

Företagsekonomiska institutionen Department of Business Studies

# Accounting for Accountability

Theoretical and Empirical Explorations of a Multifaceted Concept

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#### Abstract

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This dissertation extends our understanding of accountability in the accounting literature, where discourses revolve around diverse manifestations of accountability. While accountability is often conceptualized as a management control tool, accountability also seems to operate through inter- and intra-personal mechanisms. This apparent elusiveness has caused confusion in the accounting literature about what accountability is, how it operates, and how it should be ultimately investigated.

The dissertation focuses on two distinct manifestations of accountability to clarify and modify explanatory mechanisms of accountability in the accounting literature. Both have in common that they explore the cognitive mechanisms of accountability involved in accounting practice, relying on behavioral, psychological, and neurobiological evidence.

Based on two laboratory experiments and one field experiment, the findings of this dissertation reveal that distinguishing between different mechanisms of accountability contributes to our understanding of how accountability is involved in the emergence of stress and dysfunctional organizational behavior. Specifically, the findings demonstrate that accountability does not only operate through external control but also through internal, self-regulatory mechanisms. Rationalization processes enable individuals to engage in potentially dysfunctional reporting behavior, while evading emotional self-sanctions, which has implications for situations where formal control is less salient. The findings of this dissertation also suggest that we need to modify our view on how accountability mechanisms are involved in the emergence of stress in the performance evaluation process. Based on neurobiological evidence, the findings reveal that individuals' prolonged anticipation of being held to account adds to unconscious stress build-up over time, which implies that frequent performance evaluations can relieve stress.

The cumulative findings of this dissertation contribute to the accounting literature by revealing accountability as a mechanism that is inherently intertwined with what humans naturally do, that is, to self-regulate and anticipate future threats. This has implications for accounting research and practice in terms of relevant theoretical frameworks and methodological approaches, as well as control system design.

Keywords: accountability, stress, reporting behavior, performance evaluation, rationalization, neurobiology, experimental research

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To my family whose unwavering support has pushed me to the finish line

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# List of Papers

This thesis is based on the following papers, which are referred to in the text by their Roman numerals.

- I. Hornbach, J., Hartmann, F.G.H., Nordvall, A.-C. Understanding accountability: Theoretical and empirical challenges
- II. Hornbach, J. How the opportunity to rationalize misreporting affects business unit controllers' feelings of guilt A previous version of this paper was presented at the 2020 Accounting Behavior and Organizations Virtual Research Conference.
- III. Hornbach, J. The slippery road of earnings management: The role of rationalization as a coping strategy for guilt A previous version of this paper was presented at the 3<sup>rd</sup> European Network for Experimental Accounting Research Conference, Seville, Spain.
- IV. Frimanson, L., Hornbach, J., Hartmann, F.G.H. (2021) Performance evaluations and stress: Field evidence of the hormonal effects of evaluation frequency. *Accounting, Organizations and Society*, 95, 101279, https://doi.org/10.1016/j.aos.2021.101279

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# Abbreviations

BU

**Business Unit** 

### Introduction

Accountability is a fundamental characteristic of social life (Lerner & Tetlock, 1994). Ranging from education, politics, law, and business to the most private spheres of life, the question of "who should answer to whom, for what, and under which ground rules" is omnipresent in all social interactions (Lerner & Tetlock, 1999, p. 255). As human beings, we are constantly involved in the exchange of accounts (Munro, 1996; Willmott, 1996). We both demand accounts from others, and give accounts to others about who we are, what we do, and why we do it. Politicians give accounts to the public about their political agenda, students give accounts to their teachers about their acquired knowledge, and employees give accounts to their superiors about their progress toward performance goals. Even myself, as I am sitting here writing this 'kappa,' I give an account to you, the reader, about my research process. As such, accountability renders our behavior and decision-making ultimately intelligible and transparent to others (Messner, 2009; Willmott, 1996). An underlying feature of accountability is the prospect of evaluation and personal repercussion (Lerner & Tetlock, 1999). When we are accountable, or give an account, our performance and behavior can be (potentially) judged, scrutinized, and questioned in terms of certain rules, norms, and expectations (Tetlock, 1998). Deviations from those norms can trigger sanctions and penalty, while compliance can trigger praise and rewards (Bovens, 2007; Lerner & Tetlock, 1999; Schlenker, 1997).

A common assertion in the accounting literature – and in the public discourse in general – is that accountability is the key to safeguarding organizational goals and to promoting desired organizational behavior (e.g., Jensen & Meckling, 1976; Merchant & Otley, 2006). In fact, empirical evidence in the experimental accounting literature suggests that informing individuals about accountability demands in advance improves their judgment accuracy and decision-making quality (e.g., DeZoort et al., 2006; Iskandar et al., 2012; Tan et al., 2002; Tan & Kao, 1999). Accountability demands have been linked to higher professional skepticism (Kim & Trotman, 2015; Turner, 2001), less overreliance on prior commitments (Messier et al., 2014; Phang & Fargher, 2019), and less aggressive reporting behavior (Ackert et al., 2019; Pan & Patel, 2020). Interestingly, Pan and Patel (2020) have emphasized that individuals' intrinsic sense of being accountable plays an important role in

attenuating aggressive reporting behavior, suggesting that accountability can have different facets.

Scholars have challenged the overly positive connotation of accountability in the accounting literature, emphasizing that accountability can cause excessive conformity (Lord, 1992; Tan et al., 1997), and threaten auditors' independence (Koch et al., 2012; Peytcheva & Gillett, 2011) when individuals know or can guess the views and expectations of important others (Lerner & Tetlock, 1999). Accountability has also been identified as a potential stressor. A recurring argument in the accounting literature is that accountability is highly demanding for individuals, both emotionally and cognitively (e.g., Burkert et al., 2011; Messner, 2009; Roberts, 2009). Under accountability, individuals need to fulfill standards and expectations, memorize past events and situations, come up with justifications that are deemed acceptable by different key constituencies, and anticipate possible counterarguments when challenged to explain past decisions (Lerner & Tetlock, 1999). That accountability can be stressful has been suggested previously in the budget-pressure and jobtension literature (e.g., Hopwood, 1972; Marginson et al., 2014; Shields et al., 2000). The pioneering study by Argyris (1952) was the first to reveal empirical evidence on job-related tension and stress among subordinates having to justify budget variances to superiors during performance evaluations. Accountability to multiple stakeholders, specifically, has been suggested to increase negative affect (Bagley, 2010), and role stress (Imoisili, 1989; Maas & Matějka, 2009) because individuals need to juggle different, potentially contradictory, viewpoints and demands in complex organizational settings (Indjejikian & Matějka, 2006; Maas & Matějka, 2009; San Miguel & Govindarajan, 1984). In line with these findings, the critical accounting literature has pointed out that accountability can be burdensome for individuals (Messner, 2009; Roberts, 2009). First, because accountability triggers an excessive preoccupation with securing social approval and recognition from others (Roberts, 1991, 2009), a feeling that is suggested to be more intense the more individuals are exposed to evaluative situations (Messner, 2009), and second, because there is an inherent limit on how much individuals are cognitively capable of accounting for (Butler, 2001; Messner, 2009).

These diverse effects illustrate that accountability is an important, yet profoundly complex, phenomenon. Accountability seems to be about: directing and controlling the behavior of organizational participants (e.g., Merchant & Otley, 2006; Peecher et al., 2013); requiring individuals to justify processes, outcomes, and decisions to others (e.g., Bagley, 2010; Libby et al., 2004; Phang & Fargher, 2019); individuals' expectation of being held to account (e.g., Hall et al., 2017; Hall et al., 2006; Hochwarter et al., 2007; Lerner & Tetlock, 1999); the need to fulfill certain role expectations and demands from (potentially different) key constituencies (e.g., Frink & Klimoski, 2004; Roberts, 1991; Roberts & Scapens, 1985); an individual's intrinsic sense of responsibility (e.g., Bovens, 2007; Pan & Patel, 2020; Schlenker, 1997;

Schlenker & Weigold, 1989); and the articulation of reasons, explanations, and justifications (e.g. Boland & Schultze, 1996; Butler, 2001; Messner, 2009; Munro, 1996; Scott & Lyman, 1968). Hence, accountability can mean profoundly different things from different perspectives (Bovens, 2010; Mulgan, 2000; Sinclair, 1995).

In this dissertation, I argue that this complexity has important implications for both theory development and empirical investigations of accountability: When we talk, theorize, and research about accountability, do we talk, theorize, and research about the same thing?

### Problem formulation and research objective

When I first started this journey as a doctoral student, I naively believed that I had a pretty good idea of what accountability was. Having read the 'classics' on accountability by Tetlock and colleagues, I figured that accountability, in the most general sense, referred to an individual's expectation of having to justify decisions to others (Lerner & Tetlock, 1994). Accountability also seemed to involve the possibility of being evaluated, being identifiable to others, and having to face potentially negative consequences (Lerner & Tetlock, 1999). Yet, the more I immersed myself in the literature, the more I realized that discourses on accountability seemed to revolve around so much more.

First and foremost, in virtually all discussions, accountability is inherently intertwined with formal organizational control. In one way or another, accountability is something that organizations can impose on individuals in order to steer and control their behavior and decision-making, including performance evaluations (e.g., Hopwood, 1972; Imoisili, 1989), budget targets (e.g., Marginson & Ogden, 2005; Shields et al., 2000), justification requirements (e.g., Kadous & Sedor, 2004; Perera et al., 2020), and governance practices (e.g., Bergner et al., 2016; Cohen et al., 2013). However, accountability also seems to be a deeply relational issue. Several studies in the accounting literature have provided experimental evidence that psychological contracts to important others, including investors, clients, and managers steer individuals' decision-making (e.g., Hurley et al., 2019; van Rinsum et al., 2018), suggesting that accountability is something that is implicitly embedded in social relations (Frink & Klimoski, 1998, 2004). A recent study by Pan and Patel (2020) has suggested that accountability mechanisms can be in place in the absence of formal control structures, suggesting that compliance with organizational goals can result from individuals' intrinsic sense of being accountable rather than formal control alone.

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<sup>&</sup>lt;sup>1</sup> This list is far from conclusive. Rather, it is intended to show the potential breadth of accountability meanings.

What I came to realize in the process was that the accounting literature, including myself, were deeply confused about what accountability was and how it ultimately operated. Accountability seemed to be this loosely defined 'umbrella term' representing different mechanisms (e.g., Bovens, 2010; McKernan, 2012; Mulgan, 2000) that explained a variety of different, potentially conflicting, organizational and individual outcomes. Most importantly, these mechanisms seemed extremely difficult to disentangle. If we think about accountability as something that individuals naturally do and are in social settings (Munro, 1996), distinguishing these mechanisms from formally imposed organizational control seemed inherently challenging.

The elusiveness of the accountability concept has been problematic for accounting research for at least three reasons:

First, since accountability can mean different things, it seems almost impossible to define accountability in the first place. What is it that we talk about when we talk about accountability? Is it a control mechanism? Is it a social contract? Is it a justification requirement? Is it an individual's state of mind? The diversity of potential meanings has not only caused confusion about what accountability is from a conceptual point of view (e.g., Bovens, 2010), but it has also contributed to potential misunderstandings among accounting researchers who have tried to build on each other's work.

Second, if there is no agreement on what accountability is, then how are we able to investigate it? This uncertainty is likely one of the reasons for the vast diversity of accountability operationalizations that we find in the accounting literature today. As a result, replicating research findings and drawing generalizable conclusions has become almost impossible, which potentially explains why the literature has been struggling to produce robust findings on accountability and its behavioral effects (DeZoort et al., 2006).

Third, the complexity of accountability has encouraged researchers to largely rely on what they believe they already 'know' about accountability. As a result, accounting researchers have iterated the same theoretical arguments and methodological approaches over and over again in different variations. While I do not refute that doing research naturally involves building on previous knowledge, I believe that in the case of accountability, this approach has reinforced a circle of confusion and unsystematic research. As a result, accountability research has not substantially evolved, either theoretically or methodologically, since the late 1990s.

Despite these difficulties, I argue that the elusiveness of accountability provides opportunities to develop our understanding of it. The theoretical complexity of the concept allows researchers to investigate edges of accountability that have remained largely unexplored in the accounting literature, including intrinsic forms of accountability (Pan & Patel, 2020). It also encourages researchers to challenge our understanding of long-established accounting phenomena by exploring accountability effects from different theoretical angles.

In this dissertation, my overall objective is to contribute to the understanding of accountability in the accounting literature. Specifically, my intention is to expand our theoretical understanding of what accountability *is*, and, by extension, to clarify and modify explanatory mechanisms of accountability in the behavioral accounting literature. For that purpose, I focus on accountability mechanisms that manifest on the individual level, looking specifically at how cognitive mechanisms of accountability are involved in the build-up of stress and dysfunctional organizational behavior. My intention is to provide new perspectives on accounting phenomena by exploring accountability as something that is embedded in human nature, rather than something that is externally imposed by organizations. This objective also involves moving beyond traditional ways of theorizing about accountability, and to re-evaluate methodological approaches. In this dissertation, I rely on both field and laboratory experiments, and provide behavioral, psychological, and neurobiological evidence to understand accountability effects at the individual level.

### Research approach

The dissertation is comprised of four papers, one conceptual paper and three empirical papers.

Paper I provides the starting point of this dissertation, and maps previous operationalizations of accountability in the experimental accounting literature. The paper provides evidence for the overall confusion about accountability in the accounting literature by revealing mismatches between theoretical arguments and methodological approaches. Importantly, the paper reveals that cognitive processes are largely theoretically inferred and lack empirical evidence, suggesting that our understanding of what accountability is and how it operates is limited at best. The three empirical papers aim to address this limitation and explore two distinct mechanisms of accountability that focus on the underlying cognitive processes of accountability.

Papers II and III focus on rationalization – a self-regulatory mechanism through which individuals evade feelings of guilt from violating normative expectations. The papers conceptualize accountability as a process of internal scrutiny, rather than external control. Paper II clarifies the role of rationalizations in evading emotional self-sanctions from misreporting in the form of guilt, and Paper 3 extends this relationship by investigating how rationalizations, through their guilt-relieving effect, are instrumental in the emergence of dysfunctional organizational behavior over time.

Paper IV takes a different perspective, focusing on the role of accountability in the build-up of stress. In Paper IV, accountability is conceptualized as an anticipatory threat that individuals cognitively prepare for in advance of being held to account. The paper challenges the role of accountability in the build-up of stress in the performance evaluation literature, where stress is

traditionally seen as emerging from the pressure of having to justify performance during evaluation meetings (e.g., Argyris, 1952; Messner, 2009).

### Structure of the dissertation

The dissertation is structured as follows. In the next chapter, I provide a theoretical account of different accountability mechanisms, thereby illustrating how my four papers are theoretically linked to the concept of accountability. The chapter that follows provides a methodological account of accountability, in which I discuss challenges and opportunities for investigating accountability experimentally. Subsequently, I present and summarize the content of the four papers included in this dissertation. Finally, I discuss the overall contribution of this dissertation in light of theoretical and practical implications, and I reflect on potential limitations that provide opportunities for future research.

### Theoretical accounts of accountability

This chapter is intended to account for different theoretical manifestations of accountability, thereby clarifying how my empirical papers are theoretically connected to accountability. It should be noted that my account on accountability is by far conclusive and represents by far the only possible solution to what accountability is or can be. Instead, my account is the result of my own learning process through which I came to understand how accountability can manifest in different contexts and through different mechanisms. Hence, my ambition with this chapter is to position my empirical papers in the landscape of accountability that I had the opportunity to immerse myself in during my own research journey. In doing so, I rely on theoretical stances on accountability, as found in the management accounting and auditing literature, organizational behavior literature, social psychology literature, and neurobiology literature.

### Why am I NOT defining accountability?

Even though accountability is at the heart of organizational life, and of accounting practice specifically, there is surprisingly little consensus about what accountability is and how it operates (e.g., Bovens, 2010; Mulgan, 2000). In the accounting literature, different definitions of accountability circulate, including accountability as...

"an implicit or explicit expectation that one may be called on to justify one's beliefs, feelings, and actions to others." (Lerner & Tetlock, 1999, p. 255), cited in Ackert et al. (2019, p. 132), Jollineau et al. (2014, p. 1404), and Fehrenbacher et al. (2020, p. 2),

"being answerable to audiences for performing up to prescribed standards that are relevant to fulfilling obligations, duties, expectations, and other charges." (Schlenker, 1997, p. 249), cited in DeZoort et al. (2006, p. 375), and Iskandar et al. (2012, p. 463),

"the giving and demanding of reasons for conduct." (Roberts & Scapens, 1985, p. 447), cited in Sinclair (1995, p. 221),

"a requirement [or pressure] to justify." (e.g., Bagley, 2010, p. 141; Cloyd, 1997, p. 112; Glover, 1997, p. 216; Libby et al., 2004, p. 1077).

While all these definitions add an important piece of information to our understanding of accountability, none of them in isolation provides a complete picture of what accountability ultimately is. What is even more problematic is that parts of these definitions do not seem to be theoretically compatible (e.g., Bovens, 2010). For instance, defining accountability as a requirement to justify (e.g., Bagley, 2010; Cloyd, 1997; Glover, 1997; Libby et al., 2004) is different from defining it as an individual's expectation of having to justify (e.g., Ackert et al., 2019; Fehrenbacher et al., 2020; Jollineau et al., 2014), which again is different from defining it as an exchange of reasons of conduct between individuals (e.g., Roberts & Scapens, 1985; Sinclair, 1995). I share the view of McKernan (2012) and Bovens (2010), namely that searching for a concrete, encompassing, definition of accountability might be virtually impossible. This is not only because of the breadth of potential definitions but also because definitions naturally imply a commitment to rely on certain theoretical frameworks and assumptions; an endeavor that seems inherently untenable, given the plethora of different perspectives and views involved. Therefore, accountability is probably best understood if we recognize and embrace its complexity (Bovens, 2010; McKernan, 2012). In this chapter, I will account for this complexity by presenting different theoretical manifestations of accountability, ranging from accountability as an organizational intervention to accountability as an inherently internal process.

### Accountability as an organizational intervention

In management and accounting, the discourse on accountability typically revolves around accountability as an organizational intervention. Within that paradigm, accountability is perceived as something that can be formally imposed on individuals by an organization or institution as to direct and control the behavior of organizational participants (e.g., Merchant & Otley, 2006; Peecher et al., 2013). Calls for greater accountability are, therefore, often accompanied by attempts to design tighter and more effective control systems (e.g., Bergner et al., 2016; Cianci et al., 2017; Cohen et al., 2013; Jollineau et al., 2014), both to mitigate opportunistic behavior (Ackert et al., 2019), and to increase individuals' performance (Marginson et al., 2014; Marginson & Ogden, 2005; Shields et al., 2000) and judgement quality (Bartlett et al., 2014; Cohen & Trompeter, 1998; Fehrenbacher et al., 2020). Accountability is, therefore, commonly talked about in terms of 'accountability systems' that are implemented to hold individuals accountable (Roberts & Scapens, 1985).

An underlying assumption within this paradigm is that individuals are passive receivers of accountability demands because it is through the design of

formal control systems and accounting practices that individuals ultimately become subject to accountability (Messner, 2009; Roberts, 2009). Individuals are exposed to accountability demands whenever they can be subjected to evaluations, justification requirements, and potential repercussions for performing or not performing according to certain standards (e.g., Asare et al., 2000; DeZoort et al., 2006; Johnson & Kaplan, 1991; Libby et al., 2004; Messner, 2009). This means that control and accounting practices commonly found in organizations, such as performance evaluations, target setting, reward systems, and governance structures, are inherently intertwined with accountability structures (Frink & Ferris, 1998; Klimoski & Inks, 1990). Goal- and budget setting provide a frame of reference for what an individual or a business unit should be able to account for, and they serve as a benchmark by which future performance is compared and evaluated (e.g., Brownell & Hirst, 1986; Harrison, 1992; Shields et al., 2000). Performance evaluations and variance investigations constitute settings of inquiry (Schlenker, 1997) in which deviations from pre-set targets and standards become transparent to superiors (e.g., Webb, 2002), and where individuals can be asked to explain and justify such deviations to superiors (e.g., Hopwood, 1972; Imoisili, 1989; Webb, 2002). Compensation contracts induce monetary repercussions for performing or not performing up to pre-set standards and expectations (Schlenker, 1997). Governance structures, including disclosure requirements, accounting and reporting standards, constitute boundary conditions of 'normative behavior' that individuals or organizations are required to comply with and by which compliance can be scrutinized (e.g., Asbahr & Ruhnke, 2019; Boyle et al., 2015; Cianci et al., 2017).

Hence, accountability often becomes identified with control itself (Mulgan, 2000). This tendency can be witnessed in the way many empirical studies on accountability are set up. In experiments, scholars typically compare an 'accountability condition' with a 'no accountability condition' (e.g., Asare et al., 2000; Hoffman & Patton, 1997; Iskandar et al., 2012; Jermias, 2006; Johnson & Kaplan, 1991; Mala et al., 2018), where individuals are either made to believe that they will be subject to justification requirements, evaluations, and subsequent discussions, or that they will stay anonymous. Other attempts have involved the manipulation of control systems and accounting practices as to vary the extent of induced accountability (e.g., Bergner et al., 2016; Cianci et al., 2017; Gaynor et al., 2006; Gold et al., 2020; Kadous & Sedor, 2004; van Rinsum et al., 2018). These methodological choices largely imply that accountability is something that organizations can actively and objectively regulate. However, this assumption has been criticized for not recognizing that accountability is inherently embedded in social exchange, and therefore constitutes a permanent aspect of social life (Bovens, 2007, 2010; Lerner & Tetlock, 1999; Tetlock, 1985, 1998).

### Accountability as a social mechanism

Social psychologists often talk about accountability as something that relates to implicit normative expectations in social settings (e.g., Frink & Klimoski, 1998; Frink & Klimoski, 2004; Lerner & Tetlock, 1999). All groups – ranging from dyads to organizations and society at large – function due to the existence of collective rules, norms, and standards that inform individuals' behavior, and against which behavior can be compared and evaluated (Frink & Klimoski, 2004; Lerner & Tetlock, 1994, 1999; Tetlock, 1992, 1998). Implicit in any social encounter is therefore the requirement to comply with certain norms, rules, and expectations that others dictate (Dose & Klimoski, 1995; Frink & Klimoski, 2004; Patil et al., 2016; Schlenker, 1997; Schlenker & Weigold, 1989). In organizations, these norms and expectations can manifest rather explicitly in the form of codes of conduct and employee manuals, but they can also be embedded implicitly in intra-organizational dynamics (Frink & Klimoski, 2004), such as the overall organizational climate and the underlying 'tone at the top' (Merchant & Rockness, 1994; Murphy & Free, 2016).

Because of the shared understanding of what is 'expected' and 'acceptable' in social, and, specifically, organizational settings, accountability is often seen as a key mechanism that enables the maintenance and proper functioning of social systems (Frink & Klimoski, 1998; Lerner & Tetlock, 1994; Schlenker & Weigold, 1989; Tetlock, 1998). This is because, first, what individuals say or do can be inherently questioned and judged by others, and second, any verdict regarding the legitimacy of the conduct or account – again, based on certain norms and expectations – can lead to personal repercussions (Bovens, 2010; Lerner & Tetlock, 1999; Schlenker, 1997). These repercussions can involve anything from economic (e.g., bonuses, pay), to social (e.g., status, reputation, group membership), and personal (e.g., self-esteem, identity) consequences (Schlenker, 1997; Schlenker & Weigold, 1989). Hence, how others might view and judge our performance largely affects how we behave and make decisions (Frink & Ferris, 1998; Green et al., 2000; Tetlock, 1998).

The social norm enforcement mechanism of accountability, however, does not only have desirable effects. Individuals have an inherent need to gain social approval from others and to ensure their belonging to a social group (Baumeister & Leary, 1995). These needs are at stake when individuals are exposed to the scrutiny and visibility of others who can potentially judge their behavior and impose sanctions (Roberts, 1991). This might explain why conflicting expectations from different parties can increase role conflict and stress (Maas & Matějka, 2009) because individuals need to juggle expectations not of one, but of several audiences, simultaneously (Frink & Ferris, 1998; Frink & Klimoski, 2004). It might also explain why social pressure and organizational ties are powerful drivers of organizational decision-making because individuals tend to conform to the views and expectations of those they personally identify with (Tajfel, 1974), are strongly involved with (Hartmann &

Maas, 2010) or that control important resources (Tetlock, 1998). In the accounting literature, social pressure from in-group members has been linked to undesired organizational behavior, including budgetary slack (e.g., Davis et al., 2006; Hartmann & Maas, 2010) and financial misreporting (e.g., Mayhew & Murphy, 2014). Similarly, organizational ties and loyalty have been related to unethical pro-organizational behavior (e.g., Mahlendorf et al., 2018) and fraud (e.g., Free & Murphy, 2015). Hence, organizational decision-making is largely influenced by social mechanisms of accountability, where expectations from others as well as collective norms and standards play a fundamental role. Importantly, these mechanisms can be in place irrespective of formal structures and control systems (Frink et al., 2008; Frink & Klimoski, 2004), which turns accountability into an omnipresent phenomenon of daily organizational life (Lerner & Tetlock, 1994, 1999). It has been emphasized that, while accountability is something that is embedded in social context, its behavioral effects largely operate through individuals' perception and interpretation of the context (Frink et al., 2008; Hall et al., 2017; Lerner & Tetlock, 1999).

# Accountability as an expectation of being held to account

Social psychologists, like Tetlock and colleagues (e.g., Tetlock, 1985, 1992, 1998; Tetlock et al., 1989), have advocated a phenomenological view on accountability, where accountability is seen as something that is perceived by individuals rather than imposed on individuals (Frink et al., 2008; Hall et al., 2017). Under this view, accountability is not about the actual evaluation or justification requirement per se; rather, it concerns the individual's expectation that they may be called on to account, be evaluated, and face consequences for (not) complying with certain norms and expectations (Lerner & Tetlock, 1994, 1999). Hence, when it comes to understanding accountability and its effects on well-being and behavior, the individual's perception and subjective interpretation of the context is of importance, rather than the context itself (Frink et al., 2008; Hall et al., 2017). An important detail about perceived accountability, particularly for explaining its psycho-behavioral effects, is that accountability is about the possibility of being held to account (Bovens, 2010; Hall et al., 2017; Lerner & Tetlock, 1999). Hence, accountability is operating through the anticipatory threat of (potentially) being held to account someday in the future (Roberts, 2009).

The expectation of being held to account is cognitively demanding (Lerner & Tetlock, 1994, 1999; Tetlock, 1985). To ensure social approval and to avoid negative judgements by others (Baumeister & Leary, 1995), individuals mobilize cognitive effort even before they might be held to account (Brosschot et

al., 2006; Brosschot et al., 2005; Ursin & Eriksen, 2004). These cognitive efforts can relate to worrying about the detection of poor performance, ruminating about convincing excuses and justifications, and trying to remember a coherent chain of events. Individuals also engage in more self-critical and complex information processing when they believe that their decisions may be scrutinized in the future (Tetlock, 1983; Tetlock et al., 1989).

In line with literature on cognitive activation (Brosschot, 2010; Brosschot et al., 2006; Brosschot et al., 2005; Ursin & Eriksen, 2004, 2010), the expectation of being held to account functions as a potential stressor. Engaging in prolonged cognitive effort in anticipation of potential scrutiny and evaluation requires a sustained level of energy mobilization, which leads to unconscious build-up of stress over time (McEwen, 1998, 2000; McEwen & Wingfield, 2003). What ultimately affects individuals' health and well-being is therefore not the structural demands of accountability per se, but rather the individual's ability to anticipate future threats related to those demands (Brosschot, 2010; Brosschot et al., 2005; Ursin & Eriksen, 2004).

This literature review has so far focused on accountability as something that emerges from the individual's external environment, but, as I will illustrate in the next chapter, accountability also emerges from the individual itself.

### Accountability as a process of self-scrutiny

While most discourses on accountability emphasize the importance of significant others (e.g., Bovens, 2007, 2010; Frink & Ferris, 1998; Lerner & Tetlock, 1999; Tetlock, 1985, 1992), some scholars have emphasized that accountability also involves the self (e.g., Boland & Schultze, 1996; Frink & Klimoski, 2004; Schlenker, 1997; Schlenker & Weigold, 1989; Willmott, 1996). Hence, individuals are not only held accountable by others but also by themselves, and therefore act as judges of their own behavior (Schlenker & Weigold, 1989; Willmott, 1996).

Individuals have an inherent need to maintain a positive self-concept (Baumeister et al., 2001; Mazar et al., 2008). Behaving according to internalized standards and norms triggers self-worth, while violating them triggers self-condemnation and guilt (Bandura, 1999; Bandura et al., 1996). Feelings of guilt, specifically, emerge when individuals perceive that they have acted in violation of their perceived obligations, responsibilities, and sense of duty (Higgins, 1987). Guilt therefore implies a form of self-sanction for not living up to personally held standards, that is, how one 'ought to behave' (Bandura, 1999; Higgins, 1987; Schlenker, 1997). This means that accountability mechanisms do not only operate through external scrutiny but also through self-scrutiny (Schlenker, 1997; Schlenker & Weigold, 1989; Tetlock, 1998).

Actual or anticipated discrepancies between ought-states and actual states trigger self-regulatory processes (Dhiman et al., 2018; Higgins, 1987; Inzlicht

et al., 2021). Self-regulation is "a core aspect of human functioning" (Inzlicht et al., 2021, p. 319) that encompasses "the processes involved in attaining and maintaining an internally represented (i.e., within the self) desired state" (Vancouver & Day, 2005, p. 158). These processes can involve the regulation of cognitive effort and behavior, but also other aspects of the self, including emotions and thoughts (Aldwin et al., 2011; Aspinwall, 2004). As such, individuals can self-regulate by avoiding behavior that causes self-sanctions to occur in the first place (Dhiman et al., 2018; Murphy & Dacin, 2011), or by rationalizing away any discrepancies that the behavior might cause (Bandura, 1999, 2002; Bandura et al., 1996; Bandura et al., 2001). In the first case, the potential for self-sanction has strong self-disciplinary effects leading to behavior that is in accordance with internally held standards and norms (e.g., Dhiman et al., 2018; Passyn & Sujan, 2006; Tetlock, 1998), whereas in the latter case, individuals can act in violation of internally held standards and norms, while still upholding their moral self-concept (e.g., Bandura et al., 1996; Mazar et al., 2008; Tsang, 2002). Rationalizations, therefore, allow individuals to circumvent feelings of accountability while behaving in ways that would otherwise cause self-sanction. In the social psychology literature, rationalizations are seen as a form of self-justification, where individuals reconstruct a (potentially) problematic behavior as ultimately justifiable and acceptable to the self (Bandura, 1999, 2002; Bandura et al., 1996; Bandura et al., 2001). Rationalizations can be aimed at reducing the impact of the conduct itself, at reducing the individual's agency in the conduct, or at reducing the harmful consequences of the conduct (Bandura, 1999). In the accounting literature, rationalizations have been linked to misreporting and fraudulent behavior (e.g., Brown, 2014; Free & Murphy, 2015; Mayhew & Murphy, 2014; Murphy, 2012; Murphy & Free, 2016; Rajgopal & White, 2019). Hence, while self-scrutiny can constitute an important internal control function, it can also trigger self-regulatory mechanisms that enable individuals to morally disengage from misconduct and to evade accountability.

### Final reflections on accountability

The above account on accountability illustrates that accountability is a highly complex phenomenon. On the extreme ends, accountability can be something that is imposed on individuals by organizations and other individuals, but it can also be something that human behavior is naturally based on, that is, an individual's capacity to anticipate future threats, to self-scrutinize, self-regulate, and self-sanction. Interestingly, though, the role of rationalization as a self-regulatory mechanism (e.g., Bandura, 1999, 2002; Bandura et al., 1996; Bandura et al., 2001) has traditionally been separated from the concept of accountability in the accounting literature, on the premise that accountability mechanisms generally involve account-giving to others and not the self

(Murphy, 2012). However, as I argued above, the self plays an important role in how accountability mechanisms operate. As such, the internal processes of accountability warrant more scholarly attention than what they have traditionally received in the accounting literature (Pan & Patel, 2020). The variety of accountability meanings also requires a more fine-grained theoretical distinction of what accountability is (Bovens, 2010). While much discourse on accountability in the accounting literature revolves around control (e.g., Merchant & Otley, 2006; Peecher et al., 2013), the behavioral outcomes of accountability involve a complex web of social, inter- and intra-personal mechanisms (Frink & Klimoski, 1998, 2004). In this dissertation, I focus on the cognitive mechanisms through which accountability operates on the individual level. This endeavor naturally implies that individuals are embedded in a web of different accountability relations, including others but also themselves (Schlenker, 1997; Schlenker & Weigold, 1989). The diverse theoretical mechanisms of accountability pose potential challenges for how we can study accountability empirically. The methodological implications of investigating accountability will be the topic of the next chapter.

# Methodological accounts of accountability

While accountability has traditionally been investigated as something that can be formally imposed on individuals (e.g., DeZoort et al., 2006; Fehrenbacher et al., 2020; Hoffman & Patton, 1997; Mala et al., 2018), my theoretical account on accountability has highlighted that accountability operates through more than just formal demands to justify. Accountability mechanisms operate through social norms and expectations (Frink & Klimoski, 1998, 2004), and individuals' own sense of responsibility (Bovens, 2007; Schlenker, 1997; Schlenker & Weigold, 1989). A challenge of any empirical investigation of accountability is to account for this complexity (Tetlock, 1985).

Given that accountability operates through normative expectations and social cues (Frink & Klimoski, 1998, 2004; Lerner & Tetlock, 1994, 1999), any behavioral outcome that we observe in social settings can be potentially attributed to accountability mechanisms. This implies that accountability is a natural confound of any behavioral setting. Also, given that individuals are embedded in a web of accountabilities (Frink & Klimoski, 1998; Tetlock, 1985, 1992) that involve "intrapersonal, interpersonal, and person-organizational dynamics" (Frink et al., 2008, p. 184), any social context includes, by default, a variety of different accountability relations (Bovens, 2007). Disentangling them is undoubtedly one of the most challenging tasks of any accountability researcher.

While these challenges might cast doubt on the overall feasibility of conducting valid and reliable accountability research, I argue that studying accountability is not a hopeless case. In this dissertation, I have explored different empirical routes that provide opportunities to investigate accountability mechanisms. Those routes have in common their suggestion to move accountability research off the beaten track. It should be noted that my account does not provide any description of the specific methodological procedures applied in the individual papers of this dissertation. For these, the reader is referred to the method section of each individual paper.

### Understanding accountability through experiments

While experiments are often criticized for being contrived and artificial (Highhouse, 2009; Webster & Sell, 2014), it is exactly that property which makes experimental research particularly useful for studying complex concepts like accountability. First, it is because experiments make it possible to design and manipulate the exact theoretical features that are relevant for testing the effects of a specific accountability mechanism (Webster & Sell, 2014). Second, it is because experiments allow us to manipulate and therefore isolate a specific accountability mechanism while controlling, or at least mitigating, the impact of other, irrelevant situational factors and social dynamics (Webster & Sell, 2014). This unique level of control can be achieved through design choices and randomization. Random assignment to experimental conditions controls for systematic differences between participants in the treatment and control condition, thereby reducing the risk that observed effects are due to factors other than those manipulated in the experiment (Shadish et al., 2003, p. 248). Control over the order and timing of tasks, measurements, and instructions allows us to disentangle causes and effects (Webster & Sell, 2014), thereby providing unique opportunities to disentangle the causal mechanisms through which accountability operates.

However, the use of experiments is not unproblematic for accountability research. First, experiments are likely to be situations of accountability themselves (Tetlock et al., 1996). Participants are in a situation in which someone else, in most cases the researcher him- or herself, dictates what participants are expected to do and what rules they are expected to abide by during participation, which puts participants, by default, in an accountability relation to the researcher. This calls into question whether studies that manipulate accountability as being either present or absent (e.g., Asare et al., 2000; Bartlett et al., 2014; Fehrenbacher et al., 2020; Hoffman & Patton, 1997) are ecologically valid because something like 'no accountability' is unlikely to exist in any social setting, including empirical research (Gibbins & Newton, 1994). Second, the artificiality of many experimental settings casts doubts on whether the psychological and behavioral outcomes that we observe in contrived settings, such as the laboratory, can be reasonably generalized to the complex inter- and intra-personal mechanisms that accountability produces in real-life settings (Hall et al., 2017; Peecher & Kleinmuntz, 1991).

While these concerns cannot be completely denied, I also believe that they are not unproblematic themselves. What does an ecologically valid setting of accountability look like? Given that accountability can mean many different things and can affect behavior and cognitive reasoning in many different ways (Bovens, 2010; Mulgan, 2000; Sinclair, 1995), there is no reasonably encompassing setting that would account for all potential manifestations of accountability. Instead, what I am, and as I would argue, most accountability researchers are, ultimately interested in, is to understand the basic theoretical

principles through which accountability operates (Tetlock, 1985). And that is something that experiments are extremely well-suited for. Hence, a more relevant question for accountability researchers should be whether the chosen research methods and operationalizations fit the theoretical properties of the accountability mechanism that we aim to understand, rather than whether these choices fulfill an illusionary list of possible accountability features, settings, and manifestations.<sup>2</sup>

The empirical papers in this dissertation are based on two different types of experiments: two laboratory experiments (Papers II and III) and one field experiment (Paper IV). While laboratory experiments allow us to investigate causal relationships in a highly controlled, often artificially designed, environment, field experiments make it possible to probe the causal effects of a treatment in its natural, real-life setting (Paluck & Cialdini, 2014). These design choices involve important opportunities but also pose potential challenges to investigating accountability mechanisms.

A major benefit of laboratory experiments is the high degree of control over the design, order, and timing of instructions, measurements, and operationalizations (Paluck & Cialdini, 2014; Webster & Sell, 2014). Hence, laboratory experiments are particularly suited for investigating cognitive mechanisms that are difficult to capture systematically in natural settings. The investigation of rationalization processes in Papers II and III required a high degree of control over design and timing. This is because for rationalizations to be disabled or not disabled, I had to design environmental cues that motivated the use of those rationalizations in the first place. Measuring participants' inclination to re-engage in earnings management also required me to design two scenarios that were distinct, but at the same time, similar enough in terms of contextual and theoretical features. Hence, laboratory experiments are particularly suited to disentangle the theoretical steps involved in studying complex accountability mechanisms, and to control for variations of the social context in which accountability mechanisms are naturally embedded. This artificiality might, at the same time, reduce the ecological validity of findings (Paluck & Cialdini, 2014).

Field experiments, on the other hand, have comparatively high ecological validity, but most importantly, they allow interventions to persist over a prolonged period of time, which is hardly possible in a laboratory setting (Paluck & Cialdini, 2014). Hence, field experiments provide a unique opportunity to investigate long-term manifestations of cognitive accountability mechanisms. By manipulating the frequency of performance evaluation in Paper IV, we were able to vary the time period under which participants anticipated being held to account, and to measure the build-up of stress over a one-year time period. Thus, the use of field experiments can provide a novel perspective on

<sup>&</sup>lt;sup>2</sup> For a more detailed discussion on the importance of distinguishing external from ecological validity in experimental research, I refer the reader to Highhouse (2009).

accountability mechanisms by investigating the causal effects of *long-term*, as opposed to predominantly used *short-term*, accountability treatments in the accounting and social psychology literature. However, field experiments also pose potential challenges. One is related to the lack of control over potential confounds in the research environment, which threatens the robustness, and thereby, internal validity of research findings (Paluck & Cialdini, 2014). Another one is related to the omnipresence of accountability mechanisms in the field. In real-life settings, participants are involved in a web of different accountability relations (Frink & Klimoski, 2004; Tetlock, 1985), both at work and in private life, and disentangling them in the field is nearly impossible. Randomization techniques can mitigate these confounds to a certain extent, as can the use of control variables and rigorous post-hoc analytical efforts, but uncontrollable confounds remain an inherent limitation in any field setting (Paluck & Cialdini, 2014).

In summary, both laboratory and field experiment can provide important opportunities to investigate accountability mechanisms. Trade-offs between the two largely depend on the purpose of the study, the nature of the treatment, the structural requirements of the experimental procedure, and the theoretical scope of the study.

### Measuring accountability effects

As highlighted in Paper I, much of what we believe to know about the cognitive processes of accountability has remained largely unaccounted for from an empirical point of view. Research frequently relies on stimulus – response studies, where researchers manipulate some form of accountability and then measure the subsequent behavioral outcomes (Tetlock, 1985). However, what happens in-between is largely based on theoretical inferences about how individuals *potentially* cope with accountability (e.g., Birnberg & Ganguly, 2012; Lerner & Tetlock, 1999; Tetlock et al., 1989). To the best of my knowledge, experimental accounting research rarely investigates the theoretical pathways through which accountability mechanisms affect behavior and decision-making. A few exceptions include Iskandar et al. (2012) who investigate the role of cognitive effort in explaining improved auditor performance in response to accountability pressure, and Mayhew and Murphy (2014) who investigate the role of displacing responsibility in explaining the relationship between social pressure to misreport and individuals' subsequent decision to misreport. While there are comparatively few studies that rely on mediation analyses in the experimental accounting literature, future research should consider their methodological value in providing causal explanations for accountability mechanisms when combined with experimental research. Mediation assumes a causal process, and experiments help to establish that causality through experimental manipulations, measurements over time, and design choices that illuminate the temporal order of cause and effect (Hayes, 2018, p. 520). As shown in Paper III of this dissertation, mediation analysis offers the opportunity to disentangle the cognitive pathways through which accountability mechanisms operate.

In experimental accounting research, efforts have been made to measure psychological manifestations of accountability, mostly in the form of self-reported cognitive effort (e.g., Kennedy, 1995; Mala et al., 2018; Pan & Patel, 2020), perceived pressure to justify (e.g., DeZoort et al., 2006; Gong et al., 2014), and negative affect (e.g., Bagley, 2010). Hence, much of our understanding of accountability is based on self-reported data. While self-reports are an established method for measuring attitudes, beliefs, and emotional states in social science research, they have important limitations. One limitation is related to our potentially restricted conscious awareness of what accountability 'does' to us – how it affects our reasoning processes, judgments, emotions, and behavior.<sup>3</sup> Cognitive psychologists and neuroscientists have suggested that much of our daily decision-making and emotional states are regulated by unconscious cognitive processes (Bargh & Morsella, 2008; Dijksterhuis & Nordgren, 2006; Hopp et al., 2011; Kihlstrom, 1987; Smith & Lane, 2016). This implies that we are not always capable of identifying the exact mental processes or reasons that make us feel, think, or behave in a certain way (Brosschot, 2010; Kihlstrom, 1987; Smith & Lane, 2016). Considering that accountability can operate through implicit social norms and other subliminal cues (Frink & Klimoski, 1998; Schlenker & Weigold, 1989), it is questionable whether individuals are necessarily aware of accountability structures at all times, which casts doubts on individuals' capacity to self-report on their perceptions of accountability and its psychological effects reliably. Brosschot et al. (2010) suggest that unconscious cognitive processes are also likely to be involved in perseverative cognition – that is, prolonged cognitive activation in anticipation of stressful events. This might explain why we find a significant increase in baseline stress-hormone levels, but not in selfreported mental fatigue, in response to lower evaluation frequency in Paper IV. These results point to the relevance of considering alternative measures that capture the unconscious cognitive processes of accountability that selfreports are likely to miss. These alternatives include the use of neurobiological evidence for studying accounting phenomena (e.g., Eskenazi et al., 2016; He et al., 2019), something that the emerging neuro-accounting literature has already advocated (Birnberg & Ganguly, 2012; Dickhaut et al., 2010; Tank & Farrell, 2022).

<sup>&</sup>lt;sup>3</sup> Drawing on Butler (2001), Messner (2009) gives a philosophical account of the 'opaque self,' arguing that much of our behaviour and decision-making remains unconscious, and, therefore, limits our ability to fully explain and justify ourselves to others.

### Final reflections on accountability research

My methodological account of accountability has highlighted that studying accountability is challenging. Not just because accountability is an omnipresent phenomenon in social settings (Lerner & Tetlock, 1999), but also because individuals are not necessarily consciously aware of all accountability relations in which they are embedded. Other challenges relate to the trade-off between control and realism that the complexity of accountability naturally implies for empirical research (Tetlock, 1985). Given that organizational participants act in a web of different accountability relations (Tetlock, 1985, 1998), investigating accountability in a supposedly 'culture-free' environment is inherently unrealistic. However, if we want to disentangle accountability mechanisms and provide causal evidence on their effects, we need to study accountability in a, somehow, controllable environment (Tetlock, 1985). In this dissertation. I have accounted for some methodological choices that can provide opportunities to investigate cognitive processes of accountability, even though each of those choices naturally implies certain limitations. While previous research on accountability has been predominantly based on laboratory experiments (e.g., DeZoort et al., 2006; Johnson & Kaplan, 1991; Kennedy, 1993; Libby et al., 2004; Pan & Patel, 2020; Phang & Fargher, 2019), I suggest that moving accountability research into the field can provide opportunities to investigate the causal effects of accountability with longitudinal data, and by that, to capture perseverative cognitive processes of accountability. Moreover, I highlight the need for research designs and analytical approaches that attempt to open up the cognitive 'black box' of decision-making under accountability. Specifically, I suggest the use of mediation analyses in combination with experimental research to reveal causal explanatory processes (Hayes, 2018, p. 520). Another suggestion relates to the use of neurobiological measurements to reveal manifestations of cognitive processes that are often not consciously accessible to the human mind (Birnberg & Ganguly, 2012; Petrie & Vedhara, 2010; Smith & Lane, 2016).

# Summary of papers

The dissertation comprises four papers: one conceptual and three empirical papers. In the following, I will summarize the content of the four papers, provide an overview of the respective findings, and explain their unique contribution to the overall objective of this dissertation – that is, to understand accountability, and to clarify and modify explanatory mechanisms of accountability in accounting practice and literature.

### Paper I

Hornbach, J., Hartmann, F.G.H., Nordvall, A.-C. *Understanding accountability: Theoretical and empirical challenges* 

The insights from Paper I build the starting point of this dissertation. Looking at how accountability has been operationalized in the experimental accounting literature on judgement and decision-making, my co-authors and I identify three distinct empirical levels of accountability research that seem to permeate the literature, ranging from institutional, social, to individual levels. While theoretical arguments in the experimental accounting literature predominantly focus on how individuals perceive, interpret, and cope with accountability demands (e.g., Ackert et al., 2019; DeZoort et al., 2006; Fehrenbacher et al., 2020), our synthesis of the literature demonstrates that operationalizations of accountability largely leave these cognitive processes empirically unaccounted for. At the institutional level, researchers tend to manipulate features of accountability systems that are 'accountability-inducing' (e.g., Jollineau et al., 2014; van Rinsum et al., 2018), while operationalizations at the social level manipulate accountability demands more explicitly (e.g., Bartlett et al., 2014; Johnson & Kaplan, 1991), but similar to the institutional level, do not capture whether participants actually perceive these demands as 'accountability.' At the individual level, researchers manipulate accountability demands and subsequently measure some form of 'perceived' accountability (e.g., Gong et al., 2014; Koch et al., 2012). However, what 'perceived accountability' theoretically implies varies substantially across studies (e.g., Gong et al., 2014; Koch et al., 2012; Pan & Patel, 2020). The paper reveals systematic mismatches between theorized and operationalized mechanisms of accountability,

suggesting that many of the cognitive processes that our understanding of accountability is built on lack empirical evidence. Instead, mechanisms are largely implied or taken for granted, challenging the notion that accountability is well understood. The conceptual paper suggests that a possible reason for these mismatches could relate to a systematic confusion in the literature about what accountability is and how its causal mechanisms operate. The paper, therefore, motivates a more systematic investigation of accountability mechanisms.

### Paper II

Hornbach, J. How the opportunity to rationalize misreporting affects business unit controllers' feelings of guilt

Paper II introduces the role of rationalization – a form of self-regulation through which individuals can avoid negative self-sanctions for violating internally held standards and professional norms (Bandura, 1999, 2002; Bandura et al., 1996; Bandura et al., 2001). The accounting context in this paper relates to the dual responsibilities of Business Unit (BU) controllers and the web of conflicting accountability demands that this role naturally implies (Indjejikian & Matějka, 2006; Maas & Matějka, 2009). Using a randomized, scenario-based laboratory experiment in which participants (in this case, professional controllers) face a hypothetical scenario involving social pressure from local management to create budgetary slack, I either restrict or do not restrict BU controllers' opportunities to rationalize a decision to compromise on their fiduciary duty. I subsequently measure BU controllers' feelings of guilt from misreporting. My aim in this paper is to investigate how rationalization processes are instrumental in reducing BU controllers' feelings of guilt after giving in to social pressure to misreport. Contrary to my initial expectations, the findings demonstrate that BU controllers experience guilt in response to violating their fiduciary duty, despite the opportunity to rationalize. This suggests that individuals self-scrutinize their behavior and hold themselves accountable. Importantly, it also implies that breaches of BU controllers' professional duty are not easily rationalized away and increase guilt. However, making BU controllers explicitly aware of the moral implications of violating their fiduciary duty, by restricting opportunities to rationalize, causes them to engage in rationalization behavior more actively, particularly moral justification. By re-constructing the breach of their fiduciary duty as ultimately morally justifiable and acceptable, BU controllers actively reduce feelings of guilt. The findings reveal the importance of understanding the cognitive mechanisms through which individuals actively evade self-sanctions for compromising on professional responsibilities and expectations. While intrinsic forms of accountability have only received limited attention in the

accounting literature so far (Pan & Patel, 2020), my findings point to their relevance for understanding how individuals cope with conflicting accountability relations in the workplace. As such, this paper challenges the underlying assumption in the accounting literature that accountability is something that is externally imposed on individuals only (e.g., Merchant & Otley, 2006; Peecher et al., 2013). Instead, I demonstrate that regulatory mechanisms can be internally motivated when individuals perceive a discrepancy between how they believe they *ought to* behave and how they *did* behave. Rationalization processes, therefore, play an important role in understanding how individuals cognitively and emotionally navigate the complex web of accountabilities that they encounter in the workplace.

### Paper III

Hornbach, J. The slippery road of earnings management: The role of rationalization as a coping strategy for guilt

Paper III in this dissertation builds on Paper II by adding the component of behavioral outcomes. Specifically, I investigate how rationalization processes can enable the onset of an earnings-management culture in organizations. Similar to the previous paper, I use a randomized, scenario-based laboratory experiment, in which participants (in this case, business students) face a hypothetical scenario involving conflicting accountability demands and social pressure to misreport. I subsequently measure changes in participants' feelings of guilt after being or not being able to rationalize a decision to misreport, and their tendency to re-engage in a similar case of earnings management. The findings suggest that rationalizations, through their guilt-relieving effect, can facilitate the ease of engaging in earnings-management behavior over time. The findings, therefore, point to the importance of considering individuals' intrinsic, self-regulatory processes for explaining manifestations of potentially dysfunctional organizational behavior. Importantly, this implies looking beyond formal control structures when trying to intervene in ongoing earnings management. In line with Tenbrunsel and Messick (2004), the study emphasizes the need to identify the informal, often hidden, environmental cues that enable individuals to rationalize. Environmental cues are often linked to the social dynamics in organizations, such as social pressure, loyalty, and organizational ties. These dynamics, however, often escape formal accountability structures. The study also provides a potential explanation for why the ethics of earnings management are often downplayed in organizations. Previous research has suggested that earnings management tends to be more acceptable when its purpose can be morally justified (e.g., Johnson et al., 2012; Merchant & Rockness, 1994). The study demonstrates that the guilt-relieving effects of rationalization processes can be instrumental in that kind of reasoning.

### Paper IV

Frimanson, L., Hornbach, J., Hartmann, F.G.H. (2021) Performance evaluations and stress: Field evidence of the hormonal effects of evaluation frequency. Accounting, Organizations, and Society, 95, 101279

In Paper IV, my co-authors and I introduce a more refined view on the accountability mechanisms involved in performance evaluation processes. An underlying assumption in the accounting literature is that frequent performance evaluations induce stress because they create "an almost permanent need to justify" (Messner, 2009, p. 929). From this viewpoint, accountability emerges from the justification pressure imposed by frequent performance evaluations. While we recognize that individuals may experience immediate stress when they justify decisions during performance evaluations (Dickerson et al., 2009; Dickerson & Kemeny, 2004; Dickerson et al., 2008), we argue that less frequent performance evaluations may cause stress as well, once we modify our view on accountability and stress. Conceiving accountability as the anticipatory threat of being held to account sometime in the future (Roberts, 1991, 2009), we provide neurobiological evidence for the unconscious build-up of stress that is related to the mobilization of energy in anticipation of evaluation meetings. Based on cognitive activation theory (Brosschot et al., 2005; Ursin & Eriksen, 2010) and allostatic load theory (McEwen, 1998; McEwen & Wingfield, 2003), we argue that individuals engage in cognitive efforts even before the actual evaluation meeting takes place. These preparatory efforts cause the body to consume and produce more energy than is currently needed, which shows in enhanced baseline stress-hormone levels of thyrotropin and cortisol (Chatzitomaris et al., 2017). Hence, the longer the timespan between evaluations, the longer the human body needs to maintain an increased level of energy mobilization. In a one-year field experiment in a Swedish public insurance organization, we find, in line with our expectation, enhanced baseline levels of both thyrotropin and cortisol, but not higher self-reported mental fatigue, in individuals assigned to a 12-week performance evaluation cycle compared to individuals assigned to a 6-week performance evaluation cycle. The findings reveal that the relationship between performance evaluation, accountability, and stress is more complex than previously assumed. Performance evaluations do not only enforce accountability by requiring individuals to justify (Messner, 2009); they also relieve accountability by reducing the timespan during which individuals engage in dysfunctional anticipatory behaviors. Hence, the study emphasizes the need to redefine the role of performance evaluation and accountability in the build-up of stress in the accounting literature.

# Concluding discussion

The objective of this dissertation was to contribute to the understanding of accountability in the accounting literature, and to clarify and modify explanatory mechanisms of accountability involved in accounting practice. The starting point of this dissertation was the general confusion about what accountability is, and how it ultimately operates. Discourses on accountability seem to revolve around different manifestations of accountability, including accountability as a formal control mechanism through which individuals' behavior can be scrutinized, controlled, and evaluated (e.g., Merchant & Otley, 2006; Peecher et al., 2013); accountability as emerging in interaction with others, in the form of mutually understood expectations and social norms (e.g., Roberts, 1991; Roberts, 2009); and accountability as something that individuals feel, perceive, and expect (e.g., Gong et al., 2014; Pan & Patel, 2020). Importantly, these mechanisms seem inherently difficult to disentangle, which explains the apparent confusion of how to define and empirically investigate accountability in the accounting literature. Individuals work, live, and simply exist in a plethora of different accountability relations (Bovens, 2010; Frink et al., 2008; Frink & Klimoski, 2004: Lerner & Tetlock, 1999), which needs to be considered when theorizing about, and investigating, accountability and its effects.

In this dissertation, I have focused on two different manifestations of accountability in explaining the occurrence of stress and dysfunctional organizational behavior in the accounting literature. What these two manifestations have in common is that they look upon accountability from a cognitive perspective, that is, the mental processes through which accountability operates, and ultimately affects individuals' decision-making and well-being.

The findings of this dissertation reveal that embracing the complexity of accountability contributes to clarifying and modifying explanatory mechanisms of accountability in the behavioral accounting literature. Specifically, my results indicate that accountability does not only operate through externally imposed scrutiny and evaluation but also through internal processes of self-scrutiny and self-reflection. Hence, individuals are not only held accountable by others but also by themselves, which has implications for day-to-day organizational decision-making, where formal control mechanisms are often absent or ineffective (e.g., Dhiman et al., 2018). While internal accountability mechanisms have potentially strong, self-disciplinary effects, they also seem to allow individuals to evade self-sanctions. My findings emphasize that

rationalization processes enable individuals to 'play the system' in which they operate – that is, to cope with conflicting responsibilities and demands, and to evade emotional costs in the process. The findings of this dissertation also suggest that our human capacity to anticipate future evaluative situations modifies our understanding of how accountability is involved in the build-up of stress in performance evaluation settings. While a common view in the accounting literature is that stress emerges from frequent exposure to justification requirements (e.g., Messner, 2009), my co-authors and I show that individuals' conscious and unconscious cognitive efforts in anticipation of being held to account work as a stressor.

The cumulative findings of this dissertation demonstrate that accountability can have distinct theoretical manifestations that go beyond traditional views of how accountability operates in the accounting literature. Specifically, the findings challenge the seemingly underlying assumption in the accounting, and especially experimental accounting, literature that accountability is something that needs to be induced and imposed on individuals to affect their work morale and behavior (e.g., Ackert et al., 2019; Merchant & Otley, 2006; Peecher et al., 2013). Instead, my findings reveal that accountability mechanisms are inherently intertwined with two of the fundamental inner workings of the human mind – that is, humans' capacity to self-scrutinize and self-regulate (Aldwin et al., 2011; Aspinwall, 2004; Aspinwall & Taylor, 1997; Higgins, 1987; Inzlicht et al., 2021), and their capacity to anticipate potential future threats (Brosschot et al., 2006; Brosschot et al., 2005; Gaab et al., 2005; Ursin & Eriksen, 2004, 2010). As such, accountability mechanisms seem to be ingrained in what humans naturally do, rather than something that needs to be artificially induced by control systems. This seems especially relevant if we think about accountability as being an omnipresent feature of everyday life (Lerner & Tetlock, 1994, 1999). The findings also suggest that individuals are not necessarily consciously aware of the mental processes that accountability implies.

The cumulative findings of this dissertation have important implications for accounting research.

First, the findings provide reason to expand our view on what accountability *is*. While rationalization processes have been investigated in the accounting fraud literature (e.g., Brown, 2014; Free & Murphy, 2015; Mayhew & Murphy, 2014; Murphy, 2012; Murphy & Free, 2016; Rajgopal & White, 2019), they have, to the best of my knowledge, not been considered as part of the accountability puzzle in accounting research. However, the findings of this dissertation point to their relevance in explaining how individuals navigate the complex social dynamics of organizational decision-making, which, importantly, can occur beyond formal demands to justify; the latter having traditionally been the main focus of (experimental) accountability research (e.g., Asare et al., 2000; Dalla Via et al., 2019; Glover, 1997; Kennedy, 1993; Libby et al., 2004; Messier et al., 2014). Hence, adding self-regulatory processes to

the accountability discussion can provide a more complete picture of how potentially dysfunctional organizational behavior and decision-making comes about, especially in situations where formal control is absent or less salient (e.g., Dhiman et al., 2018).

Second, extending our view on what accountability is also implies that we need to redefine the role of control systems in managing individuals' health and well-being. While performance evaluations may momentarily increase stress by asking individuals to justify their actions (e.g., Dickerson et al., 2009; Woody et al., 2018), the findings of this dissertation reveal that performance evaluations also relieve stress by disrupting dysfunctional anticipatory behavior that individuals engage in before they are held to account; the latter being the culprit in long-time manifestations of stress, such as burnout and depression (Herbert, 2013; Qin et al., 2016). Hence, distinguishing between different mechanisms of accountability contributes to our understanding of how performance evaluation processes are involved in the emergence of stress. Importantly, these distinctions shed light on potential opportunities for practitioners to design control and performance evaluation systems that are better fitted to promote the long-term health and well-being of organizational participants. Apart from more frequent performance evaluations, these design choices may also extend to formal and informal feedback processes (e.g., Lechermeier & Fassnacht, 2018); both play a potentially important role in reducing anticipatory stress related to being held to account (e.g., Ursin & Eriksen, 2004; Brosschot et al., 2006).

Third, understanding accountability from a cognitive perspective implies that we need to update our theoretical repertoire and develop our methodological toolboxes. Specifically, this involves a more multidisciplinary integration of theories and methodological approaches from different fields, such as cognitive psychology and neurobiology (Birnberg & Ganguly, 2012); the latter being particularly relevant if we consider the potential limitations of how much individuals are consciously aware of accountability mechanisms.

The research presented in this dissertation is subject to several limitations that provide opportunities for future research.

First, the theoretical arguments in this dissertation are built on normative expectations about humans' psychological and behavioral patterns. An underlying assumption of the rationalization process is that individuals are responsive to moral dilemmas and feel guilt from violating social norms and professional standards. However, this responsiveness may vary depending on personality traits, including individuals' inclination to feel guilt (Cohen et al., 2012), their tendency to morally disengage (Moore, 2008), and their scoring on the dark triad, including Machiavellianism (Murphy, 2012), narcissism, and psychopathy (Harrison et al., 2018). Similarly, how much cognitive energy is mobilized in anticipation of social-evaluative threats may well depend on individuals' coping capabilities (Ursin & Eriksen, 2004), their self-esteem (Petrie & Vedhara, 2010), their fear of negative evaluation (Sigurvinsdottir et

al., 2021), and their general level of anxiety (Carleton et al., 2011). The studies in this dissertation have controlled for the effect of individual differences through randomization, but future studies may systematically investigate their effects. This endeavor could include the investigation of specific groups that are likely to show certain traits or capabilities. For instance, managers may have better coping capabilities than subordinates in dealing with anticipatory stress from performance evaluations (e.g., Sherman et al., 2012). Likewise, more experienced professionals may be more skilled in morally disengaging from their conduct, and 'playing the system,' than less experienced professionals. My findings from Paper II suggest that experience plays a potentially important role when it comes to individuals' emotional coping capabilities; future studies may determine their causal effects more systematically.

Second, the purpose of the dissertation was to understand the *causal* mechanisms of accountability. As a result, contextual features have been systematically controlled for, both through randomization techniques and experimental design choices. While these choices were necessary to disentangle the causal mechanisms of interest, they also leave room for exploring potential boundary conditions of the causal effects identified. For instance, whether performance evaluations relieve anticipatory stress may depend on the nature of the supervisor-subordinate relationship, the subordinates' performance (e.g., good or poor), and the type of feedback received in previous evaluations. Similarly, the guilt-relieving effects of rationalization processes may depend on the type and severity of the transgression (e.g., budget slack vs. financial misstatements).

Last, but not least, the studies included in this dissertation have exclusively focused on accountability mechanisms at the individual level. However, given that accountability can manifest in many different ways, not least through social interactions and verbal exchange between people (Frink & Klimoski, 2004; Scott & Lyman, 1968), future research could investigate accountability at a higher analytical level, including organizational, group, and dyad (Frink et al., 2008). This could include investigations of accountability mechanisms between individuals or groups of individuals (e.g., between superiors and subordinate; between auditors, clients, and partners; or between controllers, local managers, and corporate managers), and between individuals and organizations, such as professional bodies.

The final words of this dissertation will be dedicated to one last reflection: Am I less confused about accountability *now*? I believe my confusion has evolved throughout this journey: from moments of utter frustration, to moments of enlightenment, to moments of new-found curiosity. What I have come to realize in the process is that my research has only scratched the surface of what there is to learn and understand about accountability. My dissertation has hopefully contributed to a more 'humane' perspective on accountability in the accounting literature; a perspective which recognizes that accountability can be a profoundly intrinsic mechanism. I hope that this dissertation

can be used as a stepping-stone for other accounting researchers to continue on this path, and to embrace the opportunities that this multifaceted concept naturally provides.

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