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Self-control at work: its relationship with contextual performance

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Abstract

Purpose – Individuals differ in their levels of self-control. Trait self-control has been found to relate positively to desirable and negatively to undesirable behaviors in contexts like physical health, academic performance, and criminality. The purpose of this study is to examine the relevance of trait self-control in work-settings. The authors distinguished between two types of self-control, stop-control (inhibitory control) and start-control (initiatory control), and tested their differential validity in predicting contextual performance.

Design/methodology/approach – In two independent employee samples, stop-control, start-control, organizational citizenship behavior (OCB), personal initiative, and proactive coping were measured. Counterproductive work behavior (CWB) was added in Study 2.

Findings – Results showed that only start-control was positively related to OCB, personal initiative, and proactive coping. Both stop-control and start-control were negatively related to CWB.

Research limitations/implications – Findings support the validity of distinguishing between stop-control and start-control, suggesting that self-control theory and models should be refined to incorporate this distinction. Limitations include the correlational design and self-report measures. Although results were similar across two independent studies, future research is needed to test the generalizability of the conclusions in other settings, using non-self-report data.

Practical implications – The distinction between stop-control and start-control may help organizations in selecting staff and assigning tasks.

Originality/value – The present research introduces the distinction between two conceptually different types of self-control (stop-control and start-control), demonstrating their relevance to work-related behavior.

Keywords Personality, Organizational behavior, Resources

Paper type Research paper

When in control of one's behavior, individuals do not always act on impulse but can make a conscious effort to select actions that lead to desired outcomes (Baumeister and Vohs, 2004). Self-control helps achieving long-term or higher order goals by forgoing short-term pleasures. For instance, individuals with high self-control more likely choose a boring task



with long-term valued outcomes over a fun task without beneficial outcomes. Although self-control varies within individuals over time, research demonstrated relatively stable differences in self-control between individuals (e.g. Tangney *et al.*, 2004), referred to as trait self-control. Tangney *et al.* (2004) defined trait self-control as “the ability to override or change one’s inner responses, as well as to interrupt undesired behavior tendencies (such as impulses) and refrain from acting on them” (p. 274). It includes controlling or regulating thoughts, moods, and emotions, restraining undesirable impulses, resisting temptations, breaking bad habits, keeping good self-discipline, maintaining motivation, and persisting when problems/difficulties arise. Central to exercising self-control is the decision to act (or refrain from action) in order to serve long-term outcomes, which is important in many different domains. Self-control has been extensively studied in fields such as physical health (De Ridder and De Wit, 2006), academic performance (Duckworth and Seligman, 2005), and criminality (Hirschi, 2004), generally showing positive relations with desirable and negative relations with undesirable behaviors (De Ridder *et al.*, 2012).

In the organizational field, self-control has mainly been investigated indirectly, as part of higher order traits, such as conscientiousness. Conscientiousness refers to being purposeful, determined, disciplined, dutiful, reliable, orderly, punctual, and responsible (Costa and McCrae, 1992), and relates positively to job performance (Barrick *et al.*, 2001) and negatively to counterproductive work behavior (CWB) (Salgado, 2002). Although there is some debate about the lower order structure of personality, self-control is often conceptualized as a lower order trait or facet of conscientiousness (e.g. Roberts *et al.*, 2005). Tangney *et al.* (2004) state that the ability to control oneself is an important component of behaving in a conscientious manner. However, although conceptually and empirically related to conscientiousness, self-control is of and by itself an important construct, because it specifically targets behavior and is essential in acquiring valued outcomes in the face of psychological obstacles, such as resentment or temptation. While conscientiousness is an influential personality factor in many different domains, with or without conflicting goals, self-control is specifically required when disruptive impulses thwart valued long-term goals.

In the last decades, researchers have argued for a focus on personality facets rather than broad personality factors (e.g. Ashton, 1998; Dudley *et al.*, 2006; Paunonen, 1998; Roberts *et al.*, 2005), because narrow facets are better predictors of behavior and offer greater conceptual clarity. Building on this research, the present study focuses on examining the usefulness and relevance of the lower order personality trait of self-control in the context of work. We discuss why self-control is important for organizations, present a recent distinction between two types of self-control (i.e. stop-control and start-control; De Boer *et al.*, 2011; De Ridder *et al.*, 2011), and apply it to contextual work performance. With a pilot and two studies among employees, we aim to show that self-control and the distinction between stop-control and start-control is useful in organizational settings. Theoretically, discerning different factors within self-control can lead to a better understanding of the processes involved in work behavior, and may expand job design theories. Practically, knowledge on trait self-control could be used for personnel selection, placement, or task assignment.

Self-control at work

The more general concept of control has been important in the work and organizational psychology literature. Job design models such as the Job Characteristics Model (Hackman and Oldham, 1976), the Job Demand-Control Model (Karasek and Theorell, 1990), and the Job Demands-Resources Model (JD-R; Bakker and Demerouti, 2007),

include concepts referring to some form of control. Control in these theories is seen from a job design perspective and is usually defined as the amount of autonomy a person is given, how much decision latitude the job offers, or to what extent a person is allowed to set own targets and goals. These theories therefore describe the opportunities for control or the demands for control resulting from the employee's environment. The theories do not address control from within the employee, that is, people's capacity for self-control in terms of personality or skill. An exception is the work of Schmidt *et al.* (2007), which showed that the positive effects of control demands from the environment on emotional exhaustion and depersonalization were weaker when cognitive control (i.e. control from within the employee) was high. This implies that having high abilities for control, in employees, may eventually mitigate the effects of control demands imposed by the environment. This can be explained using JD-R, which states that the possible harmful effect of a job demand can be significantly reduced with the support of a relevant job resource (Bakker and Demerouti, 2007) or personal resource (Xanthopoulou *et al.*, 2009). Given the importance of opportunities for control in jobs, it is likely that employees' capacity for self-control (i.e. trait self-control), is an important personal resource affecting work-related processes.

One area in which employees potentially benefit from self-control is their contextual performance. Contextual performance refers to employee behaviors that are not directly beneficial for specific tasks or duties but that are indirectly beneficial to productivity and output (Motowidlo and Van Scotter, 1994). Contextual performance supports the broader organizational, social and psychological environment, rather than the organization's technical core (i.e. activities related to the goods/services that the organization produces). However, it is an important factor in organizational success. Because contextual performance is largely discretionary it may often rely on self-control. The current research is therefore aimed at possible merits of self-control for contextual performance.

Stop-control and start-control

Trait self-control represents the ability to control behavior in order to attain long-term goals. Recent work distinguished two types of trait self-control: inhibitory or stop-control and initiatory or start-control (De Boer *et al.*, 2011; De Ridder *et al.*, 2011). Stop-control is self-control aimed at short-term attractive but long-term undesirable behavior, and refers to the ability not to perform this behavior. For example, when receiving a private e-mail at work, it will require stop-control to keep from reading and answering the message immediately, and to wait until after work. Importantly, stop-control does not refer to just stopping or not performing any kind of behavior; it only and specifically refers to stopping or not performing behaviors that are attractive and immediately gratifying but have long-term negative consequences. Start-control is self-control aimed at short-term unattractive but long-term desirable behavior, and refers to the ability to perform this behavior. For example, when a colleague asks you to do a really boring, but valued task, it will require start-control to get started. Both types of self-control are related to the overall capacity to control behavior and as such are interrelated. However, they are distinct in an important way; one type is required to inhibit undesirable behavior and the other is required to initiate desirable behavior. As such, the outcome of successful stop-control is the absence of undesirable behavior, whereas the outcome of successful start-control is the presence of desirable behavior.

De Boer *et al.* (2011) and De Ridder *et al.* (2011) tested the distinction between the two types of self-control among university students. Both studies found that stop-control,

but not start-control, related negatively to drinking alcohol (i.e. for many students a short-term attractive but long-term non-beneficial behavior). Start-control, but not stop-control, related positively to studying (i.e. for many students at times a short-term unattractive but long-term beneficial behavior). Whereas De Ridder *et al.* used the items of Tangney *et al.*'s (2004) abbreviated Self-Control Scale (SCS), De Boer *et al.* (2011) developed and validated a new measure composed of two scales that more accurately reflect the theoretical constructs of stop-control and start-control. This measure demonstrated adequate reliabilities for both scales and substantial correlations with the SCS. The validity and usefulness of the distinction between two types of self-control, however, was only examined among university students, using a limited set of outcomes.

Stop-control and start-control are proposed to differentially relate to different behaviors at the workplace. We specifically propose that to inhibit or stop highly probable behavior that interferes with a work-related goal (e.g. internet-surfing, gossiping, making private phone calls), employees require stop-control, and to initiate or perform valued but unattractive behaviors (e.g. attending discretionary functions, giving negative feedback, replying promptly to e-mails), employees require start-control. This does not mean that without conscious control, all employees would surf on the internet or gossip, but that those who have the urge to are better able to stop these behaviors if they have high stop-control. It is important to note that different behaviors may or may not require self-control for different people, because the attractiveness of the behavior and of possible distractions may vary across individuals. For instance, some employees have no difficulty limiting their smoking breaks during work because they do not smoke.

Although theoretically relevant for work-settings, the distinction between stop-control and start-control has not been empirically tested in such contexts. The current studies focus on self-control as a trait-like quality and investigate the relation of stop-control and start-control with three indicators of contextual performance: organizational citizenship behavior (OCB; Smith *et al.*, 1983); personal initiative (Frese *et al.*, 1997); and proactive coping (Greenglass, 2001). The main purpose of the current research is to demonstrate the usefulness of studying stop-control and start-control in the workplace by testing the proposition that stop-control and start-control differentially relates to contextual performance.

Study hypotheses

OCB

OCB refers to individual contributions at the workplace that go beyond role requirements and contractually rewarded job achievements, and that are beneficial to the organization (Organ and Ryan, 1995), such as altruism and general compliance (Smith *et al.*, 1983). Altruism includes those behaviors that are aimed at helping a co-worker, whereas general compliance is not aimed at anyone in specific but is more indirectly helpful and can be described as "being a good employee" (e.g. attending non-required meetings).

In relation to OCB, we propose that especially start-control is important. In order to altruistically help others with their workload, orient new employees or volunteer for extra activities, one has to engage in activities that may not be immediately gratifying, but are beneficial in the long run. Because OCB is not part of the job requirements, many employees will see it as an extra burden without direct benefits for themselves. Although some OCBs (e.g. helping others) may be gratifying by itself, in practice, however, when one is in the middle of performing a required task, the extra effort

needed for OCB likely creates resistance to performing OCB. Overcoming resistance to do something requires start-control. Furthermore, many general compliance behaviors such as attending non-required meetings will only be rewarding to the employee indirectly, or after a long time. Although there are exceptions, many people do not consider attending work-meetings to be fun. When a reward for behavior is far away but to obtain it one has to perform undesirable behavior, start-control is required. We therefore hypothesize that:

H1. Start-control is positively and more strongly related to OCB than stop-control.

Personal initiative

Personal initiative is behavior that is consistent with the organizational mission, has a long-term focus, is goal-directed and action oriented, is persistent in the face of barriers and setbacks, and is self-starting and proactive (Frese *et al.*, 1996). Together these aspects make up a behavior syndrome, which causes people to take an active and self-starting approach to work (Frese *et al.*, 1997). Research showed that personal initiative positively predicts overall performance ratings (Bledow and Frese, 2009), work-unit innovativeness, and work engagement over time (Hakanen *et al.*, 2008).

In general, personal initiative can be seen as effortful behavior without direct contextual cause and without obvious short-term benefits. Since there is no immediate requirement for the behavior, it will not occur spontaneously, and because the outcomes are only visible in the long run, initiating the behavior requires overcoming short-term obstacles. Obvious obstacles are the required time and energy which could also be spend on tasks that have more immediate results. Choosing to do something difficult without direct benefits requires self-control, and especially start-control. Personal initiative is important for long-term outcomes but it requires effort and competes with short-term benefits of other behaviors. We therefore hypothesize that:

H2. Start-control is positively and more strongly related to personal initiative than stop-control.

Proactive coping

Proactive coping is a strategy that differs from traditional coping; it is not reactive but proactive and it manages goals, not risks (Schwarzer, 2000). Instead of dealing with stress when goals are lost or threatened, resources are mobilized beforehand, to promote positive moods and mental states before stress occurs. Whereas personal initiative deals with long-term organizational goals which will mostly be work related, proactive coping is more aimed at the employees themselves and focuses on personal obstacles. Proactive coping and organizational support together increase positive affect, which in turn reduces absenteeism (Greenglass and Fiksenbaum, 2009). Research also indicated that coping with a positive orientation reduces emotional exhaustion much better than working harder or avoidance (Ito and Brotheridge, 2003). Coping strategies can be indirectly related to job satisfaction or withdrawal intentions (Boyd *et al.*, 2009) – important factors for both individuals and organizations.

Similar to personal initiative, proactive coping is effortful behavior without direct contextual cause and without obvious short-term benefits. Proactive coping incorporates perceived control over the environment and acting based on foreseen stressful events. Acting on events that have not yet occurred will not be impulsive or habitual and dealing with stressful factors is generally unpleasant. Initiating effortful

behavior that is unpleasant but which creates long-term positive outcomes requires start-control. Therefore, we hypothesize that:

H3. Start-control is positively and more strongly related to proactive coping than stop-control.

Stop-control and start-control have not been previously researched in a work-related context. We therefore started with a pilot study to test whether the constructs as such were applicable to a working sample. In this pilot study, we first examined the validity of a recently developed self-control measure by De Boer *et al.* (2011) in a working sample. Second, since self-control is theoretically related to conscientiousness, we wanted to investigate whether this relation was not too strong to use self-control as a separate construct. Following the pilot study, we tested our hypotheses in two independent field studies.

Pilot

A total of 231 respondents (68.4 percent women, $M_{age} = 41.04$, $SD = 10.44$) voluntarily completed our online questionnaire, which was linked to a Dutch web site with content concerning work and work performance. It was a heterogeneous sample of employees (56.7 percent were employed fulltime; 28 percent had a managerial position) with varying educational backgrounds (4 percent vocational education, 37 percent college, 24 percent university), working in various industries (19 percent healthcare, 11 percent education, 8 percent communication, 8 percent industry).

Participants filled out a self-control measure (De Boer *et al.*, 2011), consisting of two scales: stop-control (nine items) and start-control (eight items). The items were in Dutch and developed based on items from previously validated general self-control scales such as the SCS (Tangney *et al.*, 2004), the Self-Control Schedule (Rosenbaum, 1980), and the Ego-Undercontrol scale (Letzring *et al.*, 2005). Items include: "I can easily stop doing something fun that I know to be bad for me" (stop-control) and "Even if I don't feel like it, I'm able to complete the tasks that needed to be done" (start-control). Conscientiousness was measured using twelve items from the Dutch version of the NEO-PI-r (Hoekstra *et al.*, 1996; $\alpha = 0.83$). Items were scored on seven-point scales (1 = strongly disagree, 7 = strongly agree).

The self-control items were subjected to a two-factor CFA, showing that all but one items had significant ($p < 0.01$) factor loadings (see Table I). Stop-control item 4 was removed because it did not load significantly onto either stop-control or start-control and thus seemed not to be a good item for this sample. A two eight-item factor model resulted in a reasonable fit, $\chi^2(103, N = 231) = 310.71$, $p < 0.01$, SRMR = 0.08, GFI = 0.85, RMSEA = 0.097, and fit the data significantly better than loading all items on a single latent factor, $\chi^2(104, N = 231) = 527.73$, $p < 0.01$, SRMR = 0.11, GFI = 0.74, RMSEA = 0.15, $\Delta\chi^2(1, N = 231) = 217.02$, $p < 0.01$. α 's were 0.73 for stop-control and 0.76 for start-control. The aim of this procedure was to assess whether the two-factor model fit the data better than a one-factor model, which supports the distinction between stop-control and start-control. However, model fit could be improved by letting the errors of various items within one scale (stop-control or start-control) correlate. Similar to the De Boer *et al.* (2011), we added nine correlated errors, reflecting the (reverse) coding of the items. Adding these correlated errors resulted in an acceptable fit for the two-factor model, $\chi^2(94, N = 231) = 151.38$, $p < 0.01$, SRMR = 0.06, GFI = 0.93, RMSEA = 0.050, with the model still displaying the proposed distinction, and still fitting significantly better than a similar one-factor model, $\chi^2(95, N = 231) = 268.28$,

| Item | Factor loadings | |
|---|-----------------|---------------|
| | Stop-control | Start-control |
| 1. During shopping I make impulsive purchases ^a | 0.56 | |
| 2. I can easily stop doing something fun that I know to be bad for me | 0.23 | |
| 3. I do things spontaneously as soon as I think of them ^a | 0.43 | |
| 4. I stick to the rules even if I find them unreasonable | 0.02 | |
| 5. When it comes to spending money, I find it difficult to control myself ^a | 0.77 | |
| 6. I never take action without thinking about it first | 0.48 | |
| 7. I find it easy to save money | 0.70 | |
| 8. Before I do something I go over the possible consequences | 0.55 | |
| 9. I find it fun to break rules and do things that I should not ^a | 0.30 | |
| 10. I persevere at important tasks, even if I am afraid something might go wrong | | 0.39 |
| 11. I find it difficult to do tasks that I hate doing ^a | | 0.45 |
| 12. I find it difficult having to restart something after I thought I was already done ^a | | 0.35 |
| 13. I am still able to concentrate when things around me are very hectic | | 0.70 |
| 14. Even if I do not feel like it, I am able to complete the tasks that needed to be done | | 0.48 |
| 15. When there is much distraction, I am able to focus on one thing in order to get it done | | 0.88 |
| 16. When my mind wanders while I am reading, It is easy for me to concentrate on the text again | | 0.59 |
| 17. I am able to continue working even when severely tired, if something really needs to be done | | 0.36 |

Table I.
Pilot study factor loadings

Notes: Items are from the stop and start-control scales as developed and validated by De Boer *et al.* (2011, Study 2). In the present study Item 4 was removed because it did not load on the stop-control factor in the pilot study sample. ^aReverse-scored items

$p < 0.01$, SRMR = 0.09, GFI = 0.86, RMSEA = 0.099, $\Delta\chi^2(1, N = 231) = 116.90$, $p < 0.01$. The better fit of the two-factor model, the factor loadings, and the alpha coefficients are similar to the findings of De Boer *et al.* (2011), and support the validity of the distinction between stop-control and start-control scales in a work-related context.

Stop-control and start-control were moderately correlated ($r = 0.34$, $p < 0.001$). Both stop-control ($r = 0.35$, $p < 0.01$) and start-control ($r = 0.51$, $p < 0.01$) were positively correlated with conscientiousness. CFAs with the conscientiousness items added showed that a three-factor model fit the data significantly better than alternative one-factor, $\Delta\chi^2(3, N = 231) = 169.30$, $p < 0.01$, or two-factor models with conscientiousness combined with stop-control, $\Delta\chi^2(2, N = 231) = 131.49$, $p < 0.01$, or start-control, $\Delta\chi^2(2, N = 231) = 43.84$, $p < 0.01$. The CFAs and correlations suggest that although stop-control and start-control are related to conscientiousness, they are sufficiently distinct to justify separate investigation. This corresponds to previous findings and theory stressing the importance of narrow personality traits in general (Ashton, 1998; Dudley *et al.*, 2006; Paunonen, 1998), and self-control in particular (Roberts *et al.*, 2005; Tangney *et al.*, 2004).

Study 1

Method

A total of 296 new respondents from the Netherlands (66.2 percent women, $M_{\text{age}} = 44.50$, $SD = 9.84$, 23 percent vocational education, 40 percent college, 15 percent university) filled out an online questionnaire which was linked to the same web site as

in the pilot. Respondents were mostly employed in healthcare (25 percent), arts, amusement, and recreation (15 percent), education (14 percent), and industry (6 percent), with 64.8 percent being employed fulltime, and 28 percent in a managerial position.

The questionnaire was designed to measure stop-control, start-control, OCB, personal initiative, and proactive coping. Items were administered in Dutch, and unless stated otherwise, completed by five-point scales (1 = strongly disagree, 5 = strongly agree). Based on the pilot study findings, stop-control and start-control were each measured with eight items (see Table I), using seven-point scales. OCB was measured using nine items (e.g. "I help others with their work when they have a high workload") from Smith *et al.*'s (1983) measure as suggested by Kelloway *et al.* (2002). Personal initiative was measured with Frese *et al.*'s (1997) seven-item self-reported initiative questionnaire (e.g. "I take initiative immediately even when others don't"). Proactive coping was measured using Greenglass *et al.*'s (1999) 14-item proactive coping subscale (e.g. "I turn obstacles into positive experiences"). CFAs (applying the correlated errors for stop- and start-control and using two- to three-item parcels for OCB, initiative, and coping indicators) showed that a five-factor solution with all items/parcels loading on their proposed construct fit significantly better, $\chi^2(305, N=296) = 688.59, p < 0.01, RMSEA = 0.065, CFI = 0.95, SRMR = 0.086$, than a one-factor solution, $\chi^2(315, N=296) = 1,050.07, p < 0.01, RMSEA = 0.093, CFI = 0.90, SRMR = 0.087, \Delta\chi^2(10, N=296) = 361.48, p < 0.01$. The absolute fit is only moderate (cf. Hu and Bentler, 1999), however, all factor loadings in the five-factor solution were significant.

Results and discussion

Table II displays α 's, descriptives, and correlations. Start-control significantly positively correlated with OCB, personal initiative, and proactive coping. Stop-control only weakly correlated to OCB and proactive coping, and not to personal initiative. Three regression analyses were performed (see Table III) to formally test *H1-H3*. β -weights show that start-control explained unique variance in OCB, personal initiative, and proactive coping, whereas stop-control did not. Subsequent *t*-tests showed that all β -weights were significantly different between stop-control and start-control, $t(295) = 3.84, p < 0.01, t(295) = 7.15, p < 0.01, t(295) = 6.27, p < 0.01$ (*H1-H3* supported).

Overall these results show that, as theorized, employees' capacity for self-control is positively related to contextual performance. These findings extend extant theories such as the job characteristics model (Hackman and Oldham, 1976), job demands-control model (Karasek and Theorell, 1990), and JD-R (Bakker and Demerouti, 2007) by showing that it is not only important how much control/autonomy employees receive in their work but also how much self-control they have. Start-control related positively to OCB, personal initiative, and proactive coping. Stop-control was positively correlated to OCB and

| Variable | <i>M</i> | <i>SD</i> | α | 1 | 2 | 3 | 4 |
|--|----------|-----------|----------|--------|--------|--------|--------|
| 1. Stop-control | 4.49 | 0.83 | 0.70 | | | | |
| 2. Start-control | 4.66 | 0.84 | 0.75 | 0.17** | | | |
| 3. Organizational citizenship behavior | 3.75 | 0.50 | 0.76 | 0.13* | 0.40** | | |
| 4. Personal initiative | 3.66 | 0.62 | 0.86 | 0.03 | 0.50** | 0.61** | |
| 5. Proactive coping | 3.62 | 0.52 | 0.85 | 0.12* | 0.52** | 0.56** | 0.72** |

Notes: $N = 296$; ** $p < 0.01$; * $p < 0.05$

Table II.
Study 1 correlations

proactive coping but did not explain unique variance in these variables. Although these findings were as expected, they show the usefulness of only start-control for organizational outcomes. We therefore conducted a second study, extending the criterion space with organization-relevant behavior that may depend more on stop-control.

Study 2

This second study aimed to test if, in addition to start-control, stop-control is also a useful predictor in the organizational domain. CWB was added to the criterion variables, as an indication of undesirable behavior, which may require stop-control to refrain from. CWB involves deliberate actions to violate organizational rules/policies that harm the organization and its members (Robinson and Bennett, 1995). Previous research indicated the importance of general self-control for refraining from workplace aggression (Douglas and Martinko, 2001), counterproductive behavior (Marcus and Schuler, 2004), and white-collar crime (Blickle *et al.*, 2006). We hypothesize that:

H4. Especially stop-control is negatively related to CWB, and more strongly than start-control.

Because CWB covers behaviors that violate policies and harm the organization and therefore is undesirable. Inhibiting undesirable behavior specifically requires stop-control.

Method

All 296 employees from a local office of an international risk assessment and insurance company in the Netherlands were invited to fill out an online survey. A total of 202 (68 percent) participants completed the entire survey (40.6 percent women, $M_{age} = 43.9$, $SD = 9.9$). Mean tenure was 11.9 years ($SD = 11.4$), and 84.6 percent were employed fulltime.

Stop-control, start-control, OCB, personal initiative, and proactive coping were assessed with the same measures as in Study 1. CWB was measured with ten items (e.g. "I cover up my mistakes," "I gossip about coworkers"; Kelloway *et al.*, 2002), scored on a seven-point scale (1 = never, 7 = always). Using similar procedures as in Study 1, CFAs showed that a six-factor solution showed significantly better fit, $\chi^2(410, N = 202) = 782.91, p < 0.01, RMSEA = 0.066, CFI = 0.92, SRMR = 0.092$, than a one-factor solution, $\chi^2(425, N = 202) = 1,151.89, p < 0.01, RMSEA = 0.100, CFI = 0.84, SRMR = 0.099, \Delta\chi^2(15, N = 202) = 422.98, p < 0.01$.

| Variable | Organizational citizenship behavior (β) | | Personal initiative (β) | | Proactive coping (β) | |
|-----------------|---|-----------|---------------------------------|-----------|------------------------------|-----------|
| | Step 1 | Step 2 | Step 1 | Step 2 | Step 1 | Step 2 |
| Start-control | 0.40** | 0.39** | 0.50** | 0.51** | 0.52** | 0.52** |
| Stop-control | | 0.07 | | -0.05 | | 0.03 |
| ΔR^2 | | 0.00 | | 0.00 | | 0.00 |
| Adjusted R^2 | 0.16 | 0.16 | 0.25 | 0.25 | 0.27 | 0.27 |
| $F(df_1, df_2)$ | 55.58 | 28.60 | 98.69 | 49.86 | 110.12 | 55.11 |
| | (1,294)** | (2,293)** | (1,294)** | (2,293)** | (1,294)** | (2,293)** |

Table III.
Study 1 hierarchical regression analyses

Notes: $N = 296$. ** $p < 0.01$; * $p < 0.05$

Results and discussion

Table IV displays alphas, descriptives, and correlations. Start-control correlated significantly positively with OCB and personal initiative, whereas stop-control did not. Both start-control and stop-control significantly positively correlated to proactive coping and negatively to CWB. Four regressions were performed (see Table V) to formally test *H1-H4*. β -weights show that whereas start-control explained unique variance in all dependent variables, stop-control explained unique variance in CWB only. Furthermore, *t*-tests showed that β -weights were significantly different between stop-control and start-control for all outcomes, $t(201) = 2.19, p < 0.05, t(201) = 3.26, p < 0.01, t(201) = 4.73, p < 0.01$ (*H1-H3* supported), except CWB, $t(201) = -0.82, p = 0.41$ (*H4* not supported).

Study 2 findings replicate and extend those of Study 1 showing that trait self-control relates to contextual performance. Replicating Study 1, Study 2 results indicate that start-control relates positively to OCB, personal initiative, and proactive coping. Furthermore, in both studies, start-control was found to relate significantly stronger to OCB, personal initiative, and proactive coping than stop-control. These differential relationships support the conceptual difference between, and usefulness of the two dimensions of self-control.

Extending Study 1, both stop-control and start-control were found to relate negatively to CWB. Whereas the negative relation for stop-control was as hypothesized, for start-control it was unexpected. CWB involves behaviors such as working slowly, gossiping, and covering up mistakes (Kelloway *et al.*, 2002), all behaviors that may, in some circumstances, be attractive in the short-term but with long-term undesirable consequences. Because stop-control is aimed at not performing short-term attractive

| Variable | <i>M</i> | <i>SD</i> | α | 1 | 2 | 3 | 4 | 5 |
|--|----------|-----------|----------|---------|---------|--------|--------|--------|
| 1. Stop-control | 4.61 | 0.63 | 0.66 | | | | | |
| 2. Start-control | 4.62 | 0.58 | 0.70 | 0.28** | | | | |
| 3. Organizational citizenship behavior | 4.62 | 0.62 | 0.60 | -0.02 | 0.16* | | | |
| 4. Personal initiative | 5.17 | 0.65 | 0.86 | 0.12 | 0.36** | 0.33** | | |
| 5. Proactive coping | 4.96 | 0.60 | 0.88 | 0.18* | 0.51** | 0.32** | 0.73** | |
| 6. Counterproductive work behavior | 1.57 | 0.41 | 0.69 | -0.20** | -0.26** | -0.11 | -0.13 | -0.17* |

Notes: *N* = 202. ** $p < 0.01$; * $p < 0.05$

Table IV.
Study 2 correlations

| Variable | Organizational citizenship behavior (β) | | Personal initiative (β) | | Proactive coping (β) | | Counterproductive work behavior (β) | |
|-----------------|---|----------|---------------------------------|-----------|------------------------------|-----------|---|-----------|
| | Step 1 | Step 2 | Step 1 | Step 2 | Step 1 | Step 2 | Step 1 | Step 2 |
| Start-control | 0.16* | 0.18* | 0.36** | 0.36** | 0.51** | 0.50** | | -0.22** |
| Stop-control | | -0.07 | | 0.01 | | 0.04 | -0.20** | -0.14* |
| ΔR^2 | | 0.00 | | 0.00 | | 0.00 | | 0.02* |
| Adjusted R^2 | 0.02 | 0.02 | 0.13 | 0.12 | 0.25 | 0.25 | 0.06 | 0.08 |
| $F(df_1, df_2)$ | 5.35 | 3.13 | 30.03 | 14.96 | 68.37 | 34.22 | 14.26 | 9.22 |
| | (1,200)* | (2,199)* | (1,200)** | (2,199)** | (1,200)** | (2,199)** | (1,200)** | (2,199)** |

Notes: *N* = 202. ** $p < 0.01$; * $p < 0.05$

Table V.
Study 2 hierarchical regression analyses

behavior that has undesirable long-term consequences (De Boer *et al.*, 2011), self-control was hypothesized to negatively relate to CWB. In contrast, start-control is theorized to be aimed at performing short-term unattractive behavior that has desirable long-term consequences. The finding that start-control was negatively related to CWB may be explained by the fact that some items in the CWB-measure represent behaviors that have a more desirable yet less attractive (i.e. more difficult) behavioral alternative, requiring start-control to perform. For instance, not covering up a mistake or blaming a co-worker (both examples of CWB-items) often automatically imply confessing the mistake, which may require start-control to overcome initial reluctance. Similarly, not working intentionally slow may imply working hard, which theoretically should relate to start-control.

To summarize, the findings suggest that for performing contextual behaviors such as OCB, personal initiative, and proactive coping start-control is especially important, whereas for not performing CWB both stop-control and start-control are important.

General discussion

The aim of the present research was to examine the relevance of trait self-control, and specifically the distinction between stop-control and start-control in organizational settings.

Major findings and theoretical implications

Three studies found factor analytical support for the distinction within self-control in a work-related context, with start-control and stop-control being only weakly to moderately related (r 's ranged from 0.17 to 0.34). These results extend previous research in student samples (De Boer *et al.*, 2011; De Ridder *et al.*, 2011) to organizational settings, indicating that initiatory or starting forms of self-control are not only theoretically but also empirically distinct from inhibitory or stopping forms of self-control. Altogether, these studies suggest that self-control theory and models (e.g. Baumeister and Vohs, 2004; Carver and Scheier, 1998; De Ridder and De Wit, 2006) may be refined by incorporating this distinction, leading to improved theoretical specification.

Results further showed that trait self-control is associated with contextual performance; start-control related positively to OCB, personal initiative, and proactive coping, and both types of self-control related negatively to CWB. These findings extend previous research, showing that trait self-control is not only important for health behaviors and academic performance (e.g. De Boer *et al.*, 2011; Duckworth and Seligman, 2005; Tangney *et al.*, 2004), but also for contextual performance of employees. Furthermore, these findings contribute to the personality literature (Ashton, 1998; Dudley *et al.*, 2006; Paunonen, 1998; Roberts *et al.*, 2005), by exemplifying how breaking down larger personality traits into narrower (sub)facets improves conceptual clarity and prediction of relevant outcomes.

The findings for OCB, initiative, and proactive coping were consistent with our theorizing. For OCB one has to engage in activities that are not always immediately attractive but are beneficial in the long run. Such activities require extra effort, which start-control helps overcome. Personal initiative refers to self-starting and showing persistence in the face of barriers. For such behavior, start-control is an essential requirement. Proactive coping is anticipatory in nature and refers to doing something instead of waiting or doing nothing. This active position aligns with the finding that only start-control related to proactive coping.

The general concept of control is important in job design models (Bakker and Demerouti, 2007; Hackman and Oldham, 1976; Karasek and Theorell, 1990), which state that providing employees decision latitude and having them control their own actions positively affects both well-being and performance. The current research shows that this may not only apply to control provided but also for employees' own capacity for control. Furthermore, employees with high self-control likely benefit more from the control/autonomy provided, because they are better able to deal with the opportunities for control and subsequent responsibilities. Conversely, providing autonomy to individuals with low self-control might lead to poor decisions or eventually burnout (e.g. Schmidt *et al.*, 2007).

Limitations and suggestions for future research

A first limitation concerns the self-report, correlational nature of the studies. Although every effort was made to assure participants that their responses were anonymous and confidential, social desirability and mono-method biases could be a problem. However, the differential findings for stop-control and start-control are likely unaffected by these biases, since both were measured in the same way, and likely equally sensitive to socially desirability responding. In addition, CFAs demonstrated support for the discriminant validity of the measures used. Nevertheless, one may argue that the direct relations of stop-control and start-control with contextual performance should be interpreted with some caution (although De Ridder *et al.*'s (2012) meta-analysis demonstrated that trait self-control equally relates to self-report and observed behaviors). Future research may benefit from using prospective designs with other-reports (e.g. supervisor ratings) and objective performance measures. Also, the generalizability of the distinction between stop-control and start-control should be examined experimentally, using (lab)tasks to measure self-control.

A second limitation relates to the psychometric properties of the stop-control and start-control scales. Although CFAs demonstrated that a two-factor model distinguishing between stop- and start-control fit the data significantly better than a one-factor general self-control model, α -coefficients and some factor loadings were suboptimal. This may be explained by the use of both indicative and contra-indicative items, as well as by covering multiple self-control domains in the scales (e.g. shopping, saving money, concentrating, breaking rules). Future research is needed to further extend and optimize the measurement (e.g. by developing work-specific stop- and start-control scales) and test its psychometric properties (reliability, stability, validity).

Third, while stop-control and start-control were found to differ sufficiently from conscientiousness in the pilot study, we did not test whether stop-control and start-control predicted more (or unique) variance in contextual performance than (or beyond) conscientiousness. Similar to general trait self-control (e.g. Roberts *et al.*, 2005), stop-control and start-control could be interpreted as lower order facets of conscientiousness. However, future research is needed to verify such interpretation. Future research should also examine to what extent stop-control and start-control differ from or are similar to other conscientiousness facets, such as industriousness, order, and impulse control, and predict incremental variance beyond these other facets. Furthermore, future research should focus on extending the nomological net of stop-control and start-control by exploring its relations with concepts like self-regulation skills, action-state orientation, core self-evaluations, and self-determination.

Fourth, although the present investigation is a first step toward determining the role of trait self-control in overall work performance, it was limited to contextual performance. Future research should examine the validity of self-control in predicting in-role task performance as well as other work-related outcomes (e.g. absenteeism) and self-regulatory constructs (e.g. procrastination; help-seeking, Sitzmann and Ely, 2011), and should seek to more broadly determine for what work behaviors each form of self-control is specifically needed.

Last, job design models suggest that effects of self-control may depend on control opportunities and demands employees have in their jobs. For example, in jobs with little decision latitude and autonomy, self-control may be less predictive because performance in such jobs is more externally controlled. An interesting avenue for future research would therefore be to examine the interactive effects of self-control with job autonomy. Future research should also investigate the moderating role of the relative difficulty that employees encounter with specific tasks that they should perform or refrain from. For example, regarding emerging (mobile) social media, the distractiveness of such media may vary across employees, and as such may influence the effects of self-control on performance. More generally, future research should examine to what extent self-control predicts performance beyond situational (task/organization) factors.

Implications for practice and conclusion

Ultimately, after future research has replicated our findings and addressed the limitations, stop- and start-control may be used in personnel selection, placement, or task assignment. For example, when a job requires a large amount of stop-control (patience, restraint, caution), organizations should test for stop-control in their selection procedures. Or when distributing work, employees with high levels of stop-control can be assigned tasks that demand more stop-control. Another practical implication is that having high stop-control does not necessarily imply high start-control. Knowing employees' strengths in terms of stop-control and start-control can be useful for management. For example, implementation intentions (Gollwitzer, 1999) can be used to lower the need for self-control in a specific situation. Such implementation intentions can be adapted to reduce either the need for stop-control or start-control, depending on the employee's self-control strengths.

The present research shows the importance of self-control for organizations. Employees' capacity for self-control relates to their contextual performance, and these associations are different for stop-control and start-control. We can only speculate on the importance of self-control for task performance, but for work that nowadays takes place in a highly dynamic environment, where skills like flexibility and adaptability are becoming more important, self-control will most likely only become more useful.

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