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RESEARCH ARTICLE

A needs–supplies fit perspective on employee perceptions of HR practices and their relationship with employee outcomes

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Abstract

This study explores the employees' views on the effectiveness of HR practices for their job performance, drawing from a needs–supplies (N–S) fit approach. Findings based on 465 employees show a positive association between the N–S fit of present HR practices (i.e., employees perceiving supplied practices as needed) and engagement and proactive behaviour. The N–S fit of absent HR practices (i.e., employees indicating they do not need the non-offered practices) is positively associated with engagement and negatively with proactive behaviour. Additionally, proactive behaviour and engagement are higher when employees experience present practices as effective and absent practices as irrelevant for their functioning. Also, these outcomes are higher when employees experience supplied practices as effective while missing essential practices, than when the supplied practices are ineffective and absent practices are irrelevant. Organisations can use this approach to revisit HR practices that waste organizational resources and introduce HR practices that improve employee functioning.

Abbreviations: CFA, confirmatory factor analysis; CFI, comparative fit index; D-A fit, demands-abilities fit; HR, human resource; HRM, human resource management; N–S fit, needs–supplies fit; NSFE-A, need supplies fit of absent practices; NSFE-P, need supplies fit of present practices; PE-fit, person-environment fit; RMSEA, root mean square error of approximation; SHRM, strategic human resource management; SRMR, standardized root mean square redidual; TLI, Tucker-Lewis index; WLSMV, weighted least squares mean and variance.

KEYWORDS
effectiveness of HR practices, employee perceptions of HR practices, engagement, needs–supplies fit, proactive work behaviour

Practitioner notes

What is currently known about the subject?

- Employees as key recipients of HR practices are seen as an important source of information regarding the contribution of HR practices to employee outcomes.
- There is evidence for the positive relationship between HRM and perceived performance from an (HR) management perspective. However, evidence on how employees perceive the effectiveness of present and absent HR practices for their work performance is currently lacking in SHRM literature.

What this paper adds?

- By adopting a needs–supplies fit perspective on employee perceptions of HR practices, results show that employee engagement is higher when employees perceive supplied practices as needed and indicate that they do not need those that are not supplied.
- Proactive work behaviour increases when employees perceive supplied practices as helping them work effectively but also when employees indicate they miss practices they would have needed to perform better.
- Proactive work behaviour and engagement are higher when employees experience present practices as effective while missing essential practices than when the present practices are ineffective and absent practices are perceived as irrelevant.

Implications for practitioners

- Organisations and employees should consider the extent to which employees perceive existing and missing HR practices as needed to help them work effectively.
- Rather than aiming for a large number of available HR practices, HR professionals should strive for making the best possible use of HR practices by considering whether practices that are currently offered lack added value for employees, as well as by considering adding practices where this would enable employees to function better.

1 | INTRODUCTION

The underlying premise in HRM research is that implemented HR practices are perceived by employees so that they contribute to individual job performance and, in turn, organizational performance (see e.g., Den Hartog et al., 2013; Liao et al., 2009). However, even though studies have found a positive relationship between perceptions of available HR practices and job performance, we do not know to what extent employees, as key recipients, and therefore crucial assessors of HR practices, perceive these as effective for their functioning (Edgar & Geare, 2014). This is important to investigate, as scholars have argued that if HR practices are expected to contribute to improved individual performance, it is essential that the HR practices match the employee's personal goals to work effectively (Nishii & Wright, 2008). We herewith join other authors stating that a universalistic approach -assuming that HR practices are experienced as effective by all employees- is not likely, but rather that the perceived effectiveness of present and absent HR practices depends on the fit with the individual worker context to affect employee outcomes (Kinnie

et al., 2005). Therefore, this study explores employees' views on the effectiveness of present and absent HR practices for their job performance. To this end, we address three research gaps in more detail.

First, studies to date which have included evaluative measures of employee perceptions of HR practices have mainly focussed on attitudinal measures of perceptions of HR practices, such as the perceived satisfaction with, fairness of, or meaningfulness of the HR practices in place (e.g., Heffernan & Dundon, 2016; Kinnie et al., 2005). As such, our understanding of non-attitudinal evaluative measures of employee perceptions of HR practices and how they impact employee outcomes is still limited. More specifically, it is essential to ask employees about the effective contribution of HR practices to their job performance (Van Beurden et al., 2020). The few studies that measured effectiveness perceptions of HR practices in their research are unclear as to what outcome criterion employees are asked to evaluate the effectiveness of the HR practices for (e.g., their performance, well-being, justice etc.) (see e.g., Chang, 2005). This state of research is surprising, given the large number of studies that have examined the effectiveness of HR practices in terms of organizational performance from the perspective of other informants than employees, such as (HR) managers (Guest & Conway, 2011). We, therefore, contribute to the literature on evaluative employee perceptions of HR practices by explicitly focussing on the effectiveness perceptions of HR practices for employee's own functioning (Van Beurden et al., 2020).

The second research gap concerns that most existing studies examining a particular conceptualisation of employee perceptions of HR practices lack a clear theoretical perspective in which the employee perceptions of HR practices construct is anchored (Edgar & Geare, 2014; Van Beurden et al., 2020). More specifically, studies tend to focus on the relationship between perceptions of HR practices and employee outcomes without clearly explaining how a theoretical perspective can elucidate the construct of employee perceptions of HR practices. Consistent with the argument of Nishii and Wright that "individuals perceive HR practices through different lenses and make varying conclusions about the extent to which the practices satisfy their needs" (p. 13), and with the idea that HR practices are sets of organizational supplies (Peccei et al., 2013), we rely on a needs–supplies (N–S) fit perspective (Edwards, 1991). Specifically, we examine the attitudinal and behavioural consequences of perceived fit between present and absent HR practices and the needs that employees have concerning functioning effectively at work. In addition, we examine the extent of (in)congruence in the fit between employees' needs to function effectively and organizational supplies in terms of HR practices (Kristof-Brown et al., 2005).

Third, building on the theoretical ideas from the N–S fit perspective, we propose that the positive effect of present HR practices on job performance (see e.g., Den Hartog et al., 2013; Liao et al., 2009) is more favourable if employees perceive the present HR practices as contributing to functioning well at work. In addition, we propose that the negative effect of absent HR practices on job performance is less negative if the absent HR practices are not missed to function well (Van Vianen, 2018). By consulting the individual worker on how effective present *and* absent HR practices are perceived in terms of facilitating or hindering employees' work performance (Van Beurden et al., 2020), we aim to provide new insights about (a) how there might be a waste of organizational resources via ineffective HR practices and (b) how the absence of valuable HR practices may have prohibited better functioning at work. We do this by studying two indicators that are considered highly relevant in today's work context, that is, work engagement and proactive behaviour, and that have been shown to have an important impact on organizational performance in previous research (Parker & Bindl, 2016; Van De Voorde et al., 2012).

1.1 | A needs–supplies fit perspective on employee perceptions of HR practices

The starting point of our study is the employment relationship (Tsui et al., 1997), that is, the employer's expectations about specific contributions from employees (work performance) and the inducements (HR practices) that the employer offers to affect such desired contributions. Following recent attention to the idea that individuals experience HR practices through different lenses and therefore evaluate HR practices differently, depending on the extent to which the practices satisfy the individual's needs (Lepak & Boswell, 2012; Nishii & Wright, 2008), we propose

to build on insights from the N–S fit perspective (Edwards, 1991) to better understand the construct of employee perceptions of HR practices.

N–S fit can be defined as "the comparison between the psychological needs (i.e., desires, values, goals) of the person and the environmental supplies that serve as a reward for the needs" (Edwards et al., 2006, p. 804). Different types of fit are distinguished based on whether attributes are present or absent at work and how they relate to employees' personal needs (Van Vianen, 2018). Thus, drawing from the N–S fit approach, we distinguish between (1) the extent to which employees perceive present HR practices as effective for their functioning and (2) the extent to which employees perceive absent HR practices as not missed for their functioning at work (Idson et al., 2000). In addition, we use a molar approach, that is, a direct measure of need-supply fulfilment, by focussing on the extent to which employees evaluate the HR practices as fitting with their need to work effectively (Cable & DeRue, 2002; Edwards et al., 2006). We focus on this type of measure as previous studies have shown that a molar approach captures the most proximal predictors of individual outcomes (Kristof-Brown et al., 2005).

More precisely, we consider the extent to which employees experience the supplied HR practices as sufficient and necessary for their performance, that is, the extent to which there is a fit or match between the HR practices supplied by the organization and the employees' need to work effectively. The first part of this equation (are practices offered necessary?) aims to ensure that existing practices do not waste organizational resources (including employees' time and energy) and will be referred to as the N–S fit for the effectiveness of present practices (hereafter NSFE-P). The latter part (are practices offered sufficient?) aims to ensure that the organization is not missing out on practices that would have been useful or beneficial for employees' functioning at work. This will be referred to as the N–S fit for the effectiveness of absent practices (hereafter NSFE-A). For example, for NSFE-P, consider a firm where supervisors provide regular performance reviews. For employees who believe such reviews contribute to their work performance (i.e., they are necessary to work effectively), the NSFE-P will be high. For employees who believe such reviews make no such contribution (i.e., they are unnecessary), the NSFE-P will be low. Now, assume a firm where supervisors do not conduct periodic performance reviews. For employees who believe such reviews would improve their performance, the NSFE-A will be low (i.e., the employee's need is not being met, and the firm's provision is insufficient). For employees who believe such reviews would not contribute to their performance, the NSFE-A will be high (i.e., the employee evaluates the performance review practice as not essential for their functioning, it is not missed by them).

In our study, we include a set of HR practices that can be seen as organizational supplies, that employees can relate to their functioning, and that is most often studied in the SHRM literature (Boselie et al., 2005): that is, practices in the realms of employee training and (career) development, performance management, job design, participation, communication/information sharing, and rewards (Boon et al., 2011). We excluded recruitment and selection practices from our study, as these focus more on human capital than on employee experiences as a path towards performance improvement and are mainly functional for the organization and/or team level (Wang et al., 2008). In addition, employees are typically not (all) involved in recruitment and selection in their team on a routine basis. They are therefore unlikely to be able to adequately attribute their individual functioning to such HR practices (Den Hartog et al., 2013).

We examine two potential outcomes of the effectiveness of present and absent HR practices relevant in the context of individual functioning and crucial for organizational success (Parker & Bindl, 2016; Van De Voorde et al., 2016). Proactive work behaviour is defined as "self-directed action to anticipate or initiate change in the work system or work roles" (Griffin et al., 2007, p. 329). It is an essential indicator of job performance in today's context of an increasingly complex and uncertain workplace, pressure for innovation, and changing career structures (Parker & Bindl, 2016). Work engagement is an active form of well-being characterised by vigour, dedication, and absorption at work (Schaufeli et al., 2006). This construct is positively related to job performance and predicts job performance over and above other job attitudes such as job satisfaction, organizational commitment, and job involvement (Christian et al., 2011).

1.2 | The relationship between NSFE-P and NSFE-A and employee outcomes

To explain how NSFE-A and NSFE-P result in employee outcomes, we use the guiding principles associated with the person-environment fit literature, and the sub stream within that literature on needs–supplies fit. These guiding principles are that (1) fit is a more powerful predictor of individual outcomes than the person (e.g., employees' needs) or the environment alone (e.g., supplies), (2) outcomes are most optimal when personal attributes and environmental attributes are congruent regardless of the level of the attributes, and (3) discrepancies or misfits between personal and (absent) environmental attributes decrease positive outcomes regardless of the direction of the mismatch (Van Vianen, 2018). Applying these principles, we expect that effectiveness perceptions of the present and absent HR practices combined are a more powerful predictor of work engagement and proactive work behaviour than merely asking employees to check the presence of HR practices and that these outcomes are higher when the present HR practices are perceived as contributing to employees' functioning and the absent HR practices are not missed to function well, compared to when present HR practices lack in contribution to performance and absent practices are missed to function well (Cable & DeRue, 2002; Edwards et al., 2006).

Empirical evidence has found support for the guiding principles associated with needs–supplies fit and employee outcomes. In particular, research has shown that fit between the person and the environment is indeed a more powerful predictor than the person or environment alone (Kristof-Brown et al., 2005). Second, studies have confirmed that a fit between the employees' needs and the supplies offered by the organization is related to more favourable outcomes than a misfit between needs and supplies (Cao & Hamori, 2020). That is, employees, show higher levels of employee outcomes such as engagement at work when they perceive a fit between the supplies provided by the organization and their own needs (e.g., Edwards et al., 2006; Travaglianti et al., 2016; Verquer et al., 2003; Vogel et al., 2020). In addition, studies focussing on specific work characteristics such as the N–S fit of autonomy (as part of job design practices) have shown a positive impact on proactive work behaviour (Yu & Davis, 2016). Finally, research has shown that absent attributes at work that are perceived as needed or preferred are negatively related to employee outcomes (Idson et al., 2000).

In sum, studies have argued that a high fit between present environmental attributes and employees' needs results in higher employee outcomes compared to a low fit and that a high fit between absent environmental characteristics that employees do not perceive as needed results in more positive employee outcomes compared to absent environmental attributes that employees perceive as needed (De Goede et al., 2013; Idson et al., 2000; Van Vianen, 2018). Following this line of reasoning, we argue that a high NSFE-P—that is, a perception that all organizational supplies are needed to work effectively—will be associated with higher proactive work behaviour and employee work engagement, compared to a low NSFE-P (a sense that some supplies are not needed). Furthermore, we hypothesise that a high NSFE-A (where employees feel that the practices that are not supplied are not needed) will be associated with higher employee engagement and proactive work behaviour, compared to a low NSFE-A (where practices are perceived as useful for functioning well but are not supplied) (Kristof-Brown et al., 2005). Formally, we propose:

Hypothesis 1: Employee perceptions of the NSFE-P are positively associated with proactive work behaviour (1a) and employee engagement (1b).

Hypothesis 2: Employee perceptions of the NSFE-A are positively associated with proactive work behaviour (2a) and employee engagement (2b).

1.3 | Congruence and incongruence of NSFE-P and NSFE-A in relation to employee outcomes

In case it does matter that a firm's HR practices are not entirely necessary and/or sufficient, the next question becomes which has the more significant detrimental impact—the waste of time and other supplies because of

superfluous, unnecessary practices; or the absence of valuable practices that would have supported better performance? We align with P-E fit literature arguing that the work environment should be explored in terms of both the NSFE-P and NSFE-A simultaneously, for which we suggest assessing combinations of employee perceptions of HR practices (HR practices seen as both necessary and sufficient) (Idson et al., 2000; Van Vianen, 2018). Following the P-E fit literature, we explore, next to considering the effects of NSFE-P and NSFE-A directly, whether concurrent high or low scores on both types of fit impact employee outcomes. In addition, we explore the extent to which employee outcomes are affected by situations in which the score on one of the fits is higher than the score on the other fit: NSFE-P > NSFE-A, or NSFE-P < NSFE-A (Yang et al., 2008).

We consider first the two extreme congruence conditions (high vs. low). Drawing from the N–S fit approach, we first argue that a high N–S fit for both present and absent HR practices will lead to better outcomes than a low fit for both types (Kristof-Brown et al., 2005). More specifically, where the N–S fit is high for both present and absent practices, existing practices are seen as both necessary and sufficient. In this case, employees who feel that their needs to work effectively are fully met by the HR practices supplied by the organization, and herewith do not miss out on any HR practices, are especially likely to reciprocate with favourable attitudes and behaviours towards the organization (Verquer et al., 2003).

Prior research has shown positive outcomes for a high N–S fit in terms of work characteristics on proactive work behaviour (Yu & Davis, 2016) and work engagement (Travaglianti et al., 2016). Therefore we also expect to find positive outcomes for high NSFE-P and NSFE-A. In the alternative case, when an employee experiences low N–S fit for both sets of practices (offered practices are neither wholly necessary nor sufficient and practices not offered would have been considered an improvement), employees feel that they are not receiving the support they need to function well. At the same time, they are also asked to waste time and energy on unnecessary activities. We expect reduced work engagement and proactive work behaviour in this case, as misfit occurs for both N–S fits. Based on the preceding, we propose:

Hypothesis 3: Employee perceptions of congruence between the NSFE-P and NSFE-A are associated with higher (lower) proactive work behaviour (3a) and work engagement (3b), when NSFE-P and NSFE-A are high rather than low (low rather than high).

We now consider incongruence between NSFE-P and NSFE-A and its relationship with employee outcomes. Incongruence can exist when NSFE-P is high, that is, when employees feel that their needs to work effectively are met by the HR practices supplied by the organization, but the NSFE-A is low, that is, they are not receiving the critical HR practice they need to function well. On the opposite, NSFE-P can be perceived as low, that is, employees are asked to spend time and energy on unnecessary practices, but the NSFE-A is high, that is, employees perceive they do not miss out on any HR practices. In both situations, a misfit occurs for only one of the two types of N–S fit of HR practices perceptions (Edwards, 1991).

From the SHRM literature, we know that organisations where employees perceive that the organization offers more HR practices to them (i.e., invest in the employment relationship) outperform organisations where employees do not perceive much HRM investment (Den Hartog et al., 2013; Liao et al., 2009). Whereas more investment is likely accompanied by better employee outcomes, this does not tell the full story. More specifically, prior N–S fit research argues that it is important to differentiate between the (mis)fit of personal values with present and absent attributes at work (Idson et al., 2000; Van Vianen, 2018). Empirical evidence shows that employee outcomes are higher when employees encounter present attributes they do not prefer at work, than when employees with a need for organizational attributes do not receive these from their organization (Van Vianen, 2018). Extrapolating this to our study, we expect that employees will exhibit higher engagement and proactive work behaviour when the NSFE-P is higher than NSFE-A, meaning that existing practices are all useful but are not sufficient, compared to the opposite case, where nothing is missing but employees must waste time and energy on superfluous activities.

Hypothesis 4: Employee perceptions of incongruence between the NSFE-P and NSFE-A are associated with higher (lower) proactive work behaviour (4a) and engagement (4b), when the NSFE-P is higher (lower) than the NSFE-A.

2 | METHOD

2.1 | Sample and procedure

This study used a quantitative research design. An online questionnaire was sent to a sample of Dutch employees working in various sectors. Employees were selected through a network of master's students in HR studies as part of their thesis project, under close supervision of the authors. The employees received an invitation via e-mail with a link to the digital questionnaire, a set of instructions, and an introductory statement. Informed consent was obtained from the respondents through a digital form in the questionnaire. The institution's Ethics Review Board gave permission and confirmed that the respondents' privacy and rights were sufficiently taken into account (No. EC-2018.43). A reminder was sent by e-mail after a week to increase the response rate.

In total, 827 employees were approached to participate in the research, and 470 returned completed questionnaires (a response rate of 56.8%). Five respondents were removed due to incomplete data, yielding a final sample of 465. The majority of respondents worked in business services (34.4%), education (8.1%), production (9.4%), government (4.3%), and healthcare (21.5%). Of the final sample, 63.4% were female, and the average age was 32 years. About employment type, 57.2% of the respondents had a permanent contract, 28.3% a temporary contract, and 9.6% a zero-hours contract. A zero-hours contract is a common type of employment contract in the Netherlands where the employee has no fixed working hours.

2.2 | Instruments

Our survey measures captured the N–S fit of HR practices, work engagement, and proactive work behaviour. As we developed the measurement of N–S fit of HR practices based on existing scales examining employee perceptions of the present and absent HR practices, we first describe our procedure for operationalising this construct.

Employee Perceptions of Present and Absent HR practices were measured for six functional HRM areas: employee training and (career) development, performance management, job design, participation, communication/information sharing, and rewards. We adapted 20 items from existing scales measuring the presence of HR practices (Boon et al., 2011; Den Hartog et al., 2013). For each item, we first asked respondents to indicate whether the HR practice was present or absent (a sample item: "My performance is periodically assessed by my supervisor"). To ascertain as clearly as possible whether the employee perceived the activity to be present (Bal et al., 2013), we used a dichotomous indicator for these items (0 = 'no' and 1 = 'yes', for absent or present, respectively).

Next, we employed follow-up questions to examine the **N–S Fit of Present and Absent HR Practices**, that is, the fit between employees' perceptions of HR practices needed versus those supplied. These questions differed depending on whether the employee perceived the practice as present or absent. For example, the item "My performance is periodically assessed by my supervisor" led to these follow-up questions for present and absent, respectively: "My work results have improved in the last year as a result of periodic assessments from my supervisor"; "My work results would have improved in the last year had I received periodic assessments from my supervisor." These follow-up questions were answered on a 5-point Likert scale (1 = totally disagree, 5 = totally agree). A high score on a 'present' item means the employee perceived the HR practice as meeting the need to work effectively. For the 'absent' items, scores were recoded such that a high score means the employee perceived the HR practice as not meeting the need to work effectively.

In the following step, for each participant, we calculated two overall fit scores based on that participant's perceptions of HR practices needed versus those supplied. For the *NSFE-P*, we calculated a sum score of all follow-up questions of present HR practices, and we divided this score by the number of present HR practices. For the *NSFE-A*, we created a sum score based on all follow-up questions of absent HR practices, and we divided this score by the number of absent HR practices. A high NSFE-P score means a high fit between what the employee thinks he or she needs to function effectively at work and what the organization supplies in terms of HR practices. A high NSFE-A score means a high fit between what the employee thinks he or she does not need to function effectively at work and what the organization does not supply in terms of HR practices. Appendix A provides an overview of the item construction and scoring for the N–S fit measures, and Appendix B provides a list of the concrete items.

To examine the validity of our measures, we performed confirmatory factor analysis (CFA) using Mplus (version 8.3) and robust weighted least square (WLSMV) estimation. Evaluating the model fit of the N–S fit scales in the traditional manner is not possible, as the mix of the NSFE-P and NSFE-A items across the scales varies from one employee to the next, based on the presence/absence indicated and the follow-up questions they filled in. Therefore, we could only evaluate the model fit of the presence/absence of the HR practices scale. Following the recommendation of Hu and Bentler (1998), we used multiple indices of fit, including the Tucker-Lewis index (TLI), the comparative fit index (CFI), the root mean square error of approximation (RMSEA), and the standardized root mean square residual (SRMR). For the TLI and CFI, values of 0.90 are acceptable, and values of 0.95 or higher indicate a good fit; and for the RMSEA and SRMR, values of 0.08 or lower are acceptable, and values below 0.05 indicate a good fit (Hu & Bentler, 1998). These analyses used the six HR practices as first-order factors and the overall HR system as a second-order factor. The results showed sufficient model fit, validating use of the present/absent HR practice measures to create overall HR system N–S fit scores (CFI = 0.95, TLI = 0.95, RMSEA = 0.04, SRMR = 0.09). Cronbach's alpha for this scale was 0.75.

Other measures. To measure *work engagement*, a nine-item version of the Dutch Utrecht Work Engagement Scale was used (Schaufeli et al., 2006). Answers were given based on a 7-point Likert scale (1 = never, 7 = always). A sample question: "At my job, I feel strong and vigorous." Cronbach's alpha for this scale was 0.92.

Proactive work behaviour was measured with the three-item scale of Griffin et al. (2007). Answers were given on a 7-point Likert scale (1 = never, 7 = always). A sample item was: "How often in the past month did you come up with ideas to improve the way in which your core tasks are done?". Cronbach's alpha for this scale was 0.87.

Control variables. We controlled for employees' *job proficiency*, *gender* (0 = male, 1 = female), *age* in years (a continuous variable), *sector*, and *the number of HR practices* (a sum score of the 20 dummy variables). Sector, including business services, education, production, government, and healthcare, was measured with four dummy variables (business services, education, production, and government), using healthcare as the reference category. We measured job proficiency using the three-item version of Griffin et al. (2007). Answers were given on a 7-point Likert scale (1 = never, 7 = always). A sample question was: "How often in the past month did you carry out the core parts of your job well?". Cronbach's alpha for this scale was 0.81. We included job proficiency to control for common method bias and as a type of self-serving bias to work performance evaluations (Greenberg, 1991). Previous research has shown that gender affects employee behaviours (Kidder, 2002) and that the effect of HR practices on employee outcomes varies with age (Kooij et al., 2013). Empirical research has also identified differences in how employees in different sectors perceive HR practices (Boselie et al., 2005). Finally, we controlled for the *number of HR practices*, as empirical evidence showed a positive relationship between the presence of HR practices and employee outcomes (Den Hartog et al., 2013). Controlling for this variable enabled us to test whether the NSFE-P and NSFE-A explain additional variance beyond these practices' mere presence.

2.3 | Data analysis

Given that the data are from the same source (employees), we performed a one-factor test to examine the different constructs' distinctiveness and check for common source bias (Podsakoff et al., 2003). Of the four constructs in the

current study (NSFE-P, NSFE-A, proactive work behaviour, and engagement), the principal factor on the scale scores explained only 39.62% of the variance, well under 50%. Thus, these results support the discriminant validity of the measures. In addition, we checked for common method bias using the common latent factor technique (Podsakoff et al., 2003). An additional latent variable was added to the CFA, where all paths were constrained to be equal and the variance to be 1. The factor loadings of the CFA with only the studied variables showed very small differences in factor loadings, compared to the CFA with the additional common latent factor, suggesting that common method bias is not a serious concern.

To test Hypotheses 1 and 2, we conducted multiple regression analyses in SPSS. For Hypotheses 3 and 4, we used polynomial regression analysis in combination with response surface analysis. This technique tests whether the level and direction of congruence/incongruence influences outcomes and are considered an appropriate way to analyse fit data based on perceptions (Edwards, 1994; Yang et al., 2008). The use of this combined technique is justified as long as the predictor variables fall into the same conceptual domain and are measured on the same Likert scale (Edwards, 1994; Shanock et al., 2010). In our study, both assumptions are met: our predictor variables represent the same latent construct, that is, HR practices, for NSFE-P and NSFE-A, and both are measured on a 5-point Likert scale.

The equation below represents the polynomial regression for the (in)congruence between the two types of N–S fit (the control variables are removed here for the sake of simplicity):

$$Y = b_0 + b_1 P + b_2 A + b_3 P^2 + b_4 (P X A) + b_5 A^2 + e,$$

where Y refers to the employee outcomes (proactive work behaviour and work engagement), *p* represents NSFE-P, and *A* represents NSFE-A. We scale-centred both predictor variables to remove multicollinearity issues, following Edwards's (1994) recommendation.

Surface response analysis was used following the regression to analyse the (in)congruence between the two types of N–S fit for effectiveness (Shanock et al., 2010). This analysis uses the coefficients of the polynomial regression to test the slopes and curvatures along two lines. The first line is the congruence or fit line (*P* = *A*) used to test Hypothesis 3, and the second is the incongruence line (P = -A) used to test Hypothesis 4. These lines are used to visually present the effects of (in)congruence in a three-dimensional graph (see Figures 1 and 2). We conducted our analyses using weighted scores (ranging from 10 = midpoint of the 20 HR practices, to 1 = only 1 HR practice reported as either absent or present) based on the number of HR practices variable, allowing us to include a more balanced assessment, and to correct for the reliability of the scores of respondents with fewer observations, either as to absent practices or as to present practices.

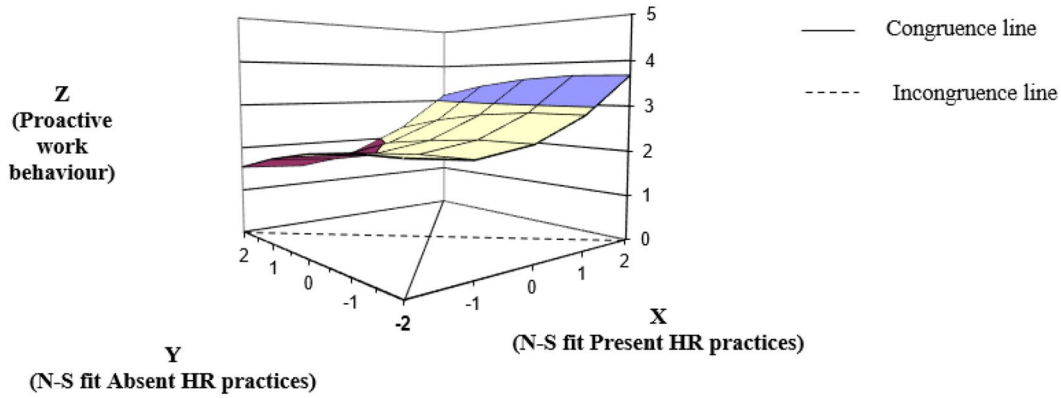

FIGURE 1 Response surface analysis for employee perceptions of N–S fit of present HR practices and N–S fit of absent HR practices on proactive work behaviour [Colour figure can be viewed at wileyonlinelibrary.com]

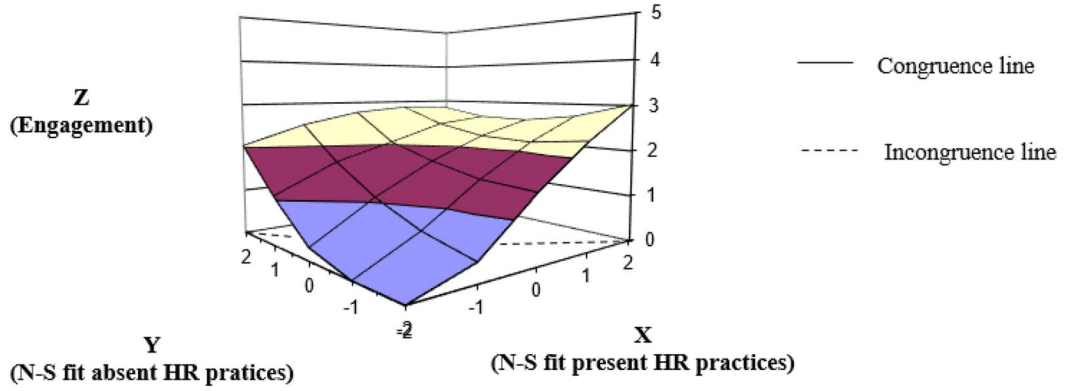

FIGURE 2 Response surface analysis for employee perceptions of N–S fit of present HR practices and N–S fit of absent HR practices on engagement [Colour figure can be viewed at wileyonlinelibrary.com]

3 | FINDINGS

3.1 | Descriptive statistics

Table 1 summarises the descriptive statistics for all variables, including their means, standard deviations, and correlations. NSFE-P and NSFE-A are negatively correlated ($r = -0.05$, $p > 0.05$), supporting the idea that the two N–S fit scales capture different constructs. Employee perceptions of NSFE-P are positively correlated with engagement and proactive work behaviour ($r = 0.27$, $p < 0.01$, $r = 0.25$, $p < 0.01$ respectively). In other words, the more employees feel the HR support they are receiving is necessary for their functioning, the more engaged and proactive they are likely to be. Employee perceptions of the NSFE-A are positively correlated with engagement ($r = 0.30$, $p < 0.01$). The more employees feel the HR support they are not receiving is not missed to function well, the higher their engagement.

3.2 | Hypothesis testing

Table 2 summarises the results of the multiple regression analyses for both outcome variables. Consistent with Hypotheses 1a and 1b, these results show that employee perceptions of the NSFE-P are positively associated with proactive work behaviour (B = 0.47, $p < 0.01$) and employee engagement (B = 0.45, $p < 0.01$). As to Hypothesis 2, the NSFE-A was positively associated with engagement (B = 0.28, $p < 0.01$), supporting Hypothesis 2b. However, the findings show a significant negative association between NSFE-A and proactive work behaviour (B = −0.17, $p < 0.01$). Thus, Hypothesis 2a is rejected.

For Hypothesis 3, we analyse the relationship between congruence in the perceived NSFE-P and NSFE-A and employee outcomes. We expect that congruence between the two measures of N–S fit will be associated with higher (lower) engagement and proactive work behaviour when the N–S fit for both measures is high rather than low (low rather than high). The results are presented in Table 3. With respect to proactive work behaviour, Table 3 shows that the slope of the congruence line is positive and significant, but the curvature is not significant (slope = 0.21, $p < 0.05$, curvature = 0.13, $p < 0.05$). As depicted in Figure 1, the surface along the congruence line is linear. In other words, proactive work behaviour is high when employees experience high levels of both types of N–S fit compared to low levels of both. Hypothesis 3a is therefore supported.

Furthermore, as can be seen in the table, there is a positive slope and significant curvature along the congruence line for engagement (slope = 0.90, $p < 0.01$, curvature = −0.18, $p < 0.05$). These results indicate that congruence between the NSFE-P and NSFE-A has a positive non-linear association with engagement, meaning that engagement

TABLE 1 Descriptive statistics

	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12
1. Gender	1.63	0.48												
2. Age	33.85	12.40	-0.19**											
3. Sector[1] (hc.)	0.28	0.45	0.34**	0.15**										
4. Sector[1] (bus. serv.)	0.44	0.50	-0.23**	-0.13**	-0.55**									
5. Sector[1] (education)	0.11	0.31	0.08	-0.10	-0.31**	-0.31**								
6. Sector[1] (prod.)	0.12	0.32	-0.19**	0.11*	-0.33**	-0.13*	-0.13**							
7. Sector[1] (gov.)	0.06	0.23	0.00	-0.03	-0.22**	-0.08	-0.09	-0.09						
8. HR presence	13.15	3.49	-0.20**	0.20**	0.06	-0.08	0.04	-0.07	-0.07					
9. Job proficiency	5.65	0.74	0.10*	0.04	-0.07	0.09	0.05	-0.08	-0.02	0.02				
10. NSFE-P	3.44	0.50	0.01	-0.14**	-0.07	-0.02	-0.00	0.01	0.22**	-0.02	-0.02			
11. NSFE-A	3.25	0.75	0.10**	0.16*	-0.11*	-0.04	0.07	-0.04	0.20**	0.12**	-0.05	-0.05		
12. Engagement	4.77	1.08	0.08	0.22**	-0.20**	0.07	0.02	-0.15**	0.41**	0.21**	0.27**	0.30**	0.30**	
13. Proactive work behaviour	4.59	1.11	-0.08	0.13**	0.04	0.04	-0.02	-0.05	0.29**	0.15**	0.25**	-0.05	0.29**	0.30**

Note: $N = 465$, $^{*}p < 0.05$; $^{**}p < 0.01$. Bus. serv. = business services; gov. = government; hc = healthcare; prod. = production.

TABLE 2 Multiple regression analyses of proactive work behaviour and work engagement

	Proactive work behaviour				Work engagement			
	Model 1		Model 2		Model 1		Model 2	
	B	(s.e.)	B	(s.e.)	B	(s.e.)	B	(s.e)
Constant	2.76**	(0.23)	2.21**	(0.22)	1.99**	(0.19)	1.92**	(0.19)
Gender	-0.12*	(0.05)	-0.10*	(0.05)	0.22**	(0.05)	0.18**	(0.04)
Age	0.01**	(0.00)	0.01**	(0.00)	0.01**	(0.00)	0.01**	(0.00)
Sector (bus. serv.)	0.08	(0.06)	0.14*	(0.06)	-0.49**	(0.05)	-0.36**	(0.05)
Sector (education)	0.23**	(0.08)	0.28**	(0.08)	-0.04	(0.07)	0.05	(0.06)
Sector (production)	-0.11	(0.08)	-0.09	(0.08)	-0.35**	(0.07)	-0.32**	(0.06)
Sector (government)	-0.09	(0.10)	-0.05	(0.10)	-0.82**	(0.08)	-0.75**	(0.08)
HR presence	0.09**	(0.01)	0.08**	(0.01)	0.11**	(0.01)	0.08**	(0.01)
Job proficiency	0.10**	(0.03)	0.14**	(0.03)	0.17**	(0.03)	0.17**	(0.03)
NSFE-P			0.47**	(0.04)			0.45**	(0.04)
NSFE-A			-0.17**	(0.03)			0.28**	(0.03)
R^2	0.09**		0.15**		0.24**		0.32**	
ΔR^2			0.06**				0.08**	

Note: $N = 465$. *$p < 0.05$; **$p < 0.01$.

Healthcare was used as the reference category. Unstandardised regression coefficients are reported.

increases along the congruence line. In addition, engagement decreases more sharply as both NSFE-P and NSFE-A become lower. Figure 2 shows that engagement increases from the front corner of the figure to the back corner on the respective surfaces, supporting Hypothesis 3b.

Hypothesis 4 suggests that incongruence between the perceived NSFE-P and NSFE-A will be associated with higher (lower) proactive work behaviour and engagement when the N–S fit of present HR practices is higher (lower) than that of absent practices. For proactive work behaviour, Table 3 shows a positive significant slope and no significant curvature (slope = 0.53, $p < 0.01$, curvature = 0.10, $p > 0.05$. Furthermore, results show a positive slope and significant curvature along the incongruence line for engagement (slope = 0.25, $p < 0.01$, curvature = 0.20, $p < 0.01$). As shown in Figures 1 and 2, proactive work behaviour and engagement increase as NSFE-P increases to equal NSFE-A (from the left corner to the incongruence point) and when NSFE-P is higher than NSFE-A (from the congruence point to the right corner). Furthermore, as depicted in Figure 2, the surface along the incongruence line is curvilinear, suggesting a non-linear effect of the incongruence line between NSFE-P and NSFE-A on engagement. In other words, engagement is relatively high when employees experience either high N–S fit of present HR practices and low N–S fit of absent HR practices or vice versa. Hypotheses 4a and 4b are therefore both supported.

4 | DISCUSSION

This study adopted a needs–supplies fit approach (Edwards, 1991; Kristof-Brown et al., 2005) towards employee evaluations of HR practices (Lepak & Boswell, 2012; Nishii & Wright, 2008) to explore how proactive work behaviour and work engagement are influenced by employees' perception of the effectiveness of present and absent HR practices, using a direct fit measure.

Our findings show that a high fit between employees' needs to function effectively and offered HR practices is positively associated with proactive work behaviour and work engagement. This builds on the idea that fit between

TABLE 3 Results of the polynomial regression analyses

	Proactive work behaviour		Work engagement	
	B	(s.e.)	B	(s.e.)
Constant	2.20**	(0.23)	1.73**	(0.19)
Polynomial terms				
N-S fit–Present (P)	0.37**	(0.06)	0.57**	(0.05)
N-S fit–Absent (A)	-0.16**	(0.04)	0.33**	(0.03)
P^2	0.16**	(0.06)	-0.08	(0.05)
A^2	-0.05	(0.03)	0.09**	(0.03)
P X A	0.02	(0.05)	-0.19**	(0.04)
HR presence	0.08**	(0.01)	0.08**	(0.01)
Job proficiency	0.13**	(0.03)	0.19**	(0.03)
Gender	-0.10*	(0.05)	0.19**	(0.04)
Age	0.01**	(0.00)	0.01**	(0.00)
Sector[1] (bus. serv.)	0.14*	(0.06)	-0.35**	(0.05)
Sector[1] (education)	0.29**	(0.08)	0.05	(0.06)
Sector[1] (production)	-0.08	(0.08)	-0.30**	(0.06)
Sector[1] (government)	-0.04	(0.10)	-0.75**	(0.08)
R^2	0.15**		0.33**	
Congruence line (P = A)				
Slope	0.21*	(0.09)	0.90**	(0.08)
Curvature	0.13	(0.08)	-0.18*	(0.08)
Incongruence line (P = -A)				
Slope	0.53**	(0.06)	0.25**	(0.04)
Curvature	0.10	(0.08)	0.20**	(0.05)

Note: $N = 465$; $^*p < 0.05$; $^{**}p < 0.01$.

Analyses performed while controlling for age, gender, sector[1] (healthcare is the reference category), HR presence, and job proficiency; unstandardised regression coefficients reported.

the person and environment is a more powerful predictor than the person or environment alone (Van Vianen, 2018). In line with prior research on this issue outside HRM, employees are more engaged and more proactive at work when they perceive existing organizational HR practices as helping them work effectively (Travaglianti et al., 2016; Yu & Davis, 2016). Furthermore, following N–S fit in terms of discrepancies between personal and (absent) environmental attributes, results show that a high NSFE-A—that is, a perception that practices which are not supplied are also evaluated as not needed for effective functioning– is positively associated with work engagement and negatively associated with proactive work behaviour. We know from the N–S fit literature that a dearth of resources is associated with diminished employee well-being, while the perception of not missing out on practices is associated with well-being (Vogel et al., 2020). Thus, the organization can interpret higher engagement in employees with high NSFE-A as indicating that they do not feel they miss out on any useful or beneficial practices. Contrary to our expectations, proactive work behaviour was negatively associated with NSFE-A, meaning that employees show less proactive work behaviour when they are not missing out on HR practices to work effectively. In this case, employees might not feel the need to engage in self-starting, future-oriented behaviour aimed to change their work situation, as they do not miss out on practices to work effectively (Parker et al., 2006).

Turning to the effects of congruence between the two fit measures, our analyses show that employee engagement is higher when NSFE-P and NSFE-A are both high rather than both low. In other words, engagement is higher when the HR practices in a firm are clearly both necessary and sufficient. These results align with previous findings showing a relationship between N–S fit of general work characteristics and employee engagement (Travaglianti et al., 2016; Verquer et al., 2003). In addition, engagement decreases more sharply as both NSFE-P and NSFE-A become lower (a significant negative curvilinear relationship), meaning that engagement drops significantly when employees' needs are met poorly, and HR resources provided by the firm are neither wholly necessary nor sufficient. Concerning proactive work behaviour, we found that employees are more proactive when the NSFE-P and NSFE-A are both high rather than both low. In other words, it appears that employees are more proactive when their needs are fully met, and HR resources provided by the firm are both necessary and sufficient.

Finally, we found incongruence between NSFE-P and NSFE-A to be related to higher proactive work behaviour and engagement, but only when the NSFE-P is higher than NSFE-A. In addition, the reverse is also true: proactive work behaviour and engagement are lower when NSFE-P is lower than NSFE-A. This means that employees work more proactively and are more engaged when they have to make up for the absence of resources that would have improved their functioning, compared with the case where nothing was missing, but the resources supplied included unnecessary and wasteful extras (Verquer et al., 2003).

Our findings extend previous HRM research by (1) introducing a fit assessment of what employees perceive in terms of HR practices for the extent to which these practices may contribute to job performance, and (2) by exploring the impact of employees' (mis)fit evaluations of present and absent HR practices and their concurrent impact on employee outcomes. This approach informs other areas of HRM. First, studies on HR systems mainly focus on the availability or presence of HR practices (e.g., Den Hartog et al., 2013; Kooij et al., 2013) and herewith adopt a more universalistic approach to HRM for individual employees. Our study advocates for a fit approach rather than a universalistic approach to individual-level HRM. Our findings show that a larger amount of present HR practices does not always result in higher employee outcomes (see e.g., Ho & Kuvaas, 2020), and that a lack of practices is not always harmful to employee outcomes. It depends on the extent to which employees experience the supplied HR practices as sufficient and necessary for their performance. In addition, research on adopting a person-job or person-organization fit perspective in SHRM literature (e.g., Boon et al., 2011) can benefit from the fit approach adopted in this study. Finally, our study contributes to the debate on the psychological approach to HRM research, in such a way that we show the importance of studying the employee's view on the effectiveness of both present and absent HR practices for employee outcomes (Troth & Guest, 2020). Taking a more micro perspective, we offer insights into implementing effective HR practices, understanding employee-centred outcomes, and applying PE-fit theory to HRM. In sum, HR scholars can look beyond the universalistic approach of exploring the supply in HR practices by using a fit evaluation to examine employee perceptions of HRM. In addition, they can simultaneously pay attention to the effectiveness of both present and absent HR practices by adopting a congruence perspective.

4.1 | Limitations and suggestions for future research

The present study is not without limitations. First, the measures in this study were collected from the same source, that is, employees, and were all self-reported, using a cross-sectional research design. Although this design was required by our study aims (examining employees' subjective fit perceptions), it is subject to potential common method and common source biases (Podsakoff et al., 2003). We conducted a Harman's one-factor test and performed the common latent factor technique (Podsakoff et al., 2003) to test for common method bias and built upon validated scales. In addition, the correlations among the survey variables in our model were rather modest, ranging from −0.05 to −0.30, countering the assumption that common method variance is a universal inflator of correlations (Spector, 2006). Finally, we cannot draw any conclusions about causality. Future studies could use a longitudinal research design in which questions about the N–S fit of HR practices and employee outcomes are separated in time. For

example, to investigate whether N–S fit for effectiveness changes over time and how this affects employee outcomes (Wright et al., 2005).

Second, we drew our data from employees' reports on the HR practices they perceived as present in their firms, meaning we do not know how well practices were implemented. We, therefore, cannot draw any conclusions about the quality of implementation of the HR practices. This is not a problem for our study, as our concern was with the extent to which employees experience HR practices (supplied and unsupplied) as sufficient and necessary for their job performance. Nonetheless, future studies could examine how the results of this study account for the actually implemented practices and the quality of the implementation (Den Hartog et al., 2013). Another issue for future research would be investigating how our findings might be biased by individual differences in performance and personal characteristics. In the current study, we controlled for employees' job proficiency as this may have played a role in measuring NSFE-P and NSFE-A. However, it might also be that other factors such as self-serving bias, locus of control, or growth mindset influence this measure (Greenberg, 1991). We, therefore, recommend exploring such variables in future studies.

Third, in this study, we focussed on a N–S fit perspective as most of the HR practices in SHRM literature are identified as a form of supplies rather than as a form of demands (Boon et al., 2011). However, the fit between a person and the work environment can also be understood as the match between job demands and employee abilities (demands–abilities fit) (Edwards, 1991; Kristof-Brown et al., 2005). Demands–abilities (D-A) fit refers to the correspondence between the individual's knowledge, skills, and abilities and the work required. We argue that including the D-A perspective is worthwhile considering for future research. From this perspective, other types of (human capital-enhancing) HR practices may be considered, such as selective recruitment and selection (selective) talent developments (Wang et al., 2008). Additionally, as we used direct measures for NSFE-P and NSFE-A, we could not evaluate which parts of the N–S equation, that is, the needs or the supplies (or both), influence the lack of need fulfilment. Therefore, future studies could explore using indirect measures for assessing needs and supplies separately to provide more specific recommendations for improving employee performance.

Finally, we believe that our study using the N–S fit approach can be seen as a first step towards exploring employee evaluative perceptions of HR practices from a more fit perspective in SHRM research. So far, most of the HR practices are identified as a form of supplies rather than as a form of demands (Boon et al., 2011). Therefore, we have selected HR practices that align well with such a "supplies" perspective, at least in the Netherlands, the country where we collected our data. However, we recommend future research to explore the N–S fit of present and absent HR practices in other contexts than the Netherlands. We argue that the principles developed in this paper can be used, while the set of HR practices might be different to match with the supplies relevant for the context. For example, the type of HR practices depends on contextual organizational boundaries, because HR practices can be specific to the organization's sector, for example, the financial service sector versus the healthcare sector. Moreover, this study compared high versus low congruence and high versus low incongruence situations to introduce a fit perspective in studying employee perceptions of HR practices. Future studies could build on this approach by studying all four contrasts in terms of congruence more explicitly and examine how they impact employee outcomes. In addition, future studies could extend the discussion to other types of employee needs, such as the need for well-being, and different outcomes, such as commitment and satisfaction as happiness dimensions of employee well-being, and exhaustion and stress as health-related dimensions of employee well-being, or more objective measures of employee performance (Van De Voorde et al., 2012). As a final direction for future research, proactive work behaviour and engagement might be influenced differentially by specific HR practices or bundles of practices. The focus in this study was to contribute to HRM literature by focussing on the whole set of supplies offered within the HRM system, as research has shown that a coherent set of HR practices has a more significant impact on employee outcomes compared to a single HR practice (Subramony, 2009). However, we recommend that future studies also examine how the NSFE-P and NSFE-A of specific HR practices impact particular employee outcomes.

4.2 | Implications

Organisations and managers invest in HR practices to contribute to the organization's performance. They are interested in understanding whether the practices they implement are perceived as effective for employees' job performance and what potentially valuable practices might be perceived as missing to work effectively. Obtaining this information can be done by asking employees how they perceive the HR practices necessary and sufficient for their job performance, such as in work meetings, employee participation, or performance appraisal conversations. Survey employees is another possibility to get an organisation-wide view on the perceived effectiveness of present and absent HR practices for employees' functioning.

How to address the issue of fit between present/absent practices on the one hand and employees' needs to function well, on the other hand, depends on whether the issue is considered at the individual level or the group level (team, department, organization), and whether it concerns NSFE-P or NSFE-A. When the low NSFE-P score is a unique phenomenon, the line-manager can have a conversation with the individual to find out why these HR practices do not help this employee work effectively or may even be harmful/a waste of time and energy on behalf of the employee. If the practice can be missed for the specific worker without problems for the organization, it is worth considering eliminating the practice. In case of a low NSFE-A score, the line manager might consider striking an idiosyncratic deal for the individual scoring low on NSFE-A, i.e., implement the practice only for the individual who needs the practice to function well (Fu et al., 2020). When low NSFE-P scores exist for an entire team or even for an organization as a whole, it is important to consider how the practices are implemented by (some of the) line-manager(s). Maybe the quality of what is offered in terms of HR practices is inadequate to add value for the employees in terms of their functioning. If many employees consider the practice a waste of time or even harmful, good reasons exist to change policy and practices more systematically. Finally, when an entire team or organization indicates low NSFE-A scores, the first one could check organizational communication and information quality as well as implementation quality of line managers (Den Hartog et al., 2013): is it clear enough to employees that such practices are available, while employees report them as absent and missed. However, there is also a possibility that there is ample room for improving HR practices' contribution to performance. Organisations and line managers could consider implementing new practices that specific teams or an entire organization would appear to lack.

The findings of this research also have important general implications for HR professionals. In particular, we found that checking whether HR practices are available to employees is less important than evaluating the perceived effectiveness of such practices. Therefore, rather than aiming for the largest arsenal of available HR practices, HR policymakers and professionals should aim for making the best possible use of HR practices, specifically by the responsible elimination of practices that lack added value or are even wasting employees' time and energy and organizational resources, as well as the substantiated addition of practices where this would enable employees to function better.

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CONFLICT OF INTEREST

The authors declare no potential conflicts of interest with respect to the authorship and/or publication of this article.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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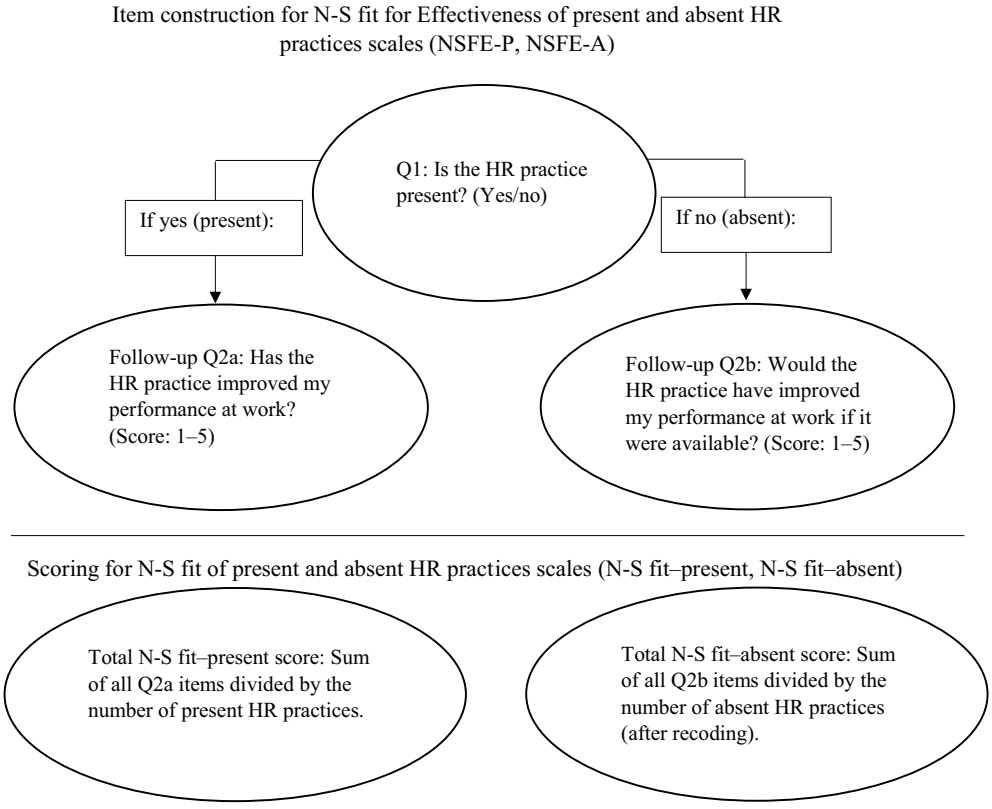
APPENDICES

Appendix A

Overview of Scoring for Needs–Supplies Fit for Effectiveness of Present and Absent HR Practices Scales.

Q = Question.



Appendix B

Items of the Needs–Supplies Fit For Effectiveness of HR practices scale.

Introduction: The following statements relate to personnel management within your organization and its impact on the accomplishment of your daily work duties. Please indicate whether or not the following applies to your work in the past year. You will be asked to choose between "yes" and "no" and then to answer a follow-up question (ranging from 1 = totally disagree −5 = totally agree) based on your chosen answer.

Note. TD = training & development, PM = performance management, JD = job design, PA = participation, CI = communication & information sharing, RW = rewards.

TD1. I follow training, courses, and workshops (yes: 66.0%).

If yes: My work results have improved in the last year as a result of trainings, courses and workshops.

If no: My work results would have improved in the last year had I followed trainings, courses and workshops.

TD2. I receive coaching in developing my knowledge and skills (yes: 58.7%).

If yes: My work results have improved in the last year as a result of coaching in developing my knowledge and skills.

If no: My work results would have improved in the last year had I received coaching in developing my knowledge and skills.

TD3. I have the opportunity to perform another function in my organization (yes: 52.3%).

If yes: My work results have improved in the last year as a result of the opportunity to perform another function in this organization.

If no: My work results would have improved in the last year had I received the opportunity to perform another function in this organization.

PM1. My performance is periodically assessed by my supervisor (yes: 80.4%).

If yes: My work results have improved in the last year as a result of periodic assessments from my supervisor.

If no: My work results would have improved in the last year had I received periodic assessments from my supervisor.

PM2. I have periodic conversations with my manager about my work results (yes: 69.9%).

If yes: My work results have improved in the last year as a result of periodic conversations with my manager about my work results.

If no: My work results would have improved in the last year had I received periodic conversations with my manager about my work results.

PM3. My work results are determined in joint consultation (yes: 57.4%).

If yes: My work results have improved in the last year as a result of determining my work results in joint consultation.

If no: My work results would have improved in the last year had my work results been determined in joint consultation.

JD1. I have diverse work (yes: 88.6%).

If yes: My work results have improved in the last year as a result of diverse work.

If no: My work results would have improved in the last year had I had diverse work.

JD2. I have challenging work (yes: 80.9%).

If yes: My work results have improved in the last year as a result of challenging work.

If no: My work results would have improved in the last year had I had challenging work.

JD3. I make my own decisions in work (yes: 87.7%).

If yes: My work results have improved in the last year as a result making my own decisions in work.

If no: My work results would have improved in the last year had I had made my own decisions in work.

JD4. I take responsibility for my own work (yes: 95.3%).

If yes: My work results have improved in the last year as a result responsibility for my own work.

If no: My work results would have improved in the last year had I had taken responsibility for my own work.

PA1. I have a say in the policies of the organization (yes: 37.4%).

If yes: My work results have improved in the last year as a result having a say in the policies of the organization.

If no: My work results would have improved in the last year had I had a say in the policies of the organization.

PA2. I give my opinion on work-related issues in the organization (yes: 84.5%).

If yes: My work results have improved in the last year as a result giving my opinion on work-related issues in the organization.

If no: My work results would have improved in the last year had I given my opinion on work-related issues in the organization.

PA3. I participate in consultation in which the division of tasks are determined (yes: 67.1%).

If yes: My work results have improved in the last year as a result of participating in consultation in which the division of tasks are determined.

If no: My work results would have improved in the last year had I had participated in consultation in which the division of tasks are determined.

CI1. I am informed about the general course of events within the organization (yes: 87.7%).

If yes: My work results have improved in the last year as a result of being informed about the general course of events within the organization.

If no: My work results would have improved in the last year had I been informed about the general course of events within the organization.

CI2. I am informed about specific procedures within the organization (yes: 79.1%).

If yes: My work results have improved in the last year as a result of being informed about specific procedures within the organization.

If no: My work results would have improved in the last year had I been informed about specific procedures within the organization.

CI3. I am informed about significant changes in the organization (yes: 90.8%).

If yes: My work results have improved in the last year as a result of being informed about significant changes within the organization.

If no: My work results would have improved in the last year had I been informed about significant changes in the organization.

CI4. I have insight in the way decisions are made within the organization (yes: 54.4%).

If yes: My work results have improved in the last year as a result of having insight in the way decisions are made within the organization.

If no: My work results would have improved in the last year had I had insight in the way decisions are made within the organization.

RW1: I receive other financial benefits in addition to my basic salary (42.4%)

If yes: My work results have improved in the last year as a result of receiving other financial benefits in addition to my basic salary.

If no: My work results would have improved in the last year had I received other financial benefits in addition to my basic salary.

RW2: I receive compensation that depends on my performance (19.4%)

If yes: My work results have improved in the last year as a result of receiving compensation that depends on my salary.

If no: My work results would have improved in the last year had I received compensation that depends on my salary.

RW3: I receive rewards that depend on team or departmental performance (14.8%)

If yes: My work results have improved in the last year as a result of receiving rewards that depend on team or departmental performance.

If no: My work results would have improved in the last year had I received rewards that depend on team or departmental performance.

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REVIEW ARTICLE

Gender in Human Resources: Hiding in plain sight

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Abstract

This paper argues an important aspect of Human Resources (HR) as an occupation has been largely overlooked by mainstream and critical scholars alike: its gendered qualities. Gender is 'hiding in plain sight' in the sense that its high concentration of women is obvious but has attracted only sporadic academic commentary. We suggest rather than simply a 'feminised' area of management, contemporary HR is a complex mix of both masculine-coded and feminine-coded values, priorities and norms derived from earlier traditions of welfare and personnel management as well as the later influence of strategic management. Attention to this gendered complexity can help us understand how the HR occupation is experienced in everyday interactions and provide an alternative perspective that enriches Critical Human Resource Management.

KEYWORDS
critical HRM, gender, HR occupation, HR practitioners, HRM function

1 | INTRODUCTION

Human Resource Management (HRM) has attracted critical debate since its inception in the 1980s with its claims to be a paradigmatic break from earlier personnel management and industrial relations (e.g. Storey, 1989). Three decades on, HRM has become an established field of academic inquiry and area of management practice. Yet questions about its relevance and legitimacy persist, both in terms of its role and value to organisations, employees and broader society (Dundon & Rafferty, 2018; Kaufman, 2020; Kochan, 2007; Marchington, 2015; Thompson, 2011).

Abbreviations: HR, Human Resources; HRM, Human Resource Management.

Those from Critical Management Studies traditions have provided several insightful analyses about the state of mainstream HRM scholarship, its performative assumptions and its unproblematised focus on serving employer interests, which at the same time seems to have little impact beyond the academy (e.g. Delbridge, 2010; Harley, 2015; Janssens & Steyaert, 2009; Vincent et al., 2020).

In reviewing this literature, we were struck by two related features. The first was that much of the debate takes place at a high level of abstraction - HRM as ideology, critique of Human Resources (HR) strategy, its ethical underpinnings, HR systems and practices – rather than drilling down to research the people comprising or performing the function (for notable exceptions, see: O'Brien & Linehan, 2014; Pritchard, 2010), a point also made by Janssens and Steyaert (2009) in their call for greater reflexivity in HR research. The second was the lack of scholarly attention to, and reflection about, what seemed like an obvious characteristic of the HR occupation given the dominance of women within this management speciality—its gendered associations, that is, the meanings attributed to the occupation related to the embodied identities of those who typically perform it (see Ashcraft, 2013). For example, 2020 data from the US Bureau of Labour Statistics (2021) indicates that 74.3% of HR workers and 76.8% of HR managers are women while in the UK, women account for 87.5% of HR administrative occupations, 67.7% of HR and IR officers and 60.9% of HR Managers or Directors (Office for National Statistics, 2021). That these two points—the abstract character of debates about HR and its gender blindness—should coexist is not coincidental: it is only when we see work as embodied that we are confronted with the need to move from 'gender-neutral' (and by implication, gender blind) abstractions to understand how organisations and occupations are differently gendered (Acker, 1990, 1992).

In this paper, we argue for the need to make the 'hidden, gendered practices and processes currently concealed within norms, customs and values' (Broadbridge & Simpson, 2011, p. 470) associated with the HR occupation more visible and analysable. Gender can also be conceptualised in different ways. We outline one feminist scholarly tradition that could help with this undertaking: 'doing gender'. First introduced by West and Zimmerman in 1987, this theory approaches gender as a 'doing' that happens through social processes and practices rather than (just) an individual attribute or social category, and which is accomplished in interaction with others and in relation to specific contexts (West & Zimmerman, 1987). From this perspective, the emphasis is on how individuals negotiate and accomplish gender in ways related, but not reducible to, their biological sex (Acker, 1992, 2006; Gherardi, 1994; West & Zimmerman, 2002).

Our focus is on the HR occupation and those working within the HR function, i.e. HR practitioners. While the high concentration of women working in HR has attracted academic attention since the 1980s to the present day (e.g. see Bolton & Muzio, 2008; Brandl et al., 2008; Gooch, 1994; Legge, 1987; Reichel et al., 2013; Reichel et al., 2020; Roos & Manley, 1996) reflection about the gendered associations of HR-as-occupation has remained marginal to the field as a whole. Our overall argument is that gender is largely a 'blindspot' in current theorising and critique of HRM. Our goal is to explain why and how gender could be made visible, and in doing so shift it from 'hiding in plain sight' to 'under the spotlight': in applying a feminist lens to explore how we might consider HR and gender, we also identify several areas for future research. In doing so, we purposely broaden out the scope of critical HRM, and suggest ways it can contribute to addressing some of its current concerns about the state of mainstream HR scholarship. These concerns include: its *conservatism* which does not incorporate adequate attention to issues of power and inequality (Delbridge, 2010; Dundon & Rafferty, 2018; Godard, 2014); a lack of *reflexivity* about the project of HRM knowledge production, including dialogue with other fields and theoretical traditions (Harley, 2015; Janssens & Steyaert, 2009; Kaufman, 2020); and *irrelevance*, that is, the disconnection between much HR research and theory and practice (Delbridge, 2010; Harley, 2015; Janssens & Steyaert, 2009; Kaufman, 2015; Vincent et al., 2020).

We begin by explaining the tradition of gender scholarship on which we draw and how it could be applied to think through some of the ways in which the HR occupation might be considered gendered at different levels of analysis. These are firstly, the gendered associations of HR, secondly, gender in HR as social practice and interaction and thirdly, how context is bound up with the simultaneous 'doing' of gender and HR. Each of these substantive points concludes with some questions and suggestions for further research and illustrative research questions that would

advance existing understanding. This is followed by a discussion of how greater attention to gender could enrich critical HRM scholarship.

2 | DOING GENDER; DOING HUMAN RESOURCES

Gender is one of the major axes of difference that underpins the organisation of work, institutions and society (Acker, 1990, 1992, 2006; Ashcraft, 2013; Crompton, 1987; Davies, 1996; Kirkham & Loft, 1993; Tomaskovic-Devey, 1993). We understand gender to be the cultural, shared meanings attributed to physical sex-based markers, meanings that vary between different times and places. While such meanings may become entrenched, they are also open to change, and continually reproduced, maintained or resisted and challenged through processes of social interaction. Rather than a pre-existing individual characteristic then, gender is both embedded in institutional arrangements and 'done' or accomplished through social practices and interaction, including within and around organisations (e.g. West & Zimmerman, 1987, 2002, 2009; Gherardi, 1994; Ridgeway, 2009; Rissman, 2009; Wright, 2016).

In characterising gender in this way, we are explicitly drawing upon feminist literature within gender studies that adopts a 'doing gender' approach. While there are different theoretical paradigms within feminist scholarship, 'doing gender', first proposed by West and Zimmerman in an article published in *Gender and Society* in 1987, has been extremely influential (Gherardi, 1994; Martin, P.Y. 2003; West & Zimmerman, 2002; West & Zimmerman, 2009). West and Zimmerman's (1987) original piece was reacting against more structural, static and essentialist understandings of gender, arguing it was better understood as 'a routine accomplishment embedded in everyday interaction' (1987, p. 125). Drawing on Goffman's (1976) ideas of gender role and gender display, they defined gender as the 'activity of managing situated conduct in light of normative concepts of attitudes and activities appropriate for one's sex category. Gender activities emerge from and bolster claims to membership in a sex category' (1987, p. 127). They made the point that, while linked, gender and sex category were analytically distinct: participants in a social interaction may invoke 'commonsense' understandings of sex categories but gender emerges from the interaction itself involving the management of gender displays that make sense in that context, producing more nuanced, fluid and adaptable variations than is accounted for by sex categories. Individuals therefore 'do gender' but West and Zimmerman (1987, p. 126) stress that gender is not a 'property of individuals'; it is an outcome of social activity involving actual and imagined individuals and groups, who draw upon shared understandings, cultural norms about gendered difference and the taken-for-granted arrangements in the particular society and contexts in which they are based.

This 'ethnomethodologically informed, and therefore distinctly sociological' (West & Zimmerman, 1987, p. 126) approach to understanding gender as socially constructed but having material consequences resonated with empirical researchers in particular and 30 years on there is a substantial body of work that draws upon the idea of 'doing gender' to explore not only issues concerning women but also men and masculinities. Alternative ways of conceptualising the 'doing of gender' have also been taken up, most notably Judith Butler's (2004, 2007) notion of 'gender performativity': this more poststructuralist idea emphasises fluidity and flexibility to a greater extent as it does not assume gender identity exists in advance of interaction (Nentwich & Kelan, 2014, p. 123). Rather it focuses on the possibilities for gender identity allowable within a particular situation or discourse and how individuals 'become recognisable gendered subjects' (McDonald, 2016, p. 24) by enacting practices that have gendered connotations. It also draws attention to the potential that gender may not be as relevant in some situations and that established gender identities can be subverted or 'undone' (Deutsch, 2007).

However, the popularity of 'doing gender' has led some to complain it is now invoked ritualistically without deeper engagement (e.g. Wickes & Emmison, 2007). This has arguably contributed to confusion about what aspects and which version of the concept are being examined. Starting from these concerns, Nentwich and Kelan (2014, pp. 124–130) develop a topology of approaches to 'doing gender' with the aim of bringing greater conceptual clarity and providing guidance to researchers. These five approaches are 'doing gender' as: 'doing structures' (which includes the gendered associations of occupations and gender as embedded in organisational structures); 'doing hierarchies' (the

symbolic valuing of masculine over feminine); 'doing identity' (how individuals do gender in different ways through social practice so that identity cannot simply be 'read off' from an occupation or role); 'flexible and context specific' (how 'doing gender' varies depending on who is doing it and in what context); 'gradually relevant and subverted', the last of which draws heavily on Butler's (2004, 2007) ideas of gender performativity. While not advocating researchers adopt a '"pure" epistemological orientation' where they are expected to choose 'either ethnomethodological interactionism or poststructural discourse approaches' (2014, p. 131), Nentwich and Kelan nevertheless suggest that greater specificity about which aspects or versions of 'doing gender' are being invoked would assist in developing more sophisticated and nuanced theorising and analysis.

Accordingly, in the following sections we have selected three of these specific approaches to 'doing gender' to illustrate and explore how they could make gender in HR more visible and analysable (cf. Davies, 1995), each of which centres around enduring sociological concerns: the first deals with 'doing structures' focussing on the gendered associations of HR as an occupation; the second explores how HR work can be understood as 'doing identity' through processes of social interaction; and the third directs attention to the 'flexible and context specific' aspects of gender and HR.

2.1 | Approach 1: Human Resources as gendered occupation

What does it mean to say that an occupation is gendered? Rather than just referring to whether a job is female or male-dominated, as may be the case with some of the literature on occupational segregation, understanding occupations as gendered is not as straightforward as it might first appear. Certainly, the numerical dominance of men or women in an occupation will leave its traces on how that occupation evolves, and its relative status and power. As Cynthia Cockburn put it (1988, p. 38) 'People have a gender, which rubs off on the jobs they do. The jobs in turn have a gender character that rubs off on the people that do them.' However, the numerical domination by sex category and its gender-coding (i.e. its masculine and/or feminine associations) are related but distinct concepts.[1] An occupation can be 'transgendered' (Britton, 2000, quotation marks in original, p. 442) in the sense that it may be coded as masculine or feminine but become dominated by those of a different gender. One example of this is veterinary science (Irvine & Vermilya, 2010) which was historically 'masculine' but experienced rapid entry of women since the early 1990s to the extent that they now dominate. And while Milkman (1983) argued that, once established, the 'sex-typing' or gender-coding of an occupation tends to be entrenched, there are instances where change has occurred over time, for example, in general practice in medicine (Wallace, 2014; Walsh, 2013).

This point is demonstrated in some detail by Ashcraft's (2007; 2013) tracing of the shifts in gendered associations of aircraft pilots in the twentieth century. Once the province of 'lady flyers' and considered an intuitive and feminine pursuit in its early years, aircraft flying became progressively more masculinised, technical and professional to the point where women were confined to the ancillary role of flight attendant, catering to passengers and shoring up the elite status of the pilot. Ashcraft's historical account resonates with other feminist scholarship tracing how the status of 'profession' for some, typically male-dominated and masculine-coded, occupations was achieved both through the exclusion of women as well as their inclusion in adjunct support roles (e.g. Broadbent et al., 2017; Crompton, 1987; Davies, 1996; Hearn, 1982; Witz, 1990, 1992). The work done by the latter was essential to maintaining the elite status of professions and their ideology of the rational and detached individual, unencumbered with personal responsibilities. Moreover, at the same time as such 'feminised' support work was needed for 'professions' to function, it was also devalued (see Davies, 1995, 1996). It is no accident that female-dominated occupations such as teaching and nursing have struggled to gain recognition as professions of the same status as law and medicine because 'the very meaning of "profession" is gendered' (Ainsworth & Flanagan, 2020, p. 253; see also; Hearn, 1982; Broadbent et al., 2017).

Occupational or professional identity is thus intertwined with gender identities (Ashcraft, 2013; Kirkham & Loft, 1993). Elaborating on this point, Ashcraft (2013) proposes that, rather than continue in the tradition of studying

occupational or professional identity as a target of individuals' affiliation, it be conceptualised as a form of social identity in itself: 'If we think of occupations as having *collective* selves…we are compelled to acknowledge empirical evidence for an *associative* view of the work-practitioner relation, wherein the nature of work is known by the company it keeps.' In other words, the identity of an occupation is intertwined with the social identities of those who perform it. Using the metaphor of the 'glass slipper', she argues occupational identities 'fit' some people better than others to the extent that they reflect the image of the gendered 'figurative practitioner', that is, those who are 'discursively or emblematically associated with the work' (p. 8). Further, she suggests that activities that make up the occupation also have gendered identities. This implies that within the same occupation, some specialisations may have different collective gendered associations.

Applying these ideas to the HR occupation, we can make several observations. Firstly, as Reichel et al. (2020) note, overall HR is a management specialisation where women have traditionally been dominant, increasingly so over recent times, and is 'perceived as matching women's stereotypically assumed talents' (p. 583) of dealing with people and showing a concern for others (see also Bolton & Muzio, 2008; Brandl et al., 2008). The traditional associations of HR with 'allegedly female skills such as communication, organisation and emotional support' (Bolton & Muzio, 2008 p. 289) makes it a 'gender authentic' (Faulkner, 2009, p. 172) career choice for women that requires little explanation. However management more generally, as an 'aspiring professional project' (Bolton & Muzio, 2008, p.283; see also; Farndale & Brewster, 2005; Pohler & Willness, 2014) focussed on rationality, performance, instrumental outcomes and economic logic, has long been associated with men and masculinity (e.g. Moss Kanter, 1977; Schein, 2007) and particular types of 'hegemonic masculinities' (Connell & Messerschmidt, 2005). We could thus interpret the HR occupation as a form of limited and very specific feminine inclusion that preserves the broader masculine ideology of management.

It is important to bear in mind though that the gendered associations of both management and HR are not static and have changed over time. For example, since the mid-1980s there have been shifts in the dominance of masculine and feminine associations within management generally (Broadbridge & Simpson, 2011).

While the early 1990s saw a celebration of essentializing constructions of women's 'feminine advantage' (Calás & Smircich, 1993) at communication, 'soft skills' and participative leadership, this was arguably followed by a 'remasculinisation' in the 2000s associated with hyper-competitiveness, long hours and greater risk-taking. Human Resources, on the other hand, has a more complicated gendered genealogy as discussed by Legge (1987), Gooch and Ledwith (1996), and Reichel et al. (2010). The precursors of HR, personnel management and industrial or labour relations, were differently gendered: the former had their origins in 'lady social workers' of the late 1890s and were concerned with employee welfare and administration, particularly female employees; whereas the latter was dominated by men and had relatively higher status. By the 1960s and 70s, industrial relations was both more central and more powerful than personnel management (see Legge, 1987). However, this position was unsettled with the rise of HRM in the 1980s alongside economic changes such as the growth in service sectors, the decline of manufacturing and mining industries as traditional male union strongholds, and weakening of employment regulation and collective institutions of labour relations (Kochan, 2007; Thompson, 2011). In the US context, personnel and then later HR was increasingly feminised from the 1970s onwards and its power grew with the institutionalisation of equal opportunity and civil rights, despite attempts under the Reagan administration to wind back existing legal protections (Dobbin, 2009; Dobbin & Jung, 2015).

The heritage of strategic HRM as a 'child of strategic management' (Jackson et al., 2014, p. 5) arguably introduced additional masculine coded ideas and practices, associated with planning, measurement and control (Broadbridge & Simpson, 2011), performance orientation and an instrumental framing of people as 'resources'. Yet the imprint of earlier feminine-coding of personnel management, with its welfare and administrative orientation, still circulates, which complicates how HRM is practiced and understood. Its evolution illustrates how gender and occupation are ongoing, intertwined cultural processes. We argue that HR now consists of a complex mix of gender-coded priorities, values and practices with implications for how it is experienced, accomplished in social interaction, and how it is conceptualised and critiqued. Moreover, the gender-coding of HR could vary between different roles

and specialisations. Taking this as a starting point, we can therefore identify several areas for future research on HR as a gendered occupation. For example, do operationally-focussed or development-oriented HR have a different 'gendered inflection' than more strategic roles or those concerned with labour relations and compensation? If so, how are these 'gendered inflections' manifested and understood, and what are the implications for relative status, power, rewards, professionalisation and careers? Depending on the specific empirical focus, methods associated with sensemaking, critical discourse analysis and/or performativity could be suitable to explore these and related research questions. In any case, such inquiry could provide a more nuanced understanding of the gender-coding of HR by identifying the constellations of associations that coalesce around the variety of sub-functions and work that makes up HR.

2.2 | Approach 2: How do individual actors do gender? Gender in Human Resources as social practice and interaction

The second approach to 'doing gender' that illustrates how gender in HR could be made more visible and analysable concerns how this is accomplished in social practice and interaction. This draws attention to the role of individual agency: while there may be collective gendered associations of an occupation or profession, there is still scope for individuals to vary in the way they practice gender and occupation—to suggest otherwise would risk reifying both (Britton, 2000; Nentwich & Kelan, 2014). In other words, individuals 'do' gender by mobilising shared cultural understandings of gender as discursive resources and versions of masculinities and femininities in how they construct the meaning of what they and others do, in relation to each other (e.g. Rissman, 2009; Wright, 2016). They may selectively emphasise, reproduce or challenge the collective gendered associations of their occupation or profession. Empirical research exploring this idea has shown how women in non-traditional that is, masculine and male-dominated STEMM (science, technology, engineering, mathematics and medicine) fields can uphold and emphasise the masculine associations of their occupation, rather than challenge them. In her study of female scientists, Rhoton (2011), for instance, detailed how they asserted their professional legitimacy by stressing the 'masculine' characteristics of their work while distancing themselves from 'feminine' coded behaviour such as emotional involvement, affect and care. Conversely, research on men in female-dominated occupations such as nursing, caregiving, teaching, and temporary administration has shown how they too commonly engaged in both appropriating and distancing from the 'feminine' associations of their field to reframe their work in masculine terms (e.g. Cross & Bagilhole, 2002; Henson & Rogers, 2001; Perra & Ruspini, 2013; Pullen & Simpson, 2009; Simpson, 2004). Individuals may thus reproduce or resist the commonly-held gendered associations of their occupation but it still 'forms the backdrop' against which such practices take place. As such the gendered associations of an occupation can be both a resource for, and a constraint on, individuals 'doing' both gender and occupational identity simultaneously.

This is particularly important once we consider that social practices happen in interaction with others (Ridgeway, 2009): if behaviour is seen as gender 'inauthentic' (Faulkner, 2009) or transgressing gendered norms, the 'doing' of gender becomes more unstable and risks being contested and seen as illegitimate or 'implausible'. For example, those women who pursue occupations dominated by men and carrying masculine associations, such as engineering or surgery, are called upon by others with whom they interact to justify, and account for, their deviation from gendered expectations (Ainsworth & Flanagan, 2020; Rodriguez, 2013). Similarly, previous research has shed light on how men in 'feminine' occupations experience challenges to their masculine identity, heterosexuality and acceptance (e.g. Bagilhole & Cross, 2002; Henson & Rogers, 2001), particularly in caregiving roles including working with young children (e.g. Børve, 2017; Pullen & Simpson, 2009; Simpson, 2004). Social interaction thus contains the potential for contradictions, tensions, and differences in (gendered) expectations if those interacting with women or men expect one thing but get another.

Also relevant is Ashcraft's (2013) distinction between the 'figurative practitioner' (the gendered 'image' of the occupation) and those who actually perform the work. Moreover, the collective gendered associations are not

necessarily controlled by those inside the occupation. Here she warns against 'assuming that insiders (i.e. practitioners) are the most active and pivotal identity producers, whereas external constituents are comparatively passive consumers' (Ashcraft, 2013, pp. 14–15). Instead she advocates for a view of occupational identity as 'co-constructed', combining ideas of what the work entails and who is associated with it, the meaning of which is negotiated between insiders and outsiders.

Building on our characterisation of the complex gendered associations of the HR occupation, we can speculate about how this could play out in social processes and introduce the potential for contradictions and tensions. For example, those within HR may have a different understanding of its gendered associations than those outside the occupation, including those with whom they work. Human Resources practitioners could be perceived as transgressing gendered norms by those with whom they interact, such as senior managers, line managers and employees. Many years ago, Moss Kanter (1977) identified how being and acting competent in some occupations, such as management, often implicitly and explicitly takes the form of 'masculine-coded' traits and behaviours, for example being agentic, authoritative, analytical, decisive etc. However, if women behave in these ways, they risk disapproval because they transgress gendered expectations that women will be communally oriented, caring, nurturing, deferential and concerned with relationships (Eagly & Karau, 2002; Kolb et al., 2010). In addition, women tend to be expected to perform more organisational citizenship and provide support to others, work often rendered invisible and without reward because it is seemingly 'natural' that is, reflecting gendered stereotypes (Gooch & Ledwith, 1996; Huff, 1990). When the strategic priorities of the organisation, and the handling of particular cases, require 'hard HRM' (Storey, 1989, 1992), or involve women working in HR behaving in 'masculine-coded ways', we could expect to find others reacting to this gendered transgression in two senses. Firstly, the individual woman, in interaction with other line managers, employees and other stakeholders, risks social disapproval. This might then be compounded by backlash against transgressing or contradicting HR's more 'feminine' associations of employee welfare and development, violating the 'injunctive' or prescriptive gendered norms expected of it by others (see Eagly & Karau, 2002). In such a situation, the female individual HR practitioner doing gender and occupational identity simultaneously risks violating both the more general gendered norms expected of women as well as the collective 'feminine' associations of the HR occupation.

On the other hand, HR's combination of feminine and masculine associations may have different implications for men, depending on their level of seniority, the role they occupy or the particular version of HR they are called upon to implement. Previous research on men in traditionally 'female' occupations has shown that they can experience not only challenges to their masculinity but also 'special consideration' (Simpson, 2004) whereby they are encouraged to pursue a more careerist orientation and rise more quickly through the ranks, a phenomenon Williams (1992), termed the 'glass escalator', a variation on the 'glass ceiling' experienced by women and minorities that blocks their career progression.

In summary then, even given the gendered associations of an occupation, individuals can still 'do gender' in different ways. However, individual agency is constrained because the gendering of occupations is co-constructed and unfolds in social interaction involving a range of actors, not just those within the occupation itself. In relation to HR, we suggest there is the potential for contradictions and tensions and perhaps different versions of its gendered associations, stemming from its history and the current complexity of its gender-coding. Therefore, future research could fruitfully focus on how individual HRM practitioners understand their work in 'gendered' terms, and how these understandings are shaped in interactions with line managers, executives, and employees (e.g. Pritchard, 2010). For example, what tactics or practices do HR practitioners use to resist, challenge, stretch or otherwise negotiate the gendered associations of their work and what limits or constraints do they face in doing so? How does this play out in the micro-politics of interactions with line managers, senior executives and employees and with what implications for those involved? These are just some of the research questions that could be explored by focussing on 'doing gender' as social practice and interaction.

2.3 | Approach 3: Flexibility and gendered contexts

The third approach to 'doing gender' that would assist to make gender in HR more visible concerns how contexts are bound up with the simultaneous accomplishment of gender and occupational identity. Here context is not considered a variable or passive backdrop but rather inherent in the construction of gender itself. West and Zimmerman's (1987) original conceptualisation of 'doing gender' stressed the importance of attending to the specific contexts in which it took place: in 'social activity involving actual and imagined groups', (p. 126), actors invoked and relied upon shared cultural understandings of gender differences, gender-appropriate norms, and institutional arrangements. In other words, in social interaction, aspects of context were either taken-for-granted as cultural knowledge shared by those interacting and/or explicitly or implicitly mobilised to 'do gender'. For gendered occupational identities to be accepted as plausible and legitimate, they need to 'make sense' in a given context and cannot be understood in isolation from such contexts.

We suggest that this attention to context in 'doing gender' is consistent with recent calls within critical HRM for greater consideration of the multilayered influences of wider political, economic, social and cultural forces on HR approaches and practices. In a recent editorial on the political economy of HRM, Vincent and colleagues (Vincent et al., 2020) outline different 'levels' of context including 'cultural knowledge systems' and 'financial, regulatory and governance systems' among others that would help broaden the focus of HR beyond the organisation. Applying this perspective to gender and HR, we would consider that the gendered norms and ideologies that circulate in different countries constitute a form of 'cultural knowledge system'. By this we mean the taken-for-granted assumptions about the desirability of equality between genders and the roles and activities in which men and women are expected to engage in political, economic and social spheres, the distribution of wealth, education and family structures (Hennekam, Tahssain-Gay & Syed, 2017) and the way these are embedded in institutional arrangements, that is, 'financial, regulatory and governance systems' (Vincent et al., 2020: 467). For example, in a 22-country comparative study of the strategic orientation and integration of HR directors, Brandl et al. (2008) found in those countries with more gender-equal attitudes and government systems supporting women's participation in the workforce, female HR directors were more involved in strategic activities, relative to their counterparts in countries with less gender equality and enabling social policies. We could also expect other contextual dimensions relating to work to have a bearing on the gendering of HR (Cooke, 2018). The norms, regulatory systems, institutions and traditions underpinning employment relations in different countries could contribute to the HR occupation being 'gendered' in divergent ways, depending on where it is practiced (Reichel et al., 2020).

Other research on gender, the labour market, the family and education suggests the need for a nuanced approach to characterising and interpreting patterns in gender-related attitudes and beliefs between countries as well as assumptions equating progress towards gender equality with degree of modernisation (Charles, 2011; Charles & Bradley, 2009; Knight & Brinton, 2017). For example, in a series of studies on cross-country variations in gender segregation in labour markets, Charles and colleagues (Charles, 2011; Charles & Bradley, 2009) show how women's representation in non-traditional STEMM fields such as engineering and computer science is higher in developing economies than in advanced industrial countries (Charles, 2011, p. 362). Charles (2011, p. 366) concludes: 'Some of the most sex-segregated labour markets and educational systems are found in precisely those countries reputed to be the most gender-progressive in their cultural values and social policy provisions.' She attributes this outcome partly to the dominance of 'liberal egalitarianism' which reinforces the importance of individual free choice in vocation and field of study, choices which are, however, conditioned and constrained by 'cultural knowledge systems' (Vincent et al., 2020) that perpetuate and legitimise gender essentialist norms about appropriate occupations.

On a related note, Knight and Brinton's study (2017) of attitudinal change in Europe suggests there are 'varieties of gender egalitarianism' that exist alongside versions of gender essentialism about women and men's roles in the family and in the labour market. Rather than a single continuum with conservative and traditional values at one extreme and gender equality at the other, they identify more specific and alternative constellations of gender-related attitudes and values or 'interpretive schemes'. For example, in addition to 'liberal egalitarianism', they identify

'egalitarian familialism', which they describe as beliefs that women should be active in the family as well as in the paid labour force, while 'flexible egalitarianism' rejects adherence to both or either of these norms. This alerts us to the need to move beyond a simplistic characterisation of gendered cultural knowledge systems to explore empirically what interpretive schemes (or combination of schemes) about gender are being assumed or invoked by actors in a particular context, interaction or account.

Conceptualising context in this multilayered way directs attention beyond the boundaries of organisations where much HR research has concentrated (see Vincent et al., 2020). Certainly industry and organisational context will still be relevant to understanding how gender is 'done'. One could imagine how different gendered cultures could evolve in HR, reflecting the masculine or feminine orientation of the industry or region (see Pan, 2015) in which it is situated. Human Resources in the construction or transport sectors, for example, could take on a more 'masculinised' ethos, mirroring the male-domination of workforce (WGEA, 2019); in contrast, in welfare and social service organisations, HR may develop and display more 'feminised' characteristics. The particular HR strategy and approach to employees adopted could also influence the gendered associations of the occupation: a firm pursuing a strategy along the lines of 'hard' HRM with a focus on controlling labour costs and reliance on 'disposable' labour (see Storey, 1989, 1992) carries more 'masculine' overtones than one involved in relatively high investment in the workforce and concern for retaining more 'valuable', highly-skilled employees. However, attention to the broader dimensions of gendered contexts allows scholars to identify the 'macro' influences in the 'micro' of interactions, in other words, how the 'political binds' (Vincent et al., 2020, p. 465) and contradictions that HR practitioners may experience are generated by the convergence or relationship between broader political, economic, social and cultural forces.

More fundamentally, because gender is such an ingrained part of culture, we cannot assume that individuals see their occupation, or the contexts in which it is performed, as gendered at all (see Lorber, 1994). Scholars would thus need to investigate not just what is said or done but also what is assumed and taken-for-granted by social actors, in specific (or different) HRM settings. In other words, different gendered interpretive schemes might be implicit and/or inferred as shared background knowledge or 'common sense'. Which dimensions of context are relevant in a given interaction and setting can only be established empirically. Therefore, an important question that warrants investigation is how different aspects of context are constructed, understood and mobilised in making sense of the practices and interactions that constitute HR and what role gender plays in these processes.

Exploring gender and HR at the level of the profession/occupation, social practices and interaction, and as flexibly deployed in specific contexts, are some of the ways in which scholarship could be advanced to overcome this current 'blindspot'. As challenging taken-for-granted ways of seeing, and not seeing, is part of the broad project of critical research (Delbridge, 2010), in the following section we argue why bringing gender out from 'hiding in plain sight' has the potential to broaden, complement and contribute to critical HRM.

3 | HOW CAN TALKING ABOUT GENDER ADDRESS CONCERNS OF CRITICAL HUMAN RESOURCE MANAGEMENT

> '[C]ritical voices are crucial to the development of a field. Critical readings of HRM indicate how this field sets priorities and limits, and, by enquiring into these boundaries, they point to blind spots and provide space for alternative readings and new perspectives' (Janssens & Steyaert, 2009, p. 144).

Approaches to gender vary and not all are critical (see Calás & Smircich, 1996; also; Martin J., 2003), for example, some research still adopts a relatively unproblematised assumption that gender is a 'given', equivalent to biological sex, a binary, demographic variable and individual characteristic (West & Zimmerman, 1987). Nevertheless, the three approaches to 'doing gender' we have discussed so far have the potential to contribute to critical HRM debates by providing another way of addressing some of its key concerns. In particular, greater attention to gender can enrich analyses of three recurring and inter-related points of contention: the *conservatism* and incrementalism of much HRM

research dominated by psychology-based inquiry which does not take into account broader issues of power and inequality (Dundon & Rafferty, 2018; Godard, 2014); a lack of *reflexivity* on the part of HR scholars about the values that underpin their research and their 'blindness' to alternative theoretical traditions (Harley, 2015; Kaufman, 2020); and the self-referential dynamic of mainstream HRM academic knowledge production, which does not speak to audiences beyond itself, even at the same time as it pursues agendas directed towards enhancing employee performance and productivity for the benefit of the organisations in which they work (e.g. Jackson et al., 2014; Kaufman, 2015). In other words, even as much HRM research focuses on instrumental concerns, it has little *relevance* and translation to practice (Delbridge, 2010; Harley, 2015; Janssens & Steyaert, 2009).

In relation to the first point, HRM research has been criticised for a conservatism maintained and reproduced through a lack of attention to power and broader structures of inequality (Dundon & Rafferty, 2018). This has resulted, at least in part, from the dominance of individual psychology as an underlying theoretical paradigm which tends to decontextualise social phenomena and actors in order to render them amenable for analysis (see Farndale et al., 2020). This has led to path-dependencies in the way the field has evolved, leading to a focus on incremental development of concepts and measures derived from the same psychologically-based theories (Harley, 2015). In contrast, critical HRM calls for serious consideration of the political, economic and social contexts in order to recognise and explore the 'broader patterns of domination' (Delbridge, 2010, p. 26) that operate in employment, organisations and institutions (Vincent et al., 2020). Bringing a gendered lens to the study of HRM immediately foregrounds one axis of difference which is used to organise society and justify, but also potentially challenge, the continuation of entrenched institutional arrangements (Martin J., 2003). Gender intersects with other dimensions of political, social and economic context, and invites reconsideration of that which has been taken for granted, such as the normative separation between public and private spheres and the assumptions on which work and organisations are based. More fundamentally, some traditions of gender scholarship would see the discrete, rational individual actor at the heart of much management and economics literature, as a 'fiction' and an effect of power (e.g. Acker, 1990, 1992). A greater focus on gender in HR could thus assist in bringing issues of power and context to the fore and help reorient the trajectory of psychologisation that is currently dominant.

A second point of critique has been a lack of reflexivity within HRM. While recognising the term has different meanings, following Janssens and Steyaert (2009, p. 144) we use 'reflexivity' to mean critical examination and questioning of assumptions, so as to bring in 'alternative descriptions, interpretations, vocabularies and voices that could be taken into account'. Janssens and Steyaert (2009; see also Delbridge, 2010; Harley, 2015; Kaufman, 2020) have argued that HR scholars demonstrate a lack of awareness of other theoretical traditions, their roles in the knowledge production process and how they may be perpetuating its narrow focus. Engagement with other traditions then, has the potential to enrich scholarly reflexivity by bringing in alternative ways of seeing and thinking about a social phenomenon. Such reflexivity encourages pluralism: it does not attempt to resolve or collapse difference and contradictions between traditions, but uses these to prompt ongoing dialogue. Given much feminist literature developed largely separately from the critical theoretical traditions that inform varieties of critical HRM (see Martin J., 2003), we consider feminist gender theory can encourage reflection about the gender-blindness or gender-neutrality of both critical HRM and mainstream HR scholarship. The interdisciplinarity of gender studies (Pavlidou, 2011) could bring new ways of seeing to a field criticised for its narrow focus on 'technocratic' and 'managerialist' concerns. Instead of a niche area of specialised inquiry, we see gender as having the potential to broaden the scope of critical HRM that to date, has demonstrated little interest in 'exploring the ways that ostensibly gender-neutral ideas and practices reflect gendered assumptions about both masculinity and femininity' (Martin J., 2003, p. 83).

Finally, despite its managerialist and performative orientation, mainstream HRM has been criticised for its lack of relevance to practice. Purporting to be producing research and theory about managerial concerns, it is a field that increasingly appears to be targeted towards itself, producing ever-more obtuse measurement of constructs of limited utility to those involved in HRM (Harley, 2015). Admittedly, lack of relevance is also a charge levelled at critical management studies which has prompted ongoing debates about whether critical scholarship can, in fact, be 'practical'. In response, both Delbridge (2010) and Janssens and Steyaert (2009) argue it can if there is a 'consistent

commitment to engagement with management practitioners in order to seek change and some form of transformation of systems and structures' (Delbridge, 2010, p. 32) and a greater focus on the processes 'through which HRM is produced and practiced' (Janssens & Steyaert, 2009, p. 149).

It follows then, that such a focus would involve greater engagement between critical scholars and those who work in HR, that is, HR practitioners. As Ashcraft (2013, p. 12) argues in relation to literature on occupational identity more generally, 'the tacit mandate seems to observe practice without seeing the practitioner. i.e., what practitioners do while minimising what they think and ignoring who else they are.' Given critical management studies, or least some strains of it (e.g. Watson, 2004), have long recognized that 'managers are themselves managed and thus subject to potential control and exploitation' (Delbridge, 2010, p. 34), we suggest such an understanding be extended more frequently to those within a specialisation of management dominated by women—HR. This would respond to Bleijenbergh, van Mierlo and Bondarouk's (2020, p. 2) call for HRM scholarship to 'better involve practitioners in the research process.' Such an approach would take seriously the capacity of those working within HR to 'reflexively engage' with their own contexts, that is, be able to identify contradictions and tensions, make sense of the complexity of their roles and relationships and interpret the dynamics of the interactions in which they engage and the practices they undertake. If we accept that gender is fundamental to social life and the organisation of experience and its meaning, then it is not such a great leap of logic to propose that it might operate in the practices, interactions etc. that make up the work of HR. Perhaps if HR research paid greater attention to HR practitioners, rather than just focus on practices and systems (cf. Ashcraft, 2013), and accounted for them as embodied and gendered actors, this may lead to HR scholarship that had greater practical relevance.

4 | 'INTO THE SPOTLIGHT': GENDER IN HUMAN RESOURCES

No doubt our reading of some of this critical scholarship is itself open to contestation. Less easily rebutted though, is our observation of the gender-blindness of much of the critique and the lack of scholarly attention to the gendered nature of HR. What we are suggesting then, is that the adoption of a gendered lens has the potential to add depth and nuance, particularly to critical HRM. This was illustrated through applying three related approaches of 'doing gender' as occupation, doing gender in interaction, and doing gender as flexible and context specific. Our discussion of each concluded with some indicative ideas for future research including: exploring the different gendered inflections of HR sub-specialities and their implications for relative power, rewards and careers; whether and how HR practitioners understand their work in 'gendered' terms and how this plays out in the micro-politics of interactions with line managers, senior executives and employees; how different aspects of context are constructed, understood and mobilised in making sense of the practices and interactions that make up HR and what role gender might play in these processes. Conceptually, we have only scratched the surface of what a more sustained and comprehensive engagement and application of diverse feminist theorising can reveal about HRM. We see considerable scope for exploring the potential of further concepts that approach gender as a socially constructed, but materially experienced, phenomenon and how this plays out in the interactions that constitute HR work.

This would go some way to a more complex understanding of how HR is experienced by those who work within the function and how they interpret, and act upon, the contradictions of their roles. Recent studies highlight the analytical gains from a focus on the everyday work of HR professionals (e.g. O'Brien & Linehan, 2014), a line of inquiry that we feel could be further enriched through applying a gendered lens. As Delbridge (2010, p. 37) has noted, 'Understanding HRM as processes of ongoing enactment and social production recognizes that HRM is "continually performed" and allows for the reflexive engagement of actors in their contexts.'

Greater critical reflexivity would benefit not only HR research but also HR practitioners. As Jacques (1996, p. 7) has argued "[b]oth practice uninformed by theoretical reflection and theory disconnected from the workplace are sterile and reinforce the *status quo*". One way forward then is to develop greater capacity for critically reflective practice (see Cunliffe, 2016), that is to say, engaging HR practitioners in questioning assumptions and 'blindspots',

including the lack of attention to gender and how it may play out in the dynamics that constitute the interactions and contexts of HR. Equipping HR practitioners with alternative perspectives and conceptual tools for understanding their work, interactions and relationships with others would assist them to see the 'macro in the micro', and potentially reframe their role, responsibilities and possibilities for action. This could, in turn, generate more critical dialogue between HR practice and scholarship. Professional associations could play a potentially important role in facilitating these exchanges. They could provide structured opportunities for practitioners to collectively reflect on, and question, taken-for-granted assumptions and explore alternative ways of making sense of the work and relationships that constitute HR.

In addition, as we have argued, a more systematic and explicit focus on the gendered nature of HR has the potential to extend and refine recurrent debates about the state of HRM as an academic field. Perhaps equally, if not more important, and in keeping with the emancipatory mission of critical inquiry, we hope that our suggested emphasis on gender can help pinpoint and redress gendered disadvantage within HRM in practice. After all, 'by just talking and writing about gender we are already changing gender relationships, just as we change them every day in the organisations where we work' (Gherardi, 1994, p. 607).

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ENDNOTE

[1] When discussing sex-distribution between occupations, some authors use the term sex and gender interchangeably whereas we follow West and Zimmerman (1987) in understanding them as related but analytically distinct concepts. Further, while numerical dominance by men or women in an occupation is an instance of sex distribution, this inevitably also influences the gendered associations such jobs acquire (Ashcraft, 2013; Cockburn, 1988).

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REVIEW ARTICLE

Can HR adapt to the paradoxes of artificial intelligence?

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Abstract

Artificial intelligence (AI) is widely heralded as a new and revolutionary technology that will transform the world of work. While the impact of AI on human resource (HR) and people management is difficult to predict, the article considers potential scenarios for how AI will affect our field. We argue that although popular accounts of AI stress the risks of bias and unfairness, these problems are eminently solvable. However, the way that the AI industry is currently constituted and wider trends in the use of technology for organising work mean that there is a significant risk that AI use will degrade the quality of work. Viewing different scenarios through a paradox lens, we argue that both positive and negative visions of the future are likely to coexist. The HR profession has a degree of agency to shape the future if it chooses to use it; HR professionals need to develop the skills to ensure that ethics and fairness are at the centre of AI development for HR and people management.

KEYWORDS
artificial intelligence, human resource management

1 | INTRODUCTION

Artificial intelligence (AI) is widely heralded as a new and revolutionary general purpose technology that will transform the world of work (Byrnjolfsson & Macafee, 2014; Agrawal et al., 2018). While there are a number of challenges

Abbreviations: AI, artificial intelligence; GDPR, General Data Protection Regulation; HR, human resources; HRM, human resource management; IO, industrial/organizational; ML, machine learning.

Practitioner notes

- The use of artificial intelligence (AI) for human resources (HR) and people management is currently in its infancy
- It is possible to conceive of optimistic and pessimistic accounts of how AI might affect HR and people management. A paradox lens suggests both will likely coexist in our immediate future
- Without regulation, existing approaches to people management could lead to AI that dramatically reduces worker autonomy and ramps up effort and stress
- The ethical values and practical insights of the HR profession are important if this 'bad AI' is to be contained
- An ethical approach to AI for HR involves the full involvement of workers and stakeholders in the design and deployment of AI systems

in developing AI for human resource management (Tambe et al., 2019), a recent industry study found 300 plus human resources (HR) technology start-ups developing AI tools and products for HR or people management, with around 60 of these companies 'gaining traction' in terms of customers and venture capital funding (Bailie & Butler, 2018). Recently, eightfold, an AI based talent intelligence platform that helps attract, develop and retain top talent, has raised $220 million and is now valued at over $2 billion (Singh, 2021). Phenom, an HR technology firm that automates job tasks and improves the job search experience, was reported by Forbes as having 'quietly become a billion dollar unicorn' (Kelly, 2021). Accenture has made a strategic investment in the London based start-up Beamery, which offers its own operating system for recruitment, and has a reported valuation of $800 million (Lunden, 2021). Large global technology firms have also started to make AI central to their people management systems and processes (van den Broek et al., 2021); IBM reported that in a single year its cost savings due to implementing artificial intelligence in human resources exceeded $100 million (Guenole & Feinzig, 2019).

Although deployment of AI systems in business is as yet limited (Benbya et al., 2020), examples like those cited above suggest an AI driven future is fast approaching. In this context there are widespread popular concerns about whether the use of AI in HR will lead to a dystopian work future, where AIs as managers degrade the quality of work (Dzieza, 2020). These concerns reflect broader insider critiques of the technology industry, which argue that AI developers are overly focussed on technical and commercial priorities and neglect the ethical and societal impact of their work (Birhane, 2021; Crawford, 2021; Whittaker, 2021).

The contribution of this article is to bring together contrasting accounts of how AI might be deployed for HR and people management to address the question of how AI could affect our field. It is possible to imagine a future in which the deployment of AI for HR and people management leads to large gains in fairness and efficiency. However, AI could also usher in an increasingly dystopian future of widespread unfairness and intensified managerial control. Indeed, a paradox lens suggests that both imaginaries will co-exist alongside each other (Collings et al., 2021; Smith & Lewis, 2011). The future that emerges will depend on choices we all make. The HR profession must be engaged in shaping these choices. Without HR involvement, HR work risks being de-skilled and replaced by black-box algorithms (Callen, 2021), locking organisations into an approach to people management and patterns of work that we hoped we had progressed beyond (Raisch & Krakowski, 2021).

The article begins by defining and explaining what AI is, both generally and as it pertains to the field of HR. Our focus is on how AI will affect the HR profession, its activities and the activity of people management more broadly. This means that we do not explicitly address some of the broader debates about how AI will affect the quantity and types of jobs (Frey & Osborne, 2017; Susskind & Susskind, 2015). We then consider alternative scenarios for how AI might be used. We argue that the risks that the realities of AI in HR will be increasingly dystopian are real, but there are solutions to many of the emerging problems if we have the will to work for them. We finish by considering how

those of us who study and practice HR can take action to move towards the more desirable future, considering what the HR profession can do and setting out a future research agenda.

2 | WHAT IS AI?

AI is typically defined as the use of digital technology to create systems capable of autonomously performing tasks commonly thought to require human intelligence (Office for AI, 2019). In contrast to popular representations of artificial general intelligence in science fiction, recent advances in AI have occurred in the field of machine learning (ML), a sub-set of AI where digital systems autonomously improve their performance at undertaking a specific task or tasks over-time as the system learns through experience (Office for AI, 2019). Over the last decade there have been significant advances in the use of ML AI in text analysis, speech recognition and comprehension and image recognition.

Conceptually, ML AI is often described as making predictions (Agrawal et al., 2018) or classification (Birhane, 2021; Crawford, 2021; Whittaker, 2021). An AI first identifies a classification schema and then predicts which categories within the schema new cases fall into. It takes a lot of effort and data to get AI to successfully make the first prediction but once trained, the cost of subsequent predictions should be very low (Agrawal et al., 2018). A complicating factor are 'edge-cases'; new scenarios with features that the AI has not encountered before so cannot initially classify, for example, a candidate with a speech impediment in an automated video interview. The underlying issue here is the quality of the training data; is there a sufficiently representative set of data labelled sufficiently well for ML AI to work (Lebovitz et al., 2021)?

Over 100 papers have been published on technical aspects of applying ML AI to HR and people management (Jatobá et al., 2019; Strohmeier & Piazza, 2013) but there is limited evidence on the use and consequences of ML AI to our field in practice [van den Broek et al. (2021) are a recent exception], with most published empirical research focussed on investigating responses to hypothetical scenarios (Langer & Landers, 2021). Because AI is a new general purpose technology many of the eventual uses that it will be put have yet to be conceived (Byrnjolfsson & Macafee, 2014); therefore AI is likely to have unforeseen consequences. Any attempt to assess its expected impacts on our field must proceed with (and be read with) caution. Nevertheless, it is important to study the phenomenon now, because this is the moment at which it is, perhaps, possible to shape and improve on the direction of travel (Bailey & Barley, 2020; Benbya et al., 2020; Glickson & Woolley, 2020; Whittaker, 2021).

3 | AN OPTIMISTIC VISION OF THE FUTURE

Central to an optimistic vision of the future is the idea that ML AI can dramatically improve the efficiency and fairness of how people are managed (Chamorro-Premuzic et al., 2019; Guenole & Feinzig, 2019). We will explore how this might happen through investigation of AI use cases currently being developed. In many ways, the focus of these use cases represents a continuation of existing trends in HR technology. What marks out AI as new and different is the scale, accuracy and efficiency of the cognitive tasks that it can undertake.

Among the most common use cases is AI that resolves the twin difficulties businesses face in identifying applicant pools of people with the knowledge, skills, abilities and attitudes that the business needs and in making cost-effective decisions about who to select from available applicant pools. While existing application management systems can partially automate selection by filtering out applications without key words relevant to the post, the promise of AI is that new systems will be able to seek out and advertise posts to new applicant pools (doing the job currently done by recruitment consultants more cheaply and at greater scale) and then automate early stages of selection by using a combination of more sophisticated algorithmic analysis of CVs and applications, gamified applicant tests and robot interviews that select candidates with job relevant traits and skills that mirror those of the businesses existing top employees. The use of ML AI will mean that organisations can recruit and select highly efficiently from larger

applicant pools without selection decision-making being biased by recruiter heuristics (e.g. educational background) and biases (e.g. gender and ethnicity) that have no relevance for job performance.

If this use case becomes established, the same principles and can be applied to decision making about workforce planning and talent management within organisations. ML AIs can use a range of digital data from employee software use, communications, manufacturing and service delivery censors, and audio and video image feeds to judge employee performance more accurately and fairly than human managers are able to do, and then use this information to make or recommend decisions such as which staff to employ, where and when, who to promote into which role, and which staff to award pay rises to in order to optimise motivation and retention (Angrave et al., 2016; Charlwood, 2021; Guenole & Feinzig, 2019; Kellogg et al., 2020).

AI could also dramatically improve the efficiency and quality of HR operations more generally through chatbot use (Strohmeier & Piazza, 2015), which is now a common application of AI technology in HR. HR chatbots allow humans (e.g., workers, prospective applicants) to interact with virtual agents in natural language. The chatbot can respond instantly to user prompts in any language, at any time of day and on any day of the year. Chatbots can provide information and in certain cases can even complete tasks (e.g., actioning request for an employment reference, or adding calendar notifications for events such as planned leave or travel, booking places on training courses), allowing human experts to focus on more complicated queries where human expertise adds value.

4 | A PESSIMISTIC CASE

Our pessimistic case focuses on possible consequences of the sorts of use cases set out above for workers and societies. The central problem is that firms tend to introduce new technologies in ways that reduce worker autonomy, wages, and job security.

5 | MANAGEMENT, LABOUR AND TECHNOLOGY

Labour process theory posits that firms are compelled by the logic of profit seeking to constantly change production and service delivery to bring down labour costs, and that the indeterminacy of labour creates a strong tendency to make greater use of surveillance and monitoring technologies in pursuit of this goal (Thompson, 2010: p. 10; Kellogg et al., 2020). A range of evidence supports these propositions. Procurement of previous technological innovations has depended on technology advocates framing the case for the technology around increased efficiencies and lower labour costs (Bailey & Barley, 2020; Thomas, 1994). Globally, the decline in the share of income going to labour since 1970 has been driven by increasing investment in information technology assets (O'Mahoney et al., 2020). Declining worker power and technology use have resulted in workers working harder with reduced autonomy and control over how they work (Green et al., 2021; Williams et al., 2020). The key question then is how will this general tendency to adopt technologies that improves efficiency while degrading work interact with the specific technology of ML AI?

6 | THE TECHNOLOGY INDUSTRY AND COMMERCIALISATION OF AI

Automation and augmentation represent different ideological paradigms for AI design (Markoff, 2016). The logic of labour process theory is that potential purchasers of AI are likely to favour automation, so AI developers will likely gravitate to this approach (Kochan, 2021). The ethical and societal consequences of a widespread automation approach are likely to be downplayed because developers take only a narrow view of ethics; commercial considerations come first (Crawford, 2021; Simonite, 2021). Broader critiques of the technology industry suggest a disregard for ethics and societal impact is hard-wired into it (Birhane, 2021; Crawford, 2021; Whittaker, 2021; Zuboff, 2019).

The issue here is not that problems of biased and unfair AIs cannot be solved. It is that developers of AI have no interest in trying to solve the ethical and societal problems that the deployment of AI might cause (Birhane, 2021; Crawford, 2021). Critics may question the internal logics that drive AI classification schema (Crawford, 2021) or argue that AI use cases in the field of HR are nothing more than snake-oil because the internal logics of classification systems are fundamentally flawed but as yet these critiques do not appear to have dented the intellectual confidence of AI advocates in offering 'snake-oil' products (Narayan, 2019).

7 | THE EARLY REALITIES OF ML AND AI IN PEOPLE MANAGEMENT

The retail and distribution sectors offer a taste of the new world of work that is being ushered in by AI ML. The relative simplicity of tasks has allowed for substantial use of algorithms to classify and predict the most efficient way of working, extracting maximum effort from workers while only offering low paid and insecure jobs in a form of digital Taylorism (Moore, 2019). Most notoriously, accounts of Amazon warehouses are replete with examples of workers sustaining serious injuries and working to the point of absolute physical exhaustion as a result of the pace and intensity of work (Bloodworth, 2018; O'Connor, 2021). Amazon has attracted further opprobrium for automating workers dismissals (Bort, 2019). In the retail sector scheduling algorithms seek to minimise retailer labour use while also minimising the numbers of workers who work enough hours to qualify for the enhanced benefits, resulting in instability of hours and income (Schulte, 2020; Ton, 2012). Algorithmic management tools with similar effects are being developed and deployed in the nascent 'gig work' sector of technologically mediated, hyper flexible employment (Duggan et al., 2020; Möhlmann et al., 2021).

To date, the use of algorithmic management has been confined by the limits of technology to controlling relatively simple tasks where relatively structured data is generated automatically through sensors. The ability of AI to recognise images and undertake more complex pattern recognition tasks is likely to increase monitoring and reduce worker autonomy in new sectors of employment. Bars and restaurants are starting to use their security cameras to feed AIs that monitor and manage the performance of serving staff (Matsakis, 2019). Hospitals are starting to use algorithm-based systems to prioritise and allocate nursing tasks. Amazon has recently started to roll out use of AI linked cameras to monitor the activities of its delivery drivers (Sonnemaker, 2021). The broad concern here is that AI facilitates a world of constant surveillance at work.

Arguably, these problematic examples arise from aspects of the ideology of AI ML developers that means they favour automation of decision-making over augmentation (Markoff, 2016) because they believe that using AI ML will result in better outcomes than traditional decision making by domain experts. The problems of this approach are carefully described in a recent ethnographic study of the development of an ML tool for hiring graduate recruits in a multinational company (van den Broek et al., 2021). Developers had little domain knowledge, and actively sought to exclude domain knowledge from the development of the tool, favouring a purely data-driven approach. Domain experts in the company commissioning the tool successfully pushed back, arguing that without domain knowledge it was impossible to determine the employee performance characteristics the ML tool was trying to predict and that hiring decisions would be taken on the basis of predictors that had no causal impact on employee performance. Dangerous cases of AI use are likely to occur where domain experts are excluded from the design and development of AI tools.

8 | IS A BETTER FUTURE POSSIBLE?

The optimistic and pessimistic accounts set out above are not mutually exclusive. A paradox lens suggests that the development of AI will be shaped by contradictory demands which will result in aspects of both co-existing (Smith & Lewis, 2011). The key question then is what can be done to contain the negative and promote the positive? In

answering this question, we stake out two claims. First, problems of AI bias are eminently solvable. Second, while the threat of AI snake-oil is real, it is possible to develop fair, ethical and efficient AI ML if design is informed by domain knowledge.

9 | MANAGING THE BIAS CHALLENGE

In responding to Google's dismissal of her colleague Timit Gebru, Margaret Mitchell (who was also subsequently dismissed, Simonite, 2021) made an insightful comment about the nature of bias in artificial intelligence: 'When diving deep into operationalising the ethical development of artificial intelligence, one immediately runs into the "fractal problem". This may also be called the "infinite onion" problem. That is, each problem within development that you pinpoint expands into a vast universe of new complex problems. It can be hard to make any measurable progress as you run in circles among different competing issues, but one of the paths forward is to pause at a specific point and detail what you see there.' Here we try to pause, look around, and describe what we see with reference to the bias debate around AI in HR systems.

10 | DEFINING BIAS

In the context of AI in HR, adverse impact is a technical term referring to majority and minority group differences in the employment related opportunities, for example, hiring, promotion and termination, that are distributed as a result of using an AI system. The differences in the opportunities distributed across groups may result from real differences between groups, or they may be due to AI models measuring differently or predicting differently for different groups. Until recently, the computer science community has not had a method for differentiating these two possibilities, although recent work has started link the social science and computer science fields on this issue (Hutchinson & Mitchell, 2019).

In any event, improving models so that they do function in the same way for all groups does not always sufficiently reduce adverse impact to the point of no concern. Under North American Civil Rights law, if any differences are sufficiently large to violate the 4/5 rule as evidenced by a statistical test (i.e. if the selection rate for a group is less than 80% of the group with the highest selection rate), then irrespective of whether they are due to real differences between groups or due to the AI system measuring or predicting differently, the AI system is producing adverse impact (EEOC, 1979; Scherer, 2017). In the computer science literature, the terms adverse impact, bias, and fairness are used interchangeably to describe this scenario, and indeed, that seems to be the way the media and popular culture understand bias too.

To industrial psychologists, however, this would only be considered adverse impact. It does not demonstrate bias, as it is quite possible to have adverse impact with an AI system that measures and predicts equivalently across groups (i.e., the AI bases decisions on real differences between groups), that is, you can have a system that is unbiased but still produces adverse impact. This distinction is of fundamental importance, because removing adverse impact caused by true differences from an AI system typically leads to lower predictive accuracy of future job performance (Pyburn et al., 2008). Social scientists call this the diversity-validity dilemma. In short, some organisations may be comfortable with different selection rates based on an AI tool, if the decisions are being made on job related criteria, and if the scores from the AI system predicts performance in the same way for all groups. Indeed, this is the way the US courts interpret the situation, which much of the world looks to as the most evolved example of how to regulate adverse impact. Adverse impact does not violate US legislation if the test scores are predictive of performance (albeit organisations do have to show no alternative predictor was available that was as effective and showed lower adverse impact).

Psychologists and statisticians also have a well-developed set of analytical tools for dealing with bias/adverse impact that are primarily content related, they use alternative tests or predict broader performance criteria (for a very detailed review of such methods, see Ployhart & Holtz, 2008). Computer scientist have also developed new methods to tackle adverse impact (Bellamy et al., 2018) that are primarily methodological. They include pre-processing techniques that can transform the predictor set to retain as much information as possible while divorcing the predictor variables of any statistical relationship to protected attributes like race or gender; training constraints that force models to deliver balanced predictions in the model building phase can also be employed; and post-processing methods, for instance, using a coarser scoring system that makes similar scores equal.

11 | MISCONCEPTIONS

A typical objection at this stage, is that the types of data that would be used by ML AI are not good enough for the task of predicting job related outcomes; 'most HR data is bad data' (Buckingham, 2015) because HR data are based on subjective opinions and judgements that are themselves likely to contain biases against minority groups. We think this objection is mistaken. Advanced latent variable models exist today that allow measurement and prediction of latent variables based on inferences about behaviours that can be seen and measured (e.g., questionnaire responses; Bollen, 1989; Kline, 2015) and we can examine whether these work equally well for all groups.

A second objection is that because training data is often based on data regarding white males, models will inevitably be biased in favour of white males (as was the case Amazon's abandoned hiring ML system, described by Bort, 2019). Yet, no well-trained IO psychologist would build a selection system that naively replicates existing top performers, including their gender and ethnicity, and this is not how well-designed AI systems operate either. First, a job analysis would be carried out that identified the knowledge, skills, abilities and attributes (KSAOs) that are required for successful performance. Next, assessments are designed that assess these attributes. It is the difference in scores on these *job-related* attributes that determine candidate ranking in competitive hiring situations. The key point here is that domain knowledge can ensure that AI ML systems do not reproduce the discriminatory behaviours produced by human biases if it is used in the development of AI systems. Job analysis alone will *not* resolve the problem of adverse impact, but it can help resolve the problem of new hires mirroring the performance irrelevant demographic characteristics of past successful candidates. Examples of AI systems where domain knowledge was not applied and which failed as a result do not mean that discriminatory AIs are inevitable.

A final objection is that ML AI models are all black boxes and cannot be examined closely to see why there is adverse impact. But AI systems are only functionally black boxes, in the sense that it is impractical to step through every input to decision a system makes. There are methods for understanding what is happening inside the black box, although the complexities involved make it impractical in many circumstances. Furthermore, model explainability is an active and fast-developing field of research in artificial intelligence (Holzinger et al., 2019) and there are numerous techniques for evaluating variable importance today (e.g., Shap values: Sundararajan & Najmi, 2020) which mean that our ability to explain black box AI models is constantly improving.

Our overall point here is that biased AIs are not inevitable. There are a number of tools and methods that can be used to develop AIs that are largely free of bias, and we can use existing industrial psychology principles to manage adverse impact. The challenge is to ensure that these methods are widely adopted in our field. What can we do to bring this about?

12 | THE ROLE OF THE HR PROFESSION

It would perhaps be tempting for the HR profession to adopt the critiques of Crawford (2021), Birhane (2021), Narayan (2019) and Zuboff (2019) in arguing that AIs cannot accurately classify human behaviour at work and that the use of AI in HR should be resisted because it represents an ideological project to control human behaviour that replaces autonomy with dependency, diminishing our common capacity for flourishing. This would be a natural position for many in the profession to take given widespread scepticism about the quantification of HR (Greasley & Thomas, 2020). However, we think this impulse should be resisted because AI in HR and people management is likely to happen whether we like it or not. Engagement will likely result in better outcomes than unsuccessful resistance, and we have outlined what we believe is a strong case for a positive future for AI in HR.

Domain knowledge and expertise is essential for the development of AI tools that work as intended, are fair and which do not reproduce existing organisational biases (van den Broek et al., 2021; Jacobs & Wallach, 2021). It is also important for senior and experienced professionals to work closely with those who develop and operate automating technologies to ensure that their knowledge and expertise is used to inform use and understanding of the automating algorithms (Callen, 2021). While augmentation and automation are often portrayed as alternative approaches to designing and deploying AI, in practice AI systems are likely to be more effective if the two approaches are combined and successful combination is likely to depend on the incorporation of HR professionals expert knowledge (Raisch & Krakowski, 2021; van den Broek et al., 2021).

Achieving fairness in AI systems is not just a matter of applying domain knowledge alongside appropriate technical fixes. Processes of development and deployment matter too. AI can only be ethical if it is based on consultation with and the involvement of stakeholders (particularly employees and prospective employees) who will be affected by the AI at the design, development and deployment stages (Leslie, 2019). Without HR involvement in negotiating the development of AI with those affected, the risks of unfair and biased AIs that negatively affect workers will likely increase.

Engagement is also needed to secure a future for the HR profession that is worth having. The use of ML AI in HR has the potential to significantly disrupt the routines of HR work in ways that are difficult to predict (Murray et al., 2021). Evidence from other knowledge professions that have been extensively exposed to algorithmic automation suggests that those who use these systems without questioning or understanding the recommendations that the system produces become de-skilled, rapidly losing the professional expertise and commercial acumen that are the basis of their role and status. By contrast, when knowledge workers constantly question and interrogate algorithmic systems and configure social interactions that develop and maintain their expertise they are able to maintain status (Callen, 2021).

If the HR profession is to put its espoused ethical values regarding the importance of human dignity and justice (e.g. AHRI, 2016; CIPD, 2020; CPHR, 2016; SHRM, 2014) into practice and safeguard its own future role and status, individual HR practitioners need to gain the skills to play a full role in developing and implementing AI ethically. This will require upskilling. Scholz (2020) outlines the components of what he calls 'big data literacy': an understanding of the principles of computation, statistics and critical thinking. An understanding of these things confers an understanding of what AI can realistically do, how it does it and what might go wrong. It is important that HR professional recognise they have a degree of personal responsibility for the use of AI in their organisations, instead of speaking the language of responsible and ethical management while evading responsibility for taking action (Grigore et al., 2021).

Human resources professional bodies could also do institutional work (Lawrence & Suddaby, 2006) to promote voluntary standards to guide procurement and development of AI for HR tools and systems (Moore, 2020). Such standards could include a requirement for suppliers to have diverse engineering teams, both because it is not ethically acceptable to exclude representatives of diverse communities from design teams if those communities will be affected by the AI system and because there is evidence to suggest that more diverse teams produce less biased AIs (Cowgill et al., 2020). There could be standards for transparency around the origins of training data used in models and data curation practices to promote the availability of training datasets less likely to result in bias (Jo &

Gebru, 2019), and standards for model explainability, so that it is clear which features are important in producing AI outputs. Use of data sheets that document all aspects of the provenance of models provide one tool for transparency (Hutchinson & Mitchell, 2019). Standards should also include processes for stakeholder consultation and engagement because an ethical approach to AI requires that those affected by the AI should be able to participate in decisions over its development (Berg, 2019; Leslie, 2019; Tambe et al., 2019). The Recruitment and Employment Confederation has recently produced guidance that starts to address these points, but there is scope to go further (REC, 2021). Voluntary standards alone are unlikely to be enough to kerb 'bad AI' in our field. Can statutory regulation provide necessary safeguards?

13 | REGULATING AI FOR HR

In the USA, civil rights legislation provides some protection for workers because employers will be legally vulnerable if they use AI tools that result in adverse impact for minority groups unless they can prove that adverse impact is the result of factors that are predictive of job performance while also protecting worker privacy outside of work (Dattner et al., 2019; Scherer, 2017). However, while this body of law might constrain the development of discriminatory AIs for decision making over hiring, promotions and pay, it does little to constrain AI being used to increase employer dominion over workers while at work through new tools for monitoring and controlling worker activity.

In Europe, the European Commission is looking to build on the protections for workers provided by the General Data Protection Regulation (GDPR) through new regulation on AI, a draft of which was published in April 2021. The regulation posits that the use of AI for hiring, promotion, pay decision making and for management and control of workers is 'high risk' requiring significant safeguards to be put in place if AI is to be used for these purposes. However, critics point to the absence of enforcement mechanisms, with employers left to decide how to manage the risks themselves through adherence to a set of standards and worry that the EU regulation could undermine more stringent national statutes (De Stefano & Aloisi, 2021; Veale & Borgesius, 2021); a number of European states already have laws which state that algorithmic management tools can only be introduced if agreed with worker representatives through co-determination processes (Aloisi & Gramano, 2019).

More broadly, AIs as managers throw up a set of legal challenges that existing employment law in most countries is ill-equipped to deal with. For example, who is legally accountable for decisions made by AI? (Adams-Prassl, 2019). Therefore if we want to avoid 'bad AI' in HR and people management, new laws to deal with the challenges that AI poses will be needed regardless of where we are in the world. Given the ethical values of the AI profession, and the threat to these values posed by unscrupulous employers using AI, logically HR professional bodies should be advocating for such regulation. However, it is also important to recognise the difficulties involved in bringing new regulation about given existing power relationships between technology companies and states (Crawford, 2021; Gebru, 2021; Whittaker, 2021) and between labour and capital within states. Therefore embedding pluralism within HR practice (Dundon & Rafferty, 2018), for example, by recognising the legitimacy of independent worker representation through trade unions so that workers have access to countervailing power resources that can offer protection from exploitation and discrimination by AIs (Moore, 2020), is important too: 'When workers have power, it creates a layer of checks and balances on the tech billionaires whose whim-driven decisions increasingly affect the entire world' (Gebru, 2021).

14 | FUTURE RESEARCH DIRECTIONS

Finally, what role can academic research play? Academic research into AI is particularly needed now because this is the moment at which research can influence how AI use in organisations develops (Bailey & Barley, 2020; Benbya et al., 2020; Glickson & Woolley, 2020; Whittaker, 2021). The relative novelty of AI mean that as yet, there have been

only a few attempts to theorise the role and impact of AI in HR and in the field of management more broadly. Murray et al. (2021) have theorised new forms of agency that AIs and humans may jointly enact. Makarius et al. (2020) have theorised that the employee-AI relationship will depend on the novelty and scope of the AI being deployed and put forward a framework to explain how organisations can deploy AI. Raisch and Krakowski (2021) have critiqued extant thought leadership that sees augmentation and automation as competing design approaches, and posit that automation and augmentation approaches are interdependent in practice. Teodorescu et al. (2021) have developed a typology augmentation approaches and consider the research questions that arise from this typology. In our specific field of HR, Prikshat et al. (2021) put forward a structural-functionalist theoretical model to predict the conditions that will lead AI adoption and the likely consequences of different antecedents and processes of adoption. These articles all contain interesting ideas and insights, but we tend to agree with Von Krogh (2018) that research into AI in our field is at the pre-theoretic stage. What is needed is qualitative phenomenological research that can provide the basis for novel theoretical insights.

Bailey and Barley (2020) echo this with a call for ethnographic field studies that unpick how AI is being used in practice. How do they reconfigure divisions of labour and social relations within organisations? This type of research would be particularly valuable for understanding how AI is affecting the HR profession; how are the tasks of HR practitioners changing, is AI up-skilling or de-skilling them? How much agency do they have to moderate the impact of AI on their work? How does augmentation work in practice, that is, how do HR practitioners and managers use the outputs and recommendations of AI systems in their activities and decision-making? Questions that the evidence and analysis of van den Broek et al. (2021) have started to address, illustrating the rich potential for this sort of research.

Bailey and Barley also call for research that extends beyond the social construction of AI design and use. They argue for research that considers the ideologies and power dynamics of those who develop and commission AI for the purposes of managing and organising. What are designers trying to achieve and why? What factors, ideological and institutional, shape the decisions of those procuring (or not) AI systems? In our field, this points to the need to study the growing business eco-system of AI for HR start-ups identified by Bailie and Butler (2018). What areas of HR activity are their products focussed on? What are their motivations and intentions in developing their products? Who are their customers and what are their aims and objectives in procuring AI for HR systems? Research to uncover this new institutional field might include mapping surveys, ethnographic studies of HR tech start-ups, and ethnographic engagement with industry experts to identify broader trends and issues.

Finally, it is also important to study the consequences of AI on workers and by extension society, including the professional and societal behaviours, norms and institutions that arise from the use of AI in our field (Bailey & Barley, 2020; Langer & Landers, 2021). Audit studies of organisations using AI and ML tools for recruitment and selection can reveal the extent to which the use of these tools reproduces, neutralises or intensifies the forms of discrimination that audit studies of traditional selection methods have revealed. How does the use of AI in HR and people management affect worker wellbeing and change the norms and the values they attach to work and employment? How do trade unions and NGOs respond and engage with firms introducing AI for people management tasks and activities? How do those doing the work of developing ML AI in our field respond to these societal–institutional forces shaping their activities? Do they seek to establish their own professional and ethical norms and standards?

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CONFLICT OF INTEREST

The authors have no conflicts of interest to declare.

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RESEARCH ARTICLE

The distinctiveness of public sector HRM: A four-wave trend analysis

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Abstract

Given the rhetoric that human resource management (HRM) models adopted by public and private organisations are becoming more similar, this study questions whether the traditional distinction between public and private sector HRM is still relevant. Building from institutional theory, we study continuity and change using four-wave data from eight European countries. We find that the traditional public sector investment in employee well-being continues to be distinctive only for HRM practices aimed at equal opportunities. Private sector organisations, on the other hand, make greater use of performance-oriented HRM practices including compensation and benefits, performance appraisal data, and modern development and career management practices. Cross-sector convergence is explained through coercive and mimetic isomorphic change, while persistent differences indicate that time-honoured public sector values are less susceptible to change. This study provides a much-needed update of the public-private comparison and a trend analysis of developments over time.

Abbreviations: AMO, Abilities-Motivation-Opportunity; ANOVA, Analysis of Variance; CRANET, Cranfield Network on International Human Resource Management; EUPAN, European Public Administration Network; HRM, Human Resource Management; NPG, New Public Governance; NPM, New Public Management; OECD, Organisation for Economic Co-operation and Development; PSM, Public Service Motivation; VIF, variance inflation factor.

KEYWORDS
distinctiveness, employee performance, employee well-being, HRM practices, institutional theory, private sector, public sector, trend analysis

Practitioner notes

What is currently known about the subject matter?

- Traditionally, public human resource management (HRM) practices have primarily been orientated towards employee well-being ('soft' HRM), rather than being driven by a rational management interest in improving organisational performance ('hard' HRM).
- In the late 1990s, there were significant differences between public and private sector HRM.
- Compared to private sector organisations, public sector organisations have traditionally made more use of HRM practices aimed at equal opportunities and welfare management, as well as development and career management, and less use of HRM practices aimed at appraisal and performance, and compensation and benefits.

What this paper adds?

- HRM practices aimed at equal opportunities continue to be used more in the public than in the private sector; however, welfare management, as well as development and career management practices, are now used either to the same extent by public and private organisations or even more in the private than the public sector.
- HRM practices aimed at compensation and benefits, as well as appraisal and performance management, continue to be used more in the private sector, but public sector organisations have also adopted appraisal systems.
- As expected, the study shows evidence for public-private differences decreasing over time for three of the four clusters of HRM practices studied.

The implications of the study findings for practitioners

- The study provides organisations in the public and private sectors with important insights into the distinctiveness of their HRM.
- The study's findings represent a relevant benchmark that can help organisations in different sectors build their HRM and position themselves as an employer of choice.

1 | INTRODUCTION

Public sector human resource management (HRM) continues to attract the interest of scholars due to the distinct public-serving operating context compared to profit-driven private sector organisations (Blom et al., 2020; Boselie et al., 2019). From the 1990s onwards, New Public Management (NPM) and subsequent management reforms were introduced that impacted public sector values, in many cases placing efficiency and effectiveness on par with traditional public values of legality and impartiality (Bezes, 2018; Leisink & Knies, 2018; Van de Walle et al., 2016). Moreover, during a similar timeframe, private sector organisations have become more socially responsible (Poole et al., 2006) and, consequently, have shifted towards a 'model employer' type of HRM, similar to the welfare-focussed public sector HRM (Paauwe & Farndale, 2017). We, therefore, might expect these dual change processes to result in cross-sector convergence of public and private sector HRM; a supposition that this study is designed to address.

Traditionally, public personnel policies have primarily been orientated towards fairness, employee well-being, and good relations with trade unions (akin to 'soft' HRM), rather than being driven by a rational management interest in improving organisational performance (akin to 'hard' HRM; Farnham & Horton, 1996). Empirical evidence has provided support for these public-private sector differences, with public sector organisations making less use of some (e.g., performance-related pay) and more use of other (e.g., participation in decision-making) HRM practices (Boyne et al., 1999; Kalleberg et al., 2006). However, these studies report results on public sector HRM dating back more than 2 decades, when NPM was only in its infancy. Given how both public and private sector landscapes have since changed, we might question whether this traditional distinction is still relevant. In this study, we conduct a trend analysis using four-wave Cranfield Network on International Human Resource Management (CRANET) data (from 1999 to 2015) from eight European countries to answer the question of how the distinctiveness of public sector HRM has evolved. We focus on processes of both change and continuity.

The study contributes to the extant HRM literature in several ways. First, we examine the expectation that public-private sector differences have decreased over time (aka cross-sector convergence). Second, building from institutional theory, we theorise patterns of both change and continuity during this period (Beszter et al., 2015; Fernández-Alles & Llamas-Sánchez, 2008). We theorise that public-private sector differences are expected to diminish because of a combination of coercive and mimetic isomorphic changes introduced by NPM reforms in public organisations, and labour market competition and pressures on private sector organisations to become more inclusive employers. However, we also explain that the prevalent public values context is less susceptible to change and that the related differences between the sectors are likely to remain and influence HRM adoption.

In the following sections, we examine the differences between public and private sector organisations as traditionally theorised, elaborating on the values underlying their prevalent HRM models and the differences in the adoption of HRM practices. Based on institutional theorising, we then argue that there are mechanisms at play that have favoured both continuity and change in both sectors over time. Through trend analysis, we empirically test our hypotheses, which address both a trend towards cross-sector convergence, as well as continuing public-private differences in HRM practice adoption. Finally, we discuss the findings of the study against extant literature, highlighting the implications for future research and practice.

2 | TRADITIONAL PUBLIC-PRIVATE SECTOR DIFFERENCES

To address our research question, it is important first to note that there is no simple public-private sector dichotomy. Increasingly, the two sectors overlap and interrelate in several ways, largely due to outsourcing and public-private partnerships that many governments initiated as part of public management reforms in recent decades (Goldfinch & Wallis, 2010; Pollitt & Bouckaert, 2017). Responding to this increasing complexity, Rainey (2009) proposes three criteria that result in varying degrees of publicness: ownership (i.e., government-owned), funding (i.e., publicly funded), and authority (i.e., political authority dominant over economic authority). For example, some public administration bodies, such as tax revenue collection, meet all three criteria fully across countries. Other organisations, such as hospitals, are fully public, for example, in the United Kingdom (National Health Service), or semi-public, for example, in the Netherlands where general hospitals are public in terms of funding and authority, but not in terms of ownership as they are legally private bodies with a public task (Leisink et al., 2021). Moreover, in several countries, NPM-inspired reforms have also opened the door for private for-profit organisations, such as hip clinics (Andersen & Jakobsen, 2011), and schools for primary and lower secondary education in Denmark (Hvidman & Andersen, 2014). Consequently, organisations in the education and healthcare industries today vary in terms of public or private ownership but continue to be publicly controlled and to raise most of their income from public funds.

The related intricacies of cross-national public-private comparisons are reflected in the different approaches adopted by extant comparative research. The early studies by Boyne et al. (1999) and Kalleberg et al. (2006) illustrate this, with the former comparing public and private sector organisations and including health service, social work, and

education as public sector organisations, and with the latter comparing public, non-profit, and for-profit organisations. Recent studies manifest the same variation. The study by Thijs et al. (2018) commissioned by the European Commission takes the three mainly publicly funded sectors across different countries (public administration, health, and education) as a working definition of 'public sector' employment. The study by Blom et al. (2020), on the other hand, compares the effects of HRM practices in the public, semi-public, and private sectors. For comparability and continuity with the early study by Boyne et al. (1999), we follow their approach of comparing public and private sector organisations and taking education and human health services as public sector organisations.

Traditional differences in HRM between private and public sector organisations originated from fundamentally different models of managing work and people. Private organisations typically adopted a 'hard' model of HRM, primarily aimed at improving organisational performance, while public organisations adopted the 'soft' model, primarily aimed at improving employee well-being (Boyne et al., 1999).

To explain the typical characteristics of 20th-century public sector HRM, Farnham and Horton (1996) provided the most comprehensive framework, which we use as our starting point. Analysing personnel policies of public organisations in the second half of the 20th century, they identified four characteristics that made public sector HRM distinctive: (1) paternalistic style of management; (2) standardised employment practices; (3) collectivist industrial relations; and (4) the aspiration to be a 'model employer'. Public organisations were said to care for and protect the well-being of their employees, which resulted in attention being paid to issues such as health, safety, and welfare. Equal treatment at work meant that employees performing the same tasks were paid the same wage rather than pay being based on individual performance. Employment practices typically included job security and lifetime employment. Trade unions and works councils traditionally had a strong voice in the public sector when it came to determining, for example, pay and working hours. Finally, public organisations aspired to be model employers setting the standard for private organisations regarding, for example, opportunities for training and workforce participation.

The most comprehensive studies empirically comparing public and private sector adaptation and use of HRM practices in the 1990s were those conducted by Boyne et al. (1999) in the UK and Kalleberg et al. (2006) in the USA. The starting point of their analyses is that in both sectors, the practices adopted best reflect the sector's values and goals. Boyne et al. (1999) conducted a cross-sectional survey including over 900 managers from public and private organisations. In their analyses, they controlled for organisational size and type of industry. They showed that private organisations typically focussed on creating flexibility, and adopted a broader range of reward practices, such as performance-related pay, fringe benefits, and individual bonus schemes. Public organisations scored higher when it comes to equal pay for equal work and greater job security. Public sector employees also had more opportunities to participate, such as through management committees, joint consultation, and regular meetings between supervisors and workgroups. Finally, public employers provided more support for employee welfare policies, such as ensuring employee health. Overall, the findings by Boyne et al. (1999) support the distinctiveness of public sector HRM as conceptually articulated by Farnham and Horton (1996).

Based on cross-sectional data collected in 1996–1997, Kalleberg et al. (2006) conducted a similar analysis comparing the use of what they call 'high-performance work organization practices' across non-profit, public, and profit organisations.[1] They adopted the 'AMO' (ability, motivation, opportunity: Appelbaum et al., 2000) model to compare the use of ability-, motivation-, and opportunity-enhancing practices using data from over a thousand organisations. In their analyses, Kalleberg et al. (2006) controlled for features such as industry, size, and organisational age. Their results provided a similar picture as presented by Boyne et al. (1999): opportunities to participate in decision making (for instance through self-directed teams and offline committees) were more frequently used in the public and non-profit sectors than in the private sector; private organisations, on the other hand, were more likely to use output-related incentive compensation arrangements (gain sharing and profit-sharing or bonuses) compared to public and non-profit organisations. Contrary to their expectations and the findings by Boyne et al. (1999), Kalleberg et al. (2006) found no significant differences for ability-enhancing practices. This might be explained by the fact that the ability-enhancing practices included by Kalleberg et al. can be characterised as 'modern' (aimed at developing human capital) compared to the more 'traditional' employee development practices included by Boyne et al. (1999).

The empirical studies by both Boyne et al. (1999) and Kalleberg et al. (2006) provide important insights into the distinctiveness of public sector HRM in the late 1990s. Based on their data and analyses, the question of whether there were substantial differences between HRM in the public and private sectors can be answered with a firm 'yes'. However, there are two important caveats. First, both studies rely on cross-sectional data and as such only provide us with a snapshot of sectoral differences and not with any information on trends (are the differences stable, increasing, or decreasing over time). Second, this snapshot is already more than 2 decades old. We address both shortcomings in this study, presenting a trend analysis of developments over time in public-private sector HRM practice adoption.

3 | AN INSTITUTIONAL PERSPECTIVE ON CHANGE AND CONTINUITY

In this study, we draw on institutional theory to provide insights into processes of change and continuity in public and private sector HRM. We posit that organisations are embedded in their wider institutional environment (Meyer & Rowan, 1977) and that values and ethics are important institutional drivers of organisational, managerial, and employee behaviour (Van der Wal et al., 2008). Values and ethics reflect the cultural-cognitive and normative elements of institutions (Scott, 2001), which are manifested in the different ways in which work and employment are regulated and managed. To illustrate, Boyne et al. (1999, p. 418) referred to the persistence of a 'public service ethos' to explain why public and private managers had not become a homogeneous group and why public managers committed to public values were unlikely to embrace private sector HRM practices.

In the early 21st century, public and private sector organisations employed fundamentally distinct value systems, although they also shared some values (Van der Wal et al., 2008). In the private sector, profitability, accountability, and reliability are core values, whereas the main public values are accountability, lawfulness, and incorruptibility (see also Pollitt & Bouckaert, 2017; Van de Walle et al., 2016). Similarly, research on public service motivation (PSM), that is, 'individuals' prosocial motivation to do good for others and society through the delivery of public services' (Perry & Hondeghem, 2008, p. 3), shows systematic differences between the public and private sector in terms of ethics (Perry et al., 2010). For the public sector, this values and ethics system is a legacy of the principles and values of the Weberian bureaucracy that slowly emerged in the 19th century as the dominant governance model of the modern state and continued to grow in the 20th century (Farnham & Horton, 1996). The HRM system in the public sector co-evolved with this values and ethics system and, in turn, contributed to the reproduction of distinctive features as illustrated, for instance, by the role of PSM in recruitment and selection practices (Piatak et al., 2020), and the reservations about pay for performance because of its crowding-out effect on PSM (Weibel et al., 2010).

Cultural change and fundamental organisational restructuring are examples of processes that take considerable periods of time, as shown by public management research (Pollitt, 2008; Pollitt & Bouckaert, 2017). However, while a certain degree of continuity is likely to characterise the values element of public sector institutions, we expect that processes of change are at play that may decrease public-private differences over time (Paauwe & Boselie, 2007). We build on the work of DiMaggio and Powell (1983) who coined the concept of institutional isomorphism to explain organisational change. From the three types of isomorphic change that DiMaggio and Powell (1983, pp. 150–152) distinguish, coercive isomorphism (change resulting from pressures exerted by other organisations such as legal requirements and cultural expectations in society) and mimetic isomorphism (when uncertainty drives organisations to imitate organisations that are seen as model) appear particularly relevant for our argument.

Moreover, these different types of isomorphism often overlap and may be working together (Bellé et al., 2019). For instance, coercion may take the subtle form of imposing a set of managerial practices by signalling their legitimacy to organisations that meet to exchange experiences and (mimetically) learn from peers that face similar conditions of uncertainty. This kind of situation characterises the diffusion of NPM ideas among national governments and the type of role played, for example, by the Organization for Economic Cooperation and Development (OECD).

Frumkin and Galaskiewicz (2004, p. 292) theorised that there is 'considerable variation in the possible forms that convergence can take'. Institutional pressures may force organisations to look more like their peers (i.e., within-sector

convergence), or it may make organisations more similar to an average or ideal type of organisation (i.e., cross-sector convergence). Empirically, they provide evidence that the process of convergence depends on the type of isomorphic change at play. Coercive isomorphism results in breaking down differences between private and public organisations resulting in a hybrid form, while mimetic isomorphism seemed to make organisations look more like an ideal model. This implies that both types of isomorphic change relevant to our argument contribute to cross-sector convergence.

To operationalise change in public-private differences over time, we use the model introduced by Farndale et al. (2017). This model distinguishes between 'constant no difference' via 'non-robust and robust convergence' and 'robust and non-robust divergence' to 'constant difference' (see Table 1).

In the following sections, we describe the changing context of first the public sector and second the private sector, drawing from institutional theory. Next, we build on this changing context to develop our hypotheses about change and continuity in public-private differences.

3.1 | The shift in public sector HRM

In the 1980s, Western countries were first exposed to a set of NPM ideas that responded to citizens' decreasing trust in government. We posit that NPM is an institutional logic that differs substantially from the traditional Weberian bureaucracy logic. Our interest is in the impact of this new institutional logic over time on the HRM practices applied by public sector organisations. The main elements of the NPM logic include an increased emphasis on private-sector styles of management, a shift to greater competition, the introduction of explicit standards and measures of performance, and a greater emphasis on output controls (Hood, 1991). The diffusion of NPM is believed to have been accelerated by a series of conferences and publications initiated by the OECD from the 1990s onwards, which advocated as follows: internal deregulation to empower public managers to manage in the pursuit of performance; performance improvement with a results-oriented culture instead of the prevalent preoccupation with rules and procedures; and public employees being made accountable for performance through the use of performance information, performance appraisal, and incentives that are linked to performance (Verbeeten & Speklé, 2015).

We attribute the change of HRM practices over time, theoretically, to the impact of NPM ideas on government policies. This impact is related to the trust that governments have in the OECD recommending these ideas, the support these ideas offer for governmental decision-making, and the legitimacy their decisions derive from OECD experts (cf. Bellé et al., 2019). In doing so, we build on studies that find evidence of the impact of NPM ideas across

TABLE 1 Trend categorisation

Trend	Baseline (2014/2015)	Preceding years	Description
Constant no difference	No difference	No difference in either preceding year	No changing trend observed, ending with no significant difference
Robust convergence	No difference	Decreasing differences	Stable trend of diminishing difference over time ending in no significant difference
Non-robust convergence	No difference	Mix of decreasing/ increasing differences	Irregular trend of difference over time ending in no significant difference
Non-robust divergence	Difference	Mix of decreasing/ increasing differences	Irregular trend of difference over time ending in significant difference
Robust divergence	Difference	Increasing differences	Stable trend of increasing difference over time ending in significant difference
Constant difference	Difference	No difference in either preceding year	No changing trend observed, ending with a significant difference

Source: Farndale et al. (2017, p. 1076).

countries (Bezes, 2018; Pollitt & Bouckaert, 2017). Theoretically, we expect that NPM may influence the adoption of HRM practices in several ways. First, NPM may influence the adoption of HRM practices directly through government policies concerning for instance rewards and pension schemes offered by public sector organisations. Second, NPM may influence HRM practices indirectly. This is the case for instance when governments introduce market-like mechanisms, as illustrated by the examples of hip clinics (Andersen & Jakobsen, 2011) and schools (Hvidman & Andersen, 2014) in Denmark, which in turn stimulate public employers to respond by adapting their HRM practices. Following Goldfinch and Wallis (2010), we do not assume a tight coupling of NPM policy rhetoric, policy design, and practice implementation.

Here, we posit that NPM ideas have promoted public sector HRM to shift towards private sector HRM through coercive and mimetic isomorphic mechanisms (Ashworth et al., 2009; Bezes, 2018, pp. 950–952; Brown, 2004, pp. 306–307). First, cross-sectional studies have shown the impact of NPM ideas as advocated by the OECD through government legislation (inducing a process of coercive isomorphic change). Examples include the change from a career-oriented to a position-based personnel system, which makes positions open to the best-qualified candidates from both the public and non-public sector (Smalskys & Urbanovič, 2017), and the change of the legal position of civil servants, changing, for example, the rules for dismissal (Van der Meer et al., 2013). Second, with the increasing emphasis on private sector values such as efficiency and effectiveness, public sector organisations have also been stimulated to emulate the ideal model of private sector organisations (through a process of mimetic isomorphic change). This has resulted in, for instance, the introduction of a more flexible workforce through the employment of temporary workers (Conley, 2002) and the outsourcing and decentralisation of certain functions (Alonso et al., 2015).

3.2 | The shift in private sector HRM

There are two primary reasons why we posit a shift in private sector HRM towards public sector HRM through mimetic and coercive isomorphic mechanisms. First, although there are regional differences, competition in the labour market for highly skilled employees has generally increased over recent decades as a result of the ageing workforce in many Western countries and increasing international mobility (Basri & Box, 2008; Johnson & Zimmermann, 2008). Quantitative and qualitative labour market shortages were only temporarily attenuated by the 2008–2009 economic crisis and a rise in the retirement age (e.g., Reymen et al., 2015). To improve their competitive position in a tight labour market and to be perceived as an employer of choice, through a process of mimetic isomorphic change, private organisations have copied 'soft' public sector HRM practices, such as family friendly arrangements, to broaden the range of HRM practices offered to highly skilled employees (Poelmans et al., 2003).

Second, through the process of coercive isomorphic change, governments have introduced regulations (hard and soft laws) to stimulate equal opportunities and inclusive workplaces (Riccucci, 2018). Simultaneously, societal expectations of a firm's legitimacy (Paauwe & Farndale, 2017) have put pressure on firms to engage in programs offering participation to disadvantaged employee groups in the labour market (Van Berkel et al., 2017). For example, to attract and retain a more diverse workforce, private organisations have invested in action programs aimed at groups such as disabled workers, women, and older workers (Moore et al., 2017).

3.3 | More similar, but still different

To compare the adoption of 'soft' and 'hard' HRM practices, we distinguish here between four clusters: (1) appraisal and performance; (2) compensation and benefits; (3) equal opportunities and welfare management; and (4) development and career management. The former two are examples of 'hard' HRM practices, the latter two of 'soft' HRM practices (Storey, 1989). Following Roan et al. (2001), we consider 'soft' and 'hard' HRM practices as points on a continuum, rather than a dichotomous variable. In doing so, we acknowledge that much depends on how HRM

practices are implemented in practice (Roan et al., 2001, p. 389). 'Hard' HRM practices have a stronger emphasis on HRM that fits a rationalist performance orientation, while 'soft' HRM practices focus stronger on HRM that fits a humanist philosophy (Truss et al., 1997).

We focus here on clusters of HRM practices as a way for gaining a broader picture of HRM practice adoption. This provides insight into more general trends due to the complementarity that emerges between practices related to an area of HRM practice (Subramony, 2009). Based on our theorising of the public and private sectors, we can now draw tentative propositions regarding the typical patterns of HRM adoption when comparing organisations.

Extant literature notes that HRM in public organisations typically has a model employer orientation, incorporating 'soft' HRM practices related to employee well-being. Based on institutional logics theorising, over time, we expect that with the advent of NPM, public sector organisations will have increased their use of 'hard' HRM practices to meet new performance standards (such as performance appraisal and performance-based reward systems), albeit to a lesser extent than private organisations that have traditionally had such practices in place. In private sector organisations, we simultaneously anticipate a greater use over time of 'soft' HRM practices (oriented towards employee well-being and diversity-oriented recruitment and selection) to match the changing labour market and societal legitimacy expectations, albeit to a lesser extent than public sector organisations (where such practices are traditionally embedded).

Additionally, because the public values context is a long-term institutional feature of public organisations and likely to change only over significant periods of time, we hypothesise that public organisations, compared to private organisations, continue to make greater use of 'soft' HRM because these fit better with prevailing traditional public sector values and ethics (Van Loon & Vandenabeele, 2021). Consequently, we expect that the greater use of 'soft' HRM practices by public sector organisations is an enduring difference between public and private sector organisations. We also hypothesise that private organisations, compared to public, continue to make more use of 'hard' HRM, as there is greater emphasis on linking HRM to the primary strategic objective of securing the economic viability of private organisations in the markets in which they compete (Boxall & Purcell, 2016). Therefore, we hypothesise:

H1a Compared *to private sector organisations, at all points in time, public organisations make greater use of HRM practices aimed at equal opportunities and welfare management, and development and career management.*

H1b Compared *to private sector organisations, at all points in time, public organisations make less use of HRM practices aimed at appraisal and performance, and compensation and benefits.*

Focussing on trends, we expect convergence across sectors towards an average type of HRM, as a result of both NPM reforms promoting the application of more private business-like HRM practices in the public sector, and private organisations adopting more employee well-being-oriented practices. Therefore, we hypothesise:

H2 The *use of HRM practices for appraisal and performance, compensation and benefits, equal opportunities and welfare management, and development and career management has converged across the public and private sector over time.*

4 | METHODS

For our study, we use data collected by CRANET. Since 1989, on a regular basis, this network of HRM scholars from more than 40 countries has collected data on HRM from organisations (CRANET, 2006, 2017). The data are collected through a questionnaire that is designed by an international team in English, translated into the language of each country, and back-translated to check for translation errors. The surveys are distributed either by paper, telephone, or online, and the data collected are later combined into an international dataset. The surveys are aimed at senior-level HR managers, as they are the best informed about their organisation's HRM practices (Farndale et al., 2017).

To test our hypotheses, we use CRANET data collected in consecutive survey rounds from 1999/2000, 2004/2005, 2008/2009, and 2014/2015. These data have been demonstrated to support the exploration of longitudinal trends over time in the private sector (Brewster et al., 2007; Nikandrou et al., 2005) and provide one of the most reliable sources available for conducting a cross-sector, multi-country, multi-time point study (Parry et al., 2021). We used 1999 as our starting point for two reasons. First, in doing so, we create a starting point that links our analysis to the cross-sectional studies conducted by Boyne et al. (1999) and Kalleberg et al. (2006) in the second half of the 1990s. This allows us to take our analysis further from there. Second, it is particularly from the mid-1990s onwards that the OECD took up an active role in disseminating NPM-based performance management ideas (Verbeeten & Speklé, 2015). The uptake of these ideas took time and therefore we expect to find significant changes from 1999 onwards.

4.1 | Sample

Cranfield Network on International Human Resource Management data sampling frames used in each country generally produce stratified representative samples and are consistent with those generated by other studies (Farndale et al., 2017). To provide both a good representation and assure variability between cases, we included only those countries that had at least 10 cases in every cell (in other words, which had at least 10 organisations per country × sector × independent variable). Through this procedure, we ended up with eight European countries with a total of 5271 organisations. The descriptive statistics are presented in Table 2.

TABLE 2 Sample characteristics

Descriptor	1999/2000 (%)	2004/2005 (%)	2009/2010 (%)	2014/2015 (%)	Mean total (%)
Year total	33.8	28.2	21.2	16.9	100
Country					
Austria (sample/response)	9.6/14.0	11.8/14.4	10.9/10.0	13.1/12.2	11.2/12.7
Denmark (sample/response)	20.4/11.0	19.1/19.4	18.3/13.0	10.0/9.7	17.0/13.3
Estonia (sample/response)	8.4/[a]	5.1/31.5	4.1/23.0	5.8/59.2	5.8/[a]
Finland (sample/response)	10.9/31.0	11.6/22.2	8.4/11.0	12.7/15.6	10.9/20.0
Germany (sample/response)	21.4/14.0	16.4/8.4	25.4/11.0	17.5/4.5	20.2/9.5
The Netherlands (sample/response)	8.5/14.0	12.8/36.6	4.2/31.0	8.4/3.7	8.5/21.3
Slovenia (sample/response)	7.4/38.8	8.3/30.8	12.4/21.0	13.0/21.8	10.3/28.1
Sweden (sample/response)	13.4/37.0	14.9/21.5	16.2/15.0	19.3/14.4	16.0/22.0
Sector					
Public sector	33.1	27.9	26.7	34.4	30.5
Private sector	66.9	72.1	73.3	65.6	69.5
Industry					
Service	45.7	47.1	44.1	39.9	44.2
Manufacturing	54.3	52.9	55.9	60.1	55.8
Organisational Size	*N*	*N*	*N*	*N*	Mean total
Mean	5822.4	1476.1	2954.4	1854.7	3026.9

[a]The response rate regarding Estonia in 1999/2000 is not clear although the total amount of questionnaires received is 218.

Looking at the descriptive statistics at the country level, the table shows that Estonia represents the smallest country in the sample (5.8% of the organisations) and Germany the largest (20.2% of the organisations). The response rates for the individual countries vary between 3.7% in the case of the Netherlands in 2015 to 59.2% in the case of Estonia in 2015, with a mean across the countries of 20.0% and a median of 15.0%. While these response rates vary as a result of different data collection strategies (e.g., number of organisations invited to participate), the absolute numbers of organisations are sufficient to be representative for each country.

Looking at the descriptive statistics based on the time of data collection, 33.8% of the sample is represented by data collected in 1999/2000, dropping to 16.9% of the sample coming from the 2014/2015 data collection round. The overall response rates for the individual years represented here vary between 16.9% in 2009/2010 and 23.1% in 2004/2005. Again, the data collection strategy was similar but not exactly the same across all years and countries.

Regarding sector, about one-third of the organisations in the data is public (n = 1608) and the other two-thirds are private (n = 3663). The distribution of private and public sector organisations in the dataset remained fairly consistent across the years: 33.1% of the sample in 1999/2000 were public sector organisations, which lowered slightly to 27.9% in 2004/2005, and further to 26.7% in 2009/2010 and a slight increase to 34.4% in 2014/2015. The majority of public sector organisations included in this study operate as public administration and compulsory social security organisations (60.6%), while healthcare and education account for 20.3% and 19.1%, respectively.

Moreover, Table 2 shows that the distribution of manufacturing and service-oriented organisations has also remained fairly consistent with a total of 2360 (44.8%) organisations in the manufacturing industry and 2911 (55.2%) in the service industry.

4.2 | Measures

4.2.1 | Public/private sector

We categorised organisations as public or private based on the information respondents provided about their organisation answering questions about: (1) the main sector of industry in which their organisation operates, and (2) whether they categorise their organisation as private, public, or not-for-profit.

Organisations are considered public sector organisations when respondents selected as the organisation's main sector of activity: (a) public administration and compulsory social security, (b) education, or (c) human health services, residential care, and social work activities, and when they selected 'public' or 'not-for-profit' as their organisation's characteristic. Organisations operating in agriculture, manufacturing of food, chemicals, electronic products, and wholesale are considered private when the respondent also identified the organisation as 'private'.

Several measures were taken to ensure that our analyses generated results that can plausibly be explained as reflecting public-private sector differences. First, rigour of comparison was accomplished by including only organisations from the public administration, education, and healthcare sectors of industry that characterised themselves as 'public' or 'not-for-profit', and by selecting organisations from the agriculture, manufacturing, and wholesale sectors of industry that identified themselves as 'private'. Of the respondents from all organisations operating in public administration and compulsory social security, 98.5% identified their organisation as 'public' or 'not-for-profit'. This holds for 91.6% of organisations in the education sector, and 80.6% of organisations in the healthcare sector. These results indicate that, throughout our study, privatisation and market-like mechanisms are comparatively more present in healthcare than education and public administration. However, the public administration, education, and healthcare sectors of industry are mainly what we consider 'public' based on respondents' self-identification. This implies that we are truly comparing public and private sector organisations.

Second, we ensured that differences in HRM practices were not attributable to correlates of private or public sector differences. We included organisational size and the distinction between service and manufacturing as control

variables to ensure that we examined public-private differences (see below; for a similar procedure to control for organisational characteristics that are related to the public-private difference, see Hansen & Kjeldsen, 2018).

4.2.2 | HRM practices

Appraisal and performance, compensation and benefits, equal opportunities and welfare management, and development and career management clusters of practices were used in the analyses. The first two clusters consist of so-called 'hard' HRM practices, and the latter two of so-called 'soft' HRM practices (Truss et al., 1997). HR managers reported the extent of adoption of a range of individual practices in each of these clusters. Note that when asked about welfare management practices, the question asked about the use of these practices above any related statutory requirements. This acknowledges the fact that not all HRM practices are the result of preference, but instead a consequence of legislation. Table 3 provides an overview of the HRM practices included in this study. Extant CRANET research also supports the bundling of practices to seek evidence of trends in areas of HRM practice (see, e.g., Gooderham et al., 2014; Poutsma et al., 2006; Stavrou, 2005; Stavrou et al., 2010).

The clusters of appraisal and performance, compensation and benefits, and equal opportunities and welfare management practices quite closely resemble the items included in the study by Boyne et al. (1999). The items in the development and career management cluster, however, are somewhat different and more in line with Kalleberg

TABLE 3 Overview of human resource management (HRM) clusters and practices

'Soft' HRM practices	
Equal opportunities and welfare management	**Development and career management**
Action programs for minorities	Special tasks/projects/training on the job to stimulate learning
Action programs for older workers (>50 years)	Participation in project teamwork
Action programs for disabled workers	Formal networking schemes
Action programs for women	Formal career plans
Action programs for women returners	Development centres
Workplace childcare[a]	Succession plans
Childcare allowances[a]	Planned job rotation
Career break schemes[a]	High-flier/high-potential schemes
Maternity leave[a]	International work assignments for experience
Paternity leave[a]	Coaching and mentoring
Pension schemes[a]	Computer-based packages/e-learning
Education/training break[a]	

'Hard' HRM practices	
Appraisal and performance	**Compensation and benefits**
Appraisal system for management	Employee share schemes
Appraisal system for professionals	Profit-sharing
Appraisal system for clericals and/or manuals	Stock options
Appraisal data used for pay	Individual performance-related pay
Appraisal data used for training and development	Bonus based on team goals/performance
Appraisal data used for career moves	
Appraisal data used for workforce planning	

[a]The question asked about the use of these practices in excess of any related statutory requirements.

et al. (2006). Boyne et al. (1999) primarily studied 'traditional' training and development practices, such as competency-based training and continuous self-development, and only included single items about career path development and management development. Career management, however, is the main focus of the items included in the CRANET survey. Although we acknowledge that our operationalisation of development and career management practices is somewhat different than that used by Boyne et al., and therefore the results are not fully comparable, we decided to include all practices from the CRANET questionnaire to provide a comprehensive overview of the use of 'modern' development and career management practices.

4.2.3 | Time

Time (data collection rounds: 1999/2000, 2004/2005, 2008/2009, and 2014/2015) was included to test the effects of the independent on the dependent variable within each year of data collection.

Two country-level and two organisational-level characteristics were included as control variables[2]:

4.2.4 | Public administrative tradition and related employment model

Based on research that has shown that the extent to which countries engage in NPM-oriented reforms differs between public administrative traditions and related employment models (Bezes & Jeannot, 2018; Meyer & Hammerschmid, 2010), we included the prevalent model in each country to control for variation in the institutional context: 1 = public interest (Denmark; Finland; Sweden); 2 = Rechtstaat (Austria; Germany; Netherlands); and 3 = Central and Eastern European countries (Estonia; Slovenia).

4.2.5 | Unemployment rate

To control for the economic environment and the presumed impact of labour market competition on private organisations' HRM, we included the unemployment rate of the countries involved in this study for each of the time points. We used annual data collected by Eurostat. Unemployment rate is defined as 'the number of unemployed persons as a percentage of the labour force' (Eurostat, 2020). Because each round of data collection spans 2 years, we computed the average unemployment rate for the 2 years.

4.2.6 | Organization size

This organisational-level control variable is pertinent to the convergence/divergence literature (Brewster et al., 2007; Farndale et al., 2017). Moreover, 'most previous studies have shown that larger organisations are more likely than small ones to use high-performance work practices' (Kalleberg et al., 2006, p. 279).

4.2.7 | Type of industry

Extant research (Boyne et al., 1999; Jackson & Schuler, 1992; Kalleberg et al., 2006) has indicated that there are significant differences in the use of HRM practices between the manufacturing and service industries. Industry is also considered important in the convergence/divergence literature (Brewster et al., 2007; Farndale et al., 2017).

4.3 | Data analysis

We conducted a simple multilevel random intercept logistic regression model for each independent variable using SPSS version 20. As the dataset includes organisation-level data of 5271 organisations nested in eight countries, multilevel analysis is appropriate. The ANOVA tests for each HRM practice[3] show that significant differences exist between countries. The F-values of the HRM practices vary as follows: 13.6–85.6 for equal opportunities and welfare management; 16.6–34.2 for performance and appraisal; 1.95–82.6 for development and career management; 6.6–172.6 for compensation and benefits. Consequently, a large part of the variance in the application of every HRM practice is caused by country. By not controlling for this variance caused by country, the regression parameters regarding the relations between HRM and sector contain 'noise' from country variance causing less reliable results whether the use of an HRM practice can really be attributed to sector or whether it should be attributed to country. To remove this noise, we conducted random intercept models which allow that the relation between HRM and sector can differ between countries.

For each separate HRM practice, we conducted a simple multilevel, random intercept, logistic regression analysis, including the control variables. More concretely, within every year, the dichotomous independent variable (private vis-à-vis public) is regressed on the application of an HRM practice, combined with the four control variables and with a random intercept that is allowed to vary. We conducted a multivariate random intercept logistic regression analysis for each separate HRM practice because pairwise deletion is not possible in multiple logistic regression and, therefore, many of the cases (i.e., organisations) would have been deleted listwise due to other missing variables.

5 | RESULTS

Correlations between the independent variables indicated no issues of multicollinearity, with variance inflation factors of main effects ranging from 1.104 to 4.425.[4] In the following paragraphs, we present the hypothesised effects, above and beyond the impact of country, year, and the control variables. Tables 4–6, Figure 1a–g, and Appendix 1 present an overview of changes in HRM practices over time.

First, we hypothesised (H1a) that compared to private sector organisations, public sector organisations would maintain at all points in time greater use of 'soft' HRM practices aimed at equal opportunities and welfare management, and development and career management. The equal opportunities practices show somewhat varying results. These are predominantly used more by public organisations than private organisations, but this is not consistently true for all practices at all points in time other than for the use of action programs for employees with disabilities (see Figure 1a). Action programs aimed at women and minorities are used significantly more at three points in time by public organisations than private organisations, but the public-private difference is not significant on one of the four time points. The use of action programs for older workers and women returners are, in general, somewhat equal across the public and private sector but at the first time point, the private sector uses these programs significantly more than the public sector and at the second time point for older workers and the third time point for women returners, the public sector uses these programs more.

Equal use across sectors is also the dominant picture regarding the cluster of welfare management practices (see Figure 1b). Only at one time point (1999/2000) did public organisations implement two welfare management practices (pension schemes and childcare allowances) significantly more often than private organisations.

The results for development and career management practices (see Figure 1c,d) show that only at one point in time (2014/15) was one practice (formal networking schemes) used more often in public than in private organisations. Otherwise, none of the other development and career management practices are used more in the public sector at any time point than in the private sector. Conversely, many practices are used more frequently by private sector organisations at almost all time points (including formal career plans, development centres, succession plans, planned job rotation, and high potential schemes).

TABLE 4 Descriptive statistics

HRM clusters and practices[a]	1999/2000[b] Private	1999/2000[b] Public	2004/2005[b] Private	2004/2005[b] Public	2009/2010[b] Private	2009/2010[b] Public	2014/2015[b] Private	2014/2015[b] Public	n[c]
Appraisal and performance									
Appraisal system for management	63.2	65.5	70.3	62.2	64.9	59.6	70.3	56.3	5096
Appraisal system for professionals	64.1	66.8	68.8	61.9	60.8	58.5	69.0	54.7	5043
Appraisal system for clericals and/or manuals	69.3	65.3	71.1	64.6	65.2	56.6	66.8	53.8	5101
Appraisal data used for pay	61.7	50.2	79.6	69.3	80.0	74.7	73.6	60.8	3901
Appraisal data used for training and development	86.9	86.5	88.1	74.0	85.4	70.7	80.2	56.0	3884
Appraisal data used for career moves	69.7	67.0	80.2	70.9	81.6	61.3	78.6	50.6	3844
Appraisal data used for workforce planning	48.1	67.4	51.6	59.1	54.7	54.2	49.2	41.1	3734
Compensation and benefits									
Employee share schemes	18.5	0.2	25.3	1.9	19.5	0.3	18.0	0.3	5173
Profit sharing	46.1	1.0	53.3	4.3	47.2	5.9	48.1	1.0	5186
Stock options	-	-	19.0	0.5	18.0	0.0	20.8	0.3	3386
Individual performance related pay	62.6	34.6	61.9	32.5	87.7	50.9	86.1	57.8	5231
Bonus based on team goals/performance	33.6	8.5	46.1	14.7	60.1	12.3	50.3	11.1	5180
Equal opportunities and welfare management									
Action programs for minorities	23.8	36.5	13.0	28.9	12.6	16.9	13.3	21.8	4376
Action programs for older workers (>50 years)	5.6	4.4	17.0	26.5	22.2	23.7	21.8	22.6	5051
Action programs for disabled workers	33.6	49.9	15.7	32.3	15.6	23.6	18.8	30.1	4355
Action programs for women	48.3	69.5	18.2	37.7	21.8	35.0	27.3	25.4	4448
Action programs for women returners	14.5	10.2	-[d]	-[d]	17.0	19.4	23.6	19.1	3661
Workplace childcare[e]	37.2	20.9	-[d]	-[d]	6.3	4.5	8.2	4.0	3709
Childcare allowances[e]	2.3	7.5	-[d]	-[d]	9.3	3.8	11.3	3.3	3686
Career break schemes[e]	5.9	9.9	-[d]	-[d]	24.1	24.5	18.8	13.1	3682
Maternity leave[e]	6.9	13.0	-[d]	-[d]	67.1	55.9	66.5	59.2	3707
Paternity leave[e]	20.6	29.8	-[d]	-[d]	61.1	53.1	64.2	55.9	3704
Pension schemes[e]	17.4	31.0	-[d]	-[d]	72.0	50.9	71.0	49.5	3701
Education/training break[e]	46.5	26.4	-[d]	-[d]	63.4	60.3	65.4	49.8	3708
Development and career management									
Special tasks/projects/training on the job to stimulate learning	95.1	90.2	94.7	94.7	91.8	90.0	95.6	91.0	5019
Participation in project teamwork	-[d]	-[d]	95.9	93.8	93.9	93.3	90.5	89.2	3322
Formal networking schemes	-[d]	-[d]	75.2	76.8	80.6	81.1	64.6	70.5	3269
Formal career plans	25.4	18.0	57.1	46.5	68.6	59.8	60.4	54.7	4902
Development centres	19.0	19.7	32.6	27.8	43.4	39.2	35.6	30.9	4846
Succession plans	51.7	18.6	65.6	37.1	76.3	57.2	75.3	50.0	4895

TABLE 4 (Continued)

HRM clusters and practices[a]	1999/2000[b] Private	1999/2000[b] Public	2004/2005[b] Private	2004/2005[b] Public	2009/2010[b] Private	2009/2010[b] Public	2014/2015[b] Private	2014/2015[b] Public	n[c]
Planned job rotation	32.1	21.6	53.6	37.6	62.4	59.0	60.4	52.1	4877
High-flier/high-potential schemes	41.1	20.8	53.5	29.8	65.9	49.1	63.8	48.3	4910
International work assignments for experience	25.0	14.7	79.8	82.7	81.2	78.1	54.9	27.6	4858
Coaching and mentoring	78.2	84.5	-[d]	-[d]	86.2	81.1	85.4	83.3	3565
Computer based packages/e-learning	71.6	75.7	-[d]	-[d]	61.3	60.9	59.9	60.7	4570

[a]Practice used (1) versus practice not used (0).

[b]All numbers in all years represent the percentage of organisations in the public and private sector indicating the use of these practices.

[c]The *n* varies between practices since in several cases organisations did not complete the questions about all practices.

[d]Organisations in these years did not receive these questions due to changes made to the CRANET questionnaire.

[e]The question asked about the use of these practices in excess of any related statutory requirements.

Overall, these results for soft HRM indicate that H1a (which stated that, compared to private sector organisations, at all points in time, public organisations make greater use of HRM practices aimed at equal opportunities and welfare management, and development and career management) was not supported.

Second, we hypothesised (H1b) that compared to private sector organisations, public organisations continue at all points in time to make less use of hard HRM practices aimed at appraisal and performance, and compensation and benefits. Our results show that all compensation and benefits practices are used more frequently by the private sector than the public sector at all time points (see Figure 1g). Within the appraisal and performance practices cluster, there is somewhat more variation, but overall private organisations also use these practices more often than public organisations (see Figure 1e,f). Only appraisal data used for workforce planning has been applied equally by public and private sector organisations since 2004/5, previously having been used more frequently by public sector organisations. In addition, appraisal systems are used equally for different employee grades across sectors since 2009/10 but before that, particularly appraisal systems for clerical or manual employees were more frequently used by private organisations. This provides general support for H1b, which stated that public sector organisations would maintain at all points in time less use of 'hard' HRM practices.

Third, we hypothesised (H2) that the use of HRM practices would have converged across the public and private sectors over time. Table 5 provides an overview of changes in 'soft' HRM practices over time. The trends regarding the 12 equal opportunities and welfare management practices vary somewhat. Here the trend of (non-)robust convergence (6 practices) is more dominant than the occurrences of constant no difference (3 practices), non-robust divergence (2 practices), and constant difference (1 practice). Table 5 also displays the trends regarding the 11 development and career management practices. However, although the trend of (non-)robust convergence (4 practices) is more prominent than the trends of non-robust divergence (2 practices) and constant difference (1 practice), it equals the occurrence of constant no difference (4 practices).

Table 6 shows only one trend—compensation and benefits practices—with a constant difference for all five practices between the public and private sectors. The appraisal and performance practices show trends of (non-)robust convergence (4 practices) and non-robust divergence (2 practices) over time, which occur more often than a state of constant difference (1 practice).

In summary, (non-)robust convergence (10 practices) and constant no difference (7 practices) across sectors are most visible regarding the use of 'soft' HRM practices, while (non-)robust convergence, non-robust divergence, and constant difference between sectors, are apparent for the use of 'hard' HRM practices (see Appendix 1). In addition, the robustness check we performed by conducting the analysis without the control variables showed the same

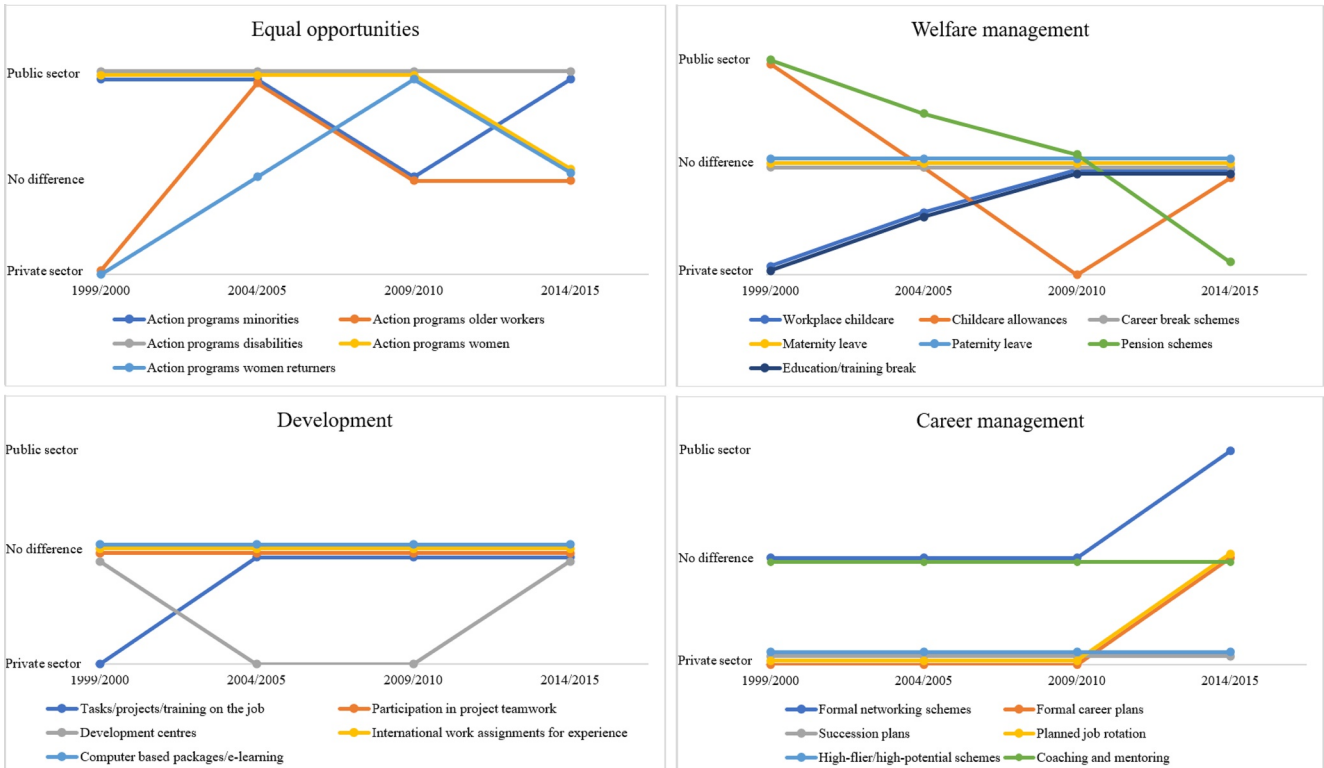
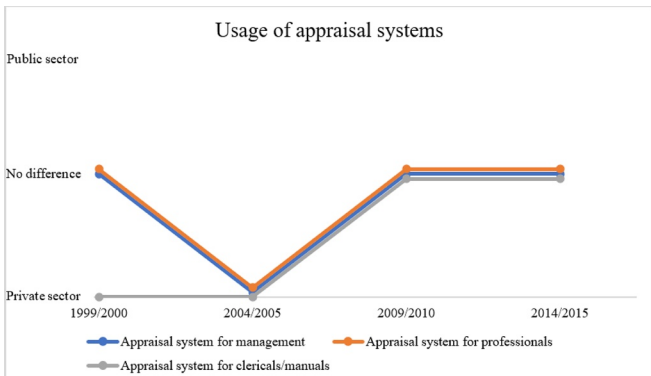
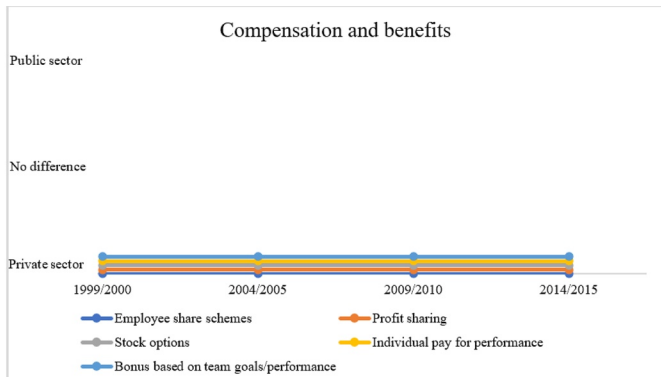


FIGURE 1 (a–g) Trends for the various human resource management (HRM) practices (1a: equal opportunities; 1b welfare management; 1c development; 1d career management; 1e usage of appraisal systems; 1f usage of appraisal data; 1g compensation and benefits). The figures show whether, on the four time points, the public sector or private sector scores significantly higher on the application of the HRM practices, or whether there is no significant difference between sectors. The lines do not represent a continuous process over time since we only have data for four time points. The figures present an exploration of how the use of HRM practices by sectors has developed over time [Colour figure can be viewed at wileyonlinelibrary.com]





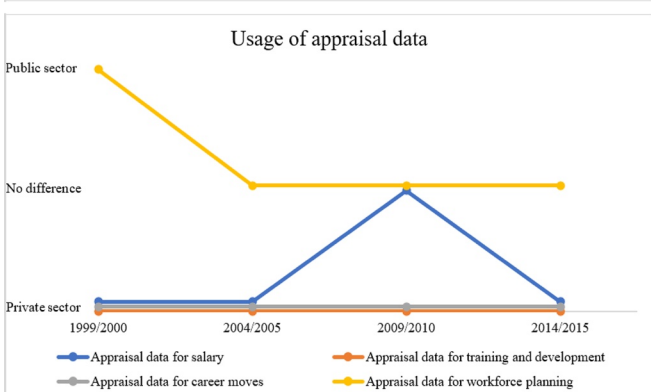


FIGURE 1 (Continued)

TABLE 5 Regression coefficients for 'soft' human resource management (HRM) practices

HRM clusters and practices[a]	Simple effect	Interaction effects			
	Public	Public × 2009/2010	Public × 2004/2005	Public × 1999/2000	Trend
Equal opportunities and welfare management					
Action programs for minorities	0.652*	0.232	0.936***	0.823***	Non-robust divergence
Action programs for older workers	0.361	0.442	0.481*	−0.698*	Non-robust convergence
Action programs for disabilities	0.745**	1.275***	1.093***	1.286***	Constant difference
Action programs for women	0.374	0.954***	1.179***	0.737***	Non-robust convergence
Action programs for women returners	0.183	0.708**	-[b]	−0.526*	Non-robust convergence
Workplace childcare	−0.238	0.311	-[b]	−0.682***	Robust convergence
Childcare allowances	−0.336	−0.866*	-[b]	1.404***	Non-robust convergence
Career break schemes	−0.221	0.220	-[b]	−0.408	Constant no difference
Maternity leave	0.033	−0.132	-[b]	0.413	Constant no difference
Paternity leave	−0.137	0.032	-[b]	0.145	Constant no difference
Pension schemes	−0.679**	−0.366	-[b]	0.444*	Non-robust divergence
Education/ training break	0.010	0.347	-[b]	−0.730***	Robust convergence
Development and career management					
Tasks/projects/ training on the job	−0.311	0.007	0.167	−0.905**	Robust convergence
Participation in project teamwork	0.168	0.268	−0.008	-[b]	Constant no difference
Formal networking schemes	0.711***	−0.097	−0.121	-[b]	Non-robust divergence
Formal career plans	−0.121	−0.721***	−0.614***	−0.666***	Non-robust convergence
Development centres	−0.299	−0.640**	−0.654***	−0.311	Non-robust convergence
Succession plans	−0.755***	−0.843***	−1.116***	−1.133***	Non-robust divergence
Planned job rotation	−0.280	−0.478*	−0.755***	−0.565***	Robust convergence

TABLE 5 (Continued)

HRM clusters and practices[a]	Simple effect	Interaction effects			
	Public	Public × 2009/2010	Public × 2004/2005	Public × 1999/2000	Trend
High-flier/ high-potential schemes	−0.987***	−1.010***	−1.154***	−1.236***	Constant difference
International work assignments for experience	−0.285	−0.451	0.182	−0.284	Constant no difference
Coaching and mentoring	−0.225	−0.500	-[b]	−0.425	Constant no difference
Computer based packages/e-learning	−0.168	0.002	-[b]	0.000	Constant no difference

[a]*≤0.05; **≤0.01; ***≤0.001.

[b]Organisations in these years did not receive these questions due to changes made in the CRANET survey.

results, indicating that the control variables had no significant impact. Overall, the results indicate that hypothesis 2, which hypothesised convergence over the public and private sectors across time for all clusters of HRM practices, receives partial support as more practices show some element of convergence than divergence.

6 | DISCUSSION

This study conducted a trend analysis of developments in HRM over time to explore the question of whether, since the late 1990s, the adoption of HRM practices has converged across public and private sector organisations. We hypothesised that the public-private differences found by Boyne et al. (1999) and Kalleberg et al. (2006) would remain (H1a and H1b) because there are fundamental differences in the values embedded in public and private sector organisations. We also hypothesised that public-private differences regarding the use of all four clusters of HRM practices would have decreased over time as a result of institutional mechanisms (mimetic and coercive isomorphic change).

H1a assumed that, compared to private sector organisations, public organisations would continue at all points in time to make more use of 'soft' HRM practices. Our findings indicate that equal opportunities practices continue to be predominantly used more often by public than by private sector organisations, while welfare management practices are used equally across sectors. This is mainly the result of private sector organisations having increased their use of welfare management practices, notably at the two later time points (2009/2010 and 2014/2015). The finding that public organisations continue to adopt equal opportunity and welfare management practices resonates with the institutional theory-based PSM reasoning (Perry & Hondeghem, 2008; Van Loon & Vandenabeele, 2021) that the public values that infuse public sector HRM practices do not appear to have been strongly affected by NPM ideas. The evolving NPM logic (Hood, 1991) has not resulted in public organisations being less committed to equal opportunity and welfare management practices that primarily support the values of social justice and employee well-being.

Although also considered 'soft' HRM practices, unexpectedly, we found that development and career management practices are either used equally by public and private sector organisations or more by private organisations at almost all points in time. This may (partly) be the result of the operationalisation of development and career management practices. Several practices which were not included by Boyne et al. (1999), such as succession plans and high

TABLE 6 Regression coefficients for 'hard' human resource management (HRM) practices

HRM clusters and practices[a]	Simple effect	Interaction effects			
	Public	Public × 2009/2010	Public × 2004/2005	Public × 1999/2000	Trend
Appraisal and performance					
Appraisal system for management	−0.369	0.005	−0.562***	−0.138	Non-robust convergence
Appraisal system for professionals	−0.311	−0.009	−0.438*	−0.202	Non-robust convergence
Appraisal system for clericals/manuals	−0.169	−0.271	−0.394*	−0.572***	Robust convergence
Appraisal data used for pay	−0.620*	−0.481	−0.651**	−0.491**	Non-robust divergence
Appraisal data used for training and development	−0.788**	−0.676*	−1.158***	−0.955***	Non-robust divergence
Appraisal data used for career moves	−0.883***	−0.854***	−0.877***	−0.885***	Constant difference
Appraisal data used for workforce planning	−0.191	−0.119	0.195	0.513**	Robust convergence
Compensation and benefits					
Employee share schemes	−4.988***	−4.504***	−2.952***	−5.199***	Constant difference
Profit sharing	−4.172***	−4.112***	−5.117***	−4.391***	Constant difference
Stock options	−4.667***	−16.280***	−4.080***	-[b]	Constant difference
Individual pay for performance	−1.733***	−1.853***	−1.224***	−1.116***	Constant difference
Bonus based on team goals/performance	−2.055***	−2.307***	−1.676***	−1.627***	Constant difference

[a]*≤0.05; **≤0.01; ***≤0.001.

[b]Organisations in these years did not receive these questions due to changes made in the CRANET survey.

potential schemes, can be characterised as reflecting an exclusive approach to talent management, aimed at a select group of employees who are highly valuable for the organisation. Although most public organisations adopt a mix of both inclusive and exclusive talent management (Thunnissen & Buttiens, 2017), the public sector is generally more inclined towards implementing inclusive talent management practices (Kravariti & Johnston, 2020). Thus, the operationalisation of these development and career management practices fits the private more than the public sector context.

This unexpected finding might also partly be explained by the impact of austerity measures (Cunningham et al., 2021), although these arguably only affect these practices at the last time point (2014/2015; Bach & Bordogna, 2016). A study by Jewson et al. (2015, p. 228) revealed that 'while training incidence remained relatively high in the public sector, establishment-level control over planning and funding fell faster than in the private sector'. This resulted, among other things, in a lower frequency of training courses and stricter eligibility criteria.

H1b posited that compared to private sector organisations, public sector organisations would continue at all points in time to make less use of 'hard' HRM practices. With few exceptions, notably the use of appraisal systems for various employee groups, we find overall support for this hypothesis. On the one hand, public sector organisations have adopted the use of appraisal systems for managers and employees, which, for example, have become mandatory for civil servants in EU Member States as of 2016 (Staronová, 2017). On the other hand, public sector organisations are less likely to use performance appraisal information for decisions on pay and career moves.

This finding is in line with the pattern of government reform that Pollitt and Bouckaert (2017) regard as typical of Continental European moderniser-states, characterised by the preservation of public service with a distinct employment status, culture, and terms and conditions. This again suggests that the change in institutional logics towards NPM ideas has not resulted in public organisations adopting HRM practices that fit the 'hard' performance steering promoted by the OECD. This may be a result of the public service ethos that makes public managers resist such practices, as Boyne et al. (1999) also speculated. It may also be a result of public managers recognising the costs of such performance practices in a public service ethos context where PSM-dedicated practices can better motivate employees to improve public services (Paarlberg et al., 2008; Weibel et al., 2010). This implies that private sector organisations have a stronger focus on improving employee performance and ultimately organisational performance through financial incentives (Boxall & Purcell, 2016; Cregan et al., 2020).

Based on institutional theorising, H2 assumed that public-private differences in HRM practice adoption would have decreased over time. Specifically, we expected public sector organisations to apply more business-like HRM practices as a result of NPM-like reforms (Bezes, 2018), and private sector organisations to mimic public sector employee-oriented practices as a result of labour market competition (Johnson & Zimmermann, 2008) and pressures to become an inclusive employer (Paauwe & Farndale, 2017; Riccucci, 2018). Empirically, we make a distinction between convergence (non-robust or robust), divergence (non-robust or robust), and a constant state (of either no difference or difference; Farndale et al., 2017).

For development and career management practices the dominant trends are convergence and constant no difference; for equal opportunities and welfare management practices, convergence; for compensation and benefits practices the only trend is constant difference; and for appraisal and performance practices the most occurring trends are convergence and divergence. In sum, this implies that we found partial support for our hypothesis regarding convergence over the public and private sectors across time. For the soft HRM practices (development and career management, equal opportunities, and welfare management) the dominant trend was convergence as hypothesised. For the hard HRM practices, the hypothesised trend of convergence is partly supported by the decreasing difference between private and public organisations regarding the use of appraisal systems for various employee groups, but the trends in the other hard HRM practices (use of appraisal data for salary, training, and career move decisions; compensation and benefits) offer no support for the hypothesised convergence.

Overall, when it comes to change, the occurrence of trends of convergence (14 instances) and divergence (6 instances) shows that convergence is more prominent than divergence. Over the same period, continuity is demonstrated by the 15 instances of stability (constant [no-]difference).

These findings imply that the differences between the use of HRM practices in public and private sector organisations vary between and within the practice clusters. The largest differences were found for the compensation and benefits cluster. For the other clusters, the differences vary from small to moderate. Scholars can benefit from studying single HRM practices in follow-up studies instead of clusters of HRM practices because there is considerable variation between practices (Björkman et al., 2007; Farndale et al., 2017; Kinnie et al., 2005).

Our empirical results appear to provide support for the mechanisms of coercive and mimetic isomorphism to instil processes of convergence. An example of coercive isomorphism is the earlier-mentioned introduction of appraisal systems by EU Member States preceding its mandatory character as of 2016. There are also examples of private organisations starting from a low level of use of a soft HRM practice and subsequently strongly increasing their use—sometimes even exceeding public sector use—as in the case of childcare allowances and pension schemes. This provides support for the role of mimetic mechanisms resulting from labour market competition and pressures to become an inclusive employer. However, other HRM practices provide less strong evidence of mimetic mechanisms.

Another relevant issue is the absent effect of the country-level control variables. It might be that the differences between public administrative traditions and related employment models have increasingly less impact on the use of HRM practices because European bodies, such as the European Public Administration Network, serve as a platform to exchange views and best practices, and foster the development of common activities in areas of interest such as HRM.

Overall, we conclude that the only cluster where the traditional public sector investment in employee well-being continues to be distinctive is HRM practices aimed at equal opportunities. Private sector organisations, on the other hand, make greater use of HRM practices aimed at development and career management, compensation and benefits, and the use of performance appraisal data for salary and career decisions.

The results point to the conclusion that institutional pressures have resulted in partial convergence across the public and private sectors for three of the four HRM clusters. Mimetic and coercive processes have resulted in cross-sector convergence regarding 'soft' HRM practices and one set of 'hard' HRM practices (appraisal systems). Convergence, where it occurs, is a result of dual change processes in the public and private sectors. On the other hand, for the 'hard' HRM practices, generally, the dominant trends are non-robust divergence and constant difference, which is in line with the institutional theory-based notion that the traditional public values have not changed profoundly in public sector organisations in Continental European states and continue to 'favour' HRM practices that are grounded in values that fit this value context.

7 | CONCLUSIONS

This study has explored the distinctiveness of public sector HRM over time. By exploring a broad range of HRM practices clustered into four primary areas, two representing 'soft' HRM and two 'hard' HRM, we were able to uncover the extent to which the public sector continues to have a distinctive approach to managing employees. Our findings imply that only some 'soft' HRM practices (equal opportunities) are still dominant in the public sector, while the private sector still holds strong for the range of 'hard' HRM practices, which continue to be used less in the public sector.

Despite these important findings, this study is, of course, subject to certain limitations. First, CRANET relies on a single respondent approach to measure the adoption of HRM practices. That is, senior-level HR managers completed the surveys. Although we can assume that they are well-informed about their organisation's HRM practices (Farndale et al., 2017), we know that intended HRM practices can differ from those that are implemented or perceived by employees (Wright & Nishii, 2013). Follow-up research might, therefore, use employees as respondents to measure perceived HRM practices. Staff surveys might offer valuable data for addressing this issue.

Second, we included eight European countries in our study. In the CRANET data, many other countries were included, but these did not have sufficient cases per cell (country × sector × independent variable), therefore, we decided to exclude these. Although the eight countries included in our study vary in terms of their public administration systems and the level of unemployment (which were controlled for in the study), our findings cannot be generalised to other countries outside Europe. It would be highly relevant to collect additional data for other (non-European) countries too to examine the extent to which the results can be generalised.

Third, our selection of HRM practices can be considered a limitation. We used the selection of practices available in the CRANET data, and although these generally parallel the practices studied by Boyne et al. (1999), there are also differences. Especially, the items measuring development and career management practices are different from the ones used by Boyne et al. that were primarily focussed on measuring 'traditional' training and development practices. We decided to include all development and career management practices to provide a comprehensive overview of the use of 'modern' development and career management practices aimed at the effective development of resources, however, we acknowledge that this has likely influenced our results.

Fourth, in this paper, the main aim was to compare HRM practices in the public and private sectors. The public-private measure was based on information provided by respondents about their main sector of industry and their organisation being 'public', 'not-for-profit', or 'private'. The limitation of our measure is that it does not focus on the public-private distinction only, but also may be affected by the industry sector. Ideally, one would want to compare organisations that engage in the same sort of activities but that differ in being publicly or privately owned, as in the studies of hip clinics (Andersen & Jakobsen, 2011) and primary/lower education schools (Hvidman & Andersen, 2014). However, this approach was unfeasible in our study because of the number of private organisations in each sector of industry, in each country, at each time point.

In addition, to prevent an oversimplification of sectoral differences (Rainey, 2009), we included several control variables (organisational size, type of industry) in our analyses. However, we acknowledge that this does not fully solve the issue of potential sectoral overlap and within-sector differences. Therefore, we recommend that follow-up research provides a more fine-grained analysis considering other relevant features that might explain differences in the adoption of HRM practices. This follow-up research can also map the effects of the emergence of the New Public Governance approach, a government reform following NPM, centre-staging values of collaboration, co-production, and network governance (Osborne, 2010), which might further affect the convergence across sectors.

Finally, our four-wave trend analysis allowed us to study the development over time of HRM practices aimed at employees in public or private employment, as a result of NPM reforms, increasing labour market competition, and the stimulation of equal opportunities and inclusive workplaces. However, it might well be that the composition of the public sector workforce (in terms of educational level, age, gender, etc.) has changed over time, for example, because of public sector restructuring and the outsourcing of lower-skilled public service jobs. In turn, these changes might have affected the adoption of HRM practices. Therefore, it is relevant for follow-up research to study the effects of changes in workforce composition on the adoption of HRM practices.

Despite these limitations, this study makes an important contribution to managerial practice. It provides both public and private organisations with insights into the distinctiveness of their HRM. It shows what HRM practices are used both within and across sectors, which provides a relevant benchmark that can help organisations build their HRM and position themselves as employers of choice. Of course, organisations need to consider what kind of employees they want to attract and retain. For example, high-skilled employees may be attracted to benefits such as opportunities for personal growth and career development, regardless of the sector of employment (Buelens & Van den Broeck, 2007). If an organisation wants to employ these high-skilled employees, it is relevant to make their HRM stand out in terms of development and career management practices.

In conclusion, this study provides an updated analysis of the development of public-private differences in the use of HRM practices. We found support for processes of both continuity and change. Based on our study, we can answer the question of whether there continue to be significant differences between HRM in the public and private sectors with a qualified 'yes', noting that some of the differences of the late 1990s have faded out, while others remain.

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CONFLICT OF INTEREST

The authors declare that there are no conflict of interests.

DATA AVAILABILITY STATEMENT

Research data are not shared.

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ENDNOTES

[1] Contrary to Boyne et al. (1999), Kalleberg et al. (2006) do not just distinguish between the public and private sector, but also include the category of non-profit organisations. The majority of these organisations are operating in the health, education, and social services sectors, which are classified as public by Boyne et al. (1999).

[2] We acknowledge that compared to the public sector (which consists of public administration, education, and healthcare), the private sector is broader and consists of a wider range of agricultural, manufacturing and service activities, and a wider variety of occupations. Please note that in the analyses we did not control for the type of occupation (e.g., professional/administrative; secretarial/skilled trades/sales and customer service).

[3] With the exception of 'tasks/projects/training on the job' in the cluster of development and career management practices.

[4] The correlation table is available on request from the authors.

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SUPPORTING INFORMATION

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RESEARCH ARTICLE

Ambiguous culture in Greenland police: Proposing a multi-dimensional framework of organizational culture for Human Resource Management theory and practice

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Abstract

This article places ambiguity at the centre of Human Resource Management theory and practice of organizational culture and advances a multi-dimensional framework that makes productive use of tensions between cultural integration and differentiation. Providing an illustrative analysis of Greenland Police, we identify a clash between a strong integrational pull and a similarly powerful differentiating force, involving an integrated occupational culture and differentiated national sub-cultures. This clash, we show, becomes productive when organizational members articulate and enact ambiguous identities. Emphasising the contextuality of organizational culture, we do not believe the empirical findings to be generalisable, but, instead, offer the analytical framework for studying multi-dimensional organizational culture as our main contribution. Conceptually, we emphasise how ambiguity is articulated in and between integration and differentiation, thus enhancing the relationality of the dimensions. The practical aim is to set ambiguous dynamics in motion that enable productive relations between different cultural dimensions.

Abbreviations: HR, Human Resources; HRM, Human Resource Management.

KEYWORDS
ambiguity, culture, differentiation, HRM, hybridity, integration

Practitioner notes

What is currently known?

- Understanding organizational culture is crucial for successful Human Resource Management HRM (change) initiatives.
- However, developing strong cultures that foster committed employees is difficult and most cultural change initiatives fail.
- Most accounts of culture in HRM are based on integration or, alternatively, differentiation while accounts of cultural ambiguity are scarce.

What this paper adds?

- Conducting cultural analyses that account for ambiguity (rather than attempting to eradicate it) is paramount for the advancement of HRM studies of organizational culture.
- Analysing fluid and less measurable dynamics of ambiguous culture makes visible the potential benefits of creating room for dissent and change within the organization.
- Focussing on ambiguity incurs sensitivity to the power relations and inequality mechanisms that are at play in cultural collaboration.

The implications for practitioners

- HRM practitioners may benefit from working with the three perspectives of integration, differentiation and ambiguity so as to de- and reconstruct perceptions and enactments of organizational culture.
- Ambiguity can be operationalized through researcher interventions where HR practitioners and researchers collaborate to explore the dynamics and fluidities of culture in order to overcome (sub-)cultural stereotypes that bar collaboration.
- The reconstructive potential of an ambiguity analysis can lead to renewed integration – a more reflexive, dynamic and, therefore, unstable integration, but also a more hospitable and attractive integration – on which practitioners may base the development of strong organizational cultures.

1 | INTRODUCTION

Developing strong cultures that foster committed employees is central to successful HRM practice (Fombrun, 1983; Harris & Ogbonna, 1998; Schein, 1985). Concomitantly, organizational culture continues to be a central concern of HRM research (e.g., Moore, 2021), especially as it relates to occupational cultures, national cultures and other sub-cultural groupings (e.g., Drori et al., 2011; Murphy & Davey, 2002; Ogbonna & Harris, 2015). To understand the tensions between cultural unity and sub-cultural differentiation, researchers are increasingly applying an ambiguity lens (Lam, 2010; Martin, 1992; Moore, 2013), which explains the dilemmas, contradictions and paradoxes that characterise negotiations of individual and collective identity in relation to organizational culture(s) (Ravasi & Schultz, 2006; Robertson & Swan, 2003).

Ambiguity, then, is well-established in HRM studies of organizational culture, but its potentials for HRM practice remain less developed (e.g., Ogbonna & Harris, 2002; Wankhade & Brinkman, 2014). In practice, organizational culture is often treated as a fixed and measurable concept that can be managed and controlled (Moore, 2021; Taylor et al., 2008). Taking note of this situation, Moore (2021) calls for more qualitative studies of cultural dynamics in HRM while Ogbonna and Harris (2015) invite more empirical research of inter- and intra-organizational subcultural

interaction. More specifically, Wankhade and Patniak (2020, p. 108) note that the "…growing interest in studying organizational culture is not accompanied by a strong evidence base on complexities and implications of cultural interventions in different settings." With this paper, we respond to such calls, seeking to harness conceptualizations of cultural ambiguity for practical intervention.

To do so, we begin from a paradigmatic case study (Flyvbjerg, 2006) of Greenland Police, asking: *how do members of the Greenland Police understand and negotiate organizational culture?* With this question, we explore how the ambiguity perspective may help explain and strengthen organizational cultures. As we detail below, Greenland Police is a police district of the Danish Police and, hence, circumscribed by a neocolonial context. Although the occupational culture of policing is known to manifest in recognisable ways across different settings (Cockcroft, 2012; Loftus, 2009; Wankhade & Patniak, 2020), the intersection of organizational and national contexts may significantly alter the conditions for cultural articulation. The case of Greenland Police offers unique insights into the dynamic interplay between occupational and national cultures within an organizational setting, and we will focus on this interplay rather than on the involved occupational and national cultures per se.

To conduct this investigation, we (re)introduce Joanne Martin's three-dimensional framework to HRM scholars. Martin (1987; 1992; see also Meyerson & Martin, 1987) offers a meta-perspective on organizational culture that indicates how the same issues may be addressed from integration, differentiation and ambiguity perspectives. The three perspectives, she argues, are not inherent qualities of empirical organizational cultures, but different conceptualizations of such cultures. No culture *is* integrated, differentiated or ambiguous but can – and should – be explained along all three lines. If we are to fully understand the complexity of organizational cultures, then, we need to first recognise that culture is an analytical rather than a substantial category. As such, we need a framework that can contain and explain cultural complexities that cut across organizational and societal contexts, and the main conceptual contribution of this paper is to propose such a framework for HRM theory *and* practice.

As we will argue below, substantiating this framework and, hence, answering the empirical research question hinges on an ethnographic and intervention-based approach that explains how ambiguity arises in and through the dynamic interactions of different cultural and sub-cultural (national, occupational, etc.) dimensions of the organization. Pointing out the limitations of resolving cultural tensions as a choice between either one dimension or the other, we show how ambiguity can become productive for HRM research and practice, as it enables organizational members to maintain relations between differentiated subcultures *within* integrated organizational settings, thereby welcoming positions of hybridity.

Thus, the analysis illustrates the challenges that practitioners face in coming to terms with a more fluid and less measurable conceptualisation of organizational culture, but also highlights the benefits of creating room for cultural ambiguity. Through our study of integration, differentiation *and* ambiguity in the Greenland Police, then, we position ourselves within the growing group of HRM scholars who define culture *as* ambiguous (e.g., Moore, 2021; Murphy & Davey, 2002; Ogbonna & Whipp, 2006; Wankhade & Patnaik, 2020). We contribute to this work by showing that attention to integration and differentiation remains central to understanding ambiguity – especially when seeking to harness this understanding for HRM practices. Further, we illustrate how research and practice may work together to explain and enhance organizational ability to enact ambiguous cultural relations meaningfully.

2 | ORGANIZATIONAL CULTURE: THE THREE PERSPECTIVES AND THEIR APPLICATION IN HUMAN RESOURCE MANAGEMENT

The continued dominance of HRM practices that approach organizational culture in fixed and static terms is particularly perplexing when considering that compelling alternatives have existed for more than 3 decades. Most notably, Martin (1987, 1992) identifies three perspectives – integration, differentiation and ambiguity – and argues that the empirical phenomenon of organizational culture is multi-dimensional. Cultural analysis should not be confined to

one perspective, but must, instead, draw on and address all three in order to capture the inherent complexity of the theory and practice of organizational culture. While the integration perspective has been supplemented with both differentiation and ambiguity in scholarly work, most research continues to conceptualise and study culture in organizations from one perspective only. In what follows, we offer brief reviews of each of these mono-dimensional approaches to culture in HRM, thereby preparing the ground for their integration.

2.1 | The integration perspective in Human Resource Management

From an integration perspective culture is defined as that which people in a group or organization share. Culture implies consensus, based on common 'basic underlying assumptions' (see Schein, 1985). Much of the HRM literature on organizational culture adopts the integration perspective, concerning itself with identification and analysis of the unique cultural patterns of specific organizations (Fombrun, 1983). The implications of integration include clearly communicated organizational values that make a difference for the well-being and performance of employees (Posner et al., 1985), group-oriented organizational cultures that minimise employee turnover and have positive effects on employee performance (Mohr et al., 2012) and strong organizational cultures that support high performance work systems, leading to higher firm performance (Den Hartog & Verburg, 2004). Thus, cultural integration is an important human resource practice that ensures and enhances performance.

As Van Maanen and Barley (1985) note, organizational cultures are often established top-down, in and through the explicit efforts of managers and HR departments. Occupational cultures, however, are much more organically driven by core practitioners and key employee groups who carry the norms and values of the occupation with them and ensure the socialisation of new members into the occupational identity. Thus, organizations that are characterised by strong occupational cultures may enjoy stronger and more organic cultural integration (Posner et al., 1985; Schein, 1985), police culture being a frequently highlighted case in point (Cockcroft, 2012; Loftus, 2009; Wankhade & Patniak, 2020). Indeed, as Waddington (1999, p. 4) points out there are distinct and recognisable traits of policing, both historically and across geographical settings. This is important, as our empirical case is a policing organization where we analyse the ways in which the integrative dynamics of the dominant occupational culture interact with the differential dynamics of nationally defined sub-cultures.

As such, we begin from the basic insight that building unified organizational cultures is never an easy task (Martin, 1987; Murphy & Davey, 2002; Wankhade & Patniak, 2020). In failing to recognise the complexity of culture, the integration perspective suffers from a discrepancy between the assumption that management may control culture and the experiences of managers who find that in practice culture is uncontrollable (Ogbonna, 1992; Starbuck, 2017). Thus, the clarity and consistency offered by integration may seem attractive, but it turns out to be an oversimplification. To arrive at a more nuanced understanding of what organizational culture is and how it works, the integration perspective must be combined with other conceptual lenses.

2.2 | The differentiation perspective in Human Resource Management

The differentiation perspective is typically applied within HRM studies of the intersection between organizational and national cultures, but an important subset of such 'differentiation studies' deals critically with culture management efforts. For instance, Ogbonna and Harris (2015, p. 229) find that in their case organization '…executives' espoused aim of cultural unity was severely undermined by the differential treatment of "stars" within the team subculture and by the huge disparity in earning and other conditions between the team subculture and the administrative subculture'. Relatedly, the differentiation perspective has been used to show how certain groups of society – for example, ethnic minority groups – are disadvantaged within organizational settings (Cockcroft, 2012; Ogbonna, 2019).

Thus, the idea of shared cultural values and assumptions may mask systemic inequalities and unfairness. This is especially prevalent in multinational and/or multicultural settings, as many HR systems are Western-/ethnocentric and do not take different worldviews into account (Jackson, 2002). Acknowledging differentiated national and/or (ethnic) minority subcultures within the organizational context has been an important first step towards better and more sub-culturally sensitive management (Chen & Lin, 2013; Singh et al., 2019). This is central to our case; as a subdivision of the Danish police, the organizational culture of Greenland Police is significantly defined by the relationship between Greenlandic and Danish sub-cultures.

However, assuming that people's norms and values align neatly with their national background (or affiliation with a prevalent social group) merely reproduces cultural stability at the subcultural rather than the organizational level (Martin, 1992). This is much too simple as, for instance, Okabe (2002) shows in a study of the attitudinal differences between Japanese and British managers; while usually are ascribed to national culture, these differences decrease considerably when the managers work in the same country. Thus, national culture is not a stable entity and cannot be used as a single or simple explanatory factor for cultural differences within organizational settings. Instead, a deeper and more nuanced understanding of inter- and intra-cultural dynamics is called for (Ogbonna & Harris, 2015).

2.3 | The ambiguity perspective in Human Resource Management

While the differentiation perspective offers some nuance to the integration perspective's somewhat simplified view of organizational culture, neither perspective acknowledges the inescapable ambiguities of culture. The third perspective, which Martin initially labelled ambiguity, but later referred to as 'fragmentation' (Martin, 1992, 2002), begins from the assumption that organizational culture is inconsistent, multiple and dynamic. The concept of ambiguity is, in itself, ambiguous, which may explain why Martin opted for the alternative label of fragmentation in her later work on the three perspectives. This enables her to discuss how ambiguity is considered across the three perspectives: the integration perspective excludes it, the differentiation perspective channels it outside subcultures and the fragmentation perspective acknowledges ambiguity (Martin, 2002, p. 95).

We are interested in the cross-cutting character of ambiguity, especially as it manifests within and between integration and differentiation. Focussing on ambiguity (and maintaining the term) enables us to attend to the shifting interrelations between organizations and environments as these relate to individual organizational members' multiple and fluid understandings of themselves vis-à-vis the organization. In foregrounding the dynamic interrelations of culture(s) and identity/-ies, we pursue the conceptualizations and applications of cultural ambiguity, as developed within the HRM literature, rather than the understanding of ambiguity that is directly associated with Martin's fragmentation perspective.

As Ogbonna and Whipp (2006) observe, managers' expectations of organizational culture usually fall within the integration category, but what actually happens in organizations is more closely aligned with – and, hence, may be better explained from – the ambiguity perspective. Working from an ambiguity perspective, however, does not exclude integration and differentiation. Rather, as Moore (2021) shows in a study of a multi-national merger, ambiguity may enable different national cultures to become integrative forces in creating new organizational culture(s) (see also, Gerhart & Fang, 2005; Ge & Zhao, 2020).

In sum, the ambiguity perspective recognises that managing culture is not an isolated practice; it is never uniform nor is it ever 'done'. In what follows, we will detail the methodological considerations involved in an organizational analysis that suggests the productive potential of ambiguity within and across cultural integration and subcultural differentiation.

3 | METHODOLOGY

Seeking to advance ambiguity as a productive negotiation of integration and differentiation, we turn to a critical ethnography of Greenland Police. Van Maanen (2011) defines organizational ethnography as the documentation of

participant observations in the field. Critical ethnography requires (self)reflection (Cunliffe, 2003; Gilmore et al., 2015) and includes practical interventions (e.g., Holck, 2018; Yanow, 2012). Such interventions can be both affirmative and subversive, offering solutions to issues raised by organizational members and problematizations of that which the organization takes for granted. In what follows, we detail how we supplement the collection and analysis of ethnographic data with a practical intervention in the field, but first we present the historical and political context for the current organization of Greenland Police.

3.1 | Context of the case study

Greenland Police is defined by the colonial relationship between Greenland and Denmark, which dates back more than six centuries and has only recently begun to shift. In 2008, a majority of the Greenlandic people voted for full autonomy from Denmark. Since then, Greenland has been working towards this goal, but, as of 2022, Denmark still contributes a block grant of more than half of Greenland's national budget. Greenland also continues to be subject to Danish law in the areas of foreign and defence policy and accepts Danish enforcement of certain areas of jurisdiction. For instance, Greenland neither has its own military nor an independent police force. Greenland Police, therefore, is organised as a police district of the Danish Police.

The Greenlandic Chief of Police reports to the Danish Minister of Justice, and the governance of the Greenlandic legal system remains within the purview of the Danish Parliament. The Greenlandic police force is composed of approximately two-thirds 'Greenlandic' police officers and one-third 'Danish' police officers. This distinction is, as we will show analytically, problematic in several respect, but it works as short-hand for a distinction that is readily recognized and reproduced within the organization. A few of the Danish officers have lived in Greenland most of their lives, but the majority are in Greenland on shorter stays, either on 2-year contracts or on four-to 6-month summer assistance assignments.

Since the total population of Greenland is only around 56.000 people, with almost 20.000 living in the capital Nuuk, most police stations, have less than 10 officers employed in total, many only one or two. Adding to this rather isolated situation is the fact that no two cities in Greenland are connected with roads or rails; you can only travel between them by plane, helicopter, boat, dog sled or snow scooter. Furthermore, the official working language of the police force is Danish, but a large part of the Greenlandic population speaks little or no Danish. Conversely, other groups, including many Danish expatriates as well as some Greenlanders with mixed family backgrounds, do not speak Greenlandic. This means that police stations are not only isolated from each other, but that police officers are also often set apart from the communities they serve.

The historical context and present circumstances of Greenland Police are what make this organization a particularly interesting case for the study of negotiations of (integrated) occupational culture among organizational members with different (and differentiated) national backgrounds. Further, as our engagement with the case developed, it also became illustrative of the conceptual as well as practical potential of framing such negotiation in terms of ambiguity.

3.2 | Data collection

Our study of Greenland Police began in February 2015, when the Chief of Police in Greenland granted us access to police stations and encouraged his employees to make themselves available for interviews. This enabled the two first authors, who undertook all empirical research for this paper, to conduct an anthropologically driven data collection with a very open approach to the field. Further, the Chief of Police did not have any expectations nor requests regarding themes, results or the like, but supported our scientific freedom and trusted us to substantiate our findings.

TABLE 1 Overview of empirical material

Observations	Training course in Denmark (6 days, Feb 2015), fieldwork in Greenland (13 days, Aug 2015)
Interviews	With officers working permanently and temporarily in Greenland (13 during fieldwork, 12 before/after)
Interventions	Training course in Denmark (2 days, Feb 2016), leadership seminar in Greenland (3 days, Nov 2016)

Since we are based in Denmark, the fieldwork began with the Danish officers who, because of shortage of Greenlandic officers, are sent to Greenland on shorter or longer assignments. The data collection covered a full circle of deployment; we observed their preparatory training, interviewed a number of Danish officers and their Greenlandic colleagues prior to, during and after their time in Greenland. And we joined them in Greenland for 13 days of participant observations. This fieldwork was documented in approximately 60 pages of notes and 13 recorded interviews, lasting between one and two and a half hours. Before and after the observations, 12 additional interviews with officers all over Greenland were conducted via a satellite link from the main police station in Copenhagen. All interviews were conducted in Danish and translated by the authors.

The following year, we were invited back to the preparatory course to continue our observations, but also to run a workshop, which meant that our initial findings became part of the training for the group of officers going to Greenland in the summer of 2016. In November 2016, the Chief of Police invited us back to Greenland to report on the research and conduct an intervention. The 33 most senior managers of Greenland Police participated in the intervention, which was incorporated as a 1-day element of a week-long leadership meeting. We were invited to observe another full day of this meeting where two representatives from the central HR department of the police force presented a report on the organizational culture of the police (meaning, the entire Danish police). Just as we had done at the preparatory course, we designed our feedback to the leadership group as an intervention based on our ethnographic data. These two interventions are key moments in our research process and central elements of our empirical material. Further, they highlight the practicality of our approach (see Table 1 for an overview of the empirical material).

3.3 | Analytical strategy

The analysis relies on the interviews and observations as well as the intervention data from the leadership seminar and proceeds in two main steps. First, we establish the predominant interpretations of an integrated police culture and differentiated national cultures as these emerged in our initial coding of the interviews and observations and were articulated at the leadership seminar. Second, we turn to seminar participants' negotiation of their relationships with these two cultural dimensions as facilitated by our intervention.

Here, we explicitly introduced Martin's three perspectives. In the subsequent discussion many participants found that the integration and differentiation perspectives could not stand alone in explaining the culture of Greenland Police and, instead, moved towards identifying themselves and the organization with ambiguity. Thus, the participants became actively involved in the analysis, as they reflected upon our initial results, complicating integration and differentiation narratives through their own ambiguous relationships with various sub-cultures and with the organizational whole.

4 | ORGANIZATIONAL CULTURES IN GREENLAND POLICE

We begin the analysis by focussing on integration and differentiation as separate perspectives, then seek to ingrate the two under the auspices of ambiguity in a second analytical round. Thereby, we not only illustrate the analytical pertinence of the multi-dimensional approach but also its practical appeal.

4.1 | Occupational integration and national differentiation

In our preliminary work with Greenland Police, we found an organization that, while clearly integrated around the occupational culture of police work, was profoundly split along fault-lines of differentiated national subcultures. In what follows, we provide brief presentations of these initial findings.

4.1.1 | Integration around occupational purpose

The strong occupational police culture is present at all times, especially in statements by top management. In our interview with one of the top managers, he said:

> We are first and foremost one police force …and it's strategically important that we view ourselves as one.
>
> (Greenlandic Police Manager A)

Another top manager explains his way into the police force:

> I was just a boy when I entered the force, I was 22, so it's always been police, police, police.
>
> (Greenlandic Police Manager B)

With statements like these, our informants are on par with studies of police culture that highlight the unity of the force, emphasising how early socialisation ensures strong integration (e.g., Charman, 2017; Cockroft, 2012). During our observations we also saw evidence of this unified culture on a daily basis. For example, we noticed the way in which the atmosphere changed as soon as officers received an emergency call, went on patrol or otherwise shifted into 'police mode'. No matter what individual officers were occupied with, the shift instantly brought them together as a group.

At the leadership seminar, participants corroborated the unifying force of the police culture, but also mentioned the context of Greenland. When asked to work together in groups to reflect on what unites the organization, many participants brought up organizational values and core tasks, which Greenland Police holds in common with other districts of the Danish police, but one group reported:

> …isolated is maybe not the right word, but in Greenland we are far away from everybody or rather, from the police in Denmark, and we have to stick together and work on the common project.

Somewhat ironically, then, one uniting force of Greenland Police is its differentiation from the organization of which it is part. Further, this split between Denmark and Greenland does not just unite the Greenlandic police force, but is, as we shall see, also a main source of differentiation within it.

4.1.2 | Differentiation through national stereotypes

The Denmark–Greenland differentiation establishes difference along very stereotypical lines of national culture, where the Greenlandic culture is described as primitive and in touch with nature and the Danish as civilised and efficient. Brought into the organizational culture of police work, the stereotypical perceptions of Greenlandic culture translate into stories about a lack of work ethic:

> Both their work ethic and pace are very different to what I am used to in Denmark. Things are much slower here compared to Denmark. So, I had to get used to working in a lower gear and not get annoyed at how slow and inefficient they are.
>
> (Summer assistant A)

Further, cultural differences are often articulated as deficiencies on the part of Greenlanders who are perceived by Danish officers as not having the necessary professional qualifications:

> It's the way reports are written. It's just not detailed enough. It's about having pride in what you do. I mean, it's not like they are not proud of what they do, but it is really not good work, there is just a different perception of standard.
>
> (Summer assistant B)

Conversely, the stereotype of Danish efficiency translates into stories of loud and arrogant control freaks:

> You can recognise a Dane by the fact that they talk loudly and a lot. We Greenlanders talk more quietly together. When two Danish colleagues greet each other, it all becomes very technical, 'where have you served' and such. They try to find something they have in common and then they have a point of departure.
>
> (Greenlandic officer A)

While the Greenlandic culture is placed at a distance from the organizational context, the Danish culture is seen to be better aligned with the professional police culture, but not with the particular context of Greenland. For instance, language is a major issue, as one Greenlandic officer explains:

> We [the Greenlanders] have to translate for them [the Danish officers] all the time, and they don't feel too good about that. Everything they write, comes from our mouth.
>
> (Greenlandic officer B)

The language issue and other questions of local knowledge threaten the competency of Danish officers, but these challenges only add to a highly differentiated organizational culture. Despite identifying with the common category of 'police', individual police officers are placed in stereotyped subcultural categories of 'Danish' or 'Greenlandic', which makes collaboration between them difficult.

The stereotypical representations on which the predominant differentiation is based incur a lack of involvement between the two groups. As one Danish officer, who is permanently stationed in Greenland, explains:

> You can see, when the Danes arrive [in Greenland], they behave just like the foreigners in Denmark. They get together in groups who refer to each other and are only social with other Danes.
>
> (Danish officer A)

This segregation is also enforced from the Greenlandic side, as getting to know people who are only there on short-term contracts can be hard. In the words of a senior Greenlandic officer:

> I've made connections with at least 50 people, Danish officers, some I've become really close with, and then they leave, and you get kind of disappointed that it's the same record being played every summer.

> You use a lot of resources on a person, personally and professionally, and when it's really fun and up and running, then they leave.
>
> (Greenlandic officer D)

We observed differentiation play out physically in many different interactions between Danish and Greenlandic police officers, most specifically in the lunchrooms of all the stations we visited. Here is one representative example from our field notes:

> When we get back from the patrol, it's lunch time. We [the two researchers] sit down and people who enter the room stand around restlessly. We ask if we've taken someone's seat, and they say that there isn't a fixed seating, they just know where they usually sit. We move to seats that we sense are not 'taken' – at the centre. Then the Greenlandic officers sit down at one end of the table, and the Danish ones at the other.

What is particularly interesting about this scene is that it was literally played back to us during the intervention. We had asked the participants to create and perform a role play of their organizational culture and one group chose this exact scenario – placing Greenlandic officers at one end of the table at which they sat mumbling quietly about fishing and hunting while the Danish officers at the other end talked loudly, bragging about their professional conquests. The play was clearly recognisable to all participants who laughed and cheered at the performance. As the laughter died down, however, the scene also gave pause for reflection.

4.1.3 | Clashes between integration and differentiation

Bringing together the accounts of feeling part of an integrated occupational culture while also belonging to differentiated national cultures, we predominantly found expressions of deep frustration; of longing to be but failing to become recognized as 'both'; for example, both a competent police officer and a Greenlander or both a Danish officer on a short-term contract and someone the Greenlanders on the force would care to spend time with and invest in emotionally. In an interview, one Greenlandic officer expressed the frustration poignantly:

> I am sick and tired of the stereotypes and all their Greenland jokes: that we are drunk all the time, lazy and all that. When they say these things, I just sit there and think 'shut up'!
>
> (Greenlandic officer E)

Our interviews and observations predominantly established the relationship between occupational integration and national differentiation as conflicted shifts between the two dimensions. That is, Greenlanders' experiences of 'truly belonging' to the occupational culture might be briefly sustained, but then ruptured by the (re-)introduction of subcultural differentiation. Similarly, Danish officers' feelings of being accepted in the Greenlandic context would constantly be challenged by new experiences of not 'fitting in'. For instance, one Greenlandic officer shared a story of a Danish colleague who he characterised as 'more Greenlandic than me', but also as someone everybody noticed:

> A Dane who runs around with a dog sled… not many do that.
>
> (Greenlandic officer F)

In sum, relations between integration and differentiation are experienced as clashes, with organizational members being unable to sustain different positions simultaneously, but instead shifting abruptly between positions of integration and differentiation. While this may indicate that the occupational culture of policing is not as integrated as it appears, differentiation is, in this case, predominantly a power play. The constant alignment of 'police' with

'Danish' creates a double bind for anyone who wishes to be recognized as 'Greenlandic police', but it also makes it difficult for Danish officers to become recognized as anything but their profession within the Greenlandic context. It simply is very difficult to be both.

4.2 | Introducing cultural ambiguity

Hoping to use our findings to provide Greenland Police with possibilities to work constructively with its cultural tensions, we were excited to be invited to the most senior officers' leadership seminar. As mentioned, we introduced Martin's three perspectives during the seminar, seeking to provide the officers with a new vocabulary for speaking about organizational culture. Following our presentation, the participants were divided into groups of four or five officers who discussed a selection of quotes and notes from our interviews and observations, including those analysed above. This led to lively debate about how a deeply differentiated culture obstructs more nuanced, inclusive and productive ways of perceiving each other and collaborating on a daily basis. The following analysis is based on that debate and the quotes stem from the groups' reports – and, therefore, are not attributed to individual respondents.

4.2.1 | Breaking down subcultural stereotypes

When the officers began to unpack their experiences of cultural differentiation, it became increasingly difficult for them to uphold the notion of two separate, overarching subcultures, as plural and complex cross-cutting alliances were articulated and became increasingly salient. The manager from one of the larger stations, for instance, introduced a differentiation within Greenlandic culture:

> I think it is interesting to talk about culture and subculture, when you consider the Danish and Greenlandic culture. But I get a lot of assistants from villages on the coast. It makes me think about how there are a lot of different cultures. Even though they are Greenlandic officers, it is another culture, and even though we are from the same country there are still a lot of things we need to explain and introduce to them.

As a result of the cultural and geographical differences between people in Greenland, the culture of people from Nuuk (the capital), this participant went on to say, holds more similarities with Danish culture than with 'village culture', which he thought characterised most of the rest of the country.

The identification of Nuuk with Danish culture disturbed the otherwise fixed Denmark–Greenland differentiation and caused some participants to express resistance to the stereotypes. For example, when a participant was asked what he wanted to show a guest to exemplify the culture he identifies with, he promptly answered:

> I would show you what I eat, what is in my freezer. I have pork, beef and frozen vegetables. [By doing that] I would try to remove some of the stereotypes, which have been placed on us.

Identifying as Greenlandic, but displaying what he frames as Danish eating habits, the officer tries to counter stereotypical images – not only of what Greenlanders eat, but of who they are. Here, the participant upholds the binary division (represented by Danish vs. Greenlandic food), but he also opens up the possibility of identifying as Greenlandic while having Danish eating habits. Thus, he actively resists Greenlandic stereotypes and blurs the cultural divide. Other Greenlandic officers expressed resistance to the stereotypes by disavowing activities like hiking and hunting, not displaying care for nature and/or not drinking alcohol. In these ways, the (self-identified) Greenlandic officers at the seminar actively built anti-stereotypes, but still clearly and proudly identified as Greenlandic.

This first step of countering and dismantling stereotypes enabled multiple and fluid definitions of and identifications with Greenlandic culture, which promoted further negotiations of identification with the cultures of 'Greenland' and 'police'.

During the seminar, the simple differentiation along the line of national culture was also complicated by the emergence of other subcultures. In the following quote, one group reports back from a discussion on subcultures:

> There are a lot of subcultures both across leadership levels, organizational levels, geography and many other things. And we are all part of many different subcultures: you are a part of your family, colleagues, friends, you have a job, a nationality and many other things. And this acknowledgement gave us a better idea of how this shapes us and how we react in different social relations.

To the officers, awareness of belonging to several subcultures highlights how they share different commonalities with different people; this was not something they had considered previously, and they were amused by the idea of finding 'alternative communities'. For example, the subculture of 'smokers' came up time and again and seemed to override otherwise strong cultural distinctions, whether this was the Greenland/Denmark differentiation or distinctions along professional lines. In fact, this was a recurrent scene in our observations, as police officers, lawyers and administrative staff would talk freely when sharing a cigarette break, exemplifying Ogbonna and Harris' (2002) conceptualization of organizational cultures as defined by multiple differentiations, which interact dynamically.

4.2.2 | Identifying with ambiguity

The discussion of multiple, fragmented and fluid identities became a pivotal event at the leadership seminar; as many participants spoke up to identify themselves as 'hybrids', they acknowledged, accepted and even began to accentuate ambiguities within their personal identities. Due to a long history of relationships between Greenlanders and Northern Europeans, a large part of Greenland's population has 'mixed' cultural/racial backgrounds; however, it was not until we explicitly introduced the vocabulary of ambiguity that the officers linked this fact to themselves and their cultural positions within Greenland Police. Once the link was made, however, it turned out that most of the officers identified ambiguously with the available subcultural positions, problematising the differentiation between them.

Identification with a position of in-betweenness rather than belonging firmly to one culture was grounded in various factors like marriage and time spent in Greenland. Yet the most vividly discussed ambiguous experience was that of racial hybridity, which was expressed as a paradoxical position, both enhancing and limiting access to cultural resources. One participant opened up this discussion by sharing his own experience:

> I am half Danish and half Greenlandic. I speak both Danish and Greenlandic almost fluently. I understand Danish and Greenlandic humour – and the Greenlandic mindset. We have several [people of mixed race] in our community who do not speak Greenlandic; they definitely face a cultural dilemma, as they do not understand the everyday jokes in Greenlandic. You miss a lot when you are not 100% into the Greenlandic way of life, and you have to be able to understand the Danish mindset.

As the quote indicates, the position of cultural/racial hybridity is inherently ambiguous, creating multiple relations of belonging while obstructing full inclusion in any one context.

From the position of 'in-between', it is particularly difficult to know what it would take to fit in – and to be certain that one has succeeded in this regard. One may learn the language or come to 'know the mindset', but

other factors remain beyond one's control. Skin colour is one such factor, as another participant succinctly points out:

> I am what I call a bastard [i.e., mixed race; the term is not as loaded in Danish as it is in English]; I am mixed Greenlandic and Danish. And I have always all through my childhood been told: 'You have more light skin than us, so you are more Danish than us.' They tried to exclude me, push me out. But I have always felt: 'You know what, I am Greenlandic.' I still feel that, and when I speak Greenlandic, I make sure to have and use a broader vocabulary than others. I've made an effort to be better at speaking Greenlandic [than other Greenlanders].

Thus, being of mixed race may cause a feeling of exclusion from the Greenlandic society. However, ambiguously positioned officers are not entirely included in the Danish subculture either as a third 'racial hybrid' explained:

> I am so lucky – or unfortunate – to have a foot in each camp. So, Danish officers quite often say to me, 'You think Danish', and then they put me into the 'Danish box'. But I am not completely there, I have become their jester, and then, 'Presto!' – they have a Greenlandic friend.

Having a 'foot in each camp', makes this officer more 'accessible' to or easily befriended by Danish officers. However, playing the role of 'the Greenlandic friend' positions the mixed-race officer ambiguously in relation to Danish *and* Greenlandic colleagues. To the former, he is an outsider who is inside, whereas the latter perceive him as an insider who is outside.

At the leadership seminar, statements like those quoted here inspired others to engage in similar acts of sharing, leading to a general discussion of the frustrations involved in belonging to 'both camps'. This, in turn, brought about reflections on the potentially positive outcomes of such ambiguity. Here, a fourth self-identified 'hybrid' adds how 'having a foot' in each culture could be used to build bridges between Danish and Greenlandic officers:

> Both [officer's name] and I are hybrids and have one foot in Denmark, one foot in Greenland. And we need to be better at being transmitters. A Danish person expects an invitation before he goes anywhere, whereas talking about something would be an invitation to a Greenlandic person. So, if [officer] and I sit at lunch and talk about going to my secret fishing place at the weekend, which we often do, a Danish person would feel he was intruding, if he asked if he could join. But our [Greenlanders'] expectation is that if someone wants to go, they should just say so. Because we have plenty of space and everyone is welcome. But the new Danish colleague probably sits there with envy and really wants to join, but he would never say anything.

In the subsequent discussion several other officers (re-)articulated connectivity across languages and cultural differences as a positive resource. One said:

> We have a role in many different subcultures, so they don't make sense as closed spaces. And they influence each other dynamically.

And, offering a succinct summary of what had been shared, another participant observed:

> Subcultures and one's roles in them influence each other; they are more fluid than we think.

As such, the discussion resulted, first, in recognition that most of the officers in one way or another identified ambiguously with the two dominant national subcultures, leading them to reconsider their relationship with the integrated occupational culture of policing and the corporate culture of the Danish police. Second, this initial recognition

led participants to become aware of several other subcultural groupings and to consider how they were able to shift between them. Third, they articulated the fluidity of their own identities and used it as a starting point for negotiating the ambiguities of the organizational culture; neither is ever fixed but is always in the mode of becoming. In sum, embracing ambiguity opened up new avenues of relating to each other and of collaboratively reconstructing the organizational culture.

4.2.3 | Ambiguous cultural relations

As the top managers of Greenland Police engaged actively with their own ambiguous positions and became able to negotiate the tenacious relationships between an integrated occupational culture and differentiated national subcultures, ambiguity became available to them as a resource for organizational leadership and, hence, for organizational change. Most notably, the officers created meeting grounds for integration and differentiation; their ambiguous positions could neither be understood nor maintained without the more stable categories (of occupational culture and national subcultures), but ambiguity also opened these categories up from within and in relation to each other. Put simply, it became possible to identify as 'Greenlandic' and 'police' in new and nonexclusive ways just as 'Greenlandic' values and behaviours became available to 'Danish' officers.

This enhanced the participants' practical ability to work with the organizational culture of Greenland Police, and the experience furthered our understanding of ambiguity as a theoretical concept. Thus, ambiguity emerges from and is articulated in negotiations of the relations between integrated and differentiated identities in organizational contexts – and enables such cultural identities to co-exist, at the individual as well as the organizational levels of analysis. Ambiguity enables individual organizational members to bridge different identities, making it possible for them to envision a new organizational whole that not only tolerates but actively supports the unique positions of all its members.

5 | CONCLUSION AND IMPLICATIONS

Working with the case of Greenland Police, we have illustrated the benefits of including the dimension of ambiguity in the study and practice of HRM. Understanding organizational culture only through integration and/or differentiation is limited in the sense that both of these perspectives present partial and overly stabilised explanations that cannot account for indeterminate cultural relations (Martin, 1987; Murphy & Davey, 2002; Wankhade & Patniak, 2020). Whereas applying the differentiation perspective can include integration as part of a cultural analysis, only the ambiguity perspective can encompass all three dimensions. This means that conducting cultural analyses that account for ambiguity (rather than attempting to eradicate it) is paramount for the advancement of HRM studies of organizational culture, but it also means that such analyses must not forget about integration and differentiation. Like Moore (2021), our analysis clearly shows how ambiguity does not dissolve the tensions between integration and differentiation, but, instead, makes these tensions productive for the inclusion of different identity positions within one organizational culture. Thus, adding to Moore's (2021) conclusions, we show how the reconstructive potential of ambiguity can lead to renewed cultural integration – a more reflexive, dynamic and, therefore, unstable integration, but also a more hospitable and attractive integration on which practitioners may base the development of organizational cultures – and subcultures – that are as strong as they claim to be. And, significantly, that can accommodate both integration and differentiation at one and the same time – and in temporally prolonged relations.

As our case indicates, introducing cultural ambiguity to HRM entails closer integration of analysis and practice, since scholars and practitioners join forces to not only deconstruct existing cultural myths of stability, but also identify the ambiguities upon which cultural reconstruction may be most productively based. Thus, we do not mean to discredit HRM studies that are conducted from a pure integration or differentiation perspective, but to advance

studies of cultural ambiguity that integrate insights from the other two analytical dimensions (e.g., Lam, 2010; Murphy & Davey, 2002; Wankhade & Patniak, 2020). Ultimately, our aim is not to promote ambiguity alone, but to forward a multidimensional framework that enhances the relationality of Martin's (1992) three perspectives. As such, we offer four distinct, but interrelated contributions:

First, we contribute conceptually to the use of Martin's three perspectives within HRM research on organizational culture by unpacking how the three perspectives relate to each other. Thus, integration studies do not usually acknowledge differences and ambiguities, and differentiation studies tend to focus on differences between integrated subcultures. Conversely, ambiguity studies are prone to neglect integration as well as differentiation, focussing, instead, on multifarious and fleeting dynamics. Our framework, to the contrary, takes seriously Martin's admonition to use all three perspectives. To this end, we revert to the label of ambiguity for the third perspective (which Martin calls fragmentation in her later work) and show how ambiguity both exists within and between integration and differentiation. Thus, we argue, ambiguity is not an independent category, but one that is negotiated in relation to the other two, thereby opening up integration and differentiation to ambiguity. The consequence is that organizational cultures are never fully stable nor entirely malleable but are repeated in and through negotiations of their members' (sub-)cultural positions (occupational, national, etc.) inside and outside of the organization.

Second, we join Moore (2021), Ogbonna and Harris (2015) and Wankhade and Patniak (2020) in suggesting a methodological shift towards more intervention-based, qualitative research of culture, as ambiguity between different people's statements, ambiguity within individual accounts and/or ambiguity between the statements and actions of interviewees can best be observed through in-depth study. Such ambiguity is, as we have shown, likely to appear as frustration if organizational members are unable to articulate and/or inhabit ambiguities. Interventions, like the one presented in this article, enable practitioners and researchers to collaboratively explore the dynamics and fluidities of culture in order to offer alternatives to national, racial, gender-based, professional, generational or classed stereotypes that often hinder organizational integration in contexts that are defined by multiple (sub-)cultures (see also Kamenou, 2007; Ogbonna, 2019). In our case, the viable alternative took the form of a shift from exclusionary categories towards recognition of embodied experiences of multiple belongings across the divides of organizational culture and subculture as well as between different subcultural positions. Simply put, understanding how the same person may, variously, belong to the occupational culture of policing, the organizational culture of the police as well as to various subcultures (e.g., Danish, smoker, hunter) not only opens up the organization to cultural multiplicity, but also complicates easy alignments between individual and collective positions. This, in turn, begins the process of nuancing cultural stereotypes (making room for 'Danish' hunters and 'Greenlandic' police officers) and strengthening hybrid positions ('Greenlandic Danes' and 'Danish Greenlanders'). Whether this might, eventually, dissolve national stereotypes, remains an open question, but one towards which we are somewhat pessimistically inclined, since the colonial history, with its ingrained asymmetries and hierarchies, continues to shape the relationship between Greenland and Denmark, generally, and between members of Greenland Police, more specifically.

The third contribution of our multi-dimensional analysis is enhanced attention to context, which also implies that our work does not offer generalisable substantial insights. Rather, we have developed a conceptual starting point for conducting the analysis anew in each new organizational context. Police organizations are typically defined by important differentiations between occupations (Charman, 2017; Cockroft, 2012), but in our case these are less relevance, because the small stations and huge distances of Greenland mean that police officers are often the only present professionals just as the national differentiation often overrides the occupational one. Hence, Greenlandic and Danish police officers are nationally differentiated before they are occupationally integrated and, conversely, Danish police officers and Danish lawyers who work in Greenland Police often come to identify with each other.

Further, the organization of Greenland Police is integrated in and through its differentiation from the Danish police force, despite its nominal integration as a part of this larger organization. But the Danish-Greenlandic dichotomy was productively complicated when key organizational members self-identified as cultural hybrids and spoke up about the ways in which they embody and experience ambiguity. This moment became pivotal to harnessing the

multidimensional framework for the production of a stronger organizational culture in our particular case. Other organizations, surely, will experience other tensions and must encounter different means of making them productive. Thus, our case shows us that there are no short-cuts to the insights that the leading officers of Greenland Police developed at the seminar. To become able to negotiate ambiguity meaningfully, every organization must identify its own ambiguous potentials. With the multi-dimensional framework along with the interventionist approach we offer a means of doing so; it is a learning process rather than a substantial solution.

Our fourth and final contribution begins from the sobering observation that bringing in ambiguity is not a quick fix to the challenges that HRM scholars experience in defining and mobilising a meaningful concept of organizational culture. Rather, embracing ambiguity necessitates a difficult move from a basic conception of organizational stability to a much more dynamic perception of culture (Wang et al., 2009). Indeed, a perception of the organizational culture, its context as well as its members as always-in-the-making, will fundamentally change the self-perceived role of HRM in terms of working with culture.

Reorientation towards the ambiguities of cultural change not only demands reconsideration of the integration perspective on culture but also calls the differentiation perspective into question. What we found in the seminar with the leaders of Greenland Police, however, is that introducing ambiguity does not make integration and differentiation disappear. Rather, it offers productive relations between the two, opening up spaces for being 'different together'. Beginning from this (re-)conceptualization of cultural ambiguity as the dynamic relationality between integrated *and* differentiated organizational members, future intervention studies could enhance the conceptual understanding of – and practical ability to – neither viewing oneself as (part of) a fixed entity nor assuming such stability on the part of others. This will enable organizational cultures to grow stronger in and through their negotiations of ambiguity.

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CONFLICT OF INTEREST

The authors have no conflict of interest to report.

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Research data are not shared.

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RESEARCH ARTICLE

A needs–supplies fit perspective on employee perceptions of HR practices and their relationship with employee outcomes

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Abstract

This study explores the employees' views on the effectiveness of HR practices for their job performance, drawing from a needs–supplies (N–S) fit approach. Findings based on 465 employees show a positive association between the N–S fit of present HR practices (i.e., employees perceiving supplied practices as needed) and engagement and proactive behaviour. The N–S fit of absent HR practices (i.e., employees indicating they do not need the non-offered practices) is positively associated with engagement and negatively with proactive behaviour. Additionally, proactive behaviour and engagement are higher when employees experience present practices as effective and absent practices as irrelevant for their functioning. Also, these outcomes are higher when employees experience supplied practices as effective while missing essential practices, than when the supplied practices are ineffective and absent practices are irrelevant. Organisations can use this approach to revisit HR practices that waste organizational resources and introduce HR practices that improve employee functioning.

Abbreviations: CFA, confirmatory factor analysis; CFI, comparative fit index; D-A fit, demands-abilities fit; HR, human resource; HRM, human resource management; N–S fit, needs–supplies fit; NSFE-A, need supplies fit of absent practices; NSFE-P, need supplies fit of present practices; PE-fit, person-environment fit; RMSEA, root mean square error of approximation; SHRM, strategic human resource management; SRMR, standardized root mean square redidual; TLI, Tucker-Lewis index; WLSMV, weighted least squares mean and variance.

KEYWORDS
effectiveness of HR practices, employee perceptions of HR practices, engagement, needs–supplies fit, proactive work behaviour

Practitioner notes

What is currently known about the subject?

- Employees as key recipients of HR practices are seen as an important source of information regarding the contribution of HR practices to employee outcomes.
- There is evidence for the positive relationship between HRM and perceived performance from an (HR) management perspective. However, evidence on how employees perceive the effectiveness of present and absent HR practices for their work performance is currently lacking in SHRM literature.

What this paper adds?

- By adopting a needs–supplies fit perspective on employee perceptions of HR practices, results show that employee engagement is higher when employees perceive supplied practices as needed and indicate that they do not need those that are not supplied.
- Proactive work behaviour increases when employees perceive supplied practices as helping them work effectively but also when employees indicate they miss practices they would have needed to perform better.
- Proactive work behaviour and engagement are higher when employees experience present practices as effective while missing essential practices than when the present practices are ineffective and absent practices are perceived as irrelevant.

Implications for practitioners

- Organisations and employees should consider the extent to which employees perceive existing and missing HR practices as needed to help them work effectively.
- Rather than aiming for a large number of available HR practices, HR professionals should strive for making the best possible use of HR practices by considering whether practices that are currently offered lack added value for employees, as well as by considering adding practices where this would enable employees to function better.

1 | INTRODUCTION

The underlying premise in HRM research is that implemented HR practices are perceived by employees so that they contribute to individual job performance and, in turn, organizational performance (see e.g., Den Hartog et al., 2013; Liao et al., 2009). However, even though studies have found a positive relationship between perceptions of available HR practices and job performance, we do not know to what extent employees, as key recipients, and therefore crucial assessors of HR practices, perceive these as effective for their functioning (Edgar & Geare, 2014). This is important to investigate, as scholars have argued that if HR practices are expected to contribute to improved individual performance, it is essential that the HR practices match the employee's personal goals to work effectively (Nishii & Wright, 2008). We herewith join other authors stating that a universalistic approach -assuming that HR practices are experienced as effective by all employees- is not likely, but rather that the perceived effectiveness of present and absent HR practices depends on the fit with the individual worker context to affect employee outcomes (Kinnie

et al., 2005). Therefore, this study explores employees' views on the effectiveness of present and absent HR practices for their job performance. To this end, we address three research gaps in more detail.

First, studies to date which have included evaluative measures of employee perceptions of HR practices have mainly focussed on attitudinal measures of perceptions of HR practices, such as the perceived satisfaction with, fairness of, or meaningfulness of the HR practices in place (e.g., Heffernan & Dundon, 2016; Kinnie et al., 2005). As such, our understanding of non-attitudinal evaluative measures of employee perceptions of HR practices and how they impact employee outcomes is still limited. More specifically, it is essential to ask employees about the effective contribution of HR practices to their job performance (Van Beurden et al., 2020). The few studies that measured effectiveness perceptions of HR practices in their research are unclear as to what outcome criterion employees are asked to evaluate the effectiveness of the HR practices for (e.g., their performance, well-being, justice etc.) (see e.g., Chang, 2005). This state of research is surprising, given the large number of studies that have examined the effectiveness of HR practices in terms of organizational performance from the perspective of other informants than employees, such as (HR) managers (Guest & Conway, 2011). We, therefore, contribute to the literature on evaluative employee perceptions of HR practices by explicitly focussing on the effectiveness perceptions of HR practices for employee's own functioning (Van Beurden et al., 2020).

The second research gap concerns that most existing studies examining a particular conceptualisation of employee perceptions of HR practices lack a clear theoretical perspective in which the employee perceptions of HR practices construct is anchored (Edgar & Geare, 2014; Van Beurden et al., 2020). More specifically, studies tend to focus on the relationship between perceptions of HR practices and employee outcomes without clearly explaining how a theoretical perspective can elucidate the construct of employee perceptions of HR practices. Consistent with the argument of Nishii and Wright that "individuals perceive HR practices through different lenses and make varying conclusions about the extent to which the practices satisfy their needs" (p. 13), and with the idea that HR practices are sets of organizational supplies (Peccei et al., 2013), we rely on a needs–supplies (N–S) fit perspective (Edwards, 1991). Specifically, we examine the attitudinal and behavioural consequences of perceived fit between present and absent HR practices and the needs that employees have concerning functioning effectively at work. In addition, we examine the extent of (in)congruence in the fit between employees' needs to function effectively and organizational supplies in terms of HR practices (Kristof-Brown et al., 2005).

Third, building on the theoretical ideas from the N–S fit perspective, we propose that the positive effect of present HR practices on job performance (see e.g., Den Hartog et al., 2013; Liao et al., 2009) is more favourable if employees perceive the present HR practices as contributing to functioning well at work. In addition, we propose that the negative effect of absent HR practices on job performance is less negative if the absent HR practices are not missed to function well (Van Vianen, 2018). By consulting the individual worker on how effective present *and* absent HR practices are perceived in terms of facilitating or hindering employees' work performance (Van Beurden et al., 2020), we aim to provide new insights about (a) how there might be a waste of organizational resources via ineffective HR practices and (b) how the absence of valuable HR practices may have prohibited better functioning at work. We do this by studying two indicators that are considered highly relevant in today's work context, that is, work engagement and proactive behaviour, and that have been shown to have an important impact on organizational performance in previous research (Parker & Bindl, 2016; Van De Voorde et al., 2012).

1.1 | A needs–supplies fit perspective on employee perceptions of HR practices

The starting point of our study is the employment relationship (Tsui et al., 1997), that is, the employer's expectations about specific contributions from employees (work performance) and the inducements (HR practices) that the employer offers to affect such desired contributions. Following recent attention to the idea that individuals experience HR practices through different lenses and therefore evaluate HR practices differently, depending on the extent to which the practices satisfy the individual's needs (Lepak & Boswell, 2012; Nishii & Wright, 2008), we propose

to build on insights from the N–S fit perspective (Edwards, 1991) to better understand the construct of employee perceptions of HR practices.

N–S fit can be defined as "the comparison between the psychological needs (i.e., desires, values, goals) of the person and the environmental supplies that serve as a reward for the needs" (Edwards et al., 2006, p. 804). Different types of fit are distinguished based on whether attributes are present or absent at work and how they relate to employees' personal needs (Van Vianen, 2018). Thus, drawing from the N–S fit approach, we distinguish between (1) the extent to which employees perceive present HR practices as effective for their functioning and (2) the extent to which employees perceive absent HR practices as not missed for their functioning at work (Idson et al., 2000). In addition, we use a molar approach, that is, a direct measure of need-supply fulfilment, by focussing on the extent to which employees evaluate the HR practices as fitting with their need to work effectively (Cable & DeRue, 2002; Edwards et al., 2006). We focus on this type of measure as previous studies have shown that a molar approach captures the most proximal predictors of individual outcomes (Kristof-Brown et al., 2005).

More precisely, we consider the extent to which employees experience the supplied HR practices as sufficient and necessary for their performance, that is, the extent to which there is a fit or match between the HR practices supplied by the organization and the employees' need to work effectively. The first part of this equation (are practices offered necessary?) aims to ensure that existing practices do not waste organizational resources (including employees' time and energy) and will be referred to as the N–S fit for the effectiveness of present practices (hereafter NSFE-P). The latter part (are practices offered sufficient?) aims to ensure that the organization is not missing out on practices that would have been useful or beneficial for employees' functioning at work. This will be referred to as the N–S fit for the effectiveness of absent practices (hereafter NSFE-A). For example, for NSFE-P, consider a firm where supervisors provide regular performance reviews. For employees who believe such reviews contribute to their work performance (i.e., they are necessary to work effectively), the NSFE-P will be high. For employees who believe such reviews make no such contribution (i.e., they are unnecessary), the NSFE-P will be low. Now, assume a firm where supervisors do not conduct periodic performance reviews. For employees who believe such reviews would improve their performance, the NSFE-A will be low (i.e., the employee's need is not being met, and the firm's provision is insufficient). For employees who believe such reviews would not contribute to their performance, the NSFE-A will be high (i.e., the employee evaluates the performance review practice as not essential for their functioning, it is not missed by them).

In our study, we include a set of HR practices that can be seen as organizational supplies, that employees can relate to their functioning, and that is most often studied in the SHRM literature (Boselie et al., 2005): that is, practices in the realms of employee training and (career) development, performance management, job design, participation, communication/information sharing, and rewards (Boon et al., 2011). We excluded recruitment and selection practices from our study, as these focus more on human capital than on employee experiences as a path towards performance improvement and are mainly functional for the organization and/or team level (Wang et al., 2008). In addition, employees are typically not (all) involved in recruitment and selection in their team on a routine basis. They are therefore unlikely to be able to adequately attribute their individual functioning to such HR practices (Den Hartog et al., 2013).

We examine two potential outcomes of the effectiveness of present and absent HR practices relevant in the context of individual functioning and crucial for organizational success (Parker & Bindl, 2016; Van De Voorde et al., 2016). Proactive work behaviour is defined as "self-directed action to anticipate or initiate change in the work system or work roles" (Griffin et al., 2007, p. 329). It is an essential indicator of job performance in today's context of an increasingly complex and uncertain workplace, pressure for innovation, and changing career structures (Parker & Bindl, 2016). Work engagement is an active form of well-being characterised by vigour, dedication, and absorption at work (Schaufeli et al., 2006). This construct is positively related to job performance and predicts job performance over and above other job attitudes such as job satisfaction, organizational commitment, and job involvement (Christian et al., 2011).

1.2 | The relationship between NSFE-P and NSFE-A and employee outcomes

To explain how NSFE-A and NSFE-P result in employee outcomes, we use the guiding principles associated with the person-environment fit literature, and the sub stream within that literature on needs–supplies fit. These guiding principles are that (1) fit is a more powerful predictor of individual outcomes than the person (e.g., employees' needs) or the environment alone (e.g., supplies), (2) outcomes are most optimal when personal attributes and environmental attributes are congruent regardless of the level of the attributes, and (3) discrepancies or misfits between personal and (absent) environmental attributes decrease positive outcomes regardless of the direction of the mismatch (Van Vianen, 2018). Applying these principles, we expect that effectiveness perceptions of the present and absent HR practices combined are a more powerful predictor of work engagement and proactive work behaviour than merely asking employees to check the presence of HR practices and that these outcomes are higher when the present HR practices are perceived as contributing to employees' functioning and the absent HR practices are not missed to function well, compared to when present HR practices lack in contribution to performance and absent practices are missed to function well (Cable & DeRue, 2002; Edwards et al., 2006).

Empirical evidence has found support for the guiding principles associated with needs–supplies fit and employee outcomes. In particular, research has shown that fit between the person and the environment is indeed a more powerful predictor than the person or environment alone (Kristof-Brown et al., 2005). Second, studies have confirmed that a fit between the employees' needs and the supplies offered by the organization is related to more favourable outcomes than a misfit between needs and supplies (Cao & Hamori, 2020). That is, employees, show higher levels of employee outcomes such as engagement at work when they perceive a fit between the supplies provided by the organization and their own needs (e.g., Edwards et al., 2006; Travaglianti et al., 2016; Verquer et al., 2003; Vogel et al., 2020). In addition, studies focussing on specific work characteristics such as the N–S fit of autonomy (as part of job design practices) have shown a positive impact on proactive work behaviour (Yu & Davis, 2016). Finally, research has shown that absent attributes at work that are perceived as needed or preferred are negatively related to employee outcomes (Idson et al., 2000).

In sum, studies have argued that a high fit between present environmental attributes and employees' needs results in higher employee outcomes compared to a low fit and that a high fit between absent environmental characteristics that employees do not perceive as needed results in more positive employee outcomes compared to absent environmental attributes that employees perceive as needed (De Goede et al., 2013; Idson et al., 2000; Van Vianen, 2018). Following this line of reasoning, we argue that a high NSFE-P—that is, a perception that all organizational supplies are needed to work effectively—will be associated with higher proactive work behaviour and employee work engagement, compared to a low NSFE-P (a sense that some supplies are not needed). Furthermore, we hypothesise that a high NSFE-A (where employees feel that the practices that are not supplied are not needed) will be associated with higher employee engagement and proactive work behaviour, compared to a low NSFE-A (where practices are perceived as useful for functioning well but are not supplied) (Kristof-Brown et al., 2005). Formally, we propose:

Hypothesis 1: Employee perceptions of the NSFE-P are positively associated with proactive work behaviour (1a) and employee engagement (1b).

Hypothesis 2: Employee perceptions of the NSFE-A are positively associated with proactive work behaviour (2a) and employee engagement (2b).

1.3 | Congruence and incongruence of NSFE-P and NSFE-A in relation to employee outcomes

In case it does matter that a firm's HR practices are not entirely necessary and/or sufficient, the next question becomes which has the more significant detrimental impact—the waste of time and other supplies because of

superfluous, unnecessary practices; or the absence of valuable practices that would have supported better performance? We align with P-E fit literature arguing that the work environment should be explored in terms of both the NSFE-P and NSFE-A simultaneously, for which we suggest assessing combinations of employee perceptions of HR practices (HR practices seen as both necessary and sufficient) (Idson et al., 2000; Van Vianen, 2018). Following the P-E fit literature, we explore, next to considering the effects of NSFE-P and NSFE-A directly, whether concurrent high or low scores on both types of fit impact employee outcomes. In addition, we explore the extent to which employee outcomes are affected by situations in which the score on one of the fits is higher than the score on the other fit: NSFE-P > NSFE-A, or NSFE-P < NSFE-A (Yang et al., 2008).

We consider first the two extreme congruence conditions (high vs. low). Drawing from the N–S fit approach, we first argue that a high N–S fit for both present and absent HR practices will lead to better outcomes than a low fit for both types (Kristof-Brown et al., 2005). More specifically, where the N–S fit is high for both present and absent practices, existing practices are seen as both necessary and sufficient. In this case, employees who feel that their needs to work effectively are fully met by the HR practices supplied by the organization, and herewith do not miss out on any HR practices, are especially likely to reciprocate with favourable attitudes and behaviours towards the organization (Verquer et al., 2003).

Prior research has shown positive outcomes for a high N–S fit in terms of work characteristics on proactive work behaviour (Yu & Davis, 2016) and work engagement (Travaglianti et al., 2016). Therefore we also expect to find positive outcomes for high NSFE-P and NSFE-A. In the alternative case, when an employee experiences low N–S fit for both sets of practices (offered practices are neither wholly necessary nor sufficient and practices not offered would have been considered an improvement), employees feel that they are not receiving the support they need to function well. At the same time, they are also asked to waste time and energy on unnecessary activities. We expect reduced work engagement and proactive work behaviour in this case, as misfit occurs for both N–S fits. Based on the preceding, we propose:

Hypothesis 3: Employee perceptions of congruence between the NSFE-P and NSFE-A are associated with higher (lower) proactive work behaviour (3a) and work engagement (3b), when NSFE-P and NSFE-A are high rather than low (low rather than high).

We now consider incongruence between NSFE-P and NSFE-A and its relationship with employee outcomes. Incongruence can exist when NSFE-P is high, that is, when employees feel that their needs to work effectively are met by the HR practices supplied by the organization, but the NSFE-A is low, that is, they are not receiving the critical HR practice they need to function well. On the opposite, NSFE-P can be perceived as low, that is, employees are asked to spend time and energy on unnecessary practices, but the NSFE-A is high, that is, employees perceive they do not miss out on any HR practices. In both situations, a misfit occurs for only one of the two types of N–S fit of HR practices perceptions (Edwards, 1991).

From the SHRM literature, we know that organisations where employees perceive that the organization offers more HR practices to them (i.e., invest in the employment relationship) outperform organisations where employees do not perceive much HRM investment (Den Hartog et al., 2013; Liao et al., 2009). Whereas more investment is likely accompanied by better employee outcomes, this does not tell the full story. More specifically, prior N–S fit research argues that it is important to differentiate between the (mis)fit of personal values with present and absent attributes at work (Idson et al., 2000; Van Vianen, 2018). Empirical evidence shows that employee outcomes are higher when employees encounter present attributes they do not prefer at work, than when employees with a need for organizational attributes do not receive these from their organization (Van Vianen, 2018). Extrapolating this to our study, we expect that employees will exhibit higher engagement and proactive work behaviour when the NSFE-P is higher than NSFE-A, meaning that existing practices are all useful but are not sufficient, compared to the opposite case, where nothing is missing but employees must waste time and energy on superfluous activities.

Hypothesis 4: Employee perceptions of incongruence between the NSFE-P and NSFE-A are associated with higher (lower) proactive work behaviour (4a) and engagement (4b), when the NSFE-P is higher (lower) than the NSFE-A.

2 | METHOD

2.1 | Sample and procedure

This study used a quantitative research design. An online questionnaire was sent to a sample of Dutch employees working in various sectors. Employees were selected through a network of master's students in HR studies as part of their thesis project, under close supervision of the authors. The employees received an invitation via e-mail with a link to the digital questionnaire, a set of instructions, and an introductory statement. Informed consent was obtained from the respondents through a digital form in the questionnaire. The institution's Ethics Review Board gave permission and confirmed that the respondents' privacy and rights were sufficiently taken into account (No. EC-2018.43). A reminder was sent by e-mail after a week to increase the response rate.

In total, 827 employees were approached to participate in the research, and 470 returned completed questionnaires (a response rate of 56.8%). Five respondents were removed due to incomplete data, yielding a final sample of 465. The majority of respondents worked in business services (34.4%), education (8.1%), production (9.4%), government (4.3%), and healthcare (21.5%). Of the final sample, 63.4% were female, and the average age was 32 years. About employment type, 57.2% of the respondents had a permanent contract, 28.3% a temporary contract, and 9.6% a zero-hours contract. A zero-hours contract is a common type of employment contract in the Netherlands where the employee has no fixed working hours.

2.2 | Instruments

Our survey measures captured the N–S fit of HR practices, work engagement, and proactive work behaviour. As we developed the measurement of N–S fit of HR practices based on existing scales examining employee perceptions of the present and absent HR practices, we first describe our procedure for operationalising this construct.

Employee Perceptions of Present and Absent HR practices were measured for six functional HRM areas: employee training and (career) development, performance management, job design, participation, communication/information sharing, and rewards. We adapted 20 items from existing scales measuring the presence of HR practices (Boon et al., 2011; Den Hartog et al., 2013). For each item, we first asked respondents to indicate whether the HR practice was present or absent (a sample item: "My performance is periodically assessed by my supervisor"). To ascertain as clearly as possible whether the employee perceived the activity to be present (Bal et al., 2013), we used a dichotomous indicator for these items (0 = 'no' and 1 = 'yes', for absent or present, respectively).

Next, we employed follow-up questions to examine the **N–S Fit of Present and Absent HR Practices**, that is, the fit between employees' perceptions of HR practices needed versus those supplied. These questions differed depending on whether the employee perceived the practice as present or absent. For example, the item "My performance is periodically assessed by my supervisor" led to these follow-up questions for present and absent, respectively: "My work results have improved in the last year as a result of periodic assessments from my supervisor"; "My work results would have improved in the last year had I received periodic assessments from my supervisor." These follow-up questions were answered on a 5-point Likert scale (1 = totally disagree, 5 = totally agree). A high score on a 'present' item means the employee perceived the HR practice as meeting the need to work effectively. For the 'absent' items, scores were recoded such that a high score means the employee perceived the HR practice as not meeting the need to work effectively.

In the following step, for each participant, we calculated two overall fit scores based on that participant's perceptions of HR practices needed versus those supplied. For the *NSFE-P*, we calculated a sum score of all follow-up questions of present HR practices, and we divided this score by the number of present HR practices. For the *NSFE-A*, we created a sum score based on all follow-up questions of absent HR practices, and we divided this score by the number of absent HR practices. A high NSFE-P score means a high fit between what the employee thinks he or she needs to function effectively at work and what the organization supplies in terms of HR practices. A high NSFE-A score means a high fit between what the employee thinks he or she does not need to function effectively at work and what the organization does not supply in terms of HR practices. Appendix A provides an overview of the item construction and scoring for the N–S fit measures, and Appendix B provides a list of the concrete items.

To examine the validity of our measures, we performed confirmatory factor analysis (CFA) using Mplus (version 8.3) and robust weighted least square (WLSMV) estimation. Evaluating the model fit of the N–S fit scales in the traditional manner is not possible, as the mix of the NSFE-P and NSFE-A items across the scales varies from one employee to the next, based on the presence/absence indicated and the follow-up questions they filled in. Therefore, we could only evaluate the model fit of the presence/absence of the HR practices scale. Following the recommendation of Hu and Bentler (1998), we used multiple indices of fit, including the Tucker-Lewis index (TLI), the comparative fit index (CFI), the root mean square error of approximation (RMSEA), and the standardized root mean square residual (SRMR). For the TLI and CFI, values of 0.90 are acceptable, and values of 0.95 or higher indicate a good fit; and for the RMSEA and SRMR, values of 0.08 or lower are acceptable, and values below 0.05 indicate a good fit (Hu & Bentler, 1998). These analyses used the six HR practices as first-order factors and the overall HR system as a second-order factor. The results showed sufficient model fit, validating use of the present/absent HR practice measures to create overall HR system N–S fit scores (CFI = 0.95, TLI = 0.95, RMSEA = 0.04, SRMR = 0.09). Cronbach's alpha for this scale was 0.75.

Other measures. To measure *work engagement*, a nine-item version of the Dutch Utrecht Work Engagement Scale was used (Schaufeli et al., 2006). Answers were given based on a 7-point Likert scale (1 = never, 7 = always). A sample question: "At my job, I feel strong and vigorous." Cronbach's alpha for this scale was 0.92.

Proactive work behaviour was measured with the three-item scale of Griffin et al. (2007). Answers were given on a 7-point Likert scale (1 = never, 7 = always). A sample item was: "How often in the past month did you come up with ideas to improve the way in which your core tasks are done?". Cronbach's alpha for this scale was 0.87.

Control variables. We controlled for employees' *job proficiency*, *gender* (0 = male, 1 = female), *age* in years (a continuous variable), *sector*, and *the number of HR practices* (a sum score of the 20 dummy variables). Sector, including business services, education, production, government, and healthcare, was measured with four dummy variables (business services, education, production, and government), using healthcare as the reference category. We measured job proficiency using the three-item version of Griffin et al. (2007). Answers were given on a 7-point Likert scale (1 = never, 7 = always). A sample question was: "How often in the past month did you carry out the core parts of your job well?". Cronbach's alpha for this scale was 0.81. We included job proficiency to control for common method bias and as a type of self-serving bias to work performance evaluations (Greenberg, 1991). Previous research has shown that gender affects employee behaviours (Kidder, 2002) and that the effect of HR practices on employee outcomes varies with age (Kooij et al., 2013). Empirical research has also identified differences in how employees in different sectors perceive HR practices (Boselie et al., 2005). Finally, we controlled for the *number of HR practices*, as empirical evidence showed a positive relationship between the presence of HR practices and employee outcomes (Den Hartog et al., 2013). Controlling for this variable enabled us to test whether the NSFE-P and NSFE-A explain additional variance beyond these practices' mere presence.

2.3 | Data analysis

Given that the data are from the same source (employees), we performed a one-factor test to examine the different constructs' distinctiveness and check for common source bias (Podsakoff et al., 2003). Of the four constructs in the

current study (NSFE-P, NSFE-A, proactive work behaviour, and engagement), the principal factor on the scale scores explained only 39.62% of the variance, well under 50%. Thus, these results support the discriminant validity of the measures. In addition, we checked for common method bias using the common latent factor technique (Podsakoff et al., 2003). An additional latent variable was added to the CFA, where all paths were constrained to be equal and the variance to be 1. The factor loadings of the CFA with only the studied variables showed very small differences in factor loadings, compared to the CFA with the additional common latent factor, suggesting that common method bias is not a serious concern.

To test Hypotheses 1 and 2, we conducted multiple regression analyses in SPSS. For Hypotheses 3 and 4, we used polynomial regression analysis in combination with response surface analysis. This technique tests whether the level and direction of congruence/incongruence influences outcomes and are considered an appropriate way to analyse fit data based on perceptions (Edwards, 1994; Yang et al., 2008). The use of this combined technique is justified as long as the predictor variables fall into the same conceptual domain and are measured on the same Likert scale (Edwards, 1994; Shanock et al., 2010). In our study, both assumptions are met: our predictor variables represent the same latent construct, that is, HR practices, for NSFE-P and NSFE-A, and both are measured on a 5-point Likert scale.

The equation below represents the polynomial regression for the (in)congruence between the two types of N–S fit (the control variables are removed here for the sake of simplicity):

$$Y = b_0 + b_1P + b_2A + b_3P^2 + b_4(PXA) + b_5A^2 + e,$$

where Y refers to the employee outcomes (proactive work behaviour and work engagement), *p* represents NSFE-P, and *A* represents NSFE-A. We scale-centred both predictor variables to remove multicollinearity issues, following Edwards's (1994) recommendation.

Surface response analysis was used following the regression to analyse the (in)congruence between the two types of N–S fit for effectiveness (Shanock et al., 2010). This analysis uses the coefficients of the polynomial regression to test the slopes and curvatures along two lines. The first line is the congruence or fit line (*P* = *A*) used to test Hypothesis 3, and the second is the incongruence line (P = -A) used to test Hypothesis 4. These lines are used to visually present the effects of (in)congruence in a three-dimensional graph (see Figures 1 and 2). We conducted our analyses using weighted scores (ranging from 10 = midpoint of the 20 HR practices, to 1 = only 1 HR practice reported as either absent or present) based on the number of HR practices variable, allowing us to include a more balanced assessment, and to correct for the reliability of the scores of respondents with fewer observations, either as to absent practices or as to present practices.

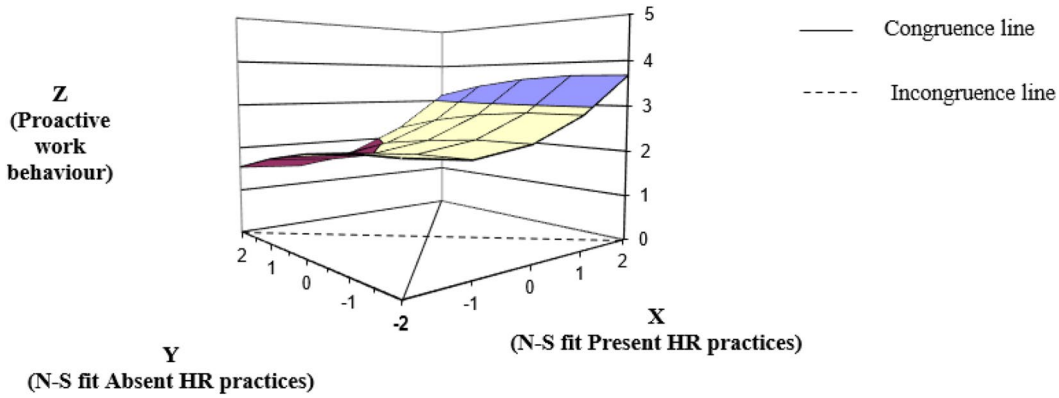

FIGURE 1 Response surface analysis for employee perceptions of N–S fit of present HR practices and N–S fit of absent HR practices on proactive work behaviour [Colour figure can be viewed at wileyonlinelibrary.com]

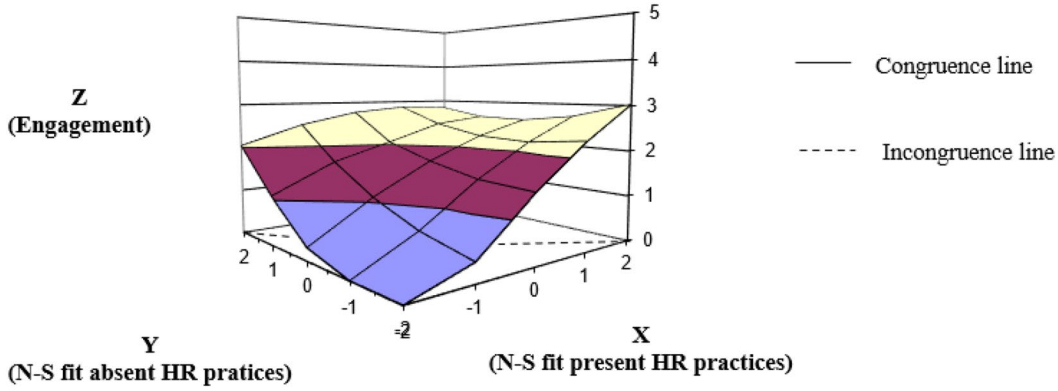

FIGURE 2 Response surface analysis for employee perceptions of N–S fit of present HR practices and N–S fit of absent HR practices on engagement [Colour figure can be viewed at wileyonlinelibrary.com]

3 | FINDINGS

3.1 | Descriptive statistics

Table 1 summarises the descriptive statistics for all variables, including their means, standard deviations, and correlations. NSFE-P and NSFE-A are negatively correlated ($r = -0.05$, $p > 0.05$), supporting the idea that the two N–S fit scales capture different constructs. Employee perceptions of NSFE-P are positively correlated with engagement and proactive work behaviour ($r = 0.27$, $p < 0.01$, $r = 0.25$, $p < 0.01$ respectively). In other words, the more employees feel the HR support they are receiving is necessary for their functioning, the more engaged and proactive they are likely to be. Employee perceptions of the NSFE-A are positively correlated with engagement ($r = 0.30$, $p < 0.01$). The more employees feel the HR support they are not receiving is not missed to function well, the higher their engagement.

3.2 | Hypothesis testing

Table 2 summarises the results of the multiple regression analyses for both outcome variables. Consistent with Hypotheses 1a and 1b, these results show that employee perceptions of the NSFE-P are positively associated with proactive work behaviour (B = 0.47, $p < 0.01$) and employee engagement (B = 0.45, $p < 0.01$). As to Hypothesis 2, the NSFE-A was positively associated with engagement (B = 0.28, $p < 0.01$), supporting Hypothesis 2b. However, the findings show a significant negative association between NSFE-A and proactive work behaviour (B = −0.17, $p < 0.01$). Thus, Hypothesis 2a is rejected.

For Hypothesis 3, we analyse the relationship between congruence in the perceived NSFE-P and NSFE-A and employee outcomes. We expect that congruence between the two measures of N–S fit will be associated with higher (lower) engagement and proactive work behaviour when the N–S fit for both measures is high rather than low (low rather than high). The results are presented in Table 3. With respect to proactive work behaviour, Table 3 shows that the slope of the congruence line is positive and significant, but the curvature is not significant (slope = 0.21, $p < 0.05$, curvature = 0.13, $p < 0.05$). As depicted in Figure 1, the surface along the congruence line is linear. In other words, proactive work behaviour is high when employees experience high levels of both types of N–S fit compared to low levels of both. Hypothesis 3a is therefore supported.

Furthermore, as can be seen in the table, there is a positive slope and significant curvature along the congruence line for engagement (slope = 0.90, $p < 0.01$, curvature = −0.18, $p < 0.05$). These results indicate that congruence between the NSFE-P and NSFE-A has a positive non-linear association with engagement, meaning that engagement

TABLE 1 Descriptive statistics

	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12
1. Gender	1.63	0.48												
2. Age	33.85	12.40	-0.19**											
3. Sector[1] (hc.)	0.28	0.45	0.34**	0.15**										
4. Sector[1] (bus. serv.)	0.44	0.50	-0.23**	-0.13**	-0.55**									
5. Sector[1] (education)	0.11	0.31	0.08	-0.10	-0.31**	-0.31**								
6. Sector[1] (prod.)	0.12	0.32	-0.19**	0.11*	-0.33**	-0.13*	-0.13**							
7. Sector[1] (gov.)	0.06	0.23	0.00	-0.03	-0.22**	-0.08	-0.09	-0.09						
8. HR presence	13.15	3.49	-0.20**	0.20**	0.06	-0.08	0.04	-0.07	-0.07					
9. Job proficiency	5.65	0.74	0.10*	0.04	-0.07	0.09	0.05	-0.08	-0.02	0.02				
10. NSFE-P	3.44	0.50	0.01	-0.14**	-0.07	-0.02	-0.00	0.01	0.22**	-0.02	-0.02			
11. NSFE-A	3.25	0.75	0.10**	0.16*	-0.11*	-0.04	0.07	-0.04	0.20**	0.12**	-0.05	-0.05		
12. Engagement	4.77	1.08	0.08	0.22**	-0.20**	0.07	0.02	-0.15**	0.41**	0.21**	0.27**	0.30**	0.30**	
13. Proactive work behaviour	4.59	1.11	-0.08	0.13**	0.04	0.04	-0.02	-0.05	0.29**	0.15**	0.25**	-0.05	0.29**	0.30**

Note: $N = 465$, $^{*}p < 0.05$; $^{**}p < 0.01$. Bus. serv. = business services; gov. = government; hc = healthcare; prod. = production.

TABLE 2 Multiple regression analyses of proactive work behaviour and work engagement

	Proactive work behaviour				Work engagement			
	Model 1		Model 2		Model 1		Model 2	
	B	(s.e.)	B	(s.e.)	B	(s.e.)	B	(s.e)
Constant	2.76**	(0.23)	2.21**	(0.22)	1.99**	(0.19)	1.92**	(0.19)
Gender	-0.12*	(0.05)	-0.10*	(0.05)	0.22**	(0.05)	0.18**	(0.04)
Age	0.01**	(0.00)	0.01**	(0.00)	0.01**	(0.00)	0.01**	(0.00)
Sector (bus. serv.)	0.08	(0.06)	0.14*	(0.06)	-0.49**	(0.05)	-0.36**	(0.05)
Sector (education)	0.23**	(0.08)	0.28**	(0.08)	-0.04	(0.07)	0.05	(0.06)
Sector (production)	-0.11	(0.08)	-0.09	(0.08)	-0.35**	(0.07)	-0.32**	(0.06)
Sector (government)	-0.09	(0.10)	-0.05	(0.10)	-0.82**	(0.08)	-0.75**	(0.08)
HR presence	0.09**	(0.01)	0.08**	(0.01)	0.11**	(0.01)	0.08**	(0.01)
Job proficiency	0.10**	(0.03)	0.14**	(0.03)	0.17**	(0.03)	0.17**	(0.03)
NSFE-P			0.47**	(0.04)			0.45**	(0.04)
NSFE-A			-0.17**	(0.03)			0.28**	(0.03)
R^2	0.09**		0.15**		0.24**		0.32**	
ΔR^2			0.06**				0.08**	

Note: $N = 465$. *$p < 0.05$; **$p < 0.01$.

Healthcare was used as the reference category. Unstandardised regression coefficients are reported.

increases along the congruence line. In addition, engagement decreases more sharply as both NSFE-P and NSFE-A become lower. Figure 2 shows that engagement increases from the front corner of the figure to the back corner on the respective surfaces, supporting Hypothesis 3b.

Hypothesis 4 suggests that incongruence between the perceived NSFE-P and NSFE-A will be associated with higher (lower) proactive work behaviour and engagement when the N–S fit of present HR practices is higher (lower) than that of absent practices. For proactive work behaviour, Table 3 shows a positive significant slope and no significant curvature (slope = 0.53, $p < 0.01$, curvature = 0.10, $p > 0.05$. Furthermore, results show a positive slope and significant curvature along the incongruence line for engagement (slope = 0.25, $p < 0.01$, curvature = 0.20, $p < 0.01$). As shown in Figures 1 and 2, proactive work behaviour and engagement increase as NSFE-P increases to equal NSFE-A (from the left corner to the incongruence point) and when NSFE-P is higher than NSFE-A (from the congruence point to the right corner). Furthermore, as depicted in Figure 2, the surface along the incongruence line is curvilinear, suggesting a non-linear effect of the incongruence line between NSFE-P and NSFE-A on engagement. In other words, engagement is relatively high when employees experience either high N–S fit of present HR practices and low N–S fit of absent HR practices or vice versa. Hypotheses 4a and 4b are therefore both supported.

4 | DISCUSSION

This study adopted a needs–supplies fit approach (Edwards, 1991; Kristof-Brown et al., 2005) towards employee evaluations of HR practices (Lepak & Boswell, 2012; Nishii & Wright, 2008) to explore how proactive work behaviour and work engagement are influenced by employees' perception of the effectiveness of present and absent HR practices, using a direct fit measure.

Our findings show that a high fit between employees' needs to function effectively and offered HR practices is positively associated with proactive work behaviour and work engagement. This builds on the idea that fit between

TABLE 3 Results of the polynomial regression analyses

	Proactive work behaviour		Work engagement	
	B	**(s.e.)**	**B**	**(s.e.)**
Constant	2.20**	(0.23)	1.73**	(0.19)
Polynomial terms				
N-S fit–Present (P)	0.37**	(0.06)	0.57**	(0.05)
N-S fit–Absent (A)	-0.16**	(0.04)	0.33**	(0.03)
P^2	0.16**	(0.06)	-0.08	(0.05)
A^2	-0.05	(0.03)	0.09**	(0.03)
P X A	0.02	(0.05)	-0.19**	(0.04)
HR presence	0.08**	(0.01)	0.08**	(0.01)
Job proficiency	0.13**	(0.03)	0.19**	(0.03)
Gender	-0.10*	(0.05)	0.19**	(0.04)
Age	0.01**	(0.00)	0.01**	(0.00)
Sector[1] (bus. serv.)	0.14*	(0.06)	-0.35**	(0.05)
Sector[1] (education)	0.29**	(0.08)	0.05	(0.06)
Sector[1] (production)	-0.08	(0.08)	-0.30**	(0.06)
Sector[1] (government)	-0.04	(0.10)	-0.75**	(0.08)
R^2	0.15**		0.33**	
Congruence line (P = A)				
Slope	0.21*	(0.09)	0.90**	(0.08)
Curvature	0.13	(0.08)	-0.18*	(0.08)
Incongruence line (P = -A)				
Slope	0.53**	(0.06)	0.25**	(0.04)
Curvature	0.10	(0.08)	0.20**	(0.05)

Note: $N = 465$; $^*p < 0.05$; $^{**}p < 0.01$.

Analyses performed while controlling for age, gender, sector[1] (healthcare is the reference category), HR presence, and job proficiency; unstandardised regression coefficients reported.

the person and environment is a more powerful predictor than the person or environment alone (Van Vianen, 2018). In line with prior research on this issue outside HRM, employees are more engaged and more proactive at work when they perceive existing organizational HR practices as helping them work effectively (Travaglianti et al., 2016; Yu & Davis, 2016). Furthermore, following N–S fit in terms of discrepancies between personal and (absent) environmental attributes, results show that a high NSFE-A—that is, a perception that practices which are not supplied are also evaluated as not needed for effective functioning– is positively associated with work engagement and negatively associated with proactive work behaviour. We know from the N–S fit literature that a dearth of resources is associated with diminished employee well-being, while the perception of not missing out on practices is associated with well-being (Vogel et al., 2020). Thus, the organization can interpret higher engagement in employees with high NSFE-A as indicating that they do not feel they miss out on any useful or beneficial practices. Contrary to our expectations, proactive work behaviour was negatively associated with NSFE-A, meaning that employees show less proactive work behaviour when they are not missing out on HR practices to work effectively. In this case, employees might not feel the need to engage in self-starting, future-oriented behaviour aimed to change their work situation, as they do not miss out on practices to work effectively (Parker et al., 2006).

Turning to the effects of congruence between the two fit measures, our analyses show that employee engagement is higher when NSFE-P and NSFE-A are both high rather than both low. In other words, engagement is higher when the HR practices in a firm are clearly both necessary and sufficient. These results align with previous findings showing a relationship between N–S fit of general work characteristics and employee engagement (Travaglianti et al., 2016; Verquer et al., 2003). In addition, engagement decreases more sharply as both NSFE-P and NSFE-A become lower (a significant negative curvilinear relationship), meaning that engagement drops significantly when employees' needs are met poorly, and HR resources provided by the firm are neither wholly necessary nor sufficient. Concerning proactive work behaviour, we found that employees are more proactive when the NSFE-P and NSFE-A are both high rather than both low. In other words, it appears that employees are more proactive when their needs are fully met, and HR resources provided by the firm are both necessary and sufficient.

Finally, we found incongruence between NSFE-P and NSFE-A to be related to higher proactive work behaviour and engagement, but only when the NSFE-P is higher than NSFE-A. In addition, the reverse is also true: proactive work behaviour and engagement are lower when NSFE-P is lower than NSFE-A. This means that employees work more proactively and are more engaged when they have to make up for the absence of resources that would have improved their functioning, compared with the case where nothing was missing, but the resources supplied included unnecessary and wasteful extras (Verquer et al., 2003).

Our findings extend previous HRM research by (1) introducing a fit assessment of what employees perceive in terms of HR practices for the extent to which these practices may contribute to job performance, and (2) by exploring the impact of employees‘ (mis)fit evaluations of present and absent HR practices and their concurrent impact on employee outcomes. This approach informs other areas of HRM. First, studies on HR systems mainly focus on the availability or presence of HR practices (e.g., Den Hartog et al., 2013; Kooij et al., 2013) and herewith adopt a more universalistic approach to HRM for individual employees. Our study advocates for a fit approach rather than a universalistic approach to individual-level HRM. Our findings show that a larger amount of present HR practices does not always result in higher employee outcomes (see e.g., Ho & Kuvaas, 2020), and that a lack of practices is not always harmful to employee outcomes. It depends on the extent to which employees experience the supplied HR practices as sufficient and necessary for their performance. In addition, research on adopting a person-job or person-organization fit perspective in SHRM literature (e.g., Boon et al., 2011) can benefit from the fit approach adopted in this study. Finally, our study contributes to the debate on the psychological approach to HRM research, in such a way that we show the importance of studying the employee's view on the effectiveness of both present and absent HR practices for employee outcomes (Troth & Guest, 2020). Taking a more micro perspective, we offer insights into implementing effective HR practices, understanding employee-centred outcomes, and applying PE-fit theory to HRM. In sum, HR scholars can look beyond the universalistic approach of exploring the supply in HR practices by using a fit evaluation to examine employee perceptions of HRM. In addition, they can simultaneously pay attention to the effectiveness of both present and absent HR practices by adopting a congruence perspective.

4.1 | Limitations and suggestions for future research

The present study is not without limitations. First, the measures in this study were collected from the same source, that is, employees, and were all self-reported, using a cross-sectional research design. Although this design was required by our study aims (examining employees' subjective fit perceptions), it is subject to potential common method and common source biases (Podsakoff et al., 2003). We conducted a Harman's one-factor test and performed the common latent factor technique (Podsakoff et al., 2003) to test for common method bias and built upon validated scales. In addition, the correlations among the survey variables in our model were rather modest, ranging from −0.05 to −0.30, countering the assumption that common method variance is a universal inflator of correlations (Spector, 2006). Finally, we cannot draw any conclusions about causality. Future studies could use a longitudinal research design in which questions about the N–S fit of HR practices and employee outcomes are separated in time. For

example, to investigate whether N–S fit for effectiveness changes over time and how this affects employee outcomes (Wright et al., 2005).

Second, we drew our data from employees' reports on the HR practices they perceived as present in their firms, meaning we do not know how well practices were implemented. We, therefore, cannot draw any conclusions about the quality of implementation of the HR practices. This is not a problem for our study, as our concern was with the extent to which employees experience HR practices (supplied and unsupplied) as sufficient and necessary for their job performance. Nonetheless, future studies could examine how the results of this study account for the actually implemented practices and the quality of the implementation (Den Hartog et al., 2013). Another issue for future research would be investigating how our findings might be biased by individual differences in performance and personal characteristics. In the current study, we controlled for employees' job proficiency as this may have played a role in measuring NSFE-P and NSFE-A. However, it might also be that other factors such as self-serving bias, locus of control, or growth mindset influence this measure (Greenberg, 1991). We, therefore, recommend exploring such variables in future studies.

Third, in this study, we focussed on a N–S fit perspective as most of the HR practices in SHRM literature are identified as a form of supplies rather than as a form of demands (Boon et al., 2011). However, the fit between a person and the work environment can also be understood as the match between job demands and employee abilities (demands–abilities fit) (Edwards, 1991; Kristof-Brown et al., 2005). Demands–abilities (D-A) fit refers to the correspondence between the individual's knowledge, skills, and abilities and the work required. We argue that including the D-A perspective is worthwhile considering for future research. From this perspective, other types of (human capital-enhancing) HR practices may be considered, such as selective recruitment and selection (selective) talent developments (Wang et al., 2008). Additionally, as we used direct measures for NSFE-P and NSFE-A, we could not evaluate which parts of the N–S equation, that is, the needs or the supplies (or both), influence the lack of need fulfilment. Therefore, future studies could explore using indirect measures for assessing needs and supplies separately to provide more specific recommendations for improving employee performance.

Finally, we believe that our study using the N–S fit approach can be seen as a first step towards exploring employee evaluative perceptions of HR practices from a more fit perspective in SHRM research. So far, most of the HR practices are identified as a form of supplies rather than as a form of demands (Boon et al., 2011). Therefore, we have selected HR practices that align well with such a "supplies" perspective, at least in the Netherlands, the country where we collected our data. However, we recommend future research to explore the N–S fit of present and absent HR practices in other contexts than the Netherlands. We argue that the principles developed in this paper can be used, while the set of HR practices might be different to match with the supplies relevant for the context. For example, the type of HR practices depends on contextual organizational boundaries, because HR practices can be specific to the organization's sector, for example, the financial service sector versus the healthcare sector. Moreover, this study compared high versus low congruence and high versus low incongruence situations to introduce a fit perspective in studying employee perceptions of HR practices. Future studies could build on this approach by studying all four contrasts in terms of congruence more explicitly and examine how they impact employee outcomes. In addition, future studies could extend the discussion to other types of employee needs, such as the need for well-being, and different outcomes, such as commitment and satisfaction as happiness dimensions of employee well-being, and exhaustion and stress as health-related dimensions of employee well-being, or more objective measures of employee performance (Van De Voorde et al., 2012). As a final direction for future research, proactive work behaviour and engagement might be influenced differentially by specific HR practices or bundles of practices. The focus in this study was to contribute to HRM literature by focussing on the whole set of supplies offered within the HRM system, as research has shown that a coherent set of HR practices has a more significant impact on employee outcomes compared to a single HR practice (Subramony, 2009). However, we recommend that future studies also examine how the NSFE-P and NSFE-A of specific HR practices impact particular employee outcomes.

4.2 | Implications

Organisations and managers invest in HR practices to contribute to the organization's performance. They are interested in understanding whether the practices they implement are perceived as effective for employees' job performance and what potentially valuable practices might be perceived as missing to work effectively. Obtaining this information can be done by asking employees how they perceive the HR practices necessary and sufficient for their job performance, such as in work meetings, employee participation, or performance appraisal conversations. Survey employees is another possibility to get an organisation-wide view on the perceived effectiveness of present and absent HR practices for employees' functioning.

How to address the issue of fit between present/absent practices on the one hand and employees' needs to function well, on the other hand, depends on whether the issue is considered at the individual level or the group level (team, department, organization), and whether it concerns NSFE-P or NSFE-A. When the low NSFE-P score is a unique phenomenon, the line-manager can have a conversation with the individual to find out why these HR practices do not help this employee work effectively or may even be harmful/a waste of time and energy on behalf of the employee. If the practice can be missed for the specific worker without problems for the organization, it is worth considering eliminating the practice. In case of a low NSFE-A score, the line manager might consider striking an idiosyncratic deal for the individual scoring low on NSFE-A, i.e., implement the practice only for the individual who needs the practice to function well (Fu et al., 2020). When low NSFE-P scores exist for an entire team or even for an organization as a whole, it is important to consider how the practices are implemented by (some of the) line-manager(s). Maybe the quality of what is offered in terms of HR practices is inadequate to add value for the employees in terms of their functioning. If many employees consider the practice a waste of time or even harmful, good reasons exist to change policy and practices more systematically. Finally, when an entire team or organization indicates low NSFE-A scores, the first one could check organizational communication and information quality as well as implementation quality of line managers (Den Hartog et al., 2013): is it clear enough to employees that such practices are available, while employees report them as absent and missed. However, there is also a possibility that there is ample room for improving HR practices' contribution to performance. Organisations and line managers could consider implementing new practices that specific teams or an entire organization would appear to lack.

The findings of this research also have important general implications for HR professionals. In particular, we found that checking whether HR practices are available to employees is less important than evaluating the perceived effectiveness of such practices. Therefore, rather than aiming for the largest arsenal of available HR practices, HR policymakers and professionals should aim for making the best possible use of HR practices, specifically by the responsible elimination of practices that lack added value or are even wasting employees' time and energy and organizational resources, as well as the substantiated addition of practices where this would enable employees to function better.

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CONFLICT OF INTEREST

The authors declare no potential conflicts of interest with respect to the authorship and/or publication of this article.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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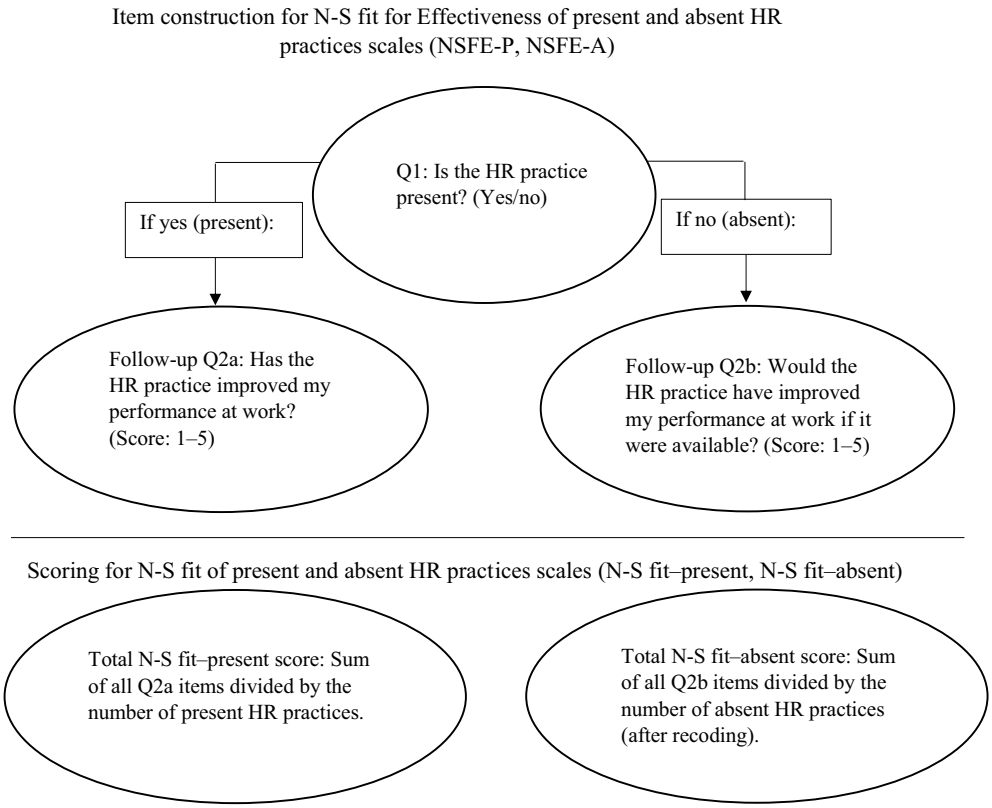
APPENDICES

Appendix A

Overview of Scoring for Needs–Supplies Fit for Effectiveness of Present and Absent HR Practices Scales.

Q = Question.



Appendix B

Items of the Needs–Supplies Fit For Effectiveness of HR practices scale.

Introduction: The following statements relate to personnel management within your organization and its impact on the accomplishment of your daily work duties. Please indicate whether or not the following applies to your work in the past year. You will be asked to choose between "yes" and "no" and then to answer a follow-up question (ranging from 1 = totally disagree −5 = totally agree) based on your chosen answer.

Note. TD = training & development, PM = performance management, JD = job design, PA = participation, CI = communication & information sharing, RW = rewards.

TD1. I follow training, courses, and workshops (yes: 66.0%).

If yes: My work results have improved in the last year as a result of trainings, courses and workshops.

If no: My work results would have improved in the last year had I followed trainings, courses and workshops.

TD2. I receive coaching in developing my knowledge and skills (yes: 58.7%).

If yes: My work results have improved in the last year as a result of coaching in developing my knowledge and skills.

If no: My work results would have improved in the last year had I received coaching in developing my knowledge and skills.

TD3. I have the opportunity to perform another function in my organization (yes: 52.3%).

If yes: My work results have improved in the last year as a result of the opportunity to perform another function in this organization.

If no: My work results would have improved in the last year had I received the opportunity to perform another function in this organization.

PM1. My performance is periodically assessed by my supervisor (yes: 80.4%).

If yes: My work results have improved in the last year as a result of periodic assessments from my supervisor.

If no: My work results would have improved in the last year had I received periodic assessments from my supervisor.

PM2. I have periodic conversations with my manager about my work results (yes: 69.9%).

If yes: My work results have improved in the last year as a result of periodic conversations with my manager about my work results.

If no: My work results would have improved in the last year had I received periodic conversations with my manager about my work results.

PM3. My work results are determined in joint consultation (yes: 57.4%).

If yes: My work results have improved in the last year as a result of determining my work results in joint consultation.

If no: My work results would have improved in the last year had my work results been determined in joint consultation.

JD1. I have diverse work (yes: 88.6%).

If yes: My work results have improved in the last year as a result of diverse work.

If no: My work results would have improved in the last year had I had diverse work.

JD2. I have challenging work (yes: 80.9%).

If yes: My work results have improved in the last year as a result of challenging work.

If no: My work results would have improved in the last year had I had challenging work.

JD3. I make my own decisions in work (yes: 87.7%).

If yes: My work results have improved in the last year as a result making my own decisions in work.

If no: My work results would have improved in the last year had I had made my own decisions in work.

JD4. I take responsibility for my own work (yes: 95.3%).

If yes: My work results have improved in the last year as a result responsibility for my own work.

If no: My work results would have improved in the last year had I had taken responsibility for my own work.

PA1. I have a say in the policies of the organization (yes: 37.4%).

If yes: My work results have improved in the last year as a result having a say in the policies of the organization.

If no: My work results would have improved in the last year had I had a say in the policies of the organization.

PA2. I give my opinion on work-related issues in the organization (yes: 84.5%).

If yes: My work results have improved in the last year as a result giving my opinion on work-related issues in the organization.

If no: My work results would have improved in the last year had I given my opinion on work-related issues in the organization.

PA3. I participate in consultation in which the division of tasks are determined (yes: 67.1%).

If yes: My work results have improved in the last year as a result of participating in consultation in which the division of tasks are determined.

If no: My work results would have improved in the last year had I had participated in consultation in which the division of tasks are determined.

CI1. I am informed about the general course of events within the organization (yes: 87.7%).

If yes: My work results have improved in the last year as a result of being informed about the general course of events within the organization.

If no: My work results would have improved in the last year had I been informed about the general course of events within the organization.

CI2. I am informed about specific procedures within the organization (yes: 79.1%).

If yes: My work results have improved in the last year as a result of being informed about specific procedures within the organization.

If no: My work results would have improved in the last year had I been informed about specific procedures within the organization.

CI3. I am informed about significant changes in the organization (yes: 90.8%).

If yes: My work results have improved in the last year as a result of being informed about significant changes within the organization.

If no: My work results would have improved in the last year had I been informed about significant changes in the organization.

CI4. I have insight in the way decisions are made within the organization (yes: 54.4%).

If yes: My work results have improved in the last year as a result of having insight in the way decisions are made within the organization.

If no: My work results would have improved in the last year had I had insight in the way decisions are made within the organization.

RW1: I receive other financial benefits in addition to my basic salary (42.4%)

If yes: My work results have improved in the last year as a result of receiving other financial benefits in addition to my basic salary.

If no: My work results would have improved in the last year had I received other financial benefits in addition to my basic salary.

RW2: I receive compensation that depends on my performance (19.4%)

If yes: My work results have improved in the last year as a result of receiving compensation that depends on my salary.

If no: My work results would have improved in the last year had I received compensation that depends on my salary.

RW3: I receive rewards that depend on team or departmental performance (14.8%)

If yes: My work results have improved in the last year as a result of receiving rewards that depend on team or departmental performance.

If no: My work results would have improved in the last year had I received rewards that depend on team or departmental performance.

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RESEARCH ARTICLE

The negative impact of individual perceived isolation in distributed teams and its possible remedies

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Abstract

Previous research on distributed teams indicates that physical distance between team members is problematic for team functioning. We advance this research by investigating the role of team members' psychological experiences of isolation using both a longitudinal diary study and a time-lag field study, applying a Job Demand–Resource (JD-R) theory lens (Bakker & Demerouti, 2017). With the diary study, we capture daily fluctuations of perceived isolation and its antecedents and consequences. Results show that (a) where distributed team members work, and (b) how much they communicate, contribute to the degree to which distributed team members may feel isolated. The combined results of the diary study and the time-lagged field study show that 1) perceived isolation, and 2) perceived isolation combined with high role ambiguity, contribute to experiences of helplessness. Subsequently, feelings of helplessness hamper the level of perceived team implicit coordination. Theoretical

Abbreviations: AIC, akaike information criterion; CFA, confirmatory factor analysis; CFI, comparative fit index; COVID, coronavirus disease 2019; DI, daily isolation; DRA, daily role ambiguity; ICC, intra-class correlation; JD-R, job demand-resource theory; M, Mean; N, sample size; n.s., non-significant; PI, perceived isolation; RA, role ambiguity; S.D., standard deviation; S.E., standard error; SPSS, statistical package for the social sciences; SRMR, standardized root mean square residual.

and practical implications for managing distributed teams are discussed.

KEYWORDS
daily communication quantity, daily work location, distributed teams, helplessness, JD-R theory, perceived isolation, team implicit coordination

Practitioner notes

What is currently known:

- Perceived isolation is a major challenge for distributed team members working remotely.
- The quantity of team communication is often lower in distributed teams than in traditional teams.
- Management of the work-home interface is a perceived challenge within Job Demand–Resource contexts where job control (low job ambiguity) and felt copresence of others have a remedial effect

What this paper adds:

- Distributed team members communicate less when working from home than when working in remote offices.
- Team members' frequent interactions with colleagues and managers improves team collaboration and helps mitigate feelings of isolation.
- Team members' perceived understanding of the clear 'what' of their tasks in a team, combined with daily communication with colleagues, improves perceived team implicit coordination.
- The innovative use of a diary study to gather data.

The study finding's implications for practitioners:

- Importance of taking into consideration peoples' work location.
- Understanding that a team member's perceived need for role clarity and daily interaction counteracts perceived helplessness and so improves perceived implicit coordination.
- The importance of combining daily communication in teams with both peers and managers as a remedy for feelings of perceived isolation.
- The application of a Job Demand–Resource (JD-R) lens to develop novel theoretical underpinnings of distributed team research.
- Showcasing how we need to navigate job demands versus available resources for long term well-being and engagement, especially in post pandemic periods.

1 | INTRODUCTION

The rapid development of digital technologies has facilitated the emergence of distributed teams, and the use of distributed teams to improve organizational efficiency is expected to continue growing (Daniel et al., 2018), especially in the post-pandemic-era (Collings et al., 2021; Sanders et al., 2020). Distributed work arrangements have been studied under different labels, including virtual work, telework, remote work, dispersed work, and telecommuting (Bartel et al., 2012). These conceptualizations align on the premise that teammates are not co-located and accordingly, rely on computer-mediated communication technology for planning and coordinating their work (Gibson & Gibbs, 2006). Compared to co-located teams, distributed teams experience greater challenges in team

satisfaction, knowledge sharing, work meaningfulness, team trust (Hoch & Kozlowski, 2014), communication (Daim et al., 2012), helping behaviours (ter Hoeven & van Zoonen, 2020), and generally, the ability to coordinate effectively (Huang et al., 2010; Lewis, 2003). Nonetheless, the hybrid workplace model, as a new job design, remains appealing to both workers and organisations—even if this model will not always be necessary due to the COVID-era's eventual end—highlighting the importance of further understanding psychological implications and team coordination in distributed teams.

Scholars point to the isolating nature of distributed teams as a major challenge to coordination, knowledge sharing, and trust building among team members (Espinosa et al., 2002; Maynard & Gilson, 2014; Schmidtke & Cummings, 2017). Unfortunately, research investigating the psychological processes at the individual level that result from isolation in distributed teams and their influence on implicit coordination is limited. Furthermore, the majority of research on distributed teams thus far has focussed on actual physical isolation, and lacks exploration of the role of perceived isolation, the feeling of being cut off from others (Golden et al., 2008). This is rather surprising given that perceived isolation has shown to be detrimental to work outcomes, such as job performance, perceived respect, organizational identification, and perceived employee development, whereas actual physical isolation (e.g., geographical dispersion) within distributed teams may not necessarily result in members feeling psychologically isolated (Bartel et al., 2012; Cooper & Kurland, 2002; Golden et al., 2008).

While previous research has either focussed on actual physical or perceived isolation, the current study combines those perspectives and conceptualises perceived isolation as the more proximal psychological process that relates actual physical isolation to work outcomes. In addition, we argue that perceived isolation per se does not always result in negative work outcomes, but could do so under certain conditions, such as role ambiguity. Using the Job Demand–Resource (JD-R) theory as a lens through which to investigate whether the effects of increases in job demands or decreases in job resources, arising from distributed work, lead to reduced team coordination through motivational or strain processes (Bakker & Demerouti, 2018), we conceptualise perceived isolation as compromising one's job resources, where individuals who experience a higher level of perceived isolation experience a lower level of social support, and therefore have fewer resources to help them accomplish their work goals. We propose that this lower level of available job resources impairs the motivational process, leading to feelings of helplessness (Golden et al., 2008). We also conceptualise role ambiguity as a job demand which requires mental effort to overcome in order to perform job tasks. We further posit that role ambiguity serves as a boundary condition which increases feelings of helplessness associated with perceived isolation. Finally, the JD-R theory proposes that reduced job resources and increased job demands lead to a strain process. Thus, we also suggest that feeling helpless leads to lower levels of implicit team coordination.

By investigating the antecedents and outcomes of perceived isolation in distributed teams, the contributions of our study are three-fold. First, our study adds to the current discussion addressing how the use of information communication technology may influence job demands and resources using JD-R theory (Wang et al., 2020). In particular, our study contributes to workplace isolation literature by highlighting perceived isolation as a reduced job resource, serving as a central mediating variable between physical and individual remoteness, as well as team outcomes. In addition, our study extends the workplace isolation literature by theorising and testing the daily fluctuation of the degree to which distributed team members feel isolated at work. Third, our study sheds light on the psychological mechanism at play when distributed team members respond to physical, and subsequently, psychological isolation, through JD-R theory.

2 | THEORY AND HYPOTHESES

Teams, characterised by their members' interdependent interactions directed towards a performance goal, are increasingly distributed (Forsyth, 2017; Larson & DeChurch, 2020). A key feature of distributed teams is their departure from the prototype of working in co-located offices daily, under supervision, alongside co-workers (Bartel

et al., 2012). The emergence of distributed teams changed team boundaries that differentiate team members: those who work in the same location, and those who do not (Sundstrom et al., 1990). The physical flexibility of distributed teams allows members to work offsite, such that a team's interdependent interaction towards the common goal relies on digital means, which poses communication challenges (Gibson & Gibbs, 2006).

Bakker and Demerouti (2017) claimed that at the heart of the JD-R model lies the understanding that in every occupation, in any sector, there are two basic categories to balance for optimal task performance: job demands and job resources. Job resources are the very social, communicational, physical, or organizational resources that a team member has, whereas job demands include the workload, emotional and cognitive demands of a task, such as concentration (Bakker & Demerouti, 2017). Distributed work has transformed teamwork in that it shifted the balance of job demands (e.g., the need to learn new technologies) and resources (e.g., social support) (Dinh, et al., 2021). Previous researchers of distributed work have explored its role as an antecedent to negative feelings, such as lack of visibility and interpersonal bonding with colleagues, resulting in social and professional isolation (Gainey et al., 1999). Building on this line of research, we argue that distributed team members are likely to feel more psychologically isolated on days where they work remotely than on days when they work in office, because physical visibility and interactions are harder to achieve via digital means (Golden et al., 2008). Thus, work-related isolation in distributed teamwork reduces available resources, as it denotes a hindrance of social support and is associated with less social relatedness and social interactions (Schaufeli & Taris, 2013). The psychological needs for belonging and connectedness constitute resources according to the JD-R theory, and their reduction, considered perceived isolation, is thought to reduce resources (in contrast to being a job demand). Indeed, earlier studies have shown that distributed team members experience a reduced sense of job resources, such as collegiality, resulting in a lack of reliance on others to achieve their work objectives (Collins et al., 2016). A second vital assumption in the JD-R model is that a consequent imbalance between such resources available to a team member and work demands can lead to issues beyond psychological problems (Bakker & de Vries, 2021). Based on the foregoing argumentation, we hypothesise that, with reduced formal and informal interactions daily, distributed team members perceive more individual isolation when working remotely. Figure 1 illustrates our conceptual model and summarises our hypotheses.

H1 *Distributed team members experience higher daily isolation on days where they work remotely than days where they work in office.*

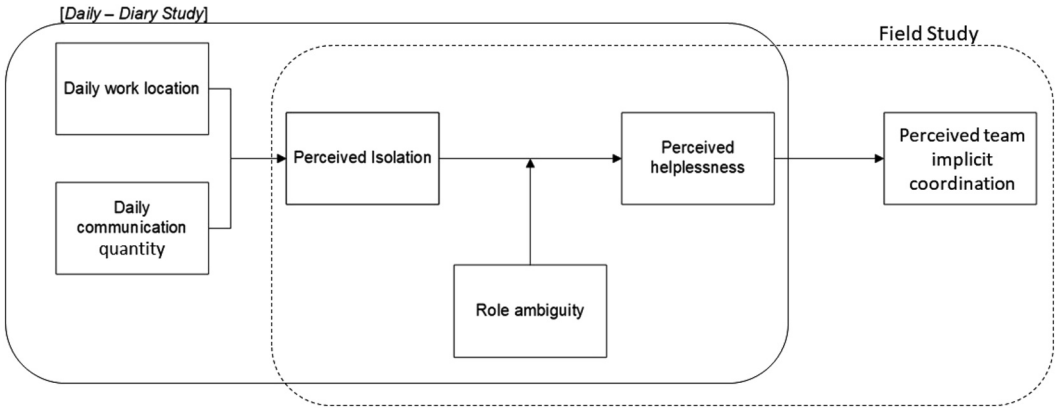

FIGURE 1 The conceptual model

2.1 | Daily team and manager communication quantity and daily perceived isolation

In addition to daily work location, we argue that daily communication quantity also predicts perceived isolation. The use of counter-balance measures, such as access to communication-enhancing technology (i.e., job resources) to facilitate interactions with other co-workers in the organisation, can reduce perceived isolation from both colleagues and the company's support network (Golden et al., 2008). However, distributed teamwork often impacts the quantity and quality of formal and informal interactions (Dinh et al., 2021). Researchers have found that patterns among distributed team members vary over short periods of time, for example, daily and weekly (Huysman et al., 2003), and that distributed team members are less likely to reach out to each other and their supervisors compared to those who work in the office (Collins et al., 2016).

Communication with team members and supervisors increases perceptions of proximity through three mechanisms: increasing cognitive salience, reducing uncertainty, and making distant others more predictable and understandable, as well as envisioning other teammates' contexts and local situations in more detail (Wilson et al., 2008). These findings are supported by propositions of the JD-R theory in that resources such as relatedness to others can offset the effect of reduced resources, and even buffer the impact of job demands on experienced strain (Bakker & Demerouti, 2017, 2018). Employees who communicate often with their teams, rewarding contact with both colleagues and supervisors for work-related discussions, are most likely to be better communicators and problem solvers, and such communications increase employees' feelings of belonging and commitment (Bakker & Demerouti, 2017). In sum, the daily quantity of communication with their teams may help distributed team members feel close, despite physical distance (Gajendran & Joshi, 2012). The negative effect of communication quantity on perceived isolation likely not only develops over time, but is also valid for distributed team members' daily experiences.

H2 *Individuals experience lower perceived daily isolation on days when they have higher communication quantity with their teams than days when they have lower communication quantity with their teams.*

2.2 | Perceived isolation and helplessness: Role ambiguity as a moderator

JD-R theory (Demerouti et al., 2001) proposes that excessive job demands and insufficient job resources spark a strain process leading to lower engagement and burnout, resulting in negative organizational outcomes, like turnover intention and lower organizational commitment (Hu et al., 2011). Specific job resources, such as work role clarity, low ambiguity, and sufficient communication are critical social and organizational aspects of JD-R theory, that can be used as remedies or buffers against the harmful impact of stressful job demands (Bakker & Demerouti, 2017). We argue that in distributed teams, higher levels of perceived isolation with a lack of social and professional support can be considered an insufficient context for healthy teamwork (Gajendran & Joshi, 2012). Isolation clashes with an individual's psychological need to belong, which affects the motivational process of the JD-R theory adversely (Van den Broeck et al., 2008), recapitulating our previous argumentation of perceived isolation to reduce resources. Experiencing detachment is furthermore related to emotional stress and reduced helpfulness towards others (Baumeister et al., 2007), which can have negative implications for organizational outcomes.

Helplessness refers to the perception that one's own behaviours and actions are futile due to an uncontrollable environment (Ashforth & Saks, 2000). Individuals feel helpless when they are uncertain regarding how to go about their work and when this uncertainty is not expected to be resolved in the near future (Sparr & Sonnentag, 2008). We propose that with greater perceived isolation, individuals perceive a lower level of job resources as available for the successful accomplishment of their job tasks. In addition, perceived isolation can be associated with perceived lack of opportunity to influence decision-making and actions, leading to a perceived lack of personal control, and a lower level

of perceived personal resources, such as a home life to relax and engage in after work. With lower levels of perceived resources, individuals are more likely to consider themselves to be unable to perform their work and to change their situation, leading to an increased experience of helplessness.

Further, role ambiguity refers to the degree to which information concerning an individual's role is unclear or vague (Tubre & Collins, 2000), including methods for fulfiling role expectations and consequences of performance stemming from that role (Orhan et al., 2016). Role ambiguity is a critical challenge for distributed teams, as working in isolation requires team members to have clear expectations of other members (Daniel et al., 2018). Distributed team members often experience ambiguity regarding what they are expected to do and lack an updated view of the team's current challenges and priorities (Gajendran & Joshi, 2012; Orhan et al., 2016). Furthermore, relying on electronic communication leads to delays in response times and hold-ups (Golden et al., 2008) where members are unable to immediately ask for clarification or help, and may miss important communicational cues (Huang et al., 2010).

While role ambiguity is classified as a job demand (e.g., Schaufeli & Taris, 2013), some ambiguity also pertains to the conceptual differentiation between job demands and resources. For example, lacking resources could create the need for more effort and increased job demands to reach work goals. Thus, resources may be construed as job demands (Schaufeli & Taris, 2013). This is an important consideration with regards to role ambiguity, as role ambiguity could be a hindrance to personal growth and development. Crawford et al. (2010) refined the JD-R theory with the appraisal of stressors to account for the inconsistent relationship between demands and outcomes by considering the nature of the demand. Namely, hindrance demands are negatively related to work outcomes, while challenge demands lead to positive work outcomes. Their meta-analysis is consistent with previous research, where role ambiguity, role conflict, and role overload correlate with hindrance demands. Based on Crawford and colleagues' (2010) work, we propose that role ambiguity is likely to be appraised as a hindrance demand when perceived isolation is high. Specifically, when distributed team members perceive themselves as isolated from other team members and/or their leaders, role ambiguity is likely to be perceived as requiring an exceedingly large amount of effort to overcome and potentially thwart personal growth and goal attainment (Crawford et al., 2010). Therefore, the positive relationship between perceived isolation and helplessness is expected to be stronger when role ambiguity is high. In addition, as feelings of isolation, role ambiguity, and helplessness can be contextual (Sparr & Sonnentag, 2008), it is likely that this intertwining of perceived isolation and role ambiguity in predicting experiences of helplessness can occur in both daily experiences and general experiences over time.

H3a *Daily Within-Person: The positive relationship between daily-perceived isolation and daily-perceived helplessness is moderated by daily-perceived role ambiguity such that when daily role ambiguity increases, the effecst of daily perceived isolation on daily perceived helplessness becomes stronger.*

H3b *Effect Over-Time: The positive relationship between perceived isolation and perceived helplessness is moderated by role ambiguity such that when role ambiguity increases, the effect of perceived isolation on perceived helplessness becomes stronger.*

2.3 | Moderated mediation in predicting team implicit coordination

Team implicit coordination, a team's ability to act cohesively by understanding the needs of team members and tasks, has been deemed critical for team performance (Rico et al., 2008). Unlike explicit coordination, which refers to visible and external coordination patterns under regulations, implicit coordination requires team members' adjustment of behavioural models according to anticipated tasks and other team members' needs (Chang et al., 2017).

Furthermore, individuals are selective in how they use their available resources such that they tend to invest more in situations when positive outcomes are expected (Hobfoll, 1989). In response to hindrance demands, where

one believes efforts are unlikely to pay off, individuals choose to conserve resources by reducing their efforts. When faced with the job demand of high role ambiguity in conjunction with high perceived isolation, members of distributed teams likely interpret role ambiguity as a hindrance stressor and are therefore less likely to make active efforts to resolve role ambiguity, leading to higher helplessness. Subsequently, we argue that this greater helplessness leads to stronger perceptions of one being unable to contribute to one's team, and actions like seeking feedback or assistance as being futile, as well as reduced helpfulness in relation to others, perpetuating passivity in interactions (Baumeister et al., 2007; Eubanks et al., 2016). This passivity would likely undermine distributed team members' experiences of team implicit coordination, potentially enabling a reinforcing cycle over time. Therefore, we argue that role ambiguity will moderate the mediated relationship between perceived isolation and team implicit coordination via helplessness.

H4 *Role ambiguity moderates the strength of the mediated relationship between perceived isolation and team implicit coordination via helplessness, where the mediated relationship is stronger with greater role ambiguity.*

3 | METHOD

We used a mixed-method approach to test our hypotheses. First, a diary study was conducted to examine changes in a work context (i.e., remote workplace and communication quantity) as an antecedent of daily fluctuating perceived isolation and its consequential effects on daily feelings of helplessness depending on role ambiguity (H1, H2, and H3a). Second, we conducted a time-lagged field study to collect data on more general feelings of isolation, helplessness, team implicit coordination, and role ambiguity in distributed teams (H3b and H4). While the first study made use of a heterogeneous sample via panel data, the second study focussed on one organisation working with distributed teams.

3.1 | Study 1—A diary study

3.1.1 | Sample and procedure

Diary studies employ daily assessments, as opposed to collecting data at a single time point or longitudinally (Cunningham et al., 2021; Ohly et al., 2010). Most commonly, diary studies in workplace and organizational research apply a quantitative survey approach with standardized questions and multi-level structure in analyses (Bakker & Xanthopoulou, 2009). Key advantages of this method include the implementation of a process perspective and a reduction of retrospective bias (Reis & Gable, 2000). Our diary study was designed to measure individuals' daily work location, communication quantity with their teams, and perceptions of isolation, role ambiguity, and helplessness.

The diary study was conducted in July 2018 and consisted of six surveys: one background survey yielding between-person (Level 2) data, such as demographics, and five diary surveys yielding within-person (Level 1) data, including work location and communication quantity with the teams, and perceived isolation, helplessness, and role ambiguity for each day.

The data collection was carefully planned to avoid potential sample validity problems associated with the use of crowd-workers as participants (Litman et al., 2017). First, we launched a background survey with questions regarding demographics and current work situation, such as whether participants had a full-time job requiring them to work in distributed teams, as well as how they interacted with their team members and leaders. We invited respondents to participate in our daily surveys if their full-time jobs required them to work in distributed teams, not only relying on face-to-face communication, but also digital communication tools to interact. In total, we invited 150 individuals to participate.

Following the introduction survey, the diary survey was distributed to participants every second workday for 2 weeks, corresponding to five surveys, to capture changes in experience over a period of time (Cunningham et al., 2021). All 150 participants were notified by email when a new survey became available and were instructed to complete it as soon as possible after each workday. Each diary survey was made available until midnight on the respective day. The response rate for each day ranged from 92% to 97.33% except for Day 1 (127 responses, 84.67%).

Of the 150 participants, 70 were female, and one reported to be neither male nor female. The majority (60.7%) had a bachelor's degree, followed by those who had a master's degree (14.7%), high school education (12.0%), diploma degree (10.7%), and a doctoral degree (2.0%). On average, they were 36.5 years old (*S.D.* = 9.0), with an average tenure of 7.6 years (*S.D.* = 7.0). The majority of participants reported working in the office across the five working days (Day 1: 66.0%; Day 2: 60.7%; Day 3: 74.7%; Day 4: 69.3%; Day 5: 58.0%) compared to working remotely (i.e., either at home or in the field) (Day 1: 18.7% [15.3% of the respondents did not report where they worked that day]; Day 2: 32.0% [7.3% missing]; Day 3: 25.3% [no missing]; Day 4: 28.7% [2.0% missing]; Day 5: 38% [4.0% missing]).

3.1.2 | Measures

All constructs except demographics, daily communication quantity, and work location, were measured according to five-point scales ranging from 1 ("strongly disagree") to 5 ("strongly agree"). To shorten the diary survey, we removed one item from the perceived isolation and role ambiguity scales, respectively.

Perceived isolation was measured with three items focussing on perceptions of distributed team members from Connaughton and Daly's (2004) study. A sample item is "I often feel disconnected from fellow team members located apart from me."

Feelings of helplessness was measured by three items adapted from Ashforth and Saks (2000). A sample item is "No matter what I do, nothing seems to have an effect at work."

Role ambiguity was measured by three items from the original scale developed by Rizzo et al. (1970). An example item is: "Today I knew what my responsibilities were." The items were reverse coded such that higher values imply higher perceived role ambiguity.

Daily communication quantity was measured using Bakker and Xanthopoulou's (2009) one-item scale. The original measure captured the amount of communication with colleagues, and we modified the item to include communication quantity with leaders. Specifically, we asked: "How much time did you spend today on business and informal contacts (phone, email, face-to-face) with 1) your team members, and 2) your leader?" Participants indicated the communication quantity by choosing: 1 = 0–15 min, 2 = 15–30 min, 3 = 30–60 min, 4 = 1–2 h, 5 = >2 h.

Daily work location was measured using the following item: "Where did you work today?" where 0 = in the office, and 1 = remotely either at home or in the field.

Control variables. Gender, age, education, and organizational tenure were included as (Level 2) between-person variables in this study. Given these variables are commonly examined and have been found to impact work outcomes in previous research, we include them as control variables to eliminate alternative explanations and improve statistical power (Bernerth & Aguinis, 2015). Participants reported their ages and organizational tenures in true years. Gender was measured according to three categories: 1 = male, 2 = female, and 3 = neither male nor female. Education was measured on six educational levels (1 = high school education, 13 years; 2 = higher diploma, 14 years; 3 = bachelor's degree, 16 years; 4 = master's degree, 18 years or higher, 5 = doctorate degree, 21 years or higher).

To minimise potential biases for the estimations, all predictor variables were centred (Hofman & Gavin, 1998). In our study, all Level 2 between-person control variables were centred to the grand means. For Level 1 within-person predictors, including daily communication quantity, daily perceived isolation, and daily role ambiguity, the variables were centred to each person's mean across the 5 days. Daily work location was categorical with 0 coded as office and 1 coded as remote.

Hypotheses 1–3a posit measured relationships within-persons across days. This implies that the data are nested within the person, that is, Level 2 with daily variables, that is, Level 1. Multilevel model analysis using SPSS MIXED procedure was thus conducted to test the hypothesised within-person effects. Our statistical model thus involves a set of regression equations nested in two levels: Level 1 at the daily level of analysis and Level 2 at the individual level of analysis. For H3a, we examined three nested models: 1) with only the Level 2 control variables, for example, gender; 2) with the Level 1 within-person predictor, for example, daily work location, and moderator, for example, daily role ambiguity added; 3) with the interaction between the predictor and moderator added. For H1 and H2, as there was no moderation posited; we examined the hypotheses using the first two nested models listed above.

3.1.3 | Study 1 Results

Table 1 presents the means, standard deviations, correlations, and reliabilities for the between-person (Level 2) and within-person (Level 1) variables. Before testing our hypotheses, we conducted a set of confirmatory factor analyses (CFA) across each of the five diary days with maximum likelihood estimation procedures to assess measurement invariance over time. We ran the analyses for the measures that were repeated across the five diary entries, that is, perceived isolation, helplessness, and role ambiguity. The analyses were run in R using the lavaan package (Rosseel, 2012). As recommended (Brown, 2015; Vandenberg & Lance, 2000), we used both a multi-group approach, which includes within-time covariances, and a single-sample longitudinal approach, which includes between-time correlations between the repeated items (this is because there is no clear guideline yet available for cut-off scores in the longitudinal approach). Table 2 shows the results of the CFA tests.

As shown in the upper part of Table 2, we first tested simple CFA within each time point. Results show a generally good fit to the data with relative (normed) chi-square (χ^2/df) smaller than 3 and CFI values above 0.95 (cf. Hu & Bentler, 1999; Kline, 1988). When assessing the invariance over time in a multigroup and in a single sample longitudinal CFA model, changes in the goodness-of-fit indices provide an estimate of invariance, as chi-square values are sensitive to sample size. A cut-off value of 0.002 for ΔCFI, and 0.03 for ΔSRMR have been suggested to judge invariance in multigroup CFAs (Cheung & Rensvold, 2002; Meade et al., 2008). The multigroup-CFAs provide very well fitting configures (i.e., baseline model) and the small changes in ΔCFI and ΔSRMR provide support for metric and even scalar invariance. The slightly lower fit scores (in terms of CFI) for the longitudinal model and configural model

TABLE 1 Means, standard deviations, correlations, and alpha reliabilities for Study 1

Variable	Mean	*S.D.*	1	2	3	4	5	6	7	8
1. Gender[2]	1.48	0.51	–							
2. Age[2]	36.50	9.0	0.17*	–						
3. Education[2]	3.84	0.89	−0.01	−0.06	–					
4. Organizational tenure[2]	7.60	7.01	0.08	0.66**	−0.09	–				
5. Daily isolation[1]	1.87	0.95					(0.93)			
6. Daily role ambiguity[1]	2.31	0.97					0.31*	(0.91)		
7. Daily perceived helplessness[1]	3.79	0.90					0.43**	0.28**	(0.94)	
8. Daily communication quantity[1]	2.84	1.19					−0.13**	−0.12**	−0.09*	–
9. Daily work location[1]	0.30	0.46					0.21**	−0.05	0.03	−0.20**

Note: N(individual) = Day 1: 126, Day 2: 140, Day 3: 151, Day 4: 146, Day 5: 147; N(day) = 5; N(observation) = 710. [1]Indicates variables measured at Level 1 within-person across days; [2]Indicates variables measured at Level 2 between-person. Alpha coefficients are in parentheses on the diagonal. For Gender, 1 was coded as male, 2 was coded as female, and 3 was coded as others. For daily work location, 0 was coded as office and 1 was coded as remote.

*$p < 0.05$, **$p < 0.01$.

TABLE 2 Confirmatory factor analyses

Model	χ^2	df	χ^2/df	CFI	SRMR	$\Delta\chi^2$	ΔCFI	ΔSRMR
Day 1 (n = 126)	45,48	24	1.90	0.971	0.045			
Day 2 (n = 140)	43.10	24	1.80	0.981	0.043			
Day 3 (n = 151)	63.46	24	2.64	0.962	0.039			
Day 4 (n = 146)	62.52	24	2.61	0.963	0.052			
Day 5 (n = 147)	29.01	24	1.21	0.996	0.025			
Multiple-groups CFA								
Configural	243.56	120	2.03	0.976	0.041			
Metric	259.22	144	1.80	0.977	0.043	15.66	0.001	−0.002
Scalar	281.53	168	1.67	0.978	0.045	22.31	0.001	−0.002
Single sample longitudinal CFA								
Configural	1200.6	750	1.60	0.930	0.055			
Metric	1217.5	774	1.57	0.931	0.057	16.93	0.001	−0.002
Scalar	1255.3	810	1.55	0.931	0.059	37.79	<0.001	−0.002

Note: Maximum likelihood estimation was used.

Abbreviations: CFI, comparative fit index; SRMR, standardized root mean square residual; $\Delta\chi^2$, change in χ^2 relative to preceding model; ΔCFI, change in CFI; ΔSRMR, change in SRMR.

+/− signs denote better/worse fitting models, respectively.

are explained by the fact that these models are more complex and generally provide a poorer fit (Brown, 2015). It is remarkable, however, that the cut-off criteria used for multilevel CFA to test invariance also holds the metric and scalar invariance test for the more complex longitudinal CFA model. Thus, overall, these analyses provide support for metric and scalar invariance of our measures across days.

Next, we conducted multilevel regression analyses to test our hypotheses. We regressed daily isolation as a dependent variable on daily work location and daily communication quantity. As presented in Table 3, individuals reported lower perceived isolation on days spent working in the office (−0.48, $p < 0.01$), supporting Hypothesis 1. In addition, supporting Hypothesis 2, daily communication quantity was negatively associated with daily-perceived isolation (−0.16, $p < 0.01$).

To test Hypothesis 3a, we regressed daily-perceived helplessness on daily isolation, daily role ambiguity, and their interaction term. As shown in Table 4 (Model 3), daily isolation (0.18, $p < 0.01$) and daily role ambiguity (0.12, $p < 0.01$) were positively related to daily-perceived helplessness. The interaction between daily isolation and daily role ambiguity was significantly positive (0.20, $p < 0.01$). The results of the two-way interaction slopes difference test demonstrate that the relationship between daily isolation and daily perceived helplessness was significant and positive when daily role ambiguity was high (0.29, $p < 0.01$). However, the daily isolation—perceived helplessness relationship was not significant when role ambiguity was low. We plotted the two-way interaction, as illustrated in Figure 2. With higher daily role ambiguity, the positive relationship between daily perceived isolation and daily perceived helplessness was stronger. Hypothesis 3a is thus supported.

3.2 | Study 2—A time-lag field study

3.2.1 | Sample and procedure

Data was collected in a two-stage survey distributed to individuals working in geographically distributed teams of an international firm across 15 countries. The Time 1 survey was distributed in March 2018 via Qualtrics to 535 targeted

TABLE 3 Multilevel regression analyses of Study 1 for testing Hypotheses 1 and 2

	Daily perceived isolation	
Variables	**Model 1**	**Model 2**
Intercept	3.17 (0.77)***	3.25 (0.89)***
Male[2]	−0.19 (0.67)	−0.03 (0.67)
Female[2]	−0.40 (0.68)	−0.21 (0.67)
Age[2]	−0.01 (0.01)	−0.01 (0.01)
Education[2]	−0.13 (0.06)**	−0.14 (0.06)
Organizational tenure[2]	0.01 (0.01)	0.01 (0.01)
Day 1[a]	−0.19 (0.10)*	−0.10 (0.09)
Day 2	−0.13 (0.09)	−0.13 (0.08)
Day 3	−0.17 (0.09)*	−0.10 (0.08)
Day 4	−0.08 (0.10)	−0.02 (0.09)
Daily work location[b]		−0.48 (0.07)***
Daily communication quantity[1]		−0.16 (0.04)***
Model deviance (AIC)	1778.84	1729.52

Note: N(individual) = Day 1: 126, Day 2: 140, Day 3: 151, Day 4: 146, Day 5: 147; N(day) = 5; N(observation) = 710. Fixed effects coefficients and their robust standard errors are shown in each equation. [1]Indicates variables measured at Level 1 (within-person); [2]Indicates variables measured at Level 2 (between-person).

[a]Day 5 was used as a reference.

[b]0 was coded as office; 1 was coded as remote and remote location was used as a reference.

*$p < 0.10$, **$p < 0.05$, ***$p < 0.01$.

participants who were given three weeks to reply, ending with 153 (28.6%) completed surveys. The Time 2 survey was distributed three months after, to those 153 individuals who completed the Time 1 survey. Of these, 107 (69.9%) responded, resulting in a final sample of individuals from 42 geographically distributed teams (ranging from 1 to 8 participants from one team unit) located across 15 countries, with a final response rate of 20.0%. We then assigned each participant a unique team identification number.

Of the 107 respondents, 28 were female (26.2%). The majority had obtained a bachelor's degree (54.2%), followed by those who had a master's degree (29.0%), high school education (10.3%), a diploma degree (5.6%), and a middle school education (0.9%). On average, they were 37.10 (*S.D.* = 11.12) years old. The average tenure working for the current organisation was 6.69 (*S.D.* = 8.38) years. To assess potential dropout biases, mean comparisons were performed to examine whether there were differences between the final sample (N_1 = 107) and among those who had completed the Time 1 survey but dropped out at Time 2 (N_2 = 46). No differences were observed for their demographic variables, including age (M_1 = 37.10; $S.D._1$ = 11.11 vs. M_2 = 37.97; $S.D._2$ = 12.32, p = 0.68), gender (M_1 = 1.26; $S.D._1$ = 0.44 vs. M_2 = 1.15; $S.D._2$ = 0.36, p = 0.14), and organizational tenure (M_1 = 6.69; $S.D._1$ = 8.38 vs. M_2 = 4.30; $S.D._2$ = 4.91, p = 0.07). There was also no significant difference observed with respect to the predictor, that is, perceived isolation (M_1 = 2.15; $S.D._1$ = 0.78 vs. M_2 = 2.24; $S.D._2$ = 1.04, p = 0.56). Thus, dropout bias was not problematic in the present study.

3.2.2 | Measures

All constructs were measured according to five-point scales ranging from 1 ("strongly disagree") to 5 ("strongly agree") unless otherwise stated. We employed the same measures used in the diary study (Study 1) for *perceived isolation*,

TABLE 4 Multilevel regression analyses of Study 1 for testing Hypothesis 3a

	Daily perceived helplessness		
Variables	**Model 1**	**Model 2**	**Model 3**
Intercept	3.39 (0.89)***	3.43 (0.89)***	3.38 (0.89)***
Male[2]	−0.12 (0.79)	−0.23 (0.79)	−0.21 (0.79)
Female[2]	−0.01 (0.79)	−0.11 (0.79)	−0.09 (0.79)
Age[2]	−0.01 (0.01)	−0.02 (0.01)	−0.01 (0.01)
Education[2]	−0.11 (0.07)	−0.11 (0.07)	−0.11 (0.07)
Organizational tenure[2]	−0.00 (0.01)	−0.00 (0.01)	−0.00 (0.01)
Day 1[a]	−0.09 (0.09)	−0.06 (0.08)	−0.03 (0.08)
Day 2	−0.02 (0.08)	0.00 (0.08)	0.04 (0.08)
Day 3	−0.17 (0.08)**	−0.13 (0.08)*	−0.12 (0.08)
Day 4	−0.02 (0.08)	0.01 (0.08)	0.02 (0.07)
Daily work location[b]	−0.09 (0.08)	−0.01 (0.08)	−0.02 (0.08)
Daily communication quantity	−0.01 (0.04)	0.03 (0.04)	0.04 (0.04)
Daily isolation[1] (DI)		0.19 (0.04)***	0.18 (0.04)***
Daily role ambiguity[1] (DRA)		0.14 (0.04)***	0.12 (0.04)***
DI x DRA			0.20 (0.06)***
Model deviance (AIC)	1704.0	1668.61	1659.74
			Simple slopes tests:
Low RA:			0.07 (n.s.)
High RA:			0.29***

Note: N(individual) = 150; N(day) = 5; N(observation) = 716. Fixed effects coefficients and their robust standard errors are shown in each equation. [1]Indicates variables measured at Level 1 (within-person); [2]Indicates variables measured at Level 2 (between-person).

[a]Day 5 was used as a reference.

[b]0 was coded as office; 1 was coded as remote and remote location was used as a reference.

*p < 0.10, **p < 0.05, ***p < 0.01.

feelings of *helplessness*, and *role ambiguity*, and this time employing the full scales. The reliability coefficients (α) of all constructs were above 0.70, as shown in Table 5.

Perceived team implicit coordination was measured by five items from Lewis' (2003) Transactive Memory System Scale. An example item is "Our team worked together in a well-coordinated fashion."

Control variables. Gender, age, education, and organizational tenure were included as control variables to consider the potential influence of demographic variables on work processes (Payne et al., 2007; Wong & Kuvaas, 2018). The control variables were included for the same reasons and measured in the same way as in Study 1.

3.2.3 | Analytic procedures

Some participants were from the same geographically distributed teams, leading to potential shared variance due to non-independence in the sample (Maas & Hox, 2005). Although all variables studied, that is, perceived isolation, role ambiguity, perceived helplessness, and perceived team implicit coordination, were at the individual level, we applied multilevel analysis to test the hypotheses, as the non-independence within team units could bias the standard error estimates (Hox, 2010). Before testing the hypotheses, we assessed the degree of interdependence between

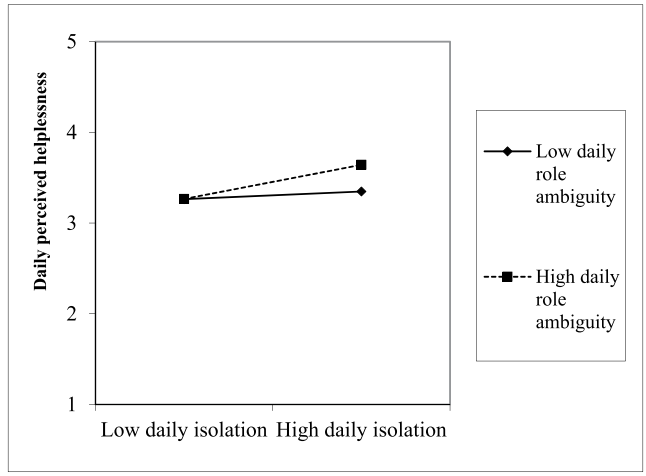

FIGURE 2 Daily-level fluctuations in helplessness predicted by the interaction between daily experience of perceived isolation and role ambiguity of Study 1

TABLE 5 Means, standard deviations, correlations, and alpha reliabilities for Study 2

Variable	Mean	*S.D.*	1	2	3	4	5	6	7	8
1. Gender[1]	1.26	0.44	–							
2. Age[1]	37.10	11.12	0.23**	–						
3. Education[1]	4.00	0.92	−0.05	−0.14	–					
4. Organizational tenure[1]	6.69	8.38	0.12	0.67***	−0.15	–				
5. Perceived isolation[1]	2.15	0.78	0.12	0.14	−0.01	−0.03	(0.83)			
6. Role ambiguity[2]	2.07	0.61	0.24**	0.14	−0.19*	0.03	0.24**	(0.84)		
7. Perceived helplessness[2]	2.47	0.87	0.05	0.04	−0.19*	0.11	0.36***	0.22**	(0.84)	
8. Perceived team implicit coordination[2]	3.75	0.65	−0.18*	−0.16	0.04	−0.09	−0.29***	−0.36***	−0.38***	(0.78)

Note: $N = 107$. [1]Indicates variables measured at Time 1; [2]Indicates variables measured at Time 2. Alpha coefficients are in parentheses on the diagonal.

*$p < 0.10$, **$p < 0.05$, ***$p < 0.01$.

teams for the dependent variables, that is, perceived helplessness and perceived team implicit coordination (Bryk & Raudenbush, 1992). We set team identification number as the Level 2 unit (team level), and perceived helplessness and perceived team implicit coordination as the outcome variables, respectively, to run the null hypothesis test without any predictors in the model. The intra-class correlations (ICC) for perceived helplessness and perceived team implicit coordination were 0.00 and 0.11, respectively, which were relatively small. However, even when ICC is low, the repercussions on standard error estimates can increase Type I errors significantly (Huang, 2016). Recent scholars recommend employing multilevel analysis to account for the clustering effect even when ICC is low (Huang, 2018; Musca et al., 2011). Therefore, we proceeded to test our hypotheses using the multilevel analytic method with SPSS MIXED procedure to ensure more conservative estimations (Hox, 2010).

We centred all independent variables using grand means to guard against potential multicollinearity and potential effects derived from the correlations between random intercepts and random slopes in a multilevel model

(Bickel, 2007). Our statistical model, therefore, involved a set of regression equations nested in two levels: Level 1 at the individual level of analysis and Level 2 at the team level of analysis. While the fixed effects were estimated based on the variables at the individual level, the random effect was the intercept based on the team units. Concerning sample size, there are no standard rules of thumb. Previous studies have shown that a number of groups above 30 provide satisfactory variance estimates (Maas & Hox, 2005). Nevertheless, the restricted maximum likelihood was applied as recommended for more conservative estimates of small group samples (Heck et al., 2014). We applied Preacher et al. (2006) procedure to examine the moderated mediation. Using PROCESS analysis, the moderated mediation hypothesis will be supported if lower and upper bound estimates of the indirect effect using 95% confident intervals do not include zero.

3.2.4 | Study 2 Results

Table 5 displays the means, standard deviations, and correlations of all variables.

3.3 | Hypotheses testing

We conducted multilevel regression analyses to test our hypotheses. We regressed perceived helplessness on perceived isolation with the control variables indicating a significant positive relationship. To test the moderating role of role ambiguity on the positive relationship between perceived isolation and helplessness proposed in Hypothesis 3b, we introduced role ambiguity and its interaction with perceived isolation (i.e., perceived isolation x role ambiguity) to the multilevel regression model. Role ambiguity was positively but marginally related to perceived helplessness, while the interaction between role ambiguity and perceived isolation was significant and negative, which was unexpected. We then tested the simple slopes at high and low levels of role ambiguity using one standard deviation (0.61) above and below, respectively. As depicted in Table 6, there was an observed significant positive slope when role ambiguity was low (0.59, $p < 0.01$), while the magnitude of the slope became smaller and non-significant when role ambiguity was high (0.09, $p > 0.10$). Last, we plotted the two-way interaction, shown in Figure 3, to inspect its moderating pattern as suggested by Dawson and Richter (2006). As expected, perceived helplessness was lowest when perceived isolation and role ambiguity were low. However, instead of having higher perceived helplessness being reported when having role ambiguity and perceived isolation combined at higher levels as in the diary study, individuals with high perceived isolation reported similar levels of perceived helplessness regardless of high versus low role ambiguity. Therefore, Hypothesis 3b is not supported.

Hypothesis 4 proposed a moderated mediation such that perceived isolation is negatively related to team implicit coordination through perceived helplessness, and this mediation is moderated by role ambiguity. Table 6 shows the moderated mediation results with the conditional indirect path coefficient and the 95% confidence intervals, using PROCESS. When role ambiguity was low, the indirect path between perceived isolation and team implicit coordination mediated by perceived helplessness was negative −0.14 (*S.E.* = 0.06) and significant, with the lower and upper bound estimates not including zero [−0.26; −0.02]. On the other hand, when role ambiguity was high, the magnitude of the indirect path was negative but reduced −0.02 (*S.E.* = 0.05) and non-significant with the lower and upper bound estimates including zero [−0.11; 0.09]. In addition, the index of moderated mediation (0.10; *S.E.* = 0.06) was also significant with 95% confidence intervals not including zero (lower bound = 0.01, and upper bound = 0.24). Hypothesis 4 is therefore not supported.

TABLE 6 Multilevel regression analyses of Study 2

	Fixed effects coefficients		
Variables	**Perceived helplessness**		**Perceived team implicit coordination**
Intercept	3.53 (0.52)***	3.10 (0.52)***	4.09 (0.40)***
Gender[1]	0.02 (0.18)	−0.01 (0.18)	−0.13 (0.14)
Age[1]	−0.01 (0.09)	−0.01 (0.01)	−0.01 (0.01)
Education[1]	−0.17 (0.09)*	−0.10 (0.08)	−0.06 (0.06)
Organizational tenure[1]	0.02 (0.01)*	−0.02 (0.02)	0.00 (0.01)
Perceived isolation[1] (PI)	0.43 (0.10)***	0.34 (0.10)***	−0.08 (0.08)
Role ambiguity[2] (RA)		0.23 (0.13)*	−0.27 (0.10)***
PI x RA		−0.41 (0.14)***	0.07 (0.11)
Perceived helplessness			−0.20 (0.08)**
Model deviance (AIC)	279.85	276.75	221.14
Simple slopes tests:			Conditional indirect effect
Low RA:		0.59***	−0.14 (0.06) [−0.26; −0.02]
High RA:		0.09 (n.s.)	−0.02 (0.05) [−0.11; 0.09]
			Index of moderated mediation
			0.10 (0.06) [0.01; 0.24]

Note: N(employee) = 107; N(team) = 42. Fixed effects coefficients and their robust standard errors are shown in each equation. [1]Indicates variables measured at Time 1; [2]Indicates variables measured at Time 2. Bootstrapped method was applied to obtain upper and lower bound estimates with 95% confidence intervals.

*p < 0.10, *p < 0.05, **p < 0.01.

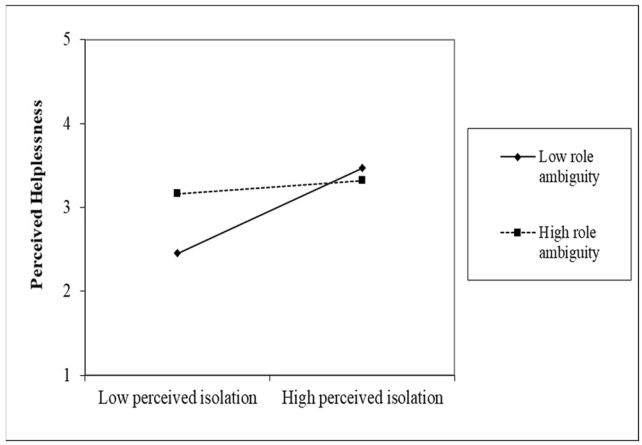

FIGURE 3 The two-way interaction between perceived isolation and role ambiguity predicting perceived helplessness of Study 2

4 | DISCUSSION

Through the lens of JD-R theory (Bakker & Demerouti, 2017, 2018; Crawford et al., 2010; Demerouti et al., 2001), we enhance current conceptual understandings of the antecedents (i.e., work location and communication quantity) and consequences (i.e., experienced helplessness and perceived team implicit coordination) of perceived isolation, and conditions that further hamper team implicit coordination (i.e., role ambiguity as a hindrance demand).

Distributed teamwork has changed how work is performed by shifting the quality and quantity of informal and formal interactions influencing the balance of job demands and resources (Dinh et al., 2021) and has previously been related to isolation, hindering social support and connectedness, thereby reducing job resources (Schaufeli & Taris, 2013). Feeling isolated at work has severe consequences for employee functioning, including deficits in communication between team members (Daim et al., 2012; Huang et al., 2010) and increased conflict with less knowledge sharing (Hoch & Kozlowski, 2014).

Study 1 indicates that distributed team members experienced lower levels of perceived isolation when working in the office than remotely. Similarly, more communication with team members also reduced perceived isolation. Both studies found support that perceived isolation increases feelings of helplessness. Additionally, on days when employees feel high levels of role ambiguity combined with perceived isolation, the daily experience of helplessness is highest. These findings highlight how reduced job resources (i.e., perceived isolation) and hindrance demands (i.e., role ambiguity) contribute to strain. Such strain processes can lead to adverse organizational outcomes (Bakker & Demerouti, 2017, 2018), as reflected in Study 2. Study 2 primarily involved distributed team members collaborating via electronic means, showing that perceived helplessness can produce tangible effects on team implicit coordination, subsequently hampering team functioning.

4.1 | Theoretical implications

This study investigated the experience of working in distributed teams using the lens of JD-R theory, conceptualising the effects of perceived isolation in terms of diminished job resources and personal resources, and helplessness as a result of these reduced resources. Role ambiguity was conceptualised as a job demand, a boundary condition that activates the effect of these diminished job resources on the experience of helplessness on a day-to-day level. The study found that when diminished perceived job resources or increased job demands, in the form of less social resources due to isolation and role ambiguity, respectively, are experienced chronically, both conditions alone can induce the experience of helplessness.

Previous literature on workplace isolation has focussed primarily on physical aspects of isolation (e.g., geographical distance, proximity of work, connectivity) within distributed work contexts. Most research showed how various aspects of actual physical isolation result in work-related effects (e.g., Bartel et al., 2012; Wilson et al., 2008). By focussing on perceived isolation, our research examines how the experience of isolation at work might not only arise from aspects of physical distance, but also from actual communication deficits due to dependence on electronic communication. The diary study replicated and supported previous findings that physical aspects, like working from a remote location, impact perceived isolation. We extended that research by highlighting an additional antecedent, communication quantity. Interestingly, while the correlation between these two antecedents is negative, indicating that working remotely was associated with lower level of communication. In other words, working remotely can imply low levels of communication quantity. Our analysis showed that both aspects drive unique qualities of variance in perceived isolation, indicating that perceived isolation is not only driven by physical proximity, as is most often discussed in current literature, but is also influenced by communication quantity. This raises a consideration linked to the JD-R theory, namely that reduced resources (in this case through dispersed locations) initiate the second principle of the Conservation of Resources theory, which states that individuals tend to regulate their behaviours (i.e., increased communication) to protect against resource loss (Hobfoll, 2002).

Additionally, our research provides further insights on the consequences of workplace isolation by linking higher perceived isolation to reduced team implicit coordination at work through greater helplessness. Specifically, higher perceived isolation leads one to ascertain that they have less adequate social support resources to perform their jobs, resulting in feelings of helplessness. Feeling unable to influence outcomes, team members reduce their coordination efforts, leading to lower team implicit coordination. When a team's tasks are highly interdependent, these reduced efforts can be detrimental, leading to poor solutions to coordination issues, such as geographic distribution

of assignment, facilitating weaker overall outcomes (Olson & Olson, 2000). These findings support the propositions of the JD-R theory by showing that the resources created by additional communication might not be sufficient to offset the effects of remote work, consequently reducing resources and resulting in feelings of helplessness. Moreover, findings reflect how reduced resources can lead to withdrawal behaviour and contribute to negative organizational outcomes (Bakker & Demerouti, 2017, 2018; Schaufeli & Taris, 2013).

The unexpected findings in Hypothesis 3b highlight that different relationships between role ambiguity, perceived isolation, and helplessness exist at a daily level compared to a general level. Our diary study indicated that daily feelings of isolation relate more strongly to daily experiences of helplessness if daily role ambiguity is high (vs. low). This illustrates how strain is increased by job demands, particularly hindrance demands (Bakker & Demerouti, 2017, 2018). In contrast, our field study showed that individuals with high perceived isolation reported similar levels of perceived helplessness regardless of high versus low role ambiguity.

The main difference between the two studies is the focus on daily experiences versus the general experience of isolation and role ambiguity over a longer period, which explains the opposing patterns and negative relationship found. In a daily context, helplessness is more likely to emerge if both isolation and role ambiguity are high, as an individual faces both higher job demands and at the same time fewer social support resources to overcome these demands. When one of these is low, an individual might be better able to manage feeling helpless, as job demands are less strenuous, or one has more social resources to confront the situation.

In contrast, high perceived isolation and role ambiguity, as measured in the field study, reflect a more chronic situation, which could influence the appraisal of other job demands experienced by the individual. The chronic conditions of lacking job resources can result in the appraisal of job demands that one experiences, such as high levels of job responsibility, workload, and time pressure, as hindrance-stressors instead of challenge stressors, effectively blurring the line between areas that are 'stressful but perceived as manageable' and 'stressful and unclear'. It follows that having consistently high perceived isolation, regardless of high or low role ambiguity, is sufficient to elicit feelings of helplessness in response to other experienced job demands, as an individual typically needs to not only understand their role, but also have confidence in their ability to fulfil their role via both personal and job resources (Crawford et al., 2010; Li et al., 2020). This suggests that the prolonged experience of reduced resources potentially influences the appraisal of job demands, increasing the likelihood of demands being appraised as hindrance stressors instead of challenge stressors. This finding emphasises the importance of vigilantly managing reduced resources (i.e., perceived isolation), job demands (i.e., role ambiguity), and their potential consequences in distributed teams.

Moreover, based on the JD-R theory, suggesting that strain and motivation processes predict organizational outcomes, our research provides further support for the general assumption that perceived isolation can threaten team coordination processes (Hoch & Kozlowski, 2014). Although the hypothesised moderated mediation was not supported, we tested an indirect effect of perceived isolation (Time 1) on team coordination (Time 2) via perceived helplessness (Time 2). The indirect effect was negative and significant −0.07 (0.04) [−0.16; −0.01] indicating perceived helplessness as a mediating factor that results in lower perceived team implicit coordination. As suggested by Gevers et al. (2020), experimental research, such as longitudinal and diary studies, are needed to substantiate the causal relationships implied in our reasoning. Moreover, the results and reflection of the propositions of the JD-R theory lend support to the relevance of the model in distributed teams.

4.2 | Practical implications

Our research has several insights for the management of distributed teams. First, physical distance (as operationalised by remote work) is not the sole factor contributing to feelings of isolation, highlighting the importance of managers increasing daily communication with employees to counter the isolating affect that physical distance may have on team members. Communication quantity is therefore a critical leadership tool to build sustainable team relations. In distributed teams, this might imply an even higher amount of communication than with teams in office, since

communication must be managed with less rich media means, which might not always have the same impact as face-to-face meetings (Daft & Lengel, 1986). Furthermore, since physical distance and communication quantity contribute unique qualities of variances to perceived isolation, our research indicates that isolation feelings can also arise in traditional office-work settings. Thus, the amount of daily communication in teams is an important tool for managing feelings of isolation for remote work and "traditional" office work alike.

Our research also highlights the importance of managing both the experience of isolation and role ambiguity within distributed teams. On a daily level, reducing role ambiguity can attenuate the negative effects of perceived isolation on the experience of helplessness. Thus, we advise managers to also focus on role clarity in distributed teams to decrease helplessness and thereby enhance team implicit coordination. Managers should consider task structuring in terms of how team members interact and how much collaboration is needed based on the work tasks at hand. Our findings also suggest that persistent experiences of isolation alone are enough to cause high levels of helplessness, regardless of role ambiguity. On the other hand, even when perceived isolation is low, persistently high role ambiguity can also lead to helplessness. Our study therefore indicates that managers should be attentive in preventing chronic experiences of role ambiguity and perceived isolation, alleviating team members' experience of helplessness and its detrimental effects on team implicit coordination.

4.3 | Limitations and future research avenues

As with all empirical work, our study is not without limitations. First, we took a deductive approach, proposing a model based on prior knowledge, testing specific causes, processes, and outcomes in two subsequent studies. Consequently, our approach might not have addressed the full range of causal mechanisms predicting perceived isolation and its effects on team functioning. Given the increasing practical and theoretical interest in workplace isolation (Daim et al., 2012; Daniel et al., 2018; Huang et al., 2010; Orhan et al., 2016), inductive research might provide additional insights, helping leaders and organisations to manage feelings of isolation in the workplace.

Each of our studies have advantages and disadvantages. While the diary study made use of a heterogeneous sample, our field study was conducted within one company that primarily employed distributed teams. Further, the diary study looked at daily relationships between variables on subsequent days, whereas the field study used a time-lag approach. Thus, our approach has combined two different methodologies to compensate for the respective weaknesses with strengths. Finally, although we employed different methods to test our hypotheses, we cannot draw causal inferences for these studies. Future researchers might test parts of our model in an experimental setting to prove actual causality.

Future research could attempt to explain the disconnect between employees preferring to work remotely, while simultaneously feeling more isolated. Working remotely ostensibly minimises office distractions (e.g., water cooler chat, walk-ins, off-topic discussions at meetings), such that employees can concentrate and work more efficiently. This trade-off between productivity and isolation may explain the disconnect between preference to work remotely (for gains in productivity) and feelings of isolation. Moreover, it would be interesting to investigate how those experiencing increased isolation and passivity at home affect their teammates, both at home and in the office. Types of communication tools with various media richness used in teams can be a fruitful avenue to reduce the experience of isolation when working remotely and have the potential to mitigate isolation "spreading" to other teammates. Moreover, it is possible that teammates may be able to "compensate" for others experiencing more isolation via these tools.

Last, while distributed work arrangements have been accelerated during the pandemic, the so-called 'hybrid workplace model' (i.e., some members sharing an office while others are doing their jobs remotely) may be an appealing option to employ while addressing uncertainty around the pandemic going forward (Knight, 2020). As such, it is expected that employees will be facing a good amount of transition shifting between various degrees of 'hybrid' depending on the pandemic situation. From a JD-R perspective, these transitions between different degrees and formats of hybrid-ness will increase job demands for employees to cope with. Future researchers are recommended

to investigate how these transitions may influence individual and team coping. Attention should also be paid to possible negative work-home interference (Bakker & de Vries, 2021). This can be a prevalent problem in hybrid situations when employees are exposed to a seamless work-home environment and consequently may perceive job resource overload combined with high job demands.

5 | CONCLUSION

The findings reported in this research suggest that both work location and communication quantity influence feelings of workplace isolation in distributed teams. Furthermore, perceived isolation increases feelings of helplessness, which, due to withdrawal behaviour, reduces team functioning. On the day-to-day level, this process is weakened when role ambiguity is reduced. However, on a more general level, increased helplessness and low team implicit coordination can be driven by the presence of either high isolation or high role ambiguity alone. These insights, viewed through a JD-R lens are useful for organisations attempting to manage perceived isolation and its potential consequences. Role ambiguity should be handled on a regular basis for distributed teams to function optimally. We advise both leaders and team members to fully engage in communication with their distributed teams, both during and after the present pandemic.

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DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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