



Organizational structure, organizational form, and counterproductive work behavior: A competitive test of the bureaucratic and post-bureaucratic views



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ABSTRACT

Knowledge about the influence of organizational structure and organizational form on counterproductive work behavior (CWB) has been limited, fragmented, and inconsistent. The contradictory findings from empirical studies were in line with the contradictory predictions of the bureaucracy and post-bureaucracy theories. These theories have opposing views regarding the influence of organizational structure elements and forms on CWB. To perform a competitive test of the bureaucratic and post-bureaucratic views, we developed pairs of opposing hypotheses. We examined the relationship between five organizational structure elements and CWB. Our findings showed that participation in decisions and formal standardization are negatively related to CWB, whereas punishment is positively associated with CWB. Specialization and decision autonomy were not related to CWB. We clustered organizational forms based on the degree to which the forms emphasize organizational structure elements. Our results indicated that incidents of CWB are least common in ideal-typical post-bureaucracies and most common in ideal-typical bureaucracies. However, hybrid forms show no significant differences with regard to incidents of CWB. In sum, our study provides evidence that post-bureaucracy theory explains CWB better than bureaucracy theory. However, we argue that the combination of both theories offers a more comprehensive view of this phenomenon than post-bureaucracy theory alone. We implicate that research should extend the integration of structural elements in order to gain a better understanding of CWB.

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1. Introduction

Counterproductive work behavior (CWB), which includes behavior such as sabotage, loafing, daydreaming, theft, absenteeism, and vandalism, is a ubiquitous and enduring problem in organizations (Robinson & Bennett, 1995). Despite efforts taken by organizations to try to detect and prevent CWB (Robinson, 2008; Salin, 2008; Zoghbi-Manrique-de-Lara, 2011), several studies provided evidence of its widespread occurrence. According to Harris and Ogbonna (2006, p. 543) between 75 and 95 percent of all employees engage in CWB. Such behavior poses a significant threat to organizations (Robinson, 2008). For example, US organizations lose about \$50 billion each year because of white collar crime, i.e., fraud and theft (Coffin, 2003), and about \$3 billion because of employee tardiness (DeLonzor, 2005).

Against this background, organizational research has paid particular attention to the antecedents of CWB (Robinson &

Greenberg, 1998). Several authors have highlighted the importance of considering the context (of which organizational structure is a central component) in which rules are to be followed (e.g., Johns, 2006; Robinson, 2008; Robinson & Greenberg, 1998), as each situation contains conditions that curb CWB (e.g., sanctions) and/or facilitate it (e.g., discretion). Although Bennett already recommended taking contextual factors into consideration in 1998, CWB research still has several important shortcomings, as will be pointed out below.

Many authors have argued that knowledge about the relationship between organizational structure, organizational form, and CWB is fragmented (Bennett & Robinson, 2003; Robinson, 2008; Robinson & Greenberg, 1998; Sackett & DeVore, 2001). As the meta-studies by Dalal (2005) and Berry, Ones, and Sackett (2007) have indicated, organizational structure and form have so far played only a minor role in CWB research. Instead, research has focused mainly on organizational justice, employees' attitudes, traits, affects, and demographics as antecedents of CWB (e.g., Ambrose, Seabright, & Schminke, 2002; Bushman, Baumeister, & Phillips, 2001; El Akremi, Vandenberghe, & Camerman, 2010; Ilie,

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Penney, Ispas, & Iliescu, 2012; Judge, Scott, & Ilies, 2006). Nevertheless, some studies have considered elements of organizational structure and have analyzed how they are related to CWB. For instance, literature on the relationship between stress and CWB has often considered organizational constraints as an antecedent of stress (e.g., Bowling & Eschleman, 2010; Fox & Spector, 1999; Fox, Spector, & Miles, 2001; Spector & Fox, 2005). These constraints can partly result from an organization's structure (e.g., obstructive formalization). Beside these findings about indirect effects of organizational structure on CWB, other studies have treated organizational structure as a main effect. However, they have often focused only on specific aspects of the organizational context. For instance, some studies have analyzed the relationship of CWB to single organizational structure elements such as autonomy (Bennett, 1998), centralization (Yen & Teng, 2013), or surveillance (Greenberg & Barling, 1999; Harris & Ogbonna, 2006). Only few studies have considered more than one organizational structure element when analyzing deviant behavior. For example, DeHart-Davis (2007) measured formalization and centralization, Jensen and Raver (2012) included autonomy and surveillance, and Zoghbi-Manrique-de-Lara (2011) focused on punishment and surveillance. Furthermore, knowledge about CWB in different organizational forms (i.e., the composition of organizational structure elements) has been limited and largely based on anecdotal evidence (Robinson & Greenberg, 1998).

To summarize, research on CWB that has focused on the relationship between organizational context and CWB has tended to be either somewhat indiscriminate or limited to specific aspects of context. Hence, research has not provided a comprehensive view of the relationship between organizational structure, organizational form, and CWB yet. However, research stressed that organizations are functions of a complex interplay of organizational characteristics such as structure elements (e.g., Mintzberg, 1979; Weber, 1958). In this perspective, an organization's structure can be best conceived of as a cluster of coupled structure elements. A more comprehensive view of the relationship between organizational structure, organizational form, and CWB could contribute to a better understanding of the organization's context and its relationship to CWB. By providing a more comprehensive view, this paper sheds light on which organizational structure elements have the strongest association with CWB and in which organizational forms CWB occurs most often.

Previous research has also showed some contradictory empirical results about the direction of influence organizational structure elements have on CWB. For instance, both low and high task specialization can cause boredom and, therefore, CWB (Acee et al., 2010; Fox & Spector, 1999; Kass, Vodanovich, & Callender, 2001). Furthermore, while some studies have suggested a negative relationship between job autonomy and CWB (Bennett, 1998; Bennett & Robinson, 2007), other scholars have argued that job autonomy goes hand-in-hand with employees' counterproductive exploitation of their discretion (Martin, Lopez, Roscigno, & Hodson, 2013; Scott, Colquitt, & Paddock, 2009).

These contradictory findings of empirical studies are in line with the contradictory predictions of organizational theories, especially the bureaucracy and post-bureaucracy theories. Both theories form a suitable theoretical framework for our study, as they focus on our central variables. More precisely, organizational structure and form are core elements of bureaucracy and post-bureaucracy theories. Furthermore, both theories focus on rule-following and deviance and assume that organizational structure and form are related to CWB. However, the bureaucracy and post-bureaucracy theories not only make opposing predictions about how organizational structure and form should be shaped, but also

about how organizational structure and form influence CWB. We will now outline the opposing predictions of both theories.

On the one hand, Weber's (1958) bureaucracy theory states that the "bureaucratic (. . .) organization guarantees the continuing rule-bound execution of official duties" (Diefenbach & Sillince, 2011, p. 1518), primarily because of the structural features of a bureaucracy. For instance, in bureaucracies, formal control mechanisms limit employee discretion (Grey & Garsten, 2001) and monitor their rule-following behavior (Tyler & Blader, 2005). When employees break rules, sanctions like reprimands and suspensions are imposed (Weber, 1958). Thus, bureaucratic characteristics are likely to curb CWB. On the other hand, Heckscher's (1994) post-bureaucracy theory assumes that rule-following behavior relies on abstract guidelines. Such guidelines are the result of decentralized decision-making processes that are accompanied by high levels of decision autonomy and participation in decisions. Since processes in post-bureaucracies are relatively unstandardized, employees often have to engage in dialog to reach an agreement and find a solution. As a result, solutions are characterized by "consensual legitimacy" (Heckscher, 1994, p. 39), that is, they are perceived as legitimate and are thus likely to be followed. In light of this argumentation, we can assume that post-bureaucratic structural features play a prominent role regarding CWB.

Our study addressed the conflicting bureaucratic and post-bureaucratic views about the organizational structure–CWB relationship and the organizational form–CWB relationship. We drew on the bureaucracy and post-bureaucracy theories to develop pairs of opposing hypotheses in order to perform a competitive test of both theories. Following Henderson and Fredrickson (2001), we sought to determine whether (a) one view is a consistent winner, (b) the contradictory influences cancel out one another, or (c) the competing views are complements so that some results support the bureaucratic perspective while others support the post-bureaucratic one. In doing so, we were able to get a more comprehensive view of the association between organizational structure and form and CWB. Further, we cross-fertilized research on organization theory and organizational behavior and contributed to the theoretical foundation of CWB. Our study can thus be seen as a response to Martin et al. (2013), who have criticized research on deviant organizational behavior as theoretically fragmented.

2. Bureaucratic and post-bureaucratic views on organizational structure and form

The analysis of organizational forms has a long tradition in organizational research (Greenwood & Miller, 2010; Puranam, Alexy, & Reitzig, 2014). This stream of research suggests that "organizations are best understood as clusters of interconnected structures and practices, rather than as modular or loosely coupled entities whose components can be understood in isolation" (Fiss, 2007, p. 1180). We adopted this view and defined organizational form as a composition of organizational structure elements. This enabled us to analyze both specific organizational structure elements and different organizational forms, thereby gaining a systematic and holistic view of organizations (Delery & Doty, 1996).

The bureaucratic organization is a prominent organizational form. Even though almost a century has passed since Weber published his work on bureaucracy, organizational researchers have shown a resurgent interest in Weber's ideas (e.g., Hodgson, 2004; Martin et al., 2013). This is partly because bureaucratic structuring has remained an inherent part of almost all organizations (Alvesson & Thompson, 2005). Bureaucracy is an efficient and

effective form of organization for achieving advantages such as rationality, precision, and predictability.

The structural features of bureaucracy are essential for achieving these outcomes. The characteristics of bureaucracy as pointed out by Weber (1958) can be distilled into five core structural elements. *Specialization* indicates the degree to which employees are required to carry out similar tasks (Hackman & Oldham, 1975; Mintzberg, 1979). *Decision autonomy* defines employees' level of independence in making their own decisions (Aiken & Hage, 1966). *Participation in decisions* indicates the degree to which employees can influence decisions of others (Aiken & Hage, 1966). *Formal standardization* refers to the extent to which employee behavior and work processes are standardized by written rules, routines, and procedures (Mintzberg, 1979). Finally, *punishment* indicates the degree to which organizations utilize threats of punishment to suppress undesirable employee behavior and to achieve desired behavior (Arvey & Jones, 1985; Grey & Garsten, 2001). Ideal-typical bureaucracies are characterized by high levels of task specialization (Aiken & Hage, 1966; Weber, 1958). They are highly centralized and thus both decision autonomy and participation in decisions are low (Weber, 1958). Finally, both formal standardization and punishment are common in ideal-typical bureaucracies (Diefenbach & Sillince, 2011; Weber, 1958).

Some scholars have argued that bureaucracies show inherent limitations, hampering an organization's flexibility and its ability to adapt and innovate (e.g., Heckscher, 1994), thus leading to the replacement of bureaucratic organizations by new organizational forms and practices (Heckscher & Applegate, 1994; McKenna, Garcia-Lorenzo, & Bridgman, 2010). These new phenomena were often labeled as "post-bureaucracy" (McKenna et al., 2010; McSweeney, 2006). This umbrella term refers to both organizational forms such as the virtual organization (Davidow & Malone, 1992) and the network organization (Oberg & Walgenbach, 2008) and to organizational practices like self-management (Barker, 1993) and transformational leadership (Bass & Riggio, 2006). Since the discussion about post-bureaucracy is rooted in manifold research traditions (e.g., network theory, job characteristics model, fairness and justice theories) one can hardly speak of a unified theory of post-bureaucracy (Palmer, Benveniste, & Dunford, 2007). Nevertheless, post-bureaucracy scholars often referred to bureaucratic structures, but challenged their efficiency and effectiveness (Heckscher, 1994; Hodgson, 2004). Instead, they have suggested that efficiency and effectiveness are better served by the exact opposite of a bureaucratic approach. Thus, post-bureaucracy has been interpreted as the antipode to bureaucracy (Grey, 2007; Oberg & Walgenbach, 2008). Following this research stream, we ascribed post-bureaucracy the following structural characteristics: low specialization, high decision autonomy, high participation in decisions, low formal standardization, and low punishment (Gittell, 2001; Heckscher, 1994; Johnson, Wood, Brewster, & Brookes, 2009; Mintzberg, 1979).

Many scholars have argued that both bureaucracy and post-bureaucracy are theoretical constructs rather than empirical facts (e.g., Hodgson, 2004). According to this view, both forms are treated as "ideal-types" (Heckscher, 1994; Weber, 1958) and as two ends of a continuum (McSweeney, 2006). Between both ends, there are various so called "hybrids", incorporating both bureaucratic and post-bureaucratic structures (Clegg & Courpasson, 2004; Dunford, Palmer, Benveniste, & Crawford, 2007; Johnson et al., 2009; Styhre & Lind, 2010). By adopting this perspective, we were able to differentiate between organizational forms which exhibit variations with regard to their organizational structure elements. This, in turn, allowed us to analyze how organizational forms along the bureaucracy–post-bureaucracy continuum relate to CWB.

3. Counterproductive work behavior and organizational structure

In line with Robinson and Bennett (1995, p. 556), the present study viewed CWB as "voluntary behavior that violates significant organizational norms and in so doing threatens the well-being of an organization, its members, or both". Thus, we distinguished between interpersonal CWB (i.e., CWB directed toward individuals) and organizational CWB (i.e., CWB directed toward one's organization).

Organizational research has put ample effort into analyzing the individual and situational antecedents of CWB (Robinson, 2008; Sackett & DeVore, 2001). It has highlighted that interpersonal CWB and organizational CWB often exhibit different determinants (e.g., Hershcovis et al., 2007; Robinson & Greenberg, 1998). Empirical evidence has suggested that organizational CWB is more strongly related to work characteristics such as organizational constraints or procedural injustice, whereas interpersonal CWB is more strongly associated with social determinants such as interpersonal injustice or interpersonal conflicts (El Akremi et al., 2010; Hershcovis et al., 2007; Jones, 2009; Robinson & Bennett, 1997; Spector et al., 2006). Thus, a large number of studies have suggested that the target of CWB depends on whether the source triggering deviant behavior is seen in an individual or in the organization (El Akremi et al., 2010; Jones, 2009; Robinson & Bennett, 1997). Since we adopted an organizational structure approach, we focused on organizational CWB that are caused by organizational structure elements. In line with Johns (2006), both bureaucratic and post-bureaucratic structures offer opportunities for and constraints against employee behavioral deviance. This argument is further elaborated in the next section.

4. Elements of organizational structure and CWB

We considered each of the five elements of organizational structure in terms of how they affect CWB from the perspective of the bureaucracy and post-bureaucracy theories, thereby devising five sets of opposing hypotheses. We developed a sixth set of hypotheses that addresses the influence of organizational form on CWB. Together, the six sets of hypotheses enabled us to gain a more holistic view of the relationship between organizational structure, organizational form, and CWB.

4.1. Specialization

According to bureaucracy theory, a high level of *specialization* of work activities is crucial for efficiency, since employees need proficient and specialized skills, technical expertise, and knowledge to fulfill job demands (Weber, 1958). These capabilities are the main source of bureaucratic ethos and pride (Downs, 1967; Pugh, 1991). Harris and Ogbonna (2006) showed that pride in one's organization (as part of a measure of an employee's desire for staying in one's organization) negatively influences sabotage. Specialization also limits jurisdiction (Weber, 1958), since bureaucratic tasks are predefined and clear. Tasks can thus be separated, giving employees clear and limited areas of responsibility (Kira & Forslin, 2008). In contrast, tasks that are fragmented and characterized by unclear responsibility are more difficult for employees to understand and leave employees with less time to focus on what is important (Kira & Forslin, 2008). A low level of task specialization requires that employees perform a broad range of actions, making it difficult to gather expert knowledge for every task and to develop routine behavior. Employees are thus likely to become overextended (Kira & Forslin, 2008). In the absence of reliable routines, the attentional load of employees increases, thus tasking their cognitive resources (Kanfer & Ackerman, 1989). These

factors may result in an over-challenging working environment, potentially leading to feelings of dissatisfaction and frustration (Acee et al., 2010). CWB is often accompanied by such negative feelings (Folger & Skarlici, 1998; Fox & Spector, 1999). Therefore, the bureaucratic perspective assumes that:

Hypothesis 1a. Specialization is negatively related to CWB.

According to the post-bureaucratic perspective, employees' roles and tasks are not clearly defined and encompass broad fields of work. Employees thus have to be multi-skilled (Johnson et al., 2009). Some critics of bureaucracy theory have argued that specialization is supposed to increase productivity, but in fact entails "dull, boring, routine soul-destroying work" that brings "about careless performance (. . .) and sabotage" (Caiden, 1991, p. 490). Thus, specialization can trigger task-focused boredom (Acee et al., 2010). As stated by different studies, bored employees tend to show deviant behavior like absenteeism (Kass et al., 2001; Rentsch & Steel, 1998) and sabotage (Ambrose et al., 2002) to change their bleak situations. Post-bureaucratic approaches such as the job characteristics model suppose that a low specialization of work activities, (high skill variety in Hackman and Oldhams' (1976) terms), increases positive work attitudes and work quality. As part of an aggregated measure of job characteristics, skill variety is positively related to organizational commitment (Mathieu & Zajac, 1990). A lack of organizational commitment weakens the bond between employee and employer and facilitates the likelihood of deviance (Dalal, 2005; Hollinger, 1986). In addition, skill variety is a source of job satisfaction (Fried & Ferris, 1987), and CWB is known to be a reaction to a dissatisfying job (Bennett & Robinson, 2003; Dalal, 2005; Judge et al., 2006). In light of this post-bureaucratic argumentation, we formulated the opposing **Hypothesis 1b** as:

Hypothesis 1b. Specialization is positively related to CWB.

4.2. Decision autonomy

Following bureaucracy theory, the hierarchy of *decision autonomy* is an instrument for establishing a legitimate authority structure that justifies, stabilizes, and facilitates employees' dutifulness and adherence (Weber, 1958). Since efficacy is the superior goal of centralized decision-making, adherence is always rational and desirable—both for the organization and its employees (Courpasson, 2000). This applies especially to employees who prefer directive orders over independent decision making (Child, 1991). High levels of decision autonomy may generate anxiety and fear of responsibility and accountability (Joiner, 2001). Moreover, as shown by McGivern and Ferlie (2007), employees try to elude attempts to make their practices more accountable. If these efforts fail, employees may feel they need to justify and defend the outcomes of their decisions. Responsibility and accountability may therefore cause stress (Siegel-Jacobs & Yates, 1996), increasing the likelihood of CWB (Fox & Spector, 1999). Another research stream has highlighted how employees exploit their discretion when they have high levels of decision autonomy (Martin et al., 2013). For instance, Scott et al. (2009) have argued that under some circumstances, high levels of managerial discretion result in increased rule-breaking. In line with this bureaucratic-orientated argumentation, we stated **Hypothesis 2a**:

Hypothesis 2a. Decision autonomy is positively related to CWB.

In contrast, post-bureaucracy theory assumes that high levels of decision autonomy (Heckscher, 1994) facilitate the flexibility required for responding quickly to a volatile workplace and environment (Johnson et al., 2009). Furthermore, high decision autonomy can humanize the workplace and fulfill employees'

desire for autonomy (Kira & Forsli, 2008). Several studies have shown that autonomy increases desired outcomes, such as intrinsic motivation and work satisfaction (e.g., Farh, Podsakoff, & Organ, 1990; Piccolo & Colquitt, 2006) and that these outcomes correlate negatively with deviance (e.g., Tyler & Blader, 2005). Bennett (1998) has argued that employees who perceive that they have little control over their work and who feel powerless try to adjust their situation via CWB. According to Bennett (1998), by harming the organization through CWB, employees try to regain decision autonomy and rebalance their share of power in the organization. Bennett (1998) also has shown that newly empowered employees engage in less CWB compared to before the empowerment. Similarly, Lawrence and Robinson (2007) have suggested a negative relationship between decision autonomy and CWB. They argued that the exercise of centralized power in organizations provokes employee resistance, since the authority structures undermine employees' decision autonomy. By engaging in deviant behavior directed toward the organization, employees try to reduce the frustration and powerlessness they feel. In light of this post-bureaucratic view, we formulated the opposing **Hypothesis 2b** as:

Hypothesis 2b. Decision autonomy is negatively related to CWB.

4.3. Participation in decisions

A basic assumption of bureaucracy theory is that conflicts of interest within bureaucracies are common (Downs, 1967). As Downs (1967, p. 51) has put it, "bureaus are large and (. . .) [h]ence the potential for conflicts is very great indeed." To avoid conflicts of interest, most employees in bureaucracies have low levels of *participation in decisions* (Weber, 1958), referring to strictly defined areas of competence in which employees can make decisions but cannot affect others' decisions. Gouldner's (1964) analysis of a bureaucratic gypsum factory has shown the consequences of a dissolving area of competence and illustrated the potential dysfunctions of participation in bureaucratic decisions. In this example, the factory's management set safety rules in cooperation with employees and union safety committees, building a type of solidarity between management and employees. However, whenever these safety rules countervailed the management's efforts to increase production rates, they were broken by the managers, which resulted in a violation of "workers' beliefs that 'supers must take care of their men'" (Gouldner, 1964, p. 201). Therefore, from the bureaucratic perspective, granting employees higher levels of participation in decisions must not lead to reconciliation of interest but rather to manifestation of conflicts of interest. Scholars have argued that employers who renege on participative decisions evoke employees' feelings of disappointment and frustration (Bies & Tripp, 1996). Bies and Tripp (1996) have supposed that one way to cope with such feelings is to seek revenge and act deviantly. Another perspective on Gouldner's (1964) example is that the workers perceived that their management failed to fulfill safety obligations, which is known to result in a perceived violation of the psychological contract (Morrison & Robinson, 1997). This in turn can lead to negative outcomes like CWB (e.g., Chao, Cheung, & Wu, 2011). In line with this argumentation, we stated **Hypothesis 3a** as:

Hypothesis 3a. Participation in decisions is positively related to CWB.

In contrast, post-bureaucracy theory states that a key characteristic of post-bureaucracies is consensus-finding, for which participative processes are preconditions (Heckscher, 1994). Participation is a mechanism applied in order to achieve "soft obedience" (Courpasson & Dany, 2003, p. 1235), since the

legitimacy of decisions in which employees are included can increase through participation. As Courpasson and Dany (2003, p. 1254) pointed out, in post-bureaucracies, obedience is ensured “through deliberation”. Therefore, some organizational researchers have regarded participation in decisions as one of the most effective instruments for initiating desirable employee behavior, that is, productive work behavior (Coch & French, 1948) and citizenship behaviors (Farh et al., 1990). Furthermore, participation in decisions is accompanied by psychological well-being and lower levels of perceived stress (Gallie, 2013), factors that reduce CWB (Fox & Spector, 1999). The assumption that a high level of participation in decisions is negatively related to deviant behavior is also shared by the procedural justice literature (e.g., Colquitt, Conlon, Wesson, Porter, & Ng, 2001). For instance, this stream of research has found that a decision is more likely to be accepted when the degree of participation in the decision making process is high than when it is low (Lind, Kulik, Ambrose, & De Vera Park, 1993). Hence, a low degree of participation leads to more incidents of CWB (Ambrose et al., 2002). In light of this post-bureaucratic argumentation, we formulated the opposing Hypothesis 3b as:

Hypothesis 3b. Participation in decisions is negatively related to CWB.

4.4. Formal standardization

Bureaucracies are typically highly *formally standardized* (Weber, 1958), and bureaucracy theory assumes that these written rules and procedures reduce deviant behavior for two reasons. First, formal standardization reduces uncertainty since the execution of tasks is regulated in detail and ambiguous situations are eliminated *ex ante* (Bozeman & Scott, 1996). Instead of setting their own standards for performing a task, employees base their behavior on prescribed standards, the absence of which can result in CWB (Chen & Spector, 1992). Therefore, formal standardization can be regarded as a mechanism useful for controlling deviant behavior (Kelley, Longfellow, & Malehorn, 1996). Second, formal standardization constitutes the basis for predictable and reliable behavior. Employees rely on written rules and procedures which ensure accountability, predictability, fairness of processes, and protection from arbitrary exercise of power (Bozeman & Scott, 1996). Grey and Garsten (2001) have argued that these outcomes of formal standardization result in a mechanical version of trust that facilitates rule-following. Colquitt, Scott, and LePine's (2007) meta-study showed that trust induced by fair and consistent procedures is negatively related to CWB. Adler and Borys (1996) have offered a theoretical explanation for this, arguing that employees may realize the individual benefits of formal standardization and avoid undermining the function of written rules and procedures. Based on this bureaucratic-based argumentation, we stated Hypothesis 4a as:

Hypothesis 4a. Formal standardization is negatively related to CWB.

Even though formal standardization has not disappeared in modern organizational practice (Alvesson & Thompson, 2005), post-bureaucracy theory assumes that it should be present only at a low level. Instead of formal rules and procedures, there are abstract principles that guide behavior and ensure flexibility (Heckscher, 1994), since problem-solving processes are not static, but ad hoc and improvisational (Mintzberg, 1979). In consequence, low levels of formal standardization facilitate quicker and innovative decisions (Mintzberg, 1979). Furthermore, the post-bureaucratic perspective assumes that the proliferation of rules and procedures threatens organizational flexibility and performance (McKenna et al., 2010). Merton (1940) has observed that the

formal standardization of bureaucracies bears the danger of red tape, slowing down work processes and serving as an obstacle rather than as a supportive tool (Bozeman & Scott, 1996). Research has shown that formal standardization as a dimension of organizational constraints can facilitate CWB (Fox et al., 2001; Spector & Fox, 2005). Martinko and Gardner (1982) have called this phenomenon organizationally induced helplessness. Based on research of Blauner (1964) and Aiken and Hage (1966), they argued that formal rules and procedures facilitate feelings of alienation, frustration, and helplessness. Under these circumstances, employees often need an outlet for their frustration and turn against their organization (Folger & Skarlicki, 1998). Therefore, according to the post-bureaucratic view, we proposed the opposing hypothesis that:

Hypothesis 4b. Formal standardization is positively related to CWB.

4.5. Punishment

Weberian bureaucracy can be described as *punishment-centered* (Diefenbach & Sillince, 2011). The bureaucratic organization facilitates conformity and achieves obedience with formal expectations of behavior by identifying and punishing employees who do not comply (Grey & Garsten, 2001; Weber, 1958). Following this argumentation, employees tend to pursue their own goals, which are rarely consistent with those of the organization (Gouldner, 1964; Martin et al., 2013). The organization thus has to offer incentives to encourage desired behavior and disincentives (i.e., punishment) to discourage undesired behavior (Arvey & Jones, 1985; Tyler & Blader, 2005). Even though the effects of punishment on employee behavior are often limited and dependent on situational factors (e.g., Verboon & Van Dijke, 2011; Zoghbi-Manrique-de-Lara, 2011), several empirical studies have supported the assumption that punishment has the desired effect (see Arvey & Jones, 1985; Tyler & Blader, 2005): The proper use of punishment increases positive outcomes like job performance and job satisfaction and discourages employees from negative behavior like absenteeism and rule-breaking. The underlying rationale is that punishment systems increase costs of CWB and, as employees choose behavior alternatives by weighing costs and benefits, they are more likely to show compliant behavior (Lawrence & Robinson, 2007). Drawing on these bureaucratic assumptions, we stated Hypothesis 5a as:

Hypothesis 5a. Punishment is negatively related to CWB.

Because of narrow spans of control in post-bureaucracies, the coordination of behavior relies more on direct interaction than on indirect control and punishment systems (Gittell, 2001). In addition, apart from direct managerial line control there is peer control, where employees mutually monitor, evaluate, reward, and punish behavior (Diefenbach & Sillince, 2011). Peer control is even more difficult to resist and harder to circumvent than formal control-and-punishment systems (Diefenbach & Sillince, 2011). The decentralized structures of post-bureaucracy facilitate these gentle forms of informal coercive control (Diefenbach & Sillince, 2011). Furthermore, literature has highlighted the potential negative outcomes of formal punishment (Tyler & Blader, 2005; Verboon & Van Dijke, 2011), as punishment causes rather than prevents deviance in some circumstances (Zoghbi-Manrique-de-Lara, 2011). For instance, Tyler and Blader (2005) have argued that punishment systems are associated with social costs, as the use of such systems can create a culture of distrust. That is, employees may perceive their organization as their opponent, putting much effort into achieving compliance. Ghoshal and Moran (1996) have assumed that this culture of distrust creates a vicious circle.

Punishment facilitates employees' tendency to behave opportunistically which, in turn, increases the further use of punishment systems to curtail opportunistic behavior. Empirical results have supported this assumption. For example, Wells and Kipnis (2001) have shown that employees' trust in their organization negatively correlates with punishment systems. Meta-analytic results have documented the negative relationship between trust and CWB (Colquitt et al., 2007). Finally, Geddes and Stickney (2011) have found that management can better respond to employees who engage in deviant behavior by supporting them rather than by imposing sanctions. In line with this post-bureaucratic argumentation, we proposed the opposing hypothesis that:

Hypothesis 5b. Punishment is positively related to CWB.

5. Organizational form and CWB

While the structural configuration of an organization as a whole (i.e., organizational form) influences employee behavior (Gillespie & Mileti, 1977), the relationship between organizational form and CWB has been subject to little investigation (Robinson, 2008).

To recall, the organizational form of an ideal-typical bureaucracy is characterized by high levels of specialization, formal standardization, and punishment as well as low degrees of decision autonomy and participation in decisions. As mentioned above, bureaucracy theory assumes that such an ideal-typical structuring curbs CWB. Furthermore, the prevention of CWB becomes less effective the more the organizational structure resembles the ideal-typical post-bureaucracy at the other end of the continuum. According to this perspective, the absence of punishment systems, for instance, provides employees in bureaucracies with the opportunity to engage in CWB without fearing sanctions, thus increasing the likelihood of CWB. Conversely, the post-bureaucratic view states the opposite. In line with our argumentation on the competing bureaucratic and post-bureaucratic views, we stated the following hypotheses:

Hypothesis 6a. The more an organization's structure is characterized by bureaucratic elements, the less likely CWB is to occur.

Hypothesis 6b. The more an organization's structure is characterized by post-bureaucratic elements, the less likely CWB is to occur.

6. Method

6.1. Sample and procedure

In July 2013 we collected our data by recruiting respondents in cooperation with the SoSci Panel. This is a German non-profit panel service specifically developed for scientific surveys, to which any researcher or research group can submit a questionnaire free of charge. Similar respondent databases like StudyResponse are often used in organizational research (e.g., Bowling & Eschleman, 2010; Piccolo & Colquitt, 2006). By agreeing to the SoSci Panel's terms of use, the researcher has potential access to over 100,000 panelists (as of 2013), who are individuals willing to complete online surveys. 3254 individuals were randomly selected from the total pool and were invited by e-mail to take part in an online survey about their work place and their behavior at work. Written instructions stated that participation was voluntary and highlighted that all responses were completely anonymous. Anonymity is particularly important when measuring CWB because this

enhances the truthfulness of respondents' self-reports (Berry, Carpenter, & Barratt, 2011). Respondents had the opportunity to request the results after data collection and to participate in a raffle of several small-value gift certificates (at 10 Euros) from an online mail order company.

We had two main sampling criteria. The respondents had to be in part-time or full-time employment and had to have a supervisor. Since some items used in the survey required respondents to have a supervisor (e.g., measure of punishment), it was necessary to exclude respondents from top managerial levels.

A total of 470 employees took part in the questionnaire (14.44% response rate, which was a usual rate for such a survey design, e.g., Bowling & Eschleman, 2010; Piccolo & Colquitt, 2006). 271 (58%) of the respondents were female and 289 (61%) had an academic education. The average respondents' age was 39.77 years (SD = 10.65), the mean job experience was 16.42 years (SD = 11.33), the average tenure was 8.83 years (SD = 8.66), and the average working hours per week were 37 h (SD = 15.78). Organization size in terms of number of employees was clustered in seven groups: 1–10 (43; 9.1%), 11–50 (84; 17.9%), 51–100 (50; 10.6%), 101–500 (112; 23.8%), 501–1000 (44; 9.4%), 1001–5000 (73; 15.5%), and 5001 and more (64; 13.6%).

The collected data were analyzed using IBM SPSS Statistics 22 and IBM SPSS Amos 22.

6.2. Measures

6.2.1. Specialization

To measure task specialization, we used three items adapted from the skill variety scale from the job diagnostic survey (Hackman & Oldham, 1975). Using a seven-point Likert scale ranging from "strongly disagree" to "strongly agree", participants reported the degree to which their jobs require a variety of activities that involve the use of multiple skills and talents. An example item was "My job requires me to do many different things at work" (reverse coded).

6.2.2. Decision autonomy

We measured decision autonomy using Aiken and Hage's (1966), five-item scale which they refer to as "hierarchy of authority". For instance, participants responded to statements such as "Any decision I make has to have my boss's approval" (reverse coded). The response scale ranged from 1 (definitely false) to 6 (definitely true).

6.2.3. Participation in decisions

We adopted Long's (1979) three-item scale to measure participation in decisions. Participants reported how much influence they felt they have in others' decisions. An example item was "How much say do you have in decisions about overall policies of the organization". Responses could vary from 1 (no say at all) to 7 (a very great deal of say).

6.2.4. Formal standardization

To measure formal standardization, we combined a five-item scale from Chen, Niu, Wang, Yang, and Tsauro (2009) and a five-item scale from Lambert, Paoline, and Hogan (2007). The former measures the extent to which employees perceive their organization's processes as standardized, whereas the latter measures the extent of an organization's formalization. We combined these scales, as each encompasses only one part of our definition of formal standardization. Because the dimensionality of this measure had not been tested previously, we performed a confirmatory factor analysis based on maximum likelihood estimation. First, we tested a one-factor model in which all ten items loaded on formal standardization. This model fitted the data

poorly ($\chi^2(27) = 204.86$ ($p > .001$), comparative fit index (CFI) = .86, Tucker-Lewis-Index (TLI) = .81, root mean square error of approximation (RMSEA) = .119, and RMSEA 90% confidence interval (CI) = .104, .134). Based on [Guadagnoli and Velicer's \(1988\)](#) thresholds, we deleted all items with loadings less than .50. The modified model, in which the remaining seven items loaded on the latent construct, indicated a satisfying model fit ($\chi^2(9) = 33.84$ ($p > .001$), CFI = .97, TLI = .95, RMSEA = .077, and RMSEA 90% CI = .050, .105). The final items were “The organization has a very large number of written rules and policies”, “A ‘rules and procedures’ manual exists and is readily available within this organization”, “There are no standard operating procedures in this company” (reversed), “There is a complete written job description for most jobs in this organization”, “Our company effectively uses automation to achieve consistency”, and “There is a formal orientation program for most new members of the organization”. Participants used a seven-point Likert scale, ranging from “strongly disagree” to “strongly agree”, to respond to the items.

6.2.5. Punishment

We used [Zoghbi-Manrique-de-Lara's \(2011\)](#) six-item scale to measure the extent of punishment existing in the respondents' organizations. For all items, participants reported whether they feared specific sanctions which varied in severity, ranging from minor (e.g., “Verbal caution from my boss”) to serious (e.g., “My organization will start disciplinary action with the intention of dismissing me”). Responses could range from 1 (strongly disagree) to 7 (strongly agree).

6.2.6. Counterproductive work behavior

We measured CWB through self-reports. Self-reports are suited well for CWB research, as CWB directed toward the organization is often performed in private ([Berry et al., 2011](#)). There are several CWB scales measuring the construct in largely the same way ([Jones, 2009](#)). We chose [Fox and Spector's \(1999\)](#) sixteen-item scale, as their broad wording of the items is particularly suitable for our sample that consisted of participants drawn from multiple organizations in several industries. For all items, respondents were

asked, “How often have you . . .”, with response options varying from 1 (never) to 6 (extremely often). The listed behaviors were solely directed toward the organization and differed in terms of the severity of deviance. For instance, a minor CWB item was “daydreamed rather than did your work” and a serious CWB item was “stole something from work”.

6.2.7. Control variables

[Becker \(2005\)](#) has demonstrated the pitfalls of including control variables without good explanation, as the results (i.e., significance levels and estimated effect sizes of predictors) are directly affected by the control variables included in the analysis. We followed his recommendations and added only control variables which we believed to be potent (i.e., ones correlating with the dependent variable) based on prior evidence. Because studies have highlighted the importance of intrinsic motivation as a predictor of deviance ([DeHart-Davis, 2007](#); [Tyler & Blader, 2005](#)), we added the *intrinsic motivation to follow rules* as a control variable, using nine items from [DeHart-Davis' \(2007\)](#) unbureaucratic personality scale. An exemplary item was “Even if I dislike a rule, I usually obey it”. The response scale ranged from 1 (strongly disagree) to 6 (strongly agree). We also measured respondents' *tenure*, since [Tyler and Blader's \(2005\)](#) study has shown the impact of tenure on deviant behavior. Furthermore, we added *sex* and *age* as control variables. Studies have documented that males and younger workers more often tend to engage in deviant behaviors than females and older workers (e.g., [DeHart-Davis, 2007](#); [Tyler & Blader, 2005](#)). Finally, we included *organization size* as a control variable because research has suggested that the incidence rate of CWB is greater in large organizations than in small ones ([Einarsen & Skogstad, 1996](#)).

7. Results

7.1. Measurement model

We performed a confirmatory factor analysis based on maximum likelihood estimation to test the dimensionality of

Table 1
Descriptive statistics, correlations and reliability coefficients.

	M ^a	SD ^a	1	2	3	4.1	4.2	4.3	5	6	7	8	9	10	11
Controls															
1. Age	39.75	10.60	-												
2. Gender	-	-	-.15**	-											
3. Tenure	8.80	8.60	.63***	-.10*	-										
4. Org. size															
4.1 Small	-	-	-	-.05	.04	-.07	-								
4.2 Medium	-	-	-	.08†	.02	.04	-	-							
4.3 Large	-	-	-	-.03	-.06	.04	-	-	-						
5. IRF	3.72	0.78	-.09†	.11*	-.03	.00	-.08†	.08†		(.76)					
Predictors															
6. SP	2.32	1.12	-.17***	.02	-.11*	.05	-.01	-.04	-.10*		(.83)				
7. DA	4.66	1.18	-.09†	-.12**	.06	.03	-.03	-.01	.06	-.26***		(.89)			
8. PD	4.23	1.34	-.14**	-.06	.08	.15**	-.01	-.15**	.07	-.37***	.39***		(.75)		
9. FS	3.86	1.46	.03	.04	.09*	-.28***	.11*	.19**	.14**	-.05	-.09†	-.01		(.81)	
10. PU	1.68	0.98	.13**	-.07	-.06	-.04	.03	.02	-.17***	.20***	-.26***	-.21***	.06		(.84)
Dependent															
11. CWB	1.48	0.36	-.08†	-.04	-.06	-.05	-.02	.08†	-.21***	.18***	-.16***	-.28***	-.10*	.40***	(.74)

Note: N = 461 (after excluding nine univariate outliers from the total sample). The numbers in parentheses on the diagonal are coefficient alphas. Gender was coded as 0 for females and 1 for males. IRF = intrinsic rule-following, SP = specialization, DA = decision autonomy, PD = participation in decisions, FS = formal standardization, PU = punishment.

^a Raw metric.
 † $p < .10$.
 * $p < .05$.
 ** $p < .01$.
 *** $p < .001$.

the measures used. We tested a five-factor model, in which items for specialization, decision autonomy, participation in decisions, formal standardization, and punishment were specified to load on their respective latent constructs, which were allowed to covariate freely. This model largely met conventional model fit indices, indicating a good model fit as $\chi^2(242) = 519.47$ ($p > .001$), CFI = .94, TLI = .93, RMSEA = .049, and RMSEA 90% CI = .044, .055 (Hu & Bentler, 1999). This model also fit the data better than an alternative model that combined all five variables in a single factor ($\Delta\chi^2(10) = 2758.59$, $p < .001$). We used the Fornell–Larcker criterion (Fornell & Larcker, 1981) to determine the discriminant validity, which was observed for all factor combinations, since the shared variance of each two-factor combination (i.e., the squared correlation) was smaller than the average variance of each of the two factors.

7.2. Preliminary analyses

The mean and standard deviation of the CWB measure were not particularly high ($N = 470$, $M = 1.51$, $SD = 0.42$). However, as El Akremi et al. (2010) have noted, these values are comparable to those in previous studies using similar scales (e.g., Christian & Ellis, 2011; Gruys & Sackett, 2003; Ilie et al., 2012; Thau & Mitchell, 2010; Yen & Teng, 2013). Bennett and Robinson (2003) have argued that even if CWB self-report measures do not capture particularly high variation in general, they do reveal enough variance for empirical research. However, studying an individual behavior with low variances, such as CWB, often results in skewed distributions (Bennett & Robinson, 2003). Indeed, our dependent variable, CWB, tended toward a negative skew (1.49), so we performed two steps to bring it close to a normal distribution. First, we excluded nine univariate outliers for the dependent variable CWB ($N = 461$, $M = 1.48$, $SD = 0.36$) and, second, we log-transformed CWB ($N = 461$, $M = 0.27$, $SD = 0.18$), a step that is recommended to correct for skewness (Pieterse, Van Knippenberg, & Van Dierendonck, 2013). To avoid distorted results caused by extreme cases, we identified six multivariate outliers using Mahalanobis distances ($\chi^2 = 44.36$,

$p < .001$; $\chi^2 = 44.51$, $p < .001$; $\chi^2 = 32.99$, $p < .001$; $\chi^2 = 32.36$, $p < .001$; $\chi^2 = 32.22$, $p < .001$; $\chi^2 = 30.47$, $p < .001$) (Pieterse et al., 2013). Analyses were conducted with and without these six cases. As including the multivariate outliers did not alter the results significantly, all results are reported with the outliers present. Finally, we standardized all variables. Since some factors correlated with others, we performed the Durbin–Watson test. The resulting $d = 1.92$ indicated no significant multicollinearity in the data.

7.3. Descriptive statistics and correlations

Table 1 shows the descriptive statistics (raw metric), correlations, and Cronbach's alphas. We clustered organization size into three categories, small (1–100 employees), medium (101–1000 employees), and large (1001 and more employees). As expected, all independent variables correlated significantly with CWB.

7.4. Organizational structure and CWB (hypotheses 1a–5b)

We used a hierarchical multiple regression analysis to test the hypotheses, regressing CWB on the control variables and the organizational structure elements (Table 3). We entered the control variables age, gender, tenure, organization size, and intrinsic rule-following first. Model 1 shows that only large organizations and the intrinsic motivation to follow rules are significantly related to the dependent variable. To test Hypotheses 1a–5b, model 2a entered all structure elements into the regression analysis to determine the relationship of these variables to CWB. Model 2a is significant, as is the change in R^2 . We found that the coefficients for degree of participation in decisions ($\beta = -.14$, $p > .001$) and formal standardization ($\beta = -.10$, $p > .05$) were significant and negatively related to CWB. The coefficient for punishment was significant but positive ($\beta = .30$, $p > .001$). In contrast, specialization ($\beta = -.02$, ns) and decision autonomy ($\beta = .00$, ns) were unrelated to CWB. Therefore, the results of model 2a provided general support for Hypothesis 3b, 4a, and 5b

Table 2
Cluster centers, results of ANOVAs for clusters, and correlation between clusters and organizational structure elements.

	Four-cluster solution				ANOVA F
	Ideal-typical post-bureaucracy	Hybrid post-bureaucracy	Ideal-typical bureaucracy	Hybrid bureaucracy	
Cluster number	1	2	3	4	
Specialization					93.66***
M/SD	–0.84/0.40	0.19/0.64	0.94/1.19	–0.19/0.61	
r	–.39***	–.12**	.57***	–.11†	
Decision autonomy					52.44***
M/SD	0.76/0.40	0.09/0.76	–0.73/1.22	–0.18/0.76	
r	.35***	.05	–.45***	–.10†	
Participation in decisions					137.25***
M/SD	1.36/0.47	–0.11/0.57	–0.71/0.98	0.00/0.72	
r	.63***	–.08†	–.45***	–.01†	
Formal standardization					141.56***
M/SD	–0.07/0.83	–0.85/0.56	0.10/0.95	1.02/0.50	
r	–.03	–.57***	–.06	.58***	
Punishment					92.45***
M/SD	–0.49/0.35	–0.31/0.50	0.98/1.32	–0.40/0.42	
r	–.22***	–.20***	.61***	–.22***	
N	82	143	124	112	

Note: $N = 461$ (after excluding nine univariate outliers from the total sample).

† $p < .10$.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

(recall that results supporting one hypothesis also contradict the other). Hypothesis 1a, Hypothesis 1b, Hypothesis 2a, and Hypothesis 2b were not supported by the results.

7.5. Organizational form and CWB (Hypotheses 6a–6b)

In further analysis, we performed a two-step cluster analysis based on a log-likelihood function in order to identify bureaucratic and post-bureaucratic forms in the data that differ in terms of their emphasis on organizational structure elements. The SPSS two-step cluster analysis algorithm combines the procedures of k-means and hierarchical clustering (Mooi & Sarstedt, 2011). We used cluster analysis instead of interaction effects analysis to avoid the limitations of the latter. Interactions with more than two variables are difficult to interpret (Fiss, 2007) and since we focused on five structure elements, cluster analysis offers a more holistic view on organizational forms. In clustering organizational forms, we considered that bureaucratic and post-bureaucratic elements coexist in practice (Dunford et al., 2007).

At first, we compared a three-cluster-solution, a four-cluster-solution, and a five-cluster-solution. The assessment of the classification adequacy indicated that the five-cluster-solution (95.0%) might be the best choice. However, we chose a four-cluster-solution (classification adequacy=92.8%) for the following reasons: in line with Larwood, Falbe, Kriger, and Miesing (1995), we described the characteristics of the clusters only by cluster-factor correlations exceeding a level of significance of $p > .001$, as these cluster-factor correlations are particularly distinctive characteristics of the clusters. In a five-cluster-solution, however, three clusters had two or less distinctive characteristics. Thus, choosing a five-factor-solution would not have substantially extended the results on the relationship between single organizational structure elements and CWB. Furthermore, the clusters of the four-cluster-

solution differed significantly in terms of the structure elements, indicating discriminant validity (Table 2).

Cluster 1, which encompassed all cases characterized by a low degree of specialization and punishment and a high level of decision autonomy and participation in decisions, was virtually an ideal-typical post-bureaucracy. Low levels of formal standardization and punishment were distinctive features of cases in cluster 2. Thus, the cases in this cluster tended towards post-bureaucratic features and cluster 2 was therefore labeled hybrid post-bureaucracy. Cluster 3, ideal-typical bureaucracy, was the opposite of cluster 1 in that it exhibited low levels of decision autonomy and participation in decisions as well as high levels of specialization and punishment. The cases in cluster 4 exhibited high levels of formal standardization and low degrees of punishment. Referring to the high correlation with formal standardization in this cluster, we interpreted this as an emphasis on bureaucratic features and labeled this cluster hybrid bureaucracy.

Models 2b–2e (Table 3) depict the results of the regression analysis that examined the relationships between the four dummy-coded clusters and CWB. In each case, we regressed CWB on three clusters, with the fourth cluster as a reference category. We only describe the effects of Models 2b–2e that are below the diagonal constituted by the reference categories (see the rows in the four-cluster solution section in Table 3), because effects that are above the diagonal show the same effects with opposite signs. Model 2b shows that employees in ideal-typical post-bureaucracies were less likely to behave deviantly compared to employees in hybrid post-bureaucracies ($\beta = .28, p > .05$) and in ideal-typical bureaucracies ($\beta = .74, p > .001$). However, there was no significant difference regarding CWB between ideal-typical post-bureaucracies and hybrid bureaucracies ($\beta = .13, ns$). Model 2c shows that employees in hybrid post-bureaucracies were less likely to engage in CWB than were those in ideal-typical bureaucracies ($\beta = .46, p > .001$). Results showed no significant difference regarding CWB between hybrid post-bureaucracies and

Table 3
Regression results: Effects of organizational structure elements and organizational form on CWB.

Variables	Hypothesis	Main effects		Four-cluster solution reference category			
		Model 1	Model 2a	Model 2b (Cluster 1)	Model 2c (Cluster 2)	Model 2d (Cluster 3)	Model 2e (Cluster 4)
Controls							
Gender		-.04	-.01	-.04	-.04	-.04	-.04
Age		-.09 [†]	.01	-.04	-.04	-.04	-.04
Tenure		.00	-.01	-.01	-.01	-.01	-.01
Organization size (medium)		.04	.03	.03	.03	.03	.03
Organization size (large)		.21 [†]	.18 [†]	.18 [†]	.18 [†]	.18 [†]	.18 [†]
Intrinsic rule-following		-.19 ^{***}	-.11 ^{**}	-.16 ^{***}	-.16 ^{***}	-.16 ^{***}	-.16 ^{***}
Main effects							
Specialization	1a vs. 1b		-.02				
Decision autonomy	2a vs. 2b		.00				
Participation in decisions	3a vs. 3b		-.14 ^{***}				
Formal standardization	4a vs. 4d		-.10 [*]				
Punishment	5a vs. 5b		.30 ^{***}				
Four-cluster solution							
Ideal-typical post-bureaucracy (C1)	6a vs. 6b			-.28 [†]	-.74 ^{***}	-.13	
Hybrid post-bureaucracy (C2)			.28 [*]	-	-.46 ^{***}	.15	
Ideal-typical bureaucracy (C3)			.74 ^{***}	.46 ^{***}	-	.61 ^{***}	
Hybrid bureaucracy (C4)			.13	-.15	-.61 ^{***}	-	
F		4.94 ^{***}	11.52 ^{***}	8.88 ^{***}	8.88 ^{***}	8.88 ^{***}	8.88 ^{***}
Adjusted R ²		.05	.20	.14	.14	.14	.14
ΔR ²		.16 ^{***}	.09 ^{***}	.09 ^{***}	.09 ^{***}	.09 ^{***}	.09 ^{***}

Note: N = 461 (after excluding nine univariate outliers from the total sample). Gender was coded as 0 for females and 1 for males. The reference category for organization size is "small". Standardized coefficients are shown. Supported hypotheses are presented in italic.

[†] $p < .10$.
^{*} $p < .05$.
^{**} $p < .01$.
^{***} $p < .001$.

hybrid bureaucracies ($\beta = -.15$, ns). Furthermore, CWB occurred significantly more often in ideal-typical bureaucracies than in hybrid bureaucracies ($\beta = -.61$, $p > .001$) (model 2d). The results of Models 2b–2e favor the post-bureaucratic perspective (Hypothesis 6b), but neither the bureaucratic view nor the post-bureaucratic view was consistently supported.

7.6. Post hoc analyses

We conducted a supplemental regression analysis with a non-log-transformed dependent variable and found similar effects at the same levels of significance. In addition, the opposing views may imply that both bureaucracy and post-bureaucracy theories are valid and that the relationship between the organizational structure elements and CWB is curvilinear. Therefore, after model 2a we added a squared term for each structure element in model 3. Results showed no curvilinear effects except those of punishment (linear: $\beta = .49$, $p > .001$; squared: $\beta = -.09$, $p > .01$). Since the turning point was more than 2.71 from the mean ($M = 0$) and nine univariate outliers were excluded, only one of the observations had a value of 2.71 or more. Thus, the maximum of the curve was outside the relevant range of the variable. Therefore, the relationship did not show an inverse-U-shape, but the curve showed a clear positive effect (Meyer, 2009), with the standard deviations ranging from -1.40 to 2.76 and a leveling off after the maximum. This alleged curvilinear effect supported the post-bureaucratic view (Hypothesis 5b) rather than the bureaucratic view.

8. Discussion

8.1. Summary of findings

A bureaucratic view implies that an organization's structure is characterized by high levels of specialization, formal standardization, and punishment and by low degrees of decision autonomy and participation in decisions. According to bureaucracy theorists, these are features that are likely to reduce CWB. In contrast, a post-bureaucratic view implies a diametric organizational structure that, paradoxically, has been hypothesized to result in a reduction of deviant behavior. Our results do not consistently support one of the two perspectives. The structure elements of specialization and decision autonomy show no effect on CWB, so the pairs of hypotheses 1a–1b and 2a–2b are rejected. However, participation in decisions is negatively related to CWB and punishment is positively related to CWB. These findings are in line with the post-bureaucratic view (Hypothesis 3b and Hypothesis 5b). Furthermore, formal standardization is negatively related to CWB (Hypothesis 4a), supporting the bureaucratic perspective. The analysis of organizational forms supports the post-bureaucratic view to some extent, since the incidents of CWB are least common in ideal-typical post-bureaucracies and most common in ideal-typical bureaucracies. However, we observe no significant difference regarding the number of incidents of CWB in hybrid post-bureaucracies and hybrid bureaucracies, so Hypothesis 6b is only partly supported.

8.2. Theoretical implications

Our study contributes to a better understanding of the relationship between organizational structure and CWB. By putting the bureaucracy and post-bureaucracy theories to a competitive test, we take up calls to take organizational structure into greater consideration when analyzing CWB (Bennett, 1998) and to generate theoretical explanations for the relationship between organizational structure and CWB (Martin et al., 2013). Even

though some studies have included some organizational structure elements (e.g., Fox & Spector, 1999; Rentsch & Steel, 1998), research has lacked systematic and theoretical analyses of how different organizational structures relate to CWB.

We find that participation in decisions is negatively related to CWB and punishment is positively related to CWB, which supports the post-bureaucratic view. Post-bureaucracy theorists have argued that punishment systems are no longer necessary to enforce rule-following (Courpasson & Dany, 2003; Jermier, 1998). Instead, post-bureaucracies use more unobtrusive and soft mechanisms (Courpasson & Dany, 2003) such as concertive control (Barker, 1993). Warhurst (1998) described a post-bureaucratically organized factory of a kibbutz community in Israel, in which formal control systems were absent and workers had high levels of participation in decisions, leading to high levels of commitment and adherence. Even though Warhurst's (1998) study may be an extreme case, it illustrated the benefits of post-bureaucratic structuring, i.e., high levels of participation in decisions and low levels of punishment. According to social exchange theory (Blau, 1964) and Gouldner's (1960) norm of reciprocity, such post-bureaucratic structures are welcomed by employees, as they can be seen as reflecting that their opinion is appreciated and their employers trust them not to behave deviantly. Thus, employees justify the confidence placed in them by the organization and behave in a proper way (Robinson, 2008). With respect to organizational behavior research, our findings about participation in decisions and punishment further highlight the importance of considering both elements in CWB studies, which has rarely been the case (exceptions are the studies of Ambrose et al., 2002 and Zoghbi-Manrique-de-Lara, 2011).

We further find that, in line with the bureaucratic view, formal standardization is negatively associated with CWB. Bureaucracy theory offers two explanations for this result. On the one hand, the negative relationship between both variables may be due to the behavior-determining function of formal standardization. High levels of formal standardization increase efficiency by simplifying coordination (Adler & Borys, 1996), even in the presence of dynamic and complex contexts (Adler, 2005). This is because employees develop shared task models when working on a highly formalized task (Mathieu, Heffner, Goodwin, Salas, & Cannon-Bowers, 2000). Thus, formal standardization can be perceived as work simplification, helping employees to reach their work goals. This can lead to a reduction of CWB (Chen & Spector, 1992). On the other hand, formal standardization is known to minimize friction between employees on different hierarchical levels (Gouldner, 1964; Merton, 1940). According to Merton (1940, p. 560), "the subordinate is protected from the arbitrary action of his superior, since the actions of both are constrained by a mutually recognized set of rules". Conversely, if behavior is not rule-driven but rather arbitrary, frustration is likely to emerge (Ashforth, 1989) which, in turn, can be a source of CWB (Fox & Spector, 1999). However, CWB research has rarely recognized formal standardization as a direct antecedent of CWB, but often focused on outcomes of formal standardization (e.g., decreased work stress) and on how these outcomes relate to CWB (e.g., Fox & Spector, 1999; Fox et al., 2001). Our study stresses that research should pay more attention to this structural element.

The pairs of hypotheses 1a–1b and 2a–2b are not supported by the data. The former pair represents the bureaucratic and post-bureaucratic views on the relationship between specialization and CWB (Johnson et al., 2009; Weber, 1958). The latter pair reflects the opposing theoretical views on the relationship between job autonomy and CWB (Courpasson, 2000; Heckscher, 1994; Weber, 1958). The correlation analysis reveals a positive association of specialization with CWB and a negative relationship between job autonomy and CWB, indicating the potential benefits of task

variety (i.e., low specialization) and job autonomy in respect to CWB (Bennett, 1998; Dalal, 2005; Hackman & Oldham, 1976; Lawrence & Robinson, 2007). Thus, correlation results are in accordance with the post-bureaucratic view. However, as our regression analysis does not show associations of specialization and job autonomy with CWB, our results support neither the bureaucratic nor the post-bureaucratic view. It is conceivable that the other structural elements (i.e., participation in decisions, formal standardization, and punishment) nullify the effects of specialization and job autonomy on CWB. This finding is surprising, particularly regarding job autonomy, because previous studies have shown a relationship between job autonomy and CWB (e.g., Bennett, 1998; Yen & Teng, 2013). Our result highlights that CWB research should depart from selecting specific organizational structure elements. Instead, research could benefit from developing a more comprehensive model of organizational context in CWB research. The analysis of the complex interplay of single organizational structure elements might uncover new insights into the relationship between CWB and its determinants.

Furthermore, our results extend the understanding of the *relationship between organizational form and CWB*. Contrary to Weber's assumption, we find that employees in ideal-typical bureaucracies report to have engaged in CWB more often than employees in the other types of organizations, and that employees in ideal-typical post-bureaucracies report the lowest rate of CWB compared to the other clusters. We see two explanations for this striking difference to Weber's arguments: First, employees in highly bureaucratic organizations try to elude bureaucratic control and defend their autonomy (Hodson, 1995) by regulating the amount of work they do (e.g., daydreaming, slowdowns) or by harming their organization. Moreover, according to Martin et al. (2013), such hidden rule-breaking is often used where there is a large disparity in power between the individual (i.e., the "bad apple") and the organization (i.e., the rule enforcer). Bureaucracies are known to have unequal power structures and, therefore, hidden CWB is often the only way to show resistance without being punished. In contrast, if the disparity in power is small, employees may have more potential for open conflict (Martin et al., 2013). For instance, because of flat hierarchies in post-bureaucracies, employees are more likely to argue about autonomy with their supervisor than to behave destructively. Second, since employees in post-bureaucracies contribute their own ideas and views to organizational processes, they have the possibility to set their own normative rule system that controls their behavior (Barker, 1993). Thus, normative control curbs CWB. If organizational rules are consistent with individuals' values, individuals are more intrinsically motivated to follow these rules (Tyler & Blader, 2005).

We find that CWB occurs significantly less often in hybrid bureaucracies than in ideal-typical bureaucracies, for which we see two reasons. On the one hand, employees of hybrid bureaucracies may perceive their highly formalized and standardized organizational structures as coercive, as formal standardization decreases their autonomy and predetermines their actions (Adler & Borys, 1996). Therefore, the lower level of CWB in hybrid bureaucracies compared to ideal-typical bureaucracies may be due to coerced, enforced rule-following. On the other hand, employees in hybrid bureaucracies may perceive their organizational structures as enabling (Adler & Borys, 1996). If employees recognize the advantages of effective formalized standardization, codified best-practice routines can become a valuable resource that employees can use to perform their tasks (Adler & Borys, 1996). This explanation suggests that the lower level of CWB in hybrid bureaucracies is based on employees' approval of bureaucratic principles.

We further find that CWB occurs more often in hybrid post-bureaucracies than in ideal-typical post-bureaucracies. Compared to the hybrid post-bureaucracy, the ideal-typical post-bureaucracy is characterized by high levels of decision autonomy and participation in decisions. As we have discussed above, employees in ideal-typical post-bureaucracies are empowered to set their own rules, making them more likely to be followed intrinsically than imposed rules (Barker, 1993; Tyler & Blader, 2005). In addition, the hybrid post-bureaucracy is characterized by lower levels of formal standardization than the ideal-typical post-bureaucracy. Thus, the benefits of formal standardization are not realized in the hybrid post-bureaucracy (Adler & Borys, 1996), resulting in an increase of CWB.

Summing up, the comparison of the ideal-typical forms suggests that post-bureaucratic scholars may have a point in saying that bureaucracy is "bad" and post-bureaucracy is "good", as the latter liberates employees from bureaucratic restrictions and curbs CWB (Grey, 2007; McKenna et al., 2010). However, the finding that hybrid bureaucracies and hybrid post-bureaucracies do not differ significantly regarding CWB suggests that this conclusion must be put into perspective, as both bureaucratic and post-bureaucratic elements can have positive outcomes for individuals. On the one hand, post-bureaucratic participation in decisions gives employees the opportunity to contribute their own ideas and affect organizational decision-making. Moreover, the reduced use of control and punishment systems can be perceived as the organization's willingness to trust employees to behave properly (Arvey & Jones, 1985). On the other hand, bureaucratic formal standardization protects employees from arbitrary power, ensures predictability, reduces ambiguity, and increases organizational effectiveness. Therefore, organizational hybrids can unify such bureaucratic and post-bureaucratic elements to reduce CWB. We conclude that both bureaucracy and post-bureaucracy theories contribute to a better understanding of CWB in organizations and that the combination of both theories offers a more comprehensive view of this phenomenon than post-bureaucracy theory alone (see Greenwood & Miller, 2010).

8.3. Practical implications, limitations, and future research

The results of our study have *practical implications*. CWB interferes with organizational processes (Robinson & Bennett, 1995) and leads to considerable monetary costs (Robinson, 2008). Thus, a major task for managers is to ensure that employees follow rules (Zoghbi-Manrique-de-Lara, 2011). However, which strategies are best suited to curb CWB remains a debated issue (Tyler & Blader, 2005). Our study suggests that one strategy is to configure the organization as a hybrid that stimulates participation in decisions and formal standardization as well as avoids punishment systems. However, these recommendations have some drawbacks, as relying on bureaucratic structures implies abandoning the advantages of post-bureaucratic structures and vice versa (Styhre & Lind, 2010). For example, participative decision-making is often more time-consuming than autocratic decision-making, while the implementation of formal standards is often costly. In other words, while fostering non-deviant behavior, the hybrid configuration comes at a price. In addition, managers have only limited scope to change organizational structures at their discretion because of the dependence of organizational structure on internal and external conditions (Miles & Snow, 1978; Mintzberg, 1979). Thus, the adoption of the practical implications of our study is restricted by situational constraints to some extent.

Our study has some *limitations*. First, cross-sectional surveys limit our ability to draw conclusions about causal relationships, as the direction of these relationships is ambiguous. Second, the use of self-reporting may have affected our results, as some authors

have argued that self-reports are not always in accordance with other-reports. However, [Berry et al.'s \(2011\)](#) meta-analysis of the CWB literature found only marginal differences between self-reports and other kinds of reports. Third, as we used the SoSci Panel service, we have little information about the respondents and their employers. Thus, the generalizability and representativeness of the results are limited ([Piccolo & Colquitt, 2006](#)). Fourth, some scholars suggested identifying different types of CWB such as withdrawal behaviors, theft, misuse of time, and production deviance (e.g., [Gruys & Sackett, 2003](#); [Spector et al., 2006](#)). However, we used a one-factor scale of CWB to measure deviance directed towards the organization. This one-factor approach may have produced non-significant correlations between a specific organizational structure element and CWB, e.g., because this structure element is only related to one or few types of CWB. Fifth, with respect to the punishment measure used in this study, respondents were asked whether or not they feared specific sanctions. It is possible that a respondent with little fear of punishment did not report fear of a certain punishment although this form of punishment existed in his/her organization. Thus, it is unclear whether the measurement captured punishment in the respondents' organizations comprehensively.

In line with others ([Johns, 2006](#); [Martin et al., 2013](#)), we suggest that *future research* should further integrate structural context elements into existing and future concepts of CWB. By including more organizational structure elements rather than focusing on single structure elements, knowledge about the context's role for the occurrence of CWB would be enriched. In addition, the significant effects of the control variables organization size and intrinsic rule-following underline that other important CWB determinants exist. Therefore, future research needs to consider not only organizational structure variables but also other variables to understand the interplay of various CWB antecedents. Furthermore, little is known about how and why antecedents may be related differently to specific types of CWB ([Bowling & Gruys, 2010](#)). Initial studies suggest that organizational constraints are related differently to different types of CWB ([Bayram, Gursakal, & Bilgel, 2009](#); [Spector et al., 2006](#)). In order to gain a more comprehensive understanding of these relationships, future studies should analyze whether bureaucratic and post-bureaucratic structures and forms trigger different types of CWB. Scholars should also pay attention to potential mediators of the relationship between organizational structure and CWB. For instance, specialization is related to boredom ([Acee et al., 2010](#)), job autonomy is associated with job stress ([Spector & Fox, 2005](#)), participation in decisions is linked to procedural justice ([Colquitt et al., 2001](#)), formal standardization is related to organizational constraints ([Bozeman & Scott, 1996](#)), and punishment is associated with distrust ([Wells & Kipnis, 2001](#)). All these structures' consequences have been shown to influence CWB ([Ambrose et al., 2002](#); [Colquitt et al., 2007](#); [Fox et al., 2001](#); [Spector & Fox, 2005](#)). Thus, the inclusion of mediators would extend the knowledge about the relationship between organizational structure and CWB. Finally, future studies should also focus on potential moderator variables which alter the behavioral response (i.e., CWB) to organizational structure and form. For instance, personal characteristics play an important role whether an individual favors a specific organizational structure (e.g., [Bourantas & Papalexandris, 1999](#); [Child, 1991](#)). The individual's appraisal of the organizational structure should, in turn, influence its behavior. Another potential moderator is the occupational field. Recent research suggests that being a blue-collar or white-collar worker plays an important role for the occurrence of CWB ([Bayram et al., 2009](#); [Jensen & Patel, 2011](#)), potentially because blue-collar or a white-collar workers response differently to organizational structure ([Locke, 1973](#)). However, more research is needed to better understand the influence of the

interaction of occupational field and organizational structure on CWB.

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