

Behavioral Compliance

– Corporate Compliance meets

Behavioral Economics –

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Family.

Thank you for everything.

Executive Summary

Today's corporate compliance instruments run short on protecting companies and shareholders from organizational fraud. Instead of implementing more and more anti-fraud controls, it is about time to rethink fraud prevention and fraud detection.

In its core, this dissertation focuses on human behavior and takes a closer look at those people who (1) commit fraud (fraudsters, non-compliant) and (2) report fraud (whistleblowers, compliant). Using a mixed-methods approach, this study analyzes observed behavior with established personality tests (e.g. HEXACO PI-R and an integrity test) in various laboratory experiments and an interview study with whistleblowers. The findings derived from these studies allow for the conclusion that integrity at work is strongly related to the personality trait Honesty-Humility. With whistleblowers ranking high on Honesty-Humility, it can be concluded that whistleblowing is (1) a form of integrity and (2) intrinsically motivated. Accordingly, this personality trait should be taken into consideration for more effective fraud prevention and fraud detection.

Motivation and Meaning of Behavioral Compliance

“Get him away from here, the doctors don’t have it under control.”

-- Nurse who saved my life, talking to my mum.

I had to learn the painful way how it is to lose something most people simply take for granted: health. It took several years to fully recover from bad luck, but drastic life experiences have laid the ground for my research on the following Behavioral Compliance.

The day my stomach perforated was February 15, 2006, a Wednesday when more than 1.5 liters of stomach contents emptied in my abdominal cavity. A life threatening condition that worsened when my body developed an infection caused by hospital bugs. While I was in coma, my parents were talking with doctors about how to save my life and were putting their trust into the hospital staff. Assuring my parents that they were providing the best medication possible, my blood’s inflammatory values were increasing significantly and the infection spreading to multiple organs – with other patients showing very similar indications of severe infection, too. Several surgeries and indications of ineffective medicine later, a nurse approached my mum and told her that the doctors were not having the situation under control and that my parents should take me out of the hospital. So they did. I was taken to another hospital where my life could be saved. I woke up many weeks later in another city and could not understand what was happening and which experiences would lie ahead of me. I had to learn to speak again, to walk again and it was not possible for me to eat or drink for more than 1.5 years due to difficulties in consequence of the massive infections. Not only was I at the age of 22 years but my family confronted with a severe trauma. As the years passed by, I decided to make the best out of my hospital odyssey and aimed at understanding my experiences from a behavioral perspective – not emotionally driven but from a scientific perspective. Influenced and inspired by behavioral economist Dan Ariely, I wanted to learn more about human behavior and why we sometimes behave against our values – even at the expense of others.

When Corporate Compliance Runs Short

The first hospital I was in had controls and procedures installed which aimed at preventing situations like mine. Hospital bugs can happen and I am not judging anybody, but when any staff learns about it they have to react because in the worst case people

can actually die. Looking back, I have always tried to find answers to why the situation could get so badly out of control. Why did the doctors try to keep me in the hospital although they might have known that I could die if they did not get me out of there? Did they simply not perceive the situation as life threatening as it was? And why did the nurse decide to speak to my parents? Without her, I would be dead today. Over the years I started researching on organizational (mis-)behavior and behavioral science to be able to better understand what had happened to me. And even more important, how I can use my experiences so that others do not have to make them as well?

Looking back at my own experiences from a more abstract level, I conclude that there are four types of people involved in any fraud scandal which ran out of control:

Type A. Misbehavior

- a. Those who actively commit fraud.
- b. Those who remain silent when they perceive fraud.

Type B. Integrity

- a. Those who actively decide against fraud.
- b. Those who report fraud when they perceive it.

Accordingly, to learn more about these types of people I decided to focus my dissertation on the underlying behavioral aspects potentially resulting in misbehavior or integrity to provide recommendations on how to better prevent and/or detect fraud. Therefore, the following research on Behavioral Compliance is focused on the behavioral differences between Type A and Type B persons. How can these people be distinguished so that Corporate Compliance as it is today can take these insights into consideration?

The studies presented throughout this dissertation will provide various fruitful insights into how to better prevent or detect fraud – and hopefully encourage companies to implement these findings. Similar to my case, fraud always causes victims. Innocent people who should be better protected because in the worst case, fraud can even cost lives.

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List of Abbreviations

ACFE	Association of Certified Fraud Examiners
APA	American Psychology Association
CFE	Certified Fraud Examiner
DOJ	U.S. Department of Justice
F/S	Financial Statement
HBR	Harvard Business Review
HCIFC	U.S. House Committee on Interstate and Foreign Commerce
HBS	Harvard Business School
NYT	New York Times
OCEAN	Openness to Experience, Conscientiousness, Extraversion and Introversion, Agreeableness and Neuroticism
OLS	Ordinary Least Squares
ORI	Oregon Research Institute
PCAOB	Public Company Accounting Oversight Board
PTSD	Post Traumatic Stress Disorder
PWC	PriceWaterhouseCoopers
SEC	U.S. Securities and Exchange Commission
SDO	Social Dominance Orientation
SOEP	Socioeconomic Panel
SOX	U.S. Sarbanes-Oxley Act
TDRA	Top-down Risk Assessment
Unifr	University of Freiburg

USA	United States of America
USSC	U.S. Federal Sentencing Commission
USSG	U.S. Federal Sentencing Guidelines
WSJ	The Wall Street Journal

1 Introduction and Structure of the Study

Since 2001, when energy tycoon Enron and its auditor Arthur Andersen caused one of the biggest corporate scandals in the history of the U.S. economy due to a manipulation of Enron's balance sheets, Corporate Compliance instruments to prevent occupational fraud have been on the rise globally.

As a result of even further corporate scandals in the following years, the U.S. government introduced various laws for companies doing business in or with the United States of America. These laws legally mandated e.g. the implementation of a host of internal controls to prevent and/or detect fraud. But despite the laws, various further big corporate scandals have erupted organizations, the media and the public over the last couple of years. To name only three: (1) the Libor manipulation at Deutsche Bank and other global banks in the finance industry of 2012, (2) the country-rigging scandal at the oil giant Petrobras in Brazil of 2014 or (3) the emissions scandal ("Dieselgate") scandal at Volkswagen and other global car manufactures of 2015. These above-mentioned corporate scandals are just three cases exemplifying that Corporate Compliance runs short on protecting companies and shareholders from self-seeking fraudsters because all of these aforementioned examples had compliance monitoring systems in place. Therefore, it is about time to rethink Corporate Compliance to prevent occupational fraud more effectively.

This dissertation sets the ground for a behavior-oriented compliance (Behavioral Compliance) and aims at helping Corporate Compliance to be more effective in occupational fraud prevention and detection. But how? By taking a closer look at those people who (1) commit fraud (fraudsters, non-compliant) and (2) report fraud (whistleblowers, compliant). Learning about the motivation leading to their behavior will provide useful insights for fraud prevention and detection.

Behavioral Compliance – Focusing on Personality and Situation

To explain any form of human behavior (e.g. committing fraud or blowing the whistle on fraud), personality and social psychologists generally agree that both personal and situational factors have to be taken into consideration. However, due to its complexity, this dissertation focuses on the personality factors in which fraudsters and whistleblowers differ, so Corporate Compliance can implement instruments based on these

insights. Situational factors are included in many parts of this study, but will be one of the main focus of future research.

Structure of this Study

In the following chapter 2 *Corporate Compliance: Status Quo + Need for More*, Corporate Compliance – as it is today – will be presented in detail. Besides U.S. law which had an impact on the global compliance movement of implementing more and more anti-fraud controls such as the U.S. Sarbanes-Oxley-Act, typical anti-fraud controls used in today's companies will be illustrated in chapter 2.1 *Corporate Compliance: Controlling for the Sake of it*. The following chapters 2.2 *The Fraud Triangle: Rethinking Corporate Compliance* and 2.3 *Need for More: Behavioral Compliance* will show why today's anti-fraud controls run short on preventing corporate fraud: these are not focused enough on the individual.

Chapter 3 *Behavioral Compliance: Challenge and Approach* explains why it is so difficult to develop behavioral-oriented compliance: human behavior is immensely complicated (if not impossible) to predict. By rationalizing their behavior, many honest people will cheat as soon as they have the opportunity to do so. Therefore, Behavioral Compliance focuses on what motivated people – and this is where intrinsic (personality) and extrinsic motivation (situation) comes into play. By taking a closer look at what motivates people, useful insights towards fraud or integrity are generated in this chapter. Above all – as the following studies within this dissertation will show – there seems to be (1) an intrinsic motive towards integrity and (2) that this motive can be learned by (3) role models.

Accordingly, chapter 4 *Know Your People* focuses on a detailed literature review on personality traits and human behavior. Besides the five basic dimensions of the human character (1) Openness to Experience, (2) Conscientiousness, (3) Extraversion and Introversion, (4) Agreeableness, and (5) Neuroticism (OCEAN), relatively new research on a sixth personality trait (6) Honesty-Humility and an integrity test will be the core of this chapter. Especially Honesty-Humility seems of particular importance when taking a closer look at intrinsic motivation towards fraud and integrity. This chapter closes with a taxonomy of personality traits and presents the mixed-methods approach (laboratory experiments and qualitative interview study with whistleblowers) of this dissertation to derive useful and reliable insights into the motivation towards compliant and non-compliant behavior.

Chapter 5 *Quantitative Research: Laboratory Experiments* details an experimental study which allows to observe fraud and whistleblowing in an anonymized research setting. As part of this study, they were asked to fill out a questionnaire consisting of personality tests which can measure OCEAN, Honesty-Humility and the overall score of an integrity test. The findings already indicated that the difference between compliant and non-compliant behavior especially seems to be rooted in Honesty-Humility. To question the various research findings of the quantitative study, a qualitative interview study is presented in chapter 6 *Qualitative Research: Interviews*. While nine whistleblowers were participating at no charge, no fraudster was willing to take part – simply because they wanted (too much) money in return. The interview study reveals strong support that whistleblowing is intrinsically motivated and that the personality dimension Conscientiousness does not seem to be as important as expected when it comes to speaking up against fraud.

The final chapter 7 *Status Quo of Behavioral Compliance* begins with two practical recommendations derived from this study. The first advice is based on findings on personality traits of fraudsters and whistleblowers. Next to a summary, signs of high or low scores on Honesty-Humility are presented. The second advice derives from research on monetary incentives (extrinsic motivation) and concludes that companies, which *honestly* aim at being compliant with the law and preventing fraud, should implement individual sanctions for non-compliant behavior. This chapter concludes with the direction of future research.

2 Corporate Compliance: Status Quo + Need for More

When Volkswagen admitted in September 2015 that it used an illegally installed defeat device to meet U.S. emission standards during regulatory testing, it had extensive Corporate Compliance mechanisms installed to prevent or detect fraud such as the resulting emissions scandal. Same holds true for global companies, such as the German Deutsche Bank or U.S. multinational bank JPMorganChase and their involvement in the Libor scandal or the Brazilian state-owned oil company Petrobras which exposed a country-wide corruption system. All of these companies – and many others involved in major fraud scandals – had corporate compliance systems installed but these failed to prevent or detect fraud that had been running over years. Obviously, Corporate Compliance fell short – and this chapter will provide potential underlying causes.

2.1 Corporate Compliance: Controlling for the Sake of it

Originally, the term "compliance" derived from medicine and can be understood as something that should be a matter of course for everybody: "*Compliance generally refers to the conformance to a set of laws, regulations, policies, best practices, or service-level agreements.*" (Silveira et al. 2012: 525). If every human being lived by the means of this definition, there would be no corporate scandals, no fraudsters and therefore no whistleblowers would be needed. But just like around half of the patients not consistently taking their medications according to the therapeutic recommendations by their doctors (WHO 2003: XIII), people generally do not comply with rules all their lives - let alone even for a whole day. Keeping this in mind with regard to employees and the various policies of the individual company, which extend beyond legal regulations, the term "Corporate Compliance" is widely used in literature referring to the adherence of policies in the business context. Therefore, throughout this study (Corporate) Compliance "*refers to the set of procedures, methodologies, and technologies put in place by a corporation to carry out, monitor, and manage compliance*" (Silveira et al. 2012: 525). Or to phrase the core of this quote conversely, Corporate Compliance aims at preventing and detecting occupational fraud – and Behavioral Compliance aims at helping Corporate Compliance to be more effective in occupational fraud prevention and detection. But how? By taking a closer look at those people who (1) commit fraud (fraudsters) and (2) report fraud (whistleblowers). Learning about the motivation leading to their behavior will provide useful insights for fraud prevention and detection.

Fraudsters – Why They Do It

“It is widely believed that some people are, by nature, prone to be deviant.”

-- Robinson/Greenberg (1998: 12).

According to Robinson and Greenberg (1998) some employees already own potential personality traits to commit fraud when they enter organizations. The more of the individuals' antecedents they possess, the greater the likelihood that he or she will engage in any form of deviant behavior. But to explain any form of human behavior (e.g. committing fraud), personality and social psychologists generally agree that not only personal but situational factors have to be taken into consideration (Lucas/Donnellan 2009: 146). But which influencing factors make employees more likely to be toxic? And which influencing factors make them more likely to be integer?

Before digging into the details to answer this question, the general term *fraud* should first be defined for the sake of completeness. Although many formal definitions of fraud exist, probably the most common is the following by (Albrecht et al. 2012: 6):

„Fraud is a generic term, and embraces all the multifarious means which human ingenuity can devise, which are resorted to by one individual, to get an advantage over another by false representations. No definite and invariable rule can be laid down as a general proposition in defining fraud, as it includes surprise, trickery, cunning and unfair ways by which another is cheated. The only boundaries defining it are those which limit human knavery.”

Accordingly, fraud is (1) done by an individual to (2) get an advantage by (3) false (4) representations on the (5) expense of others. ACFE (2016: 90) defines (occupational) fraud in a similar manner as *“the use of one’s occupation for personal enrichment through the deliberate misuse or misapplication of the employing organization’s resources or assets”*. Therefore, (occupational) fraud results from the misbehavior of employees, managers, or even executives and can be anything from a stolen meal to manipulation of a company's balance sheets. The more serious a fraud is and the longer it lasts, the more expensive it can get for a company's shareholder. Logically, fraud should be prevented or detected as soon as possible which is the reason why Corporate Compliance should seriously take employees' behavior into consideration – a fact that will be further detailed throughout this study.

Fraud can be divided into those (1) committed on behalf of organizations (e.g. Volkswagen's “Dieselgate” or Deutsche Bank's Libor scandal in which employees

used fraud to increase their employer's revenues – and due to that, their own salaries) and (2) committed against organizations or people (e.g. cybercrime such as collusion or mail theft) (Burke/Tomlinson/Cooper 2011: 164). To provide a more general overview of the different types of frauds that can occur, the following Table 2-1 illustrates the different types of fraud proposed by Albrecht et al. (2012: 10). There are six types of fraud: (1) employee embezzlement, (2) vendor fraud, (3) customer fraud, (4) management fraud, (5) investment scams and (6) other types of fraud and Table 2-1 includes further explanations on what these imply.

Table 2-1: Types of fraud

Type of Fraud	Fraudster	Victim	Explanation
1. Employee embezzlement	Employees of an organization	The employer	Employees use their positions to take or divert assets belonging to their employer.
2. Vendor fraud	Vendors of an organization	The organization to which the vendors sell goods or services	Vendors either overbill or provide lower quality or fewer goods than agreed.
3. Customer fraud	Customers of an organization	The organization which sells to the customers	Customers do not pay, pay too little, or get too much from the organization through deception.
4. Management fraud (financial statement fraud)	Management of a company	Shareholders and/or debtholders and regulators (taxing authorities, etc.)	Management manipulates the financial statements to make the company look better than it is. This is the most expensive type of fraud.
5. Investment scams and other consumer frauds	Fraud perpetrators— all kinds	Unwary investors	These types of frauds are committed on the Internet and in person and obtain the confidence of individuals to get them to invest money in worthless schemes.
6. Other types of fraud	All kinds—depends on the situation	All kinds—depends on the situation	Anytime anyone takes advantage of the confidence of another person to deceive him or her.

Source: Albrecht et al. (2012: 10).

Throughout this study, any employee who actively commits any of the six previously illustrated fraud types is defined as a fraudster. But besides those employees to actively

engage in fraud, usually several others learn about a potential wrongdoing happening in their company and actively decide to accept it. These people remain silent which refers “*to a state in which individuals refrain from any form of genuine expression that calls attention to illegal or immoral issues that violate personal, moral or legal standards*” (MacGregor/Stuebs 2013: 2). Therefore, any employee of a company (current or former) who either actively (1) engages in or (2) tolerates fraud by remaining silent about it, is defined as a fraudster within Behavioral Compliance.

Whistleblowers – Why They Do It

“*The only thing necessary for the triumph of evil is for good men to do nothing.*”

-- Edmund Burke, Irish statesman.

Opposite to fraudsters are those employees who either (1) actively decide not to commit any of the six fraud types illustrated above or (2) decide to report fraud committed by others (whistleblowers). Often involved in corporate misconduct and regarded as traitors, whistleblowers have helped expose major fraud scandals (e.g. UBS tax fraud by whistleblower Bradley Birkenfeld or Russian doping scandal by Yuliya and Vitaly Stepanov) which have not been detected by any of the anti-fraud controls implemented by Corporate Compliance. But which personal and situational factors make an employee more likely to speak up and to revise their intuitive judgments of participating in fraud (Soltes 2016: 313)? And vice versa, which personal and situational factors make an employee more likely to remain silent and to not revise their intuitive judgments of participating in fraud? Before digging into the details to answer this question, the general term *whistleblowing* should first be defined to provide a better understanding of why this type of employee should be regarded as highly valuable for any company.

In general, whistleblowing can be defined as “*the disclosure by organization members (former or current) of illegal, immoral or illegitimate practices under the control of their employers, to persons or organizations that may be able to effect action.*” (Near/Miceli 1985: 4). Accordingly, the phenomenon of whistleblowing includes three characteristics: (1) a whistleblower who may be a former or a current employee of a

company; (2) a wrongdoing that is illegal, immoral or illegitimate¹, which is therefore not only limited to illegal behavior such as the aforementioned six types of fraud (Miceli/Near/Dworkin 2008: 4) and (3) a disclosure to individuals or agencies that may be capable of eliminating the malpractice. Hence, the wrongdoing has to be shared by using internal channels (e.g. employee's immediate supervisor, upper management, or ombudsman) or external channels such as agencies or the media to blow the whistle and to therefore stop the wrongdoing (Miceli/Near/Dworkin 2008: 7).² Accordingly, an employee has three options regarding whistleblowing.

Table 2-2: Three options of an employee regarding whistleblowing

Employee (current or former)	Whistleblowing	Remaining Silent
	<i>Internal Whistleblowing:</i> Reporting fraud within the company.	<i>No Whistleblowing:</i> Remaining fallaciously silent.
	<i>External Whistleblowing:</i> Reporting fraud outside the company.	

Source: Own illustration.

For exposing severe misconduct, whistleblowers most often face severe retaliation, not seldom including deterring consequences such as death threats and/or bankruptcy. But is it not plain wrong to punish those people who help expose fraud that would otherwise remain undetected? It is and still, although they had to face negative consequences, most of them do not regret their decision to report their misbehaving colleagues. Such as Brian Penny, a former Operations Manager at the U.S. Bank of America, who turned whistleblower against his employer and helped expose a fraud in the force-placed insurance industry:

"I make a modest living doing what I love these days, and I don't regret one minute of my whistleblowing experience. I didn't do it for the money—I did it for a change that still hasn't happened, despite six years of work. And I'm going to continue doing it because I know it's the right thing to do. (Forbes 16.10.2016)"

¹ There is no difference between immoral and illegitimate (Leisinger 2003: 60) and it cannot be expected of an employee to judge if the perceived misconduct is illegal or illegitimate as long as it is legitimate (Berndt/Hoppler 2005: 2624).

² Reporting channels of whistleblowers will be further detailed in chapter 2.3.2.

Like most other whistleblowers (including those who participated in the interview part of this study), Brian Penny used internal channels first to report his suspicion and then used external channels because the fraud remained uncorrected. And in contrast to others participating, fraud feels wrong to those who decide to report it. This study aims at finding out more about these people who report potential fraud using internal channels to make their employer aware of potential compliance risks. However, internal whistleblowing may lead to external whistleblowing – and due to that to a potential loss of reputation for the company – e.g. if the wrongdoing remains uncorrected.³

In a nutshell, Behavioral Compliance is focused on the four above-mentioned types of people (fraudster versus integrity). Summarized in Table 2-3, personality traits of these people as well as situational factors, which have an impact on general decision making, will be further explained and analyzed throughout the course of this study.

Table 2-3: Behavioral Compliance - roles of employees

Employee	Fraudster	Integrity
	<ol style="list-style-type: none"> 1. Actively engaging <i>in</i> fraud 2. Remaining fallaciously silent about fraud (no whistleblowing) 	<ol style="list-style-type: none"> 1. Actively deciding <i>against</i> fraud 2. Reporting fraud (whistleblowing)

Source: Own illustration.

Before focusing on the important facets of individual behavior in connection with fraud and whistleblowing, the status quo of Corporate Compliance and the need for something like a behaviorally-oriented compliance will be presented. The aim of the following chapters is to provide an understanding of why Corporate Compliance – as it is today – is potentially not effective enough to prevent and detect fraud.

Development of Corporate Compliance

The discussion about Corporate Compliance topics has grown enormously over the last decades and was largely driven by various corporate fraud scandals: energy tycoon Enron in 2001, technology giant Siemens in 2008 or global car maker Volkswagen in 2015 to just name a few of the biggest corporate scandals. Early on since the detection

³ 9 out of 10 whistleblowers who took part in the interview study of this dissertation reported using internal channels before they decided to report using external channels (e.g. media). More information in chapter 6.

of globally running fraud schemes, the United States of America became the “*motherland of the modern compliance movement*” (Grummer/Kopka-Seeburg 2013: 145) due to sharp legal regulations that were implemented in consequence of corporate scandals. In its core, the legal regulations consist of three federal laws (1) U.S. Foreign Corrupt Practices Act, (2) U.S. Federal Sentencing Guidelines and (3) U.S. Sarbanes-Oxley-Act.⁴ The following chapter will introduce these U.S. federal laws and will show that these do not only count for companies based in the USA, but can impose far-reaching legal consequences for many companies including their management outside the North-American country.

2.1.1 U.S. Foreign Corrupt Practices Act

A major U.S. federal law impacting Corporate Compliance was introduced in consequence of findings of the investigations conducted by the U.S. Securities and Exchange Commission (SEC) investigations in the mid-1970s. More than 400 companies transacted questionable or illegal payments, with many of these paying more than US\$ 300 million to foreign government officials, politicians, and political parties (HCIFC 1977). Many of the companies involved in these bribery schemes were the largest and most widely held public companies in the United States of America, with more than 117 of these ranking among the top Fortune 500 industries⁵ of that time (ibid). According to the U.S. law makers, bribery is not only unethical but bad for business because it e.g. “*erodes public confidence in the integrity of the free market system*” and “*short-circuits the marketplace by directing business to those companies too inefficient to compete in terms of price, quality or service*” (ibid). Furthermore, the use of these payments to boost revenues can have serious effects for the bribing company including a loss of reputation, costly lawsuits and result in the appropriation of valuable assets overseas (ibid).

⁴ Further international laws (e.g. the UK Bribery Act) have had an impact on the global compliance movement, but due to the major impact of U.S. American laws these will be the starting point of Behavioral Compliance.

⁵ Sectors of industries involved were health care, oil and gas, food, aerospace, airlines and chemicals (HCIFC 1977).

In consequence, the U.S. law makers decided to introduce the so-called *Foreign Corrupt Practices Act* (FCPA)⁶ and earmarked the early development of Corporate Compliance systems in the USA. Signed by the U.S. President Jimmy Carter in December 1977, the FCPA has two main provisions:

1. Anti-bribery provision

The anti-bribery provision of the FCPA makes it illegal for (1) U.S. persons, real or corporate, or third parties acting on their behalf, (2) foreign companies registered with the SEC, and (3) foreign companies or persons that commit an act in furtherance of an improper payment or offer while in the United States, to bribe foreign officials in order to “*obtain or retain business*” (Funk 2010: 2) Accordingly, the anti-bribery provisions of the FCPA applies to foreign companies or people who make use of a corrupt payment within the territory of the United States of America. Even stricter, the FCPA is already violated if a company is using so-called *interstate commerce* (e.g. a call to the USA, an e-mail, a fax or a bank transfer via the U.S. system) to promote a corrupt payment (HCIFC 1977).

2. Accounting transparency provision

The accounting transparency provision of the FCPA requires companies whose securities are listed in the USA to meet accounting transparency. Furthermore, these companies are required to adhere to internal control standards (Funk 2010: 2).

Violating the FCPA and its two provisions can be very costly for individuals and companies. More generally, penalties fall into one of two categories: (1) economic sanctions and/or (2) imprisonment.

Individuals criminally prosecuted under the FCPA for bribing foreign officials face sanctions of up to US\$ 100.000 per violation and/or up to five years in prison.⁷ Those individuals who are violating the FCPA’s accounting and record-keeping provisions, face sanctions not to exceed US\$ 5 million and/or up to twenty years in prison (15 U.S.C. § 78ff(a)).

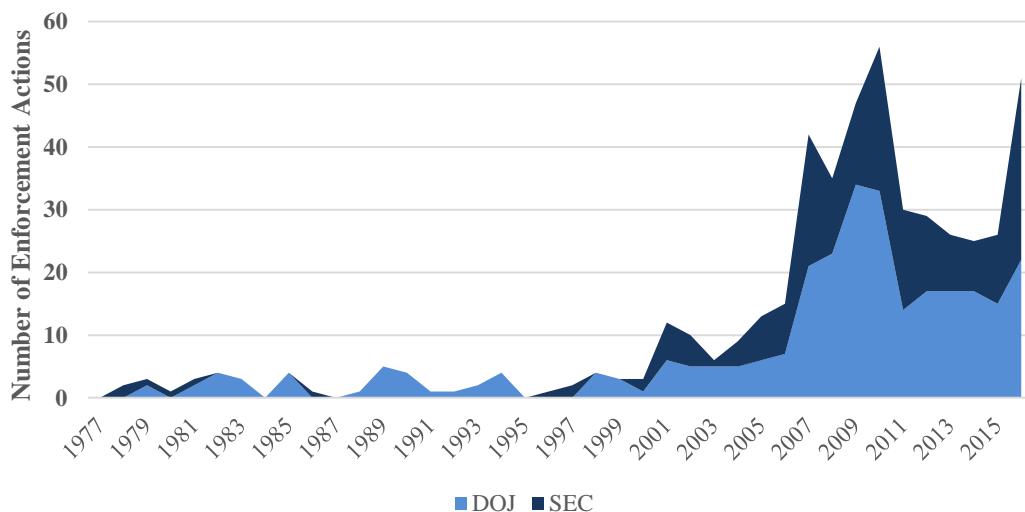
⁶ See 15 U.S. Code § 78dd-1–78.

⁷ See 15 U.S. Code §§ 78dd-2(g)(2)(A), dd-3(e)(2)(A), 78ff(c)(2)(A).

Companies charged with criminal violation of the FCPA's anti-bribery provisions face economic sanctions of up to US\$ 2 million per violation.⁸ Additionally, violating the FCPA's accounting and record-keeping provisions can lead to a sanction of up to US\$ 25 million (15 U.S.C. § 78ff(a)).

The SEC and the U.S. Department of Justice (DOJ) are both responsible for enforcing the FCPA. While the SEC enforces the FCPA for companies it regulates and the USA, the DOJ enforces the bill regarding all other domestic companies. The following Figure 1 illustrates the number of enforcement actions⁹ filed by SEC and DOJ per year since the implementation of the FCPA and shows that the number of enforcement actions has significantly increased over the years.¹⁰

Figure 1: Number of enforcement actions by SEC and DOJ



Source: Own illustration, based on StanfordLawSchool April 16, 2017.

In total, 288 enforcement actions have been conducted by the DOJ and 197 enforcement actions by the SEC since 1997. As shown in Figure 1, since its implementation in 1997 until 2003, there have been less than 10 enforcement actions per year. Without explaining the reasons in detail, the numbers of enforcement actions obviously increased significantly in the following years. One driving force of this development were fraud scandals, such as the Volcker Report on the United Nations Iraq Oil for

⁸ See 15 U.S. Code §§ 78dd-2(g)(1)(A), dd-3(e)(1)(A); 78ff(c)(1)(A)–(2)(A).

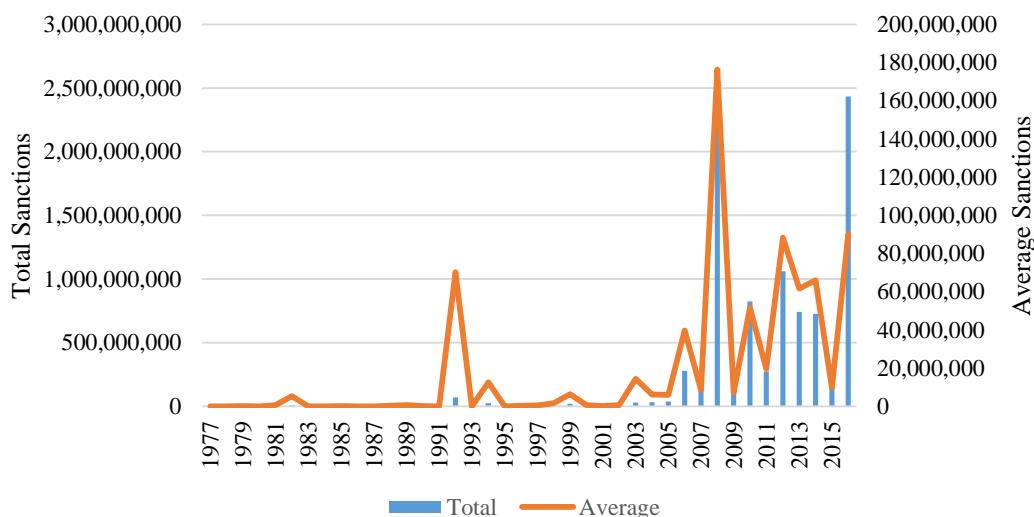
⁹ An enforcement action is defined as “*a proceeding that is brought by the U.S. Securities and Exchange Commission, the U.S. Department of Justice or both against individuals or entities based on violations of the FCPA or FCPA-related misconduct* (StanfordLawSchool April 16, 2017).

¹⁰ In case an enforcement action is filed jointly by the SEC and DOJ, it is counted once for the SEC and once for the DOJ.

Food Program in 2005 or the Siemens scandal in 2008 involving a worldwide bribery scheme.

Not only the enforcement actions have increased but the imposed sanctions due to FCPA-related misconduct have sharply risen. Figure 2 illustrates the total and average monetary sanctions¹¹ per year since its implementation in 1997.¹² Since its implementation in 1997 until 2003, not many sanctions have been imposed due to violations of the FCPA. Furthermore, similar to the development of enforcement actions, the total and average sanctions have significantly increased over the last decade.

Figure 2: Total and average sanctions due to violations of the FCPA



Source: Own illustration, based on StanfordLawSchool April 16, 2017.

As presented in Table 2-4, peaks for highest sanctions were in (1) 2008 (in total: US\$ 2.6 billion; on average: US\$ 176 million) and (2) 2016, when 27 companies paid about US\$ 2.4 billion (on average: US\$ 90 million) to resolve FCPA-related fraud cases. Out of these 27 companies, Israeli multinational pharmaceutical company Teva Pharmaceuticals (US\$ 519 million), Brazilian petrochemical company Odebrecht/Braskem (US\$ 419 million), American hedge fund manager and global alternative asset management firm Och-Ziff (US\$ 412 million) and Amsterdam-based global provider of telecommunication services Veon¹³ (US\$ 379 million) made it on the list of biggest

¹¹ Sanctions are aggregated annually according to the filing date, not the date of resolution.

¹² A US-\$ 0 value for a particular year could mean that no sanctions were imposed or, alternatively, that no FCPA-related enforcement actions were filed in that year.

¹³ Veon was formerly known as VimpelCom but changed its name in early 2017.

imposed FCPA sanctions. Over the years, the SEC has learned that "*whistleblowers with specialized experience or expertise can help us expend fewer resources in our investigations and bring enforcement actions more efficiently*" (FCPABlogb April 25, 2017). Making use of insider knowledge provided by (current or former) employees, the SEC aims at encouraging not only internal but external whistleblowing.

Table 2-4: Biggest FCPA-related sanctions until 2016

Company	Country	Year	Sanctions in US\$ (million)		
			DOJ	SEC	Total
1. Siemens	Germany	2008	350	448	798
2. Alstom	France	2014	772	-	772
3. KBR / Halliburton	USA	2009	402	177	579
4. Teva Pharmaceuticals	Israel	2016	283	236	519
5. Odebrecht / Braskem	Brazil	2016	254	65	419
6. Och-Ziff	USA	2016	199	213	412
7. BAE	UK	2010	400	-	400
8. Total	France	2013	245	153	398
9. Veon	Netherlands	2016	230	167	397
10. Alcoa	USA	2014	223	161	384

Source: Own illustration, based on FCPABloga April 16, 2017.

In total monetary sanctions, almost US\$ 10 billion were imposed in all FCPA-related enforcement actions while the overall sums paid in 2016 to resolve FCPA-related cases were of record. However, these sanctions were ultimately paid by the shareholders of the companies and not by those people who were responsible for massive fraud schemes (Soltes 2016: 325). Even worse, it seems as if companies "*would prefer to quietly pay fines, move on, and, in many cases, carry on business much as before*" (Soltes 2016: 326). But if companies want to effectively prevent fraud and their shareholders from having to pay for the fraudulent bill, they have to take corporate misconduct and its roots much more serious. Or are management executives simply too big to jail?

It is not as if no fraudster had ever faced time in prison and/or paid a criminal fine because of their participation in corporate misconduct. Several executives (with U.S. citizenship) who were involved in fraud scandals were held accountable. Most of the convicted fraudsters did not only get punished for violating the FCPA but other serious

offenses such as money laundering or conspiracy. Therefore, the following Table 2-5 only aims at providing an idea of individual sanctions for fraudsters on FCPA-related matters.

Table 2-5: Biggest FCPA-related prison sentences

Name	Company	Year	Fine in US\$ (million)	Sentence (months)
1. Joel Esquenazi	Terra	2011	3.0	180
2. William Jefferson	Former congressman	2009	-	156
3. Charles Paul E. Jumet	PECC	2010	0.1	87
4. Carlos Rodriguez Herbert Steindler	Terra General Electric	2011 1994	3.0	84 84
5. Douglas Murphy	American Rice	2005	-	63
6. Shu Quan-Sheng	AMAC	2009	0.3	51
7. Benito Chinea Joseph Demeneses	Direct Access Partners	2015	3.6 2.7	48
8. Jorge Granados	LatiNode	2011	-	46
9. David Kay John Webster Warwick	American Rice PECC	2005 2010	- 0.3	37 37
10. Jose Alejandro Hurtado Faheem Mousa Salam	Direct Access Partners Police official	2015 2007	11.9 -	36 36

Source: Own illustration, based on FCPABlog April 16, 2017.

Individual FCPA-related sanctions are likely to increase over the next years, especially due to the DOJ's so-called *Yates Memo* which was introduced by former U.S. Deputy Attorney General Sally Q. Yates in September 2015: "*One of the most effective ways to combat corporate misconduct is by seeking accountability from the individuals who perpetrated the wrongdoing*".¹⁴ In its core, the Yates Memo outlines six policies to increase individual sanctions (DOJ 2015: 2):

1. In order to qualify for any cooperation credit resulting in lower sanctions, companies have to provide the DOJ with the identities of every wrongdoer involved, along with all relevant facts about the fraud.
2. U.S. government investigations (criminal and civil) should focus on individuals from the beginning of the investigation.

¹⁴ The role of sanctions and their effect on fraud prevention will be further discussed in 3.2.2.

3. Criminal and civil attorneys should regularly communicate with each other to effectively pursue individuals.
4. Absent extraordinary circumstances, no corporate resolution to dismiss charges against or provide immunity for employees will provide protection from criminal or civil liability for any fraudster.
5. The U.S. government will not resolve matters with corporations “*without a clear plan to resolve related individual cases.*” To assure this, a U.S. government attorney has to receive a permission from the U.S. Attorney or Assistant Attorney General to decline further prosecution of individuals involved.
6. U.S. government civil attorneys should “*consistently focus on individuals*” and the company and evaluate whether to prosecute an individual “*based on considerations beyond that individual’s ability to pay*”.

As illustrated, not only companies but individuals are facing increasing pressure to be compliant with the FCPA. Accordingly, Corporate Compliance has to be more effective in fraud prevention and fraud detection to protect international companies and their staff from increasing FCPA-related sanctions due to exposed fraud. But as shown in Table 2-4 no U.S.-American executive of the companies responsible for the biggest FCPA-related sanctions is found in Table 2-5 (yet), but this is likely to change in the future. For example, the German Volkswagen manager Oliver Schmidt, who used his expert knowledge when lying to the U.S. federal authorities to cover up the emissions scandal in 2015, is charged with 11 felony counts (including violating the U.S. Clean Air Act and fraud) and facing up to 169 years in U.S. prison for his participation in VW’s emissions scandal (Cleantechica 13 March 2017).

Another U.S. law which has been shaping the global compliance movement are the so-called *U.S. Federal Sentencing Guidelines*. Resulting in many internal controls which aim at fraud prevention and fraud detection, their impact on Corporate Compliance will be illustrated in the following chapter.

2.1.2 U.S. Federal Sentencing Guidelines

Another major U.S. federal law finds its roots in 1984 when the U.S. Federal Sentencing Commission¹⁵ (USSC) was created based on the U.S. Sentencing Reform Act. One of the principal purposes of the FSC is to “*establish sentencing policies and practices for the federal courts, including guidelines to be consulted regarding the appropriate form and severity of punishment for offenders convicted of federal crimes*” (USSC 13 June 2017). Accordingly, several years later the U.S. Sentencing Commission published the U.S. Federal Sentencing Guidelines (USSG) of 1991.

Chapter eight of the USSG provides sentencing guidelines by introducing the so-called *culpability score* (§8C2.5 USSG). On a scale from 0 to 10, the culpability score starts with 5 points as a baseline used to determine multipliers for a fine.¹⁶ According to §8C2.5 USSG, points are either added or subtracted leading to higher or lower fines in consequence. The USSG adds points for (1) an organization’s involvement in or tolerance of criminal activity, (2) its prior history, (3) violation of an order or (4) obstruction of justice. Points are subtracted for (1) an effective compliance and ethics programs, (2) self-reporting, cooperation with governmental authorities, and (3) acceptance of responsibility. Accordingly, besides e.g. cooperating with the authorities in case of fraud, an effective compliance and ethics program can reduce a fine of corporate misconduct.

In November 2004 the USSG were updated for the first time. The 2004 Amendments to the U.S. Federal Sentencing Guidelines are similar in structure, but provided a new guideline under §8B2.1 (Effective Compliance and Ethics Program). This guideline explains the criteria a company is required to establish and to maintain an effective ethics and compliance program to prevent and detect fraud. According to §8B2.1 USSG, an effective compliance and ethics system

“*[...] shall be reasonably designed, implemented, and enforced so that the program is generally effective in preventing and detecting criminal conduct. The failure to prevent or detect the instant offense does not necessarily mean that the program is not generally effective in preventing and detecting criminal conduct*” (USSG §8B2.1).

¹⁵ The United States Sentencing Commission is an independent agency of the judicial branch of the federal government of the United States of America.

¹⁶ For a detailed explanation on how the fines are calculated, see Bagley (2016: 414ff.).

Without detailing what exactly (“*reasonably*”) an effective compliance system looks like, the USSG provides various guidelines of what to establish and how to maintain an effective ethics and compliance program. Because today’s Corporate Compliance systems take these guidelines into consideration when implementing their preventive and detective instruments, the guidelines of the USSG will be further detailed in chapter 2.1.4. But already summarizing, installing a Corporate Compliance system can reduce potential fines when an organization (1) exercises due diligence to prevent and detect fraud and (2) otherwise promotes an organizational culture that encourages ethical conduct and a commitment to compliance with the law (USSG §8B2.1).

A third major U.S. law to prevent and detect fraud is the so-called *U.S. Sarbanes-Oxley-Act* (SOX). This law was the result of various corporate scandals between 2000 and 2002. In 2001, Enron and its auditor Arthur Andersen caused one of the biggest corporate scandals in the history of the U.S. economy due to a manipulation of Enron’s balance sheets. Further companies such as Worldcom and Tyco fraudulently followed in 2002, exposing significant problems for companies to achieve compliance. The effect of SOX on Corporate Compliance? Even more anti-fraud controls to prevent and detect fraud.

2.1.3 U.S. Sarbanes-Oxley-Act

Another major law focusing on compliance in organizations was established in 2002 when President George W. Bush signed the Sarbanes-Oxley Act¹⁷ into U.S. federal law. Summarizing, Senator Paul Sarbanes stated in an interview in 2004:

“The Senate Banking Committee undertook a series of hearings on the problems in the markets that had led to a loss of hundreds and hundreds of billions, indeed trillions of dollars in market value. The hearings set out to lay the foundation for legislation. We scheduled 10 hearings over a six-week period, during which we brought in some of the best people in the country to testify... The hearings produced remarkable consensus on the nature of the problems: inadequate oversight of accountants, lack of auditor independence, weak corporate governance procedures, stock analysts’ conflict of interests, inadequate disclosure provisions, and grossly inadequate funding of the Securities and Exchange Commission” (Lucas 2004: 4-5).

¹⁷ The Sarbanes-Oxley Act is named after its sponsors Senator Paul Sarbanes and Representative Michael G. Oxley.

The SOX was implemented to address the identified core problems of (1) inadequate oversight of accountants, (2) lack of auditor independence, (3) weak corporate governance procedures, (4) stock analysts' conflict of interests, (5) inadequate disclosure provisions and (6) grossly inadequate funding of the SEC.,

SOX was designed to ensure the protection of investors by improving the accuracy and reliability of published financial information and is applicable to all companies listed on the U.S. stock exchanges (e.g. NASDAQ) under the jurisdiction of the SEC. The federal law consists of eleven major *Sections* which aim at achieving compliance by adding various internal controls. In the following, the sections of SOX will be shortly summarized:

1. Public Company Accounting Oversight Board

This section establishes the Public Company Accounting Oversight Board (PCAOB), a private-sector and nonprofit corporation, to provide independent oversight of public accounting firms providing audit services (e.g. the so-called *Big Four* audit companies Deloitte, Ernst & Young, KPMG and PricewaterhouseCoopers).

In theory, the PCAOB and audit companies are completely independent. However, in 2017 it became public that KPMG received confidential information from the oversight board about planned audit inspections by its regulator (NYT April 12, 2017). This clear ethics breach was exposed by a whistleblower in February 2017 and in consequence, KPMG fired six employees including the former head of its U.S. audit division. However, this share of information leaves doubts about the independence of the PCAOB and furthermore undermines the importance of whistleblowers when anti-fraud controls run short.

2. Auditor Independence

This section establishes standards for external auditors to limit conflicts of interest and requires them to report to an organization's independent audit committee. Furthermore, this section restricts audit firms from providing non-audit services (e.g. consulting) for the same clients.

In theory, auditors are independent from their clients. However, the incentives auditors face to please their clients and to get re-hired in the following year, make independence a highly questionable task (Bazerman/Moore 2011: 310).

Moreover, even honest auditors are incapable of independence “*simply because the human mind is so adept at interpreting ambiguous evidence, such as questionable financial data, in self-serving ways*” (ibid: 310).

3. Corporate Responsibility

This section mandates a set of internal controls which aim at ensuring that the financial reports are accurate. Furthermore, Section 302 requires that the company's signing officers (e.g. Chief Executive Officer and Chief Financial Officer) certify that they are “*responsible for establishing and maintaining internal controls*” (15 U.S. Code § 7241(a)(4))

4. Enhanced Financial Disclosures

This section describes enhanced reporting requirements for financial transactions such as off-balance-sheet transactions, pro-forma figures and stock transactions of corporate officers. It requires further internal controls for assuring the accuracy of financial reports and disclosures, and mandates both audits (“*an assessment [...] of the effectiveness of the internal control structure and procedures of the issuer for financial reporting*”) and reports on these controls. Additionally, Section 406(a) mandates a code of conduct for senior financial officers, controllers, or principal accounting officers, or any other persons with similar functions. Furthermore, all companies not having adopted a code of conduct are asked to disclose the reason why they did not.

5. Analyst Conflicts of Interest

This section includes measures designed to help restore investor confidence in the reporting of securities analysts. For example, it defines the codes of conduct for securities analysts and requires them to disclose potential conflicts of interest.

6. Commission Resources and Authority

This section details how the SEC's authority is allowed to censure or bar securities analysts from working as an advisor, broker or dealer.

7. Studies and Reports

This section requires the director of the U.S. Government Accountability Office and the SEC to conduct research and report on violations by companies and auditors.

8. Corporate and Criminal Fraud Accountability

This section describes specific criminal penalties for manipulation, destruction or alteration of financial records, ruling that fraudsters “*shall be fined under this title, imprisoned not more than 20 years, or both*” (18 U.S. Code § 1519)”. Additionally, Section 806 governs whistleblower protection for employees of publicly traded companies.

9. White-Collar Crime Penalty Enhancement

This section increases the criminal penalties associated with white-collar crimes and conspiracies. Section 906(a) requires a written statement by the Chief Executive Officer and Chief Financial Officer confirming the accuracy of the financial statement. Knowing that the financial report accompanying the statement is against the law, can result in severe sanctions “*not more than US\$ 5,000,000, or imprisoned not more than 20 years, or both*”.

10. Corporate Tax Returns

This section states that the Chief Executive Officer should sign the company’s tax return.

11. Corporate Fraud Accountability

This section identifies corporate fraud and records tampering as criminal offenses and joins those offenses to specific penalties. It also revises sentencing guidelines and strengthens their penalties. This enables the SEC to resort to temporarily freezing transactions or payments that have been deemed “*large*” or “*unusual*”. Furthermore, it addresses criminal penalties for retaliation against whistleblowers, imposing fines or imprisonment of up to 10 years, or both (18 U.S. Code § 1513(e)).

What was originally voluntary, was implemented mandatory by SOX and the tightening of the USSG in 2004. For the companies concerned, the costs of implementing the internal controls mandated by the Sarbanes-Oxley Act can be very high, especially Section 404. To comply with this section of the SOX, companies are required to perform a fraud risk assessment (or top-down risk assessment; TDRA) and assess related internal controls “*to provide meaningful disclosure to investors about the effectiveness of a company’s internal controls systems, without creating unnecessary compliance burdens or wasting shareholder resources*” (SEC April 16, 2017). However, depending on the evidence required (e.g. extent of control testing) to ascertain compliance with Section 404 of SOX, a TDRA can result in significant compliance costs.

Conclusion: Corporate Compliance and U.S. Federal Laws

As illustrated, not being compliant with the U.S. Foreign Corrupt Practices Act, U.S. Federal Sentencing Guidelines and/or U.S. Sarbanes-Oxley-Act can result in severe sanctions for international companies doing business in or with the USA as well as individuals.

1. Besides being one of the highest years in terms of enforcement actions, the overall sums paid in 2016 to resolve these FCPA-related cases were of record. This puts increasing pressure on companies and on individuals to be compliant.
2. According to the USSG, installing a Corporate Compliance system can reduce potential sanctions when an organization (1) exercises due diligence to prevent and detect fraud and (2) otherwise promotes an organizational culture that encourages ethical conduct and a commitment to compliance with the law.
3. The implementation of mandatory internal control systems according to SOX can be very costly.

In consequence, companies are required to implement various internal controls to be compliant with the aforementioned federal laws. And it almost seems like the governmental response to corporate scandals is legislating even more anti-fraud controls.

After the introduction of three U.S. federal laws and their impact on the development of Corporate Compliance, the next chapter illustrates which anti-fraud elements are implemented in international companies to prevent and detect fraud.

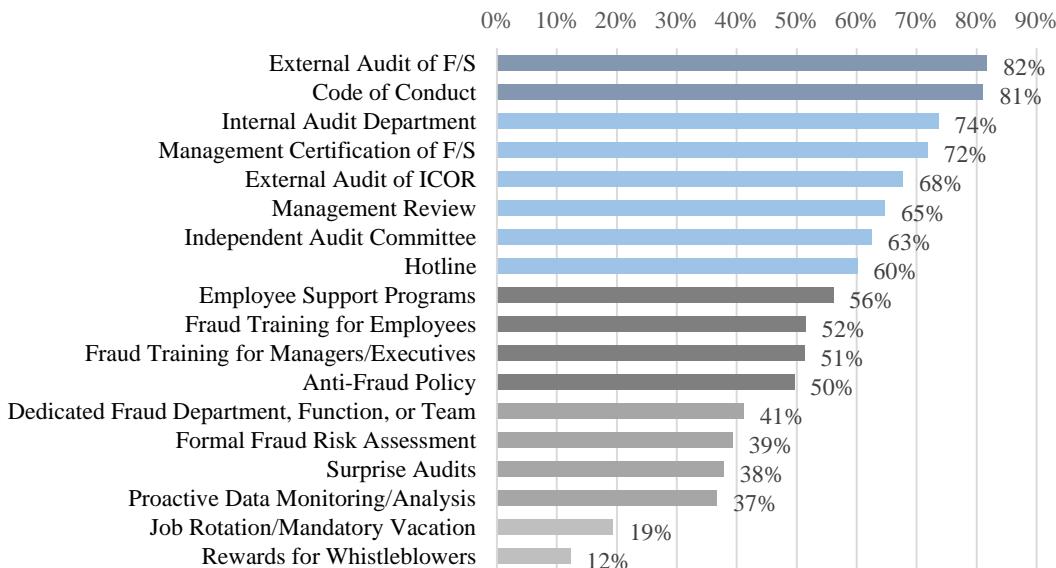
2.1.4 Corporate Compliance: Status Quo

This chapter aims at providing a better understanding of what Corporate Compliance systems looks like today in many international companies. To underlay this study with additional practical insights, the global study *Report to the Nations on Occupational Fraud and Abuse* by the Association of Certified Fraud Examiners (ACFE) of 2016 will be used for illustrative purposes. 2,410 professionals working in the field of compliance participated in this study and were asked to (1) submit a “*detailed narrative of*

the single largest fraud case they had investigated since January 2014” and (2) answer 81 questions “regarding the particular details of the fraud case, including information about the perpetrator, the victim organization, and the methods of fraud employed, as well as fraud trends in general” (ACFE 2016a: 80).

As shown in Figure 3, 18 anti-fraud controls were reported by frequency. These controls are established through policies and procedures to mitigate fraud risks. Accordingly, an anti-fraud control is “*established through policies and procedures that helps ensure that management’s directives to mitigate fraud risks are carried out*” (ACFE 2016b: 77).¹⁸ In general, controls are implemented to increase the probability of detection of fraud and thus have a preventive effect because these controls shall signalize employees that fraud can be discovered and will be sanctioned accordingly (Grüninger et al. 2014: 110). Accordingly, the more controls are introduced, the higher the probability of detection. That is the theory behind anti-fraud controls and their underlying concept of fraud prevention and fraud detection.

Figure 3: Frequency of anti-fraud controls



Source: Own illustration, based on ACFE (2016a: 38).

Each of the 18 anti-fraud controls of ACFE (2016a) will be shortly presented in the following to provide an overview of what Corporate Compliance looks like in many of today’s international corporations.

¹⁸ Accordingly, anti-fraud controls and the above-mentioned internal controls can be understood as synonyms throughout this study.

External Audit

§8B2.1(b)(5)(A) USSG mandates that an organization “*shall take reasonable steps to ensure that the organization's compliance and ethics program is followed, including monitoring and auditing to detect criminal conduct*”. In line with this, most companies (82%) of those that experienced fraud underwent an external audit of their financial statements (F/S), while 68% used an external audit of the organization's internal controls over financial reporting (ICOR) by independent audit firms as an anti-fraud control. More generally, external audits (as well as surprise audits (38%)) are implemented to increase the likelihood of detection of fraud (Petrascu/Tieanu 2014: 489).

Code of Conduct

§8B2.1(b)(4)(A) USSG mandates that companies “*take reasonable steps to communicate periodically and in a practical manner its standards and procedures*”. Therefore, 81% of the companies are using a Code of Conduct as an anti-fraud mechanism. This instrument is

“*[...] a distinct and formal document containing a set of prescriptions developed by and for a company to guide present and future behavior on multiple issues of at least its managers and employees toward one another, the company, external stakeholders and/or society in general*” (Kaptein/Schwartz 2008: 113).

According to this, a Code of Conduct is focused on the behavior of employees and supposed to provide guidelines on how to behave in their day-to-day business. However, research finds that this anti-fraud control presents an idealized view of the workplace and lacks to provide guidance on how to make real-world decisions (Burke/Tomlinson/Cooper 2011: 232). From 79 empirical studies on the effectiveness of Codes of Conduct, 35% conclude that these instruments are effective, 16% found a weak link, 33% found no significant effectiveness, 14% found mixed results, and one study even found a negative influence (Kaptein/Schwartz 2008). Furthermore, a Code of Conduct is not seldom perceived as artificial by employees and not very influential if it is grown out of the company itself (Bazerman/Tenbrunsel 2011: 119). When a direct superior calls his employees to behave unethically, a Code of Conduct only works against him if he is integrated with sanctions and in the (daily) business (Petersen/Krings 2009). Consequently, direct management must adhere to ethical behavior (Tone from the Top)

for a Code of Conduct to be an effective element of fraud prevention (Hess/Broughton 2014: 542).

Another anti-fraud control to communicate company's standards is an anti-fraud policy which is used by 50% of the companies.

Internal Audit Department

More generally, the responsibilities relating to fraud prevention within an organization are divided between (1) the executive board, (2) the independent audit committee (63%) and (3) the internal audit department (74%) (Petrascu/Tieanu 2014: 492). All of these are implemented to increase the likelihood of detection of fraud (ibid: 489). First, the executive board has the final responsibility to implement internal controls to prevent and detect fraud, something that was explained in the previous chapter. In case fraud happens, the members of the executive board are the ones who will have to explain and can be held reliable for lacking internal controls (ibid 2014: 492). Second, the independent audit committee is responsible for (1) supervising the management of fraud risks and (2) actively monitoring the efforts of the executive board against fraud (ibid). Third, the internal audit is responsible for monitoring risks, as well as in fraud prevention and detection at the disposal of the audit committee (ibid).

Management Certification on F/S

Section 906(a) SOX mandates a written statement by the Chief Executive Officer and Chief Financial Officer which confirms the accuracy of the financial statement of a company. Accordingly, most companies (72%) of those that experienced fraud are using management certification of their financial statements (F/S) as an anti-fraud control.

Management Review

Required by the PCAOB, a management review focuses on the reasonableness of estimates and other financial information that were conducted by the management. Thus, most companies (65%) of those that experienced fraud are using management review as an anti-fraud control. For detailed information on this complex and complicated anti-fraud control, see (CFO June 13, 2017).

Hotline

§8B2.1(b)(5)(C) USSG mandates that an organization

“...shall take reasonable steps to have and publicize a system, which may include mechanisms that allow for anonymity or confidentiality, whereby the organization's employees and agents may report or seek guidance regarding potential or actual criminal conduct without fear of retaliation.”

To that effect, a (whistleblowing) hotline shall be implemented for employees, suppliers or customers to communicate information on possible fraud without fear of retaliation. A large number of fraud cases could only be detected by means of an implemented hotline and furthermore, whistleblowing can work as a prevention mechanism against fraud (ACFE 2016b: 91). As shown in Figure 3, only 60% of the organizations have (whistleblowing) hotlines installed. But the impact of hotlines is obviously significant: while tips are the most common detection method of fraud regardless of whether a hotline was in place or not, fraud schemes were detected by tip in 47.3% of the cases at organizations that had hotlines, but in only 28.2% of the cases at organizations without them (ACFE 2016a: 27). Due to its importance for the development of Behavioral Compliance, whistleblowing will be further detailed in chapter 2.3 *Need for More: Behavioral Compliance*.

Employee Support Programs

According to ACFE (2016a: 90), employee support programs are “*programs that provide support and assistance to employees dealing with personal issues or challenges, such as counseling services for drug, family, or financial problems.*” These problems can be behavioral red flags resulting in fraud, therefore employee support programs can be a useful instrument for fraud prevention.¹⁹ According to the study, 56% of the companies have these kind of programs installed as an anti-fraud control.

Fraud Training for Managers and Executives

§8B2.1(b)(4) USSG makes compliance and ethics training a requirement for e.g. high-level personnel, employees and potentially even for the company's agents. Almost half of the companies make use of fraud trainings for employees (52%) and managers/executives (51%). As part of these trainings, employees are informed about legal regulations and the company's values (PWC 2013: 41). Using these trainings, an awareness

¹⁹ Behavioral red flags will be further detailed in chapter 2.2.3.

for compliant behavior (fraud prevention) and self-responsibility shall be achieved (Grüninger et al. 2014: 92), but whether these trainings are effective, is unclear. Research indicates that these types of trainings are only effective for intelligent students (Bloodgood/Turnley/Mudrack 2008),²⁰ and remain ineffective for participants without adequate moral development (Greenberg 2002). Furthermore, Mayhew and Murphy (2009) found that university ethics courses only have an effect on ethical behavior when combined with some form of social pressure such as a public disclosure. If not combined with social pressure to behave ethically, ethics trainings remain ineffective.

Dedicated Fraud Department, Function, or Team

§8B2.1(b)(2)(C) USSG requires that “*specific individual(s) within the organization shall be delegated day-to-day operational responsibility for the compliance and ethics program*”. However, only 41% of the companies that experienced fraud are using a dedicated fraud department (function or team) as an anti-fraud control.

Formal Fraud Risk Assessment

As mandated by Section 404 of SOX, companies are required to perform a fraud risk assessment and assess related internal controls. However, only 39% of the companies that experienced fraud are using fraud risk assessment as an anti-fraud control.

Proactive Data Monitoring / Analysis

37% of the companies that experienced fraud are using proactive data monitoring / analysis as an anti-fraud control. Since only few fraudsters (11.7%) have a criminal background, making standard background checks is an ineffective measure for screening out potential fraudsters (ACFE 2016a: 66).

Job Rotation / Mandatory Vacation

Only 19% of the companies asked use job rotation and/or mandatory vacation as an anti-fraud control. In job rotation programs, employees change their place of work on a regular basis, a mechanism that has proved effective to prevent fraudulent behavior in a laboratory experiment (Abbink 2004: 900). The idea behind these mechanisms is that those employees are more likely to commit fraud who have an exact knowledge

²⁰ Religious students were less likely to commit fraud, regardless of whether they participated in an ethics training or not (Bloodgood/Turnley/Mudrack 2008).

of processes in a company and thus have a certain experience (Lambsdorff 2002: 230). Additionally, job rotation can serve as a fraud detection mechanism when new employees can help to uncover fraud at the new workplace (Nimwegen 2009: 124).

Rewards for Whistleblowers

12% of the companies are offering rewards for (internal) whistleblowers. U.S. laws such as SOX are forbidding retaliation against whistleblowers and the so-called *Dodd-Frank Whistleblower Program* as part of the U.S. Dodd-Frank Act allows for financial rewards (SEC 2016). Accordingly, whistleblowers who provide information to the SEC (external whistleblowing) that result in an enforcement action in which more than US\$ 1 million in sanctions are imposed on the organization, are rewarded between 10-30% of the recovery. Furthermore, the U.S. Dodd-Frank Act provides job protection and promises confidentiality for SEC whistleblowers (Funk 2010). Due to its importance for the development of Behavioral Compliance, whistleblowing will be further detailed in chapter 2.3 Need for More: Behavioral Compliance.

Summary

18 anti-fraud controls have been shortly presented. The following Table 2-6 summarizes the various anti-fraud controls and allocates them to either the prevention or detection of fraud. However as indicated before, a mechanism that is focused on the detection of fraud (e.g. hotline or rewards for whistleblowers) can have a preventive effect on fraud as well because when an employee knows that colleagues can anonymously report potential fraud, a fraudster might refrain from committing fraud.

Table 2-6: Anti-fraud controls: prevention and/or detection of fraud

Anti-fraud Control	Prevention of Fraud	Detection of Fraud
1. External Audit of F/S		X
2. Code of Conduct	X	
3. Internal Audit Department		X
4. Management Certification of F/S	X	
5. External Audit of ICOR		X
6. Management Review		X
7. Independent Audit Committee		X
8. Hotline		X
9. Employee Support Programs	X	

10. Fraud Training for Employees	X	
11. Fraud Training for Managers/Executives	X	
12. Anti-Fraud Policy	X	
13. Dedicated Fraud Department, Function, or Team		X
14. Formal Fraud Risk Assessment		X
15. Surprise Audits		X
16. Proactive Data Monitoring/Analysis		X
17. Job Rotation/Mandatory Vacation	X	X
18. Rewards for Whistleblowers	X	X
Total	8	12

Source: Own illustration.

While 8 of the anti-fraud controls asked for by ACFE (2016a) were focused on the prevention of fraud, 12 of the anti-fraud controls were implemented to detect fraud. In the following, the core findings of the status quo of Corporate Compliance will be briefly summarized.

Conclusion: Corporate Compliance – Status Quo

The overview of the various anti-fraud controls of today's Corporate Compliance has shown that most of the instruments installed are mandated by the U.S. Sentencing Guidelines. Obviously, this finding does not imply that these various anti-fraud controls are implemented *because of* the USSG, but it can be concluded that most of the anti-fraud controls are *results of* U.S. laws such as the USSG. Accordingly, Corporate Compliance is mainly driven by law. Or as Heissner (2015: 178) puts it, Corporate Compliance "*has become a commercial and, most importantly, legal necessity*".

This finding already indicates the usefulness of something like a Behavioral Compliance. Instead of implementing more and more controls, it could be highly useful for today's Corporate Compliance to take behavioral aspects into consideration for fraud prevention and fraud detection.

The so-called *Fraud Triangle* and its extension, the so-called *Fraud Diamond*, help to explain the fundamentals of Corporate Compliance and its sets of procedures, methodologies and technologies to help achieve compliance. Therefore, this theoretical model will be presented in a next step.

2.2 The Fraud Triangle: Rethinking Corporate Compliance

The Fraud Triangle is a theoretical model helping to understand why employees end up committing fraud. The model was developed from research done by the U.S. American sociologist and criminologist Donald Ray Cressey (1971) and is still widely used today to explain fraudulent behavior in general (Kassem/Higson 2012: 191). Cressey's (1971) research was focused on influencing factors that result in people breaking the trust of others. Therefore, he interviewed 250 fraudsters over a period of 5 months and concluded in his central thesis that a fraudster is motivated by what he referred to as a "non-shareable problem":

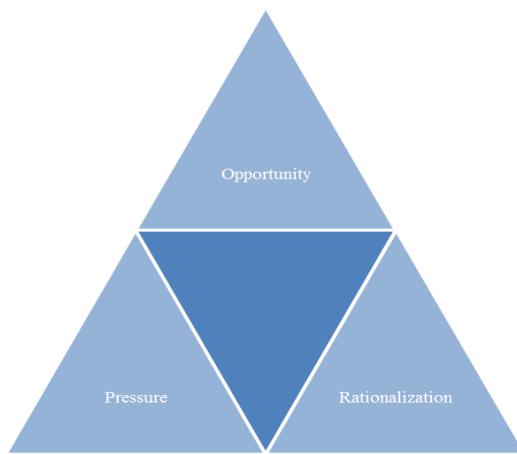
„Trusted persons become trust violators when they conceive of themselves as having a financial problem which is non-shareable, are aware that this problem can be secretly resolved by violation of the position of financial trust, and are able to apply to their own conduct in that situation verbalizations which enable them to adjust their conceptions of themselves as trusted persons with their conceptions of themselves as users of the entrusted funds or property“ (Cressey 1971: 30).

In line with this, a non-sharable problem potentially resulting in fraud occurs when an employee (1) is facing a financial or personal problem and (2) is not able to share the problem with trusted persons such as friends or colleagues (e.g. because of shame and legal or social sanctions) (Dellaportas 2013: 30).²¹

Derived from Cressey's (1971) hypothesis, fraud is a logical consequence when all of its three elements are simultaneously present: (1) opportunity, (2) pressure and (3) rationalization to commit fraud. While the opportunity is particularly influenced by the work environment, the two elements rationalization and pressure are extremely dependent on individual factors (Butscher 2014: 200).

²¹ Unlike fraudsters, whistleblowers are able to share their perceived problems with trusted persons, a finding that will be further detailed in chapter 6.

Figure 4: The Fraud Triangle



Source: Cressey (1971).

The fundamentals of the three elements of the fraud triangle will be illustrated in the following.

2.2.1 Opportunity

“Your Honor, for many years up until my arrest on December 11, 2008, I operated a Ponzi scheme.”

-- Bernie Madoff, convicted fraudster.

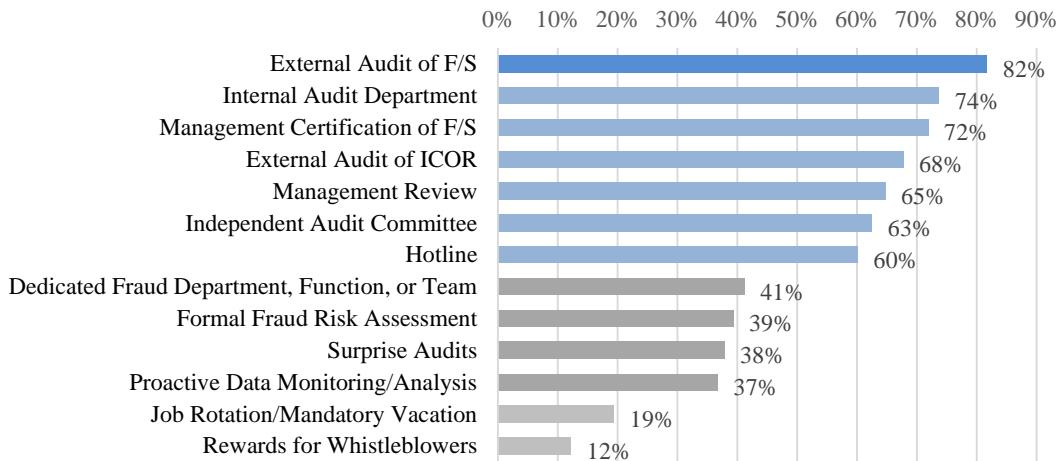
First of all, a fraudster must have an **opportunity** to commit fraud, to cover it up, and to avoid being punished (Albrecht et al. 2012: 39).

Possible opportunities usually result from (1) gaps in the control system (ineffective or inadequate controls), (2) a lack of audit trail, (3) ignorance, apathy, or an incapacity to detect fraud, (4) lack of access to information, (5) inability to judge the quality of performance, and/or (6) failure to discipline fraudsters (Dellaportas 2013: 31; Albrecht et al. 2012: 39). In consequence, the absence and/or ineffectiveness of effective control measures may trigger fraud because of a decrease in the likelihood of a possible detection of fraud (Lou/Wang 2009: 65).

The opportunity is most easily influenced by the company (Hlavica/Hülsberg/Klap-proth 2011: 99) and due to that, Peemöller/Hofmann (2005: 46) and Dellaportas (2013) recommend that Corporate Compliance should focus on the opportunity because it “*allows a would-be offender to seek a solution through illegitimate means*” (Dellaportas 2013: 37). KPMG (2013: 14) summarizing “*all types of people commit fraud if the opportunity presents itself*” and PWC (2014: 43) share this opinion and see the opportunity as the central element of the Fraud Triangle, too. Further calling in the insights

derived from the ACFE (2016a), these reveal that most of the anti-fraud controls in use (12 out of 18) are focused on addressing the opportunity side of the Fraud Triangle by increasing the likelihood of detection of fraud.

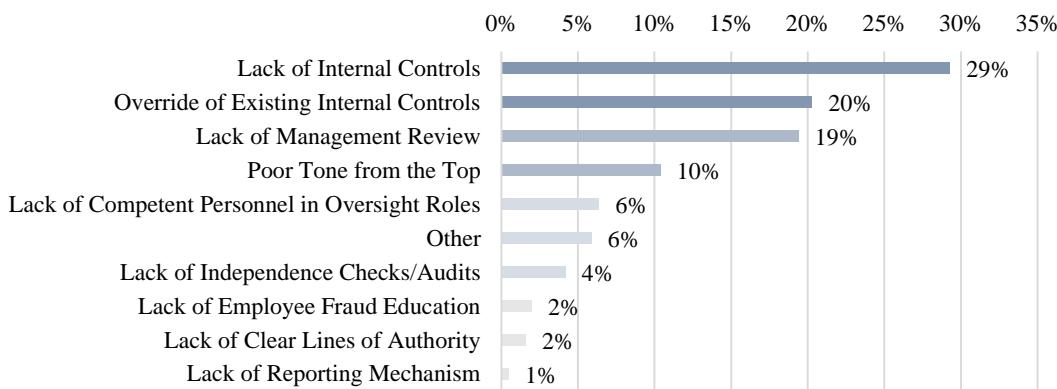
Figure 5: Frequency of anti-fraud controls (opportunity)



Source: Own illustration, based on ACFE (2016a: 38).

Most certainly, implementing control systems, procedures, and mechanisms to detect fraud are important, but focusing on these formal systems can be a potential fallacy because the simple presence of internal controls does not provide a guaranteed protection against fraud (ACFE 2016a: 38). So, are these various opportunity-oriented control systems effective? Figure 6 provides the answer.

Figure 6: Primary internal control weaknesses observed by CFEs



Source: Own illustration, based on ACFE (2016a: 46).

Unfortunately, the various opportunity-oriented control systems are not effective (enough). In more than 29% of the cases in which fraud occurred, a clear lack of internal controls was stated as the primary problem. In further 20% of the cases, existing

internal controls were installed but had been overridden by the fraudster. A lack of (1) management review (19%), (2) independent checks/audits (4%) and (3) reporting lines (1%), contributed to further lacks of internal controls.

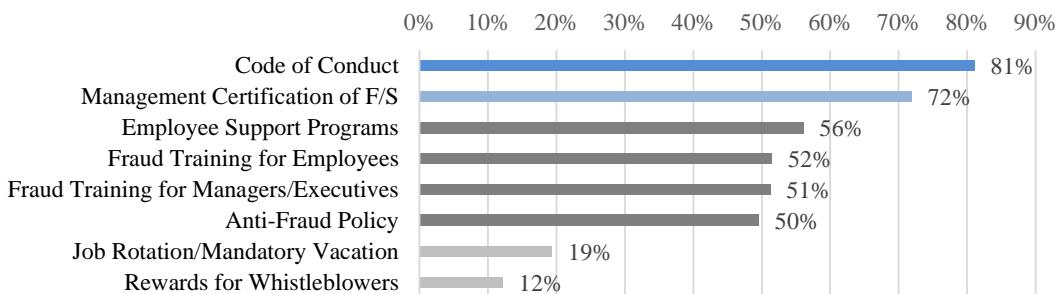
In sum, in almost 75% of all cases, internal control weaknesses resulted in fraud.²²

Conclusion: *Corporate Compliance and Opportunity*

While more than half of the anti-fraud controls are installed to increase the likelihood of detection (opportunity) in Corporate Compliance systems, in almost 75% of the fraud cases, opportunity-oriented internal control weaknesses were the underlying cause. A clear sign to rethink Corporate Compliance as it is today.

Eight other anti-fraud controls are focused on the individual, their potential rationalizations or pressure of the Fraud Triangle: (1) Code of Conduct, (2) Management Certification of the F/S, (3) Employee Support Programs, (4) Fraud Training for Employees, (5) Fraud Training for Managers / Executives, (6) Anti-fraud Policy, (7) Job Rotation / Mandatory Vacation and (8) Rewards for Whistleblowers.

Figure 7: Frequency of anti-fraud controls (individual factors)



Source: Own illustration, based on ACFE (2016a: 38).

Accordingly, a Code of Conduct is the most widely used anti-fraud control focused on the individual. As shown before, it is likely to not be very influential if it is not grown out of the company itself (Bazerman/Tenbrunsel 2011: 119) or when a direct superior calls his employees to behave unethically (Petersen/Krings 2009). Empirical evidence indicates that especially (1) informal elements, (2) cultural norms and (3) the active participation of key stakeholders may actually matter more when it comes to fostering

²² According to a study conducted by KPMG, 54% of the participants call missing or deficient controls as a high to very high-favoring factor for fraud (KPMG 2014: 28).

ethical business practices and fraud prevention (Tenbrunsel/Smith-Crowe/Umphress 2003). Therefore, what should Corporate Compliance do to be more effective? Focus on the individual by taking into consideration insights of the other elements of the Fraud Triangle and the Fraud Diamond introduced afterwards. Or in general: people's behavior. Accordingly, the other two sides of the Fraud Triangle as well as the Fraud Diamond will be detailed in the following.

2.2.2 Pressure

"But the point is, you are greedy, you want every little bit of money that you can possibly get because, like I say, that is how you are judged, that is your performance metric."

-- Tom Hayes, banker who manipulated Libor.

Second, a fraudster must have the pressure or incentive which motivates to commit fraud (Albrecht et al. 2012: 36).

A possible pressure is usually the result of at least one of four categories: (1) financial pressures, such as greed, living beyond one's means, personal debt, poor credit or unexpected financial needs, (2) vices, such as gambling, drugs, alcohol or extra-marital relationships, (3) work-related pressures, such as insufficient recognition for job performance, dissatisfaction with job, fear of losing job, being overlooked for promotion or feeling under-valued, and/or (4) other pressures, such as creating the appearance of success, ego, power and control or influence of others (Dellaportas 2013: 31). Additionally, fraud can be triggered by incentives in the company, for example (performance) pressure through certain company-internal goals (Wieland 2014: 80 f.).

Pressure is also sometimes referred to as the central element of the Fraud Triangle to explain fraud (Nimwegen 2009: 18; KPMG 2014: 28).

2.2.3 Rationalization

"Most men would rather deny a hard truth than face it."

-- George R.R. Martin (2011), author.

Third, a fraudster must have the rationalization (internal justification) to perform fraud (Albrecht et al. 2012: 49). In this part of the Fraud Triangle, a fraudster admits the wrongdoing but denies that it was wrong by rationalizing his behavior.

Whenever there is a mismatch between a person's actual behavior (e.g. fraudulent behavior) and his/her intended values, people are facing a psychological principle with a fancy name: cognitive dissonance (Festinger/Carlsmith 1959), which is a discomfort

experience that is commonly related to feelings, such as hunger, thirst, frustration, guilt, dread, embarrassment, anger or anxiety. Therefore, when acting dishonestly, negative self-sanction unfurls (Bandura 1999: 194). On the contrary, when acting honestly, positive self-sanction sets in (ibid). Keeping in mind that people perceive themselves as moral champions, they aim to keep the gap resulting in cognitive dissonance as narrow as possible (Shu/Gino/Bazerman 2012: 12). To bridge the gap resulting in cognitive dissonance, a fraudster makes use of self-deception such as various defense mechanisms to keep their moral record in balance. Derived from psychiatry research, defense mechanisms are (1) relatively unconscious, (2) adaptive, (3) pathological and (4) reversible (Vaillant 2012: 885). In a nutshell: whenever actions conflict with developed attitudes, people often change their attitudes to be more consistent with their actions (van Veen et al. 2009: 1469). By doing so, cognitive dissonance is avoided and the unethical behavior is morally permissible due to moral disengagement (Bandura et al. 1996). Thanks to self-deception, people may engage in fraud without feeling guilty. The phenomenon of Bounded Ethicality explains these circumstances and

“refers to situations in which people make decision errors that not only harm others, but are inconsistent with their own consciously espoused beliefs and preferences – decisions they would condemn upon further reflection or greater awareness”
(Gino/Moore/Bazerman 2008: 4).

It is a psychological barrier to recognizing conflicts of interest (Chugh/Bazerman/Banaji 2005). Therefore, another reason why employees may engage in fraud lies in Bounded Ethicality : they use self-deception, which „*is akin to failure to tell the self the whole truth*” (von Hippel/Trivers 2011: 7), leading to moral disengagement from the wrongdoing (Bandura 1999: 193; Shu/Gino/Bazerman 2012: 12).

More generally, people use different rationalization techniques to make fraud ethically permissible. These techniques can be clustered into two more general types: (1) justifications and (2) excuses (Burke/Tomlinson/Cooper 2011: 145). Justifications and excuses are both “*socially approved vocabularies which neutralize an act or its consequences when one or both are called into question*” (Scott/Lyman 1968: 48). These justifications and excuses are self-serving statements that can be used for internal consumption or to justify or explain misconduct to outsiders (Goodrick/Salancik 1996). The difference between these two categories is that justifications involve accepting

responsibility for the act in question, but denying the negative quality of the act. Excuses, on the other hand, involve admitting that the act was bad, but denying or displacing full responsibility for the act (Scott/Lyman 1968). Social excuses have two sub-types: (1) the social excuses which rely on displacing blame on to some aspect of the perpetrator's social environment and (2) contextual excuses which involve blaming other, inmate elements in the perpetrator's element. For the sake of completeness, Table 2-7 describes and summarizes the various rationalization techniques in more detail before further insights of the ACFE (2016a) will be presented to further develop Behavioral Compliance.

Table 2-7: Rationalization techniques: description and examples

Category	Rationalization Technique	Description	Examples
Justifications			
	Appeal to higher loyalties	The actors argue that their violation of norms is due to their attempt to realize a higher-order value.	<i>"We answered to a more important cause."</i> <i>"I would not report it because of my loyalty to my boss."</i>
	Denial of injury	The actors are convinced that no one is harmed by their actions; hence the actions are not really corrupt.	<i>"No one was really harmed."</i> <i>"It could have been worse."</i>
Social Excuses			
	Denial of victim	The actors counter any blame for their actions by arguing that the violated party deserved whatever happened.	<i>"They deserved it."</i> <i>"They chose to participate."</i>
	Social weighting	The actors assume two practices that moderate the salience of corrupt behaviors: 1. Condemn the condemner, 2. Selective social comparison.	<i>"You have no right to criticize us."</i> <i>"Others are worse than we are."</i>
Contextual Excuses			

	Denial of responsibility	The actors engaged in corrupt behaviors perceive that they have no other choice than to participate in such activities.	<i>“What can I do? My arm is being twisted.”</i> <i>“It is none of my business what the corporation does in overseas bribery.”</i>
	Denial of illegality	Actors excuse corrupt practices on the basis that their actions are not illegal.	<i>“There’s no law against it.”</i>
	Metaphor of the ledger	The actors rationalize that they are entitled to indulge in deviant behaviors because of their accrued credits (time and effort) in their jobs.	<i>“We’ve earned the right.”</i> <i>“It’s all right for me to use the Internet for personal reasons at work. After all I do work overtime.”</i>

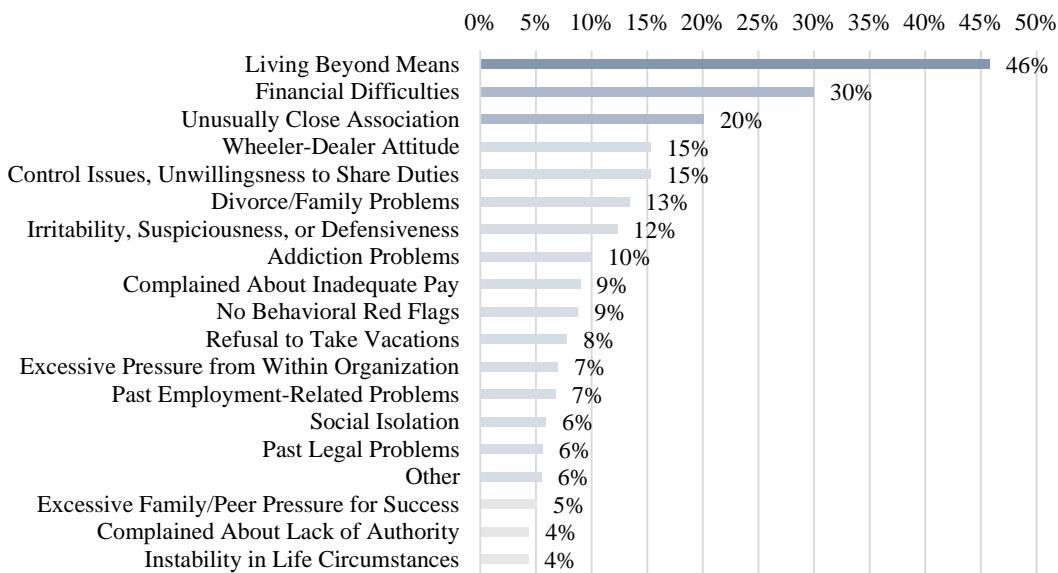
Source: Burke/Tomlinson/Cooper 2011: 146.

ACFE (2016a) asked their respondents to provide information on any of 17 common behavioral red flags associated with fraud that had been displayed by the fraudster before the fraud was detected.²³ All of these behavioral red flags can result in justifications or excuses (social or contextual) resulting in fraud. As Figure 8 shows, the six most common behavioral red flags are: (1) living beyond means, (2) financial difficulties, (3) unusually close association with a vendor or customer, (4) a general “wheeler-dealer”²⁴ attitude, (5) excessive control issues or unwillingness to share duties, and (6) recent divorce or family problems. Since the ACFE started asking on behavioral red flags in 2008, these six have always been the most common (ACFE 2016a: 68).

²³ “In more than 91% of the cases, at least one behavioral red flag was identified prior to detection, and in 57% of the cases two or more red flags were seen” (ACFE 2016a: 68).

²⁴ A “wheeler-dealer” is somebody who is shrewd and unscrupulous (ACFE 2016a: 68).

Figure 8: Behavioral red flags displayed by fraudsters



Source: Own illustration, based on ACFE (2016a: 68).

These behavioral red flags can be the reason for pressure (e.g. living beyond means or financial difficulties) and rationalization (e.g. unusually close association with vendor/customer, making fraud ethically permissible by sugarcoating “*it’s a good purpose/cause*”). As illustrated before, the anti-fraud control employee support program tries to address these behavioral red flags by offering help to employees.

Just as for the Fraud Triangle elements opportunity and pressure, rationalization is also sometimes referred to as the central element of the Fraud Triangle to explain fraud (Murphy/Dacin 2011: 613; Brytting/Minogue/Morino (2011: 57).

Criticism of the Fraud Triangle

The findings based on the Fraud Triangle have provided in-depth insights into the drivers of fraud. But since its development, the Fraud Triangle theory has not remained without criticism because it is based on the assumption that all three elements are equally weighted (Dellaportas 2013: 37). Research findings show that the three elements of the Fraud Triangle are not equally weighted, they are interrelating (Albrecht/Albrecht/Albrecht 2004: 118). However, the exact influence one element has on another has so far only been tested and investigated to a small extent. So far, three interrelationships have been investigated:

1. The easier the employee finds excuses (rationalizations) for committing fraud, the smaller the opportunity and the pressure has to be (Albrecht/Albrecht/Albrecht 2004: 118).
2. The greater the perceived opportunity or the more intense the pressure, the less pronounced the rationalization has to be (Albrecht/Albrecht/Albrecht 2004: 118).

In a nutshell, the more pronounced the influence of one of the elements, the less can be that influence of the other elements (Withus 2014: 99; Brytting/Minogue/Morino 2011: 52).

Conclusion: *Corporate Compliance and Fraud Triangle*

The three elements of the Fraud Triangle are interrelating and there is no research verifying which one of the three elements has the biggest impact on employees to commit fraud. Theoretically, it might be possible to effectively prevent fraud by concentrating only on one of the elements of the Fraud Triangle, but based on the findings and the aforementioned latest corporate scandals such as the emissions scandal at Volkswagen, effective fraud prevention requires a reduction of the three elements of the Fraud Triangle.

Today, Corporate Compliance is focused on the opportunity side and because in almost 75% of the fraud cases, opportunity-oriented internal control weaknesses were the underlying cause, Corporate Compliance should take behavioral aspects into consideration for effective fraud prevention and detection.

As mentioned before, the Fraud Triangle theory has not remained without criticism. Therefore, two more extensions of the model have emerged in the meantime. Both theories, the **Fraud Diamond** theory as well as the **Fraud Pentagon**²⁵ theory put characteristic traits of a fraudster in the focus. Although (Dellaportas 2013: 37) states that

²⁵ Marks (2009: 3) added “arrogance” as a fifth element to the model, defining it as “*an attitude of superiority and entitlement or greed on the part of a person who believes that internal controls simply do not personally apply*”. Because arrogance can be seen as a part of the ego sub-element of the Fraud Diamond, the Fraud Pentagon will not be detailed in this study.

these theories rely on “*self-developed assertions that lack significant empirical support*”. The following findings will reveal that the Fraud Diamond theory is at least based on solid ground and a useful instrument for the development of a behavior-oriented compliance.

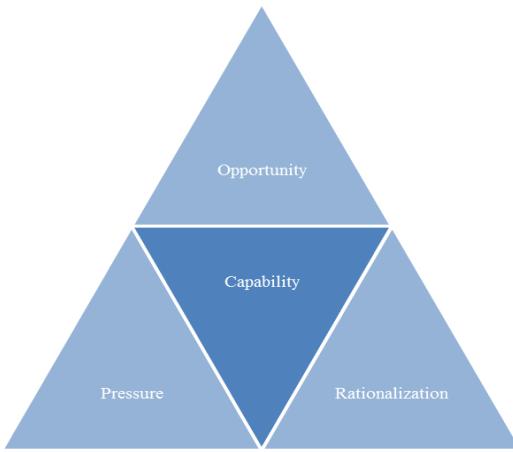
2.2.4 The Fraud Diamond: Capability

It seems that sometimes, some people just want to do something wrong. They know about their unethical behavior and – deservedly so – end up behind bars for years. Just like Bernard Madoff, who consciously, deliberately and reflectively chose to engage in a massive investment scandal: “*As I engaged in my fraud, I knew what I was doing was wrong, indeed criminal.*” (WSJa 12.03.2009). Without a doubt, Bernie Madoff had the opportunity, the incentive and rationalization needed to keep the largest financial fraud in the U.S. history running, but furthermore: he had the capability of committing fraud over and over again before his Ponzi scheme was exposed. How did he manage to lure so many people in his massive fraud scheme? The so-called *Fraud Diamond* theory helps to explain the capability side of fraud, potentially resulting in big corporate scandals.

The Fraud Diamond theory by Wolfe and Hermanson (2004) is viewed as an extended version of the Fraud Triangle. In this theory, a fourth element named capability has been added to the three initial fraud components. Wolfe and Hermanson (2004) argued that despite opportunity, pressure and rationalization, a potential fraudster needs certain skills and abilities to commit fraud:

„*Many frauds, especially some of the multibillion-dollar ones, would not have occurred without the right person with the right capabilities in place. Opportunity opens the doorway to fraud, and incentive (i.e. pressure) and rationalization can draw a person toward it. However, the person must have the capability to recognize the open doorway as an opportunity and to take advantage of it by walking through, not just once, but time and time again*” (Wolfe/Hermanson 1994: 38).

Accordingly, Wolfe and Hermanson (2004) regard the capability as particularly important when it comes to large-scale and/or long-term fraud because this element allows the fraudster to commit fraud not only once, but repeatedly.

Figure 9: The Fraud Diamond

Source: Wolfe/Hermanson (2004).

The capability element consists of six supporting elements: (1) position/function, (2), intelligence and creativity, (3) ego and confidence (4) coercion, (5) lies and (6) stress (Wolfe/Hermanson 2004). These will be presented in the following and accentuated by findings of ACFE (2016a).

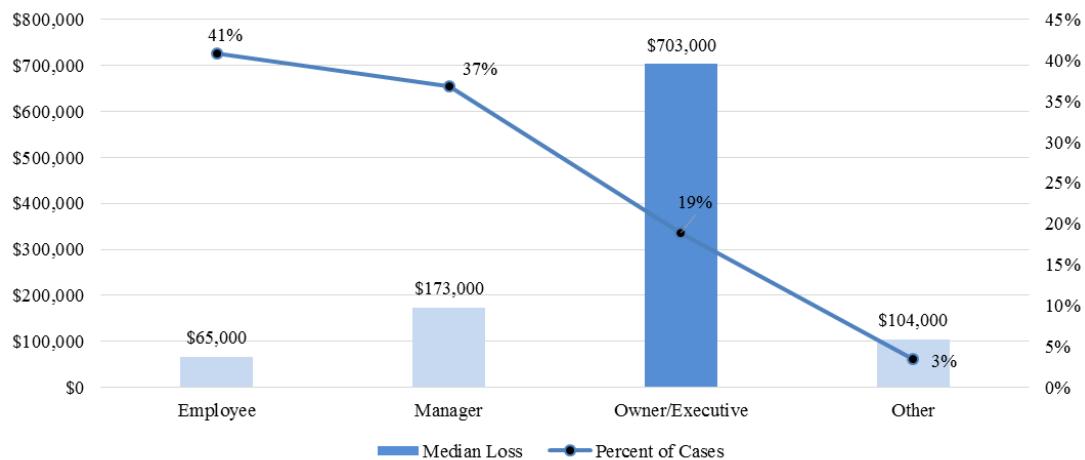
1. Position or Function

First, fraudsters must have the position or function in an organization to commit fraud (Wolfe/Hermanson 2004: 39) and “*tend to be driven individuals who care deeply about their success*” (Soltes 2016: 57). The higher the position or function of the employee, the more costly the breach the organizational trust can be.

Since the first global study of the *Report to the Nations on Occupational Fraud and Abuse* by the ACFE in 1996, there has always been a strong correlation between a fraudster’s position and the size of fraud – the same holds true for 2016 (ACFE 2016a: 49). Figure 10 shows the position of a fraudster and provides insights into this sub-element of the Fraud Diamond.

While only 18.9% of frauds were committed by owners/executives, these resulted in the most costly fraud cases with a median loss of US\$ 703,000. However, while employees (40.9%) and managers (36.8%) were much more likely to commit fraud, the median losses of these fraud cases were lower (although still costly).

Figure 10: Position of a fraudster – frequency and median loss



Source: Own illustration, based on ACFE (2016a: 49).

A possible reason for the relationship between position and loss due to fraud is that fraudsters in executive positions tend to have a better ability to evade or override anti-fraud controls and have greater access to company's assets than employees in lower positions (ACFE 2016a: 49). Additionally, there is a relationship between tenure and loss due to fraud. According to Figure 11, which illustrates the tenure of fraudsters, the longer the fraudster has worked for the company, the higher the median loss.

Figure 11: Tenure of a fraudster – frequency and median loss



Source: Own illustration, based on ACFE (2016a: 54).

26.5% of fraud cases were committed by fraudsters who stayed with the company between six and ten years and caused a median loss of US\$ 210,000. In another 22.9% of fraud cases the fraudsters had been working for the company for more than ten years and resulting in a median fraud loss of US\$ 250,000. In the fraud cases in which the

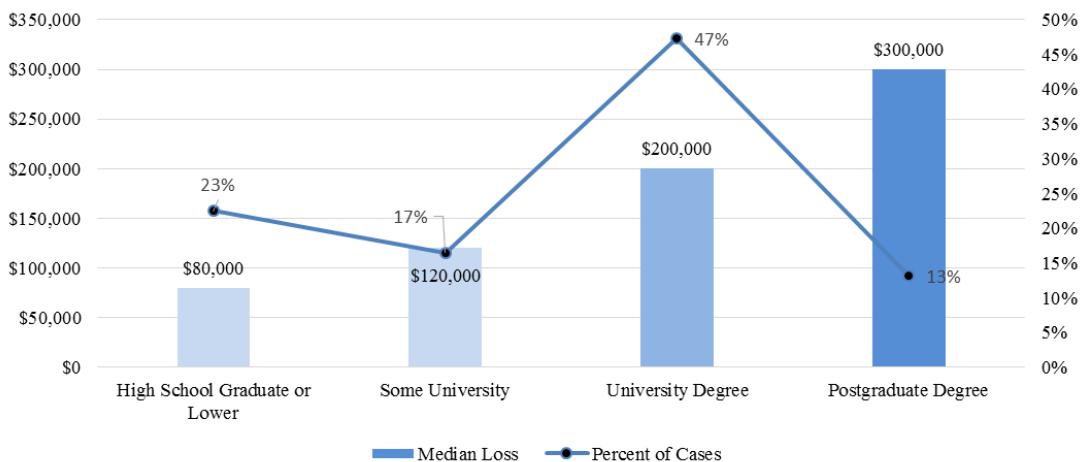
fraudster had been working for the company for five years or less, median losses were significantly lower. In summary, employees who stay in a company “*for a long period of time often move up to higher levels of authority, which in turn gives them the opportunity to commit larger frauds*” (ACFE 2016a: 54).

2. Intelligence and Creativity

Second, a fraudster must have the intelligence and creativity to commit fraud. According to Wolfe and Hermanson (2004: 39), fraudsters are “*intelligent, experienced, creative people, with a solid grasp of company controls and vulnerabilities*” who use their knowledge to breach organizational trust.

Figure 12 shows the education level of fraudsters and provides insights into this sub-element of the Fraud Diamond. While fraudsters with a university degree caused a median loss of US\$ 200,000, the fraudsters with a postgraduate degree caused a median loss of US\$ 300,000. These figures were significantly higher than the losses caused by less educated fraudsters.

Figure 12: Education level of a fraudster – frequency and median loss



Source: Own illustration, based on ACFE (2016a: 61).

3. Ego and Confidence

Third, a fraudster must have the ego and confidence to commit fraud. According to Wolfe and Hermanson (2004: 40), a fraudster “*has a strong ego and great confidence that he will not be detected, or the person believes that he could easily talk himself out of trouble if caught*”. As an egoistic person, a fraudster is somebody who is “*driven to succeed at all costs, self-absorbed, self-confident and narcissistic*” (ibid). Similar to Bernie Madoff who exactly knew about the illegality of his actions. Ntayi, Ngoboka

and Kakooza (2013) find support for this dimension of the Fraud Diamond and conclude that fraudsters have high selfishness and unmoral intentions as well as low social identity and low ethical values.

4. Coercion

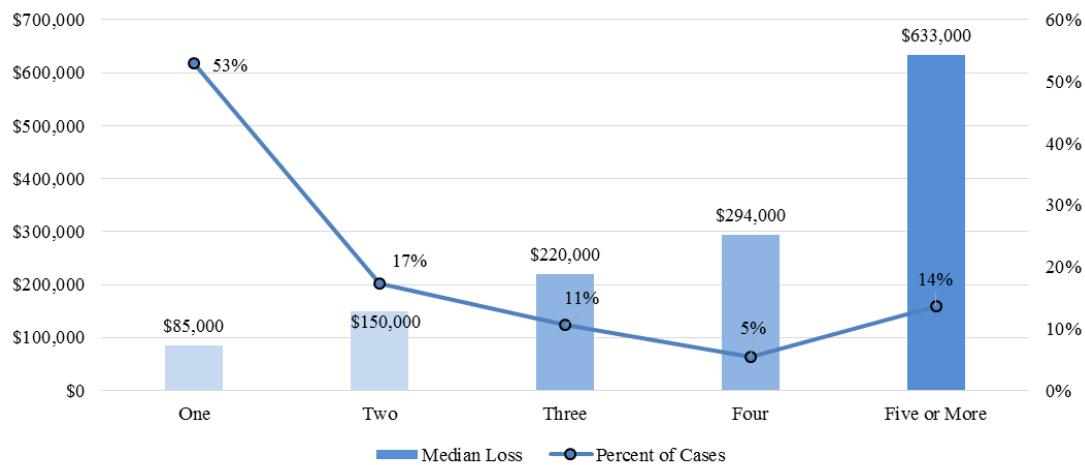
Fourth, a fraudster is able to coerce others to commit fraud. According to Wolfe and Hermanson (2004: 40), a fraudster is a “*person with a very persuasive personality [who] may be able to convince others to go along with a fraud or to simply look the other way*”. Bendahan et al. (2015) and Rosenblatt (2012) find support for this dimension of the Fraud Diamond and conclude that fraudsters have high power motifs. Additionally, Connelly and Ones (2008) and Hegarty and Sims (1978) find that fraudsters tend to be high in Machiavellianism. What is more, a fraudster is often a “bully”-type of person, pressuring others to achieve goals (*ibid*). Additionally, various research on the concept of power extracted six different potential power bases – each of them stemming from the different aspects of the relationship between a fraudster and his or her employee of influence:

1. **Reward power** is the ability of a fraudster to convince others that he or she will receive any form of benefit (e.g. promotions, bonuses or cash) for participating in a fraud (Albrecht et al. 2012: 53).
2. **Coercive power** is the ability of a fraudster to threat force (e.g. physical, social or emotional) to make others participate in a fraud. Although they do not want to commit fraud, they do because they believe that not complying with the fraudster will result in severe consequences (Albrecht et al. 2012: 53).
3. **Expert power** is the ability of a fraudster to convince others that he or she has expert knowledge (e.g. reputation or experience) and due to that they participate in a fraud (Albrecht et al. 2012: 53).
4. **Legitimate power** comes from a fraudster who is on a higher rank in an organization, using his or her authority to make others participate in a fraud. Accordingly, this type of power can be powerful to convince others in authoritarian work environments (Albrecht et al. 2012: 53).
5. **Referent power** is the ability of a fraudster to relate to others (e.g. a trusted friend) and influence others (Albrecht et al. 2012: 53).

6. **Informational power** results from the possession of knowledge that others need or want and due to that the fraudster can make others participate in a fraud (Raven 1965: 371).

By looking at the different types of power that individuals use to recruit others to participate in fraud, it is possible to understand how some fraud can turn into big scandals by involving many people. Figure 13 illustrates the number of fraudsters and provides insights into this sub-element of the Fraud Diamond. It shows two central findings: (1) almost half of the fraud cases involved multiple people and (2) the more people involved, the higher median losses tended to be.

Figure 13: Number of fraudsters – frequency and median loss



Source: Own illustration, based on ACFE (2016a: 62).

Possible explanations for these findings can be (1) undermining anti-fraud controls and/or (2) having to steal more. First, many anti-fraud controls work on the basis of separation of duties and independent checks (ACFE 2016a: 62). Therefore, when multiple people scam together, they might be able to undermine mechanisms designed to detect fraud. Second, another explanation could simply be that the more fraudsters are involved, the more money has to be stolen to satisfy everybody involved in the fraud (ACFE 2016a: 62).

5. Lies

Fifth, a fraudster is able to use lies consistently and effectively to commit fraud. According to Wolfe and Hermanson (2004: 40), a fraudster “*must look auditors, investors, and others right in the eye and lie convincingly*” and “*possesses the skill to keep track of the lies, so that the overall story remains consistent*”.²⁶

6. Stress

Finally, a fraudster is able to deal with **stress** very well. The possible risk of detection as well as the constant struggle to hide the fraud on a daily basis can be highly stressful, another aspect a fraudster has to deal with (Wolfe/Hermanson 2004: 40).

Conclusion: *Corporate Compliance and Fraud Triangle / Fraud Diamond*

Today, Corporate Compliance does not yet take behavioral aspects into consideration. The analysis on the Fraud Triangle and Fraud Diamond have shown various behavioral patterns of those people who know about the illegality of their fraudulent behavior and know how to overcome anti-fraud controls. Fraudsters (1) use the opportunity, (2) have an incentive and (3) rationalize their behavior by excuses. They (4) possess the necessary position/function, (5) are intelligent, (6) are egoistic and confident, (7) have the talent to coerce others into fraud, and have the talent to (8) keep up lies and (9) cope with stress.

As shown in the previous chapters, in almost 75% of all fraud cases, internal control weaknesses resulted in fraud and Corporate Compliance can do more than e.g. a Code of Conduct or ethical trainings to take behavioral aspects into consideration for fraud prevention and fraud detection. So what can make Corporate Compliance more effective? Taking a closer look at how fraud is detected, will provide an answer in the following chapter.

²⁶ Being able to keep up the lies, potentially requires high score on the personality trait Conscientiousness. This personality trait will be further detailed in chapter 4.

2.3 Need for More: Behavioral Compliance

“Hard as they try, they simply can't turn their heads away from an injustice when they see one taking place.”

-- Michael Moore, journalist.

In a nutshell, the loss caused by fraud is a function of how long it runs before being detected. As shown in Figure 14, the longer fraudsters are able to keep their misconduct running, the more financial harm they are able to cause.

Figure 14: Frequency and median loss based on duration of fraud



Source: Own illustration, based on ACFE (2016a: 17).

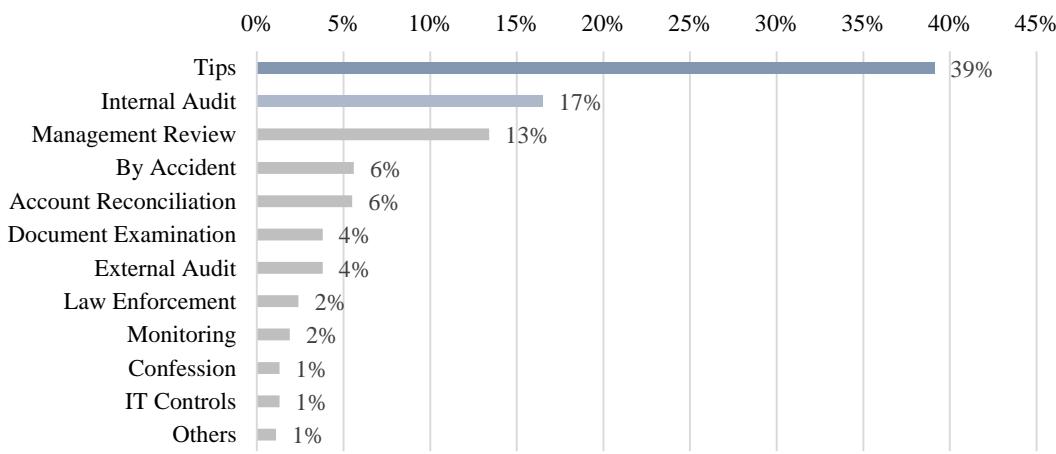
More than 30% of the fraud cases lasted for more than two years before they were discovered and these are obviously the ones which cause the most damage. These are the Dieselgate scandal at Volkswagen, the Libor scandal at Deutsche Bank or the global corruption scandal at Siemens – to name only a few of the biggest global scandals. The earlier these fraud schemes get detected, the better for the companies because sanctions – not only the ones for companies but for individuals – are likely to increase in the future.

When many of the presented anti-fraud controls, which are aimed at taking away the opportunity for fraud, fall short to effectively prevent or detect fraud, how does it get detected then? By people who provide tips.

2.3.1 Importance of Whistleblowing

Figure 15 shows that in almost 40% of fraud cases, tips of employees are the reason for initial detection of fraud and emphasizes the importance of (internal) whistleblowing. And although being the most widely used anti-fraud control, external audits of the F/S are only successful in 4% of fraud detection – even detection by accident is more successful. Internal audit (17%) is the second-most common detection method before management review (13%).

Figure 15: Initial detections of occupational fraud



Source: Own illustration, based on ACFE (2016a: 21).

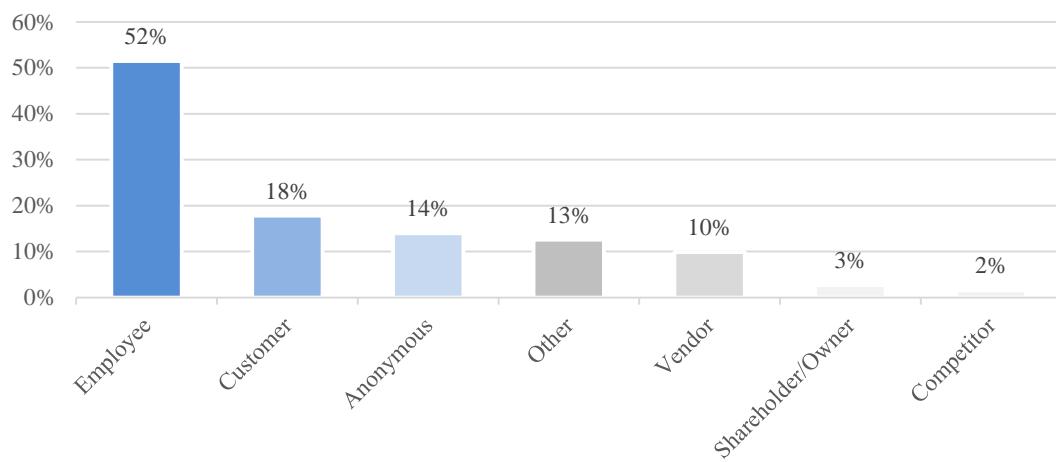
The quantity of whistleblowing tips varies from different types of wrongdoing (Near et al. 2004: 231). Especially, wrongdoings, such as mismanagement, unspecified legal violations, or sexual harassment were reported more often than evil deeds, such as stealing, safety problems, waste, or discrimination (Miceli/Near/Dworkin 2008: 79). But as incidents of whistleblowing are often featured in today's mass media, one is led to believe that it frequently occurs in organizations. But quite the contrary is true: (1) Miceli et al. (1999) asked federal employees of which about 48 % reported a misconduct; (2) Lee/Heilmann/Near (2004) asked federal employees (victims of sexual harassment) and only 4% blew the whistle; (3) Near et al. (2004) conducted a survey at a large military base consisting of half military and half civilian employees and found that around 26% became whistleblowers; (4) Miceli/Near/Schwenk (1991) asked directors of internal auditing – it is their job to report wrongdoings internally – and found that 90% of them blew the whistle. In summary, Miceli/Near/Dworkin (2008: 22) conclude that of all employees who observe a wrongdoing at work, only half of them blow the whistle about it. The others remain fallaciously silent.

Tips provided by whistleblowers are highly important when it comes to the detection of fraud and thus whistleblowing should be regarded as something necessary for any organization. To be able to better understand whistleblowing, it is useful to gain a better understanding of who the people are who report potential fraud in organizations.

2.3.2 Whistleblowers: Who They Are and How They Report

Figure 16 shows that of all the tips that were provided, employees within the organization turned in a little more than half of all tips (52%). However, externals such as customers (18%) and vendors (10%), and other parties are significant sources of tips, too, and should not be left out when opening up channels for reporting potential misconduct.

Figure 16: Sources of tips of occupational fraud



Source: Own illustration, based on ACFE (2016a: 21).

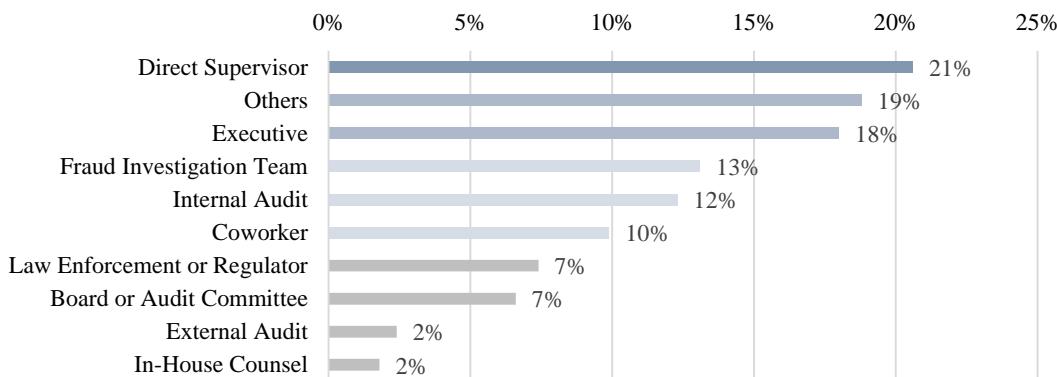
Empirical research indicates that almost every whistleblower who reports using external channels has used internal channels beforehand and reports the misconduct to at least one person within the organization (Miceli/Near 1992: 194). External channels are usually used as the last resort to get a wrongdoing corrected because e.g. (1) internal efforts have failed to do so, (2) the whistleblower has experienced retaliation, or (3) simply because the wrongdoing required it (Miceli/Near/Dworkin 2008: 10).

Internal Whistleblowing

If the employee opts for internal whistleblowing, he reports the wrongdoing to e.g. his immediate supervisor, upper management, or ombudsman within the company (Miceli/Near/Dworkin 2008: 7). Figure 17 undermines this finding and shows that the

person whistleblowers initially reported to was in one fifth of the fraud cases the direct supervisor, followed by others²⁷ (19%) or an executive (18%). Additionally, the fraud investigation team as well as the internal audit department or coworkers receive more than 10% of the initial reports. Only 7% went external by contacting law enforcement or regulator.

Figure 17: Party to whom the whistleblower initially reported



Source: Own illustration, based on ACFE (2016a: 29).

This finding could suggest that an amicable working atmosphere where colleagues are friends could increase whistleblowing, but this is a potential trap. Because if the fraudster is a friend, a colleague or a direct supervisor, the potential whistleblower is less likely to report potential fraud because blowing the whistle on a friend or colleague could ruin the friendship or cause bullying at the workplace (Miceli/Near/Dworkin 2008: 80). However, ethic programs or general organizational justice have the effect that employees are more willing to report misconducts (ibid: 84). Conversely, a threatening working atmosphere with features such as strict controls or draconic rules is related to whistleblowing using external channels rather than less reports (ibid: 82).

Which are the formal (e.g. reporting through a hotline) or informal (e.g. talking to colleagues) reporting channels whistleblowers make use of? As Figure 18 shows, most whistleblowers (40%) make use of a telephone hotline to reach out to compliance. However, e-mail (34%) and web-based (24%) combined result in more than half of all the reporting mechanisms used by whistleblowers.

²⁷ The “other” category indicated that “*human resources or the owner of the organization*” were the first contact person the whistleblower reported to (ACFE 2016a: 29).

Figure 18: Formal reporting mechanisms used by whistleblowers



Source: Own illustration, based on ACFE (2016a: 28).

Besides the finding that companies should offer their employees (and externals) various formal reporting mechanisms to report potential fraud, many whistleblowers make use of informal systems to report their suspicion.

In consequence of blowing the whistle, the whistleblower will experience either retaliation or reward for reporting misconduct. Based on whether he was retaliated or rewarded and whether the wrongdoing was corrected or not, he decides for remaining silent or in cases such as that of Edward Snowden, opts for external whistleblowing:

“But over time that awareness of wrongdoing sort of builds up and you feel compelled to talk about. And the more you talk about the more you’re ignored. The more you’re told it is not a problem until eventually you realize that these things need to be determined by the public and not by somebody who was simply hired by the government” (MIC 09.06.2013).

External Whistleblowing

If the employee decides for external whistleblowing, he reports the wrongdoing to e.g. the media outside the company (Miceli/Near/Dworkin 2008: 7). External whistleblowing can result in a damaging loss of reputation and should therefore be prevented. Because of this, Behavioral Compliance aims at encouraging internal whistleblowing. But since the above-mentioned implementation of the so-called *Dodd-Frank Whistleblower Program* and its potential rewards for whistleblowers in August 2011, the SEC has received an increasing number of whistleblower tips as shown in Table 2-8 – 18,334 whistleblower tips in total.

Table 2-8: Tips provided by whistleblowers to the SEC

FY2011	FY2012	FY2013	FY2014	FY2015	FY2016
334	3,001	3,238	3,620	3,923	4,218

Source: SEC (2016: 23).

As mentioned earlier, the SEC has learned that "*whistleblowers with specialized experience or expertise can help us expend fewer resources in our investigations and bring enforcement actions more efficiently*" (FCPABlogb 25.04.2017). Making use of insider knowledge provided by (current or former) employees, the SEC aims at encouraging not only internal but external whistleblowing by offering rewards.

2.3.3 Whistleblowing: Retaliation or Reward?

“I feel something so wrong doing the right thing.”

-- lyrics of “Counting Stars” (song) by OneRepublic.

Retaliation can be defined “*as undesirable action taken against a whistleblower - in direct response to the whistleblowing - who reported wrongdoing internally or externally*” (Rehg et al. 2008: 222). Typically, if the internal whistleblower decides to continue working for his employer, he collides with phenomena, such as (1) ostracism (Williams/Forgas/Hippel 2005: 26; Reuben/Stephenson 2013: 391), (2) demotion (Miceli/Near/Dworkin 2008: 11), (3) worse job opportunities because the whistleblower is the *persona non grata* (Tucker 1995: 476), or (4) being exposed to verbal or physical threats (Solano/Kleiner 2003: 202). These phenomena usually occur repeatedly, regularly (e.g. weekly), over a certain period of time (e.g. several months) and are in many cases an escalating process with the whistleblower ending up in an inferior position (Glasø/Vie/Hoel 2011: 355). Persistent and repeated retaliation can be considered as workplace bullying (Einarsen et al. 2011: 22). In the worst case, the whistleblower gets stigmatized with a “minority status” within the workplace or even within the society (Bjørkelo/Macko 2012: 71), potentially resulting in a post-traumatic stress disorder (FW 03.11.2010).²⁸ Michael Woodford, whistleblower who exposed the Olympus scandal in 2011, stated:

“Whistleblowers are often isolated. In the school playground whistleblowing is known as snitching, and snitches are no longer trusted by the other children. They are lonely and contemptible. Once I had been ousted from Olympus, my relationship with many left on the inside became strained. Former close colleagues suddenly treated me like some sort of leper and studiously avoided all contact with me. [...] I was suddenly persona non grata and couldn’t understand just what I had done wrong” (Woodford 2012: 111).

²⁸ A potential post-traumatic stress disorder of whistleblowers will be further detailed in the interview study in chapter 6.

Whistleblowers are treated as contagious or radioactive (Bjørkelo et al. 2008: 28).

On the contrary, there may be positive consequences after whistleblowing. These positive actions can be benefits such as the termination of the wrongdoing, financial rewards, personal gratification or promotions that were not taken, but would have been taken if the employee had not blown the whistle (Rehg et al. 2008: 222). However, research indicates that the percentage of benefits at the workplace after whistleblowing is low (Miceli/Near/Dworkin 2008: 23). As presented in chapter 2.3.2., whistleblowers who provide information that results in a SEC enforcement action in which more than US\$ 1 million in sanctions are imposed on the organization, they are rewarded between 10-30% of the recovery. Today, the SEC has now awarded about US\$ 153 million to 43 whistleblowers, the biggest award was more than US\$ 30 in 2014 (FCPABlogb April 25, 2017).

Summary

A potential whistleblower should not have to fear retaliation and should be protected because their tips eminently help to detect fraud. Whether a reward²⁹ is a promising incentive to increase whistleblowing will be discussed later in chapter 3.2 but most certainly, retaliation should be avoided and protection secured. Although forbidden by U.S. laws, such as the Sarbanes-Oxley Act, until today whistleblowers most often face severe retaliation – especially when they blow the whistle on governments. Edward Snowden had to leave the USA and reside in Russia. Yuliya and Vitaly Stepanov, who exposed the Russian doping scandal, had to leave Russia and reside in the USA. Although they knew that blowing the whistle could result in severe retaliation, they decided to report serious fraud. Therefore, one focus of Behavioral Compliance will be to find out more about these people who blow the whistle in spite of knowing that they could be victims of severe retaliation.

Conclusion: *Need for More: Behavioral Compliance*

When it comes to fraud detection, tips provided by employees and externals are the major source for initial detection. The earliest detection possible is important for companies to prevent increasing sanctions due to U.S. laws and their enforcement.

²⁹ As shown in chapter 2.1.4., 12% of the companies are offering rewards for whistleblowers.

The previous chapters have exposed various behavioral weaknesses potentially resulting in fraud and which Corporate Compliance – as it is today – should take into consideration. Fraudsters (1) use the opportunity, (2) have an incentive and (3) rationalize their behavior by excuses. They (4) possess the necessary position/function, (5) are intelligent, (6) are egoistic and confident, (7) have the talent to coerce others into fraud, and have the talent to (8) keep up lies and (9) cope with stress. Whistleblowers decide against using the opportunity of remaining silent and decide to speak up. Accordingly, Behavioral Compliance will focus on these people and what drives them towards (1) fraud and (2) remaining silent on the one side and (3) deciding against fraud and (4) whistleblowing on the other.

Table 2-9: Behavioral Compliance: roles of employees

Employee	Fraudster	Integrity
	1. Actively engaging <i>in</i> fraud 2. Remaining fallaciously silent about fraud (no whistleblowing)	3. Actively deciding <i>against</i> fraud 4. Reporting fraud (whistleblowing)

Source: Own illustration.

3 Behavioral Compliance: Challenge and Approach

“Humans are dumber, nicer, and weaker than Homo Economicus.”

-- Richard Thaler, economist (1996: 227)

To explain any form of human behavior (e.g. participating in fraud or blowing the whistle about it), personality and social psychologists generally agree that both personal and situational factors have to be taken into consideration (Lucas/Donnellan 2009: 146). And when looking at why people behave in a certain way, it is inevitable to take a closer look at what motivates people to complete a task and especially, the logic behind motivation (Ariely 2016). Why do people donate blood, even though it is an uncomfortable experience and/or without pay? Why do people work for charity in their free time or why do people blow the whistle about fraud although they know about potential retaliation – and why do others remain fallaciously silent?

Homo Economicus vs. Corporate Compliance

Standard economic theory assumes that the granting of monetary incentives increases the motivation to work and due to that, the performance of employees. The concept of a human being is the so-called *Homo Economicus*, an individual as it is perceived in various models of neo-classical economics, exhibits three typical characteristics: (1) he always behaves rationally, (2) is in constant self-control, and (3) acts on the basis of selfishness (Kahneman 2010: 420). Accordingly, agents in an economy (such as employees of a company) always solve problems with reasoned and profound decisions, never suffer from any weakness of will, and care only about themselves. Would the *Homo Economicus* be a potential fraudster? Probably yes, as he often acts in his own self-interest. Would the *Homo Economicus* be a potential whistleblower? Probably not, as he only acts in his own self-interest.

These neoclassical models should not be judged on their narrow assumptions³⁰, but rather on their fundamental predictions. However, it is clear that these assumptions are unrealistic as people not always act rationally, in constant self-control and within narrow self-interest (Thaler/Mullainathan 2008; Thaler/Sunstein 2009). The view of the *Homo Economicus* was challenged by researchers of various disciplines including

³⁰ “The assumption of rationality allows optimization, narrow self-interest allows the optimization problem to have a well-defined objective function and the absence of self-control allows the presumption of consumer sovereignty” (Thaler 1996: 227).

cognitive psychology in the early 1970s, insights required for the development of the framework of Behavioral Compliance.

3.1 Challenge of Behavioral Compliance: People

“When given the opportunity, many honest people will cheat.”

-- Dan Ariely (2008: 201).

As the previous chapter has already indicated, to predict human behavior (e.g. participating in fraud or blowing the whistle about it) is a highly complex and most likely impossible task because of the various factors that may have an impact on decision making. This chapter will provide a deeper understanding of why people are not as predictable as the Homo Economicus – and (intentionally or not) decide against being the person they aspire to be.

3.1.1 The Dual Process Theory: System 1 and System 2

“Gym or chips?”

Going to the gym or sitting in front of the television to munch chips? Many people face this kind of moral dilemma on a regular basis, and its core conflict can be explained using the dual process theory (Evans 2003: 454) and the complimentary research of Daniel Kahneman (2011). Coined by behavioral economics, the so-called *Homo Psychologicus* utilizes two distinct cognitive systems underlying any form of decision making: (1) *Intuition* (System 1), and (2) *Reasoning* (System 2). There is a fundamental difference between these two cognitive systems, which could be scientifically supported by neuropsychological evidence based on functional magnetic resonance imaging (fMRI) studies (Goel et al. 2000; Goel/Dolan 2003).

System 1: Thinking Fast (Want-Self)

System 1 is “*fast, automatic, effortless, implicit and emotional*” and can be metaphorically described as “*going with the gut*” (Bazerman/Tenbrunsel 2011: 35).³¹ It requires little or no effort and is based on formed habits, experiences and therefore very difficult to change. Therefore, it is stereotypic, subconscious and especially efficient as it is

³¹ Bazerman/Tenbrunsel (2011: 66) call a similar concept “want-self”, which is “*emotional, affective, impulsive, and hot-headed*”.

useful for a large share of decisions people make on a daily basis (Bazerman/Tenbrunsel 2011: 35). For example, it is used for calculating 2+2, the judgment how something may taste based on its look or the understanding of simple sentences (APA 17.04.2017). “*System 1 operates automatically and quickly, with little or no effort and no sense of voluntary control.*” (Kahneman 2011: 43). Therefore, the evidence for System 1 embodies a big challenge for the rationality assumption of the Homo Economicus.

System 2: Thinking Slow (Should-Self)

While System 1 runs automatically, System 2 is usually semi-dormant (Kahneman 2011: 51). System 2 is “*slower, conscious, effortful, explicit, and more logical*” (Bazerman/Tenbrunsel 2011: 35).³² It requires attention and is interrupted when the attention is otherwise preoccupied. Therefore, when System 1 faces difficulties, it calls System 2 for help (Kahneman 2011: 51). For example, it is used to calculate the answer to 17 times 24. No answer comes automatically to mind, as computing the solution requires effort. On a biological level, the pupils turn larger and the heart rate accelerates, which burns energy – that is System 2 (APA April 17, 2017). “*System 2 allocates attention to the effortful mental activities that demand it, including complex computations. The operations of System 2 are often associated with the subjective experience of agency, choice, and concentration.*” (Kahneman 2011: 43). Therefore, System 2 is partially used for second-guessing or controlling oneself. But due to cognitive biases³³ (mental short cuts of System 1), individuals do not have to perform much second-guessing or controlling (APA April 17, 2017).

The Two Systems and the Influence of Time

When people think of their own decision making, they usually identify their reasoning with System 2 and assume that they make every decision based on conscious, thoughtful mental activities (Kahneman 2011: 944). But empirical research proves this basic attitude to be wrong. System 1 is where the action is, only mobilizing System 2 when-

³² Bazerman/Tenbrunsel (2011: 66) call a similar concept “should-self”, which is “*rational, cognitive, thoughtful, and cool-headed*”.

³³ Cognitive biases most likely relevant for Behavioral Compliance are illustrated in Appendix 9.1 and marked like this throughout this study: halo effect (*italic* and underlined) to illustrate the reference to the Appendix.

ever needed (Kahneman 2011: 46). System 1 thinking is useful in a variety of situations such as shopping groceries, where System 2 thinking would be a time-consuming handicap (Bazerman/Tenbrunsel 2011: 36). But when it comes to important decisions (such as whistleblowing), System 2 should be activated to prevent a gap between the person somebody aspires to be and the person he becomes. But various cognitive biases prevent System 1 from reaching out, blurring its awareness and blocking the connection to System 2. For example, judging the overall character of a person within less than a second in a first meeting (*halo effect*) is such a phenomenon. Kahneman (2011) calls this *What You See Is All There Is* (WYSIATI) and means that people use the information they have at hand as if that is the only information available (Kahneman 2011: 194). If mental short cuts remain unchecked by System 2, this leads to decisions based on cognitive biases. Therefore, in addition to going with their gut (System 1), people should engage their “System 2”-thinking to become the person they aspire to be.

Research suggests that whether System 1 or System 2 dominates, varies across time. System 1 demands to be satisfied immediately (e.g. consuming chips), System 2 aims for longer-term interests or goals (e.g. going to the gym regularly). Another example: When shopping for groceries online, people buy healthier food when the order is for delivery in the future than when they do for the next day (HBS July 16, 2007). People think they should eat healthy food, should work out regularly, should be ecofriendly or should go against a wrongdoing for the sake of the public (should-self). But in the moment of the decision, System 1 frequently wins the cognitive battle and people decide for what they want (chips), and not for what they should (salad) (Bazerman/Tenbrunsel 2011: 67). Before and after the decision, System 2 dominates. Because people cannot anticipate what the situation will be like when they have to make the decision (Bazerman/Tenbrunsel 2011: 66), they frequently overestimate their ethical behavior. But individual’s behavior is driven by details of the situation, not abstract visions (Bazerman/Tenbrunsel 2011: 68).

3.1.2 Bounded Rationality, Bounded Willpower and Bounded Selfishness

People do not always act rationally, in constant self-control and within narrow self-interest (Thaler/Mullainathan 2008; Thaler/Sunstein 2009). The *Homo Psychologicus* is different and suffers from (1) Bounded Rationality, (2) Bounded Willpower and (3) Bounded Selfishness.

1. Bounded Rationality

“If you don’t see it often, you often don’t see it.”

-- Jeremy Wolfe, PhD Professor of Ophthalmology.³⁴

The concept of Bounded Rationality follows the model of Herbert A. Simon (1955), who tried to construct a more realistic theory of economic decision making, and “refers to the rational principles that underlie nonoptimizing adaptive behavior of real people” (Selten 2001: 15). In contrast to the Homo Economicus, rationality of individuals is limited by the information they perceive, the cognitive limitations of the brain, and the finite amount of time they have to come to a decision.

Full rationality requires unlimited cognitive capabilities, but the human brain does not work like a supercomputer. Its mental capacity is far better comparable to a simple data processor with limited memory - including frequent hard drive crashes. The fully rational man is therefore more like a hero. Daniel Kahneman and Amos Tversky have shown in various experiments that actual behavior differs from rational choice in systematic ways (Kahneman/Tversky 1979; Kahneman/Slovic/Tversky 1982). People may at times come to conclusions based on cognitive biases or simple decision rules such as rules of thumb.

Research demonstrates that people own various unconscious traits (so-called *blind spots*), which prevent them from thoughtfully assessing their decisions and resulting in so-called *Bounded Awareness*: people (1) think they are fairer than others (Messick et al. 1985), (2) are more willing to be critical of others’ ethical behavior than of their own (Gino/Moore/Bazerman 2008: 3; *naïve cynicism* in Kruger/Gilovich 1999: 743), (3) think they are more likely to do something good and are more suspicious of other people’s motives for giving somebody a treat (Epley/Caruso 2004; Epley/Dunning 2000), (4) suppose that others have more self-interest and that others are more strongly motivated by money (Ratner/Miller: 2001), (5) believe they are not only more honest but more trustworthy than others (Messick/Bazerman 1996) and (6) that they try harder to do something good (Baumeister/Newman 1994). This may lead to people being more critical toward other people’s behavior and not their own actions. They are bounded by illusory superiority (*Dunning-Kruger effect*) as they tend to overestimate

³⁴ Source: Bazerman/Chugh 2006: 91.

their competence in comparison to others (Kruger/Dunning 1999: 1121). In consequence, Bounded Awareness prevents employees from perceiving something as fraud and Table 3-1 aims at providing an idea of the various cognitive biases involved.

Table 3-1: Examples of Bounded Rationality: Bounded Awareness

Bounded Awareness	Description	Cognitive Bias and Example
Affective Blindness	A mental short cut that allows people to make decisions and solve problems more quickly due to an affect (such as liking or disliking) that cuts off cognitive deliberation (Slovic et al. 2002: 400).	<p><i>Affect heuristic:</i> If an employee sympathizes with a wrongdoing, he is likely to not perceive it as something unethical – no matter whether he himself is acting unethically or somebody else.</p>
Motivated Blindness	When motivated to stretch a point of somebody's unethical behavior, people will overlook it (Bazerman/Tenbrunsel 2011: 81). Several studies support this finding and conclude that people are biased to see evidence that supports the conclusion they would like to reach (Holyoak/Simon 1999: 3; Moore/Tanlu/Bazerman 2010: 47; Koehler 1991: 500) and ignore evidence that contradicts their expectations or subject it to critical scrutiny (Gilovich 1991: 31).	<p><i>Confirmation bias:</i> Employees do not counteract their unethical behavior if they have a personal self-interest in the situation and/or are motivated to assimilate other people's preferences. Instead of questioning their behavior (System 2), they prefer floating with the current (System 1).</p>
Inattentional Blindness	People do not notice salient objects in front of their eyes when their attention is otherwise preoccupied (Most 2010: 1102).	<p><i>Attentional bias:</i> Over-prescribing goals can work as a cognitive blinder (Bazerman/Chugh 2006: 90). Setting up too many goals for which people receive rewards, can be a treadmill. The employer may narrow the focus of its employees and by that make them blind to perceiving things unrelated to their goal.</p>
Slippery Slope Blindness	People tend to use past practices as a benchmark for evaluating new practices. If past practices were acceptable, then similar practices are likely to be judged acceptable in the short-run as well. If then, each step away from past practices is sufficiently small, a series of these small steps can lead to unethical behavior in the longer-run (Tenbrunsel/Messick 2004: 228). On the contrary, when people judge past practices as unacceptable, they are likely to judge new practices as unacceptable as well, although the situation might turn out beneficial in the longer-run.	<p><i>Outcome bias:</i> The slippery slope effect may be another reason why employees do not perceive a wrongdoing happening at work due to gradual degradation. Small ethical transgressions, which are overlooked from time to time, snowball into big crimes in the longer-run. If the same crime happened abruptly, the same employee would likely perceive the wrongdoing.</p>

Source: Own illustration.

As illustrated before in chapter 2.2.3, people use different rationalization techniques to make fraud, which they have perceived as potentially wrong, ethically permissible. Whenever actions conflict with developed attitudes, people often change their attitudes to be more consistent with their actions (van Veen et al. 2009: 1469). By doing so, cognitive dissonance is avoided and the unethical behavior is morally permissible due to moral disengagement (Bandura et al. 1996). Thanks to self-deception, which „*is akin to failure to tell the self the whole truth*“ (von Hippel/Trivers 2011: 7), people may engage in fraud without feeling guilty – a phenomenon described as Bounded Ethicality. Table 3-2 aims at providing an idea of the various cognitive biases involved in Bounded Ethicality.

Table 3-2: Examples of Bounded Rationality: Bounded Ethicality

Bounded Ethicality	Description	Cognitive Bias and Example
Denial Judgment	A cognitive blinder that leads people to the assumption that everything is normal when they find themselves in disturbing circumstances (Omer/Alon 1994: 278). It refers to „ <i>the assertion that something did not happen or is not true</i> “ (Cohen 2001: 7).	<u>Normalcy bias:</u> This kind of self-deception allows people to not feel responsible as they shut down and pretend everything is in order.
Motivated Judgment	People hide behind excuses because they could be regarded as selfish, prejudiced or even perverted by telling the truth (Chance/Norton 2009: 2).	<u>Normalcy bias</u> hits <u>confirmation bias</u> : Employees may not counteract their unethical behavior if they have a personal self-interest in the situation and/or others in their in-group benefit from it. Instead of questioning the wrongdoing (System 2), they prefer floating with the current (System 1).
Bystander Judgment	People judge their responsibility to act based on the <u>bystander effect</u> , which prevents people from helping others if too many people are around (Darley/Latané 1968: 377). Its underlying principle could be the <u>conformity bias</u> , a cognitive blinder that leads people to behave similarly to others in a group (Boen et al. 2008: 621).	<u>Conformity bias:</u> Employees may not counteract a wrongdoing if many others are around, which makes them feel helpless to act. Instead of questioning their responsibility (System 2), they prefer waiting for others to tackle the wrongdoing (System 1).
Slippery Slope Judgment	People tend to use past practices as a benchmark for evaluating new practices. If past practices were acceptable, then similar practices are likely to be judged acceptable in the short-run as well. If then, each step away from past practices is sufficiently small, a series of these small steps can lead to unethical behavior in the longer-run (Tenbrunsel/Messick 2004: 228). On the contrary, when people judge past practices as unacceptable, they are likely to judge new practices as unacceptable as well, although	<u>Slippery Slope Effect:</u> The slippery slope effect may be another reason why employees do not judge a perceived wrongdoing happening at work due to gradual degradation. Small ethical transgressions, which are overlooked from time to time, snowball into big crimes in the longer-run. If the same crime happened abruptly, the same employee would likely judge the wrongdoing.

the situation might turn out beneficial in the longer-run.	
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Source: Own illustration.

2. Bounded Willpower

“Procrastination is like a credit card: it's a lot of fun until you get the bill.”

-- Christopher Parker, actor.

In addition to Bounded Rationality, people often face Bounded Willpower. This term reflects individuals' incomplete self-control, sacrificing long-term benefits for short-term gains (Shogren/Parkhurst/Banerjee 2010: 237). Therefore, individuals may engage in unhealthy behavior (such as eating or drinking too much, saving too little, or smoking) or refrain from blowing the whistle, while at the same time recognizing that such behavior is damaging.

3. Bounded Selfishness

“Hard as they try, they simply can't turn their heads away from an injustice when they see one taking place.”

-- Michael Moore, journalist.

Finally, Bounded Selfishness refers to the phenomenon that people have social preferences such as fairness (revenge or altruism) and may act selflessly (Shogren/Parkhurst/Banerjee 2010: 237). Due to that, people may engage in helpful behavior (such as supporting friends in difficult situations or taking care of a dog) or solving a problem by blowing the whistle, while at the same time recognizing that there might be costs (retaliation) for oneself.

Conclusion: Challenge of Behavioral Compliance: People.

The analysis has shown that predicting human behavior is a highly complex and most likely impossible task because various psychological barriers have an impact on the decision making process. People suffer from Bounded Rationality, Bounded Willpower and Bounded Selfishness as well as various cognitive biases – all of these making behavior such as fraud or whistleblowing too complicated to predict.

What should Behavioral Compliance focus on then? On those factors driving behavior: human motivation.

3.2 Behavior: Intrinsic and Extrinsic Motivation

“Man must author his own behavior, rather than have it dictated by authority. Man is not a pawn to the dictates of others; at his best man is the origin of his actions.”

-- Richard DeCharms (1976: 5).

Cognitive psychologists conclude that behavior is either based on (1) intrinsic motivation or (2) extrinsic motivation (Gneezy/Rustichini 2000). Accordingly, people are intrinsically motivated when they see themselves as the personal cause of their own actions – such as donating blood for free or working for a charity in their free time. People have a primary motivation to effectively influence and change their environment and strive for personal causation (DeCharms 1968: 269). If the origin of the causation is outside their own person, they are extrinsically motivated (ibid: 328) – such as donating blood because they get paid for it or finishing a task because they receive a bonus in return. Identifying the various components behind motivation is particularly difficult due to its complexity (Ariely 2016: 3). Some people work to satisfy their desire for money, others do it for prestige or because the task gives them a meaning.

3.2.1 Intrinsic Motivation: Roles of Motives

Generally speaking, a motive is the personal component of motivation allowing people to be intrinsically motivated to finish a task (von Rosenstiel 2015: 6). Until today, psychological research has not yet agreed on a uniform number of human motives potentially resulting in behavior or whether these motives are innate or learned. However, von Rosenstiel (2015: 32) concludes that most human motives are learned or at least have been shaped by the environment around people, such as family, friends or colleagues. And since the environment of people is different, their underlying motives are not the same. Accordingly, needs people have are even more different, the more diverse the environment in which they grew up (ibid: 32). And vice versa, needs people have are even more similar, the less diverse the environment in which they grew up. Results from Bloodgood/Turnley/Mudrack (2008) and Greenberg (2002) show that long-anchored moral principles have a negative effect on immoral behavior, independent of the respective cognitive abilities. Erat/Gneezy (2012) also show in their experiment that a large part of the subjects do not lie even if this increases both the own and the benefit of a companion. A total of 39% of the subjects remained honest in a condition in which a lie could increase their own payout as well as the payout of the com-

panion by US\$ 10. Additional research has shown that motives can change by the influence of role-models (Bandura 1969), emphasizing the importance of role models at the workplace who behave according to a company's compliance standards. These studies suggest three findings: (1) there is an intrinsic motive towards moral behavior and (2) this motive can be learned from (3) role models.

Several psychologists focus their research on the nature, content and impact of the needs of individuals (Drumm 2005: 471). These so-called *content theories* explain human needs and how people allocate their energy to maximize the satisfaction of these desires (Pritchard/Ashwood 2008: 6). One of the best-known motivational theories was developed by the American psychologist Abraham Maslow in 1954. Maslow (1970) developed a hierarchy of five categories of needs which build up on each other (Maslow 1970: 35-46). A central position in Maslow's theory is that higher needs are only activated and may lead to behavior when lower-level needs are satisfied. On the basis of Maslow's hierarchy these are (1) physiological needs, such as hunger, thirst or sleep. Superior to these are (2) safety needs, such as safety, security or shelter. In the next higher category are (3) love and belongingness needs, expressed by the desire for social contacts or love. Superior to that are (4) esteem needs, such as self-esteem, achievement or recognition. Finally, at the top of the hierarchy is (5) self-actualization, the desire for the best possible unfolding of all individual needs. In the following years, Maslow's theory was advanced by Alderfer (1972), Herzberg (1966)³⁵ and McClelland (1987), which all further detailed the influence of human needs on behavior – whether intrinsically or extrinsically motivated.

Based on various research, von Rosenstiel (2015) concludes that while (1) money, (2) security and (3) prestige are perceived as extrinsic motives, the need for (1) physical activity, (2) contact with others, (3) power and influence in the company, and (4) meaning and self-realization are regarded as intrinsic motives (von Rosenstiel 2015: 54).

³⁵ Besides motivators (= causes for satisfaction) which are (1) achievement, (2) recognition, (3) the work itself, responsibility, (4) advancement and (5) growth, Herzberg (1966) defines so-called hygiene factors which are potential causes of dissatisfaction. The latter are (1) company policies, (2) supervision, (3) relationship with supervisor and peers, (4) work conditions, (5) salary, (6) status and (7) security (HBR 01.2003).

Intrinsic Motives and Behavioral Compliance

Based on the analysis and the assumption that intrinsic motives can lead to behavior, especially two of the aforementioned intrinsic motives are of importance for the development of Behavioral Compliance.

1. **Power and influence in the company**, which can be understood as the desire for higher positions (von Rosenstiel 2015: 56). Research has found that fraudsters do show a distinct need for power (e.g. Bendahan et al. 2015; Rosenblatt 2012). If power and influence in the company is the dominating intrinsic motive of an employee, it could lead to fraud because he wants to satisfy his need for power no matter what. On the other hand, an employee who has perceived fraud would probably remain silent if his leading motive is power in the company because whistleblowing could risk the satisfaction of his need because of potential retaliation or being perceived as a betrayer.
2. **Meaning and self-realization**, which is the desire to do something that is beneficial to the community and has meaning (von Rosenstiel 2015: 56). People who report meaningful lives are often more interested in doing things for others (Ariely 2016: 14). If meaning and self-realization is the leading motive of an employee, it could drive an employee towards integrity (non-fraud) or whistleblowing because he wants to satisfy his need to be beneficial to the community and be compliant. In addition, the motive meaning and self-realization could have a dampening effect in the sense that an employee does not become a fraudster despite the opportunity.

The results of the analysis are summarized in Table 3-3 which illustrates the connection between intrinsic motives and potential behavior in the context of Behavioral Compliance.

Table 3-3: Intrinsic motives resulting in fraud or whistleblowing

Leading Intrinsic Motives	Behavior
Power and influence in the company	Deciding for fraud Remaining silent
Meaning and self-realization	Deciding against fraud Whistleblowing

Source: Own illustration.

As illustrated throughout this chapter, motivation is not only dependent on intrinsic motives but also on extrinsic motives, such as money, security and prestige. The relationship between these two different types of motives will be explained in the following chapter.

3.2.2 Extrinsic Motivation: Roles of Incentives

In addition to the intrinsic motives, the concept of motivation also includes situational factors which can work as incentives towards behavior, too. These incentives then lead to behavior when motives are not satisfied and the action promises satisfaction of desires (Drumm 2005: 554). One can distinguish between positive and negative incentives. While positive incentives represent rewards, negative incentives imply sanctions (ibid: 554).

Positive incentives can be divided into material and immaterial incentives (ibid: 555). The material incentives consist of direct material and indirect material incentives. The former represent values such as salary or profit participation, while the latter relate to the design of working conditions or promotion possibilities. The intangible incentives relate to non-financial values, such as privileges, status symbols, recognition and responsibility (ibid: 555). The aforementioned incentives are attributable to the category of extrinsic incentives, since they serve as a means of satisfying the needs, so the work itself is not the motive for the fulfillment of the task (Schanz 1991: 15). These incentives do not have the same effect on all people because people can differ in terms of motive, and external incentives only result in motivation if these correspond to the anchored motives (von Rosenstiel 2015: 33). Therefore, incentives should be tailored to the needs of the individual.

Incentives pose three potentials: (1) shifting intrinsic motivation to extrinsic motivation, (2) driving fraud when implemented as monetary rewards and (3) dampening fraud when combined with a sanction.

1. Overjustification Effect

The so-called *overjustification effect* is the central problem of external incentives because these expected incentives have the potential to decrease a person's intrinsic motivation to perform a task (Carlson/Heth 2007; Lepper/Greene/Nisbett 1973: 130). The consequence of offering a material or immaterial reward for something that was not

rewarded before is a shift from intrinsic to extrinsic motivation. According to the economic theory, this should not be problematic because an increased material incentive (more money) should lead to an increased supply of blood donations or more people blowing the whistle. Ironically, research shows that the introduction of a monetary incentive leads to a reduction in blood donations (Frey/Osterloh 2005: 16). Intrinsic motivation to donor blood was crowded out by extrinsic motivation for those who want to donate blood for free. And for those who want to donate blood for the money, the amount paid is maybe not high enough. Accordingly, there are less donations of blood even with a reward. Further complicating the idea of incentivizing with monetary rewards is the finding that once these rewards are no longer offered, interest in the activity is lost and prior intrinsic motivation does not return (Carlson/Heth 2007). Therefore, extrinsic rewards must be continuously offered as a motivator to sustain the preferred behavior. Why should rewards for whistleblowing increase the number of whistleblowers then? When whistleblowers are intrinsically motivated to report fraud, extrinsic rewards could result in a shift from intrinsic motivation to extrinsic and consequently result in even less whistleblowing.

2. Monetary Incentives as a Driver Towards Fraud

Monetary incentives (extrinsic motive) involve significant risks, especially when these are implemented carelessly. Research suggests that a monetary incentive is an essential driver of fraud, undermining the above-mentioned quote by Tom Hayes, who was one of the bankers responsible for the global Libor scandal: *“But the point is, you are greedy, you want every little bit of money that you can possibly get because, like I say, that is how you are judged, that is your performance metric”* (Guardian January 18, 2017). For example, Grover/Hui (2005) and Nogami (2009) show that a lack of monetary incentives, even in a condition of complete anonymity, means that fraud behavior can hardly be observed. Fraud significantly occurs as soon as monetary incentives come into play. Erat/Gneezy (2012) observed that a monetary incentive increases fraud when it benefits not only oneself but a third party. Furthermore, Cadsby/Song/Tapon (2010) who observed that goal-oriented reward systems, in which a certain performance threshold for receiving a reward has to be achieved, result in much more fraud. This is especially the case when people can barely reach the required performance threshold (Cadsby/Song/Tapon 2010; Schweitzer/Ordóñez/Douma 2004). Logically,

any company should be careful with implementing too demanding reward systems because these could support fraudulent behavior when their employees try to achieve these goals. Furthermore, goals at work require attention (Ordóñez et al. 2009: 6), and too much concentration may lead to Bounded Awareness. Therefore, over-prescribing goals can work as a cognitive blinder (Bazerman/Chugh 2006: 90).

3. Sanctions as a Damper on Fraud

While monetary incentives are suspect to being a cause of fraudulent behavior, sanctions are suspect to being a damper on fraud. And as illustrated before in chapter 2.1, these e.g. individual FCPA-related sanctions are likely to increase over the next years, especially due to the DOJ's "Yates Memo" which states that "*one of the most effective ways to combat corporate misconduct is by seeking accountability from the individuals who perpetrated the wrongdoing*" (DOJ 2015: 2).

Individual sanctions have the potential of preventing fraud because fraudsters are sensitive to the risk of formal sanctions (Dellaportas 2013: 32). Furthermore, other employees observing "*credible punishment are likely to learn from it and be deterred from engaging in similar acts*" (Vardi/Weitz 2016: 219). Vice versa, failure to punish fraud may result in even more corporate misbehavior (ibid). Especially two factors combined seem to be able to hinder the development of fraud by signalizing a credible punishment: (1) level of sanction and (2) probability of detection.

1. Level of Sanction

When looking at the level of sanctions and its impact on fraud, Chen (2012) observes in a laboratory experiment that an increase of potential sanction from US\$ 2 to US\$ 5 results in significantly less fraud. Furthermore, Blais and Bacher (2007) show in a field experiment that reminding participants of the potential illegality of their actions and related impending sanctions, results in less observed fraud. However, contrary to the aforementioned findings, Nagin and Pogarsky (2003) cannot observe less fraud when increasing potential sanctions (no sanction vs. loss of show-up fee). Sanctions can be a useful instrument to fraud prevention, but they need to be combined with a probability of detection – otherwise they could be ineffective.

2. Probability of Detection

The effect of an increased probability of detection is more unambiguous as several studies can find a significantly negative relationship between increased

probability of detection and fraud. Barr/Lindelow/Serneels (2009) as well as Azfar/Nelson (2007) observe that when increasing the probability of detection from 20% to 40%, this significantly decreases fraud. In addition, the experiments conducted by Hannan/Ranking/Towry (2006), Nogami (2009) and Wachsman (2011) also show a significant reduction of observed fraud when raising the probability of detection.

Conclusion: *Behavior: Intrinsic and Extrinsic Motivation*

Behavior-oriented compliance, as difficult and complex as its development is, has to take not only personal and situational factors into consideration, but also their effect on intrinsic and extrinsic motivation.

As shown from the results by Bloodgood/Turnley/Mudrack (2008), Greenberg (2002) or Erat/Gneezy (2012), there could be (1) an intrinsic motive towards integrity and (2) this motive can be learned from (3) role models. Vice versa, there could be an intrinsic motive towards fraud as indicated by Robinson/Greenberg (1998). Due to the high complexity of potential influencing factors (and their interdependence) on fraud and whistleblowing, this study will focus on a way to measure these intrinsic motives – given that they exist. Accordingly, the following research will focus on those personal factors which may lead to people being intrinsically motivated to commit fraud or whistleblowing. The aim of the following research is focused on finding about the intrinsic motivation of these employees.

4 Know Your People

*"All things are poison and nothing is without poison,
only the dosage makes a thing not poison."*

-- Paracelsus, alchemist.

It seems that sometimes some people just want to do something wrong. They know about their unethical behavior and – deservedly so – end up behind bars for years. Just like Bernard Madoff, who consciously, deliberately and reflectively chose to engage in a massive investment scandal: *"As I engaged in my fraud, I knew what I was doing was wrong, indeed criminal."* (WSJa 12.03.2009).

And sometimes some people just want to do something right. They know about the importance of their behavior and decide to blow the whistle. Just like Bradley Birkenfeld who decided to follow his moral compass when he exposed massive tax fraud while working for the Swiss financial services company UBS: *"I'm the most famous whistleblower in the history of the world. It's a question of doing the right thing, and that's what I did."* (WSJb 14.09.2012). Although he knew that he might become a target of severe retaliation, he decided to blow the whistle.

Until today, various fraudsters like Bernard Madoff and whistleblowers like Bradley Birkenfeld became known in the media. We may have read all the headlines in the papers, but do we know who these fraudsters or whistleblowers are? What are the characteristic traits that make people more likely to become a fraudster or a whistleblower? After years of research in organizational behavior, it is acknowledged that (counterproductive) workplace behavior is best predicted by a combination of personality and integrity tests (Marcus/Ashton/Lee 2013: 18). Therefore, these two types of instruments will be used in researching the personality of fraudsters and whistleblowers throughout this study. In a nutshell, the following research questions are posed:

1. What personality traits are of importance when it comes to fraud and whistleblowing?
2. In what dimensions do fraudsters and whistleblowers differ, so Corporate Compliance can take these insights into consideration?

The following chapters and its findings should be read with caution. To pick up the above-mentioned quote phrased by Paracelsus: only the dosage makes a thing not poison. Characteristic traits are interdependent, one should be careful with judging a per-

son by one characteristic trait alone. But as the following chapters will show, Corporate Compliance should keep a close eye on personality traits to motivate (internal) whistleblowing to detect and to prevent fraud.

Before detailing findings on the influence of personality traits on organizational (mis)behavior, it is important to provide an in-depth knowledge base of the development of the research on these personality traits.

4.1 The Idea of Personality Traits

A personality trait refers to “*differences among individuals in a typical tendency to behave, think, or feel in some conceptually related ways, across a variety of relevant situations and across some fairly long period of time*” (Ashton 2013: 27). Accordingly, a personality trait implies:

1. **Differences among individuals:** personality traits help to directly compare people with others which allows for more information than just looking at the characteristics of one person.
2. **Typical tendency of showing a behavior, thought or feeling:** personality traits do not predict behavior in general, but they suggest that people are more likely to behave when they own certain characteristics.
3. **In some conceptually related ways:** personality traits can be expressed differently, but they share some common psychological element. For example, people low in the personality trait Honesty-Humility enjoy gambling, think they are above the law or are name droppers (Lee/Ashton 2015: 156-161).
4. **Across a variety of relevant situations:** personality traits are not only shown in one specific situation, but in many different ones.
5. **Over a fairly long period of time:** personality traits do not occur in one specific moment or a short period of time, they typically endure for many years.

Research on personality traits and their existence traces back to the idea of the so-called *lexical hypothesis*, an approach to derive human character by sampling language patterns such as personality-descriptive adjectives from dictionaries in any language. Beginning in the nineteenth century, Sir Francis Galton (1884) was the first with the idea of the lexical hypothesis. It was him who realized that the different personality-descriptive words listed in the dictionary not only have meaning on their own, but partly share in meaning with other words. Several years later in the 1930s, Baumgarten

(1933) realized an inventory using German personality-descriptive words, while Allport and Odbert (1936) conducted the lexical hypothesis by extracting 4,504 English adjectives from Webster's dictionary (Shrout/Fiske 1995). 21 years later, Cattell (1957) took the adjectives derived by Allport and Odbert (1936), eliminated synonyms and condensed the amount of words to 171 using a more recent version of Webster's dictionary. Using these adjectives, Cattell derived a self-report for the clusters of 36 personality traits he discovered. In 1961, Tupes and Christal (1961) further condensed the findings and were the first who found five factors of personality traits which they called Surgency, Agreeableness, Dependability, Emotional Stability, and Culture.

Although academic research on personality traits developed significantly over the years before, the following years made further development challenging for almost 20 years. Led by psychologists such as Walter Mischel, it was assumed that personality (1) could not predict behavior, (2) was not stable and (3) varied depending on the situation (Mischel 1968). However, these drastic views on personality traits changed again when researchers could predict patterns of behavior by aggregating large numbers of observations (Epstein/O'Brien 1985: 513). Driven by the change in academic zeitgeist of the 1980s, Goldberg picked up insights from the lexical hypothesis and derived five broad factors again (Goldberg 1981: 141), the so-called *Big Five*.

Since the findings of the 1980s became accepted, personality and social psychologists generally agree that both personal and situational factors have to be taken into consideration to explain any form of human behavior (Lucas/Donnellan 2009: 146).³⁶

4.2 Big Five of Personality: Five-Factor-Model

After the Big Five became accepted in the 1980s, the psychologists Paul Costa and Robert McCrae picked up research on these five basic characteristics of personality and were soon convinced of their existence. To make these Big Five quantifiable, they constructed a questionnaire which they called the NEO Personal Inventory (NEO PI).

³⁶ More recent research in neuropsychology concludes that personality develops on four anatomical-functional limbic levels (Roth 2016: 116) and a combination of six psycho-neural systems: (1) stress management (Roth 2016: 128), (2) self-regulation (Roth 2016: 130), (3) reward and reward anticipation (Roth 2016: 131), (4) attachment (Roth 2016: 133), (5) impulse inhibition (Roth 2016: 134), and (6) reality awareness/risk assessment (Roth 2016: 136). Each of these four anatomical-functional limbic levels as well as the six psycho-neural systems have an impact on how people behave and vary from individual to individual, resulting in people being e.g. intrinsically motivated to support the community or extrinsically motivated by money. This implies two results for a behavior-oriented compliance: (1) incentives have to be tailored to the individual, and (2) behavior is much more complex than focusing on personality and situation only. For further details see Roth (2016).

This inventory became widely used in the following years, with the more recent versions of the NEO Personal Inventory-Revised (NEO PI-R) or the shorter NEO Five-Factor inventory (NEO FFI). Depending on whether people score high or low in these dimensions, they show different forms of character. Ranging from being calm or shy to being trustful or psychopathic – analyzing these five personality traits in detail allows fruitful insights into organizational (mis)behavior.

The Big Five of underlying personality traits that provide five basic dimensions of the human character are (1) **Openness to Experience**, (2) **Conscientiousness**, (3) **Extraversion and Introversion**, (4) **Agreeableness**, and (5) **Neuroticism** (OCEAN). In the NEO PI-R, each of the five factors are identified with six lower-level traits (Costa/McCrae 1992). To provide an overview, the following Table 4-1 summarizes each of the five personality traits and its lower-level traits that cluster together statistically.

Table 4-1: NEO PI-R Big Five with six lower-level traits

I Openness to Experience (O)	II Conscientiousness (C)
1. Fantasy 2. Aesthetics 3. Feelings 4. Actions 5. Ideas 6. Values	1. Competence 2. Order 3. Dutifulness 4. Achievement Striving 5. Self-Discipline 6. Deliberation
III Extraversion (E)	IV Agreeableness (A)
1. Warmth 2. Gregariousness 3. Assertiveness 4. Activity 5. Excitement Seeking 6. Positive Emotions	1. Trust 2. Straightforwardness 3. Altruism 4. Compliance 5. Modesty 6. Tender-Mindedness
V Neuroticism (N)	
	1. Anxiety 2. Angry Hostility 3. Depression 4. Self-Consciousness 5. Impulsiveness 6. Vulnerability

Source: Own illustration, based on ORIa April 16, 2017.

The personality-descriptive adjectives that typically belong to these six personality dimensions are as follows in Table 4-2.

Table 4-2: Examples of English translations of personality-descriptive adjectives with high loadings on the Big Five personality factors

Openness to Experience	O	Intellectual, complex, philosophical, innovative, unconventional <i>versus</i> simple, conventional, uninquisitive, unintelligent, shallow
Conscientiousness	C	Organized, systematic, efficient, precise, thorough, practical <i>versus</i> careless, sloppy, absent-minded, haphazard, disorderly, unreliable
Extraversion	E	Talkative, extraverted, sociable, assertive, enthusiastic, verbal <i>versus</i> withdrawn, silent, introverted, shy, reserved, inhibited
Agreeableness	A	Sympathetic, kind, warm, cooperative, sincere, compassionate <i>versus</i> cold, harsh, rude, rough, antagonistic, callous
Neuroticism	N	Relaxed, unemotional, easy-going, unexcitable <i>versus</i> moody, jealous, possessive, anxious, touchy, high-strung

Source: Ashton (2013: 67).

For the sake of simplicity, people are described as either high or low. However, most people are somewhere in between, with not many people being very high or very low (Lee/Ashton 2015: 21). But regarding the personality of a potential fraudster or whistleblower, especially people with high or low characteristics are of interest. Therefore, to provide insights into how these different personality dimensions relate to organizational (mis)behavior, each of these *Big Five* personality traits will be detailed in the following subchapters.

4.2.1 Trait 1: (O) Openness to Experience

Openness to Experience is the “*active seeking and appreciation of experiences for their own sake*” (Unifir June 13, 2017) and is “*fundamentally an intrapsychic variable, associated with such esoteric phenomena as chills in response to sudden beauty, the experience of *déjà vu* and homesickness for the unknown.*” (McCrae/Sutin 2009: 257). The following Table 4-3 summarizes this characteristic trait in low as well as in high scores.

Table 4-3: Six sub-facets of Openness to Experience and its characteristics

Low	High
Openness to Fantasy ($\alpha=0.83$)	
Seldom daydream. Do not have a good imagination. Seldom get lost in thought. Have difficulty imagining things.	Have a vivid imagination. Enjoy wild flights of fantasy. Love to daydream. Like to get lost in thought. Indulge in my fantasies. Spend time reflecting on things.

Openness to Aesthetics ($\alpha=0.84$)	
Do not like art. Do not like poetry. Do not enjoy going to art museums. Do not like concerts. Do not enjoy watching dance performances.	Believe in the importance of art. Like music. See beauty in things that others might not notice. Love flowers. Enjoy the beauty of nature.
Openness to Feelings ($\alpha=0.81$)	
Seldom get emotional. Am not easily affected by my emotions. Rarely notice my emotional reactions. Experience very few emotional highs and lows. Don't understand people who get emotional.	Experience my emotions intensely. Feel others' emotions. Am passionate about causes. Enjoy examining myself and my life. Try to understand myself.
Openness to Actions ($\alpha=0.77$)	
Prefer to stick with things that I know. Dislike changes. Don't like the idea of change. Am a creature of habit. Dislike new foods. Am attached to conventional ways.	Prefer variety to routine. Like to visit new places. Am interested in many things. Like to begin new things.
Openness to Ideas ($\alpha=0.86$)	
Am not interested in abstract ideas. Avoid philosophical discussions. Have difficulty understanding abstract ideas. Am not interested in theoretical discussions. Avoid difficult reading material.	Like to solve complex problems. Love to read challenging material. Have a rich vocabulary. Can handle a lot of information. Enjoy thinking about things.
Openness to Values ($\alpha=0.86$)	
Believe in one true religion. Tend to vote for conservative political candidates. Believe that too much tax money goes to support artists. Believe laws should be strictly enforced. Believe that we coddle criminals too much. Believe that we should be tough on crime. Like to stand during the national anthem.	Tend to vote for liberal political candidates. Believe that there is no absolute right and wrong. Believe that criminals should receive help rather than punishment.

Source: Own illustration, based on ORIa April 16, 2017.

People scoring high on Openness to Experience tend to be (1) “*imaginative, sensitive to art and beauty, emotionally differentiated, behaviorally flexible, intellectually curious and liberal in values*” (McCrae/Sutin 2009: 258), (2) rather low in organizational loyalty (Moss et al. 2007: 266) and (3) root for the underdog (McCrae/Sutin 2009: 266). Accordingly, highly open people tend to own a proactive personality, meaning

people who not only enjoy controlling their environment, but take delight in challenges. A characteristic trait typical of a whistleblower, who believe that they (1) are good at achieving their goals, (2) they think they can stop a wrongdoing and (3) are able to avoid retaliation (Miceli/Near/Dworkin 2008: 56).

People who score low on openness tend to (1) be “*down to earth, uninterested in art, shallow in affect, set in their ways, lacking curiosity and traditional in values*” (McCrae/Sutin 2009: 258), (2) be high in organizational loyalty (Moss et al. 2007: 266), (3) support favorites (McCrae/Sutin 2009: 266) and (4) accept authoritarianism, meaning they are very obedient to people in higher positions and cannot come to terms with ambiguity (Moss et al. 2007: 258). In total, characteristic traits that are not typical of whistleblowers. People being low in openness to experience may think that they are not responsible to blow the whistle on a wrongdoing, especially when it is a superior who is committing the wrongdoing (Miceli/Near/Dworkin 2008: 57).

Regarding its impact on the personality of a fraudster, no direct relationship could be found in empirical studies. But based on the findings it can be assumed that people low in openness to experience are more likely to become bystander of fraud.

Summary

The analysis has shown that whistleblowers are likely to be more open to experiences. Regarding the impact on fraud, no direct relationship could be found in empirical studies. In sum, no major influence of this characteristic trait can be found in research studies.

Openness to Experience	Fraudster	Whistleblower
	~	↑

4.2.2 Trait 2: (C) Conscientiousness

“*As I engaged in my fraud, I knew what I was doing was wrong, indeed criminal.*”

-- Bernard Madoff, convicted fraudster.

Various researchers (e.g. Barrick/Mount/Strauss 1993; Hough/Schneider 1996; Mount/Barrick 1995) conclude that Conscientiousness most effectively predicts a variety of organizational behaviors. However, research provides partly conflicting results.

Conscientiousness is the “*degree of organization, persistence, control and motivation in goal directed behavior*” (Unifr June 13, 2017) and describes “*socially prescribed impulse control that facilitates task- and control-oriented behavior, such as thinking before acting, delaying gratification, following norms and rules, and planning, organizing, and prioritizing tasks.*” (John/Srivastava 1999: 121). The following Table 4-4 summarizes this characteristic trait in a low as well as in a high score.

Table 4-4: Six sub-facets of Conscientiousness and its characteristics

Low	High
Competence ($\alpha=0.78$)	
Misjudge situations. Don't understand things. Have little to contribute. Don't see the consequences of things.	Complete tasks successfully. Excel in what I do. Handle tasks smoothly. Am sure of my ground. Come up with good solutions. Know how to get things done.
Order ($\alpha=0.82$)	
Often forget to put things back in their proper place. Leave a mess in my room. Leave my belongings around. Am not bothered by messy people. Am not bothered by disorder.	Like order. Like to tidy up. Want everything to be “just right”. Love order and regularity. Do things according to a plan.
Dutifulness ($\alpha=0.71$)	
Break rules. Break my promises. Get others to do my duties. Do the opposite of what is asked. Misrepresent the facts.	Try to follow the rules. Keep my promises. Pay my bills on time. Tell the truth. Listen to my conscience.
Achievement Striving ($\alpha=0.78$)	
Am not highly motivated to succeed. Do just enough work to get by. Put little time and effort into my work.	Go straight for the goal. Work hard. Turn plans into actions. Plunge into tasks with all my heart. Do more than what's expected of me. Set high standards for myself and others. Demand quality.
Self-Discipline ($\alpha=0.85$)	
Find it difficult to get down to work. Waste my time. Need a push to get started. Have difficulty starting tasks.	Get chores done right away. Am always prepared. Start tasks right away. Get to work at once.

Postpone decisions.	Carry out my plans.
Deliberation ($\alpha=0.76$)	
Jump into things without thinking.	Avoid mistakes.
Make rash decisions.	Choose my words with care.
Like to act on a whim.	Stick to my chosen path.
Rush into things.	
Do crazy things.	
Act without thinking.	
Often make last-minute plans.	

Source: Own illustration, based on ORIa April 16, 2017.

People high in Conscientiousness are “*likely to show up to appointments early, follow society’s rules, keep a clean and tidy room, work hard, and cut him- or herself off before he or she has one too many cocktails*” (Roberts et al. 2009: 371). Therefore, they behave healthier and act as one’s own safeguard against disease (ibid: 371), are more hardworking (motivation) when it comes to goals (ibid: 374), they tend to be more prosocial and reliable in interpersonal relationships (ibid: 377) and tend to be graded high on integrity, sincerity and trustworthiness (Ones/Viswesvaran/Schmidt 1993: 679). Furthermore, Barrick and Mount (1991, 1993) found a positive relationship between Conscientiousness and work performance across different job sectors, i.e. policemen, managers or salespersons. In a nutshell, people high in Conscientiousness are organized, thorough, planful and efficient (Wilt/Revelle 2009: 36) as well as principled, honest, and tend to be relatively more rule-abiding (McAdams 2009: 194). Personality traits that sound typical of whistleblowers. However, too high doses of Conscientiousness may lead to workaholism (Aziz/Tronzo 2011: 269), which is related to employee burnout, work-life conflict, physical and emotional health complaints (Johnstone/Johnston 2005: 181) and organizational deviant behavior (Galperin/Burke 2006: 331). In this context, Bickle et al. (2006) found that business white-collar criminals had higher degrees of Conscientiousness and explain this with a combination of a low level of integrity.

On the contrary, people who are low in Conscientiousness are careless, disorderly, frivolous, undependable and irresponsible (Wilt/Revelle 2009: 36). They have little regard for serious standards of work or morality and lack the ability to stand by others or stand for anything in the long run (McAdams 2009: 192). Furthermore, Sarchione et al. (1998) found that people owning this trait are more likely to show dysfunctional behaviors at work, including delinquent activities and substance abuse, while Ashton

(1998) found relationships to absenteeism, theft and vandalism. Finally, Barrick/Mount/Strauss (1994) found a negative relationships to turnover and Berry et al. (2007) found that Conscientiousness is strongly negatively correlated to deviance toward the company.

Summary

The analysis has shown partly conflicting results on the influence of Conscientiousness on fraud. A potential fraudster could either be (a) low in Conscientiousness or (b) high in Conscientiousness in combination with low integrity. This indicates the importance of integrity in general, which will be presented in *4.4 Integrity Test: IBES*. Regarding the influence of whistleblowing, being prosocial, principled and honest are likely to be characteristic traits of whistleblowers. Therefore, high Conscientiousness is a typical characteristic trait for potential whistleblowers.

Conscientiousness	Fraudster	Whistleblower
	↓	↑

4.2.3 Trait 3: (E) Extraversion

Extraversion and Introversion is the “*quantity and intensity of energy directed outwards into the social world*” (Unifr June 13, 2017). The following Table 4-5 summarizes this characteristic trait in a low as well as in a high score.

Table 4-5: Six sub-facets of Extraversion, Introversion and its characteristics

Low (Extraversion)	High (Extraversion)
Warmth ($\alpha=0.87$)	
Am hard to get to know. Often feel uncomfortable around others. Avoid contacts with others. Am not really interested in others. Keep others at a distance.	Make friends easily. Warm up quickly to others. Feel comfortable around people. Act comfortably with others. Cheer people up.
Gregariousness ($\alpha=0.79$)	
Prefer to be alone. Want to be left alone. Don't like crowded events. Avoid crowds. Seek quiet.	Love large parties. Talk to a lot of different people at parties. Enjoy being part of a group. Involve others in what I am doing. Love surprise parties.
Assertiveness ($\alpha=0.84$)	

Wait for others to lead the way. Keep in the background. Have little to say. Don't like to draw attention to myself. Hold back my opinions.	Take charge. Try to lead others. Can talk others into doing things. Seek to influence others. Take control of things.
Activity ($\alpha=0.71$)	
Like to take it easy. Like to take my time. Like a leisurely lifestyle. Let things proceed at their own pace. React slowly.	Am always busy. Am always on the go. Do a lot in my spare time. Can manage many things at the same time. React quickly.
Excitement Seeking ($\alpha=0.78$)	
Would never go hang gliding or bungee jumping. Dislike loud music.	Love excitement. Seek adventure. Love action. Enjoy being part of a loud crowd. Enjoy being reckless. Act wild and crazy. Am willing to try anything once. Seek danger.
Positive Emotions ($\alpha=0.81$)	
Am not easily amused. Seldom joke around.	Radiate joy. Have a lot of fun. Express childlike joy. Laugh my way through life. Love life. Look at the bright side of life. Laugh aloud. Amuse my friends.

Source: Own illustration, based on ORIa April 16, 2017.

Extraversion and introversion are closely connected to the arousal level of the human brain, which is important when it comes to consciousness, attention and information processing (Eysenck 1967). Larsen/Buss (2008) suggest that it is most likely that introverts and extraverts have different degrees of arousability, which is the sudden response to stimuli (e.g. anyone's unethical behavior). This implies that everybody's baseline arousal level is the same, but the response to stimuli varies from individual to individual (Larsen/Buss 2008). Extraversion goes along with positive affect as on this type of personality positive inductions have greater effect on them, meaning that extraverts feel higher levels of positive affect than introverts (McCrae/Costa 1991; Lucas/Baird 2004). Apart from being happier than introverts in general, extraverts tend

to enjoy human interactions (Wilt/Revelle 2009: 36) and are considered as talkative, assertive, active and energetic (Wilt/Revelle 2009: 28). Several studies conclude that extroverts are not only more likely to report a higher level of satisfaction derived from their work and career, but are also more likely to show higher levels of performance when working with others (i.e. managers) (Barrick/Mount 1991; Seibert/Kraimer 1999; Furnham/Zacherl 1986).

These findings fit well to empirical research findings on whistleblowing. People, having a high degree of positive affectivity, being typically enthusiastic, energetic, alert and confident (Watson 2002: 106), believe that they will be successful in terminating the wrongdoing by blowing the whistle and will be able to avoid retaliation (Miceli et al. 2001). This confident person, owning the characteristic of high self-efficacy, is (1) more likely to perceive a misconduct, but (2) does not blow the whistle because he thinks the wrongdoing will be corrected without him becoming active, and (3) is likely to make use of internal channels only, strongly believing his whistleblowing will affect change (Miceli/Near/Dworkin 2008: 51). Accordingly, people who observed a wrongdoing, but did not blow the whistle although they thought the wrongdoing was not corrected, and whistleblowers who used external channels had lower degrees of self-efficacy. Regarding the personality of a fraudster, Collins and Schmidt (1993) found that white-collar criminals were more extroverted than employees in similar hierarchical levels who were not convicted of such acts.

Summary

The analysis has shown that not only fraudsters but also whistleblowers are more likely to be extraverts than introverts. However, no major influence of this characteristic trait can be found.

Extraversion	Fraudster	Whistleblower
	↑	↑

4.2.4 Trait 4: (A) Agreeableness

Agreeableness is the “*kinds of interactions an individual prefers from compassion to tough mindedness*” (Unifr June 13, 2017) and “*describes individual differences in being likeable, pleasant, and harmonious in relationship with others.*” (Graziano/Tobin

2009: 46). The following table summarizes this characteristic trait in a low as well as in a high score:

Table 4-6: Six sub-facets of Agreeableness and its characteristics

Low	High
Trust ($\alpha=0.82$)	
Distrust people. Suspect hidden motives in others. Am wary of others. Believe that people are essentially evil.	Trust others. Believe that others have good intentions. Trust what people say. Believe that people are basically moral. Believe in human goodness. Think that all will be well.
Straightforwardness ($\alpha=0.75$)	
Use flattery to get ahead. Use others for my own ends. Know how to get around the rules. Cheat to get ahead. Put people under pressure. Pretend to be concerned for others. Take advantage of others. Obstruct others' plans.	Would never cheat on my taxes. Stick to the rules.
Altruism ($\alpha=0.77$)	
Look down on others. Indifferent to the feelings of others. Make people feel uncomfortable. Turn my back on others. Take no time for others.	Make people feel welcome. Anticipate the needs of others. Love to help others. Am concerned about others. Have a good word for everyone.
Compliance ($\alpha=0.73$)	
Have a sharp tongue. Contradict others. Love a good fight. Insult people. Get back at others. Hold a grudge.	Am easy to satisfy. Can't stand confrontations. Hate to seem pushy.
Modesty ($\alpha=0.77$)	
Believe that I am better than others. Think highly of myself. Have a high opinion of myself. Know the answers to many questions. Boast about my virtues. Make myself the center of attention.	Dislike being the center of attention. Dislike talking about myself. Consider myself an average person. Seldom toot my own horn.
Tender-Mindedness ($\alpha=0.75$)	

Am not interested in other people's problems.	Sympathize with the homeless.
Tend to dislike soft-hearted people.	Feel sympathy for those who are worse off than myself.
Believe in an eye for an eye.	Value cooperation over competition.
Try not to think about the needy.	Suffer from others' sorrows.
Believe people should fend for themselves.	
Can't stand weak people.	

Source: Own illustration, based on ORIa April 16, 2017.

Agreeableness is positively related to work performance (Tett/Jackson/Rothstein 1991: 703) and strongly negatively related to deviance toward colleagues (Berry et al. 2007: 410). People high in Agreeableness, (1) are responsive to others as stronger arguments lead to greater attitude change (Graziano/Tobin 2009: 47), (2) aim at finding positive resolutions of conflict because they aim to get along well with others (Jensen-Campbell/Graziano 2001: 349), (3) own a greater experience of empathy (Graziano/Tobin 2009: 52) which leads to (4) an increased willingness to help others even when the costs to them are high (Graziano/Eisenberg 1997; Graziano et al. 2007: 597). These findings match empirical research findings on whistleblowing. Miceli/Near/Dworkin (2008) found that most whistleblowers act with the view to do something positive, they intend to prevent the negative consequences of the wrongdoing for colleagues, customers or society in general (Miceli/Near/Dworkin 2008: 33). People high in Agreeableness are considered as sympathetic, kind, appreciative and affectionate (Wilt/Revelle 2009: 28). Furthermore, people high in Agreeableness are less likely to (1) engage in absenteeism, substance abuse, theft or vandalism (Ashton 1998) (2) engage in vindictive behavior (Skarlicki/Folger/Tesluk 1999: 100). Furthermore, people high in Agreeableness strongly value their relationships, are more conforming and "*should tend to go along with suggestions made by others and support the status quo*" (LePine/van Dyne 2001: 328). However, when taken to an extreme, too high Agreeableness might lead to workaholism, too, although this could not be empirically confirmed yet (Aziz/Tronzo 2011: 280).

On the contrary, people low in Agreeableness, (1) are less influenced by strong arguments (Graziano/Tobin 2009: 47), (2) perceive a compromise as less appropriate and destructive behavior as more appropriate (Jensen-Campbell/Graziano 2001: 349), (3) may be quicker to deploy destructive tactics (Jensen-Campbell/Graziano 2001: 356) and (4) are less willing to help others when the costs are high (Graziano et al. 2007: 597). These people are typically considered as cold, unfriendly, quarrelsome and hard-headed (Wilt/Revelle 2009: 28).

Summary

The analysis has shown that whistleblowers are likely to be lower in Agreeableness. Fraudsters are more likely to be lower in Agreeableness, especially because these people perceive destructive behavior as more appropriate. However, no major influence of this characteristic trait can be found.

Agreeableness	Fraudster	Whistleblower
	↓	↓

4.2.5 Trait 5: (N) Neuroticism

“Interesting how President Obama so haltingly said I "would never be president" - This from perhaps the worst president in U.S. history!”

-- U.S. President Donald Trump, Twitter on 17.02.2016.

Neuroticism “*identifies individuals who are prone to psychological distress*” (Unifr June 13, 2017) and “*refers to an enduring tendency or disposition to experience negative emotional states.*” (Widiger 2009: 129). The following Table 4-7 summarizes this characteristic trait in a low (emotional stability) as well as in a high score (emotional instability):

Table 4-7: Six sub-facets of Neuroticism and its characteristics

Low	High
Anxiety ($\alpha=0.83$)	
Am not easily bothered by things. Am relaxed most of the time. Am not easily disturbed by events. Don't worry about things that have already happened. Adapt easily to new situations.	Worry about things. Fear for the worst. Am afraid of many things. Get stressed out easily. Get caught up in my problems.
Angry Hostility ($\alpha=0.88$)	
Rarely get irritated. Seldom get mad. Am not easily annoyed. Keep my cool. Rarely complain.	Get angry easily. Get irritated easily. Get upset easily. Am often in a bad mood. Lose my temper.
Depression ($\alpha=0.88$)	
Seldom feel blue. Feel comfortable with myself.	Often feel blue. Dislike myself.

Am very pleased with myself.	Am often down in the dumps. Have a low opinion of myself. Have frequent mood swings. Feel desperate. Feel that my life lacks direction.
Self-Consciousness ($\alpha=0.80$)	
Am not embarrassed easily. Am comfortable in unfamiliar situations. Am not bothered by difficult social situations. Am able to stand up for myself.	Am easily intimidated. Am afraid that I will do the wrong thing. Find it difficult to approach others. Am afraid to draw attention to myself. Only feel comfortable with friends. Stumble over my words.
Impulsiveness ($\alpha=0.77$)	
Rarely overindulge. Easily resist temptations. Am able to control my cravings. Never spend more than I can afford. Never splurge.	Often eat too much. Don't know why I do some of the things I do. Do things I later regret. Go on binges. Love to eat.
Vulnerability ($\alpha=0.82$)	
Remain calm under pressure. Can handle complex problems. Know how to cope. Readily overcome setbacks. Am calm even in tense situations.	Panic easily. Become overwhelmed by events. Feel that I'm unable to deal with things. Can't make up my mind. Get overwhelmed by emotions.

Source: Own illustration, based on ORIa April 16, 2017.

People high in Neuroticism are more likely to experience negative affects, such as depression, anxiety, guilt or anger. Typically, they (1) interpret inconspicuous situations as threatening, (2) experience any kind of frustration as hopelessly overwhelming, (3) are often self-conscious and (4) shy (Widiger 2009: 129). Furthermore, high Neuroticism is not only a risk factor for mental disorders such as schizophrenia (Van Os/Jones 2001: 1129)³⁷ or post-traumatic stress disorder after a traumatic exposure (Parslow/Jorm/Christensen 2006: 387), but correlates with negative life outcomes such as lower performance motivation in terms of lower self-efficacy and goal setting (Judge/Ilie 2002: 801)³⁸ and lower job satisfaction (Judge/Heller/Mount 2002: 533; Seibert/Kraimer 1999)³⁹. These people are considered to be tense, anxious, nervous and moody (Wilt/Revelle 2009: 28). Vardi/Weitz (2016: 162) conclude that the higher

³⁷ High Extraversion can reduce the risk of schizophrenia (Van Os/Jones 2001: 1129).

³⁸ High Conscientiousness can increase motivation (Judge/Ilie 2002: 802).

³⁹ High Conscientiousness and high Extraversion can increase job satisfaction (Judge/Heller/Mount 2002: 533).

people score on Neuroticism, “*the more likely they will be to act vindictively, especially when they also perceive low levels of organizational justice (e.g. discrimination, favoritism, and inconsistency)*”.

On the opposite, people low in Neuroticism are typically stable, calm, contented and unemotional (Wilt/Revelle 2009: 28). It was found that those people who own a low level of negative affectivity (Neuroticism) as a characteristic trait are less likely to perceive something as a wrongdoing (Watson/Walker 1996: 568). However, a personality with a high level of negative affectivity is likely to not be able to make up his mind or is afraid to do the wrong thing, he is more unlikely to become a whistleblower in the end.

Summary

The analysis has shown that whistleblowers are likely to own a lower, but not too low, level of Neuroticism as this does not imply that this kind of personality never perceives a wrongdoing at all. Regarding fraudsters, they are likely to own a higher level of Neuroticism.

Neuroticism	Fraudster	Whistleblower
	↑	↓

Source: Own illustration.

4.2.6 Summary

The analysis has shown that potential fraudsters and whistleblowers are likely to differ in the NEO PI-R personality dimensions Conscientiousness and Neuroticism. Similar to the findings by Berry et al. (2007), who found that deviance has a strong negative correlation with Conscientiousness and Agreeableness and a strong positive correlation with Neuroticism. Other studies also indicate that these characteristic traits are the strongest predictors of organizational misbehavior (Jensen/Patel 2011; Le et al. 2014; Mount/Illies/Johnson 2006). However, research studies have shown conflicting results for Conscientiousness and distinctions for Neuroticism which are difficult to differentiate. These findings are summarized in the following Table 4-8.

Table 4-8: Summary: influence of the degree of the Big Five on fraud and whistleblowing

Personality Trait	Fraudster	Whistleblower
Openness to Experience	~	↑
<i>Conscientiousness</i>	~	↑
Extraversion	↑	↑
Agreeableness	↓	↓
Neuroticism	↑	↓

Note: *Italics indicate conflicting results in research studies.*

Source: Own illustration.

The analysis has shown that people scoring high on Conscientiousness tend to (1) perform their work better, (2) be graded higher on integrity tests and (3) be valued by their supervisors. Outcomes which are highly valued in today's businesses. It is obvious that people scoring low on Conscientiousness are more likely to commit fraud toward the company and are less likely to be successful than their higher scoring counterparts. But the analysis has shown as well that especially those employees might be toxic who score high on Conscientiousness and low on integrity tests. The potential fraudster might be an employee who is (even over-)achieving company goals, but not for the company's benefit but especially for his own. Therefore, Corporate Compliance should take the combination of these characteristic traits into special consideration.

Additionally, the analysis has provided insights on the personality of a potential fraudster and whistleblower in the personality dimension of Neuroticism. People scoring high tend to (1) experience high levels of stress, nervousness or even depression and (2) act vindictively, especially when they also perceive low levels of organizational justice. People possessing these traits are more likely to become fraudsters than their lower scoring counterparts.

Summarizing, the analysis of the personality factors of the Big Five on fraud and whistleblowing has not yet shown clear indicators for differentiation. It seems obvious that typical fraudsters score lower on Conscientiousness, Agreeableness and higher on Neuroticism – and typical whistleblowers on the opposite end. Therefore, more personality factors as well as an integrity test will be included in the next chapters to derive more insights.

4.3 Big Six of Personality: HEXACO

After being applied to English speaking countries, the *Big Five* were tested in similar studies in several other languages, such as German or Chinese (McCrae 2002: 105). While Conscientiousness, Extraversion, Agreeableness and Neuroticism could be extracted repeatedly (De Raad/Perugini/Hrebickova/Szarota 1998), various studies have failed to extract all Big Five personality traits in their NEO PI-R form. Most surprisingly, a six-factor structure of personality traits could be derived in various studies and different languages (Ashton et. al. 2004), findings that form the basis of the so-called *HEXACO* model (Lee/Ashton 2004a). To make these Big Six measureable, they constructed a questionnaire which they called the HEXACO Personal Inventory (HEXACO PI). This inventory became widely used in the following years, with the more recent versions of the HEXACO Personal Inventory-Revised (HEXACO PI-R) in which the scale “expressiveness” was replaced by the dimension “social self-esteem” (Ashton 2013: 75).

The HEXACO PI-R model consists of factors similar to Openness to Experience, Conscientiousness and Extraversion of the NEO PI-R. The personality traits Agreeableness and Neuroticism⁴⁰ appear in rotated form, e.g. content related to anger shifts from Neuroticism to low Agreeableness while characteristics related to sensitivity shift from Agreeableness to Neuroticism (Ashton/Lee 2005: 1324). Interestingly, a sixth factor called Honesty-Humility was derived which goes along with characteristics such as being “*sincere, fair, and unassuming versus sly, greedy, and pretentious*” (Ashton/Lee 2005: 1324). Furthermore, the HEXACO PI-R model can be used to measure the personality trait of Altruism as an interstitial variable.

Further introducing the HEXACO PI-R model, its personality traits are summarized in the following Table 4-9.

Table 4-9: HEXACO PI-R personality traits with its four lower-level traits

I Honesty-Humility (H)	II Emotionality (E)
1. Sincerity	1. Fearfulness
2. Fairness	2. Anxiety
3. Greed Avoidance	3. Dependence
4. Modesty	4. Sentimentality
III eXtraversion (X)	IV Agreeableness (A)

⁴⁰ Neuroticism of the Big Five is called Emotionality in the HEXACO PI-R.

1. Social Self-Esteem	1. Forgivingness
2. Social Boldness	2. Gentleness
3. Sociability	3. Flexibility
4. Liveliness	4. Patience
V Conscientiousness (C)	VI Openness to Experience (O)
1. Organization	1. Aesthetic
2. Diligence	2. Inquisitiveness
3. Perfectionism	3. Creativity
4. Prudence	4. Unconventionality
Interstitial	

Altruism

Source: Own illustration, based on ORIB May 16, 2017.

The personality-descriptive adjectives that typically belong to these six groups are as follows.

Table 4-10: Examples of English translations of personality-descriptive adjectives with high loadings on the six HEXACO personality factors

Honesty-Humility	H	sincere, honest, faithful, loyal, modest/unassuming <i>versus</i> sly, deceitful, greedy, pretentious, hypocritical, boastful, pompous
Emotionality	E	emotional, oversensitive, sentimental, fearful, anxious, vulnerable <i>versus</i> brave, tough, independent, self-assured, stable
Extraversion	X	outgoing, lively, extraverted, sociable, talkative, cheerful, active <i>versus</i> shy, passive, withdrawn, introverted, quiet, reserved
Agreeableness	A	patient, tolerant, peaceful, mild, agreeable, lenient, gentle <i>versus</i> ill-tempered, quarrelsome, stubborn, choleric
Conscientiousness	C	organized, disciplined, diligent, careful, thorough, precise <i>versus</i> sloppy, negligent, reckless, lazy, irresponsible, absent-minded
Openness to Experience	O	intellectual, creative, unconventional, innovative, ironic <i>versus</i> shallow, unimaginative, conventional

Source: Ashton (2013: 71).

For the sake of simplicity, people are described as high or low in the following analysis. However, most people are somewhere in between, with not many people being very high or very low (Lee/Ashton 2015: 21). To provide insights into how these personality dimensions relate to organizational (mis)behavior, each of these six personality traits will be detailed in the following subchapters.

4.3.1 Honesty-Humility and its Importance

Through years of research, the personality dimension Honesty-Humility has been shown to be highly relevant in connection with many desirable traits on its high end

and many undesirable traits on its lower end. Therefore, this dimension might be highly relevant in connection with fraud and whistleblowing. The following Table 4-11 summarizes descriptions of people with high and low levels of Honesty-Humility.

Table 4-11: Description of persons with high and low levels of Honesty-Humility

Honesty-Humility	
Low	High
<ul style="list-style-type: none"> • Flatter others, pretend to like them • Willing to bend rules for personal gain • Want money and expensive possessions • Feel entitled to special status 	<ul style="list-style-type: none"> • Avoid manipulating others or being false • Scrupulously fair, law-abiding • Wealth and luxury not so important • Don't consider themselves superior

Source: Lee/Ashton (2015: 20).

People high in Honesty-Humility do not exploit, cheat or steal from others, they are more likely to favor ethics, score higher on integrity tests (Lee et al. 2008: 147) and they are much less likely to commit crimes (Lee/Ashton 2015: 27) – even when they are confronted with job insecurity (Chirumbolo 2015: 554). Furthermore, being high in Honesty-Humility is associated with behaviors such as an ethical attitude in leadership (Žiaran 2015: 689), treating people fairly and not exploiting others - even when there is no chance of being detected or the potential victim is helpless (Hilbig et al. 2013: 598; Lee/Ashton 2015: 28). In a nutshell, employees with high scores in Honesty-Humility are favorable for any company.

On the other end of this characteristic trait, many toxic personality traits can be found. People low in Honesty-Humility are associated with a conglomerate of undesirable traits that can cause severe harm – not only for themselves, but for others. Having employees with these characteristic traits can be toxic for any company.

Low scores in Honesty-Humility are negatively correlated with (1) dishonest behaviors (Hilbig/Zettler 2015: 72), (2) aggression, vengefulness and behaviors such as (immediate) revenge (Lee/Ashton 2012: 596), (3) sensation seeking and risk taking (de Vries/de Vries/Feij 2009: 536), (4) creativity (Silvia et al. 2011: 687) and (5) Social Dominance Orientation (SDO) (Leone/Chirumbolo/Desimoni 2012: 416). People scoring high in SDO are associated with characteristics of being driven, rough and numb seekers of power. Low scorers are more likely to prefer hierarchical group orientations, to have racist or authoritarian beliefs and to believe in a “dog-eat-dog

world”⁴¹ (Duriez/Van Hiel 2002: 1199). As if these characteristics are not negative enough yet, people low in Honesty-Humility are strongly negatively correlated with (1) the so-called *Dark Triad*⁴² of personality – a toxic triangle of the characteristics narcissism, psychopathy, and Machiavellianism (Lee/Aston 2004b: 1571) and (2) organizational misbehavior, such as stealing, absenteeism or theft (Lee/Ashton/de Vries 2005: 179; de Vries/van Gelder 2015 112; Cohen et al. 2014: 943; O’Neill/Lewis/Carswell 2011: 595; Oh et al. 2011: 496) or occupational crime (van Gelder/de Vries 2016: 701) – especially when they are confronted with job insecurity (Chirumbolo 2015: 554). Furthermore, people low in Honesty-Humility are more likely to cheat or exploit a sexual or romantic partner (Bourdage et al. 2007: 1506) and are more affected by situational circumstances than their higher scoring counterparts (Zettler/Hilbig 2010: 569). Therefore, low scorers on Honesty-Humility are especially likely to condition their behavior on environmental factors such as Corporate Compliance in the workplace.

Summary

The analysis has shown that fraudsters are likely to be lower in Honesty-Humility while whistleblowers are likely to be higher in Honesty-Humility.

Honesty-Humility	Fraudster	Whistleblower
	↓	↑

The analysis has shown the importance of the personality dimension Honesty-Humility for research on fraud and whistleblowing. The following chapters will shortly analyze the remaining HEXACO PI-R Big Five (1) Emotionality, (2) Extraversion, (3) Agreeableness, (4) Conscientiousness and (5) Openness to Experience.

4.3.2 Altruism: Honesty-Humility, Agreeableness and Emotionality

Honesty-Humility, Agreeableness and Emotionality are personality factors considered to be important when it comes to altruistic versus aggressive behavior (Ashton 2013:

⁴¹ „Dog eat dog world“ describes a business or other set of circumstances where people try to succeed at the expense of other people.

⁴² People owning these characteristics are typically unempathetic, self-centered, manipulative and willing to use or hurt other people for personal gain – no matter what costs included (Ashton 2013: 224).

162). While Honesty-Humility and Agreeableness both measure two different aspects of *reciprocal altruism*, Emotionality measures *kin altruism*.

Altruism is visible in many forms of behaviors for the welfare of others. It can be shown as helping colleagues with difficult tasks or showing new colleagues around, altruism has various forms. More generally speaking, it can be defined as “*behavior that benefits another organism, not closely related, while being apparently detrimental to the organism performing the behavior*” (Trivers 1971: 35). Although there might be costs for themselves, people decide to act to help others – a characteristic trait very typical of whistleblowers (Miceli/Near/Dworkin 2008: 33). Miceli/Near/Dworkin (2008) found that most whistleblowers act with the view to do something positive, they intend to prevent the negative consequences of the wrongdoing for colleagues, customers or society in general. However, *reciprocal altruism* specifies in the sense that people act altruistic if they see a chance of receiving a benefit from the person they helped before (Trivers 1971: 35).

As the previous chapter showed, high levels of Honesty-Humility suggest a person’s tendency for pro-social altruistic behaviors and fairness even when there is no chance of being detected or the potential victim is helpless (Hilbig et al. 2013: 598; Ashton 2013: 165; Lee/Ashton 2015: 28). Furthermore, the personality dimension Agreeableness goes along with reciprocal altruism, too.

Agreeableness is one of the dimensions that is “unique” to the HEXACO PI-R model, although it exists in a similar form within the NEO PI-R model. The following Table 4-12 summarizes descriptions of people with high and low levels of Agreeableness.

Table 4-12: Description of persons with high and low levels of Agreeableness

Agreeableness	
Low	High
<ul style="list-style-type: none"> • Find it hard to forgive • Critical of others’ shortcomings • Stubborn in defending point of view • Feel anger readily when provoked 	<ul style="list-style-type: none"> • Do not hold grudges, not resentful • Lenient in judging others • Flexible in opinions, accommodating • Patient and even-tempered

Source: Lee/Ashton (2015: 20).

This personality dimension goes along with traits on forgiveness, gentleness, flexibility, and patience. People scoring high on this dimension tend to (1) forgive the bad that they had to suffer, (2) be lenient in judging other people, (3) be willing to compromise

and cooperate with other people and (4) be easily able to control their temper (HEXACO 16.04.2017). Accordingly, people with a high level of Agreeableness are more likely to go on cooperating with others – even when exploitation is obvious (Ashton 2013: 164).

On the other side of this personality dimension, people scoring low tend to (1) hold grudges against those people who have caused them harm, (2) be rather critical of others' flaws, (3) be stubborn in defending their own point of view and (4) feel anger readily in response to mistreatment (HEXACO April 16, 2017). Accordingly, people with low levels of Agreeableness are egoistic and less likely to cooperate with others – even when the other people are cooperative (Ashton 2013: 164).

Summary

The analysis has shown that fraudsters are likely to be lower in Agreeableness (egoistic) while whistleblowers are likely to be higher in Agreeableness. However, no major influence of this characteristic trait can be found in research studies.

Agreeableness	Fraudster	Whistleblower
	↓	↑

Besides Honesty-Humility and Agreeableness, Emotionality is another dimension that is “unique” to the HEXACO PI-R model, although it exists in a similar form as Neuroticism within the NEO PI-R model. The following Table 4-13 summarizes descriptions of people with high and low levels of Emotionality.

Table 4-13: Description of persons with high and low levels of Emotionality

Emotionality	
Low	High
<ul style="list-style-type: none"> • Not deterred by physical danger or pain • Little anxiety even in stressful situations • Don't need emotional support from others • Little sentimental attachment to others 	<ul style="list-style-type: none"> • Fearful of physical harm • Worry about minor matters • Like to share concern with others • Feel empathic concern toward others

Source: Lee/Ashton (2015: 20).

This personality dimension goes along with personality traits on fearfulness, anxiety, dependence and sentimentality. People scoring high in this dimension tend to (1) experience fear of physical danger, (2) experience anxiety in response to life's stresses,

(3) feel a need for emotional support from others and (4) feel empathy and sentimental attachments with others (HEXACO April 16, 2017). The form of altruism that is connected to high level Emotionality is *kin altruism*, a tendency of altruistic behavior by avoiding harm to oneself and one's kin (Ashton 2013: 165).

On the other side of this personality dimension, people scoring low tend to (1) not be deterred by the prospect of physical harm, (2) feel little worry even in stressful situations, (3) have little need to share their concerns with others and (4) feel emotionally detached from others (HEXACO April 16, 2017). Regarding potential fraud, Lee, Ashton and de Vries (2005) found a negative correlation between Emotionality and workplace delinquency.

Summary

Similar to Neuroticism in NEO PI-R, the analysis has shown that whistleblowers are likely to own a higher level of Emotionality. Regarding fraudsters, they are likely to own a lower level of Emotionality. However, no major influence of this characteristic trait can be found in research studies.

Emotionality	Fraudster	Whistleblower
	↓	↑

In addition to Honesty-Humility, Agreeableness and Emotionality, the HEXACO PI-R provides the interstitial scale Altruism that “assesses a tendency to be sympathetic and soft-hearted toward others” (HEXACO May 16, 2017). People scoring high in this characteristic dimension tend to (1) avoid causing harm and (2) react with generosity toward those who are weak or in need of help. On the other side, low scorers tend to (1) not be upset by the prospect of hurting others and (2) be seen as cold-hearted (HEXACO May 16, 2017).

Summary

The analysis has shown that fraudsters are likely to be lower in Altruism (egoistic) while whistleblowers are likely to be higher in Altruism.

Altruism	Fraudster	Whistleblower
	↓	↑

4.3.3 eXtraversion, Conscientiousness and Openness to Experience

The three personality dimensions eXtraversion, Conscientiousness and Openness to Experience are similar to the same-named dimensions in the NEO PI-R model. Therefore, the insights derived on the Big Five count for the HEXACO PI-R as well. In the following, these three characteristic domains will be presented in short.

eXtraversion goes along with personality traits on social self-esteem, social boldness, sociability, and liveliness. The following Table 4-14 summarizes descriptions of people with high and low levels of eXtraversion.

Table 4-14: Description of persons with high and low levels of eXtraversion

eXtraversion	
Low	High
<ul style="list-style-type: none"> Consider self to be unpopular Feel uncomfortable with attention Avoid small talk, prefer to be alone Don't feel lively or dynamic 	<ul style="list-style-type: none"> See positive qualities in self Confident leading, speaking in groups Enjoy social interactions Feel enthusiastic and upbeat

Source: Lee/Ashton (2015: 20).

People scoring high on eXtraversion tend to (1) feel positively about themselves, (2) feel confident when leading or addressing groups of people, (3) enjoy social gatherings and interactions and (4) experience positive feelings of enthusiasm and energy (HEXACO April 16, 2017). Conversely, people scoring low on eXtraversion tend to (1) consider themselves unpopular, (2) feel awkward when they are the center of social attention, (3) are indifferent to social activities, and (4) feel less lively and optimistic than others do (HEXACO April 16, 2017). Although studies could not find a direct influence on fraud or whistleblowing, Oh et al. (2011) found that in two out of the three samples high eXtraversion amplified the relationship between low Honesty-Humility and workplace deviance.

Summary

The analysis has shown that not only fraudsters but also whistleblowers are more likely to be extraverts than introverts. However, no major influence of this characteristic trait can be found.

Extraversion	Fraudster	Whistleblower
	↑	↑

Conscientiousness goes along with personality traits on organization, diligence, perfectionism, and prudence. The following Table 4-15 summarizes descriptions of people with high and low levels of Conscientiousness.

Table 4-15: Description of persons with high and low levels of Conscientiousness

Conscientiousness	
Low	High
<ul style="list-style-type: none"> • Disorganized surroundings and schedules • Avoid difficult tasks or challenging goals • Don't mind incompleteness, inaccuracy • Act without thinking of consequences 	<ul style="list-style-type: none"> • Orderly with things and time • Work hard to achieve goals • Pursue accuracy and perfection • Prudent, careful decision making

Source: Lee/Ashton (2015: 21).

People scoring high on the Conscientiousness scale tend to (1) organize their time and their physical surroundings, (2) work in a disciplined way toward their goals, (3) strive for accuracy and perfection in their tasks and (4) deliberate carefully when making decisions (HEXACO April 16, 2017). On the other side of this personality dimension, people scoring low in Conscientiousness tend to (1) be unconcerned with orderly surroundings or schedules, (2) avoid difficult tasks or challenging goals, (3) are satisfied with work that contains some errors and (4) make decisions on impulse or with little reflection (HEXACO April 16, 2017).

Regarding compliance, while Lee, Ashton and de Vries (2005) found a negative correlation between Conscientiousness and workplace delinquency, van Gelder and de Vries (2016) found that Conscientiousness is strongly negatively correlated with occupational crime. These findings match the studies conducted with the NEO PI-R. But keeping in mind the findings of Blinkle et al. (2006), who found that business white-collar criminals had higher degrees of Conscientiousness, this personality dimension should thus be treated with caution.

Summary

The analysis has shown partly conflicting results on the influence of Conscientiousness on fraud. A potential fraudster could either be (a) low in Conscientiousness or (b) high in Conscientiousness in combination with low integrity. This indicates the importance of integrity in general, which will be presented in *4.4 Integrity Test: IBES*.

Regarding the influence of whistleblowing, being prosocial, principled and honest are likely to be characteristic traits of whistleblowers. Therefore, high Conscientiousness is a typical characteristic trait of potential whistleblowers.

Conscientiousness	Fraudster	Whistleblower
	~	↑

Openness to Experience goes along with personality traits on aesthetic appreciation, inquisitiveness, creativity and unconventionality. The following Table 4-16 summarizes descriptions of people with high and low levels of Openness to Experience.

Table 4-16: Description of persons with high and low levels of Openness to Experience

Openness to Experience	
High	Low
<ul style="list-style-type: none"> • Indifferent to artistic and aesthetic pursuits • Uninterested in natural or social sciences • Avoid creative activities • Not receptive to unconventional ideas 	<ul style="list-style-type: none"> • Appreciate beauty in art and nature • Intellectually curious • Use imagination in everyday life • Like to hear unusual opinions

Source: Lee/Ashton (2015: 21).

People scoring high on Openness to Experience tend to (1) become absorbed in the beauty of art and nature, (2) are inquisitive about various domains of knowledge, (3) use their imagination freely in everyday life and (4) take an interest in unusual ideas or people (HEXACO April 16, 2017). Accordingly, highly open people may own a proactive personality, meaning people who not only enjoy controlling their environment, but take delight in challenges. As these people believe that they are good at achieving their goals, they think they can stop a wrongdoing and are able to avoid retaliation (Miceli/Near/Dworkin 2008: 56).

Conversely, people scoring low on Openness to Experience tend to (1) be rather unimpressed by most works of art, (2) feel little intellectual curiosity, (3) avoid creative pursuits, and (4) feel little attraction toward ideas that may seem radical or unconventional (HEXACO April 16, 2017). These people may think that they are not responsible for blowing the whistle on a wrongdoing, especially when it is a superior who is committing the wrongdoing (Miceli/Near/Dworkin 2008: 57).

Summary

The analysis has shown that whistleblowers are likely to be more open to experiences. Regarding the impact on fraud, no direct relationship could be found in empirical studies, but people low in openness to experience are more likely to be bystander of fraud. However, no major influence of this characteristic trait can be found in research studies.

Openness to Experience	Fraudster	Whistleblower
	~	↑

4.3.4 Summary

In addition to the findings of the NEO PI-R Big Five, the analysis has shown that potential fraudsters and whistleblowers are more likely to differ in the HEXACO PI-R personality dimensions Honesty-Humility and Conscientiousness and likely to differ in Emotionality, Altruism and Agreeableness.

Table 4-17: Summary: influence of the HEXACO on fraud and whistleblowing

Personality Trait	Fraudster	Whistleblower
Honesty-Humility	↓	↑
Emotionality	↓	↑
eXtraversion	↑	↑
Altruism	↓	↑
Agreeableness	↓	↑
Conscientiousness	~	↑
Openness to Experience	~	↑

Note: Italics indicates conflicting results in research studies.

Source: Own illustration.

It can be concluded that people who are high in Honesty-Humility, Agreeableness and Emotionality are more likely to be altruistic (Lee/Ashton 2015: 33) and therefore more likely to become whistleblowers and less likely to become fraudsters.

After years of research in organizational behavior, it is acknowledged that (counter-productive) workplace behavior is best predicted by a combination of personality and integrity tests (Marcus/Ashton/Lee 2013: 18). Therefore, findings on integrity tests will be presented in the following.

4.4 Integrity Test: IBES

The integrity of future employees can be tested using pre-employment screening instruments such as integrity tests. To find a way to predict counterproductive work behavior, research on how to forecast any form of organizational misbehavior started in the United States of America more than 70 years ago (Marcus 2006: 9) and became popular during the 1980s (Byle/Holtgraves: 287).

The tests derived from this research were not primarily developed based on a personality theory, but were designed to predict criteria for a certain range of occupational misbehaviors, such as (1) employee theft, (2) absenteeism, (3) substance misuse or (4) aggressive behavior in the workplace (Marcus 2006: 9). Accordingly, the name “integrity tests” was only coined much later and stands for a collective label of two historically and conceptually clearly distinguishable techniques: (1) overt integrity tests and (2) personality-oriented integrity tests.⁴³ Throughout this study, the German integrity test “*Inventar Berufsbezogener Einstellungen und Selbsteinschätzungen*” (IBES, translated into English: Inventory of professional attitudes and self-assessments) by Marcus (2006) will be used. As the IBES consists of an overt part (60 items) and a personality-based part (55 items), it is obvious to present at least the core of these two research approaches below.

Historical Development of Integrity Tests

Since the 1940s, not only the two aforementioned types of integrity tests have been developed two, but three: (1) biographical integrity tests, (2) overt integrity tests and (3) personality-oriented integrity tests. These different types will be shortly introduced in the following:⁴⁴

1. Biographical Integrity Tests

Beginning in the 1940s and 1950s, the core of today’s integrity tests originated from research within the American military. During the Second World War, the American army psychologist G. L. Betts received the order to develop a selection instrument that helps to identify potential recruits with a criminal background before they get hired and might damage the military (Ash/Maurice 1988: 387). His approach was strongly

⁴³ These two types of integrity tests belong to a group of occupational-related personality scales, for which Ones/Viswesvaran (2001) coined the term "Criterion-Focused Occupational Personality Scales".

⁴⁴ For a detailed review, see Viswesvaran/Ones (2016).

influenced by the theories of Sigmund Freud, so that he questioned childhood experiences which he assumed as the origin of deviant behavior (Marcus/Funke/Schuler 1997: 2). G. L. Betts was satisfied with raising questions with a comparatively obvious relationship to honesty at work and asked, for example, about theft in early childhood ("How many times did you steal things before you were twelve years old?") which was empirically connected to corresponding behaviors at adult age.

After asking two contrast groups (prisoners and armed soldiers), the so-called *Biographical Case History* (BCH) survey was published in 1947 (Marcus/Funke/Schuler 1997). This questionnaire consisted of 67 items, which, in addition to confessions of deviant behavior, also included attitudes of the subjects ("How far can one trust people?"). Despite empirical preservation, the BCH was taken from the market at the end of the 1950s (Marcus 2006: 9).

2. Overt Integrity Tests

Independent of the work of G. L. Betts, the so-called *Reid Report* had already emerged in the 1950s. Similar in its content, but based on a completely different concept, the Reid Report is still on the market today after several revisions (Marcus 2006: 9). Named after the American lawyer J. E. Reid, the test was initially developed as a question technique, which should improve the usability of the polygraph for the use as a lie detector (ibid). However, this overt integrity test focuses on the attitudes and values regarding deviant behavior including questions on (1) social behavior, (2) substance use, (3) work background, (4) optimism, (5) persistence, (6) influence, (7) valuing of interpersonal relationships, (8) self-restraint or (9) willingness to help others with tasks (COD June 14, 2017). Besides the Reid Report, examples of overt integrity tests are: (1) London House Personnel Selection, (2) Stanton Survey or (3) Phase II Profile.

3. Personality-Oriented Integrity Tests

Also in the 1950s, a third version of integrity tests was developed to create an instrument that aims at helping companies distinguish between potential fraudsters and non-fraudsters (Marcus 2006: 10). But unlike the overt integrity tests, the personality-oriented equivalent focuses on personality dimensions relating to counterproductive work behavior. Accordingly, the personality-oriented test items typically define items on (1) dependability, (2) social conformity, (3) thrill-seeking, (4) conscientiousness and (5) trouble with authority (Wanek 1999: 184).

Largely related to the socialization items of the so-called *California Psychological Inventory* (Marcus 2006: 10), the first personality-oriented integrity test was the so-called *Personnel Reaction Blank* developed by the U.S. American psychologist Harrison Gough (Gough 1972). More modern personality-oriented integrity tests such as the (1) Employment Inventory or (2) Hogan Personality Inventory rely on this tradition and developed procedures from different facets of personality, their commonness in their empirical connection with counterproductive or deviant behavior (Marcus 2006: 10).

In a nutshell, all these various types of integrity tests measure a very heterogeneous mixture of (1) different biographically manifested behavioral tendencies, (2) different attitudes and (3) different personality traits while sharing the goal of measuring counterproductive work behavior (ibid). Thus, these integrity tests do not measure *integrity*, which could easily be interpreted as a harmony between behavior and internal moral standards in a more philosophical discussion (ibid).

In the following chapter, the findings on personality traits of potential fraudsters and whistleblowers will be summarized in a taxonomy of personality traits and hypotheses will be developed.

4.5 Summary: Taxonomy of Personality Traits and Hypotheses

“Normal is a setting on a dryer.”

-- Harley Quinn, fictional character.

The previous chapters have exposed various insights into characteristic traits of potential fraudsters on the one side and potential whistleblowers on the other side. In short, what can be derived from these previous chapters to help Corporate Compliance become more effective? What combination of personality traits could make people more likely to become a fraudster or remain silent? And what combination of personality traits could make an employee more likely to behave with integrity or become a whistleblower? Based on the literature review, the following taxonomy is developed.

Table 4-18: Summary of personality traits: fraudster or whistleblower

Personality Test	Personality Trait	Fraudsters	Whistleblowers
Big Five	Openness to Experience	~	↑
	<i>Conscientiousness</i>	↓	↑
	Extraversion	↑	↑
	Agreeableness	↓	↑
	Neuroticism	↑	↓
HEXACO	Honesty-Humility	↓	↑
	Emotionality	↓	↑
	eXtraversion	↑	↑
	Altruism	↓	↑
	Agreeableness	↓	↑
IBES	<i>Conscientiousness</i>	↓	↑
	Openness to Experience	~	↑
IBES	Integrity	↓	↑

Note: Italics indicate conflicting results in research studies.

Source: Own illustration.

As illustrated before, Behavioral Compliance aims at taking those characteristic traits into consideration in which a potential fraudster and a potential whistleblower are more likely to differ. In line with this, these people are more likely to differ in the following personality patterns – resulting in the consequent hypotheses:

1. Big Five Conscientiousness, Agreeableness and Neuroticism⁴⁵

H₁: Conscientiousness is positively related to whistleblowing and negatively related to fraudulent behavior.

H₂: Agreeableness is positively related to whistleblowing and negatively related to fraudulent behavior.

⁴⁵ Because no major influence of the Big Five dimensions Openness to Experience (see chapter 4.2.1) and Extraversion (see chapter 4.2.3) could be found in the literature review, no hypotheses were developed on the influence of these on fraud or whistleblowing. However, in the later experimental studies, these dimensions were tested and not simply ignored.

H₃: Neuroticism is negatively related to whistleblowing and positively related to fraudulent behavior.

2. HEXACO Honesty-Humility, Emotionality, Altruism, Agreeableness and Conscientiousness⁴⁶

H₄: Honesty-Humility is positively related to whistleblowing and negatively related to fraudulent behavior.

H₅: Emotionality is positively related to whistleblowing and negatively related to fraudulent behavior.

H₆: Altruism is positively related to whistleblowing and negatively related to fraudulent behavior.

H₇: Conscientiousness is positively related to whistleblowing and negatively related to fraudulent behavior.

3. IBES Overall sum of the integrity test.

H₈: Integrity is positively related to whistleblowing and negatively related to fraudulent behavior.

4.5.1 When Driven by Personality: Fraudster vs. Whistleblower

The lesson learned from the previous findings is that especially a combination of (1) Conscientiousness, (2) Honesty-Humility and (3) results of an integrity test are potentially the most likely personality traits to take into consideration when it comes to potential fraud (or remaining silent) or people reporting fraud (or not engaging in fraud). Because when one of these personality traits was found to be relevant when it comes to fraud or whistleblowing, employees who show valid signs of all three of these personality traits are more likely to become a fraudster or whistleblower. Based on the literature review, two characteristic types of a potential fraudster and two characteristic types of a potential whistleblower could be derived.

Table 4-19 summarizes the findings which will be further taken into consideration when developing a behavior-oriented compliance.

⁴⁶ Because no major influence of the HEXACO dimension eXtraversion (see chapter 4.3.3) could be found in the literature review, no hypothesis was developed on the influence of this trait on fraud or whistleblowing. However, in the later experimental studies, this dimension was tested and not simply ignored.

Table 4-19: Behavioral Compliance: personality of a fraudster or whistleblower

Employee	Fraudster	Personality
	Integrity	Personality
	<ol style="list-style-type: none"> 1. Actively engaging <i>in</i> fraud 2. Remaining fallaciously silent about fraud (no whistleblowing) 	Type A. Low in Conscientiousness in combination with low integrity (scoring low on an integrity test or scoring low in Honesty-Humility) Type B. High in Conscientiousness in combination with low integrity (scoring low on an integrity test or scoring low in Honesty-Humility)
	<ol style="list-style-type: none"> 1. Actively deciding <i>against</i> fraud 2. Reporting fraud (whistleblowing) 	Type A. Low in Conscientiousness in combination with high integrity (scoring high on an integrity test or scoring high in Honesty-Humility) Type B. High in Conscientiousness in combination with high integrity (scoring high on an integrity test or scoring high in Honesty-Humility)

Source: Own illustration.

Based on the literature review, a potential fraudster could either be (a) low in Conscientiousness in combination with low integrity (scoring low on an integrity test or scoring low in Honesty-Humility) (Type A of a fraudster) or (b) high in Conscientiousness in combination with low integrity (scoring low on an integrity test or scoring low in Honesty-Humility) (Type B of a fraudster). Lee and Ashton (2015) support these findings and undermine that Type A of a fraudster would be an “*employer’s worst nightmare*” (Lee/Ashton 2015: 58) because they are the “*last people you’d want to hire*” (ibid). As shown in chapters 4.3.2., 4.3.3 and 4.3.1, people low in Conscientiousness and low in Honesty-Humility are most likely to engage in fraud. However, people low in Conscientiousness are sloppy and lazy (Lee/Ashton 2015: 58) and therefore less likely to become successful in any company. Similar to Type A, Type B of a fraudster is potentially as toxic for any company, too. Less obvious to detect than Type A, companies should keep a close eye on these people because they are “*prone to white-collar crimes*” (Lee/Ashton 2015: 59). While combining all the facets of people being high

in Conscientiousness (e.g. being organized, thorough, planful and efficient; see chapters 4.2.2. and 4.3.3), they are selfish at heart and focused on personal gain and glory – even at the expense of others (Lee/Ashton 2015: 62). Most dangerously, these people have the potential to actively plan and commit fraud on a repeated, ongoing basis – especially because they know about ongoing anti-fraud controls implemented in a company. These people combine low Honesty-Humility with those toxic capabilities presented in chapter 2.2.4 and (1) use the opportunity, (2) have an incentive (personal gain, greed), (3) rationalize their behavior by excuses, (4) possess the necessary position/function, (5) are intelligent, (6) are egoistic and confident, (7) have the talent to coerce others into fraud, and have the talent to (8) keep up lies and (9) cope with stress.

Based on the literature review and opposite to potential fraudsters, a potential whistleblower (including employees who behave integer) could either be (a) low in Conscientiousness in combination with high integrity (scoring high on an integrity test or scoring high in Honesty-Humility) (Type A of integrity) or (b) high in Conscientiousness in combination with high integrity (scoring high on an integrity test or scoring high in Honesty-Humility) (Type B of integrity). As mentioned before and regarding Type A of an integer employee, people low in Conscientiousness are sloppy and lazy (Lee/Ashton 2015: 58), but in combination with high integrity these people are less likely to engage in fraud (Lee/Ashton 2015: 27) – even when they are confronted with job insecurity (Chirumbolo 2015: 554). Type B of an integer employee combines both preferable personality traits which would make them (referencing to the above-mentioned quote by Ashton/Lee (2015)) the *“first people you’d want to hire”*. These people are more likely to be successful and at the same time less likely to engage and more likely to report potential fraud.

To find out whether especially the personality traits Conscientiousness and integrity (Honesty-Humility or integrity test) are of most relevance when it comes to fraud and whistleblowing, a mixed-methods approach will be conducted and introduced in the following.

4.5.2 Researching Behavioral Compliance: Mixed-Methods Approach

To observe organizational (mis)behavior such as fraud or whistleblowing and to generate reliable information on people’s underlying motives is a highly challenging task. A variety of research methods exist, but it takes much effort to beneficially make use

of (1) qualitative research methods, such as surveys, questionnaires, or interviews, or (2) quantitative research methods, such as (experimental economics) laboratory experiments or field experiments. To research on Behavioral Compliance, a mixed-methods approach consisting of quantitative laboratory experiments with university students as well as a qualitative interview study with whistleblowers was used.

Quantitative Research: Laboratory Experiments

Observing fraud or whistleblowing in a field experiment? Highly complex to implement in a company, unlikely to observe and because the decision-making process of the participants (including their underlying motives) cannot be fully controlled, field experiments were not used. In contrast, in laboratory experiments, the research environment can be controlled. Consequently, the major strength of laboratory experiments to research on fraud and whistleblowing is that they provide salient incentives to respond or behave in a way that allows revealing the participants' true preferences (Friedman/Sunder 1994: 14). Therefore, laboratory experiments in combination with the personality tests to measure the (1) Big Five, (2) HEXACO PI-R personality dimensions as well as (3) scores on an integrity test (IBES), were used to gain quantitative data to prove or falsify the hypotheses. For details, see chapter 5 of this study.

Qualitative Research: Interviews

To question the findings of the laboratory experiments conducted with university students, a qualitative interview study with whistleblowers was performed. Initially, it was planned to conduct interviews with convicted fraudsters, too, but none of them was willing to participate. As part of the interview study, the whistleblowers filled out the HEXACO PI-R personality test. For details, see chapter 6 of this study.

5 Quantitative Research: Laboratory Experiments

“When given the opportunity, many honest people will cheat.”

-- Dan Ariely (2008: 201).

Experimental economics laboratory experiments have proven that when given the opportunity, many (even many honest) people will cheat (Ariely 2008: 201). Therefore, an environment which gives students the opportunity to either opt for fraud or whistleblowing had to be created in the laboratory field to generate data on the underlying decision-making process when it comes to fraud and whistleblowing. Obviously, key to generating reliable results about a potential fraudster or a potential whistleblower is to work with a strong experimental design which allows to observe all potential roles of employees in a controlled scenario.

Table 5-1: Behavioral Compliance: personality of a fraudster or whistleblower

Employee	Fraudster	Personality
	Integrity	Personality
	<ol style="list-style-type: none"> 1. Actively engaging <i>in</i> fraud 2. Remaining fallaciously silent about fraud (no whistleblowing) 	Type A. Low in Conscientiousness in combination with low integrity (scoring low on an integrity test or scoring low in Honesty-Humility) Type B. High in Conscientiousness in combination with low integrity (scoring low on an integrity test or scoring low in Honesty-Humility)
	<ol style="list-style-type: none"> 1. Actively deciding <i>against</i> fraud 2. Reporting fraud (whistleblowing) 	Type A. Low in Conscientiousness in combination with high integrity (scoring high on an integrity test or scoring high in Honesty-Humility) Type B. High in Conscientiousness in combination with high integrity (scoring high on an integrity test or scoring high in Honesty-Humility)

Source: Own illustration.

The focus of the following experimental studies is to find out about the different types of employees and whether Conscientiousness, as well as Honesty-Humility and an integrity test are the most valid personality traits when it comes to identifying those people intrinsically motivated towards fraud and the reporting of fraud (whistleblowing).

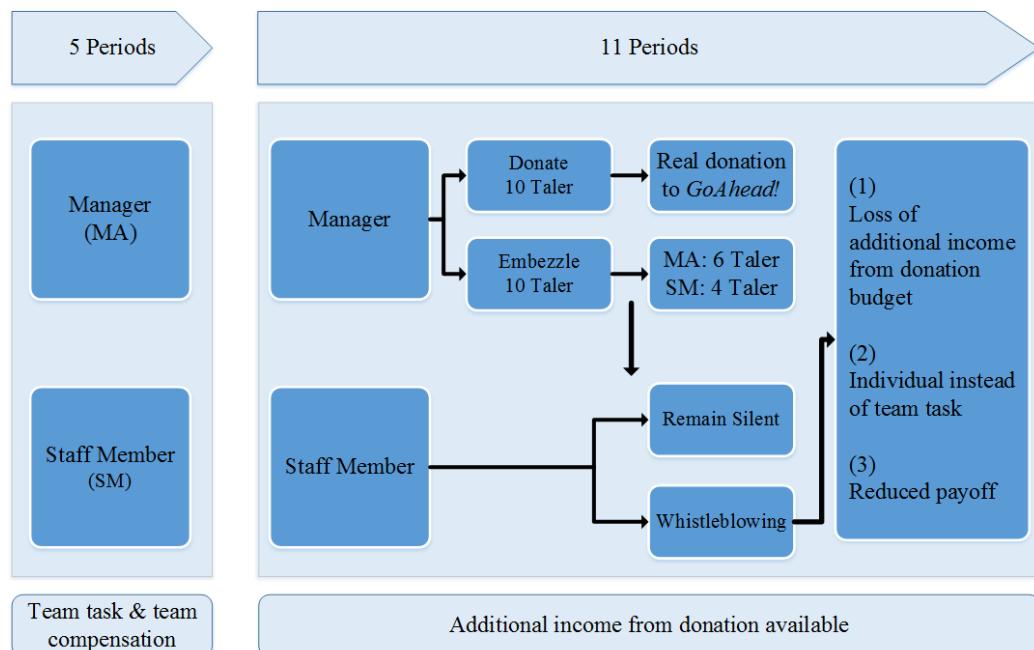
5.1 Experimental Design

Bartuli/Djawadi/Fahr (2016) designed a suitable experimental design which will be illustrated and used throughout the following experimental studies.

5.1.1 Baseline Scenario

Bartuli/Djawadi/Fahr (2016) created an experimental design with a stylized organizational context. Participants of the experiment were either in the role of (1) a manager given the possibility to engage in fraud or (2) a staff member given the opportunity to blow the whistle on the potentially observed fraud of the manager. Perfectly suitable, this laboratory experiment allows to analyze situations in which (1) fraud occurs and subsequently (2) whistleblowing can be observed and as a result, data for all four roles of employees relevant for the research on intrinsically motivated fraudsters or whistleblowers can be obtained. Details of the baseline scenario will be presented in the following, the sequence of the experimental design is displayed in Figure 20.

Figure 19: Experimental design of the baseline scenario



Source: Own illustration, based on Bartuli/Djawadi/Fahr (2016).

Before the Experiment: Instructions and Allocation of the Roles

Before the experiment starts, the printed instructions were handed out to the participants, they were given 15 minutes reading time and the opportunity to ask questions to clarify any misunderstandings.

Using a simple estimation task⁴⁷, the participants of the experiment are assigned to the roles which they will keep throughout the whole experiment: (1) manager or (2) staff member. After the assignment of the roles, the participants will be randomly divided into teams of two participants, with each team of the experiment consisting of one manager and one staff member. The allocation to teams is anonymous and the participants do not know who their respective team member is.

Course of the Experiment: 16 Periods

In each of the 16 periods of the experiment, a real effort task is used. In line with this, each team has to solve a team task for which they are compensated according to a team compensation scheme. The team task implemented in Bartuli/Djawadi/Fahr (2016) consists of counting the occurrence of the number 7 in a series of tables. The numbers in the tables are randomly drawn and a new counting problem is presented in each period. The team task is successfully accomplished if all number sevens are counted correctly. However, each team is granted a tolerance of + / - 4 sevens.

Having accomplished the task successfully, the team is granted a payoff of 10 Taler⁴⁸. Out of these 10 Taler, the manager in his executive position receives a payoff of 6 Taler, and the staff member a payoff of 4 Taler, respectively. If the team task is not completed successfully, the team members do not receive a payoff and the next period starts.

After Period 5: Fraud and Whistleblowing in Organizations

In the sixth period, the manager and the staff member are then informed that the parent company made the decision to donate the counter value of a period production, equal to 10 Taler, for a charity project in South Africa. The charity of choice within the experiments is called *GoAhead!*, an organization which aims at helping children in

⁴⁷ The experimenter presents a glass filled with marbles. The participants have to estimate the amount and whoever is closest to the exact number of marbles is assigned to the role of a manager.

⁴⁸ Taler is the digital currency in the experiment. After the experiment, the participants will receive one Euro for 8 Taler.

KwaZulu Natal in South Africa who lost their parents due to HIV and AIDS (GoAhead June 14, 2017).⁴⁹ All donations within the experiment will become *real* donations to *GoAhead!*. Since the distribution and employment of this budget in South Africa cannot be controlled by the parent organization, the manager is in charge of managing this donation budget. The participants are thereupon informed about all choices in the instructions.

Manager as a Potential Fraudster

In each period the team manager has the choice between (1) donating the full amount of 10 Taler for the charity project *GoAhead!* or (2) embezzling the donation budget in his division.

- 1. Donating the budget:** If the manager opts for donating the sum assigned by the parent company, their periodic payoff will remain at 6 and 4 Taler, respectively. Then, the 10 Taler will be donated to the charity project *GoAhead!* in South Africa.
- 2. Embezzling the donation budget:** If the money is kept, the 10 Taler will be divided between the manager and the staff member exactly as their usual payoff from their team task; thus, the manager receives 6 Taler, the staff member the remaining 4 Taler. If the team task is accomplished successfully and the manager opts for keeping the donation budget, in total, the manager's payoff per period then adds up to 12 Taler, the staff member earns 8 Taler. After the manager has made his choice about the use of the donation budget, the staff member is informed about his decision. If the manager opted for the donation of the 10 Taler for the charity project, the experiment continues with the next period. In each period, again, the manager has to decide about the use of the donation budget, but once he has decided to embezzle the money, he cannot donate the budget again. Consequently, deciding for the embezzlement once implies being a fraudster for all later periods.

Staff Member as a Potential Whistleblower

⁴⁹ Details on *GoAhead!* are explained in detail in the instructions which are handed to the participants.

If the manager opted to withhold the additional 10 Taler from the donation budget in his division, the staff member can decide whether he accepts the manager's decision or he reports the manager's decision to the parent company.

1. **Remaining Silent:** If the staff member decides to accept the manager's decision, he then receives his additional payoff and the experiment continues. In each period, both players get the same choice set: opting for or against the additional source of income, and accepting or reporting.
2. **Whistleblowing:** If the manager chooses to keep the 10 Taler and the staff member decides to report the manager's choice, the team faces three consequences.
 - a. First, the team loses the additional income from the donation budget. The additional 10 Taler, which were divided between the manager and employee will be claimed back and donated to the project in South Africa by the parent company. Since it is not possible for the parent company to fully control all previous decisions concerning the use of the donation budget, only the withheld donation from the current period, in which the staff member reported, will be withdrawn.
 - b. Second, the parent company dissolves the team; both, the staff member and the manager are then moved to a different position in the company. In the new positions, both players work individually. This represents the consequences in the real world, since after a case where a staff member reports on his manager, this division will not be able to work efficiently any longer. Consequently, each player has to count the occurrence of the number seven individually and only the individual result from the two tables counts for successfully solving the task. Now, in order to accomplish the task, each player has to come to the exact number of sevens + / - 2 in order to receive his individual payoff. Besides, the parent company will revoke the manager's responsibility for managing the donation budget. In all further periods, the parent company will ensure the donation of the 10 Taler by appointing an external intermediary in South Africa.
 - c. Third, the individual players will receive a reduced payoff as a result of the detection of the withheld donation in the previous division. The staff

member's payoff for successfully accomplishing the task will be reduced from previously 4 to 3 Taler. Respectively, the manager's payoff for the task in all subsequent periods decreases from previously 6 to 5 Taler.

After the Experiment: Questionnaire to Measure Personality Traits

After playing all 16 periods, the participants are asked to fill out a questionnaire. Besides some general questions relating to the experiment itself, the questionnaire consists of questions on personality traits. In particular, Bartuli/Djawadi/Fahr (2016) use (1) the Big Five Inventory-SOEP (BFI-S) consisting of 15 questions (Schupp/Gerlitz 2014), (2) the DOSPERT scale Ethical (Weber et al. 2002) consisting of six questions, and (3) the Honesty-Humility domain of the HEXACO PI-R consisting of 12 questions⁵⁰.

After all participants have completed the questionnaire, each is separately called up and receives their final payoff.

In the following, the first treatment of this baseline scenario will be presented.

5.1.2 Treatment 1: Completeness Statement

Treatment 1 of this study uses the very same experimental design as Bartuli/Djawadi/Fahr (2016) but adds a nudge to alter the participants' behavior towards integrity (no embezzlement and whistleblowing). More generally, Thaler/Sunstein (2009) define a nudge as follows:

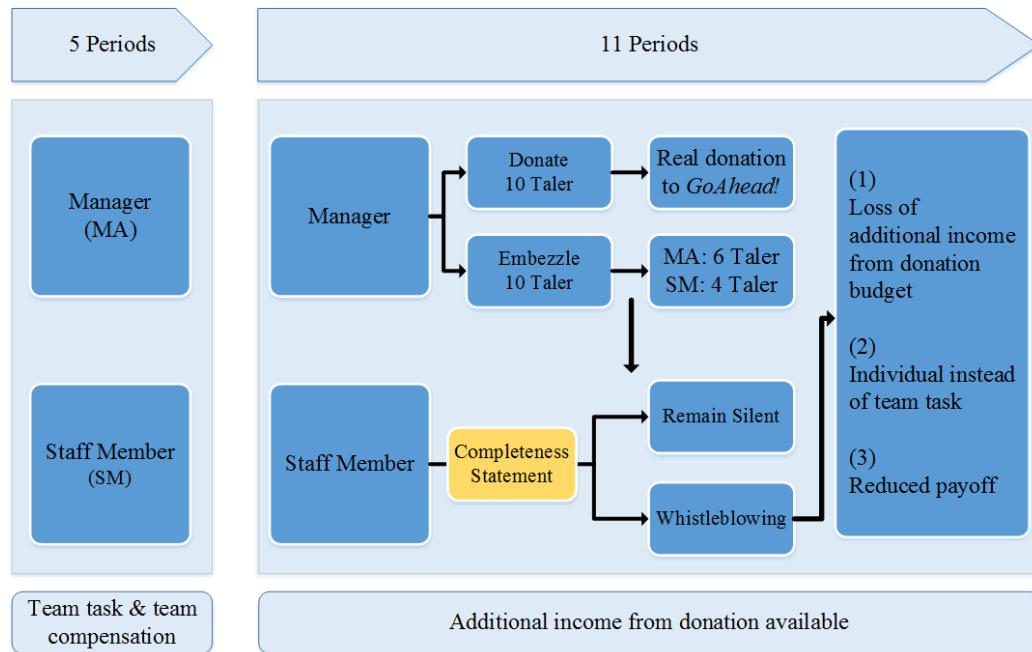
„A nudge, as we will use the term, is any aspect of the choice architecture that alters people's behavior in a predictable way without forbidding any options or significantly changing their economic incentives. To count as a mere nudge, the intervention must be easy and cheap to avoid. Nudges are not mandates. Putting fruit at eye level counts as a nudge. Banning junk food does not.” (Thaler/Sunstein 2009: 6).

⁵⁰ Out of HEXACO-60's Honesty-Humility subdomains, Bartuli/Djawadi/Fahr (2016) asked 3 questions on Fairness, 2 questions on Greed Avoidance, 3 questions on Sincerity and 4 questions on Altruism. Questions on Modesty were not asked.

A completeness statement⁵¹ for the staff member was introduced without forbidding any options or changing the incentives. Therefore, this treatment allows for research on intrinsic motivation on fraud and whistleblowing.⁵²

The staff member is supposed to confirm that the donation was submitted to the charity project. Independent of the decision whether the manager has opted to withhold the additional 10 Taler from the donation budget or not, the staff member is supposed to fill out a completeness statement.

Figure 20: Experimental design of treatment 1



Source: Own illustration, based on Bartuli/Djawadi/Fahr (2016).

- 1. Denunciation:** If the manager decides to donate the budget and the staff member declines the completeness statement in return, nothing happens for the course of the experiment. The staff member learns that the company has not found any fraud, the manager does not receive any information on the decision of the staff member.
- 2. Remaining Silent:** If the staff member decides to confirm the completeness statement although the manager embezzled the donation budget, he then receives his additional payoff and the experiment continues. In each period, both

⁵¹ The idea to test a completeness statement as an anti-fraud control arose in a meeting with the chair and senior management of a Big4 company.

⁵² The overjustification effect is the central problem of external incentives because these expected incentives have the potential to decrease a person's intrinsic motivation to perform a task (Carlson/Heth 2007; Lepper/Greene/Nisbett 1973: 130). For further information see chapter 3.2.2.

players get the same choice set: opting for or against the additional source of income, and accepting or reporting.

3. **Whistleblowing:** If the manager chooses to keep the 10 Taler and the staff member decides to decline the completeness statement, he will face the same three consequences as in the baseline scenario.
 - a. First, the team loses the additional income from the donation budget.
 - b. Second, the parent company dissolves the team and will ensure the donation of the 10 Taler by appointing an external intermediary in South Africa.
 - c. Third, the individual players will receive a reduced payoff as a result of the detection of the withheld donation in the previous division.

After the Experiment: Questionnaire to Measure Personality Traits

After playing all 16 periods, the participants are asked to fill out a questionnaire. Besides some general questions relating to the experiment itself and the participants' intentions towards behavior, the following questionnaire consists of the following set of 156 questions in total.

1. **Big Five** Using the German Socioeconomic Panel (SOEP) and its Big Five Inventory-SOEP (BFI-S) consisting of 15 questions (Schupp/Gerlitz 2014), the Big 5 personality traits are measured. Participants answer on a 7-point response scale with response options ranging from 1 = "strongly disagree" to 7 = "strongly agree".
2. **HEXACO** Using the German questionnaire of the HEXACO PI-R, the Honesty-Humility and the Altruism personality traits are used in this treatment. Consisting of 16 questions for the Honesty-Humility and 4 questions for Altruism, participants will answer on a 5-point scale with response options ranging from 1 = "strongly disagree" to 5 = "strongly agree".
3. **Integrity Test** All 115 questions of the IBES (Marcus 2006) are part of the questionnaire. Items are scored on a 5-point scale with response options ranging from 1 = "strongly disagree" to 5 = "strongly agree".

4. DOSPERT⁵³ Additionally, the Ethical scale of the DOSPERT (Weber et al. 2002) was used because it was found to be significantly related to fraudulent behavior in Bartuli/Djawadi/Fahr (2016). The items are scored on a 5-point scale with response options ranging from 1 = "extremely unlikely" to 7 = "extremely likely".

After all participants have completed the questionnaire, each is separately called up and receives his or her final payoff.

In the following, the second treatment of the baseline scenario will be presented.

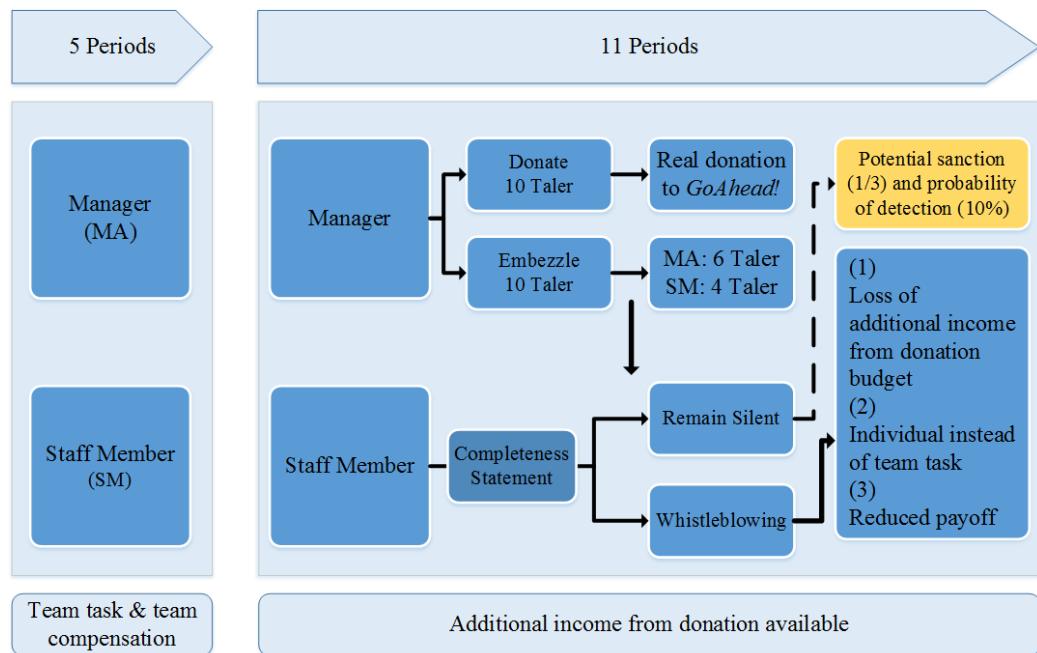
5.1.3 Treatment 2: Completeness Statement with Sanction

As learned in chapter 3.2.2., individual sanctions have the potential of preventing fraud because fraudsters are sensitive to the risk of formal sanctions (Dellaportas 2013: 32). Furthermore, other employees observing "*credible punishment are likely to learn from it and be deterred from engaging in similar acts*" (Vardi/Weitz 2016: 219).

Accordingly, treatment 2 of this study uses the very same experimental design as treatment 1 but adds (1) a potential sanction and (2) a probability of detection by adding an external audit to the experimental design. To be able to run the experimental session with realistic levels, senior management of a Big4 company was asked for cooperation. It was decided on (1) a level of sanction of 1/3 of the maximum amount which a participant in its assigned role could earn in 16 periods by behaving ethically and (2) a probability of detection by an external audit of 10%.

⁵³ The Ethical domain of the DOSPERT was found significant in the baseline scenario in Bartuli/Djawadi/Fahr (2016). Therefore, it was used in Treatment 1 again.

Figure 21: Experimental design of treatment 2



Source: Own illustration, based on Bartuli/Djawadi/Fahr (2016).

Therefore, this treatment 2 allows for research on extrinsic motivation on fraud and whistleblowing.⁵⁴

After the Experiment: Questionnaire to Measure Personality Traits

After playing all 16 periods, the participants are asked to fill out a questionnaire. Besides some general questions relating to the experiment itself and the participants' intentions towards behavior, the following questionnaire consists of the following set of 115 questions in total.

- 1. Big Five** Using the German Socioeconomic Panel (SOEP) and its Big Five Inventory-SOEP (BFI-S) consisting of 15 questions (Schupp/Gerlitz 2014), the Big 5 personality traits are measured. Participants answer on a 7-point response scale with response options ranging from 1 = "strongly disagree" to 7 = "strongly agree".

⁵⁴ The overjustification effect is the central problem of external incentives because these expected incentives have the potential to decrease a person's intrinsic motivation to perform a task (Carlson/Heth 2007; Lepper/Greene/Nisbett 1973: 130). For further information see chapter 3.2.2.

2. HEXACO Using the German questionnaire of the HEXACO PI-R, all six personality traits are used in this treatment. Consisting of 100 questions, participants will answer on a 5-point scale with response options ranging from 1 = "strongly disagree" to 5 = "strongly agree".

How the experimental procedure was conducted for both treatments of this study will be presented in the following.

5.1.4 Experimental Procedure

For all sessions of the laboratory experiments conducted for the development of a behavior-oriented compliance, the participants were recruited using the online recruiting system ORSEE (Greiner 2015). Accordingly, all subjects (1) had to pre-register, (2) were randomly picked and (3) did not receive any information on the context of the experiment when they were invited via e-mail.

In each session, the experiments were conducted in four steps:

1. Arrival at the Experimental Laboratory

After the participants arrived at the *BaER-Lab* at the University of Paderborn, they first had to show an identification card to confirm their identity. Next, the subjects were (1) required to draw a number from a bag and (2) asked to take a seat in the cabin with the equivalent number.

2. Assigning the Participants to Their Cabins

To guarantee anonymity and to avoid socially preferable behavior throughout the laboratory experiments, all cabins were visually separated from each other.

3. Introductory Talk and Instructions

After being seated in their cabins, all participants (1) received the introductory talk, (2) were asked to mute their cell phones and (3) requested not to communicate during the experimental session. Afterwards, (1) the printed instructions (including information on *GoAhead!*) were handed out, (2) 15 minutes reading time was granted and (3) the participants were given the opportunity to ask questions to clarify any misunderstandings.

4. Conduction of the Experiment

After all open questions had been clarified, the experimental session was started.

The experiment itself was computerized and conducted using the experimental software z-Tree (Fischbacher 2007). Except for the printed instructions (including information on *GoAhead!*), all the other information was only presented on the computer screen and the subjects made their respective decisions on the computer screen by using z-Tree. Each session lasted approximately 120 minutes, including the time the subjects needed to read through the instructions and to ask questions. After the experimental session had been conducted, the participants were paid their total earnings anonymously in cash, at a conversion rate of one Euro for 8 Taler. On top, the participants were granted a show-up fee of €2.50.

Table 5-2 summarizes the experimental studies and provides an overview of the (1) total subjects, (2) motivation towards behavior and (3) personality tests used.

Table 5-2: Summary of the experimental studies

	Subjects	Motivation towards Behavior	Personality Tests			
			HEXACO	IBES	SOEP	DOSPERT
Baseline	222	Intrinsic (no extrinsic motivation)	Yes	No	Yes	Yes
Treatment 1	158	Intrinsic (nudge)	Yes	Yes	Yes	Yes
Treatment 2	138	Extrinsic (sanction and probability of detection)	Yes	No	Yes	No

Note: See chapter 3.2 for further details on intrinsic and extrinsic motivation.

Source: Own illustration.

In the following, the results of the experimental studies will be presented to provide insights on intrinsically and extrinsically motivated behavior towards fraud or whistleblowing.

5.2 Results of Experimental Studies

5.2.1 Treatment 1: Completeness Statement

Treatment 1 was conducted in the *BaER-Lab* at the University of Paderborn on May 18, 2015 (2 sessions, 54 subjects), May 20, 2015 (1 session, 28 subjects), June 01, 2015 (2 sessions, 54 subjects) and June 03, 2015 (1 session, 22 subjects). In sum, the experiment comprised six sessions, each subject was allowed to take part in only one session, and no subject had participated in the baseline scenario of the experiment before.

Each session lasted approximately 120 minutes; this includes the time spent for reading the instructions. At the end of the experiment, the participants were paid their total earnings anonymously in cash, including a show-up fee of €2.50. Subjects earned between €9.50 and €22.80 with an average payoff of €16.10.

In the six sessions, on average €79 were donated to the charity *GoAhead!*. The average total payoff of all participants in one session was €417 (€2504 for six sessions).

5.2.1.1 Descriptive Analysis

Starting with the descriptive analysis, Table 5-3 summarizes the demographic characteristics of the participants of this treatment. As shown, this experiment was conducted with a total of 158 student participants (79 managers and 79 staff members).

Table 5-3: Treatment 1: demographic characteristics

	Managers		Staff members		Total	
	Mean	N	Mean	N	Mean	N
Age	22	79	24	79	23	158
Gender						
Female	51.9%	41	60.8%	48	56.3%	89
Male	48.1%	38	39.2%	31	43.7%	69
Field of Studies						
Business	41.8%	33	45.6%	36	43.7%	69
Education	36.7%	29	36.7%	29	36.7%	58
Language/Culture	6.3%	5	11.4%	9	8.9%	14
Media	6.3%	5	2.5%	2	4.4%	7
Technology	8.9%	7	3.8%	3	6.3%	10
Donation Experience outside Laboratory						
Never	6.3%	5	12.6%	10	9.5%	15
Once	16.5%	13	31.6%	25	24.0%	38
1-3 times	55.7%	44	46.9%	37	51.3%	81
Regularly	21.5%	17	8.9%	7	15.2%	24

Source: Own illustration.

As shown in Table 5-1, most of the participants were students enrolled in business studies. In contrast to wide-spread stereotypes, these students are in general not more likely to commit fraud than students enrolled in other student paths (e.g. Friesen/Gangadharan 2012). Frank/Schulze (2000) conclude that the teaching of theoretical concepts (such as business administration) is not the root of deviant behavior, but rather an existing, e.g. motivational disposition.

Taking a closer look at the first five periods in which the students only played the team task and were paid under the team compensation scheme, it can be observed that most

divisions solved the team task correctly in each period. However, one participant admitted that he embezzled the donation budget because his team player had not solved the counting task correctly and he wanted to compensate.

After Period 5: Fraud and Whistleblowing in Organizations

As illustrated before, in each of the following periods (6-16), the manager had the choice to (1) commit fraud (embezzle money) or (2) behave integer (donate the additional budget) while the staff member had the choice to (1) denounce the manager by declining the completeness statement although he did not embezzle the budget, (2) remain silent by confirming the completeness statement although the money was embezzled by the manager or (3) blow the whistle by declining the completeness statement when money was withheld from charity. These different behavioral patterns and the timing of the embezzlement and whistleblowing actions are summarized in Table 5-4.

Table 5-4: Treatment 1: managers' and staff members' observed behavior

Managers	Mean (%)	N	Staff members	Mean (%)	N
Always donated	15.2	12	Denunciation		1
Always embezzled	41.8	33	Whistleblowing	29.85	20
First donated, then embezzled	43.0	34	Remaining Silent	70.15	47
Total		79			68

Source: Own illustration.

While in the baseline scenario conducted by Bartuli/Djawadi/Fahr (2016) roughly 21% of the managers were compliant to the company's regulations by donating the designated budget to the charity, the implementation of the completeness statement in this treatment surprisingly caused even more fraudulent behavior. Only in 12 out of 79 divisions (15%), the managers were compliant, by far most of the managers (85%) embezzled money at least once throughout the experiment. However, the results are scarcely consistent with findings of Shalvi/Handgraaf/de Dreu (2011) who showed that many people have an aversion against a maximum lie, and due to that they strive for a compromise between self-oriented and social-moral motives.

Accordingly, 67 staff members had the chance to blow the whistle by declining the completeness statement on perceived fraud. Out of these, 20 (29.85%) decided to blow the whistle including 9 participants who decided to blow the whistle immediately by

declining the completeness statement in the same period the manager decided to embezzle the donation budget. Only one staff member chose to try to denounce the manager although the money was donated. Table 5-3 shows that there does not seem to exist an influence of gender on fraud or whistleblowing, which Chi-Square tests prove (fraud: $\chi^2(df=1): 0.54$; $p = 0.46$; whistleblowing: $\chi^2(df=1): 0.23$; $p = 0.62$). Thus, observed behavior cannot be explained by taking gender into consideration, similar to the studies conducted by Dworkin/Baucus (1998), Frank/Schulze (2000), Lambsdorff/Frank (2011) or Cassematis/Wortley (2013).

Table 5-5: Treatment 1: influence of gender on fraud or whistleblowing

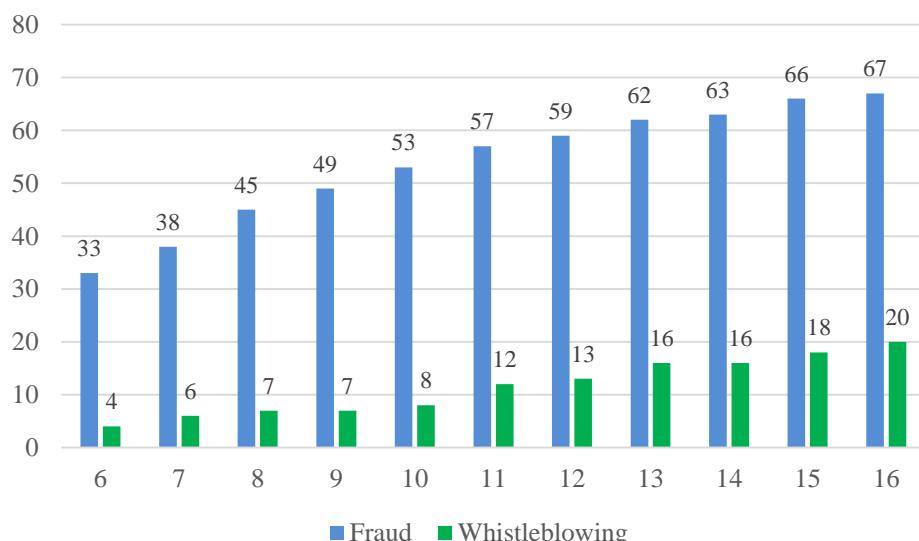
Fraud	Mean (%)	N	Whistleblowing	Mean (%)	N
Male	86.84	33	Male	27.27	9
Female	82.93	34	Female	32.35	11
Total		67			20

Source: Own illustration.

Out of the 67 subjects who decided to embezzle the donation budget at least once, 33 were male (86.84%) and 34 female (82.93). The same counts for the decision to blow the whistle, with 9 subjects being male (27.27%) and 11 whistleblowers being female (32.35%).

The cumulated distribution of all observed embezzlement and whistleblowing actions over time is presented in Figure 22.

Figure 22: Treatment 1: cumulated distribution of all observed actions over time



Source: Own illustration.

As shown before, approximately 42% (33 in total) of the managers immediately embezzled the donation budget. Over the course of the 16 periods, 34 more students in the role of managers decided to earn gain from the additional budget, too. As part of the questionnaire, the students were asked why they decided to embezzle the budget. Managers who immediately embezzled, rationalized their behavior with various different reasons: (1) profit maximization (15 out of 33, e.g. *"I am young and need the money."*) or (2) regular donations to other charities, (3) support of the staff member, (4) mistrust of the charity organization chosen (*GoAhead!*) or (5) low risk of detection. However, those managers who decided to embezzle later, rationalized their behavior differently. Almost all of the students admitted that they perceive the donation to the charity organization as important, but that they wanted to maximize their own profits, too.

All of the whistleblowers, who certainly did not rationalize to remain silent, explained their behavior driven by altruistic motives – indicating intrinsic motives. Almost all of the whistleblowers emphasized that they did so because it felt wrong that the manager tried to embezzle the donation budget, which indicates the intrinsic motive of meaning and self-realization. The participants commented e.g. *“Sometimes you should donate money instead of maximizing self-interest.”* (Subject 61). Other whistleblowers left comments such as *“I find it important to support organizations that help other people.”* (Subject 92) or *“I would have donated in the first periods because this is a good cause and it is additional money and not our own anyway.”* (Subject 86).

Summarizing, Table 5-6 shows the total of managers who embezzled per period as well as whistleblowing and remaining silent per period.

Table 5-6: Treatment 1: whistleblowing and non-whistleblowing actions conditional on the period in which the donation budget was embezzled the first time (in absolute numbers)

11	4						3	-	-	-	-	-	3	1
12	2							-	-	-	-	-	-	2
13	3							-	-	-	1	1	2	
14	1								-	-	-	-	-	1
15	3									-	-	-	-	3
16	1										-	-	-	1

Source: Own illustration.

As already shown before, 33 participants in the role of managers embezzled in the first period possible. In consequence, 12 staff members blew the whistle on these decisions through the course of the following periods. While four staff members blew the whistle immediately and eight participants later, 21 students in the role of staff members decided to remain silent.

In the following, the hypotheses on the relationship between personality traits and observed behavior derived in chapter 4.5 will be tested.

5.2.1.2 Non-parametric Statistics on the Relationship between Personality and Behavior

Personality traits were analyzed using the German Socioeconomic Panel (SOEP) and its Big Five Inventory-SOEP (BFI-S) consisting of 15 questions (Schupp/Gerlitz 2014), the Honesty-Humility and Altruism dimensions of the HEXACO PI-R consisting of 20 questions and 115 questions of the IBES (Marcus 2006). Additionally, the Ethical scale of the DOSPERT was used. In the following, these personality traits will be examined in combination with observed behavior of fraud and whistleblowing.

Internal Consistency of the Personality Tests

Internal consistency of the tests part of the questionnaire is analyzed using the Cronbach's α , a statistic calculated from the pairwise correlations between items (Streiner 2003: 100). Cronbach's alpha ranges between negative infinity and one, with an $\alpha \geq 0.7$ being generally accepted as a statistic indicating internal consistency of items (Streiner 2013: 103). However, because the calculation of the Cronbach's α is influenced by the number of items, personality tests with few items can result in low α scores. Summarized on the diagonal in Table 5-7, it is shown that only the IBES ($\alpha=0.85$; 115 items) and the Ethical scale of the DOSPERT ($\alpha=0.71$; six items) are

above the $\alpha \geq 0.7$ threshold. The other personality variables consist of less than five items each, therefore it is not surprising that these have low α scores.

Table 5-7: Treatment 1: means, standard deviations and intercorrelations of personality variables

	Mean	SD	1	2	3	4	5	6	7	8	9
1. Openness	4.79	1.18	(0.66)								
2. Conscientiousness	5.43	0.91	0.10	(0.65)							
3. Extraversion	5.02	1.24	0.06	0.02	(0.84)						
4. Agreeableness	5.42	0.91	0.01	0.14**	-0.01	(0.47)					
5. Neuroticism	4.22	1.22	-0.02	-0.01	-0.03	0.11	(0.66)				
6. Honesty-Humility	3.38	0.53	0.06	0.19***	-0.00	0.15***	0.04	(0.59)			
7. Altruism	3.62	0.64	0.14**	0.10	0.04	0.19***	0.09	0.34***	(0.60)		
8. DOSPERT	5.37	0.99	0.09	0.11	0.04	0.14**	0.19***	0.28***	0.20***	(0.71)	
9. Integrity test	1.91	1.29	-0.01	0.28***	-0.08	0.38***	-0.04	0.32***	0.26***	0.22***	(0.85)

Note: N=158. Kendall's tau correlation was used. Cronbach's alpha coefficients are presented on the diagonal in parenthesis. Significance at the 1% and 5% level is denoted by *** and **, respectively.

Source: Own illustration.

Intercorrelation between the personality variables is measured using Kendall's Tau (Kendall 1938). As shown in Table 5-7, various strong positive correlations could be found. Most notably, Honesty-Humility finds very strong positive correlations with the personality variables Conscientiousness, Agreeableness, Altruism, DOSPERT and the integrity test IBES. Furthermore, IBES presents very strong positive correlations with Conscientiousness, Agreeableness, Honesty-Humility, Altruism and DOSPERT. Overall, all personality traits which aim at measuring behavior of integrity, show highly significant correlations: (1) Honesty-Humility, (2) Altruism, (3) DOSPERT and (4) the integrity test (IBES). Therefore, these four variables will be clustered in the later following multivariate regressions.

Mann-Whitney-U Test Two-sample Rank-sum Test

For the analysis to test whether non-embezzling managers (whistleblowing employees) score on average significantly different in the personality traits and prosocial attitudes than embezzling managers (non-whistleblowing employees), non-parametric methods are used. Therefore, the Mann-Whitney-U Test two-sample rank-sum test is used to test the hypotheses based on the taxonomy developed in chapter 4.5. The results are summarized in Table 5-8.

Table 5-8: Treatment 1: Mann-Whitney U-Test (1)

	Never donated vs. Always Donated		Non-Whistleblowers vs. Whistleblowers	
Openness	4.68 vs. 5.69*	$z=-2.53$	4.70 vs. 4.85	$z=-0.66$
Conscientiousness	5.51 vs. 5.80	$z=-1.10$	5.31 vs. 5.36	$z=-0.15$
Extraversion	4.96 vs. 4.63	$z=0.77$	4.97 vs. 5.06	$z=-0.66$
Agreeableness	5.31 vs. 5.77	$z=-1.42$	5.46 vs. 5.43	$z=-0.56$
Neuroticism	3.83 vs. 4.13	$z=0.47$	4.43 vs. 4.16	$z=0.55$
Honesty-Humility	3.27 vs. 3.82***	$z=-2.63$	3.23 vs. 3.45	$z=-1.59$
Altruism	3.41 vs. 4.08***	$z=-2.98$	3.49 vs. 3.86**	$z=-2.09$
DOSPERT	5.03 vs. 5.86**	$z=-1.90$	5.44 vs. 5.51	$z=-0.56$
Integrity test	1.78 vs. 3.08***	$z=-2.98$	1.63 vs. 2.05***	$z=-2.17$

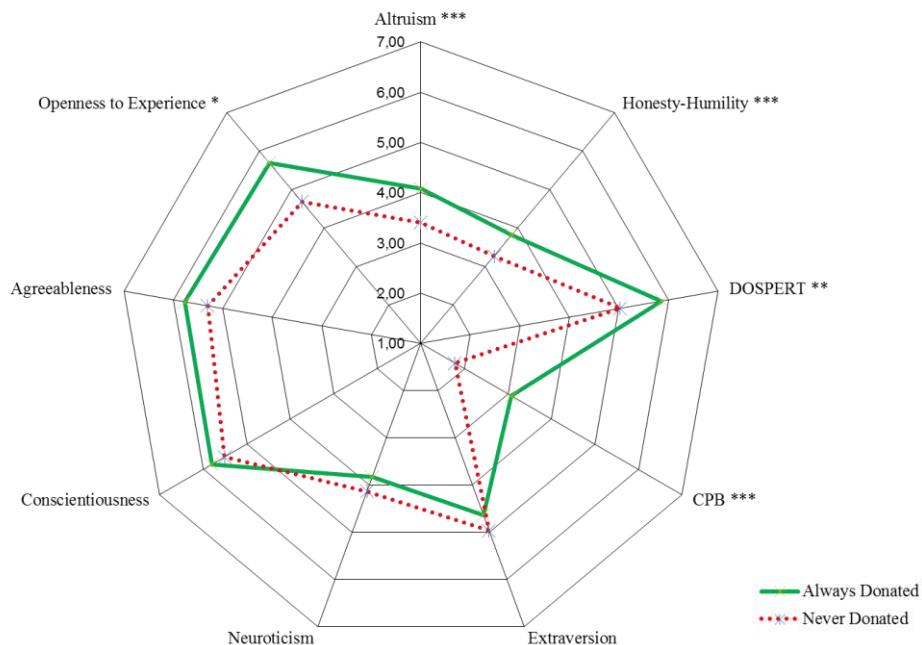
Note: Significance at the 1%, 5%, and 10% level is denoted by ***, ** and *, respectively.

Source: Own illustration.

On the side of the managers, those who behave compliant (donating the budget to the charity) are significantly higher at the 1% level in the personality dimensions Honesty-Humility⁵⁵, Altruism, DOSPERT and the overall sum of the integrity test (CPB) than those who decide for fraudulent behavior. Furthermore, compliant managers are significantly higher at the 10% level in the Big 5 personality variable Openness to Experience. Based on the analysis on arithmetic means, the personality differences among non-compliant (never donated) and compliant managers (always donated) are developed in Figure 23. As illustrated, those managers who are compliant rank on average higher on most personality dimensions than the non-compliant counterparts.

⁵⁵ Furthermore, managers who always donated the additional budget were significantly higher at 1% in the sub-trait Greed Avoidance and Fairness.

Figure 23: Treatment 1: personality differences among managers



Source: Own illustration.

On the side of the staff members, those who blew the whistle were significantly higher at the 1% level in the sum of the integrity test (CPB) and at the 5% level in Altruism. Although whistleblowers were not significantly higher in the overall Honesty-Humility personality dimension, significances could be found in the sub-trait Fairness ($p=0.04$; $z=-2.09$) and low significance for Greed Avoidance ($p=0.09$; $z=-1.65$). However, putting additional focus on those nine staff members who immediately blew the whistle on the fraudulent manager, further significant differences can be found.

Table 5-9: Treatment 1: Mann-Whitney U-Test (2)

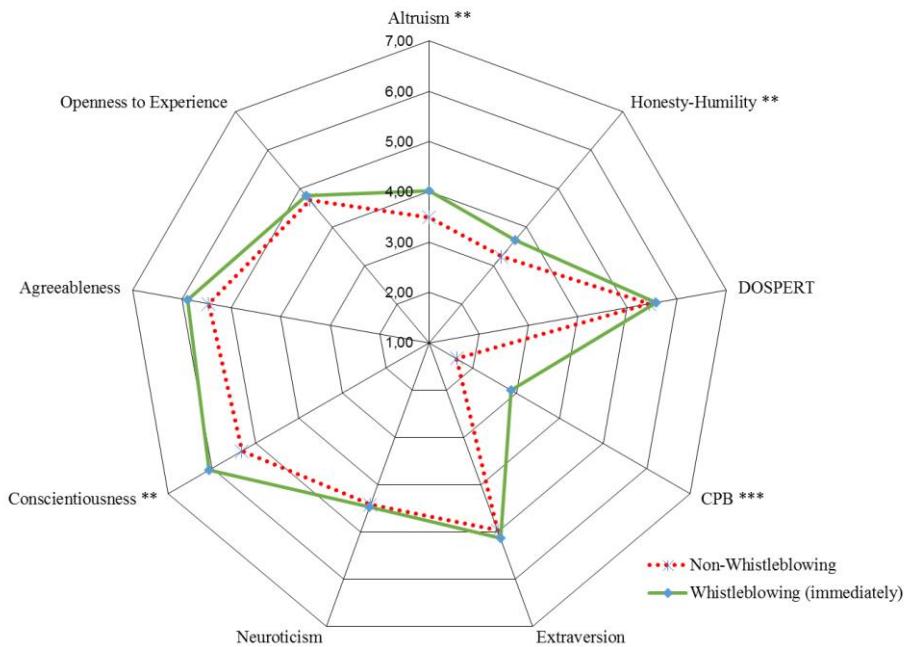
	Never donated vs. Always Donated		Immediately vs. Non-Whistleblowers	
Openness	4.68 vs. 5.69*	$z=-2.53$	4.70 vs. 4.81	$z=0.28$
Conscientiousness	5.51 vs. 5.80	$z=-1.10$	5.31 vs. 6.07**	$z=2.47$
Extraversion	4.96 vs. 4.63	$z=0.77$	4.97 vs. 5.14	$z=0.12$
Agreeableness	5.31 vs. 5.77	$z=-1.42$	5.46 vs. 5.88	$z=0.13$
Neuroticism	3.83 vs. 4.13	$z=0.47$	4.43 vs. 4.48	$z=0.07$
Honesty-Humility	3.27 vs. 3.82***	$z=-2.63$	3.23 vs. 3.66**	$z=1.97$
Altruism	3.41 vs. 4.08***	$z=-2.98$	3.49 vs. 4.02**	$z=1.96$
DOSPERT	5.03 vs. 5.86**	$z=-1.90$	5.44 vs. 5.59	$z=0.50$
Integrity test	1.78 vs. 3.08***	$z=-2.98$	1.63 vs. 2.88***	$z=3.02$

Note: Significance at the 1%, 5%, and 10% level is denoted by ***, ** and *, respectively.

Source: Own illustration.

Whistleblowers (immediately) were significantly higher at the 1% level in the overall sum of the integrity test (CPB) as well as at the 5% level in Conscientiousness, Altruism and the overall Honesty-Humility. Furthermore, whistleblowers (immediately) ranked significantly higher on Honesty-Humility's sub-trait Fairness ($p=0.01$; $z=2.33$) and Greed Avoidance ($p=0.06$; $z=1.82$). Based on the analysis on arithmetic means, the personality differences are illustrated in Figure 24.

Figure 24: Treatment 1: personality differences among staff members



Source: Own illustration.

To already provide a better overview, the various findings will be shortly summarized.

Summary of the Findings of the Non-parametric Statistics

Based on the Mann-Whitney-U Test two-sample rank-sum test, fraudsters vs. those who decide against fraud and whistleblowers vs. those who decide to remain silent are significantly different in the following personality traits. Most interesting for the development of Behavioral Compliance are those personality domains in which fraudsters and whistleblowers are different from each other, so Corporate Compliance can take these into consideration for fraud prevention.

Summary of Non-parametric Statistics

Summarizing, the following research findings can be concluded based on the Mann-Whitney-U Test two-sample rank-sum test.

	higher in	lower in
Fraudsters are significantly		Openness to Experience Honesty-Humility Altruism DOSPERT Integrity test
Whistleblowers are significantly	Conscientiousness Honesty-Humility Altruism Integrity test	

Source: Own illustration.

Based on the findings of the non-parametric statistics and consistent with the hypotheses derived in chapter 4.5, these personality traits are (1) Honesty-Humility, (2) Altruism and (3) Integrity test.

Before interpreting and discussing these findings in detail in chapter 5.3, results of multivariate regressions will be presented to provide further insights into intrinsically and extrinsically motivated behavior towards fraud or whistleblowing.

5.2.1.3 Multivariate Regression Analysis

The general purpose of multiple regression analyses is to learn more about the relationship between several independent variables (e.g. many personality traits) and a dependent variable (Pearson/Lee 1908). For example, the decision to become a whistleblower might be influenced by many personality traits in combination. Two multivariate regressions are performed: (1) an ordinary least squares regression (OLS) and (2) a logistic regression.

Ordinary Least Squares Regression

The dependent variable includes the waiting time until the first time fraud is observed (embezzlement; immediately or later) or reporting of such behavior (whistleblowing; immediately or later) within the experiment.⁵⁶ Accordingly, those subjects who have

⁵⁶ To take the point of time of fraud or whistleblowing into consideration, a survival model was performed as well. However, this statistical method is not included in the analysis due to various violations of the model. See Appendix 9.2 for more information.

never embezzled or who remained silent are not taken into account for these regressions, since no plausible waiting time can be derived for these persons (managers = 12, staff member = 47).

Table 5-10: Treatment 1: subjects used in multivariate regressions

Fraudsters		Whistleblowers	
Period	Frequency	Period	Frequency
0 (immediately)	33	0 (immediately)	9
1	5	1	0
2	7	2	0
3	4	3	0
4	4	4	1
5	4	5	3
6	4	6	1
7	3	7	2
8	1	8	2
9	3	9	1
10 (last period)	1	10 (last period)	1
Sum	67	Sum	20

Source: Own illustration.

Logistic Regression

The dependent variable in the logistic regression is categorial such as pass/fail, win/lose or simply 1/0. Accordingly, in this experimental context, the category is either embezzlement (immediately or later) vs. no embezzlement on the manager side or whistleblowing (immediately or later) vs. remaining silent on the staff member side.

Manager as a Potential Fraudster

In terms of content, the following analysis is designed to answer the following research questions:

1. How quickly do people show deviant behaviors (embezzlement) as soon as they have the opportunity to do so? and
2. How is this behavior statistically related to different personality traits?

To answer these research questions, the two aforementioned regressions, including personality traits as independent variables and age as a control variable will be performed. Due to heteroscedastic and not normally distributed residues, the regressions

are calculated with robust standard errors. Furthermore, the dependent variable is logarithmized to transform the very positively skewed distribution of the periods into a somewhat symmetrical normal distribution.

Since Honesty-Humility and Altruism of the HEXACO PI-R, the Ethic domain of the DOSPERT and the overall sum of the integrity test (CPB) are all designed to measure behavior of integrity, they are analyzed for factor loading. All four constructs positively load on a common component with a factor of at least 0.60. Therefore, the factor score (f_{-1}) is calculated and used for the following regressions. Table 5-11 shows the results of the OLS as well as the logistic regression.

Table 5-11: Treatment 1: multivariate regressions (managers)

	(OLS) ln_accept_first_period_neu	(Logit) spendeverhalten_0_1
Age	-0.00586 (-0.12)	0.0678 (0.49)
Openness	0.0741 (0.84)	0.607 (1.15)
Conscientiousness	-0.277* (-2.26)	-0.449 (-1.01)
Extraversion	0.00398 (0.05)	-0.316 (-1.08)
Agreeableness	0.125 (1.24)	0.155 (0.35)
Neuroticism	0.0564 (0.59)	-0.322 (-0.80)
f₋₁	0.340** (3.46)	2.053*** (2.63)
_cons	1.163 (0.87)	-1.644 (-0.38)
N	67	45

Note 1: When running OLS regressions consisting of the Big 5 personality traits, the control variable plus Honesty-Humility, Honesty-Humility is significant on a 1% level ($z=0.58$; $p=0.003$).

Note 2: When running the logistic regression consisting of the Big 5 personality traits, the control variable plus Honesty-Humility, Honesty-Humility is significant on a 5% level ($z=2.59$; $p=0.052$).

t statistics in parentheses: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Source: Own illustration.

The results of the multivariate regressions on the manager side can be interpreted as follows:

1. If Conscientiousness increases by one unit, the first embezzlement is observed on average in a 27% earlier period.

2. If f_{-1} increases by one unit, the first embezzlement is observed on average in a 34% later period.
3. If f_{-1} increases by one unit, the log. chance to belong to the group which never embezzled increases.

Summary Manager

In summary, the following findings are obtained.

Fraudsters are significantly	Higher in	Lower in
	Conscientiousness	f_{-1}

Source: Own illustration.

Staff member as a Potential Whistleblower

In terms of content, the following analysis is designed to answer the following research questions:

1. How quickly do people report deviant behaviors (whistleblowing) as soon as they have the opportunity to do so? and
2. How is this behavior statistically related to different personality traits?

To answer this research questions, an OLS regression as well as a logistic regression are performed, including personality traits as independent variables and age as a control variable. Similar to the regressions on the side of the manager, residues are heteroscedastic and not normally distributed. Accordingly, the regressions are calculated with robust standard errors and the dependent variable is logarithmized to transform the very positively skewed distribution of the periods into a somehow symmetrical normal distribution.

Furthermore, since Honesty-Humility and Altruism of the HEXACO PI-R, the Ethic domain of the DOSPERT and the overall sum of the integrity test (CPB) are all designed to measure behavior of integrity, they are analyzed for factor loading. Again, all four constructs positively load on a common component with a factor of at least

0.60. Therefore, the factor score (f_{-1}) is calculated and used in the following regressions.

Table 5-12 shows the results of the OLS as well as the logistic regression.

Table 5-12: Treatment 1: multivariate regressions (staff members)

	(OLS) first_period_blown_neu	(Logit) blowed
Age	0.0239 (0.29)	-0.214 (-1.86)
Openness	0.163 (0.58)	0.0362 (0.12)
Conscientiousness	-0.475* (-2.38)	-0.00883 (-0.03)
Extraversion	-0.119 (-0.33)	0.190 (0.86)
Agreeableness	-0.114 (-0.49)	-0.479 (-1.11)
Neuroticism	-0.0894 (-0.57)	-0.266 (-0.82)
f_1	-0.289 (-1.16)	0.752* (2.25)
_cons	3.876 (1.88)	6.993 (1.55)
<i>N</i>	20	67

Note 1: When running OLS regressions consisting of the Big 5 personality traits, the control variable plus Honesty-Humility, Honesty-Humility is significant on a 1% level ($z=-0.71$; $p=0.017$).

Note 2: When running the logistic regression consisting of the Big 5 personality traits, the control variable plus Honesty-Humility, Honesty-Humility is significant on a 5% level ($z=0.97$; $p=0.065$).

t statistics in parentheses: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Source: Own illustration.

The results of the multivariate regressions on the staff member side can be interpreted as follows:

1. If Conscientiousness increases by one unit, whistleblowing is observed on average in a 47% earlier period.
2. If f_{-1} increases by one unit, the log. chance to belong to the group of whistleblowers increases.

To already provide a better overview, the various findings will be shortly summarized.

Summary of the Findings of the Statistical Analyses

Based on the statistical analyses, fraudsters vs. those who decide against fraud and whistleblowers vs. those who decide to remain silent are significantly different in the following personality traits.

Summary of Statistical Analysis			
		higher in	lower in
Fraudsters are significantly	Non-parametric Statistics		Openness to Experience Honesty-Humility Altruism DOSPERT Integrity test
	Multivariate Re-gressions	Conscientiousness	f_1
Whistleblowers are significantly	Non-parametric Statistics	Conscientiousness Honesty-Humility Altruism Integrity test	
	Multivariate Re-gressions	f_1 Conscientiousness	

Source: Own illustration.

Most interesting for the development of Behavioral Compliance are those personality domains in which fraudsters and whistleblowers are different from each other, so Corporate Compliance can take these into consideration for fraud prevention and fraud detection. Based on the findings and consistent with the hypotheses derived in chapter 4.5, these personality traits are (1) Conscientiousness, (2) Honesty-Humility, (3) Integrity test and (4) Altruism. Moreover, fraudsters and whistleblowers significantly differ in the factor score (f_1) combining the four personality dimensions Honesty-Humility and Altruism of the HEXACO PI-R, the Ethic domain of the DOSPERT and the overall sum of the integrity test (CPB).

Before interpreting and discussing these findings in detail in chapter 5.3, treatment 2 and its effect of (1) a potential sanction and (2) a probability of detection on fraud and whistleblowing will be presented in the following.

5.2.2 Treatment 2: Completeness Statement and Sanctions

Treatment 2 was conducted in the *BaER-Lab* at the University of Paderborn on December 12, 2016 (2 sessions, 56 subjects), December 13, 2016 (1 session, 28 subjects)

and January 24, 2017 (2 sessions, 56 subjects). In sum, the experiment comprised five sessions, each subject was allowed to take part in only one session, and no subject had participated in the baseline scenario of the experiment before.

Each session lasted approximately 120 minutes; this includes the time spent for reading the instructions. At the end of the experiment, the participants were paid their total earnings anonymously in cash, at a conversion rate of one Euro for 8 Taler. Additionally, the participants were granted a show-up fee of €2.50. Subjects earned between €7.30 and €22.80 with an average payoff of €13.30.

In the five sessions, on average €211 were donated to the charity *GoAhead!*. The average total payoff of all participants in one session was €345 (€1727 for five sessions).

5.2.2.1 Descriptive Analysis

Table 5-13 summarizes the demographic characteristics of the participants of this treatment. The experiment was conducted with a total of 138 student participants (69 managers and 69 staff members). The demographic characteristics show very similar results to treatment 1.

Table 5-13: Treatment 2: demographic characteristics

	Managers		Staff members		Total	
	Mean	N	Mean	N	Mean	N
Age	23	69	22	69	23	138
Gender						
Female	60.9%	42	60.8%	42	60.9%	84
Male	39.1%	27	39.1%	27	39.1%	54
Field of Studies						
Business	52.1%	36	49.28	34	50.7%	70
Education	37.6%	26	37.68	26	37.7%	52
Language/Culture	7.3%	5	7.25	5	7.2%	10
Media	1.5%	1	4.35	3	2.9%	4
Technology	1.5%	1	1.45	1	1.5%	2
Donation Experience outside Laboratory						
Never	20.4%	14	20.3%	14	20.3%	28
Once	15.9%	11	10.2%	7	13.0%	18
1-3 times	47.8%	33	53.6%	37	50.7%	70
Regularly	15.9%	11	15.9%	11	15.9%	22

Source: Own illustration.

The students were on average 23 years old and overall by far more women than men participated in this treatment. Furthermore, most of the students were enrolled in either Business Administration or Education study paths and had already donated 1-3 times

in their life.⁵⁷ On average, less than 10% of the students stated that they had never donated to a real charity in their life.

Taking a closer look at the first five periods in which the students only played the team task and were paid under the team compensation scheme, it can be observed that most divisions solved the team task correctly in each period.

After Period 5: Fraud and Whistleblowing in Organizations

As illustrated before, in each of the following periods (6-16), the manager had the choice to (1) commit fraud (embezzle money) or (2) behave integer (donate the additional budget) while the staff member had the choice to (1) denounce the manager by declining the completeness statement although he did not embezzle the budget, (2) remain silent by confirming the completeness statement although the money was embezzled by the manager or (3) blow the whistle by declining the completeness statement when money was withheld from charity. Additionally, a detection mechanism and a sanction were introduced.

These different behavioral patterns and the timing of the embezzlement and whistleblowing actions are summarized in Table 5-14.

Table 5-14: Treatment 2: managers' and staff members' observed behavior

Managers	Mean (%)	N	Staff members	Mean (%)	N
Always donated	66.6%	46	Denunciation		
Always embezzled	5.8%	4	Whistleblowing	39.1%	9
First donated, then embezzled	27.6%	19	Remaining Silent	60.89%	14
Total	69			23	

Source: Own illustration.

While in the baseline scenario conducted by Bartuli/Djawadi/Fahr (2016) roughly 21% of the managers were compliant to the company's regulations by donating the designated budget to the charity *GoAhead!*, in treatment 1 only 15% of the managers were compliant throughout all periods. Accordingly, the implementation of the completeness statement (nudge) did not increase compliant behavior. In this treatment 2, the introduction of the probability of detection and a sanction proved effective towards

⁵⁷ As mentioned in chapter 5.2, business students are in general not more likely to commit fraud than students enrolled in other student paths (Friesen/Gangadharan 2012). Furthermore, Frank/Schulze (2000) conclude that the teaching of theoretical concepts is not the root of deviant behavior, but rather an existing, e.g. motivational disposition.

compliant behavior of the managers: sanctions worked as a damper on fraud (see chapter 3.2.2 for further information on the effect of sanctions). In 46 out of 69 divisions (66.67%), the managers were behaving according to the company's regulations. Out of 23 divisions in which money was embezzled, 9 employees (39.13%) blew the whistle on it. Nobody used the completeness statement to denounce the manager. Table 5-15 shows that there could be an influence of gender on fraud or whistleblowing, but Chi-Square tests prove against (fraud: $\chi^2(df=1)$: 0.27; $p = 0.60$; whistleblowing: $\chi^2(df=1)$: 0.20; $p = 0.64$). Accordingly, observed behavior cannot be explained by taking gender into consideration, similar to the studies conducted by Dworkin/Baucus (1998), Frank/Schulze (2000), Lambsdorff/Frank (2011) or Cassematis/Wortley (2013).

Table 5-15: Treatment 2: influence of gender on fraud or whistleblowing

Fraud	Mean (%)	N	Whistleblowing	Mean (%)	N
Male	34.8%	8	Male	33.3%	3
Female	65.2%	15	Female	66.7%	6
Total		23			9

Source: Own illustration.

Out of the 23 subjects who decided to embezzle the donation budget at least once, 15 were male (34.78%) and 15 female (65.22). The same counts for the decision to blow the whistle, with three subjects being male (33.3%) and six whistleblowers being female (66.7%).

The cumulated distribution of all observed embezzlement and whistleblowing actions over time is presented in Figure 25. As shown before, only approximately 6% (4 in total) of the managers immediately embezzled the donation budget. Over the course of the 16 periods, 19 more students in the role of managers decided for the additional budget, too. As part of the questionnaire, the students were asked why they decided to embezzle the budget.

Figure 25: Treatment 2: cumulated distribution of all observed actions over time



Source: Own illustration.

Managers who embezzled, rationalized their behavior with various different reasons – similar to treatment 1: (1) profit maximization (12 out of 23, e.g. “*Greed...*”) or (2) regular donations to other charities, (3) support of the staff member, (4) mistrust of the charity organization chosen (*GoAhead!*) or (5) low risk of detection.

All of the whistleblowers, who certainly did not rationalize to remain silent, explained their behavior driven by altruistic motives – indicating intrinsic motives. Almost all of the whistleblowers emphasized that they did so because it felt wrong that the manager tried to embezzle the donation budget, e.g. "*I would have always donated.*" (Subject 42). Other whistleblowers left comments such as "*I find it important that children who need help are really helped when possible.*" (Subject 69).

Summarizing, Table 5-16 shows the total of managers who embezzled per period as well as whistleblowing and remaining silent per period.

Table 5-16: Treatment 2: whistleblowing and non-whistleblowing actions conditional on the period in which the donation budget was embezzled the first time (in absolute numbers)

10	3					1	-	-	-	-	-	-	2	2
11	3					-	-	-	-	-	-	-	-	3
12	4						1	-	-	-	-	-	2	3
13	-							-	-	-	-	-	2	-
14	2								-	-	-	-	-	2
15	2									1	-	-	-	1
16	-										-	1	-	-

Source: Own illustration.

As already shown before, only four participants in the role of managers embezzled in the first period possible, 19 subjects in later periods. In consequence, nine staff members blew the whistle on these decisions during the course of the following periods. Further nine departments which tried to embezzle the donation budget were detected by the external audit.

Next, the hypotheses on the relationship between personality traits and observed behavior derived in chapter 4.5 will be tested. Due to the dampening effect of the implemented sanction on fraud, the following statistical analysis is kept rather short because it is conducted with a rather small sample of 23 fraudsters and 9 whistleblowers only.

5.2.2.2 Non-parametric Statistics on the Relationship between Personality and Behavior

Personality traits were analyzed using the whole HEXACO PI-R consisting of 100 questions. In the following, these personality traits will be examined in combination with observed behavior of fraud and whistleblowing.

Internal Consistency of the Personality Tests

Internal consistency of the tests part of the questionnaire is analyzed using the Cronbach's α , a statistic calculated from the pairwise correlations between items (Streiner 2003: 100). Cronbach's alpha ranges between negative infinity and one, with an $\alpha \geq 0.7$ being generally accepted as a statistic indicating internal consistency of items (Streiner 2013: 103). However, because the calculation of the Cronbach's α is influenced by the number of items, personality tests with few items can result in low α scores. Summarized on the diagonal Table 5-17, it is shown that only the sub-domains Emotionality ($\alpha=0.73$), Agreeableness ($\alpha=0.78$) and Openness to Experience

(0.78) are above the $\alpha \geq 0.7$ threshold. The other personality variables consist of less than five items each, therefore it is not surprising that these have low α scores.

Table 5-17: Treatment 2: means, standard deviations and intercorrelations of personality variables

	Mean	SD	1	2	3	4	5	6	7
1. Honesty-Humility	3.28	0.03	(0.55)						
2. Emotionality	3.32	0.04	0.16***	(0.73)					
3. eXtraversion	3.38	0.03	0.14**	-0.04	(0.45)				
4. Agreeableness	2.96	0.04	0.13**	-0.09	0.01	(0.78)			
5. Conscientiousness	3.46	0.94	0.08	0.15***	0.01	-0.05	(0.67)		
6. Openness	3.17	0.04	0.12**	-0.06	0.24***	0.08	-0.01	(0.78)	
7. Altruism	3.75	0.05	0.38***	0.30***	0.22***	0.21***	0.07	0.13**	(0.66)

Note: N=138. Kendall's tau correlation was used. Cronbach's alpha coefficients are presented on the diagonal in parentheses. Significance at the 1% and 5% level is denoted by *** and **, respectively.

Source: Own illustration.

Intercorrelation between the personality variables is measured using Kendall's Tau (Kendall 1938). As shown in Table 5-18, various strong positive correlations could be found. Most notably, Honesty-Humility finds very strong positive correlations with the personality variables Emotionality and Altruism.

Mann-Whitney-U Test Two-sample Rank-sum Test

For the analysis to test whether non-embezzling managers (or whistleblowing employees) score on average significantly different in the personality traits and prosocial attitudes than embezzling managers (or non-whistleblowing employees), non-parametric methods are used. Therefore, the Mann-Whitney-U Test two-sample rank-sum test is used to test the hypotheses based on the taxonomy developed in chapter 4.5.

Table 5-18: Treatment 2: Mann-Whitney U-Test

	Never donated vs. Always Donated		Non-Whistleblowers vs. Whistleblowers	
Honesty-Humility	3.43 vs. 3.28	z=0.51	3.26 vs. 3.25	z=0.02
Emotionality	3.62 vs. 3.31	z=1.27	3.31 vs. 3.44	z=0.32
eXtraversion	3.46 vs. 3.38	z=0.27	3.47 vs. 3.35	z=0.78
Agreeableness	2.82 vs. 2.99	z=0.51	2.89 vs. 2.88	z=0.19
Conscientiousness	3.85 vs. 3.26	z=2.83	3.32 vs. 3.27	z=0.12
Openness	3.35 vs. 3.26	z=0.30	3.16 vs. 3.38	z=0.62
Altruism	4.30 vs. 3.66	z=2.00**	3.89 vs. 3.75	z=-2.09

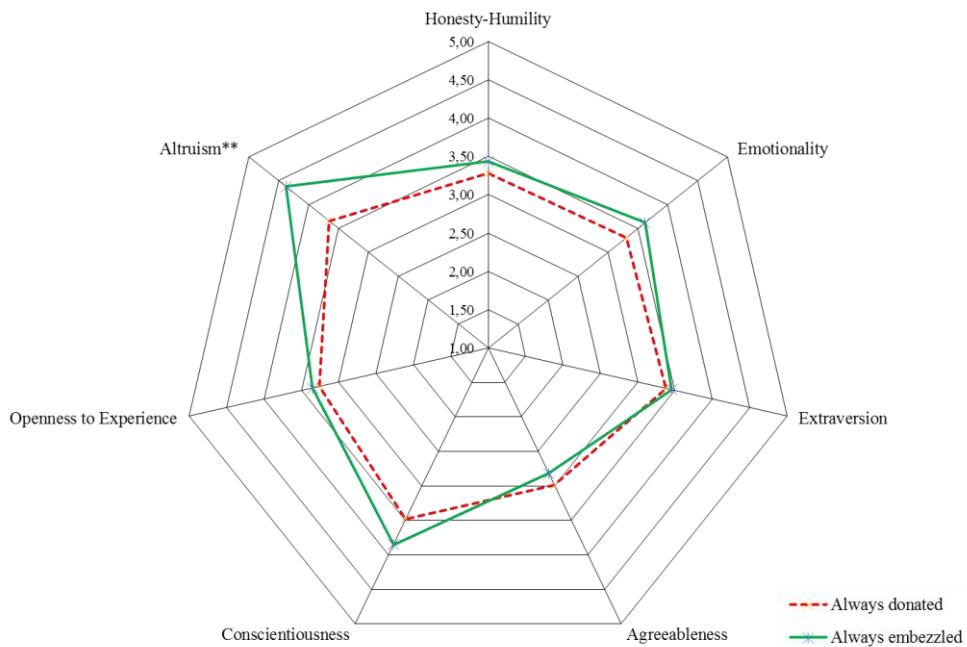
Note: Significance at the 1%, 5%, and 10% level is denoted by ***, ** and *, respectively.

Source: Own illustration.

As presented in Table 5-18, almost no significant differences in personality traits can be found on the manager and the staff member side.

On the side of the manager, those who behave compliant (donating the budget to the charity) are significantly higher at the 5% level in the personality dimension Altruism. Based on the analysis on arithmetic means, the personality differences among non-compliant (never donated) and compliant managers (always donated) are developed in Figure 26.

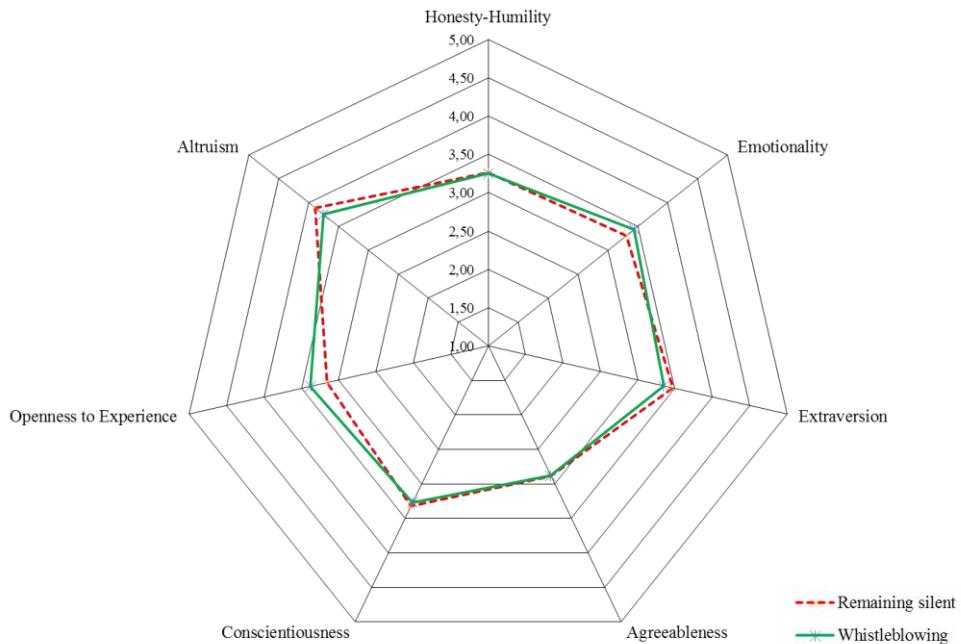
Figure 26: Treatment 2: personality differences among managers



Source: Own illustration.

On the side of the staff members, no significant differences in personality traits could be found in the Mann-Whitney U-Test shown in Table 5-18. Based on the analysis on arithmetic means, the personality differences among non-whistleblowers and whistleblowers (immediately) are developed in Figure 27.

Figure 27: Treatment 2: personality differences among staff members



Source: Own illustration.

Before interpreting and discussing these findings in detail in chapter 5.3, results of multivariate regressions will be presented to provide further insights on intrinsically and extrinsically motivated behavior towards fraud or whistleblowing.

5.2.2.3 Multivariate Regression Analysis

An ordinary least squares regression (OLS) is performed, in which the dependent variable includes the waiting time until the first embezzlement or whistleblowing within the experiment. Accordingly, those subjects who have never embezzled or who remained silent are not taken into account for this regression, since no plausible waiting time can be derived for these persons (managers = 46, staff member = 14).

Table 5-19: Treatment 2: subjects used in multivariate regression

Fraudster		Whistleblower	
Period	Frequency	Period	Frequency
0 (immediately)	4	0 (immediately)	0
1	2	1	5
2	1	2	1
3	2	3	1
4	3	4	1
5	3	5	-
6	4	6	-

7	-	7	1
8	2	8	-
9	2	9	-
10 (last period)	-	10 (last period)	-
Sum	23	Sum	9

Source: Own illustration.

Manager as a Potential Fraudster

In terms of content, the following analysis is designed to answer the following research questions:

1. How quickly do people show deviant behaviors (embezzlement) as soon as they have the opportunity to do so? and
2. How is this behavior statistically related to different personality traits?

To answer these research questions, the two above-mentioned regressions, including personality traits as independent variables and age as a control variable, will be performed. Due to heteroscedastic and not normally distributed residues, the regressions are calculated with robust standard errors. Furthermore, the dependent variable is logarithmized to transform the very positively skewed distribution of the periods into a somewhat symmetrical normal distribution.

Since Honesty-Humility and Altruism of the HEXACO PI-R, the Ethic domain of the DOSPERT and the overall sum of the integrity test (CPB) are all designed to measure behavior of integrity, they are analyzed for factor loading. All four constructs positively load on a common component with a factor of at least 0.60. Therefore, the factor score (f_{-1}) is calculated and used in the following OLS model. Table 5-20 shows the results of the OLS as well as the logistic regression.

Table 5-20: Treatment 2: multivariate regressions (managers)

	(OLS)	(Logit)
	ln_accept_first_period_neu	spendeverhalten_0_1
Age	-0.0222 (-0.41)	-0.263 (-1.23)
Emotionality	0.158 (0.40)	-0.457 (-0.27)
eXtraversion	-0.169 (-0.29)	-0.0863 (-0.09)
Agreeableness	0.869* (2.70)	0.255 (0.35)

Conscientiousness	-0.265 (-0.59)	-1.456* (-2.00)
Openness	-0.000923 (-0.00)	0.695 (0.34)
f_1	0.0141 (0.05)	-0.536 (-0.98)
_cons	0.151 (0.04)	13.14 (1.02)
N	23	50

t statistics in parentheses: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Source: Own illustration.

The results of the multivariate regressions on the manager side can be interpreted as follows:

1. If Agreeableness increases by one unit, the first embezzlement is observed on average in a 86% earlier period.
2. If Conscientiousness increases by one unit, the chance to belong to the group which never embezzled decreases.

Staff Member as a Potential Whistleblower

In terms of content, the following analysis is designed to answer the following research questions:

1. How quickly do people report deviant behaviors (whistleblowing) as soon as they have the opportunity to do so? and
2. How is this behavior statistically related to different personality traits?

To answer this research question, the following OLS regression is performed including personality traits as independent variables and age as a control variable. Similar to the OLS regression on the side of the manager, residues are heteroscedastic and not normally distributed. Accordingly, the OLS model is calculated with robust standard errors and the dependent variable is logarithmized to transform the very positively skewed distribution of the periods into a somehow symmetrical normal distribution. Furthermore, since Honesty-Humility and Altruism of the HEXACO PI-R, the Ethic domain of the DOSPERT and the overall sum of the integrity test (CPB) are all designed to measure behavior of integrity, they are analyzed for factor loading. Again, all four constructs positively load on a common component with a factor of at least

0.60. Therefore, the factor score (f_1) is calculated and used in the following OLS model. Table 5-21 shows the results of the OLS as well as the logistic regression.

Table 5-21: Treatment 2: multivariate regressions (staff members)

	(OLS) first_period_blower_neu	(Logit) blower
Age	-0.270 (-1.98)	-0.0242 (-0.09)
Emotionality	-2.593 (-2.45)	3.635 (1.66)
eXtraversion	-1.397 (-0.37)	-1.998 (-1.13)
Agreeableness	-0.153 (-0.11)	1.208 (0.99)
Conscientiousness	0.546 (0.53)	-0.849 (-0.53)
Openness	-0.839 (-0.34)	3.505 (1.93)
f_1	0.119 (0.12)	-1.363 (-1.29)
_cons	21.65 (2.71)	-17.62 (-1.17)
<i>N</i>	9	23

t statistics in parentheses: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Source: Own illustration.

No significant differences in personality dimensions could be found. However, this could be the result of the rather small sample size.

5.3 Discussion of the Findings

The experimental studies have exposed various findings on personality traits which Corporate Compliance should take into consideration to better prevent and/or detect fraud.

5.3.1 Treatment 1: Intrinsic Motivation

The findings derived as part of the first treatment on intrinsic motivation towards fraud and whistleblowing strongly support the hypotheses derived in chapter 4.5 and the types of potential fraudsters and potential whistleblowers derived in chapter 4.5.1.

The findings presented in Table 5-22 strongly support the hypotheses derived in chapter 4.5 that potential fraudsters (compared to their non-embezzling counterparts) rank

significantly lower in personality traits such as (1) Honesty-Humility or (2) Altruism as well as (3) an integrity test (IBES).

Table 5-22: Treatment 1: personality of a potential fraudster

	Personality based on Literature Review	Statistical Analysis
Fraudster: Embezzlement of donation budget	<p>Type A. Low in Conscientiousness in combination with low integrity (scoring low on an integrity test or scoring low in Honesty-Humility)</p> <p>Type B. High in Conscientiousness in combination with low integrity (scoring low on an integrity test or scoring low in Honesty-Humility)</p>	<p>Significantly lower in</p> <ul style="list-style-type: none"> • Honesty-Humility • Altruism • Integrity test <p>Significantly higher in</p> <ul style="list-style-type: none"> • Conscientiousness

Note: See chapter 4.5.1 for further details on Type A and Type B of a potential fraudster.

Source: Own illustration.

Comparing these results with those people who blew the whistle on embezzlement, Table 5-23 shows further results which support the aforementioned hypotheses. Potential whistleblowers (compared to those counterparts who decided to remain silent) rank significantly higher in personality traits such as (1) Honesty-Humility or (2) Altruism as well as (3) an integrity test such as IBES.

Table 5-23: Treatment 1: personality of a potential whistleblower

	Personality based on Literature Review	Statistical Analysis
Integrity: Reporting em- bezzlement of donation budget (whistleblowing)	<p>Type A. Low in Conscientiousness in combination with high integrity (scoring high on an integrity test or scoring high in Honesty-Humility)</p> <p>Type B. High in Conscientiousness in combination with high integrity (scoring high on an integrity test or scoring high in Honesty-Humility)</p>	<p>Significantly higher in</p> <ul style="list-style-type: none"> • Honesty-Humility • Altruism • Integrity test • Conscientiousness

Note: See chapter 4.5.1 for further details on Type A and Type B of a potential whistleblower (integrity).

Source: Own illustration.

Regarding Conscientiousness, the results indicate that both, a potential fraudster as well as a potential whistleblower, tend to rank higher on this personality trait, too. But ranking low on integrity traits seems to make the difference between Type A of a

fraudster who would be an “*employer’s worst nightmare*” (Lee/Ashton 2015: 58) or Type B of an integer employee who combines high Conscientiousness with high integrity and makes them the “*first people you’d want to hire*”.

In its core, three findings can be derived from treatment 1 for the development of Behavioral Compliance:

1. Behavioral Compliance: Honesty-Humility

Along with the previously set hypothesis, fraudsters are significantly lower in Honesty-Humility while whistleblowers are significantly higher in this personality dimension. This study supports previous research which has shown that low scores in Honesty-Humility are negatively correlated with (1) dishonest behaviors (Hilbig/Zettler 2015: 72), (2) organizational misbehavior, such as stealing, absenteeism or theft (Lee/Ashton/de Vries 2005: 179; de Vries/van Gelder 2015 112; Cohen et al. 2014: 943; O’Neill/Lewis/Carswell 2011: 595; Oh et al. 2011: 496) or occupational crime (van Gelder/de Vries 2016: 701). Furthermore, whistleblowers rank significantly higher in Honesty-Humility, a personality trait that goes along with favorable behaviors. For example, people high in this trait (1) do not exploit, cheat or steal from others, (2) are more likely to favor ethics and (3) score higher on integrity tests (Lee et al. 2008: 147) and (4) are much less likely to commit crimes (Lee/Ashton 2015: 27) – even when they are confronted with job insecurity (Chirumbolo 2015: 554).⁵⁸

Accordingly, the following hypothesis is supported:

H4: Honesty-Humility is positively related to whistleblowing and negatively related to fraudulent behavior.

2. Behavioral Compliance: Altruism

Another characteristic trait in which fraudsters and whistleblowers significantly differ is Altruism. Along with the previously set hypothesis, fraudsters rank significantly lower in Altruism, whistleblowers rank significantly higher. This finding fits well to the findings on Honesty-Humility which already suggest a person’s tendency for pro-

⁵⁸ Furthermore, whistleblowers (immediately and later) were significantly higher on Honesty-Humility’s sub-dimensions Greed and Fairness – similar to those managers who behaved compliant. These findings will be further detailed in the interview part of this study.

social altruistic behaviors and fairness – even when there is no chance of being detected or the potential victim is helpless (Hilbig et al. 2013: 598; Ashton 2013: 164; Lee/Ashton 2015: 28). Therefore, the following hypothesis is supported:

H6: Altruism is positively related to whistleblowing and negatively related to fraudulent behavior.

3. Behavioral Compliance: Integrity Test

Finally and along with previous research findings, fraudsters and whistleblowers significantly differ in the overall sum of the integrity test. Not only managers who always donate the additional budget but staff members who blow the whistle (immediately and later) are significantly higher than their non-integer counterparts.

H8: Integrity is positively related to whistleblowing and negatively related to fraudulent behavior.

5.3.2 Treatment 2: Extrinsic Motivation

Similar to findings presented by Blais/Bacher (2007), Barr/Lindelow/Serneels (2009) or Azfar/Nelson (2007), treatment 2 shows that a sanction (extrinsic incentive) clearly has a dampening effect on fraud. While in the baseline scenario conducted by Bartuli/Djawadi/Fahr (2016) roughly 21% of the managers, in treatment 1 only 15% of the managers and in treatment 2 almost 67%, were compliant. Based on these findings, this leaves Corporate Compliance two options when aiming at better fraud prevention or fraud detection:

Advice 1: Taking personality traits into consideration.

Advice 2: Imposing sanctions on non-compliant behavior.

Before discussing these two advices in chapter 7 in more detail, the following chapter will question the findings on personality traits in a qualitative interview study (option 1).

6 Qualitative Research: Interviews

After the laboratory experiments had been conducted and various potential characteristic traits of relevance had been analyzed, these findings were mirrored in a qualitative research. More generally speaking, the aim of qualitative research is to explore and understand the why and the how of decision making (Creswell 2013: 32) and is therefore of high usefulness for this study. The characteristics of what qualitative research methods are focused on, becomes clear in the following definition by Denzin and Lincoln (2005):

„Qualitative research is a situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that make the world visible. These practices transform the world. They turn the world into a series of representations, including field notes, interviews, conversations, photographs, recordings, and memos to the self. At this level, qualitative research involves an interpretive, naturalistic approach to the world. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them” (Denzin/Lincoln 2005: 3).

More precisely, this part of the study uses qualitative interviews as a further research method. These are defined as

„In qualitative interviews, the researcher conducts face-to-face interviews with participants, telephone interviews, or engages in focus group interviews with six to eight interviewees in each group. These interviews involve unstructured and generally open-ended questions that are few in number and intended to elicit views and opinions from the participants” (Creswell 2013: 239).

Accordingly, the goal of the following interviews of this study is to question the findings of the laboratory experiments and to find out more about the impact of personality on fraud or whistleblowing. When this part of the research started, it was planned to conduct interviews with fraudsters and whistleblowers, but due to the sensitivity of this research approach, recruiting participants for this study was a highly challenging task. And unfortunately, no white-collar criminal could be recruited due to various reasons which will be highlighted in the following.

Recruiting Fraudsters

Using a snowball sampling technique, the participants were (unsuccessfully) recruited (Baltar/Brunet 2012). After a detailed online investigation to find contact details of

convicted fraudsters, the researcher reached out to potential participants between August 2016 and December 2016.

Except for being a convicted fraudster, there were no other basic criteria for being a potential candidate. All of the individuals were contacted either via the online platform LinkedIn or via e-mail, resulting in an average first reply within 24 hours or no answer at all. With the first contact, fraudsters and whistleblowers received the same information: (1) outlining the details of the study, (2) assuring confidentiality and (3) publishing nothing without their consent. Furthermore, several German public prosecutor's offices were contacted beginning in September 2016 to conduct interviews with fraudsters still in prison. However, until the end of February 2017 all of the offices declined contact with inmates because it would have been either too time consuming for their staff or because it could have had an impact on the therapy of the fraudsters. While most of the white-collar criminals did not answer at all, potential participants did not agree to participate because they simply expected too much money in return. One fraudster (via his personal assistant) asked for US\$ 10.000 for a Skype session in which the researcher would have been able to ask a "couple of questions".⁵⁹ All of the other potential participants who decided to answer the initial request, asked for money in their first or second reply. A characteristic which is typical of people being low in the Honesty-Humility domain (Ashton/Lee 2005: 1324) and being extrinsically motivated (von Rosenstiel 2015: 54).

Recruiting Whistleblowers

Using a virtual snowball sampling technique, the participants were recruited (Baltar/Brunet 2012). After a detailed online investigation to find contact details of whistleblowers, they were directly contacted between September 2016 and the end of December 2016. All of the whistleblowers, who were contacted, were external whistleblowers who either (1) tried to or did not have the chance to blow the whistle internally first or (2) refrained from internal whistleblowing because it would have been life threatening.

Except for being a whistleblower, there were no other basic criteria for being a potential candidate. All of the individuals were contacted either via the online platform

⁵⁹ This person regularly holds presentations in front of (senior) management of various corporations and earns enormous sums by explaining how he kept his massive fraud scheme running – and how good he felt about it.

LinkedIn or via e-mail, resulting in an average first reply within 24 hours or no answer at all. With the first contact, whistleblowers received the same information as the fraudsters: (1) outlining the details of the study, (2) assuring confidentiality and (3) publishing nothing without their consent. But contrary to the fraudsters, most of the whistleblowers answered. Almost all of them asked for a call to learn more about the study approach of Behavioral Compliance and the researcher as well as his motivation. Furthermore, these calls were helpful for the researcher to learn whether the potential participants would be willing and able to honestly and openly talk about their whistleblowing experiences in the interview situation.⁶⁰ Due to various influencing factors (e.g. legal constraints, personal circumstances or thoughts of the traumatic whistleblowing experience) potentially impacting their decision, recruiting whistleblowers was a highly challenging task. In a nutshell, gaining the whistleblowers' trust was key to convincing them to participate in this study.

None of the whistleblowers ever asked for money while all of them expressed their good intentions when they decided to blow the whistle. These preliminary findings, which will be further detailed in the following qualitative analysis of the interviews, already indicated that whistleblowers could be high in the Honesty-Humility domain (Ashton/Lee 2005: 1324) and be intrinsically motivated.

Research Questions

Based on the results of the experimental studies, research questions for whistleblowers are as follows:

1. Are whistleblowers intrinsically or extrinsically motivated to blow the whistle?
2. Do whistleblowers rank high on personality traits that measure moral behavior?

To answer these questions and to derive insights from the qualitative research, the qualitative content analysis by Mayring (2014) was applied and will be further detailed in the following.

⁶⁰ Creswell (2013: 133) emphasizes the importance of acquiring participants who will be willing to openly and honestly share "their story". Therefore, Creswell recommends that interviews should be conducted in a comfortable environment.

6.1 Qualitative Content Analysis

In general, qualitative content analysis has been defined as “*a research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns*” (Hsieh/Shannon 2005: 1278). The central idea of Qualitative Content Analysis is to assign categories to text passages as a qualitative-interpretive act of the content (Mayring 2014). This method is intended to analyze any form of communication such as an interview by proceeding systematically, rule- and theory-guided, and to ultimately allow drawing conclusions on certain aspects of communication. Mayring (2014: 39) developed a technique of systematic, qualitatively oriented text analysis which provides eight basic approaches which will be used to analyze the interviews. The eight basic approaches of this technique will be explained shortly in the following.

1. Embedding of the material within the communicative context

The material, such as the interviews conducted for the research on Behavioral Compliance, is understood as relating to a particular context of communication. This context has to be considered when interpreting the results.

2. Systematic, rule-bound procedure

In order to keep the results comprehensible for other content analysts, the procedure for the analyses and its evaluation are based on previously defined rules.

3. Categories in the focus of the analysis

The categories are at the center of the analysis. The application of categories is crucial for the comparability of the results and the reliability of the analysis.

4. Object reference in place of formal techniques

The methods of qualitative content used for analysis is adapted, depending on the individual research approach.

5. Testing specific instruments via pilot studies

The methods and the category system should be first tested and documented in a pilot study.

6. Theory-guided character of the analysis

Latest research findings are used to fulfill the theory-guided character of the analysis. In particular, (1) content-related arguments should always be valued more than procedural arguments and furthermore (2) validity is more important than reliability.

7. Integrating quantitative steps of the analysis

Quantitative methods should be in the analytical process and fully explained and analyzed in detail. However, a quantitative analysis of the interviews will not be conducted due to the very different backgrounds of the whistleblowers as well as due to the fact that not all interviews were conducted in the mother tongue of the whistleblowers.

8. Quality criteria

The assessment of the results according to quality criteria, such as objectivity, reliability and validity. Intercoder reliability is a particularly important quality criterion. It checks whether different encoders with the same instrument and the identical record come to comparable results.

The strength of the Qualitative Content Analysis (Mayring 2014) is rooted in its clear process of analysis – making it comprehensible to others and intersubjectively testable. Mayring (2014: 54) defines steps for a general procedural model which will be used for the analysis of the qualitative interviews.

Table 6-1: General procedural model for the Qualitative Content Analysis

1. Determination of the Material	
	a. Definition of the corpus material
	b. Analysis of the situation of origin
	c. Formal characteristics of the material
2. Research Focus	
	a. Direction of the analysis
	b. Theory-oriented differentiation of the problem
3. Definition of the Category System	
	a. Determination of techniques of analysis and establishment of a concrete procedural model
	b. Definition of content analytical units
4. Analysis	
	a. Analytical steps taken by means of the category system
	b. Re-checking the category system by applying it to theory and material
	c. Interpretation of the results in relation to the main problem and issue
	d. Application of content-analytical quality criteria

Source: Mayring (2014: 55).

These steps for a general procedural model will be presented in the following.

6.1.1 Determination of the Material

First, the material which will be used for the qualitative research will be presented. After (1) the presentation of the corpus material combining a pre-interview questionnaire and qualitative interviews, (2) the analysis of the situation of origin of the interview study will be presented. Finally, further (3) formal characteristics of the material will be detailed.

Presentation of the Corpus Material

After whistleblowers agreed to participate, they were sent an informed consent (Appendix 9.3) which they were asked to sign. Along with a signed version of the informed consent by the researcher, the participants were sent a pre-interview questionnaire (Appendix 9.4) before scheduling a time and location for an interview. In total, eight whistleblowers participated in this study.

1. Pre-Interview Questionnaire

The pre-interview questionnaire consists of two parts (Appendix 9.4).

In the first part of it, some general information was asked: (1) age, (2) gender, (3) education and (4) fields of studies. More general information was not gathered because the combination could already put the confidentiality of the whistleblowers at risk. For example, a combination of nationality, age and industry could expose some of the whistleblowers in the sample.

The second part of the questionnaire consisted of the HEXACO PI-R personality test that was already used in the experimental studies. Consisting of 100 questions, participants answered on a 5-point scale with response options ranging from 1 = "strongly disagree" to 5 = "strongly agree". The HEXACO PI-R and no other personality tests that had been previously used were included because they showed the strongest results in the experimental studies and therefore, allowing for interpretations on fraud and whistleblowing. The researcher decided not to directly ask for personality traits in the qualitative interviews because answers would likely be biased. Lee/Ashton (2015: 76) conclude that self-reports are likely to be very accurate when they are used in anonymous research settings because people do not have an incentive to cheat. However,

to check the results of the personality tests for potential bias, the researcher included control questions in the qualitative interviews to indirectly ask for personality traits (Hilbig/Moshagen/Zettler 2015).

2. Qualitative Interviews

While all of the whistleblowers filled out the HEXACO PI-R personality test, open-ended interviews were conducted with six whistleblowers. The interview questionnaire was developed based on the framework of Behavioral Compliance. After an introductory part, questions regarding (1) personal factors, (2) situational factors and then (2) the process of whistleblowing were asked. The questionnaire is attached in Appendix 9.5.

Table 6-2 shows the participating whistleblowers in the qualitative interviews.

Table 6-2: Participating whistleblowers in the qualitative interview study

	WB01	WB02	WB03	WB04	WB05	WB06	WB07	WB08	WB09
HEXACO PI-R	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Interview	Yes	Yes	No	Yes	Yes	Yes	No	Yes	No
Duration	128 min	37min	-	41min	46min	71min	-	38min	-
Age	51-55	51-55	36-40	61-65	41-45	56-60	31-35	26-30	26-30
Gender	Male	Male	Male	Male	Male	Male	Male	Female	Male
Education	Master	Master	High School	Master	PhD	Master	BA	BA	High School
Internal Whistleblowing	Yes	No	Yes	No	Yes	Yes	Yes	Yes	No
External Whistleblowing	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note 1: WB02 blew the whistle after he had left the organization. He felt pressured to report to the media because his former employer tried to blame him for an exposed misconduct.

Note 2: WB04 could not blow the whistle internally because it would have risked his life: *"In fact you make enemies by blowing the whistle, you can't rely on anybody to save you."*

Note 3: WB09 blew the whistle on a fraud that had already been internationally reported on. He collected evidence proving that the fraud was still running and reporting using internal channels would have been too risky.

Source: Own illustration.

Analysis of the Situation of Origin

Participation in the interviews was voluntary. The researcher conducted all of the interviews in English⁶¹ via Skype in video conferences, each of the whistleblowers was at home in a comfortable environment. One of the interviews was held in person at the whistleblower's home and was conducted in German.

Encouraging the participants to talk about their feelings and emotions throughout their personal whistleblowing experience was not only challenging but required the whistleblower's trust and a huge sense of sensitivity. Similar to the findings of Bjørkelo/Macko (2012), all of the whistleblowers got stigmatized with a "minority status" within the workplace or even within the society, which potentially resulted in a post-traumatic stress disorder (PTSD) (FW 03.11.2010). A PTSD is defined as "*a disorder that develops in some people who have experienced a shocking, scary, or dangerous event*" (NIMH 19.05.2017). Risk factors for the development of a PTSD are e.g. (1) getting hurt, (2) seeing another person get hurt, (3) feeling helplessness, and/or (4) no social support after the traumatic event (*ibid*).⁶² All of the whistleblowers experienced at least two of the four risk factors. Every whistleblower lost many friendships while two of them even had to go through a divorce. At worst, some participants had to fear for their lives.

Formal Characteristics of the Material

The interviews were tape-recorded and then transcribed but due to the sensitivity and confidentiality of the information, these typescripts are not attached in the published version of this dissertation and only available to the researcher and professors in the doctoral committee.

The interviews with the whistleblowers will be analyzed in the following and provided with additional insights from the HEXACO PI-R.

6.1.2 Research Focus

The research focus of the interview study is based on the research findings derived in the previous chapters and accordingly focused on (1) intrinsic and extrinsic motivation as well as (2) personality traits of whistleblowers.

⁶¹ However, English was not the mother tongue of all participants.

⁶² Research on PTSD shows that "*support from family and friends can be an important part of recovery*" (NIMH May 19, 2017).

Direction of Analysis

The qualitative interviews were intended to encourage participants to report on various factors that might have impacted them towards becoming a whistleblower. As indicated before, finding out about intrinsic motivation to become a whistleblower was of main interest for this research. The questionnaire was based on the framework of Behavioral Compliance and is available for review in Appendix 9.5. Accordingly, the whistleblowers were asked to report on (1) personal factors, (2) situational factors and (3) their whistleblowing experience. However, the analysis of the interviews is only focused on the motivational aspects towards whistleblowing while most of the other questions were used as controls to allow for a stronger answer of the research questions.

Theory-oriented Differentiation of the Problem

To determine which text passages of the six interviews are relevant for the analysis, categories need to be defined first. To develop these categories, Mayring (2014) suggests two different methods: (1) inductive and (2) deductive. While the inductive method derives the categories directly from the material without a theoretical concept, categories are deduced from theory or from previous research in the deductive method (Mayring 2014: 97). Based on the previous findings from the literature review as well as the experimental studies, a deductive method was used to derive insights into underlying personality traits of whistleblowers.

Table 6-3: Behavioral Compliance: personality of a potential whistleblower

	Personality based on Literature Review	Statistical Analysis
Integrity: Whistleblower	<p>Type A. Low in Conscientiousness in combination with high integrity (scoring high on an integrity test or scoring high in Honesty-Humility)</p> <p>Type B. High in Conscientiousness in combination with high integrity (scoring high on an integrity test or scoring high in Honesty-Humility)</p>	<p>Significantly higher in</p> <ul style="list-style-type: none"> • Honesty-Humility • Altruism • Integrity test • Conscientiousness

Note 1: See chapter 4.5.1 for further details on Type A and Type B of a potential whistleblower.

Note 2: See chapter 5.3 for details on the statistical analysis of the laboratory experiments.

Source: Own illustration.

Additionally, for the purpose of analyzing the interviews for similarities, an inductive method was applied as well.

6.1.3 Definition of the Category System

To answer the first research question (Are whistleblowers intrinsically or extrinsically motivated to blow the whistle?), the following categories are set:

Table 6-4: Categories for the analysis of the qualitative interview study

Category	Sub-Category
[A] Personality of Whistleblowers	[A1] Intrinsic Motivation
	[A2] Extrinsic Motivation

Note: See chapter 3.2 for further details on intrinsic and extrinsic motivation.

Source: Own illustration.

Anchor examples for the categories will be listed in the following.

[A] Personality of Whistleblowers

[A1] Intrinsic Motivation

- (I) Are whistleblowers intrinsically motivated?
- (II) *“Staying in the job and not saying anything is torture. You just feel it inside you. You go in angry every day. It's hard to explain it because it seems... Why would you be so angry? Why don't you just do the thing and ignore it? But you spend so many hours of your day at work. And you do it because you're kind of working for the future. You're saving money for yourself, for your family, and you're trying to make the world a better... trying to make the future better for your kids. And knowing that I'm part of something that's very negative for my kids and for the rest of society, I think that's something that people haven't really discussed much.”* (WB05)
- (III) – The intrinsic motive of meaning and self-realization, which is the desire to do something that is beneficial to the community and has meaning (von Rosenstiel 2015: 56), is the content of the statement.

[A2] Extrinsic Motivation

- (I) Are whistleblowers extrinsically motivated?
- (II) *“I know I'm in a foreign country where the rulers of the foreign country are probably taking the money... the corrupt money, and I know that I'm in danger. [...] And you have a devil on one shoulder saying, no, you could do a deal. You could blackmail the*

managing director. You could get him to pay you. You could resign and take a payment and go. You could get him to give you another job. And on the other shoulder, you've got your conscience, your little angel sitting there going: "Hang on here. You can't do that. You know, if you do that, you're corrupt. You're one of them. Is that what you want? Is that what you're going to be? Are you going to take the money and run?'"' (WB06)

(III) – Intrinsic motives seem to be stronger than extrinsic motives (money) for whistleblowers.

In the following, the interview study will be analyzed and its deductively as well as inductively developed findings presented. Due to the sensitivity of the information, only parts of the interviews will be published in an anonymized version.

6.2 Findings of the Interview Study

As learned in chapter 2.2, fraudsters (1) use the opportunity, (2) have an incentive and (3) rationalize their behavior by excuses. They (4) possess the necessary position/function, (5) are intelligent, (6) are egoistic and confident, (7) have the talent to coerce others into fraud, and have the talent to (8) keep up lies and (9) cope with stress. Without a doubt, whistleblowers possess the necessary position,⁶³ but they decide to speak up and decide against (1) using the opportunity, (2) rationalizing their behavior.

This chapter presents findings derived from the interviews conducted with the whistleblowers.

6.2.1 When Corporate Compliance Runs Short

Chapter 2.3.1 showed that when it comes to fraud detection, tips provided by employees and externals are the major source for initial detection. And because the earliest detection possible is important for companies to prevent increasing sanctions due to U.S. laws and its strict enforcement, whistleblowing is an inevitable source for fraud detection and prevention of sanctions.

The findings of the interview match the research findings presented in chapter 2. As shown in Table 6-2, all whistleblowers except for WB02 and WB04 first reported in-

⁶³ Without the necessary position, the whistleblowers would not have learned about the fraud which they later reported.

ternally before they decided to report using external channels, such as media or external authorities, because the fraud remained uncorrected. Within the companies, the whistleblowers talked to direct superiors or reached out to the company's compliance department to make their employer aware of potential fraud risks. Using many different channels such as the compliance hotline or e-mail (see Figure 18 on page 51), whistleblowers tried to be heard. However, all whistleblowers were not taken seriously or even worse, if they were taken seriously, their former employer tried to muzzle them. For example, WB05 and WB06 were explicitly threatened to remain silent or they would have to suffer consequences. Nevertheless, all whistleblowers who participated in the interview study were (and still are) facing severe retaliation – especially when they were reporting on a government.

All whistleblowers hazarded the potential consequences when they decided to blow the whistle. In the end, all of them were financially broken and had to start a new life for reporting severe misconduct. Without a doubt, Corporate Compliance (and in some cases even the local government) ran short in protecting the whistleblowers who were treated as contagious or radioactive (Bjørkelo et al. 2008: 28).⁶⁴ If companies and/or local government want to encourage whistleblowing because it helps to detect fraud as early as possible, they have to take whistleblowing much more seriously.

As the following chapter will show, all whistleblowers reported fraud because it was (1) "the right thing to do" and that they have (2) good moral intentions.

6.2.2 Intrinsic or Extrinsic Motivation towards Whistleblowing

The literature review as well as the laboratory experiments suggest that there seems to be an intrinsic motive towards moral behavior and that this motive can be learned from role models. Does the interview study support this finding? Yes, the analysis of the interviews suggests that seven out of eight whistleblowers were intrinsically motivated to blow the whistle. For example, WB05 said:

"There was also my background is more ideological. I was an activist as a student. I had pretty strong convictions. (...) I was outraged by what I saw. Occupy Wall Street was gaining stream at the time (...) and the protests were right there. So that gave me a very strong feeling that I'm doing the right thing, that it's important what I'm doing. It's important for millions of people." (WB05).

⁶⁴ In some cases the impression was somewhat conveyed that the whistleblowing hotline was used to find and silence whistleblowers.

All of the whistleblowers felt morally “pressured” to “do the right thing”. As indicated before, not only questions focused on personal factors, but also on situational factors were asked. Although all whistleblowers had different backgrounds, were working in different organizations in different countries with different kinds of colleagues or leaderships, what united them is that they felt intrinsically motivated to “do the right thing”. Only WB02 showed clear signs of being extrinsically motivated. He blew the whistle to protect himself, an indication of the extrinsic motive security (von Rosenstiel 2015: 54): *“Honestly, I did it for selfish reasons”*.

All of the whistleblowers filled out the HEXACO PI-R personality test which allows for measuring tendencies towards moral behavior as part of the Honesty-Humility dimension. Therefore, this personality dimension will be analyzed in a next step.

6.2.3 Moral Pressure: Honesty-Humility as a Driver towards Whistleblowing?

As learned in chapter 4.3.1, people ranking high on the Honesty-Humility domain of the HEXACO PI-R combine many positive characteristics of employees for any company: they do not exploit, cheat or steal from others, they are more likely to favor ethics, score higher on integrity tests (Lee et al. 2008: 147) and they are much less likely to commit crimes (Lee/Ashton 2015: 27) – even when they are confronted with job insecurity (Chirumbolo 2015: 554). Furthermore, being high in Honesty-Humility is associated with behaviors such as an ethical attitude in leadership (Žiaran 2015: 689), treating people fairly and not exploiting others - even when there is no chance of being detected or the potential victim is helpless (Hilbig et al. 2013: 598; Lee/Ashton 2015: 28). Based on the literature review and the experimental studies, whistleblowers should rank high in the Honesty-Humility dimension. According to e-mail communication with Michael Ashton, who is one of the developers of the HEXACO PI-R, high scores in the Honesty-Humility can be interpreted as an indication of intrinsic motivations towards moral behavior. But what does “high” mean on a 5-point scale with response options ranging from 1 = "strongly disagree" to 5 = "strongly agree"? At least 3.75 out of 5, which amounts to 75% of the overall scale. Accordingly, can the HEXACO PI-R personality test conducted in anonymous research settings support the hypothesis that most whistleblowers rank at least fairly high on the Honesty-Humility dimension? Table 6-5 provides an answer and supports the hypothesis.

Table 6-5: HEXACO PI-R Honesty-Humility of whistleblowers

Personality	WB01	WB02	WB03	WB04	WB05	WB06	WB07	WB08	WB09
HEXACO PI-R Honesty-Humility									
Honesty-Humility	3.87	4.12	4.18	3.18	2.62	3.93	3.75	3.75	4.38
Fairness	3.75	5	4	4	2.75	5	3.75	3.5	4
Greed Avoidance	4.25	3	4.25	3	2.5	3	4	3.75	4.5
Modesty	3.75	4.75	5	2	2.75	3.25	4	3.5	5
Sincerity	3.75	3.75	3.5	3.75	2.5	4.5	3.25	4.25	4

Source: Own illustration.

All whistleblowers – except for WB04 and WB05 – rank relatively high on the Honesty-Humility domain and on all of its four sub-domains: (1) Fairness, (2) Greed Avoidance, (3) Modesty, and (4) Sincerity. Out of these four sub-dimensions, especially Fairness tends to be an underlying driver of the overall Honesty-Humility score and will therefore be further detailed as well.

Overall Score: Honesty-Humility

Seven out of nine whistleblowers scored higher than 75% on the overall score Honesty-Humility. Strongly undermining the high scores in this personality dimension with anonymized quotes, the whistleblowers said:

WB01: *“For me, the driver was that we have to defend public interests and have to adhere to these legal norms ourselves.”*

WB01 ranked high on Honesty-Humility with 3.87 out of 5. He reported that the fraud he later exposed immediately felt wrong and he decided to ask questions within the company.

WB02: *“Honestly, I did it for selfish reasons.”*

When WB02 learned about the fraud which he later reported, he instantly knew it was wrong. He never was part of the team that actively engaged in the fraud, but later decided to blow the whistle about it because his former employer tried to make him responsible. Being pressured to become an external whistleblower, he is one of the highest ranking whistleblowers in the Honesty-Humility domain (4.12).

WB04: *“It was a social justice issue. [...] It was just all wrong. Socially, morally, it was all wrong.”*

All experiences of the whistleblowers were intense, but WB04's experiences were probably the most severe and dangerous. The fraud that was reported was not of a monetary nature like all the others but involved people dying while the whistleblower had to fear for his life, too. Just like the other whistleblowers, what was happening around him immediately felt wrong. With a score of 3.18, WB04 is not ranking high on the Honesty-Humility domain, but as shown in Table 6-5, he ranks especially high on Honesty-Humility's sub-domain Fairness which will be further detailed in the later course of this study.

WB05: *"Staying in the job and not saying anything is torture. You just feel it inside you."*

Of all the whistleblowers, WB05 ranks the lowest on the Honesty-Humility domain (3.12). However, what he said in the interview was not any different from the other whistleblowers in a sense that the fraud he later externally reported, immediately felt awkward, made him ask questions and report to the internal compliance department.

WB06: *"And on the other shoulder, you've got your conscience, your little angel sitting there going: "Hang on here. You can't do that. You know, if you do that, you're corrupt. You're one of them. Is that what you want?""*

WB06 tried many times to make his former employer aware of a potential fraud and hoped to be taken seriously. Similar to the others, what felt suspicious in the beginning, exposed major fraud which even put his life at risk. With a score of 3.93, WB06 ranks high on the Honesty-Humility domain.

WB08: *"We do it because we know we do good things."*

WB08 blew the whistle together with a colleague. Similar to the other whistleblowers, they were using internal channels before finally deciding to talk to the media about the fraud scandal they had experienced and participated in over years.

All whistleblowers, directly or indirectly, said that they blew the whistle because it was "the right thing to do" to stop serious fraud from happening. And as indicated in

Table 6-5, especially Fairness seems to be driving the overall score of Honesty-Humility and seems to play a crucial part in the decision to become a whistleblower: the fraud they perceive feels unfair to the society.

Sub-domain: Fairness

Regarding Honesty-Humility's sub-domains, almost all whistleblowers tend to rank especially high on Fairness and no whistleblower especially low. This personality dimension *“assesses a tendency to avoid fraud and corruption. Low scorers are willing to gain by cheating or stealing, whereas high scorers are unwilling to take advantage of other individuals or of society at large”* (HEXACO May 16, 2017). Seven out of nine whistleblowers rank higher than 3.75, five out of nine higher than 4 and even two whistleblowers (WB02 and WB06) achieve the full score in this sub-domain.

In addition to Fairness, all whistleblowers tend to rank fairly higher on the remaining three sub-domains Greed Avoidance⁶⁵, Modesty⁶⁶, and Sincerity⁶⁷.

Regarding Greed-Avoidance, no whistleblower showed signs of being greedy. As detailed in chapter 3.2, money is regarded as an extrinsic motive (von Rosenstiel 2015: 54) – decreasing a person's intrinsic motivation to perform a task (Carlson/Heth 2007; Lepper/Greene/Nisbett 1973: 130). The interview study reveals that none of the whistleblowers was extrinsically motivated by money. For example, WB08 said: *“I did not do it for money or for something for myself”*.

All whistleblowers were severely punished for speaking up – all of them are financially broken, some of them even had to leave their home country. For example, WB02 said: *“Whistleblowers always die broke. They never make a financial comeback. The act of whistleblowing ruins them financially and they never make money again”*. Offering financial rewards for whistleblowers, as illustrated in chapter 2.3.3, is likely no effective instrument to encourage people to speak up. Even worse, offering monetary incentives could encourage people to provide any information (not necessarily fraud) to

⁶⁵ Greed Avoidance *“assesses a tendency to be uninterested in possessing lavish wealth, luxury goods, and signs of high social status. Low scorers want to enjoy and to display wealth and privilege, whereas high scorers are not especially motivated by monetary or social-status considerations”* (HEXACO May 16, 2017).

⁶⁶ Modesty *“assesses a tendency to be modest and unassuming. Low scorers consider themselves as superior and as entitled to privileges that others do not have, whereas high scorers view themselves as ordinary people without any claim to special treatment”* (HEXACO 16.05.2017).

⁶⁷ Sincerity *“assesses a tendency to be genuine in interpersonal relations. Low scorers will flatter others or pretend to like them in order to obtain favors, whereas high scorers are unwilling to manipulate others”* (HEXACO May 16, 2017).

receive a monetary reward in return. Those who are not greedy, like all whistleblowers in this sample, do not report fraud because of the money but because it is “the right thing to do”. Accordingly, governments or agencies should rather think of protecting whistleblowers against severe retaliation and punish fraudsters – this finding will be further detailed in chapter 7.

High Honesty-Humility Leading to Moral Pressure?

All of the whistleblowers participating in this interview study told the researcher that many others (e.g. colleagues or a direct supervisor) knew about the fraud and decided to remain silent.⁶⁸ Comparing with their remaining silent counterparts, why did the whistleblowers decide to speak up?

Chapter 3.1.2 illustrated various forms of potential reasons why people potentially remain silent. Besides Bounded Awareness, which prevents employees from perceiving something as fraud, especially Bounded Ethicality could be an underlying cause. As a reminder, Bounded Ethicality

“refers to situations in which people make decision errors that not only harm others, but are inconsistent with their own consciously espoused beliefs and preferences – decisions they would condemn upon further reflection or greater awareness.”
(Gino/Moore/Bazerman 2008: 4)

All of the whistleblowers (knowingly or not) first participated in the fraud which they later decided to report using internal and/or external channels. But over time and compared to most of their colleagues, all nine whistleblowers did not rationalize the fraud to remain silent. They all (directly or indirectly) said that the fraud which they later reported instantly felt suspicious and over time, intrinsically “pressured” them to blow the whistle about it. They were actively looking for channels to report to and did not only use them once, but many times, and in case the fraud remained uncorrected, they used external channels.

In addition to the Honesty-Humility personality dimension, Altruism was found potentially relevant in the previous literature review as well as in the experimental studies. Findings of the interview study will be presented in the following.

⁶⁸ In WB04’s case, other colleagues decided to become whistleblowers after he came forward. In WB05’s case, other colleagues became whistleblowers, but were retaliated as well. WB08’s whistleblowing resulted in more whistleblowers, too.

6.2.4 Effect of Altruism on Whistleblowing

The literature review presented in chapter 4.3.2 showed that people scoring high on the Altruism scale tend to (1) avoid causing harm and (2) react with generosity toward those who are weak or in need of help. On the other side, low scorers tend to (1) not be upset by the prospect of hurting others and (2) be seen as cold-hearted (HEXACO May 16, 2017). The experimental studies presented in chapter 5.2 showed that while fraudsters ranked significantly lower, whistleblowers ranked significantly higher on Altruism. Based on these findings, whistleblowers should be ranking higher in Altruism. Accordingly, Table 6-6 presents the scores of whistleblowers:

Table 6-6: HEXACO PI-R Altruism of whistleblowers

Name	WB01	WB02	WB03	WB04	WB05	WB06	WB07	WB08	WB09
HEXACO PI-R Altruism									
Altruism	3	4.5	3.75	4	2.75	3.75	3	3	4.25

Source: Own illustration.

Five out of nine whistleblowers rank fairly high on the Altruism scale while the others rank somewhere in the middle, but none of them ranks especially low. However, those who do not rank higher on Altruism, rank higher on Honesty-Humility – except for WB05. And WB04 who does not rank fairly high on the Honesty-Humility domain, ranks high in Altruism.

In addition to Honesty-Humility and Altruism, Conscientiousness was found potentially relevant in the previous literature review as well as in the experimental studies.

6.2.5 Influence of Conscientiousness not as Important as Expected

The literature review presented in chapter 4.3.3 exposed that people scoring high on the Conscientiousness scale tend to (1) organize their time and their physical surroundings, (2) work in a disciplined way toward their goals, (3) strive for accuracy and perfection in their tasks and (4) deliberate carefully when making decisions (HEXACO April 16, 2017). On the other side of this personality dimension, people scoring low in Conscientiousness tend to (1) be unconcerned with orderly surroundings or schedules, (2) avoid difficult tasks or challenging goals, (3) are satisfied with work that contains some errors and (4) make decisions on impulse or with little reflection (HEXACO April 16, 2017). Regarding compliance, while Lee, Ashton and de Vries (2005) found a negative correlation between Conscientiousness and workplace delinquency, van

Gelder and de Vries (2016) found that Conscientiousness is strongly negatively correlated with occupational crime. However, keeping in mind the findings of Blickle et al. (2006)⁶⁹, who found that business white-collar criminals had higher degrees of Conscientiousness, therefore this personality dimension should be treated with caution.

The experimental studies presented in chapter 5.2 showed two findings:

1. If Conscientiousness increases by one unit, fraud (the first embezzlement) is observed on average in a 27% earlier period.
2. If Conscientiousness increases by one unit, whistleblowing is observed on average in a 47% earlier period.

Based on the various findings, whistleblowers should be ranking higher in Conscientiousness. Accordingly, Table 6-7 presents the scores of whistleblowers:

Table 6-7: HEXACO PI-R Conscientiousness of whistleblowers

Personality	WB01	WB02	WB03	WB04	WB05	WB06	WB07	WB08	WB09
HEXACO PI-R Conscientiousness									
Conscientiousness	2.75	2.8	2.81	3.06	2.75	3.68	3.81	3.31	3.94
Diligence ⁷⁰	3.5	3	3	3.5	3	5	3	3.75	4.25
Organization ⁷¹	2.75	3	3.25	2.75	3.25	3.25	4	3.5	2.75
Perfectionism ⁷²	2.5	3	3.25	3	1.5	2.5	4.5	3	4.25
Prudence ⁷³	2.25	2.25	1.75	3	3.25	4	3.75	3	4.50

Source: Own illustration.

⁶⁹ Blickle et al. (2006) conducted their research with the NEO PI-R personality inventory and not the HEXACO PI-R.

⁷⁰ Diligence assesses “*a tendency to work hard. Low scorers have little self-discipline and are not strongly motivated to achieve, whereas high scorers have a strong “work ethic” and are willing to exert themselves*” (HEXACO May 16, 2017).

⁷¹ Organization assesses “*a tendency to seek order, particularly in one’s physical surroundings. Low scorers tend to be sloppy and haphazard, whereas high scorers keep things tidy and prefer a structured approach to tasks*” (HEXACO May 16, 2017).

⁷² Perfectionism assesses “*a tendency to be thorough and concerned with details. Low scorers tolerate some errors in their work and tend to neglect details, whereas high scorers check carefully for mistakes and potential improvements*” (HEXACO May 16, 2017).

⁷³ Prudence “*assesses a tendency to deliberate carefully and to inhibit impulses. Low scorers act on impulse and tend not to consider consequences, whereas high scorers consider their options carefully and tend to be cautious and self-controlled*” (HEXACO May 16, 2017).

In contrast to Honesty-Humility and Altruism, whistleblowers do not tend to rank higher on Conscientiousness – only WB07 and WB09 rank fairly higher in this personality dimension. Therefore, Honesty-Humility seems to be the more important personality trait when it comes to whistleblowing.

Conclusion: Whistleblowing and Personality

The whole whistleblowing process started with a suspicion and then over time, all whistleblowers felt intrinsically “pressured” to report the fraud using external channels, although WB04 as well as WB09 had to refrain from using internal channels because it would have put their lives at risk. Although all whistleblowers had very different backgrounds or were working in different industries, they were all very similar when it comes to their motivation to report serious wrongdoing: it was the right thing to do. In its core, the interview study revealed the following findings:

1. Almost all whistleblowers interviewed within the scope of this study were intrinsically motivated to speak up, only WB02 was extrinsically motivated.
2. This intrinsic motivation is shown in high scores on the Honesty-Humility domain, in which all whistleblowers rank at least fairly high except for two (WB04 and WB05).
3. In addition to Honesty-Humility, most whistleblowers rank fairly high in Altruism. In case of WB04, who does not rank fairly high on Honesty-Humility, he ranks fairly high in Altruism.
4. In contrast to Honesty-Humility and Altruism, whistleblowers do not tend to rank higher on Conscientiousness (but not low either).

Combining these findings with the literature review presented in chapter 4, the experimental studies presented in chapter 5 and the interview study, the following personality traits of relevance can be concluded:

Table 6-8: Interview Study: personality of a potential whistleblower

	Personality based on Literature Review	Statistical Analysis	Interview Study
Integrity: Whistleblower	Type A. Low in Conscientiousness in combination with high integrity (scoring high on an integrity test or scoring high in Honesty-Humility) Type B. High in Conscientiousness in combination with high integrity (scoring high on an integrity test or scoring high in Honesty-Humility)	Significantly higher in <ul style="list-style-type: none"> • Honesty-Humility • Altruism • Integrity test • Conscientiousness 	Higher in <ul style="list-style-type: none"> • Honesty-Humility • (slightly lower) Altruism Mixed results in <ul style="list-style-type: none"> • Conscientiousness

Note 1: See chapter 4.5.1 for further details on Type A and Type B of a potential whistleblower.

Note 2: See chapter 5.3 for details on the statistical analysis of the laboratory experiments.

Source: Own illustration.

In the following chapter, the various findings of this dissertation will be concluded and recommendations for practice given.

7 Status Quo of Behavioral Compliance

According to the USSG, installing a Corporate Compliance system can reduce potential sanctions when an organization (1) exercises due diligence to prevent and detect fraud and (2) otherwise promotes an organizational culture that encourages ethical conduct and a commitment to compliance with the law. Summarizing the findings of the laboratory experiments as well as the interview study with whistleblowers, practical recommendations are given for Corporate Compliance to be taken into consideration.

In times of increasing enforcement actions and sanctions driven by U.S. SEC and DOJ (see chapter 2.1), international companies have to take compliance with the law seriously and not understand it as “*a commercial and, most importantly, legal necessity*” (Heissner 2015: 178). And to be able to effectively prevent or detect fraud, Corporate Compliance should focus more on those people who are part of any fraud scandal: people who (1) actively engage in fraud and (2) remain fallaciously silent about fraud; and those employees on the opposite who (3) actively decide against fraud and (4) report fraud (whistleblowing) – summarized in Table 7-1.

Table 7-1: Behavioral Compliance: roles of employees

Employee	Fraudster	Integrity
	1. Actively engaging <i>in</i> fraud 2. Remaining fallaciously silent about fraud (no whistleblowing)	3. Actively deciding <i>against</i> fraud 4. Reporting fraud (whistleblowing)

Note: See chapter 2.1 for a detailed explanation of the types of fraudsters and integrity.

Source: Own illustration.

To explain any form of human behavior (e.g. engaging in fraud), personality and social psychologists generally agree that not only personal but situational factors have to be taken into consideration (Lucas/Donnellan 2009: 146). But which influencing factors make employees more likely to be toxic? And which influencing factors make them more likely to be integer? As already indicated in chapters 5.3.1 and 5.3.2, the status quo of a behavior-oriented compliance (Behavioral Compliance) can provide at least two pieces of advice when aiming at better fraud prevention or fraud detection:

Advice 1: Taking personality traits into consideration.

Advice 2: Imposing sanctions on non-compliant behavior.

Giving practical recommendations, these pieces of advice will be illustrated in the following.

7.1 Advice 1: Know Your People

First of all, international companies should finally realize the necessity and importance of whistleblowing: the earlier fraud gets detected, the better. As shown in chapter 2.3.1, in almost 40% of fraud cases, tips of employees are the reason for initial detection of fraud (ACFE 2016a: 21). But besides whistleblowing, Corporate Compliance should take research findings on potential fraudsters into consideration. Based on the various research findings, the following analysis summarizes what insights Behavioral Compliance has uncovered about employees.

7.1.1 Know Your Whistleblowers

“I didn’t do it for the money—I did it for a change that still hasn’t happened, despite six years of work. And I’m going to continue doing it because I know it’s the right thing to do.”

-- Brian Penny, whistleblower.

As shown throughout the various studies, the Honesty-Humility personality domain seems to be the underlying driver of the decision to become a whistleblower: (1) in the experimental studies, whistleblowers (compared to those who remained silent) ranked significantly higher in Honesty-Humility and (2) in the interview study, most whistleblowers ranked at least fairly high on the Honesty-Humility domain. These findings allow for the conclusion that the decision to become a whistleblower seems to be intrinsically motivated (motive of meaning and self-realization) and not extrinsically motivated (e.g. motive of money or prestige).⁷⁴ Does this finding imply that the decision to actively decide against fraud (integrity) is intrinsically motivated, too? It is likely, yes.

Integrity and Intrinsic Motivation

As chapter 4.3.1 has illustrated, high scores in Honesty-Humility go along with many desirable traits of employees: they do not exploit, cheat or steal from others, they are more likely to favor ethics, score higher on integrity tests (Lee et al. 2008: 147) and they are much less likely to commit crimes (Lee/Ashton 2015: 27) – even when they are confronted with job insecurity (Chirumbolo 2015: 554). Furthermore, being high

⁷⁴ See chapter 3.2 for details on intrinsic and extrinsic motivation.

in Honesty-Humility is associated with behaviors such as an ethical attitude in leadership (Žiaran 2015: 689), treating people fairly and not exploiting others – even when there is no chance of being detected or the potential victim is helpless (Hilbig et al. 2013: 598; Lee/Ashton 2015: 28). Moreover, this study has shown that the decision to become a whistleblower is related to higher scores in Honesty-Humility. Accordingly, Table 7-2 summarizes the findings on potential whistleblowers derived from this research on Behavioral Compliance.

Table 7-2: Behavioral Compliance: personality of a potential whistleblower

	Personality based on Literature Review	Statistical Analysis
Integrity	<p>Type A. Low in Conscientiousness in combination with high integrity (scoring high on an integrity test or scoring high in Honesty-Humility)</p> <p>Type B. High in Conscientiousness in combination with high integrity (scoring high on an integrity test or scoring high in Honesty-Humility)</p>	<p>Significantly higher in</p> <ul style="list-style-type: none"> • Honesty-Humility • Altruism • Integrity test • Conscientiousness

Note 1: See chapter 4.5.1 for further details on Type A and Type B of a potential whistleblower (integrity).

Note 2: See chapter 5.3 for further details on the statistical analysis.

Source: Own illustration.

While whistleblowers (compared to those who remained silent) ranked significantly higher in the experimental studies, whistleblowers did not rank fairly high or low in the interview study. As indicated before, Honesty-Humility seems to be the underlying driver of the decision to become a whistleblower – and Conscientiousness does not seem to be as important as expected according to the literature review. Because Conscientiousness seems to be more relevant for the decision to become a fraudster, this characteristic trait will be further detailed in chapter 7.1.2.

The SEC has learned that "*whistleblowers with specialized experience or expertise can help us expend fewer resources in our investigations and bring enforcement actions more efficiently*" (FCPABlogb April 25, 2017). Accordingly, if the SEC wants to encourage whistleblowing, the agency should enforce that people with high Honesty-Humility work in (senior) management positions because these people are not only

more likely to speak up but less likely to actively engage in fraud. Above all, companies should actively promote people who show signs of high scores in Honesty-Humility. Lee/Ashton (2016: 152ff.) conclude six not-so-valid signs of high Honest-Humility, these are:

- 1. Respectability** People who are well-spoken or well-dressed are not necessarily well intentioned (Lee/Ashton 2016: 152).
- 2. Anti-Conformity** People who are visibly different from others do not necessarily indicate authenticity which could indicate high Honesty-Humility (Lee/Ashton 2016: 153).
- 3. Religious Piety** Being religious does not necessarily imply honest intentions (Lee/Ashton 2016: 153).
- 4. Championing the Underdog** People eagerly defending others can be a sign of an idealist (high Honesty-Humility, whistleblower) or an opportunist (low Honesty-Humility) (Lee/Ashton 2016: 154).
- 5. Blunt Criticism** Delivering criticism is not necessarily a sign of high Honesty-Humility. For example, having a low threshold for criticizing others can be a valid sign for low Agreeableness and aiming to undermine a person's self-esteem a sign of low Honesty-Humility (Lee/Ashton 2016: 154).
- 6. Publicly Displayed Generosity** A donation which is intended to be publicly made visible is likely no sign of high Honesty-Humility. People with high Honesty-Humility scores donate without seeking attention (Lee/Ashton 2016: 154).

As illustrated, none of these behavioral patterns are valid signs of high Honesty-Humility scores. Accordingly, companies should be careful when promoting people showing these different behaviors and take a closer look at people's underlying intentions.

One could think that these findings on Honesty-Humility could be used against potential whistleblowers: if a company does not promote or even hire employees potentially ranking high in Honesty-Humility, nobody can speak up and fraud is less likely to get detected. However, this is a fraudulent trap because the experimental studies in chapter 5 have shown that fraudsters rank significantly lower in the Honesty-Humility domain. So a company who even tries to filter for potential whistleblowers based on Honesty-

Humility, directly (1) promotes potential fraud and (2) decreases the probability of fraud detection.

7.1.2 Know Your Fraudsters

“As I engaged in my fraud, I knew what I was doing was wrong, indeed criminal.”

-- Bernard Madoff, convicted fraudster.

The research findings of this study indicate that companies should be careful with employees who are high in Conscientiousness. People owning this personality are “*likely to show up to appointments early, follow society’s rules, keep a clean and tidy room, work hard, and cut him- or herself off before he or she has one too many cocktails*” (Roberts et al. 2009: 371). Furthermore, this type of employee is organized, thorough, planful and efficient (Wilt/Revelle 2009: 36) as well as principled, honest, and tends to be relatively more rule-abiding (McAdams 2009: 194). What sounds like a conglomerate of preferable characteristics any company would appreciate in any job position, contains another potential fraudulent trap: in combination with lower scores in Honesty-Humility, these people are “*prone to white-collar crimes*” (Lee/Ashton 2015: 59).

Table 7-3: Know your people: personality of a potential fraudster

Fraudster:	Personality based on Literature Review	Statistical Analysis
	Type A. Low in Conscientiousness in combination with low integrity (scoring low on an integrity test or scoring low in Honesty-Humility) Type B. High in Conscientiousness in combination with low integrity (scoring low on an integrity test or scoring low in Honesty-Humility)	Significantly lower in <ul style="list-style-type: none"> • Honesty-Humility • Altruism • Integrity test Significantly higher in <ul style="list-style-type: none"> • Conscientiousness

Note 1: See chapter 4.5.1 for further details on Type A and Type B of a potential fraudster.

Note 2: See chapter 5.3 for further details on the statistical analysis.

Source: Own illustration.

People ranking high in Conscientiousness and low in Honesty-Humility are those who are able to plan fraud and keep it running for years. These are the executives engaging in (1) the Libor manipulation at Deutsche Bank and other global banks in the finance industry of 2012, (2) the country-rigging scandal at the oil giant Petrobras in Brazil of

2014 or (3) the emissions scandal (“Dieselgate”). People who know that they are part of a fraud scandal and decide to remain fallaciously silent about it.

What makes them toxic for any company is that they (1) take advantage of the opportunity, (2) have an incentive and (3) rationalize their behavior by excuses (see *Fraud Triangle* in chapter 2.2). These employees (4) possess the necessary position/function, (5) are intelligent, (6) are egoistic and confident, (7) have the talent to coerce others into fraud, and have the talent to (8) keep up lies and (9) cope with stress (see *Fraud Diamond* in chapter 2.2.4). These are the people who Corporate Compliance cannot stop by simply implementing more and more anti-fraud controls because these people know how to circumvent them. Above all, companies should be careful when it comes to people who show signs of low scores in Honesty-Humility. Lee/Ashton (2016: 156ff.) conclude seven valid signs of low Honest-Humility score, these are:

- 1. Beating the System** Talking (and bragging) about beating the system (e.g. at work) is a valid sign of low Honesty-Humility scores and is used by people who should not be trusted (Lee/Ashton 2016: 156).
- 2. Instrumental Ingratiation** People who are only selectively nice to those who they want something in return, are more likely to be low scorers in Honesty-Humility (Lee/Ashton 2016: 156).
- 3. Gambling and Financial Speculation** Risking a lot of money in short-term speculation (e.g. casino) is a sign of low Honesty-Humility (Lee/Ashton 2016: 157).
- 4. Sexual Infidelity** Being sexually unfaithful is related to low Honesty-Humility scores. While low scoring men are more likely to brag about the sexual conquests, low scoring women are more likely to brag about material benefits or the status of their sexual encounter (Lee/Ashton 2016: 158).
- 5. Conspicuous Consumption (and Name Dropping)** People who are showing their wealth to signal their importance, are sending signals of low Honesty-Humility and tend to be selfish, deceitful and insincere (Lee/Ashton 2016: 158).
- 6. “Above the Law” Mentality** People who think that they are better than others (e.g. social class, rank in a company, ethnicity), are low scorers on Honesty-Humility (Lee/Ashton 2016: 160).

7. Contempt of Other Groups People who are making ethnic jokes of any but the most good-natured variety, are more likely to be low scorers on Honesty-Humility (Lee/Ashton 2016: 161).

Accordingly, companies should rather not actively promote people showing these behavioral patterns because these are the people who are (1) more likely to actively engage in fraud and (2) less likely to speak up once they see themselves confronted with fraud. In times of increasing sanctions, these are the people companies should not be having as executives.

7.2 Advice 2: Sanction for Non-compliant Behavior

As the experimental study has shown, the implementation of an individual sanction has resulted in much less fraud. This is the case because fraudsters are sensitive to the risk of formal sanctions (Dellaportas 2013: 32). Accordingly, companies should rather sanction non-compliant behavior because it has proved effective as an instrument for fraud prevention. Furthermore, other employees observing “*credible punishment are likely to learn from it and be deterred from engaging in similar acts*” (Vardi/Weitz 2016: 219). Vice versa, failure to punish fraud may result in even more corporate misbehavior (ibid).

Necessity of Individual Sanctions for Fraudsters

Today, most whistleblowers have to face severe retaliation for speaking up while only few fraudsters have to suffer consequences for engaging in serious fraud. For example, in the case of Volkswagen’s “Dieselgate” emission scandal or most other corporate fraud scandals, such as the Libor manipulation or the country-rigging bribery scandal at the oil giant Petrobras in Brazil of 2014, it is most often not the fraudsters who have to pay for the fraudulent fine: it is most often the shareholders of the company. In Volkswagen’s case, more than US\$ 22 billion had to be paid in consequence of cheating on emissions testing and all of these costs were paid by the company itself (Ewing 2017). No senior management of Volkswagen had to face financial sanctions, not even for not cooperating with the investigating U.S. federal authorities EPA and CARB (Ewing 2017: 335). In case international companies want to take compliance with the law more seriously and not as a lip service, they should not only reward in good times but sanction in case of bad times.

As illustrated in chapter 2.1.1, at least the U.S. DOJ has learned about the necessity of individual sanctions on fraud prevention. Thus, individual FCPA-related sanctions are likely to increase over the next years: *“One of the most effective ways to combat corporate misconduct is by seeking accountability from the individuals who perpetrated the wrongdoing”* (DOJ 2015: 2). So if companies such as Volkswagen do not sanction individual fraud themselves, at least U.S. federal authorities are more likely to do so. For example, the German Volkswagen manager Oliver Schmidt, who used his expert knowledge when lying to the U.S. federal authorities to cover up the emissions scandal in 2015, is charged with 11 felony counts (including violating the U.S. Clean Air Act and fraud) and facing up to 169 years in U.S. prison for his participation in VW’s emissions scandal (Cleantechica March 13, 2017).

Necessity of Individual Rewards for Whistleblowers?

In addition to sanctioning non-compliant behavior, companies could think of incentivizing compliant-behavior. However, rewarding behavior which should be a matter of course for everybody is not only difficult but dangerous. Chapter 3.2 has shown the complexity of intrinsic and extrinsic motivation as well as people’s underlying motives in the context of external incentives (monetary or non-monetary). As presented, the central problem of external incentives is that these expected incentives have the potential to decrease a person’s intrinsic motivation to perform a task (Carlson/Heth 2007; Lepper/Greene/Nisbett 1973: 130). Consequently, incentivizing any form of compliant behavior (integrity) could have the effect that employees behave compliant because they receive a reward and simply not because it is the right thing to do.

Research indicates that incentivizing compliant behavior is a potential fallacy. For example, the introduction of a monetary incentive leads to a reduction in blood donations (Frey/Osterloh 2005: 16). Intrinsic motivation to donate blood was crowded out by extrinsic motivation for those who want to donate blood for free. And for those who want to donate blood for the money, the amount paid might not be high enough. Accordingly, there are less donations of blood even with a reward. Further complicating the idea of incentivizing integrity with monetary rewards is the finding that once these rewards are no longer offered, interest in the activity is lost and prior intrinsic motivation does not return (Carlson/Heth 2007). Therefore, extrinsic rewards must be continuously offered as a motivator to sustain the preferred behavior. Why should rewards for compliant behavior increase the occurrence of compliant behaviors then?

The analysis has shown that whistleblowers are intrinsically motivated to report fraud. Accordingly, extrinsic rewards on whistleblowing could result in a shift from intrinsic motivation to extrinsic and thus result in even less whistleblowing. A monetary incentive does not motivate whistleblowing, these people do it because it is the right thing to do: *"I'm doing the right thing, that it's important what I'm doing. It's important for millions of people."* (WB05).

Instead of offering a reward, whistleblowers should receive *compensation* for their financial and psychological losses. Whistleblowing should finally be understood and appreciated as something highly beneficial and necessary for companies and society.

Nowadays, it seems to be easier for companies to financially reward employees and to refrain from sanctions (monetary or non-monetary). However, if companies want to take compliance with the law more seriously, they should (1) take a closer look at their employees' personality and (2) sanction non-compliant behavior.

In addition to the personality traits and sanctions, various situational factors (e.g. goals, relationship with colleagues or leadership) can work as external incentives towards behavior. Logically, situational factors should be taken into consideration for the development of a behavior-oriented compliance. Due to its complexity, this will be the focus of future research.

7.3 Direction of Future Research: Know Your Situation

"But the point is, you are greedy, you want every little bit of money that you can possibly get because, like I say, that is how you are judged, that is your performance metric."

-- Tom Hayes, banker who manipulated Libor.

A lot of research on situational factors was already conducted and used for the interview study of this dissertation. Based on this research, a framework of Behavioral Compliance was developed, but it is not part of this dissertation because of its complexity. This model and its insights will be useful for giving further recommendations on how to achieve compliance with the law.

Future research on Behavioral Compliance will focus on situational factors which are more likely to have an impact on the decision to become a fraudster or whistleblower. Besides whistleblowing, which seems to be intrinsically motivated, it will be of focus

to find out more about the underlying motives (intrinsic motivation or extrinsic motivation?) of people who (1) actively engage in fraud, (2) decide to remain silent on fraud (no whistleblowing) and (3) actively decide against fraud. To derive useful and reliable insights, interview studies based on the research design of this dissertation shall be conducted with these types of employees.

Another focus of future research will be on how exactly intrinsic motivation towards integrity develops. The interview study has already indicated findings but these need additional research before being published.

Further experimental studies will be conducted at the *BaER-Lab* at the University of Paderborn. Potential treatments of interest are (1) rewards for compliant behavior (no embezzlement and whistleblowing as part of the experimental design) or (2) experimental design with one manager and two staff members.

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9 Appendix 1

9.1 List of Cognitive Biases

Table 9-1 : List of cognitive biases: name and description

Name	Description
Affective Forecasting	Affective forecasting is the prediction of one's future feeling (Wilson/Gilbert 2003: 345).
Affect Heuristic	Mental shortcut that allows people to make decisions and solve problems more quickly due to an affect (such as liking or disliking) that cuts off cognitive deliberation (Slovic et al. 2002: 400).
Attentional Bias	This bias causes people to selectively attend to personal relevant information (Smeets/Roefs/Jansen 2009: 370).
Backfire Effect	When people are confronted with information that contradicts their views, they come to support their views even more strongly (Nyhan/Reifler 2010: 307).
Bandwagon Effect	Sometimes, people are doing things because other people are doing them (Nadeau/Cloutier/Guay 1993: 203).
Bystander Effect	The Bystander Effect refers to situations in which people do not help others when many people are present (Darley/Latané 1968: 377).
Black-Dog Bias	Black dog bias is a veterinarian and animal shelter phenomenon in which black dogs are passed over for adoption in favor of lighter-colored animals (Nakano 2008).
Confirmation Bias	Confirmation bias is a tendency of people to favor information that confirms their beliefs or hypotheses (Gilovich 1991: 9).

Distinction Bias	The tendency to view two options as more distinctive when evaluating them simultaneously than when evaluating them separately (Hsee/Zhang 2004: 680).
Dunning-Kruger Effect	The Dunning–Kruger effect leads people to suffer from illusory superiority, rating their abilities much higher than they are (Dunning et al. 2003: 83).
Endowment Effect	According to the endowment effect, people are sometimes attached to things (material or immaterial) they own and do not want to lose them (Knetsch 1989).
False Consensus Bias	Due to the false consensus bias, people tend to overestimate how many others agree with him or her (Yinon/Mayraz/Fox 1994: 717).
Framing Effect	People make different choices, depending on whether it is presented as a loss or as a gain (Kahneman/Tversky 1979).
Halo Effect	Judging somebody from one part of his character to his overall character (Thorndike 1920).
Identifiable Victim Effect	<i>“Identifiable victims seem to produce a greater empathic response, accompanied by greater willingness to make personal sacrifices to provide aid”</i> (Jenni/Loewenstein 1997: 236).
Implicit Attitude	<i>“An implicit attitude can be thought of as an existing attitude projected onto a novel object”</i> (Greenwald/Banaji 1995: 5).
In-Group Bias	The <i>“in-group-out-group bias refers to the tendency to evaluate one’s own group or its members (the in-group) more favorably than groups to which one does not belong and its members (the out-group)”</i> (Struch/Schwartz 1989: 365).

Naïve Cynicism	According to naïve cynicism people expect others to be more egocentric than those actually are (Kruger/Gilovich 1999).
Normalcy Bias	A cognitive blinder that leads people to the assumption that everything is normal when they find themselves in disturbing circumstances (Omer/Alon 2004: 278).
Ostrich Effect	The ostrich effect implies the avoidance “ <i>of apparently risky financial situations by pretending they do not exist</i> ” (Galai/Sade 2006: 2744).
Out-Group Bias	The “ <i>in-group-out-group bias refers to the tendency to evaluate one’s own group or its members (the in-group) more favorably than groups to which one does not belong and its members (the out-group)</i> ” (Struch/Schwartz 1989: 365).
Outcome Bias	According to the outcome bias, “ <i>people tend to take outcome information into account in a manner that is not logically justified</i> ” (Gino/Moore/Bazerman 2008: 3).
Pluralistic Ignorance Effect	“ <i>Pluralistic ignorance describes situations where a majority of group members privately reject a norm, but assume (incorrectly) that most others accept it</i> ” (Centola/Willer/Macy 2005: 1010).
Self-Justification	Self-justification is used to avoid cognitive dissonance (Blanton et al. 2009: 685).
Self-Serving Bias	People affected by this bias blame others for failures and credit themselves for success (Campbell/Sedikides 1999: 24).
Semmelweis Reflex	The Semmelweis reflex is “ <i>the reflex-like rejection of new knowledge because it contradicts entrenched norms, beliefs or paradigms... the automatic rejection of the obvious, without thought, inspection, or experiment</i> ” (Szasz 2011).

Slippery Slope Effect	According to the slippery slope effect, people tend to use past practices as a benchmark for evaluating new practices (Tenbrunsel/Messick 2004: 228).
Social Desirability Bias	The tendency of respondents to answer questions in a manner that will be viewed favorably by others (Fisher 1993: 303).
Status Quo Bias	<i>“In choosing among alternatives, individuals display a bias toward sticking with the status quo”</i> (Samuelson/Zeckhauser 1988: 47).

Source: Own illustration.

9.2 Laboratory Experiments: Survival Model

The usefulness of a Cox proportional hazards model (a class of survival models) for the statistical analysis of laboratory experiments is that these take the time that passes into consideration before some event (fraud or whistleblowing) (Breslow 1975: 45; Cox 1972).

Especially problematic for the use of the Cox regression for the statistical analysis is that no waiting time before the decision to become a fraudster or whistleblower can be calculated for those who (1) embezzle in the first period possible and (2) blow the whistle immediately. Accordingly, this highly useful information is not considered at all in the regressions on the decision to become a fraudster or whistleblower. Because of this, a simple OLS regression was used for the multivariate statistical analysis.

9.3 Informed Consent

Informed Consent

Researcher: Burkhard Wolf Wilmes

Supervisor: Prof. Dr. René Fahr, Chair of Business Administration incl. Corporate Governance

Organization: University of Paderborn, Germany

Research Title: Behavioral Compliance – Corporate Compliance meets Behavioral Economics

This Informed Consent Form has two parts:

1. **Information Sheet** (to share information about the study with you)
2. **Certificate of Consent** (for signatures if you choose to participate)

Part I: Information Sheet

Description of the Research

You are invited to participate in a research study that is conducted by Burkhard Wolf Wilmes, a PhD candidate in the field of Business Administration at the University of Paderborn, Germany.

The purpose of the research study is to understand (2) the personality of a whistleblower in comparison to a fraudster as well as (2) the influence of situational factors on whistleblowing in comparison to fraud.

Voluntary Participation

Your participation in the study is strictly voluntary and what you are willing to share depends on you. Furthermore, you may change your mind later and stop participating even if you agreed earlier. If at any time you have any questions regarding the research or your participation, you can contact the researcher, who will answer your questions. The researcher's phone number is +49 160 939 22682 and his email address is burkhard.wilmes@gmail.com.

Data Storage to Protect Confidentiality

The protection of your confidentiality is of highest priority. Therefore, your identity will be coded and any identifiers will be deleted from the original data, which can only be accessed by the researcher and his supervisor. Moreover, all digital data will be password-protected and any paper copies will be kept in a locked file at the researcher's office.

Any information that identify you will not be released without your consent.

Type of Research Intervention

You are asked to participate in an interview via Skype, but a face-to-face interview could be arranged if that is more convenient for you. Furthermore, a personality test consisting of 100 questions is part of this research study. To be able to guarantee research quality, you are asked to fill out this personality test.

The interview will be audio recorded, which will enable the researcher to analyze the data afterwards. During the stage of analysis, the audio recording will be password-protected and kept with all the other data of this research. Once the analyses of the data are finalized, the researcher will delete all audio recordings.

Time Involvement

Your participation will take approximately 90-120 minutes.

1. **Pre-interview questions (30 minutes):** besides some general questions, you will be asked to fill out a personality test consisting of 100 questions. The questionnaire comprising all questions will be sent to you as soon you have decided to participate.
2. **Interview (~60 minutes):** you will be talking to the researcher about your experiences.

Risks

The researcher and his supervisor anticipate that there will be no greater risk or discomfort associated with participating in this study than in any other typical interview situation.

Payments

There will be no payment for your participation. Findings of this research study will be sent to you if you like, e.g. your results of the personality test in comparison with other whistleblowers or fraudsters.

How Results Will be Used

The researcher will use the findings for his dissertation as part of the doctoral program in the field of Business Administration at the University of Paderborn, Germany. Moreover, the results might also be used for publication in journals or articles, as well as for educational purposes.

Part II: Certificate of Consent

I have read the foregoing information. I have had the opportunity to ask questions about it and any questions I have been asked have been answered to my satisfaction. I consent voluntarily to be a participant in this study.

Name: _____

Date: _____
(day/month/year)

Participant's signature: _____

I confirm that the participant was given an opportunity to ask questions about the study, and all the questions asked by the participant have been answered correctly and to the best of my ability. I confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily.

Name: _____

Date: _____
(day/month/year)

Researcher's signature: _____

9.4 Pre-interview Questionnaire

Researcher: Burkhard Wolf Wilmes

Supervisor: Prof. Dr. René Fahr, Chair of Business Administration incl. Corporate Governance

Organization: University of Paderborn, Germany

Research Title: Behavioral Compliance – Corporate Compliance meets Behavioral Economics

This pre-interview questionnaire has two parts:

1. General questions
2. Personality related questions

Part I: General questions

Age	<input type="checkbox"/> 20-25	<input type="checkbox"/> 36-40	<input type="checkbox"/> 51-55
	<input type="checkbox"/> 26-30	<input type="checkbox"/> 41-45	<input type="checkbox"/> 56-60
	<input type="checkbox"/> 31-35	<input type="checkbox"/> 46-50	<input type="checkbox"/> 61-65
Gender	<input type="checkbox"/> Male <input type="checkbox"/> Female		
Education <i>(check highest)</i>	<input type="checkbox"/> Bachelor's	<input type="checkbox"/> Master's	<input type="checkbox"/> PhD
	<input type="checkbox"/> High school diploma	<input type="checkbox"/> other: Click here to enter text.	
Fields of study	Click here to enter text.		

Part II: Personality related questions

On the following pages you will find a series of statements about you. Please read each statement and decide how much you agree or disagree with that statement. Then write your response in the space next to the statement using the following scale:

5 = strongly agree

4 = agree

3 = neutral (neither agree nor disagree)

2 = disagree

1 = strongly disagree

Please answer every statement, even if you are not completely sure of your response.

Please provide the following information about yourself.

1	Choose an item.	I would be quite bored by a visit to an art gallery.
2	Choose an item.	I clean my office or home quite frequently.
3	Choose an item.	I rarely hold a grudge, even against people who have badly wronged me.
4	Choose an item.	I feel reasonably satisfied with myself overall.
5	Choose an item.	I would feel afraid if I had to travel in bad weather conditions.
6	Choose an item.	If I want something from a person I dislike, I will act very nicely toward that person in order to get it.
7	Choose an item.	I'm interested in learning about the history and politics of other countries.
8	Choose an item.	When working, I often set ambitious goals for myself.
9	Choose an item.	People sometimes tell me that I am too critical of others.

10	Choose an item.	I rarely express my opinions in group meetings.
11	Choose an item.	I sometimes can't help worrying about little things.
12	Choose an item.	If I knew that I could never get caught, I would be willing to steal a million dollars.
13	Choose an item.	I would like a job that requires following a routine rather than being creative.
14	Choose an item.	I often check my work over repeatedly to find any mistakes.
15	Choose an item.	People sometimes tell me that I'm too stubborn.
16	Choose an item.	I avoid making "small talk" with people.
17	Choose an item.	When I suffer from a painful experience, I need someone to make me feel comfortable.
18	Choose an item.	Having a lot of money is not especially important to me.
19	Choose an item.	I think that paying attention to radical ideas is a waste of time.
20	Choose an item.	I make decisions based on the feeling of the moment rather than on careful thought.
21	Choose an item.	People think of me as someone who has a quick temper.
22	Choose an item.	I am energetic nearly all the time.
23	Choose an item.	I feel like crying when I see other people crying.
24	Choose an item.	I am an ordinary person who is no better than others.
25	Choose an item.	I wouldn't spend my time reading a book of poetry.
26	Choose an item.	I plan ahead and organize things, to avoid scrambling at the last minute.
27	Choose an item.	My attitude toward people who have treated me badly is "forgive and forget".

28	Choose an item.	I think that most people like some aspects of my personality.
29	Choose an item.	I don't mind doing jobs that involve dangerous work.
30	Choose an item.	I wouldn't use flattery to get a raise or promotion at work, even if I thought it would succeed.
31	Choose an item.	I enjoy looking at maps of different places.
32	Choose an item.	I often push myself very hard when trying to achieve a goal.
33	Choose an item.	I generally accept people's faults without complaining about them.
34	Choose an item.	In social situations, I'm usually the one who makes the first move.
35	Choose an item.	I worry a lot less than most people do.
36	Choose an item.	I would be tempted to buy stolen property if I were financially tight.
37	Choose an item.	I would enjoy creating a work of art, such as a novel, a song, or a painting.
38	Choose an item.	When working on something, I don't pay much attention to small details.
39	Choose an item.	I am usually quite flexible in my opinions when people disagree with me.
40	Choose an item.	I enjoy having lots of people around to talk with.
41	Choose an item.	I can handle difficult situations without needing emotional support from anyone else.
42	Choose an item.	I would like to live in a very expensive, high-class neighborhood.
43	Choose an item.	I like people who have unconventional views.
44	Choose an item.	I make a lot of mistakes because I don't think before I act.
45	Choose an item.	I rarely feel anger, even when people treat me quite badly.

46	Choose an item.	On most days, I feel cheerful and optimistic.
47	Choose an item.	When someone I know well is unhappy, I can almost feel that person's pain myself.
48	Choose an item.	I wouldn't want people to treat me as though I were superior to them.
49	Choose an item.	If I had the opportunity, I would like to attend a classical music concert.
50	Choose an item.	People often joke with me about the messiness of my room or desk.
51	Choose an item.	If someone has cheated me once, I will always feel suspicious of that person.
52	Choose an item.	I feel that I am an unpopular person.
53	Choose an item.	When it comes to physical danger, I am very fearful.
54	Choose an item.	If I want something from someone, I will laugh at that person's worst jokes.
55	Choose an item.	I would be very bored by a book about the history of science and technology.
56	Choose an item.	Often when I set a goal, I end up quitting without having reached it.
57	Choose an item.	I tend to be lenient in judging other people.
58	Choose an item.	When I'm in a group of people, I'm often the one who speaks on behalf of the group.
59	Choose an item.	I rarely, if ever, have trouble sleeping due to stress or anxiety.
60	Choose an item.	I would never accept a bribe, even if it were very large.
61	Choose an item.	People have often told me that I have a good imagination.
62	Choose an item.	I always try to be accurate in my work, even at the expense of time.
63	Choose an item.	When people tell me that I'm wrong, my first reaction is to argue with them.

64	Choose an item.	I prefer jobs that involve active social interaction to those that involve working alone.
65	Choose an item.	Whenever I feel worried about something, I want to share my concern with another person.
66	Choose an item.	I would like to be seen driving around in a very expensive car.
67	Choose an item.	I think of myself as a somewhat eccentric person.
68	Choose an item.	I don't allow my impulses to govern my behavior.
69	Choose an item.	Most people tend to get angry more quickly than I do.
70	Choose an item.	People often tell me that I should try to cheer up.
71	Choose an item.	I feel strong emotions when someone close to me is going away for a long time.
72	Choose an item.	I think that I am entitled to more respect than the average person is.
73	Choose an item.	Sometimes I like to just watch the wind as it blows through the trees.
74	Choose an item.	When working, I sometimes have difficulties due to being disorganized.
75	Choose an item.	I find it hard to fully forgive someone who has done something mean to me.
76	Choose an item.	I sometimes feel that I am a worthless person.
77	Choose an item.	Even in an emergency I wouldn't feel like panicking.
78	Choose an item.	I wouldn't pretend to like someone just to get that person to do favors for me.
79	Choose an item.	I've never really enjoyed looking through an encyclopedia.
80	Choose an item.	I do only the minimum amount of work needed to get by.
81	Choose an item.	Even when people make a lot of mistakes, I rarely say anything negative.

82	Choose an item.	I tend to feel quite self-conscious when speaking in front of a group of people.
83	Choose an item.	I get very anxious when waiting to hear about an important decision.
84	Choose an item.	I'd be tempted to use counterfeit money, if I were sure I could get away with it.
85	Choose an item.	I don't think of myself as the artistic or creative type.
86	Choose an item.	People often call me a perfectionist.
87	Choose an item.	I find it hard to compromise with people when I really think I'm right.
88	Choose an item.	The first thing that I always do in a new place is to make friends.
89	Choose an item.	I rarely discuss my problems with other people.
90	Choose an item.	I would get a lot of pleasure from owning expensive luxury goods.
91	Choose an item.	I find it boring to discuss philosophy.
92	Choose an item.	I prefer to do whatever comes to mind, rather than stick to a plan.
93	Choose an item.	I find it hard to keep my temper when people insult me.
94	Choose an item.	Most people are more upbeat and dynamic than I generally am.
95	Choose an item.	I remain unemotional even in situations where most people get very sentimental.
96	Choose an item.	I want people to know that I am an important person of high status.
97	Choose an item.	I have sympathy for people who are less fortunate than I am.
98	Choose an item.	I try to give generously to those in need.
99	Choose an item.	It wouldn't bother me to harm someone I didn't like.

100	Choose an item.	People see me as a hard-hearted person.
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9.5 Interview Questionnaire

Researcher: Burkhard Wolf Wilmes

Supervisor: Prof. Dr. René Fahr, Chair of Business Administration incl. Corporate Governance

Organization: University of Paderborn, Germany

Research Title: Behavioral Compliance – Corporate Compliance meets Behavioral Economics

General Questions

	Questions	Topics covered / buzz words
1.	<ul style="list-style-type: none"> • Please tell me about who you are until you started working for [Company/Organization]. 	
2.	<ul style="list-style-type: none"> • Why did you decide to work for [Company/Organization]? 	
3.	<ul style="list-style-type: none"> • Did the job meet your expectations? 	

People: Position

	Questions	Topics covered / buzz words
4.	<p><i>Responsibility</i></p> <ul style="list-style-type: none"> • What was your job like? 	<input type="checkbox"/> Job title
5.	<ul style="list-style-type: none"> • What were your daily duties? 	
6.	<ul style="list-style-type: none"> • What were your responsibilities, who were your clients/customers? 	<input type="checkbox"/> High position
7.	<p><i>Autonomy</i></p> <ul style="list-style-type: none"> • Could you work autonomously or were you part of a team? 	
8.	<ul style="list-style-type: none"> • How many colleagues did you have on your rank? How many superiors? For how many people were you responsible? 	
9.	<p><i>Pressures</i></p> <ul style="list-style-type: none"> • Do you think you can handle stress well? 	<input type="checkbox"/> Stress resistance

1. Clarify job position

(high) rank 4+5

tenure 4+5

2. Whistleblower as a

<input type="checkbox"/> team player	7+8
<input type="checkbox"/> stress-resistant person	9

Situation: Organizational

	Questions	Topics covered / buzz words
10.	<p><i>Goals</i></p> <ul style="list-style-type: none"> • Have you had any goals to achieve? • If so, were these difficult to achieve? • If so, was it important for you to achieve your goals? 	<input type="checkbox"/> conscientiousness
11.	<p><i>Incentives</i></p> <ul style="list-style-type: none"> • Have you received any monetary incentives to achieve your goals? If so, were these incentives important to you? 	<input type="checkbox"/> motivated by incentives?

3. Whistleblower as a conscientious or greedy person?

<input type="checkbox"/> conscientiousness	10
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<input type="checkbox"/> greediness	11
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12.	<p><i>Climate and Corporate culture / norms</i></p> <ul style="list-style-type: none"> • How would you describe the work environment, e.g. climate and corporate culture? 	
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13.	<ul style="list-style-type: none"> • Could you openly speak at work? 	
14.	<ul style="list-style-type: none"> • Were there any norms prohibiting you from speaking openly? 	

4. Did the whistleblower feel encouraged to speak up openly?

open communication wanted?

12-14

15.	<p><i>Control Systems</i></p> <ul style="list-style-type: none"> • Were there any control systems installed? (e.g. regular audits, speak-up hotline, code of conduct, policies, investigations, sanctions for misbehavior?) 	<input type="checkbox"/> Regular external audits on financial statement <input type="checkbox"/> Code of Conduct <input type="checkbox"/> Internal audit department <input type="checkbox"/> Internal audit committee <input type="checkbox"/> Speak-up hotline <input type="checkbox"/> E-Mail system <input type="checkbox"/> Anti-fraud trainings <input type="checkbox"/> Investigations <input type="checkbox"/> Sanctions <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____
16.	<ul style="list-style-type: none"> • Were these of importance to you? 	

5. What anti-fraud controls were installed and how were they perceived?

15-16

Situation: Social

	Questions	Topics covered / buzz words
17.	<p><i>Leadership</i></p> <ul style="list-style-type: none"> • What was the leadership like? E.g. commanding or including? 	
18.	<ul style="list-style-type: none"> • How was your relationship with the leadership? Were you pressured? Were you supported? 	<input type="checkbox"/> Trust in leadership
19.	<ul style="list-style-type: none"> • What were your colleagues like, were they friends of yours? 	
20.	<ul style="list-style-type: none"> • How was your relationship with colleagues? Were you pressured by colleagues? Were you supported? 	<input type="checkbox"/> Competition

6. Did the management lead by role?
 Tone from the top 17+18

7. Did the colleagues support each other?
 competition 19+20

versus

contagion 19+20

21.	<p><i>Contagion</i></p> <ul style="list-style-type: none">• How many of your colleagues participated in the fraud, could you tell it in % of your department?	<input type="checkbox"/> Knowing about fraud <input type="checkbox"/> Participating in fraud
22.	<p><i>Optional</i></p> <ul style="list-style-type: none">• Were you involved in the fraud?	
23.	<ul style="list-style-type: none">• Have other colleagues blown the whistle? If not, do you know why?	
24.	<ul style="list-style-type: none">• Did other colleagues of yours remain silent? If so, do you know why?	

8. Did the colleagues support each other?

competition 21+24

versus

□ contagion 21+24

Framework of Ethical Decision Making

	Questions	Topics covered / buzz words
25.	<p><i>Awareness and Judgement</i></p> <ul style="list-style-type: none"> • When did you first perceive fraud in your organization? That is how many months after you started working for your company? 	
26.	<ul style="list-style-type: none"> • How many months later did you decide to blow the whistle about it? 	<input type="checkbox"/> internal <input type="checkbox"/> external
27.	<p><i>Intention</i></p> <ul style="list-style-type: none"> • Why did you decide to blow the whistle? (Altruism) 	
28.	<ul style="list-style-type: none"> • Who helped you most before you blew the whistle, e.g. family, friends, your moral compass? 	
29.	<ul style="list-style-type: none"> • Who helped you least before you blew the whistle, e.g. family, friends, colleagues, organization? 	
30.	<ul style="list-style-type: none"> • Have you talked with others (family, friends, colleagues) about whether you 	

	should blow the whistle, or not? Or did you decide that on your own?	
31.	<ul style="list-style-type: none"> • In a nutshell, what was driving you to blow the whistle? 	<input type="checkbox"/> Personality
32.	<p><i>Moral Character</i></p> <ul style="list-style-type: none"> • Did you blow the whistle internally? • If yes, how many times? • If not, why not? 	
33.	<ul style="list-style-type: none"> • Did you speak to somebody directly or did you use any whistleblowing system (speaking-up hotline or email system)? If not, what would you prefer, speaking to somebody directly or using an anonymous system? 	

9. Internal whistleblowing?

 attempts

32

 channels

33

34.	<ul style="list-style-type: none"> • Why did you decide to contact external channels? 	<input type="checkbox"/> conflict of loyalty
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35.	<ul style="list-style-type: none"> • Which external channels did you use? 	
-----	--	--

10. Internal whistleblowing?

attempts

34

channels

35

36.	<ul style="list-style-type: none"> • What is your lesson learnt? 	
37.	<ul style="list-style-type: none"> • Would you blow the whistle again? 	
38.	<ul style="list-style-type: none"> • Who helped you most after you blew the whistle, e.g. family, friends, your moral compass? 	
39.	<ul style="list-style-type: none"> • Who helped you least after you blew the whistle, e.g. family, friends, colleagues, organization? 	
40.	<ul style="list-style-type: none"> • Do you think you have changed since you blew the whistle? 	

Closing Questions

	Questions	Topics covered / buzz words
41.	<ul style="list-style-type: none">• When you think of your childhood, who was your idol?	
42.	<ul style="list-style-type: none">• What was your favorite book?	

10 Eidesstattliche Erklärung

Hiermit versichere ich, Burkhard Wolf Wilmes, die vorliegende Arbeit selbstständig und unter ausschließlicher Verwendung der angegebenen Literatur und Hilfsmittel erstellt zu haben. Alle Stellen, die wörtlich oder sinngemäß veröffentlichtem oder unveröffentlichtem Schrifttum entnommen sind, habe ich als solche kenntlich gemacht. Die Arbeit wurde bisher in gleicher oder ähnlicher Form keiner anderen Prüfungsbehörde vorgelegt und auch nicht veröffentlicht.

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