

**Structural empowerment in Taylorist contexts: When role ambiguity inhibits
psychological empowerment.**

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Abstract

The current research reports the results from 1 study ($N = 157$) on the role of role ambiguity in preventing structural empowerment to bring about the anticipated psychological empowerment in work environments high in Taylorism. Moreover, we investigated the mitigating effects of mastery achievement goals and proactive personality on the negative effects of role ambiguity. Results from structural equation modelling showed tentative support for the hypotheses that structural empowerment leads to role ambiguity in environments that are perceived as high in Taylorism, whereas role ambiguity in turn weakens the relationship between structural and psychological empowerment. The results provided no support for the mitigating effects of mastery achievement goals and proactive personality on the negative effects of role ambiguity. The article concludes with discussing the implications and shortcomings of the current research, while also outlining avenues for future research.

Abstract: 138 words

Key words: Empowerment, role ambiguity, call centres, Taylorism, mastery achievement goals, proactive personality, education

Structural empowerment in Taylorist contexts: When role ambiguity inhibits psychological empowerment.

The management of a Dutch call centre recently set up a program to empower its service employees. The aim of this program was to increase employees' flexibility and autonomy in decision making in order to fix customer complaints during the first customer contact. Two months after the intervention, management examined whether employees felt more empowered. Although some employees did, others did not. Even worse, some individuals seemed to be more hesitant in making their own decisions. Unfortunately, the effort towards empowerment seemed to have failed and management was disappointed by this result.¹

Although considerable research states that empowerment can yield important benefits for individuals and organizations, such as job enrichment and skill enhancement (Mathieu, Gilson, & Ruddy, 2006), the previous example illustrates that the benefits of empowerment programs are not always realized (Cordery, Morrison, Wright, & Wall, 2010). The current research therefore examines why empowerment efforts do not necessarily translate into psychological empowerment. Firstly, I will argue that the effectiveness of structural empowerment, i.e. policies and practices to decentralize authority throughout the organization (Kanter, 1977), depends on the organizational context (Wall, Cordery, & Clegg, 2002). In contexts characterized as high in Taylorism, i.e. characterized by mass production and the mechanization of work, structural empowerment will likely result in role ambiguity. Put differentially, employees in a Taylorist work environment may feel confronted with vague and unpredictable expectations given the sudden freedom to structure their own workflow (Katz & Kahn, 1978). This uncertainty may prevent that structural empowerment

¹ Personal communication with the customer service and social media department of a Dutch telecom provider 2015

results in the subjective experience of empowerment. Secondly, I will argue that not all individuals may respond negatively to role ambiguity. Individuals high in mastery goals and proactive personality may perceive role ambiguity as a challenge and as an opportunity for learning rather than as a stressful factor. The reappraisal of role ambiguity buffers the negative effects of role ambiguity in preventing the anticipated psychological empowerment.

The current research contributes to the academic literature and to practice in at least three ways. Firstly, it aims to shed light on research ambiguities why the effects of structural empowerment are not always beneficial (e.g. Ahearne, Mathieu, & Rapp, 2005; Cordery et al., 2010; Hui, Au, & Fock, 2005). Instead of taking an individual's perspective that focuses on the perception of empowerment as burdensome by some individuals (e.g. Ahearne et al., 2005), the current research focuses on organizational context. By doing so, it takes a rather new perspective on contradictory findings by looking at the organizational context as a potential moderator. Secondly, the current research looks at individual orientations such as mastery goals and proactive personality in shaping individual psychological empowerment. By doing so, we follow advice from Seibert (2008), and Maynard, Gilson, and Mathieu (2012) that research on empowerment has yet to consider individual orientations. Thirdly, this research provides managerial advice on when the usage of empowerment as a managerial strategy is most effective. By doing so, it provides guidance to organizations how to reap the full benefits from empowerment.

Structural and psychological empowerment

Early work on empowerment developed out of two motivational frameworks: the job characteristics model (Hackman & Oldham, 1980) and Bandura's (1977) work on self-efficacy. These two different foundational literatures gave rise to two distinct conceptualizations of empowerment: structural- and psychological empowerment (Kanter,

1977; Thomas & Velthouse, 1990). Structural empowerment is mainly concerned with structures, policies and practices to decentralize authority throughout the organization. The essence of this perspective is to share power with lower levels of the organizational hierarchy through the delegation of responsibility. Employees at lower levels of the organizational hierarchy can be empowered if they have access to opportunity, information, support and resources which together constitute the construct of structural empowerment (Spreitzer, 2008).

In order to foster structural empowerment, organizations can thus direct organizational practices away from top-down control systems towards high involvement practices where power and knowledge are shared (Bowen & Lawler, 1995). In this perspective, power means having formal authority over organizational resources and the ability to make decisions that fit within the scope of their work (Lawler, 1986). For example, manufacturing employees might not be making decisions about firm strategy but instead make decisions about how and when to do their own work (Spreitzer, 2008). In the domain of a call centre, management can change practices to allow employees to decide on their own how they will deal with customer incidents instead of waiting for the approval from a supervisor or transferring the case to a back office. This would allow employees to fix the customer incident on the first contact and thus exceeding a customer's expectations.

Rather than focusing on structures and policies towards sharing power –as is done in structural empowerment–, the psychological empowerment perspective is focused on how employees experience their work (Thomas & Velthouse, 1990). Psychological empowerment relates to a cognitive state achieved when individuals perceive that they are empowered. Psychological empowerment is usually conceptualized as a composite of four dimensions: meaning, competence, self-determination and impact. Meaning refers to the fit between one's work goals and beliefs or values. Competence is the belief individuals hold regarding their

capability to skilfully perform their work activities. Self-determination considers one's sense of autonomy or control over immediate work behaviours and processes, and reflects choice in initiating and regulating action. Finally, impact is the degree to which individuals view their behaviour as making a difference or the extent to which they have influence on operating outcomes (Spreitzer, 1995).

Since the early 2000s, researchers have started to integrate the structural- and psychological approaches to empowerment to create a comprehensive perspective of the empowerment phenomenon (Menon, 2001). This perspective positions structural empowerment as a necessary antecedent and key predictor of psychological empowerment. The argument is that when management transfers autonomy and responsibility to lower level employees, i.e. fosters structural empowerment, feelings of empowerment should ensue. For instance, management could provide call centre employees with refund and compensation tools providing them with more resources to solve customer cases on the first contact. The provision of these extra tools should then provide the employee with an extra sense of impact as it allows them to solve a wider range of customer service incidents. However, Spreitzer et al., (1997) noted that structural empowerment may not always be effective and lead to psychological empowerment. In fact, Wall (2002) stated that the effectiveness of empowerment practices is contingent on the organizational context; contexts characterized by high uncertainty may fare well with empowerment practices, while contexts characterized by low uncertainty don't. To illustrate, organizations characterized by a Taylorist approach to work such as call centres are very low on uncertainty. These organizations are generally defined by the mechanization of work and widespread target setting which constitute the anti-thesis of empowerment (Wilkinson, 1997). As such, these contexts may especially not be receptive to structural empowerment because of an inherent tension between structural empowerment and Taylorist organizational structures and work practices (Bain et al, 2002).

This tension may therefore give rise to role ambiguity which occurs when employees lack salient information about what is expected of them to effectively enact their roles (Kahn et al., 1964). For instance, many call centres are eaves-dropping their employees' calls and scoring them on pre-defined scoresheets ensuring that all employees espouse the same structured manner of conducting a phone call. Some organizations even go as far as to endorse standardized greetings for all employees regardless of the specific customer they are talking to. These practices disallow employees the freedom to structure customer interactions in their own preferred manner. Indeed, Bowen and Lawler (1995) stated that organizations must change all their policies, practices and structures to create and sustain a state of empowerment. In a similar vein, Menon (1995) found that these formalization practices undermine empowerment fostering an environment of ambiguity. In sum, we believe that structural empowerment will give rise to role ambiguity in Taylorist organizational contexts.

Role ambiguity

The reviewed literature thus suggests that in a Taylorist work environment, structural empowerment may engender role ambiguity. Role ambiguity is defined as the lack of salient information from the environment about what is expected from an employee to effectively enact their roles (Kahn et al., 1964), and is generally considered to constitute a role stressor (Gilboa et al., 2008). In the current research, we propose that structural empowerment results in role ambiguity in a Taylorist environment due to a mismatch between the organizational context and structural empowerment. Furthermore, we propose that structural empowerment only results in psychological empowerment when role ambiguity remains low. Firstly, role ambiguity threatens employees' self-efficacy beliefs, which are strongly related to the competence dimension of psychological empowerment (Hartline & Ferrel, 1996). By preventing individuals to feel competent about the extra power that now comes with their role, high role ambiguity will undermine structural empowerment to result in psychological

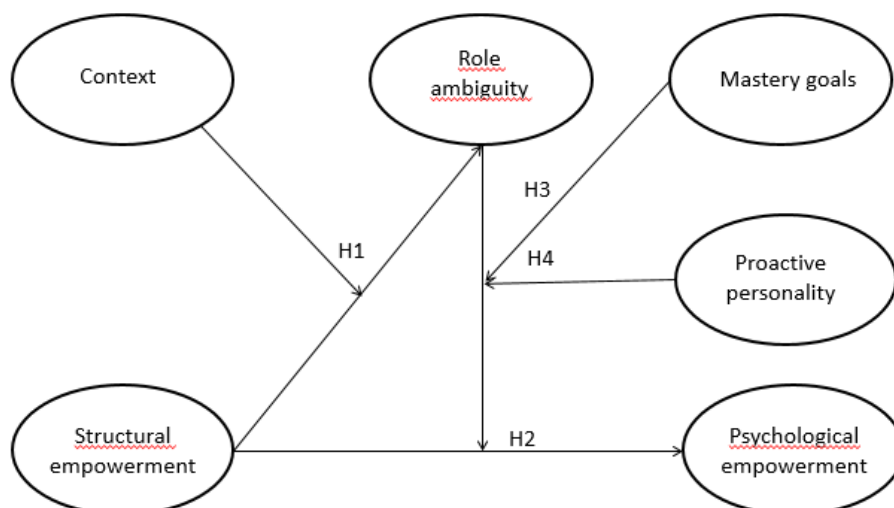
empowerment. Secondly, if individuals are unsure about what is expected of them, they may hesitate to act (i.e. lack self-determination). Even though they may hold some formal power, they can be unsure about the extent of their power preventing structural empowerment to lead to psychological empowerment. Thirdly, when high role ambiguity inhibits individuals to act under conditions where power is shared, they are unable to make a difference (i.e., lack impact) (Spreitzer, 1996). All in all, we believe that structural empowerment will not result in psychological empowerment under high role ambiguity. Based on the previous information, we hypothesize the following:

H1: The relationship between structural empowerment and role ambiguity is moderated by context - only when the Taylorism is high, structural empowerment is positively associated with role ambiguity.

H2: The relationship between structural and psychological empowerment is moderated by role ambiguity – only when role ambiguity is low, structural empowerment is positively associated with psychological empowerment².

Figure 1: The hypothesized research model

² We assume this relationship to be independent of the organizational context



Empowerment, role ambiguity, mastery goals and proactive personality

The appraisal of any role stressor such as role ambiguity is suggested to reflect two basic dimensions: a threat or hindrance dimension and challenge dimension (LePine et al., 2005). The first dimension of threat is negatively associated with an individual's well-being, while the second dimension of challenge can be positively associated with one's well-being. The interaction of threat and challenge appraisals synergistically leads to one's overall assessment of the stressfulness of a stressor. While role ambiguity is typically considered a hindrance stressor, not all individuals may appraise role ambiguity as stressful (Gilboa et al., LePine et al., 2005; 2008; Rodell & Judge, 2009). In particular, some individuals may be more likely to appraise role ambiguity as a challenge or as an opportunity to serve their own needs and goals (e.g. Maynard, Gilson, & Mathieu, 2012). The constructs of mastery goals and proactive personality may be especially relevant here due to their emphasis on reappraising ambiguous situations and seizing upon their opportunities and challenges (Bagger & Li, 2008; Bateman & Crant, 1993; Dweck & Leggett, 1988).

Mastery goals are focused on the development of competence through task mastery (Elliot & McGregor, 2001) and are part of the 2 × 2 achievement goal framework (Elliot,

1999; Elliot & McGregor, 2001). Competence is at the core of this model. Competence and achievement goals can be differentiated along two independent competence dimensions: the definition and the valence dimensions. Firstly, the definition dimension forms the basis of the mastery-performance distinction and states that competence can be defined according to an absolute or intrapersonal standard (mastery) or relative to a normative standard (performance). Mastery-based standards tend to focus individuals on learning, whereas performance-based standards tend to focus individuals on performing (Dweck, 1986). Secondly, the valence dimension of competence forms the basis of the approach-avoidance distinction and states that competence can be valenced in terms of its focus on the possibility of success (i.e. approach) or the possibility of failure (i.e. avoidance) (Elliot & Harackiewicz, 1996). Combining the mastery-performance and approach-avoidance distinctions leads to four different types of achievement goals: mastery-approach (focused on attaining task-based or intrapersonal competence), performance-approach (focused on attaining normative competence), mastery-avoidance (focused on avoiding task-based or intrapersonal incompetence), and performance-avoidance (focused on avoiding normative incompetence) (Elliot & Murayama, 2008). In this research we focus on the mastery-approach goals and we will use the terms mastery goals and mastery-approach goals interchangeably.

Individuals high in mastery goals seek challenging tasks. They are also self-driven and persistent in the face of obstacles (Rawsthorne & Elliot, 1999). They may therefore see the uncertainties and extra responsibilities that come with role ambiguity as positive challenges that can help them to enhance their abilities (Humborstad, Nerstad, & Dysvik, 2014; Li & Bagger, 2008). Indeed, previous research by Dweck and Leggett (1988) has shown that that these individuals tend to view a challenging situation as an opportunity to advance their abilities. Individuals high in mastery goals would confront a challenge head-on, becoming intrinsically involved in the task and expending extra effort. These characteristics

enable them to remain resilient and see the positive side in difficult situations, as well as allow them to acquire the competence to overcome role ambiguity and to perform effectively at work (Li & Bagger, 2008). For instance, a call centre employee high in mastery goals would try to scout for additional information by asking their supervisor for advice how to deal with a particular type of customer incident and would consequently put in their best effort to satisfy the customer. High mastery goals may therefore attenuate the negative effects of role ambiguity in preventing structural empowerment to lead to psychological empowerment.

Proactive personality is usually conceptualized as a dispositional construct capturing a self-starting approach to work (Bateman & Crant, 1993) and reflects a willingness to change (Fuller & Marler, 2009). It relates to a disposition toward taking action to influence one's environment. Proactive people seek out opportunities and show initiative to bring about meaningful change (Bateman & Crant, 1993). Proactive individuals also have a natural proclivity to show proactive behaviours, which are a necessity to make sense of weak or ambiguous situations (Spreitzer, 2008). One such activity is seeking feedback. Research on feedback seeking (Ashford & Cummings, 1985; Crant, 2000) indeed found that individuals high in proactive personality were more likely to seek feedback when the environment was ambiguous. Consequently, by making sense of their environment and by capitalizing upon the opportunity that role ambiguity may offer, individuals with a proactive personality can overcome the negative effects of role ambiguity. For instance, a call centre employee high in proactive personality may be asking their team- or project manager about the prescribed way to deal with customer service request. The call centre employee, having overcome the situation of ambiguity, can then act upon this information and satisfactorily serve their customer. All in all, a high proactive personality may attenuate the negative effects of role

ambiguity in preventing structural empowerment to lead to psychological empowerment.

Based on the previous information, we hypothesize the following:

H3: We expect a three-way interaction between structural empowerment, role ambiguity and mastery goals: Mastery goals will attenuate the influence of high role ambiguity on the relationship between structural and psychological empowerment such that the relationship between structural and psychological empowerment remains positive.

H4: We expect a three-way interaction between structural empowerment, role ambiguity and proactive personality: Proactive personality will attenuate the influence of high role ambiguity on the relationship between structural and psychological empowerment such that the relationship between structural and psychological empowerment remains positive.

Methods

Participants and procedure

This study was conducted as a field study among customer service employees working in call centres, and educational staff working in high schools in the greater Amsterdam area. Participants filled out an online survey which they received from their executives. After one reminder, two hundred and two respondents had filled out the survey, from which one hundred and fifty-seven had answered at least ten out of twelve questions on the main variables psychological empowerment and structural empowerment. Of these respondents, seventy-eight worked in customer service and seventy-nine worked in education.

The customer service sample constituted of 47% males, 50% females and 3% stated their gender as other. They had an average age of 33 years ($SD = 12.17$). Participants had an average tenure of 2.1 years ($SD = 4.11$) within the organization. 62% of the sample worked more than 32 hours per week and were classified as full-time, while 33% worked less than 32 hours per week and were thus classified as part-time. 7.6% of the participants did not state the amount of hours worked per week. 51% of the customer service sample was highly educated holding a bachelor's degree, while 49% of the sample was lowly educated.

The education sample constituted of 40% males and 60% females. They had an average age of 46 years ($SD = 11.96$). Participants had an average tenure with the organization of 11.4 years ($SD = 11.13$). 35% of the sample worked more than 32 hours per week and were classified as full-time, while 63% worked less than 32 hours per week and were thus classified as part-time. 2% of the participants did not state the amount of hours worked per week. 81% of the education sample was highly educated holding a bachelor's degree while 19% of this sample was lowly educated.

There were several differences between the customer service and education samples. Firstly, the customer service sample was significantly younger than education sample ($M = 33.28$ $SD = 12.23$ vs $M = 46.01$ $SD = 11.87$, $t(153.86) = 6.60$, $p < .001$). Secondly, the customer service sample had a lower percentage of highly educated employees than the education sample ($p = 51\%$ vs $p = 81\%$, $\chi^2(1) = 14.21$, $p < .01$). Thirdly, the customer service sample had a significantly higher percentage of individuals that worked full time as compared to the education sample ($p = 62\%$ vs $p = 35\%$, $\chi^2(1) = 10.64$, $p < .01$). Fourthly, the customer sample had significantly lower tenure within the organization than the education sample ($M = 2.1$ $SD = 4.11$ vs $M = 11.4$ $SD = 11.13$, $t(98.07) = 7.03$, $p < .01$). There were no significant differences in gender between the customer service and education samples, $\chi^2(2) = 3.45$, $p = .18$.

Materials

All items were measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). All reliability indices were calculated based on the combined customer service and education samples.

Taylorism (context). Taylorism, the context check used in this study, was measured by using the subscale task simplicity (e.g. “*The tasks I do on my job are simple and uncomplicated*”) from the multimethod job design questionnaire (MJDQ) as developed by Campion (1988). Simplicity constitutes an important component of Taylorism as this captures the mechanistic approach to work (Bain et al, 2002). The scale displayed a satisfying reliability, $\alpha = .71$. The full scale can be found in appendix A.

Structural empowerment. Structural empowerment was measured using the subscales (a) opportunity ($\alpha = 0.84$), (b) information ($\alpha = .89$), (c) support ($\alpha = .84$), and (d) resources ($\alpha = .77$) from the CWEQ-2 (Laschinger, Finegan, Shamian, & Wilk, 2001). Each subscale

had 3 items. Confirmatory factor analyses showed that the four factor model where each factor was allowed to co-vary revealed the best factor structure ($\chi^2(48) = 76.34$, CFI = .97, RMSEA = .06)³. Example items of each subscale include “*How much of each kind of opportunity do you have in your present job: Challenging work*”, “*How much access to information do you have in your present job: The current state of the organization*”, “*How much access to support do you have in your present job: Specific information about things you do well*”, and “*How much access to resources do you have in your present job: Time available to do necessary paperwork*”. The full scale can be found in appendix A.

Psychological empowerment. Psychological empowerment was measured using the subscales (a) meaning ($\alpha = .90$), (b) competence ($\alpha = .81$), (c) self-determination ($\alpha = .88$), and (d) impact ($\alpha = .92$) from a 12- item scale developed by Spreitzer (1995). Each subscale had three items each. Confirmatory factor analyses showed that the four factor model where each factor was allowed to co-vary did not reveal a significantly worse fit than the four factor model with psychological empowerment as a higher order factor and was therefore selected because of parsimony ($\chi^2(48) = 69.51$, CFI = .98, RMSEA = .05)⁴. Example items of each subscale include “*The work I do is very important for me*”, “*I am confident about my ability to do my job*”, “*I have significant autonomy in determining how I do my job*”, and “*My impact on what happens in my department is large*”. The full scale can be found in appendix A.

Role ambiguity. Role ambiguity was measured by using a 6-item scale developed by Rizzo, House, and Lirtzman (1970). The scale had a good reliability ($\alpha = .82$). An example

³ See the sub section factor analyses in the results section for more information on how models were compared.

⁴ See the sub section factor analyses in the results section for a more elaborate discussion on this.

item includes “*I feel secure about how much authority I have*”. The full scale can be found in appendix A.

Mastery achievement goals. Mastery achievement goals were measured using three items from the revised achievement goal questionnaire (AGQ-R) developed by Elliot and Murayama (2008). The scale had a good reliability ($\alpha = .81$). A sample item includes “*My goal in my work is to improve myself*”. The full scale can be found in appendix A.

Proactive personality. Proactive personality was measured using a 6-item adaptation of Bateman and Crant’s (1993) Proactive Personality Scale. We chose to use the 6-item adaptation instead of the 10-item adaptation because research on Dutch speaking samples has shown the 6-item scale, in contrast to the 10-item scale, to be unidimensional (Claes, Beheydt, & Lemmens, 2005). The scale had a reasonable reliability ($\alpha = .74$). A sample item includes “*If I see something I don’t like, I fix it*”. The full scale can be found in appendix A.

Control variables. Because several individual characteristics such as age, education level and tenure reflect the level of knowledge or skill that individuals bring to work, these variables should be positively associated with one’s ability to take action and one’s ability to have a positive impact in the workplace (i.e. core components of psychological empowerment). Indeed, Seibert et al. (2011) found age and tenure but not education to be associated with psychological empowerment in a meta-analysis. We therefore included age and tenure as control variables in this research⁵. Age was measured by a single question that asked participants to indicate their age on a continuous scale. Tenure was measured by asking people to indicate in years and months how long they have been working in their current position. The month field was included because the customer service industry has a relatively

⁵ See the discussion section for a discussion on why gender and work hours were not included as covariates in this research even though there were significant differences between the samples.

high turnover and as such, a large share of employees was expected to work in their current position for less than a year.

Results

Preliminary analyses

Before testing the hypotheses, we conducted the following pre analyses: (a) imputation of missing values (b) detection of multivariate outliers (c) confirmatory factor analyses (d) invariance checking between the customer service and education samples

Multiple imputation. We used the R package mice (van Buuren & Groothuis-Oudshoorn, 2011) to impute missing values of the variables of interest such as structural-, psychological empowerment, role ambiguity, mastery achievement goals, proactive personality and Taylorism. The number of imputations was set to fifty and the method for all continuous variables was set to predictive mean matching to ensure that the imputed values were always within the range of the observed values (van Buuren & Groothuis-Oudshoorn, 2011). At last, the mean of all imputed values was taken for each missing value.

Outliers. After imputing all missing values, the variable structural empowerment was checked for multivariate outliers. Outlier detection was done separately for the customer service and education samples. An outlier analysis based on the Mahalanobis distance indicated that there were 2 outliers in the education sample and 4 outliers in the customer service sample which were removed from any further analyses.

Factor analyses. After removing the outliers, confirmatory factor analyses (CFAs) were conducted to assess the measurement models of structural- and psychological empowerment. All model results can be found in Table 1. Firstly, we tested a null model for structural empowerment where all items were forced to load upon 1 factor. As can be seen in Table 1, this model displayed a very poor fit. We subsequently tested a four factor model where each factor co-varied with another. This model displayed a significantly better fit than the 1 factor model, $\chi^2(6) = 380.21, p < .001$. We subsequently tested a second-order

measurement model of structural empowerment where opportunity, information, support and resources constitute the first-order latent variables. This model displayed a significantly worse fit than the previous four factor model with covariance between the factors, $\chi^2(2) = 18.08, p < .001$. Hence, we adopted the four factor model. To calculate the variable for structural empowerment, we averaged the items of each factor and then took the global average of the four factors to represent a participant's score on structural empowerment (for similar practice, see Patrick & Laschinger, 2006).

Secondly, we tested a null model for psychological empowerment where all items were forced to load upon 1 factor. As can be seen in Table 1, this model displayed a very poor fit. We subsequently tested a four factor model where each factor co-varied with another. This model displayed a significantly better fit than the 1 factor model, $\chi^2(6) = 512.32, p < .001$. We then tested a second-order measurement model of psychological empowerment where meaning, competence, self-determination and impact constitute the first-order latent variables. This model did not fit significantly better than the more parsimonious four factor model, $\chi^2(2) = 2.27, p = .32$. Hence, we adopted the four factor model. To calculate the variable for psychological empowerment, we averaged the items of each factor and then took the global average of the four factors to represent a participant's score on psychological empowerment (for similar practice, see Chen & Klimoski, 2003; Erdogan & Bauer, 2009).

Thirdly, we tested the unidimensionality of the constructs role ambiguity, mastery achievement goals, proactive personality and Taylorism. Although a principal component analysis (PCA) of proactive personality displayed two factors with eigenvalues larger than 1, the scree plot displayed a sharp drop in variance explained after one factor which allows for the acceptance of a single factor structure (Field, Miles, & Field, 2012). All other variables displayed a satisfying factor structure and hence the average was taken of their indicators.

Table 1: Measurement model comparisons of structural- and psychological empowerment

Model	df	χ^2	CFI	RMSEA
1. One factor model structural empowerment	54	456.55**	.58	.22
2. Four factor model structural empowerment with covariance	48	76.34**	.97	.06
3. Second-order model of structural empowerment	50	89.74**	.96	.07
4. One factor model psychological empowerment	54	579.96**	.54	.25
5. Four factor model psychological empowerment with covariance	48	67.64*	.98	.05
6. Second-order model of psychological empowerment	50	69.92*	.98	.05

Note. $N = 151$, CFI = comparative fit index, RMSEA = root-mean-square error of approximation, * $p < .05$, ** $p < .01$

Invariance testing. Following the establishment of the factor structure of the variables in the model, we used the R package *semTools* to test for measurement invariance. We tested for both configural and measurement invariance because these invariance hypotheses indicate that the constructs and the scores on the constructs have the same meaning across groups (Kline, 2011).

Firstly, we tested for invariance of core variables of the model (i.e. structural empowerment, role ambiguity and psychological empowerment) between the customer service and education samples because this allowed us to do more focussed tests on which items and subscales potentially caused measurement variance. This model specifically tested structural empowerment characterized as a four factor model where opportunity, information, support and resources each constitute a latent variable, psychological empowerment as a four factor model where meaning, competence, self-determination and impact each constitute a latent variable and role ambiguity as a single factor with 6 indicators. This model rendered a *CFI* of 0.88 and a *RMSEA* of 0.08 for configural invariance and a *CFI* of 0.87 and a *RMSEA*

of 0.08 for measurement invariance. Although the RMSEA is sufficient, the CFI is below the threshold of 0.90 (Kline, 2011).

Following these results, we checked which sub-items caused the measurement variance. Although we identified measurement invariance on structural empowerment, we found that the competence indicators (i.e. indicators related to the belief that individuals hold regarding their capability to skilfully perform their work activities) were responsible for the lack of invariance on psychological empowerment. Furthermore, the items “*Clear, planned goals and objectives exist for my job*” and “*Explanation is clear of what has to be done*” caused the lack of invariance on role ambiguity. This may be due to the fact that all other items of role ambiguity are actively formulated and the passive formulation of these two items could have increased their difficulty for the lowlier educated customer service sample. Because it is important that constructs are conceptually equivalent across groups to make meaningful comparisons, the model was again tested without these two items of role ambiguity and without the competence items of psychological empowerment. This model rendered a *CFI* of 0.92 and a *RMSEA* of 0.07 for configural invariance and a *CFI* of 0.91 and a *RMSEA* of 0.07 for measurement invariance. We thus achieved measurement invariance on the core of the research model by removing two items of role ambiguity and the competence items of psychological empowerment.

Secondly, we tested for invariance of the personality variables of the model (i.e. mastery achievement goals and proactive personality). This model specifically tested mastery achievement goals as a single factor with 3 indicators and proactive personality as a single factor with 6 indicators. By focusing on just the personality variables of the model again allowed us to do more focussed tests on which items potentially caused measurement variance. The model rendered a *CFI* of 0.82 and a *RMSEA* of 0.13 for configural invariance and a *CFI* of 0.82 and *RMSEA* of 0.12 on measurement invariance. Following these results,

we checked which sub-items caused the measurement variance. We found that the items “If I believe in an idea, no obstacle will prevent me from making it happen” and “If I see something I don’t like, I fix it” of proactive personality were responsible for the measurement variance. The variance may be due to the fact that these two items are the only items formulated as conditionals which, surprisingly, are evaluated differently across the two samples. Because it is important that constructs are conceptually equivalent across groups to make meaningful comparisons, the model was tested again without these two items. The new model with 3 items of mastery achievement goals and 4 items of proactive personality displayed a *CFI* of 0.95 and a *RMSEA* of 0.08 for configural invariance and a *CFI* of 0.94 and a *RMSEA* of 0.08 for measurement invariance. We thus achieved measurement invariance on the personality variables of the model by removing two items of proactive personality.

Descriptive analyses

Prior to testing the hypotheses, the ratings of participants on the constructs of interest were averaged across items. The means, standard deviations, correlations and scale reliabilities can be found in Table 2.

Table 2: Descriptive statistics for all study variables across samples

Variables	Mean	SD	1	2	3	4	5	6	7	8
	s									
1. Age	39.98	13.45	-							
2. Tenure	6.86	9.65	.63**	-						
3. Taylorism	2.81	0.92	-.30**	-.21**	(.71)					
4. Structural empowerment	2.85	0.65	-.10	-.01	.00	(.73)				
5. Role ambiguity	2.25	0.65	-.16*	-.25**	-.07	-.34**	(.77)			
6. Mastery achievement goals	3.92	0.62	-.17*	-.13	.09	.07	-.27**	(.81)		

7. Proactive personality	3.76	0.53	-.05	.00	.05	.03	-.10	.20*	(.63)
8. Psychological empowerment	3.30	0.75	.11	.27**	-.24**	.44**	-.40**	.09	.10	(.73)

Note. Diagonal entries between parentheses are scale reliabilities. $N = 151$, * $p < .05$, ** $p < .01$

Confirmatory analyses

In the previous sections, we imputed missing values of all variables in the research model, removed 6 multivariate outliers, and verified the factor structure of the research variables. We also established measurement invariance between the customer service and education samples by removing the competence items of psychological empowerment and by removing 2 items from each role ambiguity and proactive personality. We then took the average of all items of each variable to calculate a mean score for each construct. Lastly, we added the customer service and education samples together. In this section, we will firstly check the assumption that the customer service sample is higher in Taylorism than the education sample. We will subsequently test all hypotheses using multi-group structural equation modelling.

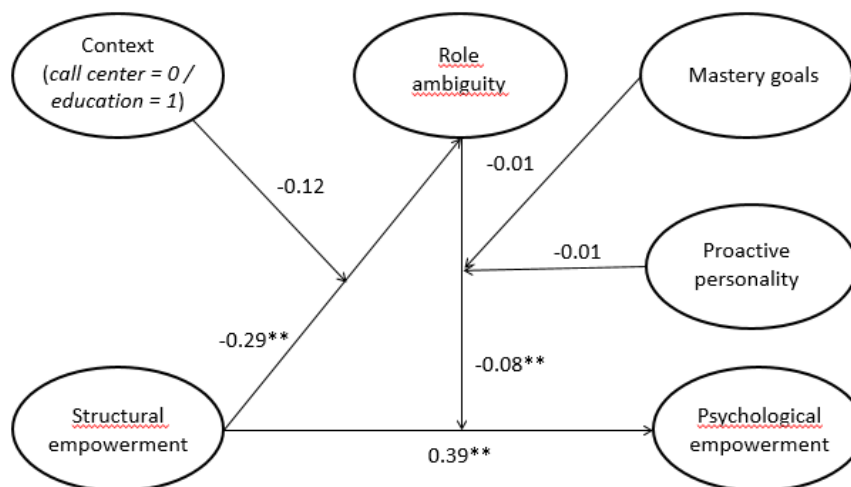
Assumptions check. In order to test whether the customer service context was higher in Taylorism than the education context, we conducted a t test with as independent variable industry and as dependent variable Taylorism. The t test proved to be significant; the customer service sample scored higher in Taylorism than the education sample ($M = 3.24$, $SD = 0.86$ vs $M = 2.40$, $SD = 0.78$, $t(145.76) = 6.27$, $p < .001$). Our assumption that the customer service sample was higher in Taylorism than the education sample was thus supported.

Hypothesis testing. Because we achieved measurement invariance on all research variables, we tested the hypothesized model depicted in figure 1 by using multi-group structural equation modelling. All paths were constrained to be the same across groups except

for the path from structural empowerment to role ambiguity which was allowed to vary across the customer service and education samples. The model also included the covariates age and tenure on the path to role ambiguity and on the path to psychological empowerment.

The hypothesized model displayed a poor fit $\chi^2(12) = 39.48, p < .01, CFI = .75, RMSEA = .18$. Furthermore, the covariate age did not have a significant relationship with role ambiguity ($\beta = -0.002, SE = 0.005, p = .68$) and psychological empowerment ($\beta = -0.003, SE = 0.004, p = .47$). However, the covariate tenure was significantly related to role ambiguity ($\beta = -0.014, SE = 0.007, p < .05$), but not to psychological empowerment ($\beta = -0.004, SE = 0.005, p = .52$).

Figure 2: The hypothesized research model with coefficients



$N = 149^6$, * $p < .05$, ** $p < .01$

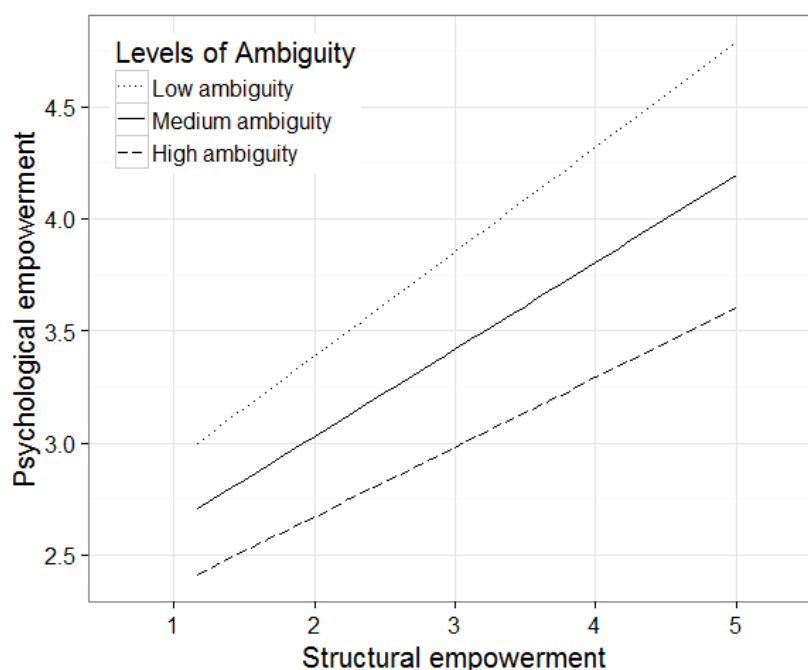
Hypothesis 1 stated that the relationship between structural empowerment and role ambiguity is moderated by context such that only when Taylorism is high (i.e. customer service context), structural empowerment is positively associated with role ambiguity.

⁶ The sample size was 149 instead of 151 for testing the model, because two participants had missing values on the covariates age and tenure

However, structural empowerment was negatively associated with role ambiguity in both the education sample ($\beta = -0.41$, $SE = 0.10$, $p < .01$) and customer service sample ($\beta = -0.29$, $SE = 0.11$, $p < .01$). Hypothesis 1 was therefore not confirmed.

Hypothesis 2 stated that the relationship between structural- and psychological empowerment would be moderated by role ambiguity for both the customer service and education sample. It also predicted that there would be no relationship between structural empowerment and psychological empowerment under high role ambiguity. Indeed, the interaction term of structural empowerment and role ambiguity on psychological empowerment proved to be significant ($\beta = -0.08$, $SE = 0.03$, $p < .01$). Figure 3 shows that the relationship between structural empowerment and psychological empowerment is stronger when role ambiguity is low. However, there is also a relationship between structural empowerment and psychological empowerment when role ambiguity is high, although this relationship is weaker. Hypothesis 2 is therefore tentatively confirmed.

Figure 3. Interaction between role ambiguity and structural empowerment on psychological empowerment



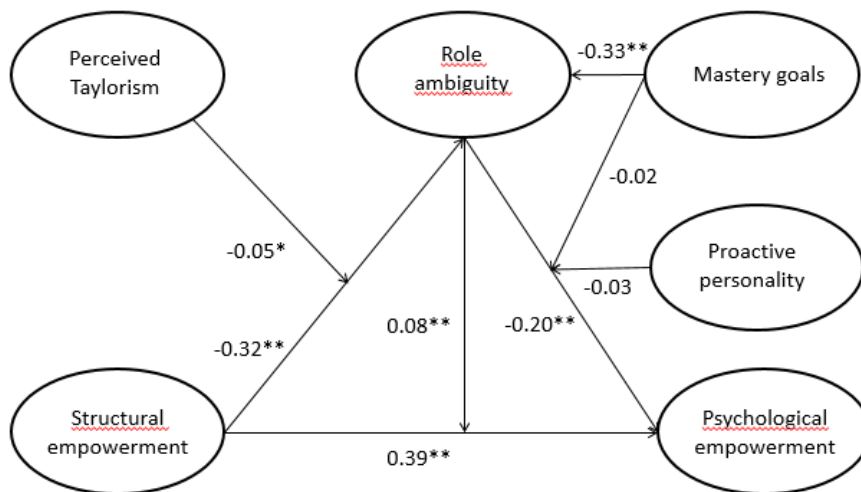
Hypothesis 3 assumed a three-way interaction between structural empowerment, role ambiguity and a mastery achievement goals on psychological empowerment. This interaction term was, however, not significant ($\beta = -0.006$, $SE = 0.006$, $p = .28$). Hypothesis 3 was therefore not confirmed.

Hypothesis 4 also assumed a three-way interaction between structural empowerment, role ambiguity and proactive personality. This interaction term was not significant ($\beta = -0.011$, $SE = 0.007$, $p = .13$). Hypothesis 4 was therefore not confirmed.

Exploratory analyses

In order to improve model fit, we made three changes to the hypothesized model. First, we inspected the modification indices of the model that was tested in Figure 1. The biggest improvement in model fit was suggested by a path between mastery goals and role ambiguity. Because earlier research had also proposed mastery goals and role ambiguity to be related (Li & Bagger, 2008), this path was added. Second, we replaced the multi-group variable context by the variable perceived Taylorism. We did so because we used a subjective measure of Taylorism which allowed for large intra-industry differences in perceived Taylorism. Third, we removed the non-significant three-way interactions between structural empowerment, role ambiguity and mastery goals and between structural empowerment, role ambiguity and proactive personality. This decision was motivated by the lack of power in testing three-way interactions with our current sample size (Dawson & Richter, 2006). The modified model that was tested is depicted in Figure 4.

Figure 4. Modified model based on modification indices



N = 149 * $p < .05$, ** $p < .01$

The modified model showed significantly better fit than the original research model, $\chi^2(3) = 16.16, p < .01$. Also, the modified model fitted significantly better than the baseline model, $\chi^2(11) = 109.46, p < .01$ and did not fit worse than the saturated model, $\chi^2(19) = 23.31, p = .77^7$. All other model statistics are displayed in Table 3.

Table 3: Model comparisons of all structural models

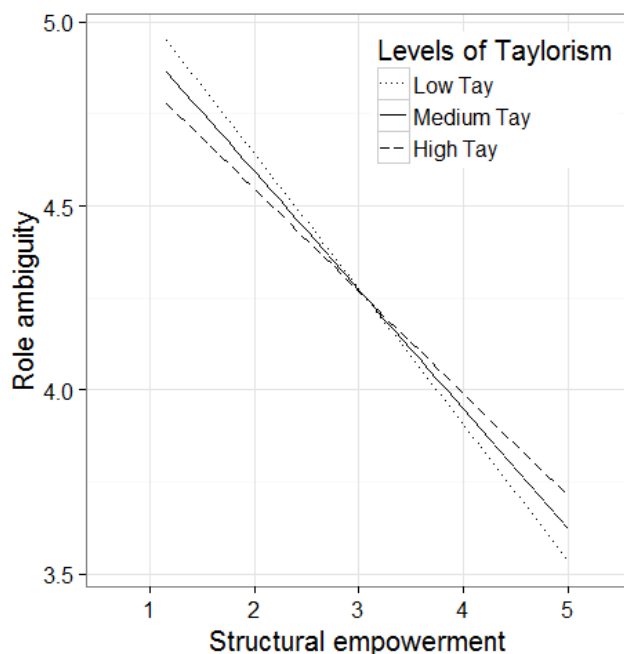
Model	df	χ^2	CFI	RMSEA
1. Saturated model	0	0	NA	NA
2. Baseline model	26	132.77**	1	1
3. Hypothesized model	12	39.48**	.75	.18
4. Modified model	15	23.31	.92	.09

Note. N = 149, CFI = comparative fit index, RMSEA = root-mean-square error of approximation, * $p < .05$, ** $p < .01$

⁷ Chi square of the baseline model was calculated by $-2 \times (\text{the log likelihood of the modified model} - \text{the log likelihood of the baseline model})$ which was then tested the number of free parameters in the modified model

Just as in the original model, there were significant main effects of structural empowerment on role ambiguity ($\beta = -0.32, SE = 0.07, p < .01$), structural empowerment on psychological empowerment ($\beta = 0.39, SE = 0.07, p < .01$), role ambiguity on psychological empowerment ($\beta = -0.20, SE = 0.08, p < .01$) and a significant interaction effect of role ambiguity and structural empowerment ($\beta = -0.08, SE = 0.03, p < .01$). However, the modified model also revealed a significant interaction between structural empowerment and perceived Taylorism ($\beta = 0.05, SE = 0.021, p < .05$). Figure 4 shows that the relationship between structural empowerment and role ambiguity is weaker when perceived Taylorism is high, lending indirect support for the notion that structural empowerment in Taylorist environments is less effective. The modified model furthermore revealed a significant main effect of mastery goals on role ambiguity ($\beta = -0.33, SE = 0.07, p < .01$) indicating that higher mastery goals are associated with lower role ambiguity.

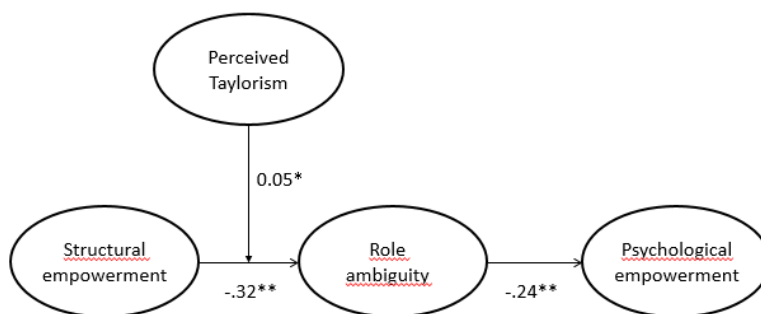
Figure 4: Interaction structural empowerment and Taylorism on role ambiguity



Because we found strong main effects and strong correlations between structural empowerment and role ambiguity, and between role ambiguity and psychological

empowerment, we probed the idea that role ambiguity mediates the path between structural empowerment and psychological empowerment. The new model is displayed in figure 5 and was also tested using the lavaan package in R (Rosseel, 2012). Just as in the modified model, there were significant main effects of structural empowerment on role ambiguity ($\beta = -0.32$, $SE = 0.07$, $p < .01$) and role ambiguity on psychological empowerment ($\beta = -0.24$, $SE = 0.09$, $p < .01$) and a significant interaction effect of perceived Taylorism and structural empowerment ($\beta = 0.05$, $SE = 0.02$, $p < .05$). Furthermore, we found an indirect effect of 0.08. To test for significance of this indirect effect, we calculated a 95% confidence interval on 10000 bootstrap samples. Our confidence interval of the indirect effect ran from 0.0045 to 0.15. As this confidence interval does not contain 0, role ambiguity significantly mediates the relationship between structural empowerment and psychological empowerment. Thus, we also found evidence for a mediating role of role ambiguity.

Figure 5: Mediation model where role ambiguity mediates the path between structural and psychological empowerment



$N = 149$ * $p < .05$, ** $p < .01$

Discussion

Empowerment is an important managerial practice: at least 70% of all organizations strive to empower their employees (e.g. Lawler, Mohrman, & Benson, 2001). Numerous studies have shown that these empowerment practices can result in important outcomes such as job enrichment, skill enhancement, feelings of meaning, competence, and self-determination –in short: structural empowerment practices often result in psychological empowerment (e.g., Mathieu et al., 2006; Menon, 2001). Yet, the benefits of empowerment practices are not always realized (Corderoy et al., 2010). The purpose of the current study was to investigate why empowerment efforts (i.e., structural empowerment) do not necessarily lead to the desired psychological empowerment. In line with previous research, we expected that structural empowerment was generally associated with psychological empowerment. However, in contexts high in Taylorism, we expected that structural empowerment would result in role ambiguity. High role ambiguity would in turn prevent structural empowerment from achieving the desired psychological empowerment. Additionally, we examined whether some individuals are more resistant to the negative effects of high role ambiguity. Specifically, we expected individuals with high mastery goals and a more proactive personality to perceive role ambiguity as a challenge and as an opportunity for learning, and this reappraisal of role ambiguity in turn buffers its negative effects.

Our results provided partial support for one out of four hypotheses. First of all, we found that structural empowerment was associated with less role ambiguity in both the call center and education contexts. However, through an exploratory endeavor, we found structural empowerment to more strongly reduce role ambiguity when individuals perceived their work context as low in Taylorism. Secondly, we found structural empowerment to be more strongly associated with psychological empowerment when role ambiguity was low.

Notwithstanding, even under high role ambiguity, structural empowerment was associated with psychological empowerment. Thirdly, we did not find high mastery goals or a high proactive personality to attenuate the negative effect of role ambiguity on the relationship between structural and psychological empowerment. Lastly, through another exploratory endeavor, we found significant moderated mediation; structural empowerment was associated with a reduction of role ambiguity but less so when an individual perceived their work context as high in Taylorism. A reduction in role ambiguity was in turn associated with higher feelings of psychological empowerment.

Theoretical implications

The results of this study bear three important theoretical implications. Firstly, we found that the positive effects of structural empowerment were robust across both organizational contexts, as illustrated by the result that structural empowerment was associated with psychological empowerment in both the call center and education context. These results can be integrated with more recent meta-analytical findings (e.g. Seibert, Silver, & Randolph, 2011) that reported different but still positive effects of structural empowerment across industries such as service and manufacturing. In line with these findings, we also found stronger effects of empowerment among employees that experienced their work as less standardized and routine (i.e. low in Taylorism). However, our results did not find any inter-industry differences between the effectiveness of empowerment, while Seibert et al. (2011) reported empowerment to be less effective in industries high in Taylorism (e.g. manufacturing) and more effective in industries low in Taylorism (e.g. the service industry). This discrepancy may be due to the fact that most of our call center industry sample (i.e. the sample high in Taylorism) also performed the job of customer service employee. While their job could have provided them with ample opportunities to make use of the additional empowerment such as to engage in discretionary behaviors with customers (cf. Batt, 2002),

the organizational context of a call center may have prevented these individuals from capitalizing upon these opportunities due to standardized procedures and monitoring practices that are inherent to a call center. This combination could have nullified both the negative impact of Taylorism and positive impact of service work on psychological empowerment. In sum, our results corroborate previous research on empowerment showing that structural empowerment is generally universally effective but to a lesser extent when employees perceive their work as high in Taylorism.

Secondly, we found the relationship between structural empowerment and psychological empowerment to be weaker when role ambiguity was high. This finding was partly in line with our expectations; while we did propose the relationship between structural empowerment and psychological empowerment to be different for high and low role ambiguity, we did not expect the relationship to hold up when role ambiguity was high. Our results are also in line with previous research on role ambiguity and psychological empowerment which found that role ambiguity inhibits the experience of psychological empowerment (Hartline & Ferrel, 1996; Spreitzer, 1997). Unexpectedly, however, the effect of role ambiguity proved to be weak and it was unable to undo the relationship between structural- and psychological empowerment completely. Clearly, factors as role ambiguity and the organizational context attenuate the effect of structural empowerment on psychological empowerment but structural empowerment proved to be that strong that it still had a positive impact regardless of these factors. The weak effect of role ambiguity and the notion that structural empowerment does not always lead to its desired outcomes (Biron & Bamberger, 2010; Cordery et al., 2010; Spreitzer, 1997) indicate that there are other potential moderating variables. One key variable that we haven't considered is role conflict. Role conflict refers to the incompatibility between one or more roles within an employee's role set, such that fulfilling one role would make fulfilling the others more difficult (Weatherly &

Tansik, 1993). Role conflict may especially be relevant here for two reasons. First, call center employees are constantly monitored based on predefined key performance metrics (KPIs). For instance, a call centre can monitor an agent on two conflicting KPIs such as interaction time (e.g. AHT) and customer satisfaction. While the organization itself wants a shorter interaction time, a customer may demand an extra bit of time-consuming service in order to be satisfied. By being unable to live up to the set standards, the employee may feel incompetent and experience that he can have little impact. Second and related to the first point, role conflict has been shown to strongly reduce self-efficacy (Jex & Gudanowski, 1992) which is strongly related to the competence dimension of psychological empowerment. Future research on empowerment in call centres may therefore consider role conflict as a possible moderator in the link between structural- and psychological empowerment. Lastly, exploratory analyses also revealed that structural leads to psychological empowerment through a reduction in role ambiguity. Our research thus reported both a moderating and mediating role of role ambiguity on the relationships between structural empowerment and psychological empowerment. Future research could therefore compare different models where role ambiguity mediates and where role ambiguity moderates the relationship between structural- and psychological empowerment, and see which model better explains the data. All in all, our research posits that role ambiguity plays a more nuanced role in the reduction of psychological empowerment than that we expected.

Thirdly, we also examined whether individuals high in mastery goals and proactive personality evaluated role ambiguity as challenging. For instance, Humborstad et al. (2014) reasoned that individuals high in mastery goals may see the uncertainties and extra responsibilities that come with role ambiguity as positive challenges to enhance their abilities. However, we did not find any of our dispositional variables to be associated with a reappraisal of role ambiguity. One reason for the lack of finding may be the limited sample

size. For instance, Dawson et al. (2006) proposed that a minimum of 300- 500 participants is required to have enough power to identify three-way interactions. Due to power issues, we could have failed to identify effects that were actually there. A second reason for this lack of finding could be that the factors mastery goals and proactive personality diminished role ambiguity directly rather than that they were associated with a reappraisal of role ambiguity as challenging. For instance, while mastery goals and proactive personality did not diminish the influence of role ambiguity, they did show strong negative relationships with role ambiguity. As such, having high mastery goals and a proactive personality is associated with experiencing less role ambiguity in general. A third reason for our lack of finding is that there may be other factors such as regulatory focus (Higgins, 1998) that are related to the reappraisal of role ambiguity as a challenge. Regulatory focus discerns between a promotion and a prevention focus. For instance, individuals with a promotion focus are concerned with advancement and growth, while individuals with a prevention focus are concerned with security and safety (Crowe & Higgins, 2002). Individuals high in promotion focus could capitalize on situations of role ambiguity turning ambiguity into a situation of personal growth and advancement. As such, a promotion focus could attenuate the negative effects of role ambiguity in reducing psychological empowerment. Future research could therefore consider regulatory focus as a mechanism that influences an individual's reappraisal of role ambiguity. All in all, perceived Taylorism and role ambiguity only slightly reduced the positive effects of structural empowerment. To further answer the question why structural empowerment does not always result in psychological empowerment, we suggest future researchers to look at other factors such as role conflict and other dispositional factors such as regulatory focus that pertain to how individuals deal with empowerment.

Practical implications

Given the results of the current research, some practical implications are warranted. By and large, the main implication is that empowerment practices are effective within all work contexts, even those high in Taylorism. However, a point of caution is warranted; although empowerment practices are still effective in environments high in Taylorism, their effectiveness is attenuated. Managers should therefore take great care in incorporating all organizational policies, practices and structures to create and sustain a state of empowerment (Bowen & Lawler, 1995). Through communication of a coherent and strong message of empowerment, one can foster strong levels of structural empowerment (Humborstad et al., 2014) overcoming organizational artefacts of Taylorism. Only then the full benefits of empowerment can be leveraged.

A second practical implication relates to the negative impact of role ambiguity. Role ambiguity was shown to attenuate the effects of structural empowerment on psychological empowerment and may therefore be one of the factors that explain why empowerment practices do not always have their full effect. When companies want to leverage the full benefits from empowerment, they should therefore also take into consideration any factors that reduce role ambiguity and psychological empowerment. One such factor is feedback (Sawyer, 1992). By providing just and targeted feedback on the actions of employees, companies can create clarity among their employees about the appropriate policies and processes. A second factor that we found in our own research was tenure which was negatively associated with role ambiguity. Tenure could reduce role ambiguity through making an employee more familiar with the organization's policies and practices. The extra familiarity in turn contributes to a clearer and less ambiguous view of the organization's policies and structures reducing the experienced role ambiguity. Thus, it is key to ensure the retention of qualified employees with the firm for as long as possible. To do so, organizations would benefit from a greater emphasis on employee retention. One way to retain employees

is to minimize voluntary turnover. Indeed, companies can prevent turnover by ensuring that employees are satisfied with their job (i.e. job satisfaction) or by fostering a sense of commitment among employees (i.e. organizational commitment) (Griffeth, Hom, & Gaertner, 2000; Hom, Caranikas-Walker, Prussia, & Griffeth, 1992). However, companies may fare best if they treat their employees as internal customers of the management of the organization (Cardy & Lengnick-Hall, 2011). For example, companies can regularly survey their employees as to identify potential sources of dissatisfaction. These sources can be then further investigated and acted upon when necessary. All in all, if organizations want to foster psychological empowerment among their employees through structurally empowering their workforce, organizations would fare well in articulating a coherent and strong message of empowerment and in treating their employees as valuable internal customers.

Limitations and avenues for future research

As with all studies, the current study has a number of limitations. First, our samples differed greatly in demographical attributes. To control for these sample differences, we included age and tenure as covariates. However, by not including other demographic variables such as education or number of working hours, we cannot exclude their potential influence within the model. Notwithstanding, we believe that our decision to only include age and tenure was warranted for two reasons. First, a recent meta-analysis found little influence of demographics other than age and tenure on psychological empowerment, and adviser researchers against putting too much emphasis on demographic variables regarding research on empowerment (Seibert et al., 2011). Second, including a large number of covariates takes away power from the variables of interest. In line with this reasoning, Becker (2005) warned researchers against including impotent covariates by stating that researchers should only include a variable as a covariate if they believe the variable to be a legitimate suppressor. In the current research, we have followed these advises.

Second, by using a simplified measure of Taylorism (i.e. task simplicity) we may have been unable to fully capture the full construct of Taylorism. For instance, our measure did not include items on whether employees were strongly monitored based on quantitative and qualitative criteria. However, by including items related to autonomy and self-determination under the label of Taylorism, we could have accidentally created construct overlap between psychological empowerment and Taylorism undermining divergent validity. Also, to the best of our knowledge, there were no psychometrically validated questionnaires on Taylorism yet. Future research could therefore focus on the creation of an integrative questionnaire of Taylorism that shows no construct overlap with either structural- or psychological empowerment.

Third, we assumed all relationships in our research model to be linear while recent research on empowerment (e.g. Humborstad et al., 2014) found curvilinear effects between structural empowerment and its outcomes (e.g. performance). In particular, they found that moderate levels of empowerment had limited or even negative effects as there can be greater ambiguities in terms of what and how decision-making responsibilities are shared. While their research focused on the relationships between structural empowerment and performance, and not necessarily on psychological empowerment, it stands to reason that this may equally apply to the relationship between structural- and psychological empowerment. For instance, it could be argued that low or moderate levels of empowerment in call centers may not be beneficial or even detrimental to psychological empowerment because it will only convey a weak message to employees that they have the authority to structure their own workflow. Instead of capitalizing on their new authority, employees could cling on to the organizational artifacts of Taylorism. Indeed, it was argued by Bowen and Lawler (1995) that organizations must change all their policies, practices and structures to create and sustain a state of empowerment. A weak message of empowerment could therefore remain too hidden

while a moderate message of empowerment could provide an employee with conflicting views of organizational policy (e.g. role conflict) being detrimental for an employee's psychological empowerment. Only high levels of empowerment could bring about the clarity of a new organizational vision that has the power to counteract existing organizational artifacts of Taylorism. Future research on structural and psychological empowerment could therefore consider non-linear effects of empowerment such as quadratic or cubical effects.

Conclusion

In the very beginning of this paper, we illustrated the failed empowerment effort in a call center that left some employees more hesitant in making their own decisions. We aimed to shed light on this phenomenon by examining whether the generally Taylorist environment of call centers may prevent structural empowerment from translating into psychological empowerment. Our results showed that empowerment efforts in a Taylorist environment such as a call center only weakly affected employees' role ambiguity. In turn, this role ambiguity only slightly weakened the positive effect of empowerment effort on psychological empowerment. Thus, despite popular and scientific belief, our results have shown that even call centers can leverage empowerment to make work more meaningful and leave employees more self-determined.

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Appendix A

Items of structural empowerment

Opportunity

How much of each kind of opportunity do you have in your present job?

1 = None 2 3 = Some 4 5 = A lot

1. Challenging work
2. The chance to gain new skills and knowledge on the job
3. Tasks that use all of your own skills and knowledge

Information

How much access to information do you have in your present job?

1 = None 2 3 = Some 4 5 = A lot

1. The current state of the call center
2. The values of top management
3. The goals of top management

Support

How much access to support do you have in your present job?

1 = None 2 3 = Some 4 5 = A lot

1. Specific information about things you do well
2. Specific comments about things you could improve
3. Helpful hints or problem solving advice

Resources

How much access to resources do you have in your present job?

1 = None

2

3 = Some

4

5 = A lot

1. Time available to do necessary paperwork
2. Time available to accomplish job requirements
3. Acquiring temporary help when needed

Items of psychological empowerment

Meaning

1. The work I do is very important to me (meaning 1)
2. My job activities are personally meaningful to me (meaning 2)
3. The work I do is meaningful to me (meaning 3)

Competence

4. I am confident about my ability to do my job (competence 1)
5. I am self-assured about my capabilities to perform my work activities (competence 2)
6. I have mastered the skills necessary for my job (competence 3)

Self-determination

7. I have significant autonomy in determining how I do my job (self-determination 1).
8. I can decide on my own how to go about doing my work (self-determination 2)
9. I have considerable opportunity for independence and freedom in how I do my job (self-determination 3)

Impact

10. My impact on what happens in my department is large (impact 1)
11. I have a great deal of control over what happens in my department (impact 2)
12. I have significant influence over what happens in my department (impact 3).

Items of Taylorism

1. The tasks I do on my job are simple and uncomplicated.
2. My job requires little skill and training time.
3. I perform the same task or activity repeatedly on my job.

Items of role ambiguity

1. I feel secure about how much authority I have
2. Clear, planned goals and objectives exist for my job
3. I know that I have divided my time properly
4. I know what my responsibilities are
5. I know exactly what is expected of me
6. Explanation is clear of what has to be done

Goal orientation

Mastery-approach

1. My aim is to improve myself
2. In my work, I am striving to do well relative to how well I did in the past
3. In my work, my aim is to improve my previous performance

Mastery-avoidance

1. In my work, my aim is to not perform worse
2. In my work, I am striving to not do worse relative to how well I did in the past
3. In my work, my aim is to not stagnate

Performance-approach

1. In my work, my aim is to do well relative to my colleagues
2. In my work, I am striving to do well relative to my colleagues
3. In my work, my aim is to perform better than my colleagues

Performance-avoidance

1. In my work, my aim is to prevent to do worse than my colleagues
2. In my work, I am striving to prevent to do worse than my colleagues
3. In my work, my aim is to prevent to perform worse than my colleagues

Proactive personality

1. If I see something I don't like, I fix it
2. No matter what the odds, if I believe in something I will make it happen
3. I love being a champion for my ideas, even against other's opposition
4. I excel at identifying opportunities
5. I am always looking for better ways to do things
6. If I believe in an idea, no obstacle will prevent me from making it happen