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Reciprocal Effects of Psychological Contract Breach on Counterproductive and Organizational Citizenship Behaviours: The Role of Time

Abstract

The purpose of this study was to investigate the static and dynamic relationship between psychological contract (PC) breach, violation feelings, and acts of counterproductive work (CWBs) and organizational citizenship (OCBs) behaviour, as well as to investigate the reverse relationship from CWB and OCB to PC breach. We tested these direct and reverse relationships by means of structural equation modelling using latent growth parameters on weekly survey data from 80 respondents for 10 consecutive weeks (516 observations). PC breach was positively associated with violation feelings, which in turn related positively to CWB-O acts and negatively to OCB-O acts. An accumulation of PC breach was positively associated with intensifying violation feelings, which in turn related positively to an increasing number of CWB-O acts over time. We found no such relationship for OCB-O. Moreover, we found that both static and increasing OCB-O and CWB-O acts were negatively and positively related to static and accumulating perceptions of PC breach, respectively. This study challenges the negative PC breach-OCB-O relationship and demonstrates a recursive relationship between PC breach and OCB-O and CWB-O.

Keywords: psychological contract breach; violation feelings; counterproductive work behaviour; organizational citizenship behaviour; growth parameters; structure equation model

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“It is probably not an over- statement to claim that the cumulative knowledge gained from applied psychological research gives us little insight into how people develop, behave, perform, and grow over time.” (Ployhart, Holtz, & Bliese, 2002, p. 455).

The psychological contract (PC) can be defined as a continuous exchange of a set of reciprocal obligations, arising from explicit and implicit promises, between the employee and the employer (Rousseau, 2001), which shapes the current and future employee-employer exchange relationship. It is considered a critical construct in organizational behaviour literature because employees who perceive that their employer does not meet its obligations—termed PC breach—may develop a strong emotional and affective reaction—termed violation feelings (Morrison & Robinson, 1997). Moreover, scholars increasingly pay attention to PC breach because changes in business practices mean that PC breaches have become more common (Coyle-Shapiro & Neuman, 2004). In the past, the employer was considered to be “a caretaker” for the employee, helping employees to plan and develop their career (Cavanaugh & Noe, 1999). Nowadays, the PC is believed to revolve less around long-term employment, and employees have become responsible for their own career development.

Although substantial empirical progress (for a meta-analysis see Zhao, Wayne, Glibkowski, & Bravo, 2007) has been made in understanding the relationship between PC breach, violation feelings, and counterproductive work behaviour (CWB) and organizational citizenship behaviour (OCB), little attention has been given to the role of time in understanding this chain of events. That is, PC research has remained predominantly contemporaneous and has overlooked the temporal context in which perceptions of PC breach are formed and in which employees change their CWBs or OCBs as perceptions of PC breach and violation feelings unfold over time.

This contemporaneous way of studying PC breach, violation feelings, and CWB and/or OCB is problematic for multiple reasons. First, the PC is theorized to be dynamic constructs that is formed, maintained, disrupted, and repaired over time (e.g., Hansen & Griep, 2016; Rousseau, Hansen, & Tomprou, under review; Schalk & Roe, 2007; Tomprou, Rousseau, & Hansen, 2015). Moreover, several scholars have argued that emotions, attitudes, and behaviours are interrelated and potentially intensify each other over time (e.g., Beal, Weiss, Barros, & MacDermid, 2005; Mitchell & James, 2001; Shipp & Janssen, 2011). As such, capturing only current events of PC breach, violation feelings, and acts of CWB or OCB does not allow us to understand how individuals interpret and react to these dynamic and evolving events. Hence, we would only paint a very simplistic and distorted picture of reality.

Moreover, by ignoring the temporal context of PC breach, violation feelings and acts of CWB or OCB, we fail to account for how time can define the way employees experience PC breach and adjust their acts of CWB or OCB accordingly (Kozlowski, 2009). Specifically, we argue that employees do not operate from a *tabula rasa* when perceiving PC breach. In contrast, perceptions of PC breach are situated in time and with reference to past perceptions of PC breach (i.e., the history of the employee-employer relationship) and future expectations of PC breach (Kozlowski, 2009; Rousseau et al., under review). For example, at any given moment, two individuals from the same organization may perceive the same PC breach event (e.g., not receiving a promised promotion). However, one employee may have experienced a history of PC breaches and as a consequence experiences intensifying violation feelings, which in turn trigger an increasing number of CWB acts or a declining number of OCB acts in the events following this PC breach. In contrast, the other employee only occasionally experienced a PC breach and as a consequence only experiences violation feelings in this moment, which triggers acts of CWB or a reduction in OCB in the moment itself (i.e., there is no intensifying relationship over time). By failing to account for these substantial different

relationships between PC breach, violation feelings and acts of CWB or OCB over time, we risk to overlook that employee reactions to PC breach do not appear out of thin air, but gradually grow over time (e.g., Hansen & Griep, 2016; Schalk & Roe, 2007).

Finally, because most empirical work has overlooked the dynamic nature of the PC, we have generated widely held assumptions that fail to acknowledge that the PC is in a constant state of flux. The most problematic assumption in this regard is the idea that relationships among relevant PC variables are static: a given variable holds the same relationship with the PC at any given point in time (for an elaborate critique see Hansen & Griep, 2016). For example, certain variables (such as PC breach and violation feelings) have been typecast as antecedents of employee reactions whereas other variables (such as acts of CWB or OCB) have been typecast as outcomes of the PC. In such a static “antecedent-consequence” way of thinking, little regard has been given to the notion that the PC is a dynamic construct. As a consequence, we propose to abandon this static way of thinking to make room for a more dynamic way of thinking (for a similar line of arguments in person-organization fit literature see Shipp and Jansen, 2011) in which we account for the option that current acts of CWB or OCB may not only happen in reaction to past perceptions of PC breach but may also serve as antecedents to future perceptions of PC breach.

In this paper, we accounted for the role of time to demonstrate that employees who perceive a PC breach do not only report strong violation feelings in that same moment, but to also show that an accumulation of PC breach perceptions actually leads to *intensifying* violation feelings, which in turn *intensifies* employee reactions (i.e., increasing number of CWB-O acts, decreasing number of OCB-O acts). Moreover, we set out to demonstrate that employees’ current behavioural reactions (i.e., CWB-O and OCB-O) might equally well serve as antecedents of future PC breach perceptions (reverse relationships). By doing so, we bring a temporal perspective to the PC literature and underscore the inter-relatedness of past,

current, and future perceptions and reactions. By doing so, we aim to demonstrate that this dynamic perspective may provide a better depiction of reality than the contemporaneous way of studying PC breach, violation feelings, and employee reactions.

Theoretical Background

The Static Direct Relationship: Relating the Initial Status of PC Breach to the Initial Status of CWB-O and OCB-O.

Traditionally, we have understood behavioural changes in reaction to PC breach based on Social Exchange Theory (Blau, 1964) and the norm of reciprocity (Gouldner, 1960). These frameworks state that employees and employers engage in a mutual exchange relationship in which each party reciprocates the other party's contributions by altering their own contributions either in a negative or positive way (Blau, 1964; Gouldner, 1960). This mechanism of reciprocity builds on the behavioural contingency hypothesis (Heider, 1958) or the proposition that there ought to be a direct alignment between the source of frustration (i.e., the organization breaking its obligations) and the target of an emotional, attitudinal, or behavioural reaction. This implies that, although CWB refers to "voluntary behaviour that violates significant organizational norms and in doing so threatens the well-being of the *organization or its members, or both*" (Robinson & Bennett, 1995, p.556), and OCB refers to discretionary actions that go above and beyond the formal requirements and promote the efficient and effective functioning of the *organization or its individuals* (Podsakoff, MacKenzie, Paine, & Bachrach, 2000), employees who perceive a PC breach are expected to only target the *organization* (CWB-O and OCB-O). Substantial empirical evidence indeed supports this behavioural contingency principle (Conway, Kiefer, Hartley, & Briner, 2014; Bordia, Restubog, & Tang, 2008; Griep, Vantilborgh, Baillien, & Pepermans, 2016). Following this line of thought, the negative reciprocity norm (Gouldner, 1960) suggests that when employees receive unfair treatment from the organization (i.e., PC breach), they will

repay the the party judged to be responsible for the unfair treatment by engaging in, for example, CWB-O. Bordia and colleagues (2008) and Restubog, Bordia, and Tang (2007) indeed found a positive relationship between PC breach and acts of workplace deviance. Restubog, Zagenczyk, Bordia, Bordia, & Chapman (2015) reported a positive relationship between PC breach and both self-rated and peer-rated acts of workplace deviance. Thus, in line with the proposed theoretical mechanism and previous studies, we aim to replicate the hypothesis that employees will increase their initial level of CWB-O acts when perceiving a PC breach.

Hypothesis 1: Static differences in PC breach are positively related to static differences in the number of CWB-O acts.

In contrast, in line with the positive reciprocity norm (Gouldner, 1960), employees feel a sense of indebtedness to reciprocate positive behaviour by the organization (i.e., fulfilling the PC) with positive behaviour on their behalf (i.e., engaging in OCB-O). However, when the organization breaks its obligations, employees are released from this sense of indebtedness and may withdrawal OCB-Os. Several scholars (e.g., Bordia, Restubog, Bordia, & Tang, 2010; Restubog, et al., 2007; Suazo & Stone-Romero, 2011) have indicated that perceptions of PC breach relate negatively to the enactment of OCB. Thus, in line with the proposed theoretical mechanism and previous studies, we aim to replicate the hypothesis that employees will decrease their initial level of OCB-O acts when perceiving a PC breach.

Hypothesis 2: Static differences in PC breach are negatively related to static differences in the number of OCB-O acts.

The Mediating Role of Initial Violation Feelings.

As noted previously, in their conceptual model Morrison and Robinson (1997) distinguished between PC breach and violation feelings when proposing that violation feelings would mediate the relationship between PC breach and behavioural outcomes, such

as acts of CWB-O and OCB-O. Several authors (e.g., Dulac, Coyle-Shapiro, Henderson, & Wayne, 2008; Griep et al., 2016) indeed found longitudinal support for the notion that perceptions of PC breach are a strong antecedent of violation feelings. In addition, Zhao and colleagues (2007) concluded that violation feelings are a key mediating mechanism between PC breach and employees' attitudinal and behavioural reactions. Therefore, in line with the proposed theoretical mechanism and previous studies, we aim to replicate the hypothesis that static differences in violation feelings mediate the relationship between static differences in PC breach and static differences in acts of CWB-O and OCB-O.

Hypothesis 3: Static differences in violation feelings mediate the positive relationship between static differences in PC breach and static differences in the number of CWB-O acts.

Hypothesis 4: Static differences in violation feelings mediate the positive relationship between static differences in PC breach and static differences in the number of OCB-O acts.

The Dynamic Relationship Between Change in PC Breach, Violation Feelings, OCB-O, and CWB-O.

Although the previous sections dealt with the static relationship between PC breach, violation feelings, and acts of CWB-O and OCB-O, these sections fail to account for the temporal context which can define the way employees experience PC breach and adjust their acts of CWB-O and OCB-O accordingly (Kozlowski, 2009; Rousseau et al., under review). By ignoring this temporal context, we are not doing justice to the theoretical tenets of Social Exchange Theory (Blau, 1964) and the norm of reciprocity (Gouldner, 1960) which includes retrospections of the past and anticipations of the future to determine the exchange and balancing of each party's contributions.

The fact that most studies are still overlooking the role of time is somewhat surprising because early person-situation theories (Lewin, 1943; Murray, 1938) have already emphasized that human behaviour is a function of the environment in which they operate and

that one can only make meaningful interpretations of human behaviour and its environment in relation to a temporal context, characterized by the past, the present, and the future. Recently, PC theorizing (e.g., Griep & Hansen, 2016; Rousseau et al., under review; Tomprou et al., 2015) and research (Griep et al., 2016; Vantilborgh, Bidee, Pepermans, Griep, & Hofmans, 2016) picked up on this and has begun to explore the role of time in PC processes.

In line with the negative and positive (release thereof) norm of reciprocity (Gouldner, 1960), we argued that employees would engage in acts of CWB-O while reducing the number of OCB-O acts when they perceive a PC breach. Despite the numerous, cross-sectional and semi-longitudinal studies supporting this assumption, the underlying nature of this finding is faulted because it assumes that employees perceive each PC breach with a *tabula rasa*. However, several authors (e.g., Griep & Hansen, 2016; Griep et al., 2016; Rousseau et al., under review; Tomprou et al., 2015; Vantilborgh et al., 2016) have argued and empirically demonstrated that perceptions of PC breach are situated in time and exist with reference to past perceptions of PC breach (i.e., the history of the employee-employer relationship is accounted for) and future expectations of PC breach. Moreover, based on the work of Andersson and Pearson (1999), it can be argued that when interactions between two social parties become more frequent and complex—as is the case in a prolonged employee-employer relationship—a perceived increase in the number of PC breaches can be a precursor for more intense repercussive acts (i.e., further increasing the number of CWB-O acts and further decreasing the number of OCB-O acts). Likewise, studies suggest that reactions to PC breach may intensify in later career stages (Ng & Feldman, 2008) or as employees age (Bal et al., 2008). In sum, it can thus be argued that acts of CWB-O and OCB-O do not only happen in immediate response to PC breach and violation feelings, but also continue to decrease or increase in response to an accumulation of PC breach perceptions and intensifying violation feelings. Therefore, we hypothesize:

Hypothesis 5: An accumulation of PC breach is related to an increase in the number of CWB-O acts over time.

Hypothesis 6: An accumulation of PC breach is related to a decrease in the number of OCB-O acts over time.

We also propose that intensifying violation feelings would mediate the relationship between an accumulation of PC breach and changes in the number of CWB-O and OCB-O acts over time. Based on the conceptual model of violation feelings (Morrison & Robinson, 1997), and the meta-analytical findings of Zhao and colleagues (2007), we argue that perceiving an accumulation of PC breaches will result in intensifying violation feelings over time. In turn, these increasingly stronger violation feelings will influence the further increase in the number of CWB-O acts and the further decrease in the number of OCB-O acts.

Therefore, we hypothesize:

Hypothesis 7: Intensifying violation feelings mediate the relationship between an accumulation of PC breach and an increase in the number of CWB-O acts over time.

Hypothesis 8: Intensifying violation feelings mediate the relationship between an accumulation of PC breach and a decrease in the number of OCB-O acts over time.

The Reverse Relationship: Initial Status and Change of OCB-O and CWB-O to Initial Status and Change of PC Breach.

Up until now we have been arguing that static and dynamic perceptions of PC breach and violation feelings precede static and intensifying acts of OCB-O and/or CWB-O. However, based on the theoretical arguments that the PC is a dynamic construct that is formed, maintained, disrupted, and repaired over time (e.g., Rousseau et al., under review; Tomprou et al., 2015; Schalk & Roe, 2007), and the argument that events are temporally situated with reference to the past, the present, and the future (Shipp & Jansen, 2011), we propose that current acts of OCB-O and CWB-O have the potential to also influence future

perceptions of PC breach (reverse relationship). Drawing from the work of Shipp and Jansen (2011), we argue that the current experience of events (i.e., enactment of CWB-O or OCB-O) will influence the way employees think about, and make sense of, past events and anticipate future events (Weick, 1979). In particular, we argue that employees will retrospectively rationalize their current behavioural reactions in light of the past status of their PC (i.e., whether the PC was breached or not; Morrison & Robinson, 1997; O'Neill & Mone, 2005; Weick, Sutcliffe, & Obstfeld, 2005) to determine whether they anticipate future PC breaches.

When employees engaged in acts of CWB-O, they will compare these current acts of CWB-O with their past perceptions of PC breach to retrospectively makes sense of these CWB-Os. Rousseau (1995) and Morrison and Robinson (1997) argued that during this mental exercise, employees tend to vigilant monitoring the extent to which an organization has fulfilled, or failed to fulfil, the PC in the past. In this process, employees tend to see what they expect to see, gather only information that confirms their pre-existing beliefs, and ignore a lot of information that does not fit with their current beliefs about the organization (Rousseau, 1995; Shipp & Jansen, 2011). Specifically, it has been argued that these employees are more likely to notice and attend to anomalies (Adler & Obstfeld, 2007) and shift their attention to cues pointing toward potential future discrepancies in the PC (Öhman, Flykt, & Esteves, 2001). When employees notice these discrepancies, sense making mechanisms will influence how they are contextualized (e.g., the organization breached the PC in the past; Weick et al., 2005) and interpreted (e.g., the current discrepancy is pointing toward a potential future PC breach). By doing so, Schalk and Roe (2007) argued that employees will become less tolerant (i.e., their tolerance limit is moved closer toward the initially agreed-upon exchange) toward future deviations in the PC and hence are more likely to perceive small discrepancies as PC breaches. Building further on their dynamic model of PC (Schalk & Roe, 2007), we argue that when employees continue to increase the number of CWB-O acts over time, they will

repeatedly go through the above described process of trying to retrospectively making sense of their CWB-O acts. As a consequence, they will repeatedly adjust their tolerance limit upwards (i.e., increasingly moving their tolerance limit toward the initially agreed-upon exchange). By doing so, they are increasingly more likely to perceive small discrepancies as PC breaches; resulting in a further accumulation of PC breach perceptions over time. Hence, we hypothesize the following:

Hypothesis 9: Static differences in CWB-O acts are positively related to PC breach.

Hypothesis 10: An accumulation of CWB-O acts is related to an increase in the number of PC breaches over time.

In contrast, when employees engaged in acts of OCB-O, it can be argued that they did this because the organization has fulfilled the PC (Coyle-Shapiro, 2002; Turley et al., 2003). In these instances, we thus argue that there is no need for employees to look for cues which signal that the organization might breach the PC in the future because there are currently no cues pointing toward that possibility. Hence, these employees do not need to revise their existing beliefs about the organization and have no reason to expect that the organization will not uphold its part of the PC in the future. According to the dynamic model of PC (Schalk & Roe, 2007) these employees will not change their tolerance limit (i.e., the tolerance limit remains stable at the initially agreed-upon exchange) toward future discrepancies in the PC. As such these employees will have a wider zone of acceptance—reflecting what employees feels is acceptable variation within the agreed-upon PC—compared to their counterparts who have engaged in acts of CWB-O. Because of this wider zone of acceptance, these employees are more likely to perceive small discrepancies as being within their zone of acceptance and thus not as PC breaches. Based on the same model, it can be argued that when employees continue to increase their number of OCB-O acts, they will most likely perceive a further decrease in PC breach perceptions over time. That is, Schalk and Roe (2007) argued that the

zone of acceptance and the tolerance limit are susceptible to change. Specifically, they mention that positive behavioural deviations by one party in the PC are likely to be followed by positive behavioural deviations by the other party in the PC, which might result in a broader zone of acceptance and a downwards adjusted (i.e., increasingly moving their tolerance limit away from the initially agreed-upon exchange, allowing for more deviations) tolerance limit. This implies that these employees will be even more likely to perceive discrepancies in the PC as falling within their zone of acceptance and hence not as PC breaches.

Hypothesis 11: Static differences in OCB-O acts are negatively related PC breach.

Hypothesis 12: An accumulation of OCB-O acts is related to a decrease in the number of PC breaches over time.

Method

Procedure

This study was conducted among paid employees working for a Belgian fair trade non-profit organization. We prepared all communication and surveys in Dutch because all our respondents were native Dutch speakers. We translated all surveys to Dutch and had two colleagues back-translate them to English. We discussed and resolved all inconsistencies between the translation and back-translation. We recruited our respondents via email and asked them to complete a general survey prior to completing ten consecutive weekly surveys. We sent the weekly surveys each Friday at 11AM with a due date of Sunday at 11AM of the same week. We asked the respondents to complete the weekly survey only during weeks they were actively involved in their organization. In all other cases respondents were not required to complete the survey and the data was treated as missing. We also treated the data as missing when respondents failed to (timely) complete the survey. We opted for a weekly survey design because the measures are frequent enough to pick up variations in the focal

variables, but not so frequent that respondents are more likely to drop out over time.

Concerning the one-week time-lag, scholars (e.g., Bakker & Bal, 2010) have established that employees are able to accurately reflect upon and respond about work-related experiences over the course of one week.

Participants

We contacted 583 paid employees, of whom 406 individuals completed the general online survey (response rate = 69.64%). Of the 92 respondents who were willing to take part in the repeated weekly surveys, 80 respondents (13.72% of all individuals who were contacted; 86.95% of all individuals who agreed to take part in the weekly survey study) filled out the weekly surveys. This resulted in an effective sample size of 516 observations as the unit of analyses ($M = 6.53$, $SD = 2.84$). We compared those respondents who participated to the general survey with those respondents who dropped out between the general survey and the weekly surveys or throughout the weekly surveys. We found no significant differences on demographical characteristics or key variables under study. Respondents were on average, 46.70 years ($SD = 10.92$), 76.3% were female, 76.3% obtained a higher educational degree, and the average company tenure was 10.51 years ($SD = 8.69$).

Measures

General survey measures. We used the general online survey to collect demographic information on respondents' age (in years), gender (female or male), educational background (highest level of formal education), and company tenure (in years). In addition, we collected information on the level of promised PC inducements. *Level of promised inducements* was assessed to confirm that the selected transactional, relational, and ideological inducements types were relevant to this particular sample. Respondents rated the extent to which their employer promised to provide them with 5 transactional and 6 relational items (as used by Robinson, Kraatz, & Rousseau, 1994; Robinson & Morrison, 1995) and 9 ideological items

(as used by Bingham, 2005) on a 5-point scale (1 = minimally or not at all, 5 = to a very large extent; for a similar approach see Montes & Irving, 2008). The means for the transactional ($\alpha_{\text{transactional}} = .76$), relational ($\alpha_{\text{relational}} = .78$), and ideological ($\alpha_{\text{ideological}} = .96$) inducements ranged from 3.54 to 3.98, 3.28 to 4.70, and 4.40 to 4.82, respectively. This indicates that these inducements were all relevant for our sample.

Weekly survey measures. Consistent with similar studies using a diary methodology (e.g., Conway & Briner, 2002; Griep et al., 2016), we used short scales or single items to ensure a reasonable length and to avoid endangering the compliance of respondents. The use of single-items is not uncommon in repeated measurement designs. When these single items have face validity, correlate with traditional validated measures for the same concept, and correlate as theoretically expected with all other constructs under study, they should be considered acceptable measurement tools (Fisher & To, 2012). Next, we counterbalanced all scales to rule out potential order effects in the results (Fisher & To, 2012). Finally, we worded all items such that they included “*during the past week*”.

PC breach was measured by presenting the same list of PC inducements as in the general survey. We asked respondents to indicate (yes or no) whether their organization had breached its obligations toward them for each of these PC inducements (Conway & Briner, 2002; Griep et al., 2016). By doing so, we assessed PC breach in a global way, collapsing across PC types (Robinson & Rousseau, 1994), at a specific point in time (Conway & Briner, 2002). Respondents reported a total of 237 specific PC breaches over the course of the study. These 237 PC breaches were used to assess the accumulation of PC breach over the course of the study. This specific number of PC breach incidences could be expected based on the number of PC breach incidences reported by previous studies using the same techniques (Conway & Briner, 2002; Griep et al., 2016). Moreover, Griep and colleagues (2016) demonstrated that this single item correlated significantly and in the expected direction with

other global measures of PC breach and negative affectivity. Hence, it could be considered an acceptable measurement of PC breach (Fisher & To, 2012).

Feelings of violation were measured with a single item (i.e., *To what extent did the breach of this (these) obligation(s) have a negative emotional effect on you during the past week*). Responses ranged from (1) “minimally” to (5) “to a very great extent” (Solinger, Hofmans, Bal, & Jansen, 2016). When no PC breaches were reported, respondents indicated that the item was not applicable to their current situation and we coded their response as zero (Griep et al., 2016). In past studies, this single item correlated significantly and in the expected direction with other global measures of PC breach and negative affectivity (e.g., Griep et al., 2016). Therefore, it could also be considered an acceptable measurement of violation feelings (Fisher & To, 2012).

OCB-O and CWB-O were each measured with a 6-item scale of Dalal, Lam, Weiss, Welch, and Hulin (2009) because these authors revised existing CWB and OCB scales to fit the purpose of a repeated measurement design. Consistent with the recommendations by Dalal and colleagues (2009), we presented respondents with these items and asked them to indicate whether they had purposefully engaged in each of these specific behaviors during the past week. Responses ranged from zero (no items endorsed) to six (all CWB-O or OCB-O items endorsed). This measure can be considered a formative construct which renders the estimation of internal reliability coefficients obsolete (Coltman, Devinney, Midgley, & Venaik, 2008).

Analytical Strategy: Latent Growth Parameters in a Structural Equation Model (SEM)

To accurately assess our assumed direct (Hypotheses 1 through 8) and reverse (Hypotheses 9 through 12) relationships between PC breach, violation feelings, and acts of CWB-O and OCB-O, we first need to understand how these variables changes over time before we can relate characteristics of stability and change to each other in a single reciprocal SEM. To start, we estimate a univariate latent growth curve model (LGCM) to assess the

complexity of change in our variables. Once we have determined how these variables change over time, we then relate the growth parameters of one variable to the growth parameters of another variable in a SEM (Andruff, Carraro, Thompson, Gaudreau, & Louvet, 2009; Preacher, Wichman, MacCallum, & Briggs, 2008). By doing so, we can focus on reciprocal the static and dynamic relationships between our variables.

The univariate LGCM. To assess the level of complexity in our variables we start by specifying an LGCM with an intercept only, representing static differences between respondents. Next, we added a slope, followed by the inclusion of a quadratic term, representing the dynamic nature of the variables. This type of LGCM was used to determine whether there is statistically significant variance in the growth parameters of a variable so that variance in these growth factors can potentially be accounted for by the growth factors of other variables. To do so, the factor loadings for the intercept growth factor to each of the repeated measurement moment were fixed to 1.0 so that the intercept growth factor equally influenced all ten repeated measures, whereas the factor loadings for the slope growth factor to each of the repeated measurement moment were fixed to increasing values from zero (first measure) to nine (tenth measure) so that the slope growth adequately represents an increase over the course of all ten repeated measurement moments (Preacher et al., 2008).

Determining the best fitting univariate LGCM. To decide which model fitted the data best, we compared the competing models using the Bayesian Information Criteria (BIC). In addition, we relied on the Sample Size Adjusted Bayesian Information Criteria (ABIC). Lower levels of the BIC and ABIC suggest better fitting models. We also evaluate model fit of the best-fitting LGCM for each focal variable using the established cut-off values for the following fit indices: RMSEA, CFI, TLI, and SRMR (Dyer, Hanges, & Hall, 2005). After having identified best fitting univariate LGCM for each variable, we saved the growth parameters of these LCGM's using the SAVEDATA and SAVE=FSCORES command in

Mplus 7.4 (Muthén & Muthén, 2012). By doing so, we can relate the variables' growth parameters to each other in a reciprocal SEM.

SEM using growth parameters. Using a SEM framework, we related our variables' growth parameters to determine the influence of the growth parameters of the independent and mediator variable on the growth parameters of the dependent variable. In a single reciprocal SEM framework, we included the relationship between the initial status of PC breach and the initial status of CWB-O and OCB-O, and the direct relationship between the higher-order growth factor of PC breach and the higher-order growth factor of CWB-O and OCB-O. We also included the relationship from the initial status of PC breach to the initial status of violation feelings, and the direct relationship between the initial status of violation feelings and the initial status of CWB-O and OCB-O. In addition, we included the relationship from the higher-order growth factor of PC breach to the higher-order growth factor of violation feelings, and the relationship between the higher-order growth factor of violation feelings and the higher-order growth factor of CWB-O and OCB-O. Moreover, we included the indirect effect of the initial status of PC breach on the initial status of CWB-O and OCB-O via the initial status of violation feelings, as well as the indirect effect of the higher-order growth factor of PC breach on the higher-order growth factor of CWB-O and OCB-O via the higher-order growth factor of violation feelings. Finally, we included the relationship between the initial status of CWB-O and OCB-O and the initial status of PC breach, and the relationship between the higher-order growth factor of CWB-O and OCB-O and the higher-order growth factor of PC breach.

We estimated the indirect effects from the independent variable on the dependent variable via the mediator as the product of the relationship between the independent variable and the mediator, and the relationship between the mediator and the dependent variable. We scrutinized the significance of these indirect effects by means of the Monte Carlo Method

(Bauer, Preacher, & Gil, 2006) using the INTEGRATION = MONTECARLO (10,000) option in Mplus 7.4 (Muthén & Muthén, 2012). This means that we drew 10,000 bootstrapped samples to generate 95% confidence intervals (95% CI). When zero is not part of the 95% CI, the indirect effect is significant. To assess whether a full mediation LGCM or a partial mediation LGCM, fitted the data better, we estimated both mediation models and compared them using the -2Log Likelihood (-2LL) difference test (Hayes, 2006).

Results

Descriptive Statistics

Table 1 presents between- and within-person means, standard deviations, and correlations among the study variables. Given the conditional relationship between violation feelings and PC breach, we computed the correlations between violation feelings and CWB-O and OCB-O on a subset of the data only (i.e., those data points representing PC breach).

[INSERT TABLE 1 ABOUT HERE]

Complexity of the Univariate LGCM

To assess the level of complexity of the LGCM of each variable in our model, we specified separate univariate LGCM's for each focal variable with only an intercept (i.e., no change over time) as latent growth factors. Next, we included a linear term to the model (i.e., linear change over time), followed by a quadratic term (i.e., curvilinear change over time). When comparing the competing univariate LGCM's for each variable in our model, we found that the model with an intercept and slope provided the best fit to the data; suggesting that all our variables changed in a linear way over time (see Table 2).

INSERT TABLE 2 ABOUT HERE

The best-fitting univariate LGCM of PC breach (RMSEA=.06, CFI=.96, TLI=.95, SRMR=.05), violation feelings (RMSEA=.05, CFI=.98, TLI=.98, SRMR=.03), CWB-O (RMSEA=.02, CFI=.96, TLI=.93, SRMR=.03), and OCB-O (RMSEA=.08, CFI=.91,

TLI=.93, SRMR=.10) showed good to reasonable fit to the data (Dyer et al., 2005). In contrast, the other univariate LGCM's (intercept only; intercept, linear, quadratic terms) fitted the data worse. Therefore, we saved the value of the individual growth parameters to be used in the SEM framework to estimate direct and indirect effects.

Growth Parameters in Reciprocal SEM: Direct Relationships

Our above specified reciprocal SEM had a good fit to the data (RMSEA=.05, CFI=.95, TLI=.97, SRMR=.01). Our results indicated that the initial status of PC breach was positively related to the initial status of CWB-O (see Figure 1; right side), and negatively related to the initial status of OCB-O (see Figure 1; left side). In addition, the slope of PC breach was positively related to the slope of CWB-O (see Figure 1; right side), and unrelated to the slope of OCB-O (see Figure 1; left side). Because all relationships were estimated in a single SEM wherein the intercepts and slopes of CWB-O and OCB-O were allowed to correlate and the within-person correlation between CWB-O and OCB-O was non-significant, there is a low likelihood that the absence of significant relationship between the slope of PC breach and the slope of OCB-O is due to a suppressor effect. These findings support Hypotheses 1, 2, 5, whereas Hypothesis 6 is not supported by these findings.

[INSERT FIGURE 1 ABOUT HERE]

Moreover, our results indicated that the intercept of PC breach was positively related to the intercept of violation feelings, which in turn was positively related to the intercept of CWB-O (see Figure 2; right side), and negatively related to the intercept of OCB-O (see Figure 2; left side). In addition, the slope of PC breach was positively related to the slope in violation feelings, which in turn was positively related to the slope in CWB-O (see Figure 2; right side), and unrelated to the slope in OCB-O (see Figure 2; left side).

[INSERT FIGURE 2 ABOUT HERE]

Growth Parameters in Reciprocal SEM: Indirect Relationships

To interpret the indirect relationships, we estimated a full mediation SEM and a partial mediation SEM and compared them using the 2Log Likelihood (-2LL) difference test (Hayes, 2006) to assess which of these models had a better fit to the data. Both models did not differ significantly from each other ($\Delta-2LL(6) = 4.05, p = .66$). However, the full mediation model had a lower BIC (802.82) and ABIC (921.38) value than the partial mediation model (BIC = 820.54; ABIC = 922.58) and thus a better fit to the data. Our results indicated a positive indirect effect from the intercept of PC breach to the intercept of CWB-O ($\beta = .07$, 95% CI [.03 ; .12]) and a negative indirect effect to the intercept of OCB-O ($\beta = -.13$, 95% CI [-.25 ; -.02]), via the intercept of violation feelings. These findings support Hypotheses 3 and 4. In addition, we found a positive indirect effect from the slope of PC breach to the slope of CWB-O ($\beta = .05$, 95% CI [.07 ; .30]) via the slope of violation feelings. However, we did not find a significant indirect effect from the slope of PC breach to the slope of OCB-O ($\beta = -.01$, 95% CI [-.04 ; .02]) via the slope of violation feelings. These findings support Hypothesis 7, whereas they do not support Hypothesis 8.

Growth Parameters in Reciprocal SEM: Reverse Relationships

As previously mentioned, we estimated a reciprocal SEM model that had a good fit to the data (see above). Our results indicated that the initial status of initial status of CWB-O was positively related to the initial status of PC breach (see Figure 3; right side), whereas the initial OCB-O was negatively related to the initial status of PC breach (see Figure 3; left side). In addition, the slope of CWB-O was positively related to the slope of PC breach (see Figure 3; right side), whereas the slope of OCB-O was negatively related to the slope of PC breach (see Figure 3; left side). These findings support Hypotheses 9, 10, 11, and 12.

[INSERT FIGURE 3 ABOUT HERE]

Sensitivity Analysis.

Given that respondents reported PC breach on transactional, relational and/or ideological inducement(s), we calculated a composite score for each PC breach dimension (i.e., transactional, relational, ideological, or any combination of the aforementioned) and used this composite score to test for potential differential effects on the outcomes under study; testing for multi-group equivalence (Byrne & van de Vijver, 2010). Comparing a model in which we constraint the regression parameters to be equal for all PC breach dimensions with a model in which no such constraints were forced upon the regression parameters, indicates that proposed relationships for the direct model ($\chi^2(21, N = 80) = 24.25, p = .28$) and the mediation model ($\chi^2(11, N = 80) = 13.88, p = .24$) did not differ significantly between the PC breach dimensions. As a consequence, our results do not differ significantly when transactional, relational, or ideological inducements are breached.

Discussion

This study contributes to the PC literature by recognizing that the PC unfolds via a dynamic process that includes ongoing cycles of PCB, violation feelings, negative attitudes and/or behaviours, and repair (Hansen & Griep, 2016; Rousseau et al., under review; Tomprou et al., 2015; Schalk & Roe, 2007). Specifically, we introduced a temporal perspective to the PC literature and proposed that current acts of CWB or OCB may not only happen in reaction to past perceptions of PC breach but may also serve as antecedents to future perceptions of PC breach. By doing so, we are able to provide a better depiction of reality in which emotions, attitudes, and behaviours are interrelated and potentially intensify each other over time (e.g., Beal et al., 2005; Mitchell & James, 2001).

Much of the existing theory and empirical work on the relationship between perceptions of PC breach and employee attitudes and behaviours is premised upon Social Exchange Theory (Blau, 1964) and the norm of reciprocity (Gouldner, 1960). In line with these theories, we indeed found a positive relationship between the initial status of PC breach

and acts of CWB-O and a negative relationship between the initial status of PC breach and acts of OCB-O. Furthermore, we found that these relationships were mediated by the initial status of violation feelings (Morrison & Robinson, 1997; Zhao et al., 2007). However, as previously argued, these studies fail to account for the temporal context (i.e., retrospections of the past and anticipations of the future) that is inherently present in Social Exchange Theory (Blau, 1964) and the norm of reciprocity (Gouldner, 1960). Our results indicate that when employees perceive an accumulation of PC breach over time, they experience intensifying violation feelings, which in turn result in enactment of an increasing number of CWB-O acts over time. This finding aligns with the negative norm of reciprocity (Gouldner, 1960) and the arguments that acts of CWB-O grow gradually over time in response to an accumulation of PC breach perceptions and an intensifying nature of violation feelings (e.g., Rousseau et al., under review; Schalk & Roe, 2007). Moreover, this process resembles the work by Andersson and Pearson (1999) on the spiralling effect of incivility in the workplace. Based on their conceptual model it could be argued that CWB and violence are rarely spontaneous acts but reflect the accumulation of escalating negative interactions between two social parties (i.e., an accumulation of PC breach resulting in an increasing number of CWB-O acts).

While we found evidence for this dynamic relationship between accumulating PC breach perceptions, intensifying violation feelings, and an increasing number of CWB-O acts, we found no evidence for a further decrease in the number of OCB-O acts over time. We believe that this could be explained by the different intended nature of CWB-O versus OCB-O; acts of CWB-O are intended to be covert and not to be noticed by the employer, whereas acts of OCB-O are intended to be overt and noticed by the employer. Specifically, it could be argued that it might be easier to start engaging in a negative behaviour (i.e., increasing the number of CWB-O acts), than it is to stop engaging in a positive behaviour (i.e., decreasing the number of OCB-O acts) in response to an accumulation of PC breach perceptions and

intensifying violation feelings. That is, employees can more easily increase the number of CWB-O acts because meta-analytical evidence (Berry, Carpenter, & Barratt, 2012) has demonstrated that acts of CWB are more covert and not always observed by others. Specially, Berry and colleagues (2012) demonstrated that self-reports of CWBs have higher means than other-reports of CWBs, which suggests that a lot of CWBs remain unobserved by others. Second, based on the impression-management literature (e.g., Jones & Pittman, 1982; Tedeschi & Melburg, 1984), it can be argued that employees might consciously choose to keep engaging in OCB-O despite having perceived an accumulation of PC breaches in the hope that their employer notices these acts of OCB-O and provides them with the desired outcomes after all (e.g., Bolino, 1999; Rioux & Penner, 2001). Although this seems paradoxically, Vantilborgh and colleagues (2014) found that some employees actually increase their work effort in the aftermath of a PC breach to signal their value in the hope to attain desired outcomes from their employer. This idea is further supported by meta-analytical evidence from Podsakoff, Whiting, Podsakoff, and Blume (2009), which demonstrates that employers rely on the observed enactment of OCB as an indicator of employee commitment to the success of the organization when assessing their performance. As a result, employees who exhibit higher levels of OCB were found to receive higher performance evaluations, higher reward recommendations, and more actual rewards than those employees who exhibit lower levels of OCBs (Podsakoff et al., 2009).

Finally, our results demonstrate the need to abandon a static “antecedent-consequence” way of thinking and make room for a more dynamic way of thinking in which acts of CWB-O and OCB-O are not only the consequence of PC breach but also serve as the antecedent of future PC breach perceptions. Our results suggest that the enactment of CWB-O relates positively to future perceptions of PC breach; both at a static point in time and as an accumulation over time. These results seem to suggest that employees who engaged in CWB-

O in response to perceptions of PC breach and violation feelings, also have a lower tolerance toward future discrepancies in the PC; a proposition made by Schalk and Roe (2007) which also resembles the spiralling effect of incivility uttered by Andersson and Pearson (1999). In contrast, we found that employees who engaged in acts of OCB-O were less likely to perceive future PC breaches; both at a static point in time and as an accumulation over time. These results seem to suggest that employees who engaged in OCB-O have a wider zone of acceptance and a higher tolerance toward future discrepancies in the PC. This zone of acceptance and tolerance continue to widen or increase when employees engage in an increasing number of OCB-O acts over time (Schalk & Roe, 2007). As such, this relationship seems to resemble a spiralling effect of *civility*, instead of incivility, over time.

Limitations

Like all studies, our paper has limitations that deserve further attention. First, we collected our data using repeated weekly measurement surveys in which all variables were collected at the same point in time. This might raise concerns with social desirability and common method variance (Podsakoff, MacKenzie, & Podsakoff, 2012). However, by presenting all items and scales in a random order (both within and between blocks) and by studying the dynamic nature of the relationships over time, we tried to minimize the risks associated with common method bias. A second limitation concerns the self-reported nature of the data. Asking employees to report on their acts of CWB-O or the withdrawal of their OCB-O acts might be particularly susceptible to social desirability (i.e., underreporting of actual CWB-O or over-reporting of actual OCB-O). However, the range in responses related to CWB-O and OCB-O indicated that respondents were willing to admit that they engaged in CWB-O or reduced their OCB-O. In addition, if respondents truly had under-reported their acts of CWB-O or over-reported their acts of OCB-O, we would have had a lower likelihood of finding the predicted relationships. In line with the recommendations of Berry and

colleagues (2012) we used self-reports because they provide a more reliable and valid assessment than observer-reports, and took steps to assure anonymity. A final limitation concerns the measure of CWB-O and OCB-O. Although Dalal and colleagues (2009) developed these scales for the purpose of a repeated measurement design, such as the one we applied in our study, the measures of CWB-O and OCB-O counted the number of CWB-O and OCB-O acts but did not allow for meaningful variation in the intensity of these acts. However, the intensity of CWB-O or OCB-O might change as a function of the number of PC breach perceptions and/or the intensity of violation feelings.

Suggestions for Future Research

Social Exchange Theory (Blau, 1964) and the norm of reciprocity (Gouldner, 1960) deal with reciprocation in exchange relationships and therefore implicitly assume that both parties of the exchange relationship can mutually influence each other. However, the PC literature by and large overlooks the role of exchange and mutual influence (Conway & Briner, 2009). Nearly all studies, including this study, focus only on the employer in the exchange agreement and the extent to which the employer breaches or fulfils the PC, while neglecting the central tenet of Social Exchange Theory (Blau, 1964) and the norm of reciprocity (Gouldner, 1960), namely that one party's inducements and obligations are reciprocated by the other party. As a consequence, little is known as to which specific contributions, attitudes and behaviours employees are willing to exchange in return for which specific employer obligations. Hence, we do not know whether a perceived PC breach always triggers the exact same behavioural reaction by the employee, and whether these behavioural reactions always have the same intensity. However, studying these precise exchanges would greatly increase the accuracy of predicting employee reactions to PC breach (Conway & Briner, 2009). For example, knowing that one employee is willing to reciprocate a specific employer inducement (e.g., job security) with a particular contribution (e.g., displaying

loyalty and volunteering for additional tasks; when present these reflect OCBs), whereas another employee is willing to reciprocate that same specific employer inducement with another particular contribution (e.g., complying to authority and respect; when absent these reflect CWBs) implies that one can predict that the first employee will withhold acts of OCB whereas the latter employee will engage in acts of CWB if the employer fails to provide job security. Recent attempts to explain how interactions between individuals are in constant flux and how social network and computational models might be used to model and understand the process of employee-employer exchanges (Vantilborgh, Griep, Achnak, & Hansen, 2016), demonstrate the need to capture the exchange between social partners (i.e., employer and employees) to offer a more realistic model of social exchange. Therefore, we argue that future research should try to capture employees' PC and their behavioural reactions following a PC breach as a network, in which we can model employer's inducements (e.g., job security) and employees' contributions and expected reactions when a PC breach is perceived. By doing so, we believe that future researchers will be able to more accurately capture reciprocity in the PC and provide practitioners with practical insights into employees' specific reactions to delivered and withheld employer inducements.

Practical Implications

By unravelling the role of static and accumulating CWB-O and OCB-O acts both as a consequence and antecedent of static and accumulating PC breach perceptions, we are able to extend the traditionally proposed remedies by focusing on the role of timeliness responses to de-escalate the conflict. *Timeliness* seems a crucial factor in preventing an increase in the number of CWB-O acts. Timeliness refers to the discordance between an employee's perceived speed of discrepancy reduction (i.e., the perceived speed at which an organization delivers intervention or remedy) and the desired speeds of discrepancy reduction (i.e., the speed at which an employee desires intervention or remedy). Building on the work by

Tomprou and colleagues (2015), we argue that the concept of resolution velocity or the relative speed of resolution as perceived by the employee, provides some helpful insights on these matters. Tomprou and colleagues (2015) argued that an employee compares the perceived velocity of discrepancy reduction with the personal standard or preferred velocity of discrepancy reduction (Johnson, Howe, & Chang, 2013). The larger the negative discordance between an employee's preferred and perceived speed of discrepancy reduction, the more likely it becomes for perceptions of PC breach and violation feelings to persist or even intensify over time. As a consequence, a slow resolution velocity might result in (continued) downward spirals of negative employee reactions over time, which potentially hinders attempts to successfully resolve violation feelings as it further weakens the employer-employee relationship (Bordia et al., 2008). In contrast, a positive discordance between an employee's preferred speed of discrepancy reduction and the perceived speed of discrepancy reduction, increases the likelihood that an employee believes that the employer is aware of its wrongdoing, sufficiently concerned about the employee, and willing to make amends (Tomlinson, Dineen, & Lewicki, 2004). In this case, de-escalation can be achieved when organizational agents offer an act of reconciliation (e.g., remedy, apology, or communicating and discussing the PC breach) faster or equally fast to an employee's desired speed of discrepancy reduction. These actions hold the potential to de-escalate the conflict because they reduce the tension between both parties, and shift attention to a problem-solving and negotiation mode instead of a retaliation mode (Patchen, 1988). Therefore, it seems advisable for organizational agents to intervene as soon as they notice that an organizational obligation is breached. However, for this to happen, organizational agents should be aware of the extent to which employees perceive these organizational obligations as breached. To gather this information, we advice that employees and organizational agents clearly communicate about what can and cannot be offered in return for employee contributions.

Finally, our findings have important consequences for managing employees' careers. Our results show that an accumulation of PC breaches can deteriorate the exchange relationship, thus threatening the career of the employee. At first, employees may overlook PC breaches or they may show mild reactions, such as acquiescent silence (Wang & Hsieh, 2014). However, as PC breaches accumulate, reactions intensify and employees engage in increasing acts of CWB. This may explain why some managers are surprised when employees suddenly lash out by engaging in CWB, even though no major PC breach event seemed to predate this reaction. Hence, it is crucial that employees' perceptions of the exchange relationship history are taken into account when counselling employees.

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Table 1

Between-Person and Within-Person Means, Standard Deviations, and Correlations Among the Focal Variables

	<i>M</i>	<i>SD</i>	1.	2.	3.	4.
	2.06/5.9	2.84/5.9				
1. PC breach	3	4	-	.62***	.17	-.55***
2. Violation feelings PC breach	1.00/2.7					
	5	.81/1.06	.70**	-	.44**	-.65***
3. CWB-O	.80/.31	.63/.72	.45*	.82***	-	-.17
	3.04/3.7	1.03/1.6				
4. OCB-O	8	8	-.44*	-.57*	-.41*	-

Notes. Between-person correlations are presented below the diagonal ($N = 80$). Within-person correlations are presented above the diagonal ($N = 516$). The first presented means and standard deviations are at between-person level, while the later are at within-person level.

*: $p < .05$. **: $p < .01$. ***: $p < .001$.

Table 2

Comparing Competing Univariate LGCM's: BIC and ABIC Values

LGCM	BIC	ABIC
PC breach – intercept	1952.29	1917.63
PC breach – intercept and slope	1867.50	1823.38
PC breach – intercept, slope, and quadratic	1871.76	1825.49
Violation feelings – intercept	1051.59	1016.93
Violation feelings – intercept and slope	970.23	926.11
Violation feelings – intercept, slope, and quadratic	976.66	927.23
CWB-O – intercept	964.21	924.39
CWB-O – intercept and slope	954.22	903.79
CWB-O – intercept, slope, and quadratic	963.20	915.93
OCB-O – intercept	1687.70	1640.43
OCB-O – intercept and slope	1678.06	1639.24
OCB-O – intercept, slope, and quadratic	1689.66	1640.24

Notes. Lower levels of the BIC and ABIC suggest better fitting models.

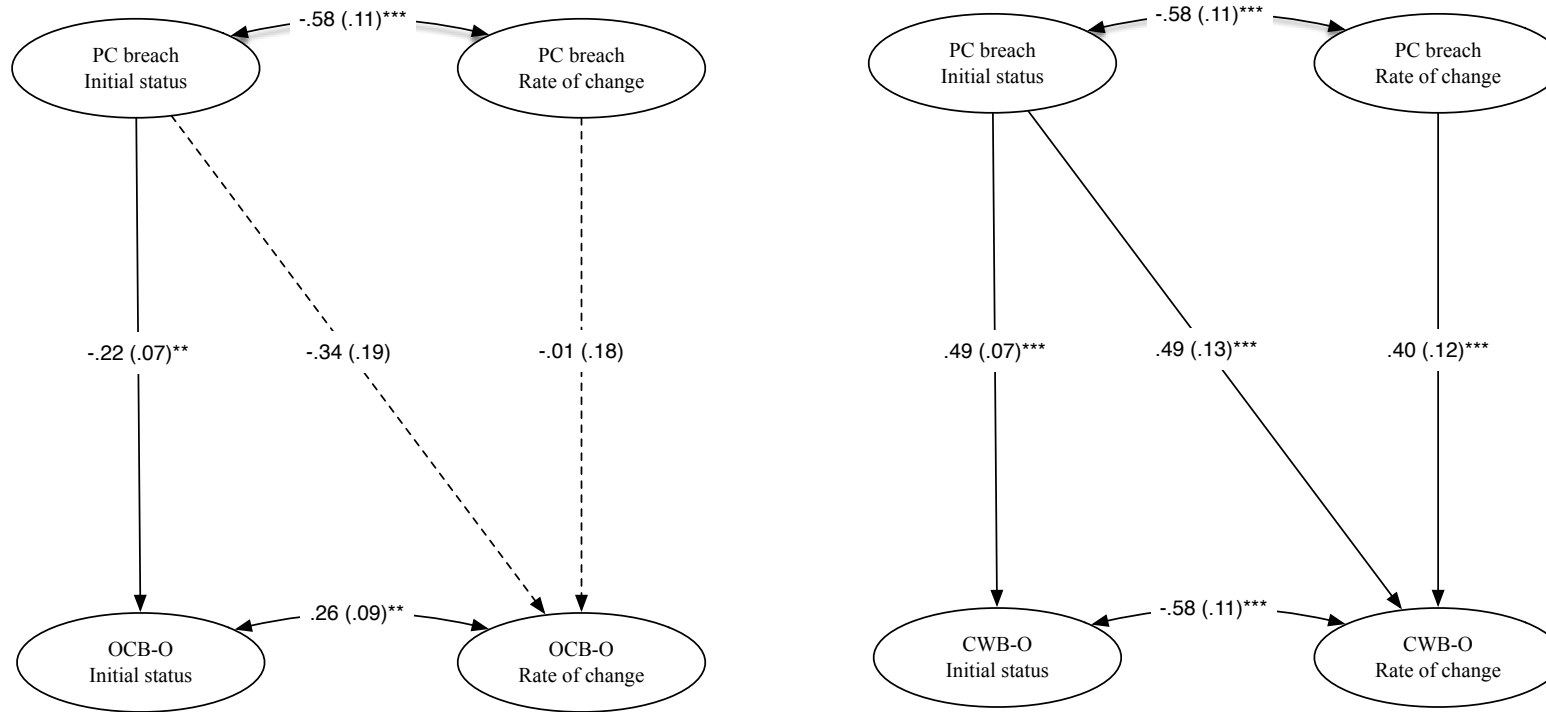


Figure 1: Relationships from PC breach to OCB-O and CWB-O: Initial status and linear change.

Notes: Although all relationships are estimated in a single conditional reciprocal LGCM, standardized parameter estimates are reported for each outcome separately for reasons of interpretability. Standard errors are reported between parentheses. Solid lines indicate significant relationships, whereas dotted lines indicate non-significant relationships. Double-headed lines indicate correlations between the initial status and the linear change of the same variable. * $p < .05$; ** $p < .01$; *** $p < .001$

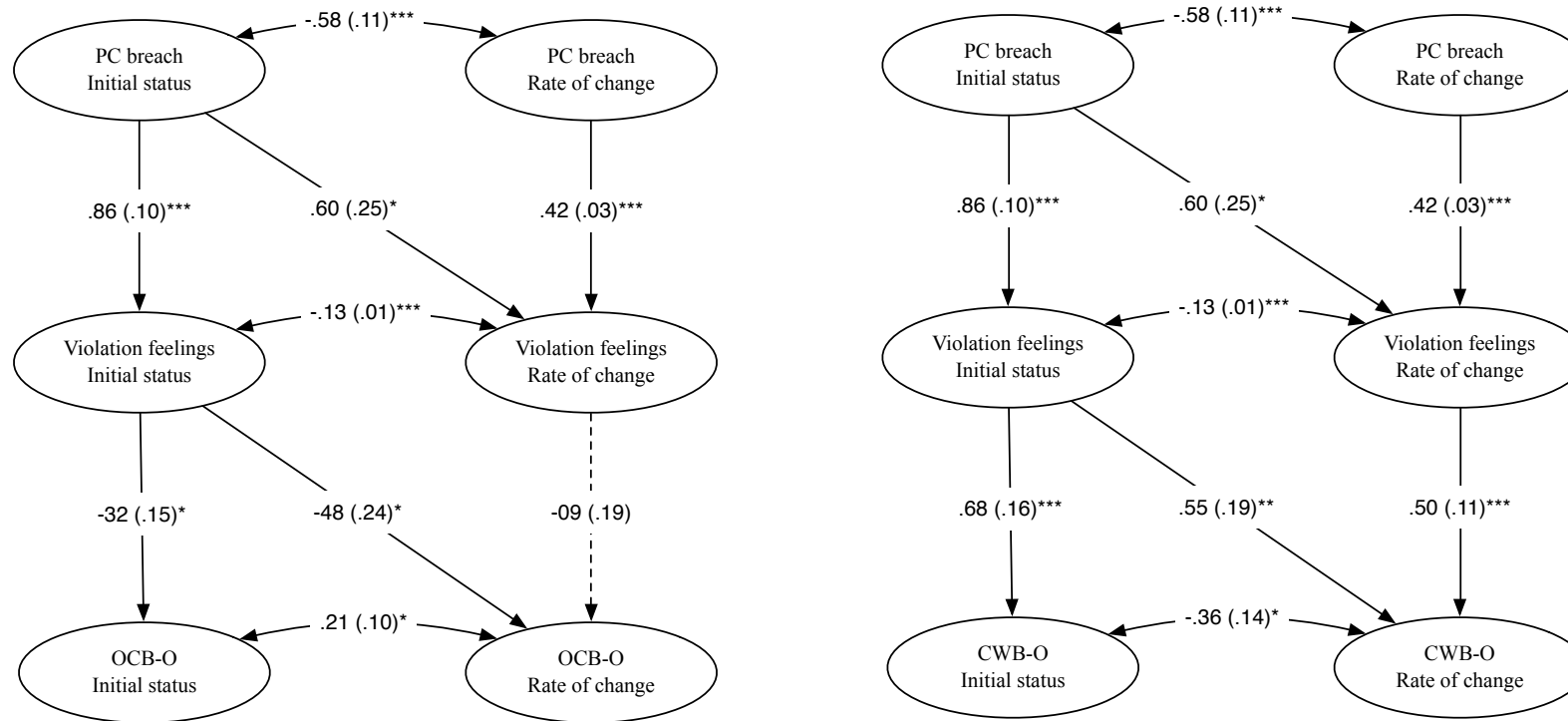


Figure 2: Relationships from PC breach to violation feelings and from violation feelings to OCB-O and CWB-O: Initial status and linear change.

Notes: Although all relationships are estimated in a single reciprocal conditional LGCM, standardized parameter estimates are reported for each outcome separately for reasons of interpretability. Standard errors are reported between parentheses. Solid lines indicate significant relationships, whereas dotted lines indicate non-significant relationships. Double-headed lines indicate correlations between the initial status and the linear change of the same variable. * $p < .05$; ** $p < .01$; *** $p < .001$

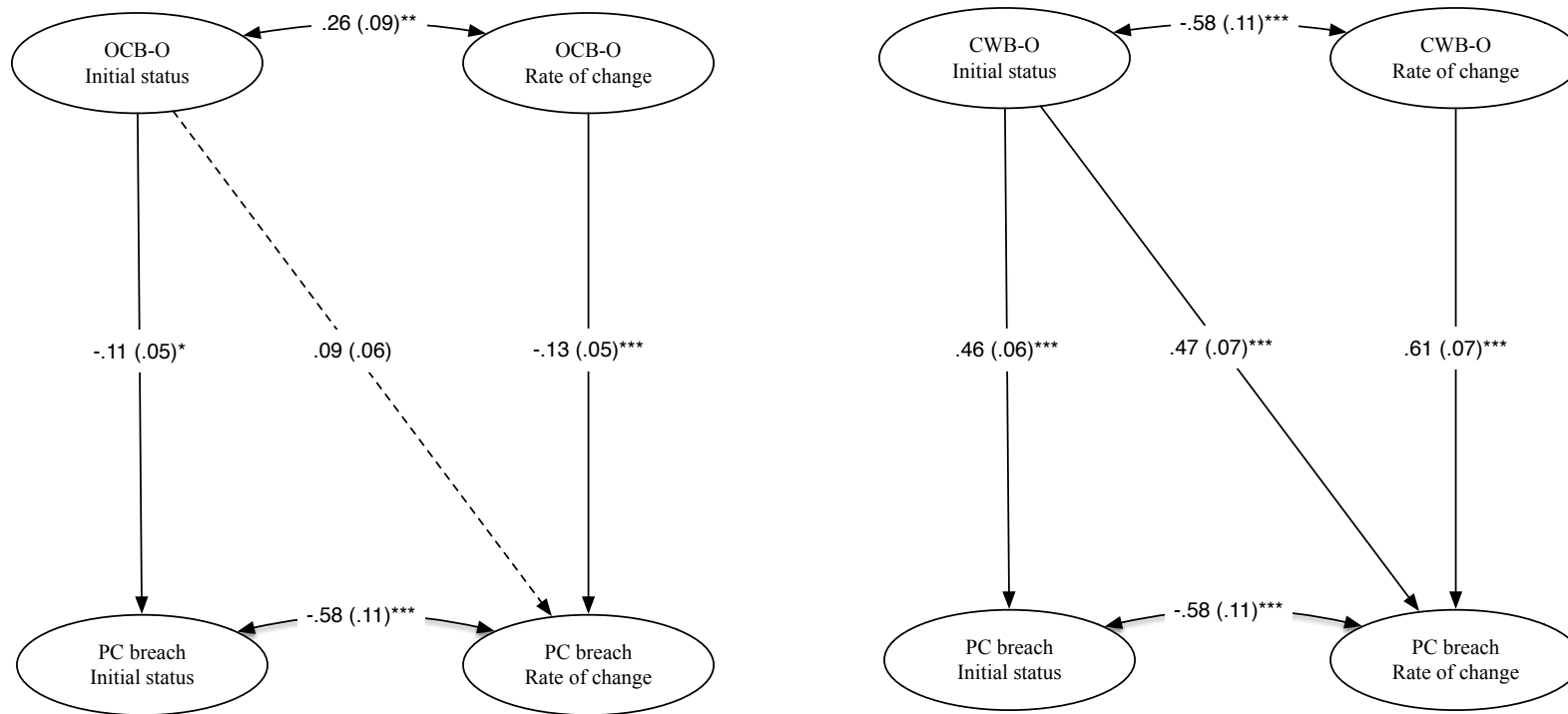


Figure 3: Relationships from OCB-O and CWB-O to PC breach: Initial status and linear change.

Notes: Although all relationships are estimated in a single reciprocal conditional LGCM, standardized parameter estimates are reported for each outcome separately for reasons of interpretability. Standard errors are reported between parentheses. Solid lines indicate significant relationships, whereas dotted lines indicate non-significant relationships. Double-headed lines indicate correlations between the initial status and the linear change of the same variable. * $p < .05$; ** $p < .01$; *** $p < .001$