños experimentales, lo cual permite establecer nexos causales

y comprobar la efectividad de las intervenciones.

Además del interés académico y de la relevancia de los temas que presenta esta investigación, estos asuntos resultan de gran interés para todos aquellos encargados de tomar decisiones, para gerentes que deben tomar decisiones que afectan a otras personas y para organizaciones que tratan, en última instancia, con individuos interesados. Por lo tanto, esta investigación aspira a contribuir a un mayor entendimiento de la ética del juicio y la toma de decisiones, además de servir para reducir las instancias de comportamiento no ético en las organizaciones y en la vida diaria.

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## Chapter1

### Consequential Reflection in Unpacking Unethical Behavior: Morality is in the Details

#### ABSTRACT

People largely rely on automatic evaluations in moral decision-making. I draw on bounded ethicality (Chugh, Banaji, & Bazerman, 2005) and support theory (Tversky & Koehler, 1994) and demonstrate that unpacking unethical behavior helps reduce individuals' willingness to indulge in it. I suggest *consequential reflection* – unpacking unethical behavior into its related consequences – as an intervention to curb intentions to act unethically. Consequential reflection made participants less willing to indulge in unethical behavior, both when consequences were pre-specified (Study 1) as well as when they were self-generated (Study 2), more so when the consequences generated referred to other people (Study 3). Finally, in Study 4, I explore the effects of consequential reflection in judgments concerning other people's unethical behavior. Those studies provide encouraging results for the potential of consequential reflection as a way to reduce unethical behavior.

## Introduction

Recall the headlines a few years ago, after the collapse of financial institutions in the 2008 crisis. Stock markets plunging, ordinary people losing their life savings, economies shaking, and golden paid employees found in the street without a job or facing jail. Ex-post, many argued on a foreseeable chain of consequences stemming from rogue trading and human greed.

But let us step back and look at one individual rogue trader in action. There are at least two ways to explain and judge the trader's behavior. One could be that the trader was conscious of the possible negative consequences and intentionally decided to continue with her trading acts for the benefit of her self-interest (e.g., an important bonus or a promotion). On the other hand, it is possible that the trader knew there was something not right in deciding to do certain trading acts, yet such trading acts were common and usually nothing went wrong afterwards.

What really went through the trader's mind? Did the trader consciously unpack the consequences of her actions or was it more of an automatic decision? In which case would the trader be more prone to indulge in unethical behavior (rogue trading)? Were a judge to examine this case in a court of law, would the unpacking of consequences affect her judgment?

With those questions in mind, I shift my attention to people's decision to indulge in unethical behavior as well as their judgment about the unethical behavior of others. Rogue trading, is one of the many unethical behaviors that are part of everyday reality. From slight cheating in a school exam, to hiding income from the tax authorities, to

financial, business, and political scandals, there is a wide array of unethical behaviors that tempt individuals and trouble businesses and even whole nations.

I hereby use a broad definition of what constitutes an unethical decision, proposed by Jones, as one that is “either illegal or morally unacceptable to the larger community” (p.367, 1991). I use the terms (im)moral and (un)ethical interchangeably throughout the paper, subscribing to the efficiency argument of understanding those terms as referring to the same domain (Moore & Gino, 2015). Research has shown that individuals have an inherent need to think of themselves as moral (Aquino & Reed, 2002) but frequently behave otherwise. In this paper, I propose a technique – *consequential reflection* – to reduce willingness to indulge in unethical behaviors. Consequential reflection is a prompt to reflect on the unpacked consequences of the moral decision at hand.

The paper is organized as follows. Drawing on research on bounded awareness (e.g., Chugh & Bazerman, 2007) and bounded ethicality (e.g., Chugh, et al., 2005), I discuss how systematic biases and reliance on automatic processes largely govern moral decision making and judgment. Next, I turn to the remedy side, answering the call for intervening mechanisms to reduce unethical behavior (e.g., Moore & Gino, 2013) and propose consequential reflection as a way of de-biasing and reducing unethical decision making. I draw from support theory (Tversky & Koehler, 1994) to show how unpacking – making an implicit description more explicit by breaking a category down to its constituents – central to consequential reflection, can be used to override automatic responses and result to more ethical decision making.

I then present the results of four experimental studies, whereby consequential reflection resulted in less willingness to indulge in unethical behavior, both when the

consequences were pre-specified (Study 1) as well as when participants were asked to self-generate them (Study 2). Furthermore, I explore the role of the referent of those self-generated consequences, as well as the mechanism of unpacking, in Study 3. In Study 4, I test the effect of consequential reflection on judgments about others' unethical behavior. Finally, I conclude with the limitations as well as the practical implications of those studies.

### **Automaticity and Unethical Behavior**

Human judgment and decision making has been shown to involve heuristics and biases (Tversky & Kahneman, 1974), thereby challenging our self-views as rational decision makers that make optimal choices (Simon, 1955; 1979) and demonstrating how affect overrides rational thought (Epstein, 1994; Loewenstein, Weber, Hsee, & Welch, 2001). Under this umbrella of humans as boundedly rational, Chugh and Bazerman (2007), suggested the term bounded awareness to describe our selectivity as well as our failures to see and use accessible and perceivable information during the decision making process.

Bringing the above to the domain of ethics, scholars have noted that poor ethical decisions have the same causes as poor decisions in general, referring to “bounded ethicality” (e.g., Chugh, et al., 2005; Kern & Chugh, 2009), due to which people indulge in unethical behaviors without their own awareness. Indeed, automatic evaluations are prevalent behind moral judgments (Haidt, 2001), more so in cases of conflict of interest where own self-interest is involved (Moore & Loewenstein, 2004; Moore, Tetlock, Tanlu, & Bazerman, 2006). Thus, we fail to recognize our less than perfect or even inconsistent ways of making decisions when moral components are included.

In fact, there are surprisingly many ways an – otherwise ethical – person is tempted to indulge in unethical behavior. Normal people have found themselves from simply cheating in reporting their performance in lab experiments (e.g., Gino, Ayal, & Ariely, 2009) to falling in inconsistent moral judgments (see, Greene, Sommerville, Nystrom, Darley, & Cohen, 2001, on trolley and footbridge dilemmas) to actually accepting the idea of giving electroshocks to others (Milgram, 1974). It is striking to also note how people are found to engage in unethical behaviors for reasons other than the rational explanation of self-interest: unethical behavior may come in response to unfairness (e.g., Gino & Pierce, 2009); when cheating benefits others apart from the self (e.g., Gino, Ayal, & Ariely, 2013), especially when it benefits the group that the individuals [want to] belong to (e.g., Thau, Derfler-Rosin, Pitesa, Mitchell, & Pillutla, 2014); when a medium helps justify the unethical behavior (e.g., Mazar, Amir, & Ariely, 2008) or simply because of contagion, when individuals are exposed to the unethical behavior of others (e.g., Gino, Ayal, & Ariely, 2009).

Apart from our own indulgence, we are equally bounded when judging unethical behaviors of other people (e.g., Gino, Moore, & Bazerman, 2009). For example, we are more lenient towards unethical behaviors when the outcome is nevertheless positive by chance or when the victims are not identifiable (Gino, Shu, & Bazerman, 2010), when the consequences have already been suffered rather than expected (Caruso, Gilbert, & Wilson, 2008) as well as when “the dirty job” is done through an intermediary rather than the focal actor (Paharia, Cassam, Greene, & Bazerman, 2009).

It is apparent from the above discussion that morality is dynamic and malleable and that people regularly fail to resist or even to recognize the temptation to act

dishonestly (e.g., Bazerman & Gino, 2012). This research, based on the premise of malleable ethics of individuals, looks at them as a coin with two sides. Up to now, I discussed the negative side of this malleability, showing how contextual factors and subtle influences can easily fuel our decisions to act unethically and affect our judgments of others' unethical behavior. Next, I turn to the positive side, tapping on the room for intervention that malleable ethics leave open, by introducing consequential reflection as a technique of de-biasing moral decision making.

### **Consequential Reflection: Unpacking the Decision to Indulge in Unethical Behavior**

Beyond pointing to fallacies and inconsistencies due to our malleable ethics, there is a growing number of studies on the ways of de-biasing decision-making in the domain of ethics. Increasing moral saliency (e.g., Shu, Gino, & Bazerman, 2011), drawing attention to moral standards (e.g., Mazar et al., 2008), as well as providing reasoning and time for reflection (e.g., Paxton, Ungar, & Greene, 2012), seem to make a difference in moral decisions. Joining the efforts of de-biasing moral decision-making, I hereby suggest that consequential reflection – unpacking unethical behavior into its related consequences – can have a positive effect in reducing people's willingness to indulge in it.

Note here that consequential reflection is different from existing interventions such as providing time for reflection (Paxton et al., 2012) or asking people to carefully contemplate or have a conversation with others (Gunia, Wang, Huang, Wang, & Murnighan, 2012). Consequential reflection is a specific prompt to think of both positive and negative consequences of the decision to be taken, thus focusing the reflection towards a specific direction of joint evaluation of consequences. Importantly, it is not

directive in the sense of pointing towards the “right” decision or towards one type of consequences, allowing the freedom of choice in the decision.

My proposition follows from research in support theory (Rottenstreich & Tversky, 1997; Tversky & Koehler, 1994), a descriptive theory of subjective probability judgment, stating that probabilities are not assigned to events themselves but rather to descriptions of events. In other words, the more explicit the description of the event, the more the support it summons. Unpacking, as used in one of Tversky and Koehler's classic studies (1994), serves exactly that purpose: making an implicit description of a focal event (e.g. death by natural causes) more explicit, by breaking a category down to its constituents (e.g. death by heart disease, cancer or other natural causes), thus increasing the support assigned to it, and thereby increasing the judged probability of the focal event.

Although demonstrated in probability and frequency judgments, support theory can extend to any multifaceted task or decision under uncertainty. For example, unpacking one's group into separate individual collaborators has been shown to reduce people's tendency to claim more than their fair share of credit in group efforts (Savitsky, Van Boven, Epley, & Wight, 2005). Task unpacking helps reduce the planning fallacy (Kruger & Evans, 2004) while time unpacking reduces overconfident forecasting (Jain, Mukherjee, Bearden, & Gaba, 2013). Applied to evaluative judgments, unpacking in the form of more detailed descriptions has been shown to produce more extreme evaluations (Van Boven & Epley, 2003). Finally, unpacking positive alternatives, leads to enhanced performance in a negotiation context (Haselhuhn, 2015). In a nutshell, unpacking has been shown to increase salience and accessibility of the various components of the focal event (Tversky & Koehler, 1994) and thereby altering judgments related to it.

The decision to indulge in unethical behavior is a multifaceted one that involves a variety of outcomes, motives, and actions, and with far-reaching consequences that go beyond the person indulging in it. I hereby argue that unpacking related consequences the unethical behavior might entail, as suggested in consequential reflection, de-biases the largely automatic processes that prevail in moral decision making. Using the logic of support theory, unpacking the description of an unethical behavior into its related consequences can result in enhanced availability and salience of information that would otherwise remain implicit. Below, I argue how consequential reflection works to reduce individuals' – otherwise less elaborate – decisions to act unethically, in naturally stringent contexts where self-interest is directly involved.

Imagine an individual, tempted to indulge in unethical behavior for the benefit of self-interest. This is an implicit description of the indulgence, as only one focal consequence is highlighted. Moreover, as this consequence (benefit of self-interest) is intuitively appealing, the individual is not actively motivated to unpack the decision to indulge in more explicit relevant consequences of the unethical behavior. A more deliberate mode that would allow for the accessibility of corrective thoughts (Kahneman, 2003) would require the person to reflect upon and consciously evaluate immediate and future costs and benefits, to self and to others. Such information might be available but not readily accessible or it might not be available in the first place. The unpacking of consequences, through consequential reflection, serves to make such related consequences of unethical behavior more explicit and thereby more salient (Tversky & Koehler, 1994) in the individual's mind. Stated formally:

*Hypothesis 1. Consequential reflection, by unpacking unethical behavior into related consequences, will result in less willingness to indulge in such behavior than when the unethical behavior is not unpacked.*

Furthermore, I expect consequential reflection to work in similar ways when someone is to make a judgment regarding another person's unethical behavior.

Recall the opening example of the rogue trader case examined in the court. Individuals tend to believe that self-interest and financial rewards exert a greater influence on the behavior of other people (Miller & Ratner, 1998), are quick to recognize other's conflicts of interest (Chugh et al., 2005) and just knowing that someone has an incentive to cheat they expect him to do so (Tenbrunsel, 1998). Unpacking rogue trading into its related consequences, should serve to make the unethical behavior more accessible to the mind of the judges and jury and – given the above – to magnify the trader's unethical behavior and result in more extreme judgments. Importantly, such judgments are decisive for the innocence or guilt of the prosecuted individual and the corresponding punishment (if any). Stated formally, I expect that:

*Hypothesis 2. Consequential reflection, by unpacking unethical behavior into related consequences, will result in more extreme judgments in the form of harsher punishment than when the unethical behavior is not unpacked.*

## **Studies Overview**

In the following sections, I present four studies to test those hypotheses. Studies 1 and 2, are designed to test hypothesis 1. Study 1, compares participants' willingness to indulge in unethical behavior for the sake of their self-interest, depending on whether the consequences (pre-specified) of that behavior are presented to them unpacked or

not. Study 2 replicates study 1, yet in a context where unethical behavior has more serious consequences and this time asking participants to reflect and self-generate possible consequences. Study 3, explores the role of the referent of the self-generated consequences and offers a preliminary suggestion on the mechanism behind the effect of unpacking the consequences of unethical behavior (not formally hypothesized). Study 4, tests hypothesis 2, in the realm of judgment about other people's unethical behavior and the resulting magnitude of punishment this behavior should entail.

### **Study 1: Cheating in the exam**

In this study, I seek to explore whether the willingness of participants to indulge in unethical behavior differs, depending on whether the behavior is presented to them unpacked into the consequences related to it.

#### *Method*

##### Participants

112 participants of Indian origin (68% male, 30.4 years old and with 4.4 years of work experience, on average) were recruited through Mechanical Turk to participate in this study. The number of studies conducted with participants on online platforms, such as Amazon's Mechanical Turk, is growing and so is the evidence about the overall similarity of those participants to the general population and the benefits of these platforms to researchers (Goodman, Cryder, & Cheema, 2013; Paolacci, Chandler, & Ipeirotis, 2010). Participants were informed that they would need to respond to a hypothetical scenario for which they were paid a participation fee.

##### Materials and Procedure

Participants were randomly assigned to one of the two conditions, *Control* (56 participants) and *Consequential reflection* (56 participants). Everyone read the same base-scenario that is used for the control condition, describing a situation of taking an important exam in which they do not know the answers. Participants had to decide whether to copy from the person next to them in order to pass the exam, which serves as the operationalization of decision to indulge in unethical behavior. In the consequential reflection condition, participants additionally read three consequences that cheating in an exam might have (apart from passing the exam, which they already know as a consequence and have to decide upon it). After reading the scenario that corresponds to the condition they are assigned to (please see Appendix for the scenario description), all participants were requested to answer the following question on a scale from 0 (=not at all) to 100 (=certainly): “How likely are you to copy in the exam?”

### *Results*

To test hypothesis 1, an independent samples T-test was conducted to compare the willingness to indulge in unethical behavior for participants in the control versus the consequential reflection condition. Willingness to indulge was significantly lower in the consequential reflection condition ( $M = 29.63$ ,  $SD = 33.95$ ) than in the control condition ( $M = 47.84$ ,  $SD = 33.65$ ), [ $t(110) = 2.85$ ,  $p = 0.005$ ,  $\eta^2 = 0.068$ ]. The results are graphically illustrated in figure 1.

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Insert Figure 1 about here  
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### *Discussion*

In accordance with hypothesis 1, participants in the consequential reflection condition were significantly less willing to indulge in unethical behavior, here operationalized as cheating in the exam. In this study, participants were provided with possible related negative consequences of unethical behavior in the consequential reflection condition, which might have created a demand effect in their responses. In study 2, I account and correct of such possible effects, by letting participants self-generate the possible consequences of indulging in unethical behavior.

### **Study 2: Drug-safety Test**

In study 2, I seek to test whether consequential reflection as self-generated unpacking of related consequences, reduces the willingness of participants to indulge in unethical behavior. I let participants reflect on possible consequences themselves, with no restriction imposed by the experimenter's suggestion. Thus, with this study I aim to overcome possible demand effects and let to the participants' discretion whether they should place their focus on positive, negative, or both positive and negative consequences. Also, I let them reflect on consequences related to themselves or to others around them (see study 3 for further elaboration on this point). I present participants with a scenario related to a safety test for a newly developed drug, asking them to decide whether they would be willing to manipulate the data on the safety test.

#### *Method*

##### Participants

195 participants of US origin (42% male, 34.1 years old and with 9.9 years of work experience, on average) were recruited online on Mechanical Turk to participate in this study and were paid a participation fee.

## Materials and Procedure

Participants were randomly assigned to one of the two conditions: *Control* (102 participants) and *Consequential reflection* (93 participants). They all read the same base-scenario that is used for the control condition, describing a situation whereby they are supposedly working for a pharmaceutical company and have conducted a drug-safety test for a new drug they are developing. The results of the safety test are marginally unfavorable for launching the drug to the market. They have to decide whether or not to manipulate the data, in order to present a result favorable to launching the drug. The data manipulation is the operationalization of decision to indulge in unethical behavior. In the consequential reflection condition, after reading the base-scenario, participants are reminded that the data manipulation in this case might have consequences for the self as well as for others and are requested to write down four such possible consequences. After reading the scenario that corresponds to the condition they are assigned to (please see Appendix for the scenario description), all participants are requested to answer the following question on a scale from 0 (=not at all) to 100 (=certainly): “How likely are you to go for the data manipulation?”

## Results

To test hypothesis 1, an independent samples T-test was conducted to compare the willingness to indulge in unethical behavior for participants in the control versus the consequential reflection condition. Willingness to indulge was significantly lower in the consequential reflection condition ( $M = 9.43$ ,  $SD = 16.73$ ) than in the control condition ( $M = 17.86$ ,  $SD = 26.60$ ); [ $t(193) = 2.67$ ,  $p = 0.008$ ,  $\eta^2 = 0.039$ ]. Results are graphically illustrated in Figure 2.

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Insert Figure 2 about here  
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Out of the 354 consequences participants self-generated, the vast majority (96%) were negative ones, while few participants (4%) referred to positive consequences from data manipulation. Of the negative consequences, 69% referred to an impact on others, while 31% to the self (respectively 42% and 58%, for the positive consequences). Some sample statements can be found in Table 1.

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Insert Table 1 about here  
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## *Discussion*

In further support of hypothesis 1, consequential reflection reduced willingness to indulge in unethical behavior. This study also shows that the mere request to elaborate further on the consequences, was enough to highlight the negative consequences of unethical behavior and thus decrease its lure<sup>1</sup>. Next, I seek to investigate whether focusing participants in different referents changes the effect of consequential reflection on reducing willingness to indulge in unethical behavior.

### **Study 3: Different Referents of the Consequences and Exploratory Mechanism**

In this study, participants are asked to engage in consequential reflection with a specific focus on consequences of unethical behavior only for the self, only for others, or

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<sup>1</sup> I conducted a replication of study 2, with an Indian sample. The results were in the same direction: participants in the *consequential reflection* condition ( $N = 76$ ,  $M = 34.32$ ,  $SD = 33.73$ ) condition showed less willingness to manipulate the data than the participants in the *control* ( $N = 54$ ,  $M = 46.22$ ,  $SD = 35.07$ ) condition; [ $t(128) = 1.95$ ,  $p = 0.053$ ,  $\eta^2 = 0.026$ ].

for both the self and others. Moreover, I explore whether the change in likelihood of positive and negative consequences materializing accounts for (mediates) the effect of consequential reflection on willingness to indulge in unethical behavior.

### *Method*

#### Participants

201 participants (44% male,  $M_{\text{age}} = 36.19$ ) of U.S. origin completed the study through Amazon's Mechanical Turk.

#### Materials and Procedure

Participants assumed the role of a university professor close to tenure evaluation. The professor had a manuscript under review in a top journal and the tenure decision depended heavily on this manuscript getting published. The analysis of additional data requested by the journal was not providing desirable results. The professor/participant was facing the dilemma to manipulate the data or not (please see Appendix for the scenario description). Participants were randomly assigned to one of the four conditions: control, consequences for both self and others (both), consequences for self only (you), and consequences for others only (other). In all but the control condition, participants were asked to list down possible consequences (both positive and negative) of their decision affecting – depending on the condition they were assigned to – both themselves and others around them (both), only themselves (you), or only others (other) before providing their likelihood to manipulate the data (from 0 = not at all, to 100 = certainly).

After the likelihood judgment all participants rated the chance (from 0 to 100) of negative consequences actually happening and the chance (from 0 to 100) of positive consequences actually happening. I combined those in the consequences chance index

(chance of negative consequences minus chance of positive consequences) that could range from -100 to 100. Positive (negative) scores imply that the participants perceive higher (lower) chance of negative consequences materializing. To assess any difference between conditions regarding the justifiability of the decision to manipulate the data in this situation, or the ownership of the decision, I included additional measures: participants rated the justifiability of the decision to manipulate the data in this decision situation (from 0=not at all justifiable to 100=absolutely justifiable) and also rated the extent (from 0=not at all to 100=absolutely) to which they felt accountable for the decision, responsible for the decision, and owned the decision. I combined those in the ownership index ( $\alpha = 0.93$ ).

### *Results*

A univariate analysis of variance (ANOVA) using likelihood judgment as the dependent variable and the four experimental conditions as a between-subjects factor demonstrated a marginally significant main effect of condition  $F(3, 197) = 2.49, p = 0.06$ . Pairwise comparisons revealed that the mean likelihood was lower in the both condition ( $M = 22.40, SD = 26.00$ ) compared to control ( $M = 30.31, SD = 30.77$ ),  $t(108) = 1.46, p = 0.15$ . The mean likelihood was lower in the you condition ( $M = 22.09, SD = 26.23$ ) compared to control  $t(103) = 1.47, p = 0.15$  and was lower in the other condition ( $M = 16.00, SD = 26.06$ ) compared to control  $t(108) = 2.64, p = 0.01$ . The differences in mean likelihood among the consequential conditions were non-significant. Thus, participants' likelihood to indulge in unethical behavior was mitigated through consequential reflection, regardless of whether the consequences referred to the self, to others or to both. Yet the lowest likelihood judgment occurred in the consequential condition where participants

were asked to reflect only on consequences on others. Results are graphically illustrated in Figure 3.

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Insert Figure 3 about here  
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Looking at the assessments of chance of negative and positive consequences materializing, the consequences chance index in the both condition ( $M = 4.85$ ,  $SD = 44.31$ ) was higher than in control condition ( $M = -11.65$ ,  $SD = 46.44$ );  $t(108) = 1.91$ ,  $p = 0.06$ . The consequences chance index was higher in the you condition ( $M = 10.07$ ,  $SD = 43.44$ ) compared to control  $t(103) = 2.43$ ,  $p = 0.02$  and was also higher in the other condition ( $M = 15.73$ ,  $SD = 45.04$ ) compared to control  $t(108) = 3.17$ ,  $p < 0.001$ .

Taking a closer look in the above differences in the consequences chance index, I assessed whether those results were driven by changes in the assessment of chance of positive or of negative consequences materializing. The chance of negative consequences was significantly different in the experimental conditions. Chance of negative consequences in the both condition ( $M = 62.25$ ,  $SD = 25.45$ ) was higher than in control condition ( $M = 49.35$ ,  $SD = 28.81$ );  $t(108) = 2.48$ ,  $p = 0.01$ . Chance of negative consequences was higher in the you condition ( $M = 64.77$ ,  $SD = 28.36$ ) compared to control  $t(103) = 2.87$ ,  $p = 0.01$  and was also higher in the other condition ( $M = 70.56$ ,  $SD = 25.02$ ) compared to control  $t(108) = 4.08$ ,  $p < 0.001$ . The differences in chance of negative consequences among the consequential conditions were non-significant. Regarding chance of positive consequences, no significant differences between conditions were found.

Regarding the ownership and justifiability of the decision, participants in all conditions provided high ratings of ownership of the final decision to manipulate the data (overall,  $M = 92.24$ ,  $SD = 15.19$ ) and low ratings of justification of data manipulation in the current decision situation (overall,  $M = 19.13$ ,  $SD = 26.29$ ). The only significant differences were in terms of ownership of the decision, which was higher in the both condition ( $M = 94.15$ ,  $SD = 17.38$ ) compared to control condition ( $M = 89.16$ ,  $SD = 15.01$ ),  $t(108) = 1.72$ ,  $p = 0.09$  and was also higher in the other condition ( $M = 95.33$ ,  $SD = 12.64$ ) compared to control  $t(108) = 2.13$ ,  $p = 0.04$ . Thus, in all conditions, participants seemed to be aware that themselves owned the final decision and that indulging in unethical behavior (data manipulation) is not justifiable in this situation. Those findings provide some evidence that, in the current decision situation, participants understood they had freedom of choice to indulge or not in unethical behavior.

In addition, I conducted a mediation analysis using the PROCESS macro (Hayes, 2013) model 4, with 10,000 bootstrapped confidence interval iterations. Three dummy variables were created, one for both, one for you, and one for other condition, with control condition as baseline. Both had a positive effect on (increased) consequences chance index  $b = 16.50$ ,  $SE = 8.78$ ,  $p = 0.06$ , you had a positive effect on consequences chance index  $b = 21.72$ ,  $SE = 8.96$ ,  $p = 0.02$ , and other had a positive effect on consequences chance index  $b = 27.37$ ,  $SE = 8.86$ ,  $p < 0.001$ . Consequences chance index had a negative effect on likelihood to indulge in unethical behavior  $b = -0.17$ ,  $SE = 0.05$ ,  $p < 0.001$ . The total effect of both on likelihood  $b = -7.91$ ,  $SE = 5.47$ ,  $p = 0.15$  was reduced to  $b = -5.04$ ,  $SE = 5.50$ ,  $p = 0.36$  upon introducing consequences chance index as a mediator. The total effect of you on likelihood  $b = -8.21$ ,  $SE = 5.67$ ,  $p = 0.15$  was reduced

to  $b = - 4.43$ ,  $SE = 5.56$ ,  $p = 0.43$  upon introducing consequences chance index as a mediator. The total effect of other on likelihood  $b = - 14.31$ ,  $SE = 5.47$ ,  $p = 0.01$  was reduced to  $b = - 9.54$ ,  $SE = 5.56$ ,  $p = 0.09$  upon introducing consequences chance index as a mediator. Consequences chance index had a robust indirect effect on likelihood to indulge in unethical behavior for both  $b = - 2.87$ ,  $SE = 1.69$ , 95%  $CI [- 6.98, - 0.20]$ , for you  $b = - 3.78$ ,  $SE = 1.83$ , 95%  $CI [- 8.54, - 0.98]$ , and for other  $b = - 4.77$ ,  $SE = 1.86$ , 95%  $CI [- 9.45, - 1.87]$ .

### *Discussion*

Although I cannot claim proper mediation since the direct effects in the above model are marginal to begin with, this analysis provides an indication of the following pattern: Consequential reflection – either by reflecting on consequences for oneself, for others, or both – raises the assessment of chance of negative consequences materialising (vis-à-vis chance of positive consequences materialising) and thus reduces the likelihood of indulging in unethical behavior. Next, I turn to judgment of other people's unethical behavior.

### **Study 4: Legal Judgment**

In this study, I wanted to test how consequential reflection can affect judgments of other peoples' unethical behavior, using a legal case scenario. Here, unethical behavior refers to attempt of murder. Most people in a jury may readily condemn such a behavior as strictly illegal. Although the distinction is not straightforward, as per the broad definition of unethical behavior used hereby, attempt of murder is also unethical as morally unacceptable. Using such an extreme case of unethical behavior, offers a stricter test of the effect of unpacking related consequences (versus not) of such behavior on judgment

and intention to punish. As stated in hypothesis 2, I expect that, under consequential reflection, other's unethical behavior would entail harsher judgments reflected in increased intentions to punish the behavior.

### *Method*

#### Participants

94 participants of Indian origin were recruited on Mechanical Turk to participate in this study (64% male, 52.9 years old and with 16.2 years of work experience, on average) and were paid a participation fee.

#### Materials and Procedure

Participants were randomly assigned to one of the two conditions: *Control* (47 participants) and *Consequential reflection* (47 participants). They all read the same hypothetical crime scenario that is used for the control condition, describing a husband's (Neil) attempt to murder his wife (Monica). In the consequential reflection condition, apart from the base-scenario, participants read the related consequences of the murder attempt in a way that those would be presented to the jury in a real court case (please see Appendix for the scenario description).

After reading the scenario corresponding to the condition they were assigned to, all participants were requested to answer the following question: "If you were part of the jury that was deciding on the punishment for Neil, what kind of sentence (years in jail, from 0 to 100) would you give?" Here I should stress that participants were allowed to give a sentence of 0 years, in case they thought Neil's behavior was not to be punished.

### *Results*

An independent samples T-test was conducted to test hypothesis 2, comparing the punishment participants in each of the experimental conditions suggested. This was the operationalization of how harsh their judgments would be regarding Neil's behavior. Punishment suggested was significantly higher in the consequential reflection condition ( $M = 45.94$ ,  $SD = 34.40$ ) than in the control condition ( $M = 32.04$ ,  $SD = 32.70$ ); [ $t(92) = 2.01$ ,  $p = 0.048$ ,  $\eta^2 = 0.052$ ]. Results are graphically illustrated in Figure 4.

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Insert Figure 4 about here  
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At the end of the survey, using an open-ended question format, participants were asked to share their thoughts on the case. Several referred to additional penalties, monetary fines, and compensation to Monica for the material damages, which should be imposed to Neil, on top of the jail time. Some also referred to Neil's need of psychiatric help, while others guessed and criticized the deeper reasons that led to the murder attempt.

### *Discussion*

In support of hypothesis 2, participants gave more extreme judgments in the form of harsher punishment of an unethical behavior of another person, when this behavior was presented to them unpacked.

### **General Discussion**

This paper began by reviewing the extant literature on bounded awareness and ethicality, and the ways to reduce unethical behavior. Using the notion of unpacking from support theory (Tversky & Koehler, 1994), I proposed consequential reflection as a

technique of de-biasing automatic decisions to indulge in unethical behavior. Studies 1 and 2, showed that consequential reflection reduced willingness to indulge in unethical behavior. Study 3 provided preliminary results regarding the effect of different referents of the self-generated consequences, as well as for the mechanism – assessment of chance of negative vis-à-vis positive consequences materializing – though which consequential reflection operates. Last, Study 4 showed that consequential reflection resulted in harsher judgment and intention to punish others' unethical behavior.

A caveat in all studies presented here is that I have tested for the intentions of people to indulge in or punish unethical behavior rather than testing actual behavior. Conducting laboratory-based or field-based studies that involve making participants actually indulge in unethical behavior is a challenging task. The main paradigm used in lab-based studies, is that of giving individuals the option to misrepresent their performance through a self-report (e.g., using the unsolvable matrices task as in Mazar et al., 2008, or the coin flipping task as in Bryan, Adams, & Monin, 2013). In such studies, where participants are typically paid a fee for participation and their anonymity is ensured, it is difficult to simulate the environment where their unethical behavior has consequences for others around them. Manipulating individuals to act unethically on field-based studies, on the other hand, may be a questionable practice itself. Nevertheless, curbing intentions to act unethically, is a crucial first step towards reducing unethical behavior.

Although not explicitly hypothesized, I found evidence that the act of deliberation – through self-generated consequential reflection – can reduce willingness to indulge in unethical behavior (Study 2). Furthermore, this result holds independent of the referent of those self-generated consequences (Study 3). Research in the de-biasing literature

(e.g., Arkes 1991; Larrick & Soll, 2006) has looked at different variants of this technique as a way to improve decision-making. For example, consider-the-opposite techniques (e.g., Lord, Lepper, & Preston, 1984) and counterfactual thinking strategies (e.g., Hirt & Markman, 1995; Hoch, 1985) make people consider previously overlooked information. One reason why self-unpacking of consequences might work, could be that producing one's own arguments as opposed to receiving a suggestion on them (e.g., provided from the experimenters, in Study 1), may be more powerful in engaging participants into more elaborate thinking or creating a pronounced sense of accountability on the decision. Last, it seems that consequential reflection – through unpacking – raises the assessment of probability of negative vis-à-vis positive consequences materializing. Those are interesting paths to explore, I believe, in the search of more effective ways of reducing unethical behavior.

This research provides practical suggestions to managers and generally to people making or influencing decisions that involve moral elements. The fast-paced and unbounded-achievement frame individuals and organizations find themselves operating under, quick decision making is often a rule. Moreover, the lure of using unethical means to achieve more and more (status, money, influence, etc.) is getting bigger. As many decisions demand ethical trade-offs, the consequences of which are not immediately obvious, visible, or predictable in the long-run, it may be worth examining the value of a more elaborate “second thought” – as consequential reflection suggests – in our moral decisions and judgments.

Although the power of consequential reflection seems attractive to use in managerial and everyday life, I wish to note that it is not the one-size-fits-all remedy. What

is important to bear in mind, are the limits and possible counter-effects of consequential reflection. It could be that too much consequential reflection is neither feasible nor desirable, and maybe ultimately not useful, when too frequently used: losing its effectiveness as an intervention due to being converted to a default mindset that transfers to other domains, where on the contrary it induces biases in decision-making (e.g., too much thought over simple decisions, or pronounced risk aversion).

Related, in Study 4, we saw that people in the consequential reflection condition were willing to give much harsher punishments for the same focal unethical behavior (attempt of murder). The scenario referred to the atrocious case of a murder, but certainly not all unethical behaviors are as grave or as immediately irreversible. Consequential reflection, then, may result into too harsh judgment and punishment, in different contexts.

I believe that the strength of consequential reflection lies in its simplicity, making it a quick and gentle nudge, easily usable in everyday life situations where unethical behavior is a tempting choice. Certainly, it is important to study how consequential reflection can be combined with other ways of de-biasing to provide a stronger process of reducing unethical behavior, offering interesting avenues for further research.

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## APPENDIX A

### Study 1 scenarios

#### *Control condition*

“Please read the following scenario and answer the question that follows:

You are about to take a multiple-choice test exam. If you pass the exam you will obtain a diploma that is important for your professional career. If you fail, you will not obtain the diploma. When you receive the question sheet, you feel that you do not know the answers to several questions. However, the person next to you has prepared well and knows most of the answers. You have to decide whether or not to look at that person’s answer sheet and copy the answers in order to pass the exam.”

#### *Consequential reflection condition*

“Please read the following scenario and answer the question that follows:

You are about to take a multiple-choice test exam. If you pass the exam you will obtain a diploma that is important for your professional career. If you fail, you will not obtain the diploma. When you receive the question sheet, you feel that you do not know the answers to several questions. However, the person next to you has prepared well and knows most of the answers. You have to decide whether or not to look at that person’s answer sheet and copy the answers in order to pass the exam.

Copying in an exam, not only has consequences for the person who indulges in it but also for others around him/her (i.e. other students, evaluator, etc). Some examples are:

- Being caught
- Free-riding on the effort of another person
- Presenting false information of one’s knowledge to the evaluator”

## **Study 2 scenarios**

### *Control Condition*

“Please read the following scenario and answer the question that follows:

You are working in the Research and Development department of a big pharmaceutical company. You have just finished analyzing the data on your pet project for a new drug's safety and you are about to present the results of your analysis. If the drug is considered safe, it will be launched to the market; if it is not considered safe it will not be launched. You have realized that 3 out of 100 data points cause the results to show that the drug is not safe.

You can manipulate those 3 data points and get significant results showing the drug is safe. You have to decide whether or not to go for the data manipulation in order to present that the drug is safe to be launched to the market.”

### *Consequential reflection Condition*

“Please read the following scenario and answer the question that follows:

You are working in the Research and Development department of a big pharmaceutical company. You have just finished analyzing the data on your pet project for a new drug's safety and you are about to present the results of your analysis. If the drug is considered safe, it will be launched to the market; if it is not considered safe it will not be launched. You have realized that 3 out of 100 data points cause the results to show that the drug is not safe.

You can manipulate those 3 data points and get significant results showing the drug is safe. You have to decide whether or not to go for the data manipulation in order to present that the drug is safe to be launched to the market.

Manipulating the data can not only have consequences for the person who indulges in it but also for others around him/her (i.e., colleagues, family, company, community, etc.) Could you think of and write some examples of such consequences?” (Provided space for 4 examples).

### **Study 3 scenarios**

#### *Control Condition*

You are an Assistant Professor of Biotechnology at a prestigious university in the US. Your tenure decision is coming up soon - which means after your performance appraisal, it will be decided whether you should be promoted to an Associate Professor level and also be given a permanent contract with the university. This is a big decision for any academic - all the years of hard work culminates into this decision. As you might know, developing and publishing new research is the biggest component of such tenure decisions. The university gives points for different kinds of publication based on the prestige of the journal. This year the school has decided to provide permanent contracts to a very small number of professors with as many publications in top journals. You have published several key articles in top journals of your field. You currently have one paper being considered for publication in the world's most respected journal *Science*. An article in this journal will surely seal the deal for you. However, the journal has asked you to provide additional data. You have just finished analyzing the data. You realize that 3 out of 100 data points cause problems in the results that you would like to have to support your article. Because the stakes are so high, you are thinking if you should manipulate those 3 data points and provide the required results. Of course, whatever you decide to do, there are both positive and negative consequences involved.

#### *Both [You] {Other} Condition*

Before answering, please reflect on the consequences (both positive and negative) of your decision, *both for yourself and for others around you [for yourself] {for other people around you}*. Could you list down a few that come to your mind?

## **Study 4 scenarios**

### *Control Condition*

“Please read the following hypothetical crime-related scenario carefully and answer the questions that follow.

Monica (age 29) and Neil (age 31) are both from India and have been married for more than a year now. As often is the case in India, their's was an arranged marriage. Both belonged to affluent families. However, before the marriage, Neil was in a relationship with another lady. Since his family did not agree to their alliance, Neil agreed to marry Monica. Even after a year of their marriage, Neil and Monica were unable to have a healthy married life. They had several communication issues and fought often. This situation was taking a toll on Neil's mental well-being, to the extent of him becoming a maniac. Not only that, Neil and Monica were living separately and Neil continued his affair with the other lady.

Later one day, police found Monica badly injured in her house. Her house was ransacked completely. Monica was immediately taken to the hospital and she is recovering well now. Police has caught Neil with most evidence pointing towards his involvement. According to the investigations, Neil got fed up with all the mess in his life and decided to kill her. He hoped that after that he could marry his girlfriend and live happily ever after. Police has charged Neil with intent of murder.”

### *Consequential reflection Condition*

“Please read the following hypothetical crime-related scenario carefully and answer the questions that follow.

Monica (age 29) and Neil (age 31) are both from India and have been married for more than a year now. As often is the case in India, their's was an arranged marriage. Both belonged to affluent families. However, before the marriage, Neil was in a relationship with another lady. Since his family did not agree to their alliance, Neil agreed to marry Monica. Even after a year of their marriage, Neil and Monica were unable to have a healthy married life. They had several communication issues and fought often. This situation was taking a toll on Neil's mental well-being, to the extent of him becoming a

maniac. Not only that, Neil and Monica were living separately and Neil continued his affair with the other lady.

Later one day, police found Monica badly injured in her house. Her house was ransacked completely. Monica was immediately taken to the hospital and she is recovering well now. Police has caught Neil with most evidence pointing towards his involvement. According to the investigations, Neil got fed up with all the mess in his life and decided to kill her. He hoped that after that he could marry his girlfriend and live happily ever after. Police has charged Neil with intent of murder. Police argued that in order to do so, he also violated foreign property (broke into foreign property as Monica was living in her own house), destroyed evidence, and ran away from the crime scene, leaving Monica badly injured but still alive.”

## FIGURES AND TABLES

**TABLE 1**

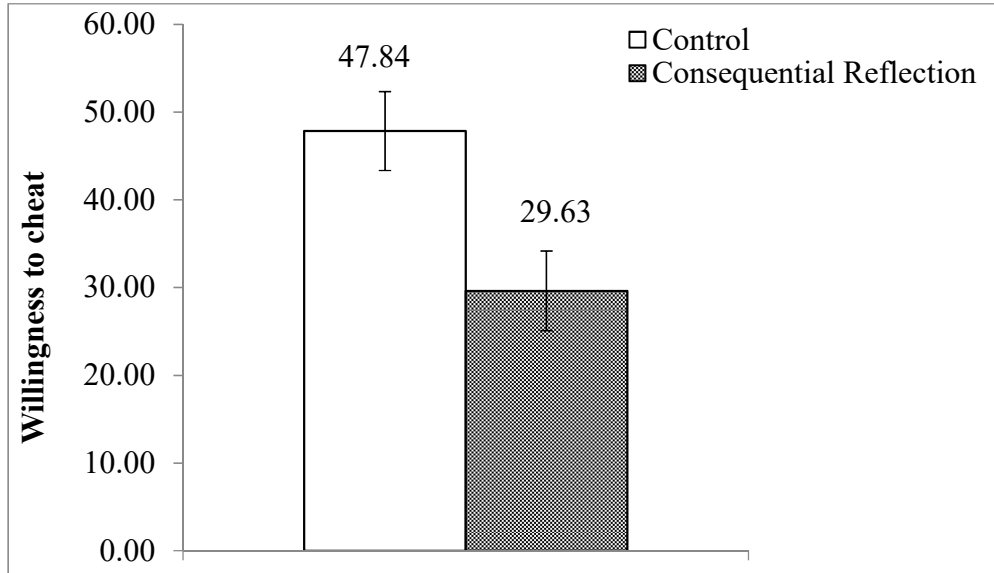
**Participants' Self-generated Consequences of Data Manipulation – Study 2**

Consequences of Data Manipulation	Participants' Statements / Indicative excerpts
<b>Negative to Self</b>	"Stress with significant other - loss of job & dishonesty"; "Negative impact on family and other relationships if people find out you falsified research"; "I could lose my job"; "I could be criminally liable"; "Loss of respect & trust"; "Guilt and shame for yourself"
<b>Negative to Others</b>	"If someone found out the company had been lying and manipulating data, the company and the colleagues would probably be less trusted by society and it would be bad for business"; "Doctors who prescribe the new drug may be sued if the drug is unsafe "; "The government or community may have to pay for victim care"; "People could die as a result"
<b>Positive to Self</b>	"Nobody could find out and I may get a raise"; "The company may praise you"
<b>Positive to Others</b>	"My company may earn profits"; "Manipulating the data will get the drug on the market faster, which would help people who need the drug as soon as possible"

**FIGURE 1**

**Mean Willingness to Cheat in the Exam – Study 1**

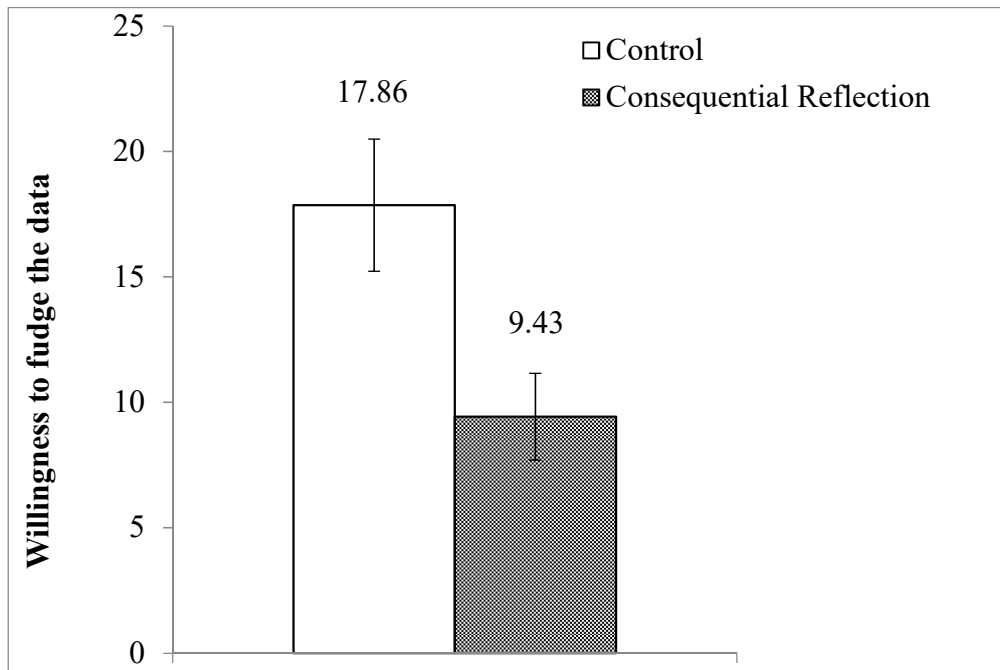
**(Error bars represent  $\pm$  Standard Error of Means)**



**FIGURE 2**

**Mean Willingness to Fudge the Data – Study 2**

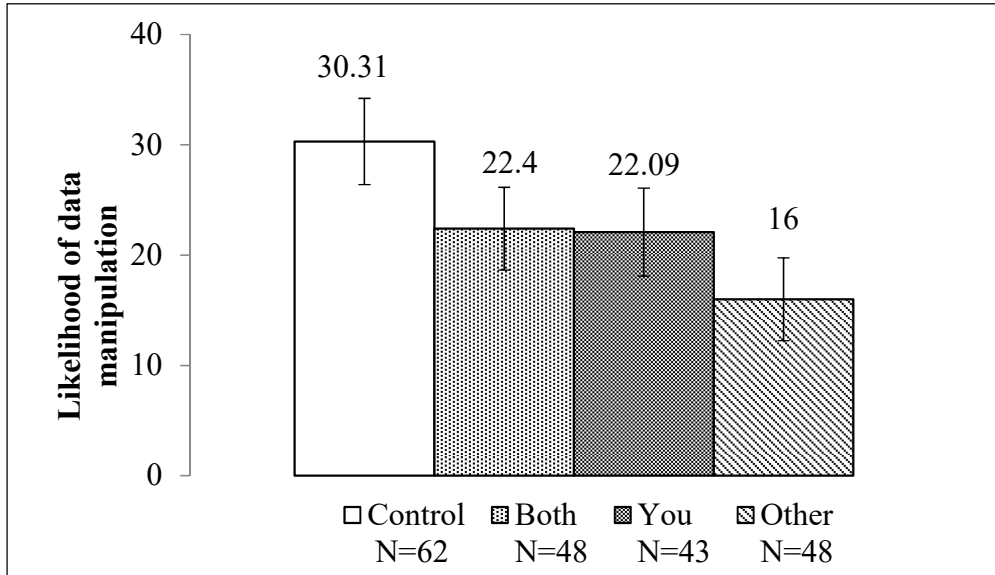
**(Error bars represent  $\pm$  Standard Error of Means)**



**FIGURE 3**

**Mean Likelihood of Manipulating the Data – Study 3**

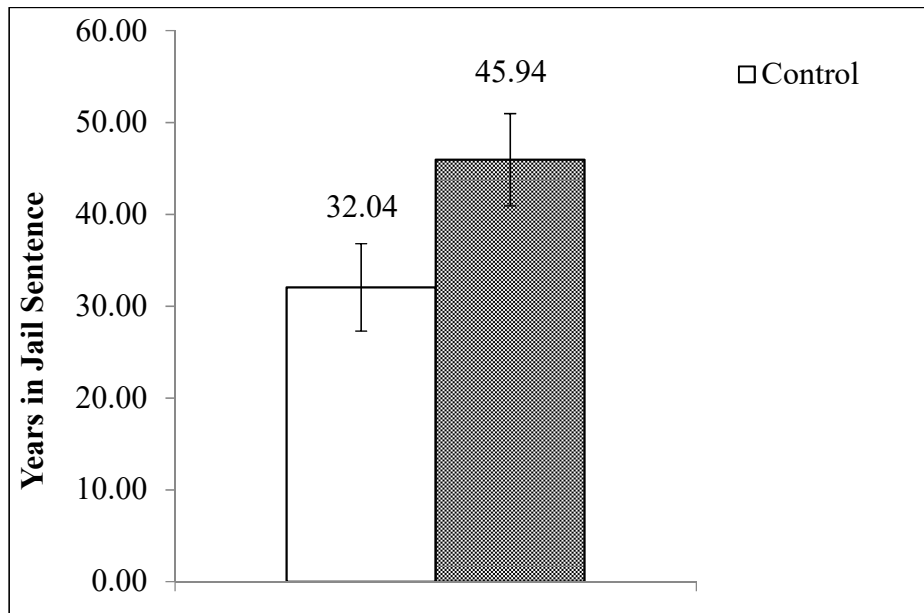
**(Error bars represent  $\pm$  Standard Error of Means)**



**FIGURE 4**

**Mean Punishment of Other's Unethical Behavior – Study 4**

**(Error bars represent  $\pm$  Standard Error of Means)**



## **Chapter 2**

### **Unethical Behavior under Relative Performance Evaluation: Evidence and Remedy**

#### **ABSTRACT**

Relative performance evaluation, wherein the performance of employees is evaluated relative to the performance of their peers, is popular within organizations. In this paper, four experimental studies are reported to explore the impact that such an evaluation system has on unethical behavior. I find that participants under relative performance evaluation expect others to be more likely to use unethical means (Study 1) and indulge more in unethical behavior themselves (Study 2). Drawing on these results, in Study 3 I test consequential reflection as a technique to reduce intentions of unethical behavior and also test for the mediating role of perceived risks and benefits. In Study 4, I test the effect of consequential reflection on expectations about others' unethical behavior. Overall, the paper provides evidence of moral side-effects of relative performance evaluation. Furthermore, keeping in mind the constraints and needs of practitioners, a simple intervention is suggested to curb tendencies towards unethical behavior.

## Introduction

Unethical behavior in the workplace is an important concern for organizations. Corporate scandals arising from employee misconduct often dominate the headlines and can result in significant consequences: the collapse of Lehman Brothers and Barings Bank, the Volkswagen emissions scandal (e.g., Wright, 2015), financial institutions fined billions of dollars for manipulating foreign currency exchanges (e.g., Binham & Arnold, 2015), and Wells Fargo scandal of sham accounts (e.g., Gray, 2016). A recent report by the Association of Certified Fraud Examiners identified more than 2,000 cases of occupational fraud between 2014 and 2015 that resulted in \$6.3 billion in losses (2016). The same report (p.68-70) attributed approximately 12% of these cases to excessive pressure towards performance and success. Furthermore, academia has suffered retractions of research papers due to non-replicable studies or non-tractable data (e.g., Carey, 2015) that have propelled debates about the side-effects of a tenure system fundamentally based on a fierce publication race.

Obviously, unethical behaviors – i.e., behaviors that are “either illegal or morally unacceptable to the larger community” (p.367, Jones, 1991) – within organizations differ in scale and magnitude. Irrespective of whether such behaviors result in full-blown scandals or inconsequential damage, there are important questions that require answers: why do these behaviors occur and what can organizations do to minimize their occurrence. Certainly, controlling for all possible individual and situational factors that could tempt employees to act unethically is a daunting task. This paper addresses one potential cause of unethical behavior that organizations can actually control – performance evaluation systems – and possibly resolve through behavioral interventions.

Performance evaluation serves many functions within an organization (Baron & Kreps, 1999; Cleveland, Murphy, & Williams, 1989) such as communicating values, monitoring the achievement of goals, understanding training and development needs, providing feedback, and forming the basis of compensation and career progression. Since performance evaluations hold employees accountable and are usually linked to some form of rewards, they may entail behaviors related to active manipulation on the part of employees (for a review, see Ferris, Munyon, Basik, & Buckley, 2008). Based on this and given the growing interest in reshaping performance management systems (Deloitte's Human Capital Trend survey, 2015), I suggest that unethical behavior is a critical yet an overlooked factor.

In the business world, one commonly used system of evaluating employees is relative performance evaluation which is known by various names such as vitality curve, forced rankings, stacking systems, and rank & yank. Under such systems – popularized by General Electric in the 1980's – fixed proportions of employees are categorized as top (e.g., 20%), mediocre (e.g., middle 70%), and low (e.g., bottom 10%) performers (see Figure 1 for a typical example). Often, top performers are disproportionately rewarded with big bonuses while the lowest performers are fired (Michaels, Hanfield-Jones, & Axelrod, 2001). Similarly, the bell-curve grading in an MBA classroom ensures that students are categorized and graded for their performance relative to peers without considering their absolute-level performance. Relative performance as a criterion has become common in other domains of everyday life as well: fortune 500 businesses, top 10 industry performers, country rankings on various indicators, three medal-winning slots in sports, top academic journal lists, and so on.

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Insert Figure 1 about here  
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Researchers and practitioners have debated the use of relative performance evaluation systems on the basis of efficiency and motivation benefits on the one hand and the problems created in terms of teamwork, morale, and injustice perceptions on the other (e.g., Lipman, 2012; Ignatius, 2015; Moon, Scullen, & Latham, 2016). The debate around it recently revived due to diametrically different corporate decisions making it to the news headlines: at a time when Yahoo endorsed it (Cohan, 2013), Microsoft abandoned it after receiving negative reactions from its employees (Ovide & Feintzeig, 2013). In this paper, I argue that relative performance evaluation can exacerbate unethical behavior. Whether directly tied to rewards or not, it can invite explicit comparison and competition amongst employees (Garcia & Tor, 2007) since objective outcomes of actors are opposed to one another (Kilduff, Galinsky, Gallo, & Reade, 2015). To this end, I specifically focus on unethical behavior in the context of *relative performance evaluation*.

Motivational and affective outcomes of relative performance evaluation and compensation systems have been studied (e.g., Berger, Harbring, and Silwka, 2013; Casas-Arce & Martínez-Jerez, 2009; Luffarelli, Gonçalves, & Stamatogiannakis, 2015). Extensive work has been done on related concepts such as tournaments (e.g., Backes-Gelner & Pull, 2013), forced distribution rating systems (e.g., Blume, Rubin, & Baldwin 2013; Schleicher, Bull, & Greene, 2009), and the relative percentile method (e.g., Goffin, Jelley, Powell, & Johnston, 2009). Tournament theory in Economics has advocated the

efficiency benefits of rank-based incentives for executives (e.g., Lazear & Rosen, 1981). Management scholars have since highlighted how tournament structures can affect individual performance, aggressiveness, and risk taking and have provided mixed results in terms of firm performance, cooperation, and innovation (see, Connelly, Tihanyi, Crook, & Gangloff, 2014, for a comprehensive review). My focus is neither on the specific optimal structures nor on the performance effects of such systems. Instead, I intend to complement the economic view with the missing behavioral perspective (Henderson & Fredrickson, 2001; Connelly et al., 2014) by highlighting the moral side-effects of what I broadly refer to as relative performance evaluation (hereafter RPE).

In addition to documenting the temptation for unethical behavior under RPE, I also propose a new remedy for this phenomenon. In many instances, organizations may not want to discard RPE for various reasons such as its effects on performance and rater leniency. For example, using a laboratory experiment where incentives were tied to ratings, Berger et al. (2013) showed that productivity increased under a forced distribution condition compared to an absolute rating condition. Research studies have shown that informing individuals about their relative standing increases performance even in situations where their tangible benefits were tied to absolute performance (Blanes i Vidal & Nossol, 2011) and regardless of whether such standings are private or made public (e.g., Tran & Zeckhauser, 2012). Furthermore, in contrast to an absolute performance evaluation system where managers might not make distinctions among performance levels of their employees even when those differences exist (e.g., Bretz, Milkovich, & Read, 1992), managers under RPE can be forced to do so. Therefore, this paper proposes and tests an intervention, *consequential reflection*, that may curb unethical

behavior among individuals subjected to RPE. Consequential reflection prompts individuals to acknowledge that they have the option to act in either an ethical or unethical way and to reflect on the consequences before making a decision. I show that this subtle and easily implementable intervention works by altering an individual's perceptions of risks and benefits involved in the moral decision they are presented with.

The rest of the paper is organized as follows. I begin by describing the interpersonally comparative and competitive context of RPE and discuss findings from the field of behavioral ethics related to judgments about others' ethical decision making and one's own actual behavior. I argue that RPE exacerbates unethical behavior and proceed to develop the first two hypotheses related to individuals' expectations about others' unethical behavior as well as their own behavior under RPE. I describe two studies thereafter. Study 1 investigates the influence of RPE on expectations about others' unethical behavior and Study 2 tests RPE's role in influencing individuals' unethical behavior. Although an exhaustive comparison of evaluation systems is beyond the scope of this study, in Studies 1 and 2 I compare RPE with two other performance evaluation systems: no evaluation and absolute performance evaluation.

Next, I outline why and how the technique of consequential reflection can reduce intentions of behaving unethically under RPE, as well as expectations that others will behave unethically under RPE. Here, I develop hypotheses 3 and 4 and describe the next two studies. Study 3 tests the consequential reflection intervention and the mediating mechanism through which it helps curb intentions to indulge in unethical behavior within the context of RPE. Study 4 tests the effect of consequential reflection on attenuating expectations of others' indulgence in unethical behavior. Finally, I conclude with a

discussion of our findings, managerial implications, limitations of the studies, and future research possibilities.

### **Relative Performance Evaluation**

Performance evaluation is a salient organizational procedure that allows management to communicate to employees what the organization values and how each employee fares on those valued outcomes (e.g., Cleveland et al., 1989). Along with motivating employees to perform in alignment with the employers' interests, evaluation systems (and the rewards attached to them) can lead to gaming and unwanted behavior on the employees' part (e.g., Baker, 1992; Ferris et al., 2008). What makes employees under RPE especially susceptible to engaging in unethical behavior are its inter-personal comparison and competition elements which increase the salience of one's self-interest as described next.

Social comparison theory (Festinger, 1954) proposed a unidirectional drive upwards that causes people to value better performance and indulge in competitive behavior as an action to protect their superiority when discrepancies in abilities or performance are highlighted. An upward social comparison of oneself to another who does better on an important dimension is especially painful (e.g., Tesser, 1988; Tesser & Smith, 1980) given that individuals are motivated to see themselves in a positive light and more so in comparison to others (e.g., Brown, 1986; Hoorens, 1993; Robins & Beer, 2001; Sedikides & Strube 1997). Performance evaluation on relative (rather than on absolute) terms can be expected to invite such interpersonal comparisons and increased unethical practices to advance self-interest. For example, research has shown that in situations involving interpersonal comparisons versus intrapersonal standards, individuals exhibited

increased tendencies towards tactical deception and cheating as well as a reduced inclination to share accurate information (Poortvliet, Anseel, Janssen, Van Yperen, & Van de Vliert, 2012; Van Yperen, Hamstra, & Van der Klauw, 2011).

Providing ranking information may provoke strong dysfunctional competition (Garcia, Tor & Gonzales, 2006; Garcia & Tor, 2007; Moon et al., 2016). It has been documented that competition stretches the ethical considerations and limits of people (Hegarty & Sims, 1978; Zahra, 1994) and intra-organizational competition has been theorized as a driver of employees' unethical behavior (e.g., see Kulik, O' Fallon, & Salimath, 2008, that used Enron as an example of competitive culture). In one experiment (Hoffman, Festinger, & Lawrence, 1954), after one of the three participants began scoring considerably well on a task, the other two began to act in ways to prevent the higher scorer from gaining additional points. Furthermore, there are often high stakes attached to the best performers in an RPE setting both in terms of monetary (e.g., bonuses) and non-monetary rewards (e.g. visibility, recognition, prestige, promotions). Since unethical behavior such as cheating and lying have been shown to increase with the magnitude of incentives (Gneezy, 2005; Gneezy, Rockenback, & Serra-Garcia, 2013), the context of RPE can further increase unethical behavior.

Related to judgments about other's unethical behavior, research demonstrates how people form lopsided negative views about others. People tend to associate unfair acts with others but fair ones with themselves (Messick, Bloom, Boldizar & Samuelson, 1985) and assume that others do not engage in positive or moral behavior as frequently as they themselves do (Allison, Messick, & Goethals, 1989). Moreover (as also discussed in Chapter 1), individuals more easily detect others' conflicts of interest and believe on

the heightened influence that self-interest, financial rewards, and incentives to cheat, create on other people (Chugh, Banaji, & Bazerman, 2005; Miller & Ratner, 1998; Tenbrunsel, 1998). The comparative, competitive, and heightened self-interest context of RPE would exacerbate expectations about others' indulgence in unethical behavior. Formally stated:

*Hypothesis 1. Relative performance evaluation exacerbates expectations about others' indulgence in unethical behavior.*

With respect to our own behavior, self-interest is known to influence our decisions (Moore & Lowenstein, 2004; Moore, Tanlu, & Bazerman, 2010) and may cause us to overlook our professional obligations and engage in unethical behavior (e.g., Moore, Tetlock, Tanlu, & Bazerman, 2006). However, since we also like to think of ourselves as more ethical than others (Epley & Dunning 2000; Tenbrunsel, 1998), we are quick to rationalize such transgressions in a variety of ways. For example, we often interpret outcomes that align with our self-interest as morally justifiable (Epley & Caruso, 2004), reconcile questionable behavior with our ethical goals through the process of moral disengagement (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996; Shu, Gino, & Bazerman, 2011), and selectively forget moral rules after breaking them (Shu & Gino, 2012). RPE's comparative and competitive context can elevate such self-interest and disregard for others. For example, in tournament settings, sabotaging a competitor can become a preferred strategy where such conduct is allowed (Charness, Masclet, & Villevall, 2014; Lazear 1989). In Berger et al. (2013), participants in the forced distribution condition were twice as likely as those in the absolute rating condition to sabotage others

when the option was available. Therefore, I expect that RPE will exacerbate the temptation to indulge in unethical behavior. Formally stated:

*Hypothesis 2. Relative performance evaluation exacerbates individuals' indulgence in unethical behavior.*

Next, I describe the first two studies. Study 1 tests hypothesis 1 on expectations about others' unethical behavior under RPE and Study 2 tests hypothesis 2 related to actual unethical behavior. In both studies, two other conditions (control and absolute performance evaluation) are used as comparison points. In all studies, I use an experimental design in order to directly manipulate the main variable of interest. A major benefit of using such an experimental manipulation is that the effects of all other factors (e.g., individual differences) on the dependent variables are randomized and causal relationships can be investigated. Furthermore, studies where participants are presented with carefully constructed scenarios (also called paper people studies) and are then asked to make explicit judgments or decisions can enhance experimental realism and has widely been used in research on business ethics (see, e.g., Aguinis & Bradley, 2014, for details on experimental vignette methodology). I elaborate more on this in the general discussion section.

### **Study 1: Expectations about Others' Unethical Behavior**

This study tests hypothesis 1 that individuals under an RPE are more likely to expect others to indulge in unethical behavior compared to those under other evaluation systems. Participants were presented with the case of an investment banking employee facing an ethical dilemma and asked them to estimate the likelihood that the employee

would indulge in unethical behavior. The experimental manipulation consisted of the evaluation system the employee was subject to.

### *Method*

#### Participants

One hundred and sixty-four people (75.6% male,  $M_{age} = 29.7$  years) enrolled in an MBA program of a top-ranked European business school participated in our study as part of an introductory course on decision making. The participant pool was highly international (26.2% Asian, 26.2% Latin and Central American, 25% European, 11.6% US and Canadian, 8.5% African and 2.5% Australian).

#### Materials and Procedure

Participants were provided with a hypothetical scenario of an investment banker named Sam who had the opportunity to behave unethically in order to receive a better evaluation (and consequently maximize his compensation). The scenario was motivated by the true story of an investment banker whose trading practices ultimately drove his bank to insolvency. Participants were randomly assigned to one of the three experimental conditions: *control*, *absolute performance*, and *relative performance*). The difference across conditions was in the evaluation system that Sam faced. To add realism to the scenario, his evaluation was tied to compensation in the following manner. In the control condition, Sam faced no evaluation and his compensation consisted just of the fixed salary. In the absolute performance condition, Sam's evaluation and compensation depended on the profits he generated *individually* while in the relative performance condition his evaluation and compensation depended on profits he generated *compared* to his peers. I deliberately did not assign specific dollar amounts to the bonus possibilities

to avoid any anchoring effects and to reduce the likelihood that participants would focus on the size of the reward rather than the evaluation system (please see Appendix for a full description of the scenarios).

After reading the scenario, participants were asked to provide their judgment about the likelihood that Sam would indulge in unethical behavior. Specifically, participants were asked the following question, “How likely, do you think, would Sam be to use this error account to cover the loss?” Answers were provided on a scale of 0 (not at all likely) to 100 (absolutely likely).

### *Results*

A univariate analysis of variance (ANOVA) using likelihood judgment as the dependent variable and the three experimental conditions as a between-subjects factor demonstrated a significant main effect of condition  $F(2, 161) = 8.40, p < 0.001$  (Figure 2). Pairwise comparisons revealed that the mean likelihood judgment in the relative performance condition ( $M = 52.74; SD = 27.57$ ) was significantly greater than in the absolute performance condition ( $M = 42.36, SD = 25.44$ );  $t(107) = 2.04, p = 0.04$ , as well as in the control condition ( $M = 33.33, SD = 20.76$ );  $t(107) = 4.15, p < 0.001$ . The difference between absolute performance and control conditions was also significant  $t(108) = 2.04, p = 0.04$ .

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Insert Figure 2 about here

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### *Discussion*

In accordance with hypothesis 1, participants expected another person to indulge more in unethical behavior when they knew the person was facing an RPE<sup>2</sup>. In the next study, I test the effect of RPE on participants' actual unethical behavior.

## **Study 2: Actual Unethical Behavior**

In this study, I sought to test hypothesis 2 that individuals subjected to an RPE would be tempted to behave more unethically. I used a popular paradigm from laboratory experiments in which participants are given an opportunity to cheat by self-reporting their performance on a task in order to increase their compensation (e.g., Mazar, Amir, & Ariely, 2008). In this study, I measured the incidence and the magnitude of over-reporting performance on a quiz that participants took online. As in Study 1, the interest was in measuring unethical behavior under RPE and two other systems (control and absolute performance) were used for comparison purposes.

### *Method*

#### Participants

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<sup>2</sup> The three conditions in Study 1 experimentally manipulated the evaluation system Sam faced and compensation-related information was included only to add realism to the context. Special care was taken to include non-specific description of compensation so as to keep participants' attention on the evaluation systems rather than on rewards. To be sure, another study was ran to test the effects of evaluation systems and rewards separately on the judgment about Sam's likelihood to indulge in unethical behavior. Specifically, the same scenario as in Study 1 was used. The only difference was that the scenario mentioned the fixed salary for traders was \$300,000 on average instead of providing this as Sam-specific information. This was done to provide the same base level information across all conditions. Next, I used a 3 evaluation (*control, absolute performance, relative performance*) x 2 reward (*no mention* versus *mention*) factorial design. The three evaluation conditions with reward-mention were the same as in Study 1. In the other three conditions, no information of reward related to the up-coming evaluation was included. 322 participants of U.S. origin (49% male,  $M_{\text{age}} = 36.87$  years) participated in the study and were assigned to one of the six experimental conditions. A univariate analysis of variance using likelihood to indulge as the dependent variable and evaluation and reward conditions as between-subjects factors demonstrated a significant main effect of evaluation  $F(2, 316) = 9.02, p < 0.01$ . Main effect of reward  $F(1, 316) = 0.03, p = 0.87$  and its interaction main effect  $F(2, 316) = 0.02, p = 0.98$  were not significant. Individual contrasts revealed that likelihood in the relative performance condition ( $M = 57.80, SD = 22.81, N = 108$ ) was significantly higher than in the absolute performance condition ( $M = 48.98, SD = 26.43, N = 107$ ),  $t(213) = 2.60, p = 0.01$ , as well as in the control condition ( $M = 43.35, SD = 25.18, N = 107$ ),  $t(213) = 4.26, p < 0.01$ . Likelihood in the absolute performance condition was marginally significantly higher than that in the control condition  $t(212) = 1.66, p = 0.10$ . These results demonstrate that evaluation system, independent of reward's mention, had an effect on the likelihood judgment.

160 participants of U.S. origin (37.50% male,  $M_{age} = 37.02$  years) were invited on Amazon's Mechanical Turk online platform to participate in a quiz. A number of studies are being conducted with participants on online platforms such as the Mechanical Turk and a growing body of evidence has since emerged regarding the overall similarity of those participants to the general population (Goodman, Cryder, & Cheema, 2013; Paolacci, Chandler, & Ipeirotis, 2010). The study took approximately 6 minutes to complete and participants were paid a participation fee of \$0.10 according to the norm payments of the platform (e.g., Paolacci & Chandler, 2014). In addition, participants had the chance to earn a bonus based on their assigned experimental conditions.

#### Materials and Procedure

Participants were randomly assigned to one of the three conditions: *control*, *absolute performance*, and *relative performance*. Participants were informed that they would need to self-report their performance and that their evaluation (and consequently their compensation) would be based on these self-reported scores. Note that Mechanical Turk platform ensures participant anonymity that is actually required to study unethical behavior. Each participant has a unique worker ID, no personally-identifying information is accessible to experimenters, repeated interactions through other tasks are participant's choice, and no group dynamics occurs. This allowed participants to freely cheat by reporting a score higher than their true score. At the same time, to make the evaluation conditions relevant and meaningful, the possibility of a small bonus of maximum \$1 was included. Since the quiz was conducted online, I had access to participants' actual responses and thus to their true scores. Accordingly, I could compute a *cheat index*:

$$\text{Cheat Index} = \text{Self-reported Score} - \text{True Score}$$

All participants received the same introductory instructions and the quiz consisted of 10 questions. Each question appeared on the screen for a limited duration (ranging from 15 to 45 seconds) after which participants could not go back to answer. The period of time available to answer each question was based on average response times from an informal pre-test conducted earlier. The time durations were further reduced to make the quiz more difficult. The questions did not require participants to have any specific knowledge, experience, or prerequisite skill and were adapted from online IQ tests and quizzes that include tasks ranging from basic math problems to guessing the next one in a sequence of shapes.

Participants were instructed to complete the quiz in a single uninterrupted session in an environment free from distractions. Furthermore, participants were asked to self-verify their scores. Accordingly, they were instructed to use a pencil and a sheet of paper and to manually record their answer for each question (so they could calculate their final score).

Participants were then informed about the respective evaluation and reward scheme depending on their randomly assigned experimental condition. All participants – regardless of their assigned experimental condition – were reminded that they would receive \$0.10 as participation fee. Additionally, participants in the absolute [relative] performance conditions saw the following:

*“Additionally there is a bonus. Of the approximately 50 people that are participating, 10 of you will be randomly selected. If you are one of the selected, you will get additional \$ 0.10 for every point you score.”* [“Additionally there is a bonus. Of the

*approximately 50 people that are participating, at the end of the study we will award \$1 to the top 10 highest scorers based on the final scores you report.”]*

Participants were informed that approximately 50 people were participating and 10 of them would be selected for the bonus. This way, the probability of being selected for the bonus was kept constant across these conditions. In the absolute performance condition, 10 participants were to be selected randomly to earn up to \$1 based on their score. In the relative performance condition, the top 10 performers (i.e. those participants receiving the 10 highest scores) would earn a \$1 bonus.

After completing the quiz, participants were once again reminded about their respective evaluation and compensation scheme and were shown a table with the correct answer to every question. At this time, they were asked to verify their answers by checking their manually recorded responses against the correct answers displayed on the screen. Finally, they were instructed to submit a self-report of their score. All participants were thanked and bonus payments were made according to their experimental conditions.

### *Results*

Overall, participants averaged 3.39 correct answers (out of 10 questions). A univariate analysis of variance (ANOVA) using true score as the dependent variable and the three experimental conditions as a between-subjects factor demonstrated no significant differences in the actual performance of participants across the three conditions  $F(2, 157) = 0.09, p = 0.91$ .

With respect to incidence of cheating, results showed that 85.6% (137 out of 160) of the participants in our sample over-reported their performance. Across the conditions, 100% (56 out of 56) of participants in the relative performance condition over-reported

their performance which was significantly greater than the 86% (44 out of 51) in the absolute performance condition ( $\chi^2 = 8.32, p < 0.01$ ) and the 70% of the participants (37 out of 53) in the control condition ( $\chi^2 = 19.49, p < 0.01$ ).

Next, I analyzed the magnitude of cheating. A univariate analysis of variance (ANOVA) using self-reported scores as the dependent variable and the three experimental conditions as a between-subjects factor demonstrated a significant main effect of condition  $F(2, 157) = 10.34, p < 0.001$ . The self-reported score in the relative performance condition ( $M = 5.80, SD = 1.57$ ) was significantly greater than in the absolute performance condition ( $M = 5.02, SD = 1.68$ );  $t(105) = 2.48, p = 0.02$ , as well as in the control condition ( $M = 4.36, SD = 1.72$ );  $t(107) = 4.57, p < 0.001$ . The difference between absolute performance and control conditions was also significant  $t(102) = 1.98, p = 0.05$ .

Looking at the cheat index, participants across all conditions significantly over-reported their performance. Overall, the cheat index ( $M = 1.68, SD = 1.60$ ) was significantly greater than zero,  $t(159) = 13.28, p < 0.001$ . A univariate analysis of variance (ANOVA) using the cheat index as the dependent variable and the three experimental conditions as a between-subjects factor demonstrated a significant main effect of condition  $F(2, 157) = 13.08, p < 0.001$ . Cheat index in the relative performance condition ( $M = 2.38, SD = 1.83$ ) was significantly greater than in the absolute performance condition ( $M = 1.71, SD = 1.54$ );  $t(105) = 2.04, p = 0.04$ , as well as in the control condition ( $M = 0.92, SD = 0.94$ );  $t(107) = 5.19, p < 0.001$ . The difference between absolute performance and control conditions was also significant  $t(102) = 3.17, p < 0.01$ . The results provide support for hypothesis 2 (Figures 3 and 4).

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Insert Figures 3 and 4 about here  
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### *Discussion*

Study 2 was designed to test whether participants behave more unethically under RPE. Unethical behavior was operationalized as over-reporting performance on a quiz in order to have a chance to receive increased compensation. I found that the incidence and magnitude of cheating was significantly higher in the relative performance condition as compared to that in the absolute performance and the control conditions even though there was no difference in actual performance between the participants across all three conditions. Therefore, under RPE participants tended to behave more unethically.

Studies 1 and 2 provide evidence that RPE exacerbates expectations of others' unethical conduct and actual unethical behavior of individuals. Recognizing that organizations may continue using RPE despite the elevated risk of unethical behavior, I believe it is necessary to develop simple and subtle techniques (or interventions) for curbing unethical tendencies that arise when employees are evaluated relative to one another. In the following section, I propose one such intervention to reduce the temptation to act unethically under RPE.

### **Consequential Reflection as a Remedy**

Researchers have suggested various direct methods aimed at decreasing individuals' unethical behavior. Activities such as signing codes of honour (Shu et al., 2011), exposure to ethical reminders like the Ten Commandments (Mazar et al., 2008) and recalling past immoral behavior (Jordan, Mullen, & Murnighan, 2011) have been shown to increase the tendency and willingness to act more ethically. One suggested

direction for interventions to reduce unethical behavior is to induce more deliberative modes of processing (Bazerman & Gino, 2012; Bazerman & Sezer, 2016; Moore & Gino, 2015; Sezer, Gino, & Bazerman, 2015; Zhang, Gino, & Bazerman, 2014). For example, Gunia, Wang, Huang, Wang, and Murnighan (2012) showed that asking people to carefully contemplate or to have a conversation with others about a decision improved moral decision making.

Consequential reflection is proposed as a new intervention aimed specifically at curbing one's temptation to act unethically in the context of RPE. Consequential reflection is a simple prompt that induces an individual to reflect on both the positive and negative consequences of a decision to indulge in unethical behavior. I predict that such deliberative thinking will reduce the willingness to indulge in unethical behavior. Formally stated:

*Hypothesis 3a. The intention to indulge in unethical behavior under relative performance evaluation will be mitigated through consequential reflection.*

Next, the mechanism through which consequential reflection operates to curb the impulse to indulge in unethical behavior is explained.

Unethical behavior can originate from an overweighting of perceived benefits vis-à-vis the perceived risks associated with such behavior for at least two reasons. First, indulgence in unethical behavior may involve a perception that benefits and costs occur at different times. The benefits associated with unethical behavior may be perceived as psychologically more immediate compared to its costs since the latter materialize only *if and when* the person gets caught (Moore & Loewenstein, 2004). Moreover, the desire to be an ethical person and act in socially appropriate ways requires self-control to avoid

succumbing to the immediate desire to promote self-interest through unethical behavior (Gino, Schweitzer, Mead, & Ariely, 2011; Mead, Baumeister, Gino, Schweitzer, & Ariely, 2009). As such, the perceived proximal benefits tend to be highlighted vis-à-vis the distal consequent risks.

Secondly, by inviting an individual to think of *both positive and negative consequences* of their decision to indulge, consequential reflection forces a joint evaluation of both positive and negative consequences. The prospect of advancing one's self-interest by indulging in unethical behavior results in a clash between what one wants (advance self-interest) versus what one should do (refrain from indulgence). As Bazerman, Tenbrunsel, and Wade-Benzoni (1998) have theorized, in such tensions between what one wants and what one should do, a separate evaluation favors the want-criterion (which is subject to affect and impulse) while a joint evaluation promotes the should-criterion (which corresponds to more rational and thoughtful choices).

I expect that reflective reasoning induced by the explicit prompt to consider both positive and negative consequences of indulging in unethical behavior will allow for an adjustment of the overweighting of perceived benefits vis-à-vis the perceived risks. Formally stated:

*Hypothesis 3b. The effect of consequential reflection on mitigating one's intention to indulge in unethical behavior is mediated by altered perceptions of risks and benefits of the decision situation. More specifically, under consequential reflection the perceived risks vis-à-vis the perceived benefits would increase and lead to reduced intentions to indulge in unethical behavior.*

As previously discussed, our biased beliefs that self-interest exerts greater pressure on others (Miller & Ratner, 1998) would lead us to overestimate the perceived benefits vis-à-vis the perceived risks, in situations where others are tempted to act unethically. We would rarely take a moment to reflect why another person might choose *not* to behave unethically in the competitive context of RPE. Under consequential reflection though, the risks and benefits from indulgence are jointly brought on focus thus calibrating the automatic overweighting of benefits vis-à-vis the risks we perceive in the case of judging another person's likelihood to behave unethically. Thus I hypothesize that consequential reflection will help attenuate expectations about others' indulgence in unethical behavior.

*Hypothesis 4a. Expectations about others' unethical behavior under relative performance evaluation will be attenuated through consequential reflection.*

*Hypothesis 4b. The effect of consequential reflection on expectations about others' unethical behavior is mediated by altered perceptions of risks and benefits of the decision situation.*

Next, Studies 3 and 4 are described, where we focus solely on RPE to test the consequential reflection intervention. In Study 3, I test hypotheses 3a and 3b related to the effects of consequential reflection on the likelihood to indulge in unethical behavior through the mechanism of perceived risks-benefits. In Study 4, I test how consequential reflection attenuates expectations about others' indulgence (hypotheses 4a and 4b).

### **Study 3: Consequential Reflection as a Remedy**

Study 3 tests the proposed intervention of consequential reflection in mitigating intentions to act unethically under RPE. Building on recent scandals in academia, in this

study we asked participants to assume the role of a professor facing an ethical dilemma regarding data manipulation.

### *Method*

#### Participants

184 participants of U.S. origin (49% male, age unrecorded due to a technical issue with this survey question) completed the study through Amazon's Mechanical Turk online platform.

#### Materials and procedure

Participants assumed the role of a university professor close to tenure evaluation and being considered for nomination to a prestigious national congress. The professor had a manuscript under review with a top journal and its publication was key to both the tenure and nomination decisions. The data analysis for the manuscript had not provided desirable results and, as a result, the professor was tempted to manipulate the data (please see Appendix for a full description of the scenarios). Participants were asked to provide their likelihood of manipulating data on a scale of 0 (not at all) to 100 (certainly).

Participants were randomly assigned to either one of the two conditions: *control* and *consequential reflection*. The only difference between the conditions was that participants in the consequential reflection condition were asked to list possible consequences (both positive and negative) of their decision *before* providing their likelihood judgment.

After providing their likelihood judgment, all participants were asked to rate the magnitude of both the perceived risks and the perceived benefits involved in the situation

they faced using a scale of 0 (low) to 100 (high). For each participant, these assessments were combined to construct *assessment index*:

$$\text{Assessment Index} = \text{Perceived Risks} - \text{Perceived Benefits}$$

Assessment index can range from -100 to 100 and increases as perceived risks increase relative to perceived benefits. Positive (negative) scores imply that the participants perceive the same situation to have higher (lower) risks than benefits.

### *Results*

Consistent with hypothesis 3a, an independent samples t-test showed the mean likelihood in the consequential reflection condition ( $M = 18.70$ ,  $SD = 28.73$ ) was significantly lower than in the control condition ( $M = 29.12$ ,  $SD = 31.43$ );  $t(182) = 2.35$ ,  $p = 0.02$  (Figure 5).

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Insert Figure 5 about here  
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In hypothesis 3b, I theorize that assessment index (perceived risks - perceived benefits) would mediate the effect of consequential reflection on participants' likelihood to indulge in unethical behavior.

The assessment index in the control condition ( $M = -8.47$ ,  $SD = 30.47$ ) was significantly lower than in the consequential reflection condition ( $M = 11.34$ ,  $SD = 42.54$ );  $t(182) = 3.63$ ,  $p < 0.001$ . That is, participants judged greater risks (as compared to benefits) in the consequential reflection condition vis-à-vis in the control condition. Taking a closer look in what drove the above differences in the assessment index, the results show that consequential reflection altered both the risk and the benefits assessments

participants gave, although the change was more pronounced for benefits assessments. Risk assessments in the consequential reflection condition ( $M = 74.98$ ,  $SD = 28.02$ ) were higher compared to risk assessments in the control condition ( $M = 69.82$ ,  $SD = 26.73$ );  $t(182) = 1.28$ ,  $p = 0.20$ . On the other hand, benefits assessments in the consequential reflection condition ( $M = 63.64$ ,  $SD = 32.44$ ) were lower compared to benefits assessments in the control condition ( $M = 78.29$ ,  $SD = 22.12$ );  $t(182) = 3.57$ ,  $p < 0.001$ .

I conducted a mediation analysis using the PROCESS macro (Hayes, 2013), model 4, with 10,000 bootstrapped confidence interval iterations. Results of this analysis are presented in figure 6. Condition (0 = control, 1 = consequential reflection) had an effect on assessment index  $b = 19.81$ ,  $SE = 5.50$ ,  $p < 0.001$ . That is, participants in consequential reflection condition perceived significantly higher risks vis-à-vis benefits than those in the control condition. Assessment index had an effect on likelihood  $b = -0.17$ ,  $SE = 0.06$ ,  $p = 0.01$ . The total effect of condition on likelihood  $b = -10.42$ ,  $SE = 4.46$ ,  $p = 0.02$  was reduced to non-significance  $b = -7.09$ ,  $SE = 4.67$ ,  $p = 0.13$  upon introducing assessment index as a mediator. Assessment index had a robust indirect effect  $b = -3.23$ ,  $SE = 1.56$ ,  $95\% CI [-7.24, -1.01]$  on likelihood to indulge in unethical behavior.

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Insert Figure 6 about here  
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### *Discussion*

Study 3 shows that consequential reflection intervention was effective in reducing individuals' intention to indulge in unethical behavior. Furthermore, this effect was mediated by higher perceived risks vis-à-vis benefits (i.e., higher assessment index).

These two together provided support for hypotheses 3a and 3b. Next, I investigate whether consequential reflection also attenuates expectations about others' indulgence in unethical behavior, testing our hypotheses 4a and 4b.

#### **Study 4: Judgment of Others**

In this study a scenario similar to that of Study 3 was employed, asking participants to estimate the likelihood that another person, Neil, would engage in unethical conduct.

##### *Method*

##### Participants

142 people, enrolled in the MBA program of a top-ranked European business school, participated in the study as part of an introductory course in decision making. The sample consisted of 75% male participants, of 30 years of age on average and was highly international (24.6% Asian, 26.8% Latin and Central American, 27.5% European, 11.3% US and Canadian, 7.0% African and 2.8% Australian).

##### Materials and procedure

Participants were asked to provide their judgment about the likelihood of a professor, Neil, to behave unethically in order to get a research article published by manipulating the data. In the scenario, Neil worked at a prestigious university and faced a tenure system based on relative performance. He had a manuscript under review in a top journal and his tenure evaluation was up soon (see Appendix for a full description of the scenarios).

Participants were randomly assigned to either one of the two conditions, *control* and *consequential reflection*. The only difference between the two conditions was that participants in the consequential reflection were asked to list down possible

consequences (both positive and negative) of Neil's decision before making their judgment. After reading the scenario, all participants were asked to give a judgment of the likelihood that Neil would indulge in unethical behavior: "What, do you think, is the likelihood of Neil manipulating the data?" (from 0 = not at all, to 100 = certainly). Next, participants also rated the magnitude (from 0 to 100) of both the risks and the benefits involved in Neil's situation, which we combined to construct the *assessment index*. As in study 3, the assessment index can range from -100 to 100 and positive (negative) scores imply that the participants judge Neil's situation to have higher (lower) risks than benefits.

According to hypothesis 4a, I expected participants to provide lower likelihood of Neil's indulgence in unethical behavior in the consequential reflection condition as compared to the control condition. As per hypothesis 4b, I expected that an increase (decrease) in the assessment index mediates the decrease (increase) of likelihood judgments.

### *Results*

To test hypothesis 4a, I first conducted an independent samples t-test comparing the estimates participants gave in the control and the consequential reflection condition regarding Neil's likelihood to indulge in unethical behavior. The mean likelihood in the consequential reflection condition ( $M = 39.67$ ,  $SD = 23.06$ ) was significantly lower than in the control condition ( $M = 55.38$ ,  $SD = 27.93$ );  $t(140) = 3.65$ ,  $p < 0.001$ . This is consistent with the prediction that participants' expectations of others' indulging in unethical behavior would be alleviated through consequential reflection. The results are graphically illustrated in figure 7.

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Insert Figure 7 about here  
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I further theorized that the assessment index would drive participants' judgments regarding Neil's indulgence in unethical behavior. The assessment index in the control condition ( $M = -3.72$ ,  $SD = 49.08$ ) was significantly lower than in the consequential reflection condition ( $M = 21.31$ ,  $SD = 40.31$ );  $t(140) = 3.32$ ,  $p = 0.001$ . That is, participants judged greater risks (as compared to benefits) in the consequential reflection condition vis-à-vis in the control condition. Taking a closer look in what drove the above differences in the assessment index, the results show that consequential reflection altered both the risk and the benefits assessments participants gave. Risk assessments in the consequential reflection condition ( $M = 72.07$ ,  $SD = 21.74$ ) were higher compared to risk assessments in the control condition ( $M = 62.06$ ,  $SD = 30.80$ );  $t(140) = 2.24$ ,  $p = 0.03$ . On the other hand, benefits assessments in the consequential reflection condition ( $M = 50.76$ ,  $SD = 30.10$ ) were lower compared to benefits assessments in the control condition ( $M = 65.78$ ,  $SD = 30.19$ );  $t(140) = 2.97$ ,  $p < 0.001$ .

I conducted a mediation analysis, using the PROCESS macro (Hayes, 2013), model 4, with 10,000 bootstrapped confidence interval iterations. Results are presented in Figure 8. Condition had an effect on Assessment Index  $b = 25.04$ ,  $SE = 7.55$ ,  $p = 0.001$  and Assessment Index had an effect on likelihood judgment  $b = -0.25$ ,  $SE = 0.04$ ,  $p < 0.001$ . The total effect of Condition on likelihood judgment  $b = -15.70$ ,  $SE = 4.30$ ,  $p < 0.001$  was reduced to a smaller direct effect  $b = -9.35$ ,  $SE = 4.02$ ,  $p = 0.02$  upon introducing

Assessment Index as a mediator. Assessment Index had a robust indirect effect  $b = -6.36$ ,  $SE = 2.16$ ,  $95\% CI [-11.14, -2.61]$  on likelihood judgment.

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Insert Figure 8 about here  
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### *Discussion*

Study 4 was designed to test whether consequential reflection would attenuate exacerbated expectations (evident in the control condition) about others' indulgence in unethical behavior. I found support for hypothesis 4a. In accordance with hypothesis 4b, the assessment index mediated this decrease of likelihood judgment, as participants judged higher risks rather than benefits (higher assessment index) involved in the decision situation under the consequential reflection condition.

### **General Discussion**

#### *Overview of the Findings*

Employees tend to care about their performance evaluation and the potential rewards attached to it. In the case of RPE though, employees get explicitly pitted against each other resulting in social comparisons and escalated levels of competition. In such competitive settings, unethical behavior in order to promote one's self-interest can become a salient temptation. As the present studies show, expectations about others' indulgence (Study 1) as well as one's own unethical behavior (Study 2) may increase under RPE. However, consequential reflection may reduce one's temptation to act unethically by altering perceived risk-benefit evaluations of indulging in unethical behavior

(Study 3). Similarly, consequential reflection helps to alleviate expectations that others' will behave unethically (Study 4).

The present studies contribute to the field of human resource management in several ways. First, a link between RPE and unethical behavior is made. Although RPE is frequently used by organizations, academic institutions, and a variety of contests and ranking systems, research regarding its behavioral and moral side-effects is scarce (e.g., Connelly et al., 2014). Second, the above gap is filled with an eye on the constraints that practitioners may claim: instead of challenging possible efficiency merits of RPE, I caution against its overlooked perils in terms of unethical behavior.

Third, I propose consequential reflection as an easily implementable remedy to curb intentions of unethical conduct within an RPE context. I also test for how the altered perceptions of risks and benefits provide the underlying mechanism for this remedy to function. That way, I contribute to research on unethical behavior by linking organizational practices with psychological processes (e.g., Moore & Gino, 2015; Zhang et al., 2014).

Next, I comment on the experimental methodology used across all studies. Experimental design allowed me to maintain the same context for all participants and directly manipulate the independent variables of interest (i.e., evaluation systems, consequential reflection). Thus I was able to test causality in our hypotheses by isolating the independent variables' effect on the dependent variables (i.e., judgment, intention, and actual unethical behavior). Moreover, the randomized assignment of participants to experimental conditions allowed me to preclude the effects of uncontrolled individual differences that may come into play in moral judgment or behavior. In the experiments (except in Study 2), I used scenario-based studies where participants are asked to

provide responses to hypothetical scenarios. Such studies (also known as paper people studies) have been used in a variety of domains including leadership, entrepreneurship, citizenship behavior, and ethics (see, e.g., Aguinis & Bradley, 2014, for examples and best practices in designing experimental scenario-based studies). Regarding the concerns of external validity and generalizability while using experimental designs and scenario-based studies, considerable care was taken in approximating a real workplace environment and in selecting representative samples of the working population.

I used different contexts where RPE may occur in the workplace. Studies 1, 3 and 4 used scenarios adapted from real incidents in the fields of investment banking and academia respectively. Study 2 represented a familiar context of cheating and self-report. Readers may note that using different contexts, especially with single scenario-based decisions, does not allow a direct comparison or an assessment of the replicability of the observed effects across studies. At the same time, finding similar patterns of results across the different contexts and scenarios does suggest a generalizable phenomenon.

In terms of samples, for study 1 and study 4 I deliberately invited participants from the MBA program of a leading business school. This approach provided several advantages. First, the students were already familiar with the concept of RPE since they were being graded using similar schemes. Second, the participant pool was highly international and randomly assigned to experimental conditions and that precluded any consideration of cultural idiosyncrasies in the pattern of our results. Third, all participants had 5-8 years of work experience and were familiar with organizational issues.

In studies 2 and 3, a well-regarded online platform, Amazon's Mechanical Turk, was used to invite participants from the general U.S. population. This can be a potential

threat to external validity and generalizability, specifically regarding the extent to which these participants are systematically different from employees within organizations. Compared to traditional participant pools of undergraduate students, Mechanical Turk respondents are relatively representative of the U.S. workforce (e.g., Goodman et al., 2013; Paolacci et al., 2010). At the same time, overeducated, underemployed, less religious, and more liberal participants tend to be over-represented (e.g., Paolacci & Chandler, 2014). Nevertheless, these studies have found no difference in the attention levels that online participants demonstrate compared to traditional participant pools and, in fact, have found evidence of replicability of several well-documented behavioral research results. Use of such online platforms for data collection is rapidly growing. Researchers can access participants from across the world, with varied profiles based on education, income, or job experience. In turn, participants can choose the studies at their own discretion, finish the tasks from a place of their convenience, and be paid electronically. All these factors provide researchers with opportunities for quick and reliable data collection and need to be taken into account while addressing potential limitations related to generalizability. Moreover, in the online studies 2 and 3, majority of the participants were aged 20 to 55. Thus, although I do not have data from employees within organizations, I can be confident that those findings are not confined to a specific subsample and are derived from participants with characteristics similar to the average employee.

### *Managerial Implications*

Unethical behavior by employees can prove costly for organizations both in terms of reputation and money. As is apparent in the present findings, RPE is not the only

evaluation system where unethical behavior can occur but it is certainly a highly tempting one. Organizations that value RPE's efficiency benefits should at least acknowledge that it may come with a price that may, ultimately, prove disproportionately high. Apart from this gloomy finding, I offer managers and employees a shield from the temptation to act unethically or think that everyone else will. Consequential reflection can be a simple prompt to think twice before acting or judging others and thus avoiding unethical behavior. I believe that the strength of the proposed intervention lies in its unobtrusive non-paternalistic nature which avoids direct manipulation and is unlikely to invoke negative reactions from the recipients.

#### *Limitations and Directions for Future Research*

As is the case of non-field experiments, I was not able to test actual unethical behavior and judgments in the workplace. Although ultimately desirable, this is a tricky endeavor since unethical behavior is something people try to hide. Thus it is not easily observable and not many companies would make their doors open for such a sensitive investigation. This is a well-known challenge for researchers (e.g., Moore & Gino, 2015) which I had to tackle in measuring individuals' unethical behavior even in the simulated evaluation context of study 2. In studies 3 and 4 I tested the effectiveness of consequential reflection intervention using scenario-based decisions and I measured behavioral intentions rather than actual behavior. Thus, throughout the paper I make modest claims on the effect of consequential reflection on curbing the intention to indulge in unethical behavior. Investigating the link of relative performance evaluation with actual unethical behavior in organizational settings such as in over-reporting numbers of hours worked, hiding losses, or manipulating data and the effectiveness of consequential reflection

intervention in curbing such behavior offers a practically relevant direction for future work. Research is also needed to address the best ways in which this prompt can be used and the duration of its effectiveness in the workplace.

In order to obtain a more realistic context where evaluation is meaningful and is seen as having implications, performance evaluation was tied to a variety of mild rewards such as a non-specified bonus amount (Study 1), a specific mild monetary bonus (Study 2), and academic tenure and a prestigious nomination (Study 3 and Study 4). Another study (footnote 2) was run to investigate the separate effects of evaluation systems and rewards wherein I experimentally manipulated whether participants had information about the rewards (although non-specific) or not and found a significant effect of evaluation systems but no significant effect of the mention of rewards. Different kinds and levels of rewards are bound to result in different degrees of unethical behavior. Rewards (from unethical behavior) can be expected to influence unethical behavior, especially if they are high enough such that any concerns of getting caught, fired, or finding another job in the future become insignificant. In those instances, it is possible that the proposed intervention might not be effective. Given that people would have different definitions of what such 'high' rewards are and different appetite for taking associated risks, the question of magnitude of rewards remains an important and interesting challenge for future research.

This paper isolated the effect of relative performance evaluation on unethical behavior. However, there are other organizational factors that, in conjunction with the specific evaluation and compensation systems, can result in varying levels of unethical behavior in the workplace. For example, the ethical climate within organizations can

signal the boundaries of what is considered (un)ethical (for a review see Martin & Cullen, 2006). Studying the moderating role of these organizational-level factors provides an interesting avenue for further research with practical importance as well.

Furthermore, I proposed and tested consequential reflection as one possible remedy for unethical behavior under relative performance evaluation. Specific features of implementing this intervention such as the number of consequences generated, time spent on reflection, the type of consequences (positive or negative, self vs. other relevant), or the order of consequences (positive first or negative first) could be expected to moderate the effects and offer possibilities of future research with practical implications. Previous research has shown that raising moral awareness with other forms of intervention (e.g., with moral reminders and honor codes) can curb unethical behavior (e.g., Mazar et al., 2008; Shu et al., 2011). And, individual difference variables such as rational-intuitive decision making styles, Machiavellianism, or Narcissism could be expected to have an influence on indulgence in unethical behavior and the effectiveness of corrective interventions. Future research could also investigate the relative and combined effects of different interventions under different organizational contexts and their relationships with other individual differences constructs of interest.

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## APPENDIX B

### Study 1 scenarios

*(Control Condition) [Absolute Performance Condition] {Relative Performance Condition}*

Sam is one of the key traders for Mercury Bank's recently launched operations in the futures markets on the Singapore International Monetary Exchange (SIMEX). He has had a successful trading career at the bank's London operations – in last two years his trades made profits of £2 million for the bank that accounted for 8% of Mercury's annual profit. Mercury also hired several others at its Singapore office. At the moment, there are **10 traders in total**. All of them handle independent accounts without interfering or knowing much about the others'.

*(Sam's annual compensation has a **fixed salary of \$300,000 with no additional bonus possibilities.**)*

*[Sam's annual compensation has a **fixed salary of \$300,000 with additional bonus related to the total profits from his trades. A standard pay for performance system** – the more profit he makes, the more his personal income is.]*

*{Sam's annual compensation has a **fixed salary of \$300,000 with additional bonus related to his performance compared to the 9 other traders. A stacked performance system or Gauss Curve** - the better he does compared to the other traders, the more his personal income is.}*

Recently, Sam noticed that he has made a big trading loss on one of the accounts costing Mercury \$100,000. Sam is thinking about what he should do with this since performance appraisals are coming soon. Sam also manages Mercury's *error account*. Most banks have something called an error account that is used to account for genuine trading mistakes. Sam has an idea. He could use the error account to hide this loss without the

knowledge of the bank. Of course, this is illegal and unethical. He feels that this is just a temporary situation and he would recover the losses and fix this soon.

### **Study 3 scenario**

#### *Control Condition*

You are an **Assistant Professor** of Biotechnology at a prestigious university in the US. Your tenure decision is coming up soon – which means after your performance appraisal, it will be decided whether you should be **promoted** to an Associate Professor level and also be given a **permanent contract** with the university. This is a big decision for any academic – all the years of hard work culminate into this decision. Failure to get tenure means being terminated from the university, in which case the professor has to search for another job at less prestigious universities and for much less money.

Furthermore, there is a new science research congress being formed at a national level. **The school will be nominating 3 (or max 4) of the 15 tenure-track professors to this congress.**

As you might know, developing and publishing new research is the biggest component of such tenure and nomination decisions. The university gives points for different kinds of publication based on the prestige of the journal. Those who score the highest research points would have higher chances.

You have published several key articles in top journals of your field. You currently have one article being considered for publication in the world's most respected journal **Science**. An article in this journal will surely seal the deal for you. However, the journal has asked you to provide additional data. You have just finished analysing the data. You realize that 3 out of 100 data points cause problems in the results that you would like to have to support your article. Because the stakes are so high, you are thinking if you should manipulate those 3 data points and provide the required results.

How likely would you be to manipulate the data? Please answer on a scale from 0 (=not at all) to 100 (=certainly).

*Consequential Reflection Condition*

(Same as in Control condition except for the additional reflection task as follows)

“Before answering, please reflect on the consequences (both positive and negative) of your decision. Could you list down a few that come to your mind?”

## **Study 4 scenario**

### *Control Condition*

Neil is an **Assistant Professor** of Biotechnology at a prestigious university in the US. His tenure decision is coming up soon – which means after his performance appraisal, it will be decided whether he should be **promoted** to an Associate Professor level and also be given a **permanent contract** with the university. This is a big decision for any academic – all the years of hard work culminate into this decision. As you might know, developing and publishing new research is the biggest component of such tenure decisions. The university gives points for different kinds of publication based on the prestige of the journal. This year the school has decided to provide permanent contracts to 3 (or max 4) professors who score the highest points out of approximately 15 professors. Neil has published several key articles in top journals of his field. He currently has one paper being considered for publication in the world's most respected journal **Science**. An article in this journal will surely seal the deal for him. However, the journal has asked him to provide additional data. He has just finished analysing the data. He realizes that 3 out of 100 data points cause problems in the results that he would like to have to support his article. Because the stakes are so high, he is thinking if he should manipulate those 3 data points and provide the required results.

What, do you think, is the likelihood of Neil manipulating the data? Please answer on a scale from 0 (=not at all) to 100 (=certainly).

### *Consequential Reflection Condition*

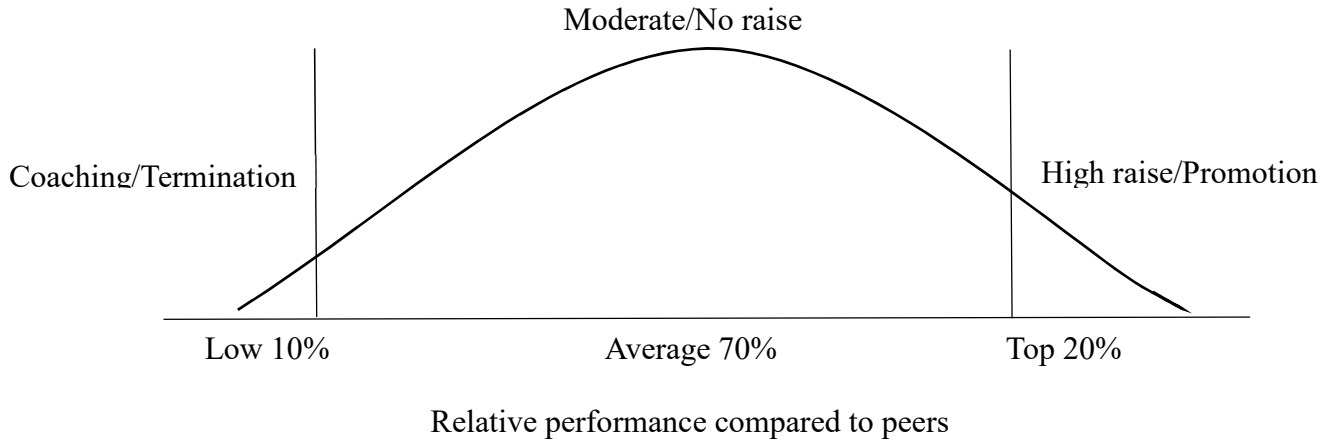
(Same as Control condition except for the additional reflection task as follows)

“Before answering, please reflect on the consequences (both positive and negative) of Neil's decision. Could you list down a few that come to your mind?”

**FIGURES AND TABLES**

**FIGURE 1**

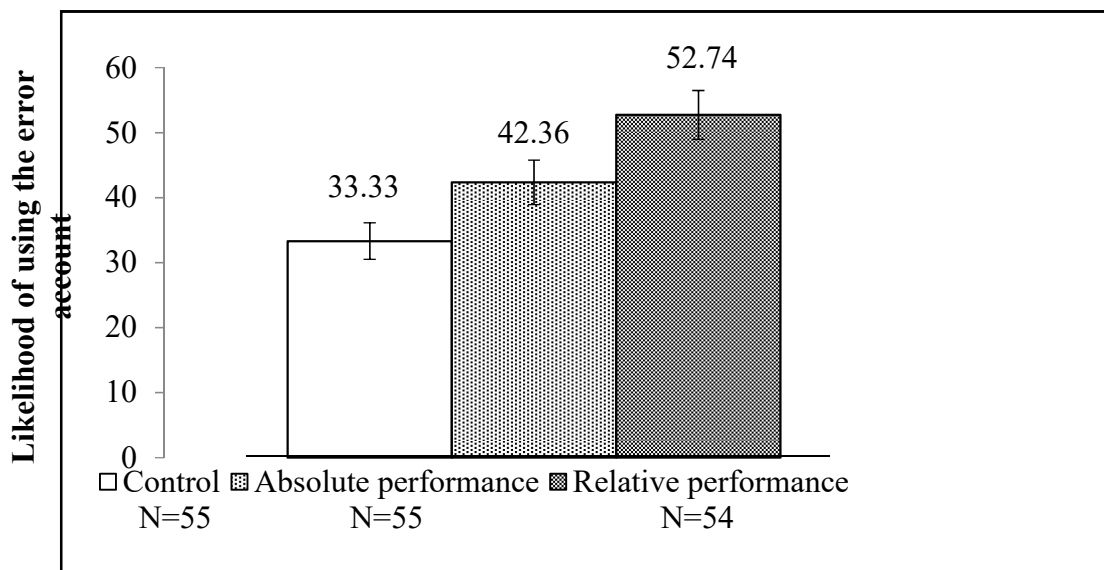
**Typical Relative Performance Evaluation**



**FIGURE 2**

**Mean Likelihood of Sam using the error account – Study 1**

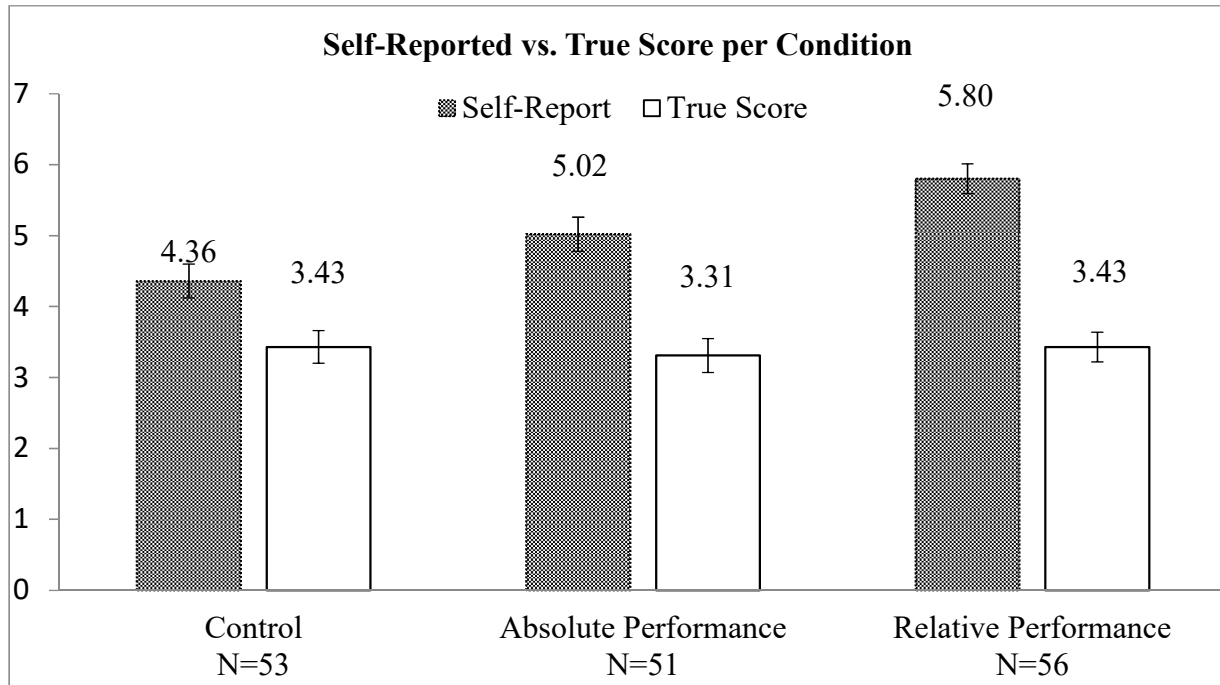
**(Error bars represent  $\pm$  Standard Error of Means)**



**FIGURE 3**

**Self-Reported and True Scores across experimental conditions – Study 2**

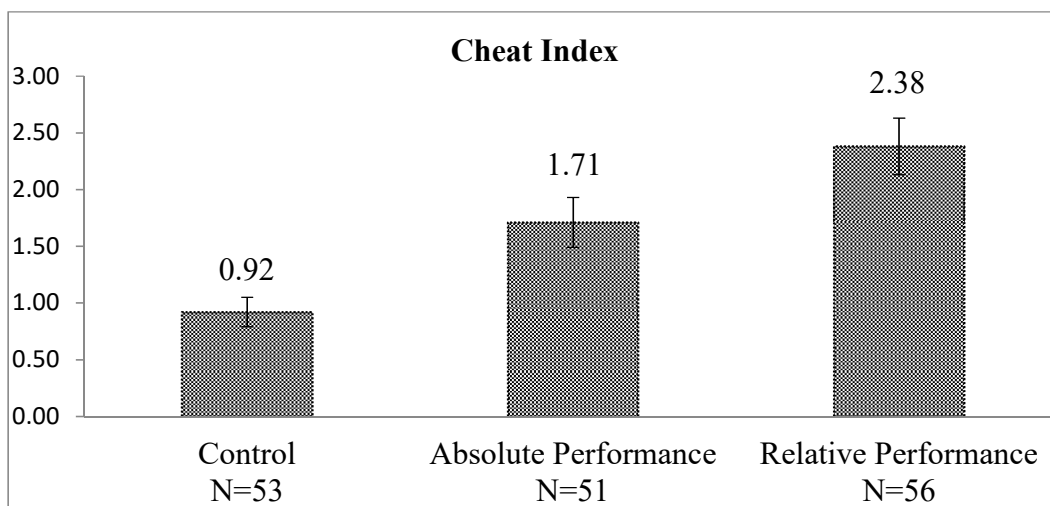
(Error bars represent  $\pm$  Standard Error of Means)



**FIGURE 4**

**Cheat Index across experimental conditions – Study 2**

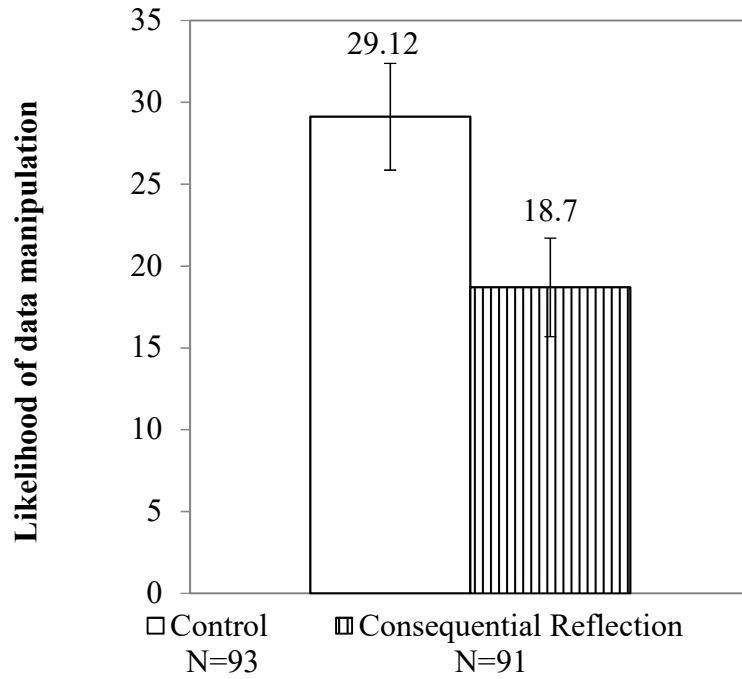
(Error bars represent  $\pm$  Standard Error of Means)



**FIGURE 5**

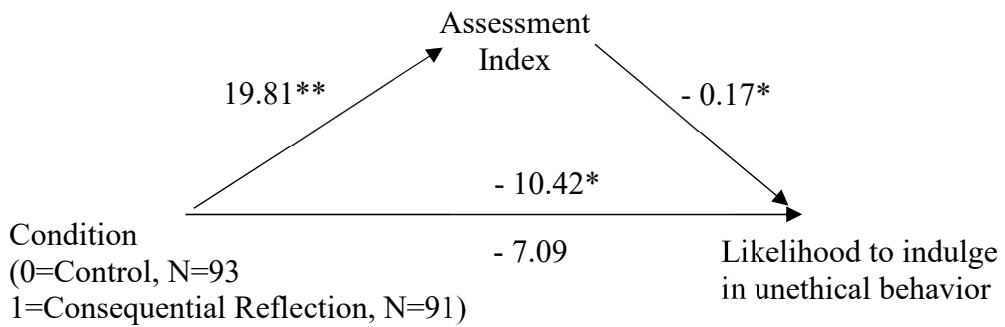
**Mean Likelihood of data manipulation across experimental conditions – Study 3**

(Error bars represent  $\pm$  Standard Error of Means)



**FIGURE 6**

**Mediation Analysis – Study 3**

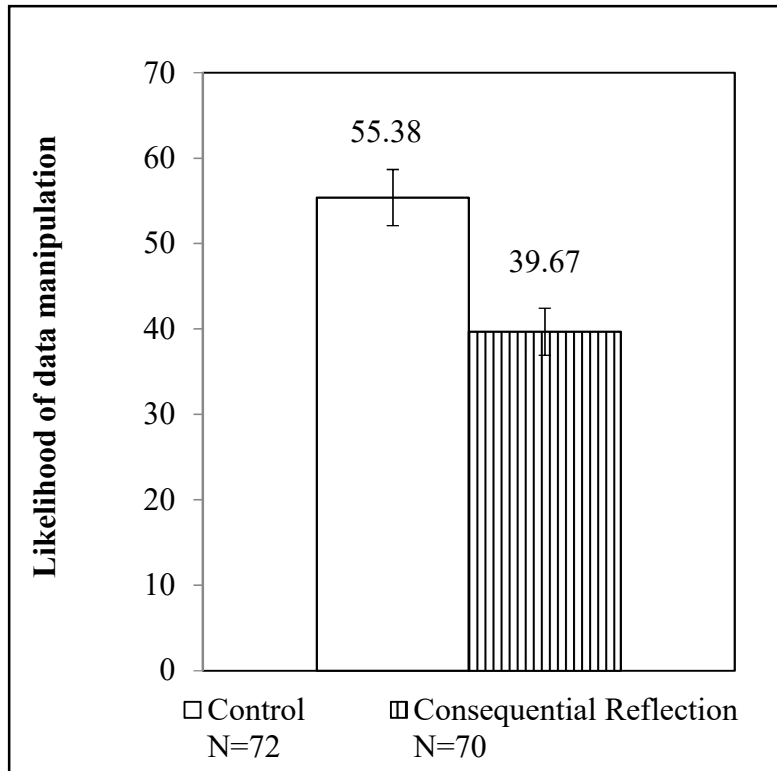


\*=  $p < 0.05$ , \*\*=  $p < 0.01$

**FIGURE 7**

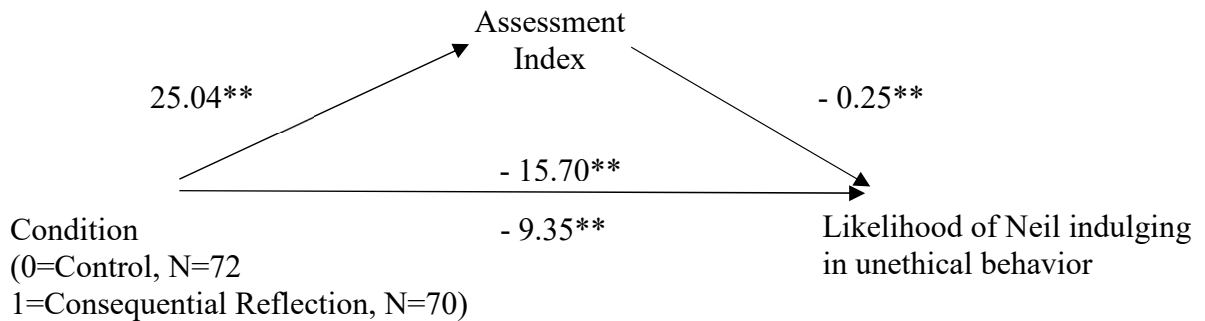
**Mean Likelihood of data manipulation across experimental conditions – Study 4**

**(Error bars represent  $\pm$  Standard Error of Means)**



**FIGURE 8**

**Mediation Analysis – Study 4**



\*\*= p < 0.05



### **Chapter 3**

## **Boundary Conditions for Consequential Reflection as a Remedy to Unethical Behavior**

### **ABSTRACT**

One suggested way to attenuate the temptation to indulge in unethical behavior, is the reflection on both positive and negative consequences of one's decision, namely consequential reflection. Yet, several questions remain as per individual differences and contextual factors that may increase unethical behavior and render consequential reflection more or less effective. In this paper, I report three experimental studies to explore such boundary conditions. I examine the role of individuals' preferred decision making style (Study 1) and compare the effectiveness of consequential reflection to that of honor codes – another highly suggested intervention to curb unethical behaviors (Study 2). Moreover, looking into a relevant practical concern of managers, I test whether the magnitude of rewards (Study 3) linked to the performance evaluation alters the effectiveness of consequential reflection. Overall, the paper provides practically relevant boundaries regarding the effect of consequential reflection on attenuating unethical behavior.

## Introduction

Many companies – as well as many business schools that educate future managers – use evaluation systems based on relative comparisons between individuals. It has been shown that such focus on relative, interpersonal standards, can give rise to unwanted behaviors such as cheating (Van Yperen, Hamstra, & Van der Klauw, 2011), or interpersonally harmful behaviors such as tactical deception (Poortvliet, Anseel, Janssen, Van Yperen, & Van de Vliert, 2012) and sabotage (Charness, Masclet, & Villeval, 2014; Lazear 1989). Those behaviors, apart from thwarting teamwork and creating a toxic climate within the organization (e.g., Kulik, O' Fallon, & Salimath, 2008), may escalate to scandals that harm the organizations' reputation and cost considerable amounts.

In response, interventions aimed to increase attention to ethical standards, such as signing honor codes (Shu, Gino, & Bazerman, 2011), or prompting the individual to switch to more deliberative modes of processing (e.g., Bazerman & Sezer, 2016; Moore & Gino, 2015), such as reflecting on both positive and negative consequences of one's decision, may help attenuate individuals' intentions to indulge in unethical behavior. The latter intervention, consequential reflection, has been tested in contexts where individuals are subject to relative performance evaluation.

What still remains an important theoretical and practical concern, relates to the boundary conditions of consequential reflection as an intervention. Consequential reflection works to override the automatic impulse to indulge in unethical behavior, by altering risks-benefits assessments of the individuals. To establish that this is indeed a theoretically solid mechanism, we need to directly assess how consequential reflection works in relation to individual decision making styles directly mapping to dual process

theories (e.g., Evans & Stanovich, 2013; Stanovich & West, 2000), proposing the distinction of our mental processes into automatic and deliberate ones.

Further, it is theoretically important to distinguish between consequential reflection and existing interventions – such as honor codes – by showing that the mechanism through which consequential reflection works is unique. Related to this distinction, an important practical implication emerges: If consequential reflection works just as well as another broadly used intervention – honor codes – then it is as good to use the one or the other in contexts where temptation for unethical behavior exists. Still, although unethical behaviors are probably as old as humankind and any intervention to combat their occurrence is worth a consideration, it is important to establish that consequential reflection is not redundant. That would allow for careful choice of each intervention, in accordance with the decision situation or the context at hand.

Moreover, it is worth examining a boundary condition that matters in organizational settings and is directly related with performance evaluation within organizations. One important concern rising after the recent financial crisis, is the magnitude of rewards attached to the performance evaluation of employees. It makes intuitive sense to think that if rewards from unethical behavior are so high that the employee does not even have to care about being fired or about the ease of finding a new job, then any intervention aimed at deterring unethical behavior would probably be in vain. Thus, we need to know whether consequential reflection is effective in curbing intentions to act unethically depending on the magnitude of rewards the unethical behavior would yield.

The rest of the paper is organized as follows. I elaborate on each of the above boundary conditions and suggest experimental studies to test their effect on

consequential reflection. I begin by describing the different decision styles mapping directly into the dual process theory, develop hypothesis 1, and design Study 1 to test it. Then I proceed to test whether there is a difference between consequential reflection and honor codes as per their effectiveness to curb intentions of unethical behavior (hypothesis 2 – Study 2). Last, I test the effect of the magnitude of rewards (hypothesis 3 – Study 3) involved in the performance evaluation.

### **Rational-Intuitive Decision Making Styles and Consequential Reflection**

Recent research indicates that individual differences are an important factor worth exploring when studying unethical behavior and corrective interventions (Moore & Tenbrunsel, 2014; Welsh, Ordoñez, Snyder, & Christian, 2015; see also, Kish-Gephart, Harrison, & Treviño, 2010, for a meta-analytic review). In this paper, relevant to the distinction between automatic versus deliberate mental processes, I look at individuals' preference for rational versus intuitive decision styles.

Decision making styles have been defined as “the learned, habitual response pattern exhibited by an individual when confronted with a decision situation” (p.820, Scott & Bruce, 1995). Decision making literature has considered various measures of decision making styles (e.g., Epstein, Pacini, Denes-Raj, & Heier, 1996; Pacini & Epstein, 1999; Scott & Bruce, 1995). Here, the focus is on the habitual decision making styles based on the dual-process theory. Previous studies show that people primarily respond in one of two ways: *rationally* (using logical deliberation, systematic appraisal, thorough search, and logical evaluation of alternatives) or *intuitively* (relying on hunches, feelings, and impulses) (e.g., Phillips, Paziienza, & Ferrin, 1984; Scott & Bruce, 1995). Thus, I

investigate the influence of individuals' preferences for rational versus intuitive decision making styles on the intervention of consequential reflection.

Consequential reflection is aimed at overriding the automatic impulse of indulging in unethical behavior by suggesting a more deliberative thought. Individuals that tend to engage in rational decision making are expected to do so with or without a specific prompt. In these individuals, the presence of a deliberative prompt (such as consequential reflection) may reinforce their habitual decision making style. In the case of intuitive decision makers, consequential reflection should override – rather than simply reinforce – their habitual decision making style. Hence, although consequential reflection should decrease intentions to act unethically regardless of the individual's preferred decision making style, I expect its effect to be more pronounced for intuitive decision makers. Formally stated:

*Hypothesis 1. The effect of consequential reflection on attenuating intentions to indulge in unethical behavior will be more pronounced for individuals with an intuitive decision making style than for individuals with a rational decision making style.*

Next, I describe Study 1, to test the above hypothesis.

### **Study 1: Rational-Intuitive Decision making Styles**

Study 1 tests whether the effect of consequential reflection on curbing intentions to act unethically will be more pronounced for individuals with an intuitive decision style. The scenario for this study – adapted from Zhong, Ku, Lount, and Murnighan (2010) – involved a workplace exam where employees are presented with the option to cheat in order to become eligible for a promotion being offered to the highest scoring employees.

#### *Method*

## Participants

218 participants of U.S. origin (47% male,  $M_{age} = 35.8$  years) completed the study through Amazon's Mechanical Turk online platform.

## Materials and procedure

Participants assumed the role of an employee in a large company where all employees were required to take an exam to assess their knowledge of the company. Employees receiving the highest scores would be eligible for a promotion. Participants were informed that they were unprepared for the exam and had the opportunity to copy the correct answers (please see Appendix for the scenario description). Participants were randomly assigned to one of two conditions: *control* and *consequential reflection*. Participants in the consequential reflection condition were asked to list possible consequences (both positive and negative) of their decision before providing their likelihood judgment.

Intention to indulge in unethical behavior was measured by participants' likelihood of copying the correct answers using a scale of 0 (not at all) to 100 (certainly). After providing their likelihood judgment, all participants rated the magnitude (from 0 to 100) of perceived risks and benefits involved in the situation they faced. I calculated the assessment index for each participant with positive (negative) scores imply that participants judged the situation to have higher (lower) risks than benefits.

To measure the rational-intuitive decision styles construct, I used the ten-item Rational-Intuitive Decision Styles (hereafter DSS) from Hamilton, Shih, and Mohamed (2016). Hamilton et al. showed that their scale is high on reliability, internal consistency, and convergent and discriminant validity, thus overcoming problems with previously used

scales. The DSS items are relatively straightforward and have very high face validity with 5 items each measuring rational style (e.g., “I prefer to gather all the necessary information before committing to a decision”, “I weigh a number of different factors when making decisions”) and intuitive decision style (“I make decisions based on intuition”, “I rely on my first impressions when making decisions”). Respondents rated the items on a standard 5-point Likert-type scale (1 = strongly disagree to 5 = strongly agree). The 5 intuitive item ratings were reverse coded and then all individual ratings were summed to create a single scalar composite score ( $M = 35.92$ ;  $SD = 6.65$ ;  $\alpha = 0.85$ ). Higher values correspond to a greater preference to use a rational decision style.

### *Results*

The mean likelihood in the consequential reflection condition ( $M = 29.97$ ,  $SD = 32.19$ ) was significantly lower than in the control condition ( $M = 39.41$ ,  $SD = 36.75$ );  $t(216) = 2.02$ ,  $p = 0.05$ . Assessment index in the consequential reflection condition ( $M = 13.14$ ,  $SD = 39.05$ ) was significantly higher than in the control condition ( $M = -1.72$ ,  $SD = 48.04$ );  $t(216) = 2.47$ ,  $p = 0.01$ . I conducted a mediation analysis, using the PROCESS macro (Hayes, 2013), model 4, with 10,000 bootstrapped confidence interval iterations. The total effect of condition on likelihood  $b = -9.44$ ,  $SE = 4.69$ ,  $p = 0.05$  was reduced to non-significance  $b = -6.00$ ,  $SE = 4.51$ ,  $p = 0.19$  upon introducing assessment index as a mediator. Assessment index had a robust indirect effect  $b = -3.44$ ,  $SE = 1.45$ , 95% CI [-6.81, -1.04] on likelihood to indulge in unethical behavior.

In order to test whether DSS moderates the relationship between consequential reflection and willingness to indulge in unethical behavior, I regressed likelihood to indulge on condition, DSS, and the interaction of the two. Both condition ( $b = -64.15$ ,  $p = 0.01$ ) and

DSS ( $b = -1.88, p < 0.001$ ) had a significant effect on likelihood to indulge which was further qualified by a significant interaction ( $b = 1.49, p = 0.03$ ). Interestingly, DSS had a significant negative effect on the willingness to indulge such that individuals with an intuitive decision making style tended to report higher willingness to cheat. Notably, the effect of consequential reflection on curbing intentions to indulge in unethical behavior was higher among participants with an intuitive decision making style as compared to those with a rational decision making style.<sup>3</sup>

Next, I discuss the comparison between consequential reflection and honor codes.

### **Honor Codes and Consequential Reflection**

Research in the domain of behavioral ethics has long been interested to provide alternative ways to increase the ethical conduct of individuals or decrease the occurrence of unethical behaviors (Zhang, Gino, & Bazerman, 2014). Broadly, the most frequently suggested intervention in this regard, is the use of honor codes (Shu & Gino, 2012; Shu, Gino, & Bazerman, 2011; Shu, Mazar, Gino, Ariely, & Bazerman, 2012).

Honor codes, serve to draw individuals' attention to moral standards, thereby increasing their moral awareness. As a result, individuals are more attentive to their own moral standards and more "strict" in judging the ethicality of their behavior (Shu & Gino, 2012). Consequential reflection, on the other hand, jointly highlights the positive and negative consequences of the behavior, thus allowing for the self-adjustment of risks and

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<sup>3</sup> Rational-intuitive decision making styles are sometimes considered as not being reciprocally exclusive but instead theoretically independent (e.g., Hamilton et al., 2016; Pacini & Epstein, 1999; Scott & Bruce, 1995). Therefore, I also ran the analyses with the two separate subscales of rational ( $\alpha = 0.91$ ) and intuitive ( $\alpha = 0.92$ ) decision making styles. Specifically, I conducted a regression with likelihood as the dependent variable, the consequential reflection condition, two subscales (rational and intuitive), and their respective interaction terms with experimental condition as the independent variables. The results showed significant main effects of condition ( $b = -10.50, p = 0.02$ ), the intuitive subscale ( $b = 2.05, p = 0.001$ ) and its interaction term ( $b = -1.86, p = 0.05$ ). No other variables were found to be significant.

benefits from the decision. As such, both honor codes and consequential reflection, serve the same final end of reducing intentions to act unethically. Yet, while honor codes prompt individuals to confirm and live up to their high ethical standards, consequential reflection targets towards the calibration between otherwise overlooked risks and otherwise highlighted benefits of the decision to indulge in unethical behavior.

Given the above, I expect no difference between consequential reflection and honor codes as per their effectiveness to mitigate unethical behavior. Yet, given the different focus of the two interventions, I expect that risks-benefits assessments will mediate the effect of consequential reflection on the decision to indulge in unethical behavior, but will not mediate the effect of honor codes on the decision to indulge. Formally stated:

*Hypothesis 2. Honor codes and consequential reflection will be equally effective in attenuating intentions to indulge in unethical behavior. Yet the suggested mechanism through which consequential reflection operates, risks-benefits assessments, will be unique to consequential reflection.*

I next proceed to test hypothesis 2.

## **Study 2: Honor Codes and Consequential Reflection**

### *Method*

#### Participants

267 participants of U.S. origin completed the study through Amazon's Mechanical Turk.

#### Materials and Procedure

Participants assumed the role of a university professor close to tenure evaluation and nomination for a prestigious national congress. The professor had a manuscript under review in a top journal and both the tenure decision and the nomination depended heavily on this manuscript getting published. The analysis of additional data requested by the journal was not providing desirable results. The professor/participant was facing the dilemma to manipulate the data or not. Participants were randomly assigned to one of the three conditions: control, consequential reflection, honor code. In the consequential reflection condition, participants were asked to list down possible consequences (both positive and negative) of their decision, before providing their likelihood to manipulate the data (from 0 = not at all, to 100 = certainly). In the honor code condition, after reading the scenario, participants also read:

*“The University Ethics committee needs you to sign an honor code to send your application for the science research congress. This asks all professors to pledge maintaining the highest standards and integrity of this profession in their teaching and research activities. Would you kindly write “I Agree” in the box below?”*

After selecting “I Agree” on the available textbox they provided their likelihood to manipulate the data.

After the likelihood judgment all participants rated the magnitude (from 0 to 100) of the risks and the benefits involved in the situation they are facing, which were combined in the assessment index (perceived risks - perceived benefits) that could range from -100 to 100. Positive (negative) scores imply that the participants perceive the same situation to have higher (lower) risks than benefits.

### *Results*

A univariate analysis of variance (ANOVA) using likelihood to indulge as the dependent variable and the three experimental conditions as a between-subjects factor demonstrated a significant main effect of condition  $F(2, 264) = 3.54, p = 0.03$ . Pairwise comparisons revealed that the mean likelihood in the honor code condition ( $M = 18.90, SD = 29.35$ ) was significantly lower than in the control condition ( $M = 29.82, SD = 29.56$ );  $t(172) = 2.42, p = 0.02$ . The mean likelihood in the consequential reflection condition ( $M = 19.85, SD = 30.04$ ) was also significantly lower than in the control condition  $t(173) = 2.22, p = 0.03$ . The difference between the honor code condition and the consequential reflection condition was not significant  $t(183) = 0.22, p = 0.83$ . Thus, participants' likelihood to indulge in unethical behavior was mitigated through both the honor code and the consequential reflection manipulations. Results are graphically illustrated in Figure 1.

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Insert Figure 1 about here  
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As per hypothesis 2, both honor codes and consequential reflection will be effective in reducing intentions to indulge in unethical behavior. Moreover, the risk-benefit assessments (assessment index) would mediate the effect of consequential reflection on participants' likelihood to indulge in unethical behavior. I did not expect the same for participants in the honor code condition who were not explicitly prompted to think in terms of positive and negative consequences. Rather, the participants in the honor code condition were prompted to confirm their high ethical standards. I found that the assessment index in the control condition ( $M = -9.12, SD = 38.07$ ) was significantly lower than in the consequential reflection condition ( $M = 3.67, SD = 40.77$ );  $t(173) = 2.15, p =$

0.03. The assessment index in the honor code condition ( $M = -4.25$ ,  $SD = 38.97$ ) was not significantly different from that in the control condition  $t(172) = 0.82$ ,  $p = 0.42$  or that in the consequential reflection condition  $t(183) = 1.37$ ,  $p = 0.17$ .

In addition, I conducted a mediation analysis using the PROCESS macro (Hayes, 2013) model 4, with 10,000 bootstrapped confidence interval iterations. Two dummy variables were created, one for consequential reflection and one for honor code, with control condition as baseline. Consequential reflection had a positive effect on assessment index  $b = 12.79$ ,  $SE = 6.00$ ,  $p = 0.03$  and honor code had a non-significant effect on assessment index  $b = 4.87$ ,  $SE = 5.88$ ,  $p = 0.41$ . Assessment index had a negative effect on likelihood to indulge in unethical behavior  $b = -0.25$ ,  $SE = 0.04$ ,  $p < 0.001$ . The total effect of consequential reflection on likelihood  $b = -9.97$ ,  $SE = 4.54$ ,  $p = 0.03$  was reduced to  $b = -6.82$ ,  $SE = 4.53$ ,  $p = 0.13$  upon introducing assessment index as a mediator. The total effect of honor code on likelihood  $b = -10.92$ ,  $SE = 4.50$ ,  $p = 0.02$  remained significant  $b = -9.71$ ,  $SE = 4.34$ ,  $p = 0.03$  upon introducing assessment index as a mediator. Assessment index had a robust indirect effect  $b = -3.15$ ,  $SE = 1.60$ , 95%  $CI [-6.74, -0.41]$  on likelihood to indulge in unethical behavior for consequential reflection but not for honor code  $b = -1.20$ ,  $SE = 1.42$ , 95%  $CI [-4.04, 1.61]$ .

The results provide evidence that, under this scenario, consequential reflection was as effective as creating moral awareness (through honor code). Furthermore, the result that assessment index mediated the effect of consequential reflection on unethical behavior but not of honor code provides additional support about the different mechanisms underlying the two processes.

Turning to another practical concern for managers, I next examine the effectiveness of consequential reflection in relation to the magnitude of rewards.

### **Magnitude of Rewards**

Performance evaluation is an important organizational procedure in which there is a lot at stake for employees. Among the various purposes performance evaluations serve (Baron & Kreps, 1999), they form the basis of compensation and promotion decisions. Those, in turn, usually entail monetary rewards – such as bonuses or salary raises – which may reach important amounts.

There might be real-world contexts where the benefits of unethical behaviors are so big that the risks feel insignificant. In such cases, it is entirely possible that consequential reflection is not effective in reducing unethical behavior. It is even possible that it might backfire by diverting people's attention to the extremely high levels of benefits, and as such, it is important to keep in mind that consequential reflection might not be a panacea to all reward-contexts of unethical behaviors. Formally stated:

*Hypothesis 3. Consequential reflection will be less effective on attenuating intentions to indulge in unethical behavior when the expected rewards are high than when the expected rewards are low.*

I next proceed to test hypotheses 3.

### **Study 3: Magnitude of Rewards**

In this study, I seek to test whether consequential would work for high as well as for low rewards.

#### *Method*

Participants

202 US participants completed the study through Amazon's Mechanical Turk online platform.

### Materials and Procedure

The materials and procedure were the same as in Study 1. Participants assumed the role of an employee taking a company knowledge exam. The employee was not prepared and had the opportunity to copy the correct answers. I used a 2 focal treatment (control vs consequential reflection) x 2 reward (low versus high) design. Participants were randomly assigned to one of the four conditions. In the control-low rewards condition participants read that those achieving one of the top 10 scores would get "a small prize" and then provided their likelihood of copying the correct answers (from 0 = not at all, to 100 = certainly). In the control-high rewards condition participants read that those achieving one of the top 10 scores would get "a grand prize of \$8,000 along with other benefits such as additional bonus, promotion possibilities, and being on prestigious committees". Participants then provided their likelihood of copying the correct answers. In the consequential reflection conditions (either with low or high rewards as described above) participants were asked to list down possible consequences (both positive and negative) of their decision before providing their likelihood to copy the correct answers. After providing their likelihood judgment, all participants rated the magnitude (from 0 to 100) of perceived risks and benefits involved in the situation they faced. I calculated the assessment index for each participant with positive (negative) scores imply that participants judged the situation to have higher (lower) risks than benefits.

### *Results*

A univariate analysis of variance using likelihood to indulge as the dependent variable and focal treatment and rewards as between-subjects factors demonstrated a significant main effect of focal treatment  $F(1, 198) = 8.79, p < 0.01$ . Rewards had a positive but marginally significant effect  $F(1, 198) = 3.53, p = 0.06$ . The interaction between focal treatment and rewards was not significant  $F(1, 198) = 0.11, p = 0.74$ . Figure 2 shows the average likelihood ratings across all conditions.

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Insert Figure 2 about here  
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The effect of the magnitude of rewards on willingness to indulge was in the predicted direction, yet did not reach significance. Taking together the high and low rewards conditions, I sought to test the overall effect of focal treatment on willingness through the assessment index. I conducted a mediation analysis, using the PROCESS macro (Hayes, 2013), model 4, with 10,000 bootstrapped confidence interval iterations. The total effect of focal treatment on likelihood  $b = -13.86, SE = 4.82, p < 0.01$  was reduced to  $b = -8.47, SE = 4.22, p = 0.05$  upon introducing assessment index as a mediator. Assessment index had a robust indirect effect  $b = -5.39, SE = 2.32, 95\% CI [-10.16, -1.08]$  on likelihood to indulge in unethical behavior.

### *Discussion*

The results of this study are in the predicted direction, yet do not provide clear support for hypothesis 3. Although high rewards seem to be more tempting for individuals to indulge in unethical behavior, consequential reflection still curbs such intentions.

### **General Discussion**

### *Overview of the Findings*

In this paper, I aimed to test theoretically and practically meaningful boundary conditions related to the effect of consequential reflection on attenuating unethical behavior. Study 1, provided evidence that consequential reflection is more effective for intuitive decision makers as compared to rational ones. Study 2, demonstrated the distinctiveness of the mechanism through which consequential reflection attenuates intentions to indulge in unethical behaviors and its effectiveness compared to honor codes. Finally, Study 3, showed that consequential reflection is effective in curbing intentions to indulge in unethical behavior when both high and low rewards are at stake.

The current studies, contribute to the field of human resource management and reinforce research efforts in tackling unethical behaviors in the workplace. The boundary conditions examined hereby give a more rounded view of the suggested intervention, allowing me to situate consequential reflection within the behavioral ethics research as an intervention to curb unethical behavior – answering the call of both researchers and practitioners towards this direction (e.g., Moore & Gino, 2013). Furthermore, those results are connected to research on the automatic intuitive processes related to unethical behavior (e.g. Bazerman & Sezer, 2016) and to the importance that individual differences play in the research on corrective interventions in the domain of ethics (Moore & Tenbrunsel, 2014; Welsh et al.,2015).

### *Managerial Implications*

The boundary conditions examined hereby, have relevant implications for practitioners and for every individual decision-maker. Managers who can identify whether employees have an intuitive or rational decision making style will be in a better position

to understand their subordinates' (as well as their own) reactions to temptation. Organizations, can add consequential reflection in their agenda of tackling unethical behavior in the workplace, as an unobtrusive, costless intervention. Last, HR managers and anyone involved in designing the evaluation and compensation policies of an organization, are reminded of the effect of high rewards on unethical behavior and the way to balance this through consequential reflection.

#### *Limitations and Directions for Future Research*

The present studies were conducted through an online platform, Amazon's Mechanical Turk, using scenario decisions rather than observing actual unethical behavior. It is ultimately desirable to test consequential reflection as an intervention in organizational contexts, where unethical behavior can occur and where tempting rewards and important stakes are present. In the current context, having observed strong results for the effect of this new intervention, gives confidence to present organizations with preliminary evidence of the consequential reflection intervention and test it in practice.

In the same lines, here, I only examined the effectiveness and differentiation of consequential reflection with just one other intervention – the use of honor codes. Organizations, increasingly move to the direction of ethics programs, part of which is the ethics training of employees (e.g. Weaver, Treviño, & Cochran, 1999; Weber & Wasieleski, 2013). The introduction of consequential reflection in such programs and its function along with other elements of those programs (e.g., codes of ethics), as well as with corrective measures including forms of sanctions towards employees with unethical conduct, would be a fruitful direction of applied research.

Furthermore, what is important to examine in future research is whether the effects of consequential reflection last for a specific timeframe or for a specific number of consecutive decisions. For example, would consequential reflection as a prompt be effective each and every time a decision involving ethical elements is to be taken? Would the repetition of consequential reflection result in fading of its effectiveness or would it reinforce it? Such concerns are important for organizations to consider when deciding to adopt this intervention and provide a fruitful research avenue.

Future research could also investigate other individual difference variables (e.g., personality traits, self-consistence, etc.) in combination with broader influences such as national culture, that could be expected to affect indulgence in unethical behavior and the effectiveness of consequential reflection as a corrective intervention. Furthermore, depending on contingencies imposed by individual differences, as well as by the national and even organizational culture, one intervention may be better suited for certain types of employees or cultures.

Last, it is relevant to keep in mind that an employee may not only care about achieving positive outcomes, such as promotion or compensation, but may also be concerned with avoiding negative outcomes, such as being fired or transferred to a less lucrative position. In those cases, the valence of the outcome linked to the performance evaluation is expected to play an important role on the decision to indulge in unethical behavior and hence on the effectiveness of consequential reflection as an intervention. Thus, the study of the valence of stakes from indulgence in unethical behavior, provides an important direction for future research.

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## **APPENDIX C**

### **Study 1 scenario**

#### *Control Condition*

You work for a large corporation. Your company has recently hired a team of consultants to determine everyone's knowledge of the organization. You understand that it is for informational purposes only, so you do not bother preparing. On the scheduled morning, your boss tells you that the company will consider those who achieve one of the top-10 scores as eligible for promotion. The promotion sounds quite good and is accompanied with a slight increase in your income - around 1%. You spend the next 2 hours cramming, only to realize that you really don't know as much as you had hoped.

As the exam is about to start, the consultant hands you your exam, but as he walks away, a piece of paper falls from his bag. It is the answer key for the exam. Nobody else saw the paper fall and no one else knows that you can see it.

How likely would you be to pick up the answer key and copy to get a very high score?

Please answer on a scale from 0 (=not at all) to 100 (=certainly).

#### *Consequential Reflection Condition*

(Same as Control condition except for the additional reflection task as follows)

“Before answering, please reflect on the consequences (both positive and negative) of your decision. Could you list down a few that come to your mind?”

## Study 2 scenario

### *Control Condition*

You are an **Assistant Professor** of Biotechnology at a prestigious university in the US. Your tenure decision is coming up soon – which means after your performance appraisal, it will be decided whether you should be **promoted** to an Associate Professor level and also be given a **permanent contract** with the university. This is a big decision for any academic – all the years of hard work culminate into this decision. Failure to get tenure means being terminated from the university, in which case the professor has to search for another job at less prestigious universities and for much less money. Furthermore, there is a new science research congress being formed at a national level. **The school will be nominating 3 (or max 4) of the 15 tenure-track professors to this congress.**

As you might know, developing and publishing new research is the biggest component of such tenure and nomination decisions. The university gives points for different kinds of publication based on the prestige of the journal. Those who score the highest research points would have higher chances. You have published several key articles in top journals of your field. You currently have one article being considered for publication in the world's most respected journal **Science**. An article in this journal will surely seal the deal for you. However, the journal has asked you to provide additional data. You have just finished analysing the data. You realize that 3 out of 100 data points cause problems in the results that you would like to have to support your article. Because the stakes are so high, you are thinking if you should manipulate those 3 data points and provide the required results.

How likely would you be to manipulate the data? Please answer on a scale from 0 (=not at all) to 100 (=certainly).

*Consequential Reflection Condition*

(Same as Control condition except for the additional reflection task as follows)

“Before answering, please reflect on the consequences (both positive and negative) of your decision. Could you list down a few that come to your mind?”

*Honor Code Condition*

(Same as Control condition except for the additional honor code signed as follows)

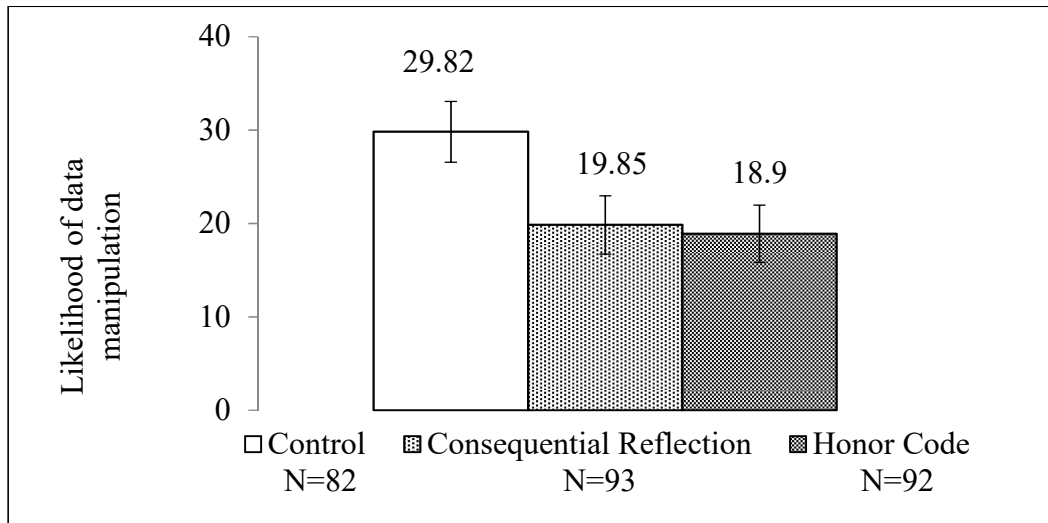
“The University Ethics committee needs you to sign an honor code to send your application for the science research congress. This asks all professors to pledge maintaining the highest standards and integrity of this profession in their teaching and research activities. Would you kindly write "I Agree" in the box below?”

**FIGURES AND TABLES**

**FIGURE 1**

**Mean Likelihood of data manipulation across experimental conditions – Study 2**

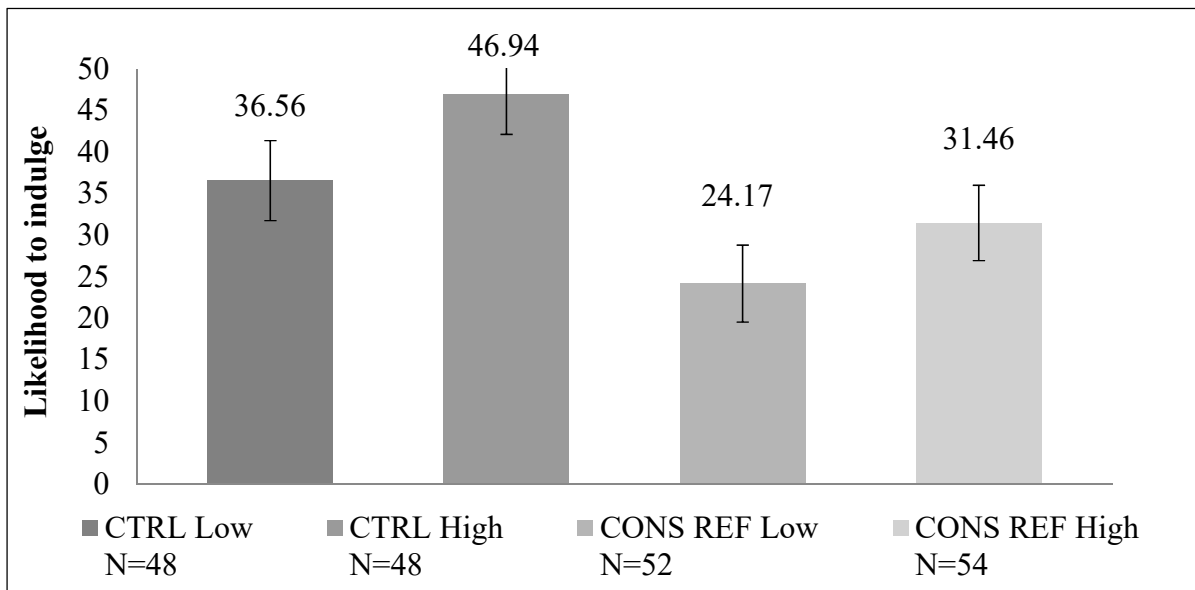
**(Error bars represent  $\pm$  Standard Error of Means)**



**FIGURE 2**

**Mean Likelihood of cheating across experimental conditions – Study 3**

**(Error bars represent  $\pm$  Standard Error of Means)**



## **CONCLUSIONS**

The studies presented in the three chapters above, have discussed a series of influences on our decision making and judgment in the domain of ethics. The three chapters, had a distinct focus: automaticity and modes of processing the ethical decision at hand was examined in Chapter 1; relative performance evaluation, a contextual factor of great importance in organizations, was closely examined in Chapter 2; last, boundary conditions for the proposed intervention to curb unethical behavior, were examined in Chapter 3. Yet, all three chapters shared a common focus on the remedy side, testing the proposed consequential reflection as an intervention for curbing unethical decisions and attenuating judgment of others' unethical decisions.

The results of the experiments conducted, suggest that consequential reflection – reflecting on both the positive and negative consequences of the situation at hand – is effective in curbing intentions to behave unethically and in attenuating expectations that others will behave unethically. Also, those results hold under the comparative and competitive context of relative performance evaluation, which moreover exacerbates the tendency to behave unethically. Importantly, the boundary conditions examined, show that consequential reflection works more effectively for intuitive (as opposed to rational) decision makers, is as effective yet distinct from honor codes, and works for high monetary stakes involved in the decision situation.

It is my hope that further research will validate and enhance those findings in organizational settings, with the purpose of curbing unethical behaviors in the workplace and in everyday life.

## CONCLUSIONES

En los estudios presentados en los tres capítulos anteriores, se han analizado una serie de influencias que afectan a nuestra toma de decisiones y a nuestro juicio en el campo de la ética. Estos tres capítulos han presentado un enfoque concreto: en el Capítulo 1 se estudió la automaticidad y los sistemas de procesamiento de las decisiones éticas; en el Capítulo 2 se examinó con detenimiento la evaluación del desempeño relativo, un factor contextual de gran importancia en las organizaciones y empresas; en el Capítulo 3, por último, se examinaron las condiciones límite de la intervención propuesta para frenar el comportamiento no ético. Sin embargo, los tres capítulos comparten un enfoque común en el aspecto de los remedios, estudiando la reflexión consecuente como propuesta de intervención para frenar las decisiones no éticas propias y para atenuar el juicio sobre las decisiones no éticas de otros.

El resultado de los experimentos llevados a cabo sugiere que la reflexión consecuente – la reflexión sobre las consecuencias tanto positivas como negativas de la situación entre manos – sirve para frenar, de modo eficaz, las intenciones de actuar con falta de ética y para atenuar las expectativas de que otros vayan a comportarse de un modo no ético. En este sentido, los resultados se mantienen bajo el contexto comparativo y competitivo de la evaluación del desempeño relativo, que tiende a exacerbar la tendencia a actuar de modo no ético. Al examinar las condiciones límite, se observa que la reflexión consecuente resulta más eficaz con aquellas personas que suelen tomar decisiones de forma intuitiva (al contrario de aquéllos que las toman racionalmente), que, aun siendo muy diferente, es tan efectiva como los códigos de honor y que funciona igual en ámbitos en los que los altos riesgos monetarios juegan un papel importante en la toma

de decisiones.

Espero que futuras investigaciones validen y refuercen esas conclusiones en el ámbito organizacional, con el propósito de frenar los comportamientos no éticos en el lugar de trabajo y en la vida diaria.