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Transmission of reduction-oriented crafting among colleagues: A diary study on the moderating role of working conditions

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Zooming into reduction-oriented job crafting among employees, next to minimizing demands (i.e., making a job less strenuous), we introduced optimizing demands (i.e., simplifying the job and making work processes more efficient) and suggested that optimizing demands should be positively related to work engagement, whereas minimizing demands negatively related to work engagement. Moreover, we suggested that both forms of reduction-oriented crafting can be transferred among colleagues, and this will particularly occur in jobs that are high on demands (workload and emotional demands), low on resources (autonomy), and when the colleagues have a high-quality relationship. We examined these hypotheses among 65 dyads of employees who filled in a general questionnaire and a diary for three working days. Multilevel analyses supported the transmission of both job crafting dimensions among colleagues. Moreover, there is more transmission of minimizing demands among colleagues when workload and emotional demands are high and autonomy is low. Additionally, optimizing demands was transmitted among colleagues when autonomy was low and quality of relationship with colleague was high. Optimizing demands was positively related to work engagement, whereas minimizing demands was unrelated to work engagement. These findings imply that optimizing demands is a favourable behaviour and can be transmitted among colleagues under specific conditions.

Practitioner points

- Working smarter is related to higher work engagement
- Employees model their colleague's proactive behaviour
- Unfavourable working conditions stimulate modelling behaviour of colleagues

Due to the current business and societal circumstances characterized by a financial crisis, globalization, and continuous changes, organizations have recognized the importance of employees who are proactive, flexible, self-initiating, and self-regulating (Belschak & Den Hartog, 2010; Parker, Williams, & Turner, 2006). A promising example of self-regulating work behaviour is job crafting. Job crafting is conceptualized as regulating one's job demands and resources to create a working situation that fits (better) one's preferences

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(Petrou, Demerouti, & Schaufeli, 2015). Studies have shown that both situational and individual characteristics of employees can encourage job crafting behaviour. Specifically, 'job crafting occurs in demanding, resourceful and changing work environments by employees who are proactive, motivated by growth, or who experience misfit between their motivational style and the environmental cues' (Demerouti, 2014, p. 241). However, recent studies show that job crafting represents a rather complex behaviour as some of its aspects appear to be beneficial for employees' work engagement, performance, and adjustment, whereas other aspects seem to be unfavourably related or unrelated to these outcomes (Petrou, Demerouti, Peeters, Schaufeli, & Hetland, 2012; Petrou *et al.*, 2015). Because of these ambiguous results, which pertain mainly to the reduction-oriented type of crafting, Rudolph, Katz, Lavigne, and Zacher (2017, p. 132) suggest in their meta-analysis that 'a more complete "unpacking" of the adaptive and counterproductive implications' of reduction-oriented crafting is warranted.

We suggest that individuals may restore fit between their demands and preferences not only by minimizing demands (make work less intense) but also by optimizing demands (make work more efficient). This is rooted on the idea of 'work smarter, not harder', which was the basis of total quality management aiming to increase productivity of manufacturing firms by developing efficient and effective processes (Wendel, 2016); eventually, this idea expanded to other jobs too. Moreover, optimization represents one of the three strategies that individuals use to achieve their goals and to foster their personal development and well-being (Freund & Baltes, 2002). Acquiring skills that enable individuals to adjust their plans and actions to optimize goal attainment represents also a core aspect of goal-setting (Pearson, 2012). Therefore, it is surprising that optimizing demands has, so far, not be considered as a constructive crafting strategy to restore fit with demands.

The aim of this study was threefold. First, we introduce *optimizing demands* as an additional job crafting strategy that can be beneficial for task accomplishment and work motivation. In this way, we contribute to a more complete conceptualization of job crafting. Second, we examine whether job crafting represents a social phenomenon that may be transmitted among colleagues working together. Building on literature on social contagion and social impact, we examine the extent to which individuals alter their crafting behaviour as a result of daily social interaction with others (cf. Robinson, Wang, & Kiewitz, 2014). Yet the question remains whether colleague (sender) job crafting always has an impact on the employee (receiver). Therefore, our third contribution is to uncover not only to what extent colleagues influence each other in their job crafting behaviour but also *the conditions* that facilitate the transmission of job crafting among colleagues. We focus in this respect explicitly on two kinds of factors: (1) the relationship quality with the colleague and (2) the prevailing work characteristics (i.e., job demands and autonomy). We suggest that employees will be more influenced by a colleague with whom they have a good relationship and when they need it more, that is, when demands are high and autonomy is low.

In order to examine daily behaviours and to make sure that our participants had the opportunity to be influenced by the behaviour of their colleague, we collected daily data among colleagues who worked closely together and who completed diaries on the same three working days. This study contributes to the literature on job crafting by uncovering a new type of reduction-oriented crafting behaviour that may be displayed daily and can be more constructive than minimizing demands. In this way, our study can contribute to enhancing the validity of job crafting conceptualization on a daily basis (Rudolph *et al.*, 2017). Moreover, we add to the literature on social impact by uncovering the daily

dynamics and the conditions under which direct colleagues influence each other's crafting behaviour (Robinson *et al.*, 2014).

Two types of reduction-oriented job crafting

Originally, job crafting has been defined as the physical and cognitive changes individuals make in their task or relational boundaries (Wrzesniewsky & Dutton, 2001). Physical changes refer to changes in the form, scope, or number of job tasks, whereas cognitive changes refer to changing how one sees the job. Wrzesniewsky and Dutton (2001) define job crafting as 'everyday' behaviour. To capture the 'everyday' changes in job characteristics that employees may pursue, some scholars (Petrou *et al.*, 2012; Tims & Bakker, 2010) theoretically frame job crafting in the Job Demands-Resources (JD–R) model (Bakker & Demerouti, 2007; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). Specifically, job crafting is conceptualized as the changes employees make to balance their job demands and job resources with their personal abilities and needs (cf. Tims & Bakker, 2010), and can be expansion-oriented (seeking resources and challenges) or reduction-oriented (minimizing demands) (Petrou *et al.*, 2012). While expansion-oriented job crafting refers to increasing the number or complexity of tasks and interactions with others, reduction-oriented job crafting refers to reducing the number or complexity of the tasks.

The strategy of *minimizing demands*[1] includes behaviours targeted towards minimizing the emotionally, mentally, or physically demanding aspects of one's work so that job demands do not exceed employees' capabilities (Demerouti, 2014). Minimizing demands serves as 'a health-protecting coping mechanism when demands are excessively high' (Demerouti, 2014, p. 239). However, this suggested role of minimizing demands has not been empirically confirmed as some studies have found that especially decreasing hindering job demands is positively (rather than negatively) related to burnout (Petrou *et al.*, 2015; Tims, Bakker, & Derks, 2012), which indicates that employees who attempt to decrease their demands may perceive to have no other options left to prevent worse negative health outcomes (Tims, Bakker, & Derks, 2015). Additionally, studies have found that minimizing demands is either unrelated (Tims *et al.*, 2012, 2015) or negatively related to favourable outcomes like work engagement (Petrou *et al.*, 2012).

In addition to minimizing demands, in this study we introduce a second strategy of reduction-oriented job crafting, namely *optimizing demands*. The underlying intention of *optimizing demands* is the simplification or optimization of work processes to make them more efficient. Similar to the literature on shortcuts or workarounds, optimizing demands occurs when the accomplishment of a work goal is blocked or made more difficult because of dysfunctional work processes (Halbesleben, Wakefield, & Wakefield, 2008). Individuals then use their knowledge and skills to create and execute an alternative, more efficient path to that goal (Koopman & Hoffman, 2003). Similar to the suggestions of Halbesleben *et al.* (2008) about workarounds, the goal of optimizing demands is to get work done, and to benefit with a secondary, self-serving gain, for example, time. The main difference between minimizing demands and optimizing demands is that the former represents attempts to avoid strenuous aspects of the job,

[1] *From now on, we will replace the term 'reducing demands' by 'minimizing demands' to avoid confusion with the generic term 'reduction-oriented crafting'. Reduction-oriented crafting refers to minimizing demands and optimizing demands.*

whereas the latter represents attempts to make work more efficient and to bypass inefficient work processes. Moreover, these strategies are directed towards different aspects of the job: minimizing demands towards making work less intense cognitively, physically, and emotionally, and optimizing demands towards finding ways to work more effectively, to simplify processes, and to eliminate obstacles. Therefore, they can be used simultaneously by the same person, and as such, they are not expected to represent two ends of one continuum because they have different targets and motives.

Transmission of job crafting

The premise of this study is that daily job crafting can be transferred between two colleagues who work closely together. This phenomenon is also known as social contagion, social impact, or crossover and occurs when individuals alter their behaviour as a result of social interaction with others through the social process of relating to those with whom one interacts (Latane, 2000). Literature, particularly on deviant behaviour (which is also voluntary in nature and violates significant organizational norms), suggests that co-worker influences can occur in three ways (Ferguson, 2007; Robinson *et al.*, 2014): (a) direct impact, whereby an employee observes the co-worker's behaviours of which the individual may even be affected; (b) vicarious impact, whereby an employee is impacted via learning from the co-worker's behaviours; and (c) ambient impact, whereby an employee is impacted by working in an environment characterized by collective co-worker behaviour.

Direct impact occurs as a result of empathetic reactions (*cf.* Westman, 2001). Empathy is 'sharing another's feelings by placing oneself psychologically in that person's circumstances' (Lazarus, 1991, p. 287). Vicarious experience means that beliefs in one' capabilities can be acquired by the observation of relevant others, where these other people act as models for one's own expectations (Bandura, 1997; Neff, Sonnentag, Niessen, & Unger, 2012). Vicarious effects result from the focal employee witnessing co-worker's behaviour, learning of it through gaining an understanding of this behaviour. Employees seem to particularly imitate or model the behaviours of others if they expect positive outcomes by executing these behaviours (Bandura, 1977; Manz & Sims, 1981). Finally, ambient impact reflects the collective actions of co-workers' behaviour – that is, ambient stimuli – that pervade a work setting (Hackman, 1992). Ambient impact reflects the influences of working in a climate that supports specific behaviours. It involves the impact of witnessing and hearing of many ongoing acts from many sources over time (Ferguson, 2007). Therefore, this way is less relevant in our study as the daily design can uncover the impact of the direct colleague.

Individuals are more likely to imitate behaviour of colleagues when they are rewarded for it (e.g., the supervisor complementing the subordinate on his task), or when they notice that others are rewarded for these behaviours (i.e., vicarious reinforcement) (Bandura, 1977). Likewise, employees are likely to engage in job crafting behaviours that adhere to social norms and are accepted by the team (Tims *et al.*, 2013). As reduction-oriented job crafting may elicit positive responses from others (as one is involved in redesigning demands such that they are affordable), colleagues may be encouraged to display these behaviours as well. Reduction-oriented job crafting allows for the expression of self-determination (control), protection of one's energy reserves, and safeguarding of goal accomplishment. All these actions represent positive behaviours that colleagues can model.

In support of this, Peeters, Arts, and Demerouti (2016) found that on days that the colleague seeks new challenges, the individual is also inclined to do so. No such effect was found for seeking resources. Moreover, the cross-sectional dyadic study by Bakker, Rodríguez-Muñoz, and Sanz Vergel (2016) showed that colleague's job crafting behaviours were positively related to employee's job crafting behaviours. Although transmission of job crafting among colleagues can be lasting, examining it on a daily basis has not only the advantage that it will be more closer to the real situation, but also that we can exclude the alternative hypothesis that the effect occurs due to exposure of the colleagues to the same situations (cf. ambient impact). Altogether, these lines of evidence and arguments lead us to assert the following (see Figure 1 for a graphical display of all hypotheses):

Hypothesis 1a: Day-level minimizing demands of the colleague (sender) is positively related to employee's (receiver) day-level minimizing demands.

Hypothesis 1b: Day-level optimizing demands of the colleague (sender) is positively related to employee's (receiver) day-level optimizing demands.

Determinants of transmission of reduction-oriented job crafting

Manz and Sims (1981) suggest that behaviour that has been observed by the individual will not automatically be executed: If the motivation to do so is lacking, there will be no or less transmission of behaviour. Similarly, the more important the information transmitted by the colleague is to the individual, the more credible the source, the more susceptible the individual to social cues, and the more ambiguous the task the more

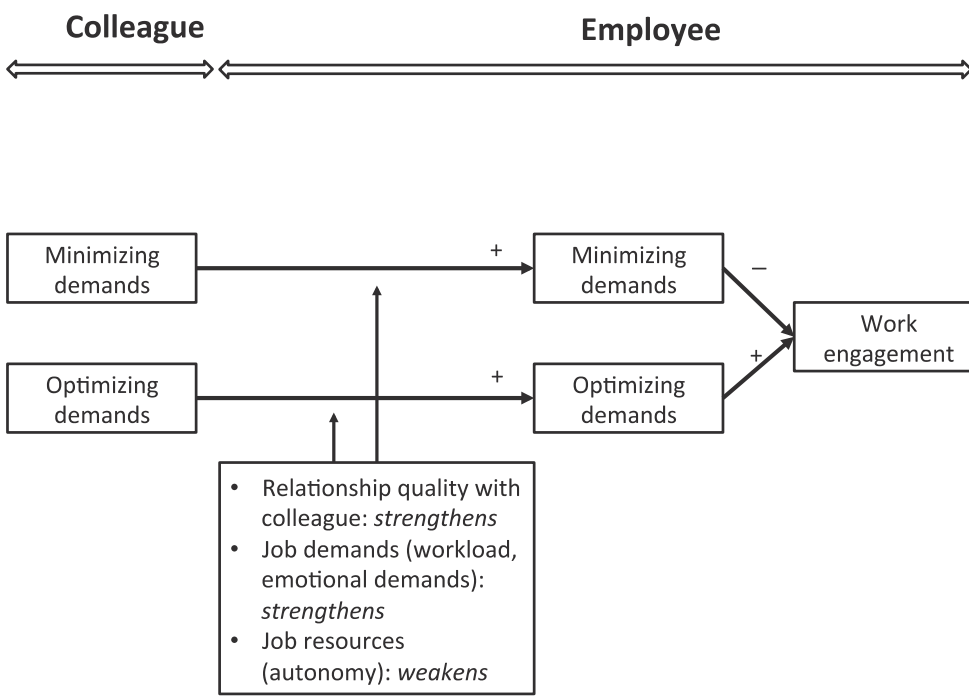

Figure 1. The model of transmission of reduction-oriented crafting among colleagues.

likely the social cues are to have an effect upon the individual (Blau & Katerberg, 1982). We suggest that individuals will be more motivated to model their colleague and to show the stored behaviour that they observe when they have a high-quality relationship with their colleague. In line with Walter and Bruch (2008), there are several reasons for this. First, because such relationships are often characterized by frequent interpersonal interactions and open affective expressions among individuals (Dutton & Heaphy, 2003; Gittel, 2003; Levine & Moreland, 1990), high-quality relationships should provide individuals with ample opportunities to express their experiences (Walter & Bruch, 2008). Affective sharing is a prerequisite of learning from each other because in a safe and affective atmosphere behaviours are more easily detected and thus increase the likelihood of convergence among individuals (Bartel & Saavedra, 2000; Walter & Bruch, 2008). Moreover, individuals in high-quality relationships generally exhibit strong interpersonal ties, which are based on trust, friendship, liking, and mutual socio-emotional support (Baker, Cross, & Wooten, 2003; Gittel, 2003; Ibarra & Andrews, 1993). This may further strengthen affective sharing by enhancing individuals' attentiveness and sensitivity towards each other's affective expressions (Dutton & Heaphy, 2003; Walter & Bruch, 2008). When individuals have favourable interpersonal relations, they are argued to be more susceptible to emotional contagion (Hatfield, Cacioppo, & Rapson, 1992) and to be more motivated to engage in emotional comparison processes with each other (Bartel & Saavedra, 2000), 'as people tend to non-consciously or consciously adjust to the moods and emotions of others with whom they feel closely connected' (Walter & Bruch, 2008; p. 242). In line with this reasoning, Westman, Bakker, Roziner, and Sonnentag (2011) found that there was more crossover from team job demands to individual job demands as well as team exhaustion to individual exhaustion over time when cohesiveness and social support in the team were high. We hypothesize as follows:

Hypothesis 2: Employee's general level of relationship quality with the colleague moderates the effect of colleague's (sender) day-level minimizing and optimizing demands on employee's (receiver) day-level minimizing (2a) and optimizing demands (2b), respectively, such that the effect will be stronger when the employee perceives the relationship with the colleague of high quality.

Furthermore, the transmission of job crafting among colleagues is expected to occur more in jobs where job demands are perceived as high and job resources as low. According to the JD-R model (Demerouti *et al.*, 2001), high job demands are related to diminished health and energy (because they require effort), whereas low job resources are related to disengagement from work and reduced motivation (because they inhibit goal accomplishment). Resource theories (e.g., Conservation Of Resources theory of Hobfoll, 2001) suggest that employees strive to maximize resources, whereas stress theories (e.g., cognitive activation theory of Eriksen & Ursin, 2002) suggest that people strive to reduce stress that arises when external demands are higher than the preferred levels.

Both the accumulation of resources and reduction in stress represent reinforcers of behaviour. A reinforcer is defined as a stimulus that increases the future likelihood of a behaviour (Cooper, Heron, & Heward, 2007). The effectiveness of a reinforcer may be reduced due to its repeated presentation or availability (also called reinforcer satiation; Catania, 1998). In line with this reasoning and with the JD-R model, we suggest that low job resources (autonomy) and high job demands represent reinforcers of behaviour as

individuals will strive to increase the chances to work in a motivating (high autonomy) and healthy (not too high job demands) work environment. We expect that low job resources (autonomy) and high job demands will trigger or reinforce behaviour to restore a highly valued situation, whereas under conditions of high autonomy and affordable demands there is low urgency and reinforcement to learn from a colleague's behaviour. When job demands are high, it is easier and more effective for individuals to copy successful behaviours of their colleagues (to deal with demands) due to lack of time or the available energetic resources. In case the employee perceives low autonomy, an additional argument for the likelihood of the transmission of job crafting is that the behaviour of the colleague will most likely be perceived as an appropriate representation of what is acceptable within the job boundaries (limited opportunities because of the low autonomy), and as a result of this, the employee will be inclined to imitate the behaviour of the colleague.

Hypothesis 3: Employee's general level of job demands (workload, emotional demands) moderates the effect of colleague's (sender) day-level minimizing and optimizing demands on employee's (receiver) day-level minimizing (3a) and optimizing demands (3b), respectively, such that the effect will be stronger when the employee perceives high job demands.

Hypothesis 4: Employee's general level of autonomy moderates the effect of colleague's (sender) day-level minimizing and optimizing demands on employee's (receiver) day-level minimizing (4a) and optimizing demands (4b), respectively, such that the effect will be stronger when the employee perceives low autonomy.

Job crafting and work engagement

Job crafting has been related to work engagement, that is, a positive state of mind characterized by vigour, dedication, and absorption (Schaufeli, Bakker, & Salanova, 2006). Employees, who craft their jobs, create a work environment that fits their preferences regarding the prevailing job characteristics (see Demerouti, 2014). The person–environment fit perspective describes fit as the congruence (or match) between an individual and its environmental (work) characteristics (Judge & Bretz, 1994). The better the fit, the more an employee is involved in the job (Blau, 1987) and the better (s)he performs (Caldwell & O'Reilly, 1990).

Minimizing demands represents attempts to minimize taxing aspects of the job such that they do not interfere with individual goal achievement. The relationship between minimizing demands and work engagement is not so clear-cut, with some studies showing non-significant relations, whereas others found a negative relationship. For instance, Tims *et al.* (2015) found that decreasing hindering demands was unrelated to work engagement as reported 1 month later. The daily diary study of Petrou *et al.* (2012) found that on days that employees reduced their demands they were less engaged in their work. Although reducing one's workload may protect employee well-being in stressful situations, Petrou *et al.* suggest that by reducing their workload, employees also reduce the triggers or necessity for action, in other words, the optimal level of job challenge (Csikszentmihalyi, 1990) in their daily activities. Similarly, Tims *et al.* (2013) reported only a negative relationship between decreasing hindering job demands and vigour, which reflects the energy aspect of work engagement.

On the contrary, when individuals try to optimize their demands we expect that this will be beneficial for their daily work engagement. Finding smart solutions to solve inefficiencies and goal blockages at work can be considered as first-order problem-solving, where employees create mechanisms to get the job done in a smarter way (Halbesleben *et al.*, 2008). Therefore, such strategies may be linked to increased work engagement because they facilitate goal accomplishment. We hypothesize:

Hypothesis 5a: Day-level minimizing demands will be negatively related to day-level work engagement.

Hypothesis 5b: Day-level optimizing demands will be positively related to day-level work engagement.

Method

Procedure and participants

In order to collect data close to real work processes and natural events, we followed the advice of Bolger, Davis, and Rafaeli (2003) and used a diary methodology, which uncovers intra-individual processes. We selected a three-day longitudinal design (Avey, Luthans, & Mhatre, 2008; Ployhart & Vandenberg, 2010). Diary methods have several advantages: (1) the reduction in retrospective bias, (2) the researcher can control for the situational context, and (3) the possibility to examine how states change over time and how states and behaviours translate into other states and behaviours within short periods of time (Ohly, Sonnentag, Niessen, & Zapf, 2010). Furthermore, we used a multilevel approach to examine the effect of the daily job crafting behaviours of a colleague (sender) on the daily job crafting behaviours of the employee (receiver), controlling for demographic variables of the employee. In this way, we can study the unique effect of the day-level actor variables on the day-level partner variables.

The majority of the participants (N = 76 or 58.5% of the final sample) were recruited from a large retail organization, and the rest of the participants (N = 54 or 41.5% of the final sample) were obtained from various organizations in the Netherlands. Comparisons between the two groups (1 = large retail organization, 2 = the rest) were made using ANOVAs, which showed no differences between the two groups on the study variables. The groups were therefore treated as one sample. Employees were asked by one of the researchers whether they wanted to participate in the study together with a colleague with whom they worked closely together on a daily basis. This meant that the members of the dyad had to work in the same physical workspace and had to have work-related contact with one another. All respondents indicated that they were in contact with one another on average 4 hours each day of the study, which is important in order to facilitate the expected learning effects. They were asked to fill in a general questionnaire, and a diary survey of three days, which were combined in a small printed booklet. The participants were instructed to fill in the day-level questionnaire at the end of their working day, preferable at the same time as their colleague but without consulting each other. As some participants worked part-time and did not see their colleague every subsequent working day and the fact that the dyad had to fill out the diary on the same days, gaps of some days between the diaries may exist. Therefore, we controlled in our analyses for the variable whether or not they had worked on the previous day. After completing both the general- and the day-level questionnaire, the dyads were requested to send the anonymous booklets back to the researchers. We only used the data if we

received the booklets from both participants within a dyad. Each participant received a voucher of 10 euro for participating in the study.

Of the 250 participants (125 dyads) approached, we received useable responses from 130 individuals (65 dyads), representing a 52% response rate. Analyses were conducted with 382 usable data points. Participants (N = 130) were on average 36.9 years old (SD = 11.3), ranging from 18 to 62 years. The sample included 87 females (66.9%) and 43 males (33.1%). On average, the employees were contracted for 30.1 hr per week (SD = 7.9), and their average organizational tenure was 8.2 (SD = 7.1) years. Only 21% of the participants had a supervisory function. Of the participants, a majority (81.5%) worked in retail, 13.8% worked in governmental functions, and 4.7% was employed in other sectors such as education (3%). Thus, retail employees were overrepresented in the sample, and therefore, we controlled for employment sector.

Measures

Job demands (workload and emotional demands) and autonomy were measured on a general level, whereas job crafting and work engagement on a daily level.

General questionnaire

Workload was assessed with a three-item scale developed by Bakker, Demerouti, and Verbeke (2004) based on Karasek's (1985) job content instrument. A typical item is 'Do you have too much work to do?' Cronbach's alpha was α = .85. *Emotional demands* were measured with the four-item scale of Bakker, Demerouti, and Sanz-Vergel (2014), including 'Do you face emotionally charged situations in your work?' Cronbach's alpha was α = .82. *Autonomy* was assessed with a three-item scale developed by Bakker *et al.* (2004), based on Karasek's (1985) job content instrument (e.g., 'Do you have control over how your work is carried out?'). Cronbach's alpha was α = .82. *Relationship quality* was measured with two positively and two negatively worded items that stem originally from the Dutch Questionnaire of Perception and Judgement of Work (van Veldhoven & Meijman, 1994). Two example items are 'There is a good atmosphere between me and my colleague' and 'I have conflicts with my colleague (reversed coded)'. Cronbach's alpha was α = .72. All items were scored on a 5-point scale, ranging from (1) never to (5) always.

Minimizing demands was assessed with the four-item scale developed by Petrou *et al.* (2012) 'I make sure that my work is cognitively less intense'). *Optimizing demands* was measured by the following five items, which were especially developed for this study: 'I simplify work processes or procedures to make my job easier', 'I come up with solutions to accomplish my work in an easier way', 'I improve work processes or procedures to make my job easier', 'I look for ways to do my work more efficiently', 'I change work processes or procedures which delay my work'. Items were scored on a 5-point scale, ranging from (1) 'never' to (5) 'always'. Cronbach's α for minimizing demands was α = .65 and for optimizing demands α = .83.

Work Engagement was measured with the nine-item version of the Utrecht Work Engagement Scale (Schaufeli *et al.*, 2006), which includes three underlying dimensions, vigour (e.g., 'At my work, I feel bursting with energy'), dedication (e.g., 'My job inspires me'), and absorption (e.g., 'I get carried away when I am working'). Items were scored on a scale ranging from (0) 'never' to (6) 'always'. Cronbach's alpha was α = .94.

Daily diary

Day-level minimizing demands was assessed with the 3-item scale developed by Petrou *et al.* (2012) ('Today, I have made sure that my work is cognitively less intense'). *Day-level optimizing demands* was measured by the same five items that were used in the general questionnaire, which were adjusted to refer to today: 'Today, . . .' 'I have simplified work processes or procedures to make my job easier', 'I have changed work processes or procedures which delayed my work'. All items were scored on a 5-point scale, ranging from (1) 'totally does not apply to me' to (5) 'totally applies to me'. Cronbach's α for minimizing demands ranged from .78 to .82 and for optimizing demands from .87 to .92.

Day-level Work Engagement was measured with the Utrecht Work Engagement Scale (Breevaart, Bakker, Demerouti, & Hetland, 2012) including nine items ('Today, . . .' 'I was enthusiastic about my job', 'I was immersed in my work'). Cronbach's α ranged from .92 to .93. All items were scored on a 5-point scale, ranging from (1) 'totally does not apply to me' to (5) 'totally applies to me'.

Results

First, we performed a multilevel confirmatory factor analysis to examine whether the two dimensions of reduction-oriented job crafting could be discriminated. The analyses were conducted with Mplus, using two-level complex type of analysis and the maximum-likelihood estimator. The model consisted of two latent factors: minimizing demands (three items) and optimizing demands (five items). The two-factor model showed a good fit to the data, χ^2 (39) = 138.32; CFI = .92; RMSEA = .08; SRMR within = .06; SRMR between = .09; AIC = 7,140.47; BIC = 7,302.65, and all indicators had significant factor loadings ($p < .01$) both on the within levels and between levels. The factor loadings of the items of minimizing demands ranged from .35 to .78 on the within level and from .47 to .56 on the between level. Similarly, the factor loadings of the items of optimizing demands were between .48 and .65 (within level) and between .44 and .72 (between level). Next, we tested the one-factor model where all items loaded on one factor, χ^2 (41) = 541.74; CFI = .58; RMSEA = .18; SRMR within = .25; SRMR between = .22; AIC = 7,648.09; BIC = 7,802.37. However, the two-factor model was significantly better than the one-factor model, $\Delta\chi^2$ (2) = 403.42, $p < .001$. This means that the two factors of reduction-oriented job crafting could be discriminated.

The data have a nested structure as days are nested within persons, and persons are nested within dyads. Before testing our hypotheses, we examined the variance components on the three levels of the day-level constructs by calculating the intraclass coefficient. For minimizing demands and optimizing demands, 11.63% and 24.04%, respectively, of the total variance were between persons, and 27.36% and 32.32% were between dyads. For work engagement, 37.78% of the total variance was between persons and 22.11% was between dyads. The within-person variance was high for all criterion variables (i.e., 56.03% for minimizing demands, 48.59% optimizing demands, and 40.09% work engagement). These results support the use of multilevel analysis as a substantial amount of variance was on the three levels.

The MLwiN program (Rasbash, Browne, Healy, Cameron, & Charlton, 2000) was used to test the hypotheses. In all analyses, we controlled for age, family status, whether or not the person had a supervisory function (as there were eight dyads with both employees having supervisory functions and 11 dyads with one employee having a supervisory function), whether or not they worked for the large retail organization that participated in

our study, employment sector, contact time with the colleague, whether they had worked they day before, and the respective general-level job crafting dimension. Controlling for these background variables increases generalizability of our findings and is in line with earlier research (Peeters *et al.*, 2016). Similar to suggested practices (Ohly *et al.*, 2010), all day-level variables were centred around the person-mean (i.e., partner minimizing demands and partner optimizing demands, contact time with the colleague) and all general-level variables were centred around the grand mean (i.e., workload, autonomy, emotional demands, relationship with colleague, age, general crafting dimension).

Means, standard deviations, and correlations among all the study variables are displayed in Table 1. Correlations were calculated using the MLwiN program. To test our hypotheses, we started with a null model that included the intercept as the only predictor. In Model 1, we included all control variables. In Model 2, we entered the main effects, namely the general autonomy, relationship with colleague, workload and emotional demands, and daily minimizing demands or daily optimizing demands of the colleague (when minimizing demands and optimizing demands were dependent variables, respectively). In Model 3, we entered the interaction terms between general-level moderators and daily job crafting of the colleague. We examined fixed effects and tested the improvement of each model over the previous one by computing the differences of their log likelihood statistic -2*log and submitted this difference to a chi-square test.

Prior to testing our hypotheses, we inspected the main effects as well as the effects of the control variables. Multilevel analysis showed that of all control variables age was negatively related to optimizing demands ($t = -3.0$, $p < .05$). Moreover, general-level minimizing demands was positively related to day-level minimizing demands. Thus, the subsequent results hold even after controlling for age, marital status, working for the retail organization, employment sector, the amount of time that the colleagues had contact, whether they had worked the previous day and the general level of the respective job crafting dimension. As can be seen in Tables 2 and 3, of all general-level work characteristics, only workload was positively and the relationship with colleague was negatively related to optimizing demands.

In line with Hypothesis 1a (Table 2) and Hypothesis 1b (Table 3), we found that colleague (sender) minimizing demands was positively related to employee (receiver) minimizing demands, and colleague optimizing demands was positively related to optimizing demands of the employee. In this way, the direct transmission Hypothesis (H1) was supported.

Hypothesis 2 suggests that the relationship with the colleague moderates the transmission of reduction-oriented crafting. Whereas the interaction between colleague day-level minimizing demands and general-level relationship with the colleague was not significant (Table 2), the interaction between colleague day-level optimizing demands and general-level relationship with the colleague was significant (Table 3). As expected, colleague day-level optimizing demands was stronger and positively related to employee's day-level optimizing demands when the relationship with the colleague was of high quality than when this was low (Figure 2). Thus, Hypothesis 2b was supported and 2a had to be rejected.

We found a significant interaction between colleague day-level minimizing demands and general-level emotional demands (Table 2). As expected, colleague day-level minimizing demands was stronger and positively related to employee's day-level minimizing demands when general-level emotional demands was high than when they were low (Figure 3). When emotional demands were low there was no relationship between colleague and employee minimizing demands. These findings provide support

Table 1. Means, standard deviations, and correlations of the study variables, $N = 65$ couples, $N = 130$ participants, and $N = 382$ data points.[a]

	Mean	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Age	36.88	11.29														
2. Supervisory function [b]	0.79	0.41	.08													
3. Working for retail organization [b]	0.72	0.45	−.15**	−.23**												
4. Contact time with colleague [c]	14:54	11:81	.06	.09	.29**											
5. Worked the day previous day [d]	1.36	0.48	.01	.06	−.03	−.03										
6. General-level workload	3.71	0.86	.15**	−.11*	−.07	−.01	−.04									
7. General-level emotional demands	2.30	0.66	.12*	−.20**	−.01	−.10*	−.08	.41**								
8. General-level autonomy	3.99	0.79	.14**	−.28**	.36**	.09	−.07	.21**	.07							
9. General-level relationship with colleague	4.57	0.43	.00	.07	.09	.09	.05	−.11*	−.33**	.14**						
10. General-level minimizing demands	2.19	0.82	−.18**	−.01	−.24**	−.07	−.03	−.11*	−.00	−.26**	−.18**					
11. General-level optimizing demands	3.70	0.61	−.05	−.35**	.07	−.13**	−.17**	.21**	.11*	.17**	.08	.01				
12. Day-level minimizing demands	2.11	0.84	−.10*	−.06	−.17**	−.03	.09	.08	.10*	−.08	−.17**	.38	−.06			
13. Day-level optimizing demands	2.88	0.89	−.16**	−.10	−.03	−.03	−.05	.19**	.07	.05	−.14**	.11*	.10*	.25**		
14. General-level work engagement	4.39	0.96	−.01	−.24**	.28**	−.04	.09	.09	−.08	.39**	.22**	−.21**	.20**	−.02	.00	
15. Day-level work engagement	3.62	0.81	.02	−.13**	.16**	−.07	.02	.07	−.02	.24**	.14**	−.13**	.06	−.02	.15**	.60**

Notes. [a]The categorical, control variables 'employment sector' and 'marital status' are not presented for reasons of simplicity.
[b]0 = yes, 1 = no.
[c]contact time indicates minutes: seconds.
[d]1 = yes 2 = 0.
**correlation is significant at the $p < .01$ level (2-tailed); *correlation is significant at the $p < .05$ level (2-tailed).

Table 2. Multilevel estimates for models predicting day-level minimizing demands of the employee, $N = 65$ couples, $N = 130$ participants, and $N = 382$ data points

	Model 1			Model 2			Model 3		
	Estimate	*SE*	Sign	Estimate	*SE*	Sign	Estimate	*SE*	Sign
Constant [a]	2.825	.404	***	2.657	.383	***	2.477	.338	***
Age (employee)	−0.007	.005		−0.007	.005		−0.007	.005	
Supervisory function	−0.309	.129	*	−0.199	.133		−0.149	.128	
Working for retail organization	−0.257	.149		−0.187	.145		−0.079	.129	
Contact time with colleague (employee)	0.005	.004		0.005	.004		0.003	.004	
Worked the day previous day (employee)	−0.084	.076		−0.094	.076		−0.092	.075	
General-level minimizing demands	0.301	.063	***	0.332	.062	***	0.308	.062	***
General-level workload (employee)				0.092	.061		0.068	.061	
General-level emotional demands (employee)				0.059	.087		0.088	.086	
General-level autonomy (employee)				0.061	.068		0.066	.069	
General-level relationship with colleague (employee)				−0.151	.118		−0.120	.115	
Day-level minimizing demands (colleague)				0.152	.058	**	0.128	.049	**
General-level workload (employee) × Day-level minimizing demands (colleague)							0.075	.061	
General-level emotional demands (employee) × Day-level minimizing demands (colleague)							0.146	.070	*
General-level autonomy (employee) × Day-level minimizing demands (colleague)							−0.137	.064	*

Continued

Table 2. (*Continued*)

	Model 1			Model 2			Model 3		
	Estimate	*SE*	Sign	Estimate	*SE*	Sign	Estimate	*SE*	Sign
General-level relationship with colleague (employee) × Day-level minimizing demands (colleague)							0.060	.112	
−2*log (lh)		817.377			809.291			799.100	
Diff-2*log		51.203	***		8.086	ns		10.191	*
Df		8			5			4	
Between-dyads (level 3) variance	0.142	.042		0.102	.037		0.023	.031	
Between-person (level 2) variance	0.038	.032		0.046	.033		0.099	.042	
Within-person (level 1) variance	0.368	.034		0.386	.034		0.379	.034	

Notes. [a]The categorical, control variables 'employment sector' and 'marital status' are not presented for reasons of simplicity.
*$p < .05$; **$p < .01$; ***$p < .001$; Model 1 was compared to a null model with the intercept as the only predictor ($\gamma = 2.114$; $SE = .072$; $t = 29.361$; −2*log = 868.580; level-1 variance = .390; $SE = .034$; level-2 variance = .081; $SE = .039$; level-3 variance = .225, $SE = .061$.

Table 3. Multilevel estimates for models predicting day-level optimizing demands of the employee, $N = 65$ couples, $N = 130$ participants, and $N = 32$ data points

	Model 1			Model 2			Model 3		
	Estimate	*SE*	Sign	Estimate	*SE*	Sign	Estimate	*SE*	Sign
Constant [a]	3.182	.485	***	2.976	.397	***	2.916	.385	***
Age (employee)	−0.020	.006	***	−0.021	.006	***	−0.018	.006	***
Supervisory function	−0.131	.168		−0.070	.159		−0.045	.154	
Working for retail organization	−0.222	.174		−0.157	.148		−0.162	.143	
Contact time with colleague (employee)	0.001	.004		0.002	.004		0.002	.004	
Worked the day previous day (employee)	−0.020	.079		−0.000	.077		0.017	.077	
General-level optimizing demands	0.167	.105		0.112	.101		0.113	.097	
General-level workload (employee)				0.181	.073	*	0.156	.071	*
General-level emotional demands (employee)				−0.062	.103		−0.074	.101	
General-level autonomy (employee)				0.051	.085		0.070	.083	
General-level relationship with colleague (employee)				−0.229	.133		−0.267	.130	*
Day-level optimizing demands (colleague)				−0.232	.048	**	0.243	.048	**
General-level workload (employee) × Day-level optimizing demands (colleague)							0.030	.062	
General-level emotional demands (employee) × Day-level optimizing demands (colleague)							0.097	.076	
General-level autonomy (employee) × Day-level optimizing demands (colleague)							−0.170	.063	*
General-level relationship with colleague (employee) × Day-level optimizing demands (colleague)							0.312	.129	*
−2*log (lh)		871.970			847.911			835.613	
Diff-2*log		23.063	***		24.059	***		12.298	*
Df		8			5			4	
Between-dyads (level 3) variance	0.173	.061		0.000	.000		0.000	.000	
Between-person (level 2) variance	0.160	.052		0.248	.048		0.223	.045	
Within-person (level 1) variance	0.383	.034		0.373	.033		0.369	.033	

Notes. [a]The categorical, control variables 'employment sector' and 'marital status' are not presented for reasons of simplicity.
*$p < .05$; **$p < .01$; ***$p < .001$; Model 1 was compared to a null model with the intercept as the only predictor ($\gamma = 2.877$; $SE = .076$; $t = 37.855$; −2*log = 895.033; level-1 variance = .380; $SE = .034$; level-2 variance = .188; $SE = .057$; level-3 variance = .214, $SE = .071$).

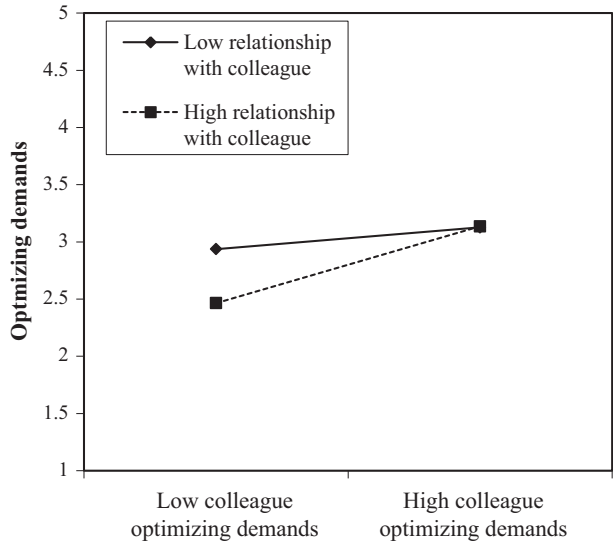

Figure 2. Interaction effect of day-level colleague optimizing demands and general-level relationship with colleague on day-level employee optimizing demands.

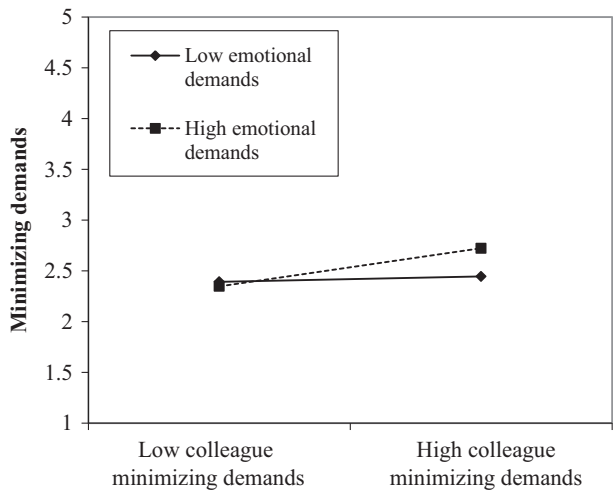

Figure 3. Interaction effect of day-level colleague minimizing demands and general-level emotional demands on day-level employee minimizing demands.

to Hypothesis 3a but only for emotional demands as the interaction between general-level workload and colleague day-level minimizing demands was not significant. As can be seen in Table 3, both interactions between colleague day-level optimizing demands and general-level workload and emotional demands were not significant. Therefore, Hypothesis 3b was not supported.

Hypothesis 4 suggested that the general-level autonomy moderates the transmission of reduction-oriented crafting. As can be seen in Tables 2 and 3, both interactions were

significant. In line with our hypothesis, day-level minimizing demands of the colleague positively related to employee day-level minimizing demands when general autonomy was low and unrelated when it was high (Figure 4). The same pattern emerged for day-level optimizing demands (Figure 5). Thus, Hypotheses 4a and 4b were supported.

Our final Hypothesis (H5) suggested that day-level minimizing demands will be detrimental for day-level work engagement and day-level optimizing demands will be beneficial. In order to test this hypothesis, we controlled for the same control variables (age, marital status, supervisory function, employment sector, working for the retail organization, contact hours with the colleague, yesterday worked) as well as for general-level work engagement. These control variables were entered in Model 1. In Model 2, we entered both dimensions of reduction-oriented job crafting. As can be seen in Table 4, day-level optimizing demands was positively related to day-level work engagement and day-level minimizing demands was unrelated to it. Taken together, Hypothesis 5b was supported whereas Hypothesis 5a had to be rejected. In an additional analysis, we tested whether the day 1 minimizing and optimizing demands predicted day 2 work engagement but this was not the case.

Discussion

The goal of this study was to introduce a new form of reduction-oriented job crafting behaviour, optimizing demands, and to examine whether and under which conditions the two forms of reduction-oriented job crafting (minimizing and optimizing demands) may be transmitted among colleagues. Next, the study aimed to examine the effects of both forms of reduction-oriented job crafting on daily work engagement. Transmission of reduction-oriented crafting through modelling one's colleague was suggested to occur daily. Therefore, we conducted a diary study where two colleagues working together completed diaries on the same consecutive working days. This elaborated research design allowed us to uncover that individuals not only minimize demands, but they also optimize demands and on days that they optimize demands they are more engaged in their job. On

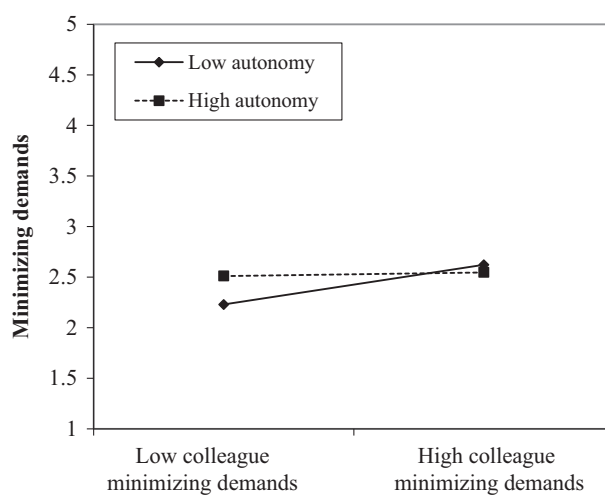

Figure 4. Interaction effect of day-level colleague minimizing demands and general-level autonomy on day-level employee minimizing demands.

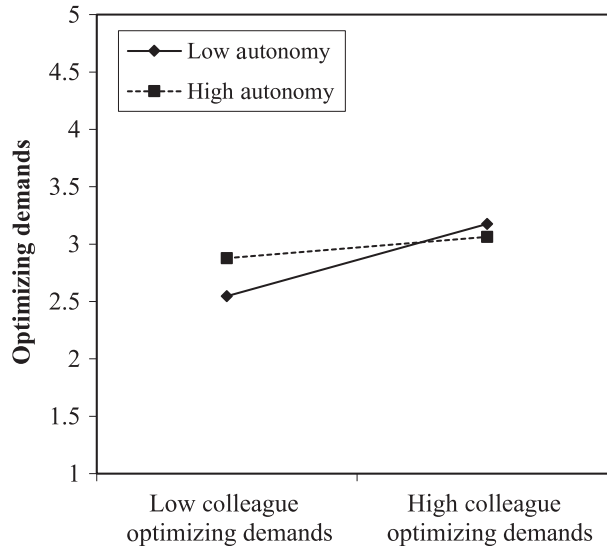

Figure 5. Interaction effect of day-level colleague optimizing demands and general-level autonomy on day-level employee optimizing demands.

days that the colleague minimized or optimized demands, the employee was also more inclined to minimize or optimize demands, respectively, supporting our assertion about the transmission of reduction-oriented crafting. Individuals were more inclined to model the reduction-oriented crafting behaviour of the colleague, when they generally had a job with low autonomy. Employees were more receptive to minimizing demands behaviour of their colleague in emotionally demanding jobs, whereas transmission of optimizing demands among employees occurred particularly when the receiver rated the relationship with the colleague as having high quality. Finally, working smarter (optimizing demands) appeared to make people more engaged in their job whereas working less (reducing demands) appeared to be unrelated to work engagement. These findings make three important contributions.

First, we uncovered that job crafting can represent behaviours that are clearly directed to the management of job demands. Next to minimizing demands, which represents attempts to avoid strenuous aspects of the job, we found that optimizing demands, which represents attempts to make work more efficient and to bypass inefficient work processes, is another form of reduction-oriented crafting. We found that both forms of reduction-oriented job crafting were substantially different, as (a) optimizing demands occurred more often than minimizing demands, (b) the two forms of reduction-oriented crafting were unrelated on the general-level and weakly but positively related on the day-level, and (c) optimizing demands was positively related to daily work engagement, whereas minimizing demands unrelated to daily work engagement. Our results about minimizing demands are in line with earlier studies (Bakker *et al.*, 2016; Petrou *et al.*, 2012; Tims *et al.*, 2012, 2013), which also showed that it is unrelated to work engagement. Some studies have found that minimizing demands is positively related to burnout (Petrou *et al.*, 2015; Tims *et al.*, 2012), which may indicate that employees who attempt to decrease their hindering demands may perceive to have no other options to prevent worse negative health outcomes (Tims *et al.*, 2015). On the contrary, optimizing demands seems to be a constructive form of reduction-oriented crafting and may signify a

Table 4. Multilevel models predicting day-level work engagement of the employee, $N = 65$ couples, $N = 130$ participants, and $N = 382$ data points

Model:	Model 1			Model 2		
Variables	Estimate	*SE*	Sign	Estimate	*SE*	Sign
Intercept [a]	3.446	.327	***	3.397	.3273	***
Age (employee)	0.002	.004		0.001	.004	
Supervisory function	−0.105	.127	–	0.126	.125	
Working for retail organization	0.034	.144		0.071	.144	
Contact time with colleague (employee)	0.000	.000		0.000	.000	
Worked the day previous day (employee)	0.063	.065		0.063	.064	
General work engagement (employee)	0.494	.044	***	0.489	.043	***
Day-level minimizing demands (employee)				−0.048	.042	
Day-level optimizing demands (employee)				0.163	.041	***
$-2 \times$ log			680.523			664.883
$\Delta - 2 \times$ log			109.852***			15.640***
Df			8			2
Between-dyads (Level 3) variance	0.056	.028		0.063	.027	
Between-person (Level 2) variance	0.065	.029		0.056	.057	
Within-person (Level 1) variance	0.269	.024		0.258	.023	

Notes. [a]The categorical, control variables 'employment sector' and 'marital status' are not presented for reasons of simplicity.
***$p < .001$; **$p < .01$; *$p < .05$. Model 1 was compared to a null model with the intercept as the only predictor ($\gamma = 3.611$; $SE = .069$; $t = 60.183$; -2*log = 790.375; level-1 variance = .261; $SE = .023$; level-2 variance = .246; $SE = .059$; level-3 variance = .144; $SE = .062$).

promising strategy that individuals can use to get work done, to get goals accomplished, to overcome the hinder of high workload and other demands, and to improve work processes. The finding that optimizing demands occurred more often than minimizing demands (both on the general level and the day level) justifies the importance of this form of job crafting for daily work. Although the motive to optimize demands may be a self-serving benefit, the fact that this behaviour is positively related with daily work engagement means that such a self-serving benefit may not be counterproductive as work engagement is unrelated to counterproductive work behaviour (Demerouti, Bakker, & Halbesleben, 2015). In sum, we uncovered that reduction-oriented job crafting can have different forms, motives, that is, reactive (minimizing demands) and constructive (optimizing demands), and outcomes, and therefore, we enhanced the validity of job crafting conceptualization on a daily basis by 'unpacking' the adaptive and counterproductive implications of reduction-oriented crafting (cf. Rudolph *et al.*, 2017).

We not only uncovered that reduction-oriented job crafting includes multiple behaviours, but also demonstrated that it can be transmitted between colleagues. Based on social contagion or social impact theory, we suggested that colleagues working together would influence each other's behaviour directly through observation or with a vicarious impact, through learning or verbal persuasion when the receiver perceives the colleague to have positive outcomes from that behaviour (Ferguson, 2007; Manz & Sims, 1981; Robinson

et al., 2014). Especially as proactivity is a characteristic that becomes increasingly important for organizations (Parker *et al.*, 2006), it is even more likely that co-workers observe and model (pro)active, self-steering behaviours because they are aware of the fact that this is highly expected and rewarded behaviour (Bakker *et al.*, 2016; Peeters *et al.*, 2016). The implication of this finding is not only that certain behaviours next to well-being can be transmitted among colleagues (Felps *et al.*, 2009; Zhou, 2003), but also that daily dynamics occur on the work floor and influence the behaviours of employees, which are not in the control of supervisors. Eventually, the crafting behaviour of one employee could influence the daily functioning, such as job performance, of the other employee (through transmission of this behaviour). Our study cannot test whether the transmission of crafting occurs by means of a direct or vicarious impact because we did not measure the possible mechanism, for example, learning, observation, and verbal communication. We cannot exclude the possibility that the transmission was an outcome of ambient impact or spurious crossover according to Westman (2001), whereby the employee is impacted by working in an environment characterized by collective co-worker behaviour rather than the specific co-worker. Therefore, it is essential to develop more understanding of such social phenomena that occur daily at the workplace among colleagues and to zoom into the conditions that facilitate positive behaviours while at the same time blocking the transmission of negative behaviours and experiences (e.g., burnout and aggression).

We uncovered such conditions, and by doing this, we made our final main contribution. We showed not only that direct transmission of reduction-oriented crafting occurs daily among colleagues but also the conditions in which this is more likely to occur: When the colleagues have a good relationship and when they have jobs with unfavourable working conditions, particularly with low autonomy. Having a high-quality relationship with the colleague makes individuals more receptive to learn from colleague's attempts to optimize demands, because they interact more openly and frequently, and they share more sensitive and affective experiences (Dutton & Heaphy, 2003; Walter & Bruch, 2008). However, we failed to find that individuals were more receptive to colleague's minimizing demands behaviour when they appraised their relationship with the colleague as high. Thus, creating a work climate in which people can develop high-quality relationships represents a context that facilitates learning of effective behaviour among colleagues and consequently may contribute to sharing of social norms and to calibrate behaviours that the organization hopes to be adopted by employees. At the same time, such a work climate makes the necessity of reduction-oriented job crafting less emergent probably because of the good collaboration between colleagues.

Moreover, we found that individuals learned from a colleague when they had jobs providing them less autonomy. More specifically, jobs with low autonomy facilitated daily transmission of both forms of reduction-oriented crafting among colleagues because in this particular situation they experienced more urgency to create a more motivating job. Low levels of autonomy acted as reinforcers of modelling behaviour from colleagues, which is a smart strategy to follow because the individuals can observe the consequences of behaviour from their colleague and whether this behaviour resulted to the expected positive outcomes. Lack of decision authority (autonomy) seems to be particularly reinforcing to imitate colleagues' behaviour given the lacking freedom to try out other behaviours, which is by definition a characteristic of experiencing low autonomy.

For job demands, we found some mixed results. High emotional demanding jobs facilitated minimizing rather than optimizing demands behaviour although such behaviour is not effective in increasing the levels of work engagement as was shown or

in lowering the levels of exhaustion (Petrou *et al.*, 2015), but it is effective in reducing daily job demands (Demerouti *et al.*, 2015). Contrary to our expectation, high workload was not a reinforcer for modelling the reduction-oriented crafting behaviour of the colleague, neither for reducing nor for optimizing demands. Perhaps the high workload leaves too few opportunities to experiment with new behaviour because employees are constantly under time pressure to perform or have to deal with tight deadlines, which makes it also difficult to try to reduce or optimize demands.

The implication of these findings is that jobs with less autonomy and better employee relations represent work contexts where social processes among group members may arise. For jobs with high demands, our study does not show a clear picture yet, so this warrants more in-depth research. In our study, we found that such social processes had rather positive outcomes. However, we suggest that it is also relevant to examine whether such social processes triggered by unfavourable working conditions may be related to negative outcomes.

Limitations and future research

A number of limitations must be mentioned. First, our sample size as well as the number of days that was used in this diary study was modest. This may have resulted in insufficient statistical power, which may have restricted the significance of the analyses. Moreover, it could have led to a less reliable assessment of fluctuations in job crafting behaviour. According to Stadler, Robbins, Laurenceau, and Bolger (2013), power in multilevel data is determined not only by the number of observations in level 1 but also by the number of observations in level 2, the variability of the predictor variable and the explained variance in the outcome variable. Stadler *et al.* suggest that adding persons (N of level 2) is preferable than adding an additional time point to increase power. Moreover, Maas and Hox (2005) showed that only a small sample size at level two (a sample of 50 or less) leads to biased estimates of the second-level standard errors, whereas the lowest-level sample size and different variance distributions between the levels (different intraclass correlations) do not seem to influence the accuracy of the estimates substantially.

The second limitation is related to the data collection procedure. Although other daily studies have also used survey packages (e.g., Xanthopoulou, Bakker, Heuven, Demerouti, & Schaufeli, 2008), we are aware that handheld computers provide certain advantages compared to paper-and-pencil diaries such as the verification of the exact time on which the survey was filled in. For this study, this means that we cannot guarantee that participants filled in the daily questionnaires after work each day, and not all at once. However, because of the fact that we found systematic, within-person variance, we think that our participants did not fill in all the daily questionnaires at once. To reduce the possible drawbacks from the use of paper-and-pencil diary, we followed the suggestions of Bolger *et al.* (2003): We used portable booklets, we asked participants to note the date of completion (and confirmed that the dates overlapped between colleagues), maintained ongoing contact with participants.

Another limitation of the present study is that participants chose the colleague of the dyad themselves, which could have been a colleague they liked or had a good relationship with. By testing quality of relationship between the partner and actor as moderator for the transmission of job crafting, we did find significant moderation effects, which indicates that there was sufficient variance in the relationship with the colleague such that the interaction could be significant. However, it is possible that the results regarding the

transmission of job crafting may have been influenced by choice of the colleague thus may not be generalizable to other working dyads within the same work unit.

Also, our measures of reduction-oriented crafting could be susceptible to social desirability. Perhaps individuals reported lower levels of minimizing job crafting in comparison to optimizing job crafting because it is more acceptable to say that one has improved work processes to make the job easier than it is to indicate that one has made sure that the work has become less intense. A final limitation has to do with the design of the study, which is correlational in nature as all variables are measured at the same time (although 3 days in a row). This means that the relationships between the variables are correlational and conclusions about causality should be made with caution. We cannot exclude alternative explanations of our findings.

Practical implications and conclusion

Our findings have some implications for organizations that strive towards proactive and motivated employees. First, organizations and supervisors could stimulate job crafting, and especially the behaviour 'optimizing demands'. Because minimizing demands was not favourable (also not detrimental) for daily work engagement, it does not seem as something to prioritize. As optimizing demands seems beneficial for daily work engagement, it may be a key to create jobs with affordable demands by building on the knowledge and proactive behaviours of the employees who know best how their job can be executed more efficiently. This requires that organizations or, more specifically, supervisors should empower individuals to craft their job to make it fit their needs and preferences and to make work (processes) more efficient. There are different options as for *how* to empower employees. Recently, Heuvel, van den Demerouti, and Peeters (2015)found that a 1,5-day lasting job crafting training can be a promising way to do this. Alternatively, supervisors may act as role models who show and communicate to their employees which job crafting behaviours are accepted in the specific context. Finally, creating an open and collaborative work climate may stimulate employees to model each other and to learn from effective behaviours of their colleagues. Within such informal learning climate, individuals feel safe to ask for feedback and/or experiment with new behaviours. To conclude, encouraging employees to proactively search for smart ways to make their work more efficient may be an important way to contribute to a healthy and motivated workforce particularly when working conditions are unfavourable.

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