ORIGINAL ARTICLE

Can leadership compensate for deficient inclusiveness in global virtual teams?

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Abstract

Although the number of global virtual teams has been growing rapidly, it is still a great challenge to achieve internal collaboration across geographic, cultural, and linguistic barriers. Two factors that have been identified to improve productivity are inclusive group attitudes in the team and the right leadership from the team leader. Although there are strong indications that each of these concepts would have a favourable effect on team member performance, we set out to explore how they function in combination. More specifically, we hypothesise that inspirational motivation from a team leader can compensate for a lack of inclusive group attitudes in the form of team openness to language diversity. We also predict the positive effects of "inspirational motivation" leadership to be stronger than those of the "management by exception" style of leadership. Using responses from 174 team members and their 23 team leaders in the research and development department of a Danish manufacturing organisation, we confirm our hypotheses. This provides clear guidelines for HRM interventions in organisations using global virtual teams.

KEYWORDS

diversity, global virtual teams, inclusive group attitudes, inspirational motivation leadership, language, transformational leadership

1 | INTRODUCTION

A central element in managing human resources is to create a work environment where motivated employees strive to do their best to advance organisational performance (Kuvaas, Dysvik, & Buch, 2014). Although this was traditionally a concern of a more or less detached specialist HRM function, activities have gradually been devolved to line managers and supervisors closer to the operations (Bos-Nehles, van Riemsdijk, & Kees, 2013; Gilbert & Winne, 2015; Purcell & Hutchinson, 2007).

The use of line managers in HRM activities has been argued to set a "softer" and more people-oriented course emphasising leadership, culture, communication, and motivation (Cook, Mackenzie, & Forde, 2016; Thornhill &

Saunders, 1998). Using this approach, line managers play a vital role in aligning the efforts of their team members with centrally formulated HRM initiatives (Gilbert & Winne, 2015). The more people-oriented style of line managers has to a great extent influenced perceptions on how to mobilise and manage performance in global virtual teams where direct contact is rarely possible (Harvey, Novicevic, & Garrison, 2004). In this context, the team leader is an example of a line manager that makes HRM come to life through appraising, developing, involving, and communicating over a geographical, cultural, and linguistic distance (Cardy & Miller, 2015; Scott & Wildman, 2015).

Although a growing body of virtual team literature is emerging, there are few studies assessing the role of leadership in virtual teams that are also globally dispersed (see, however, Davis & Bryant, 2003). With regard to *domestic* virtual teams, Dionne, Yammarino, Atwater, and Spangler (2004) have argued that inspirational motivation leadership can, in particular, support virtual teamwork outcomes by creating shared goals and thus facilitate a sense of direction. Purvanova and Bono (2009) similarly argue that this type of leadership strengthens the use of communication to motivate team members to reach a common goal. This is very important in virtual teams where interaction is less natural due to the dependence on technology-mediated communication. The technology-based interaction often leaves team members feeling more distant and anonymous (Hambley, O'Neill, & Kline, 2007; Hoyt & Blascovich, 2003) as well as confused and without a clear sense of purpose (Harvey et al., 2004). Accordingly, inspirational motivation leadership may be particularly useful in virtual teams given the difficulty of developing a collective sense of direction at a distance.

Apart from leadership, group functioning is described as central for teams (Homan & Greer, 2013). This is because teamwork is characterised by team member interdependence. Therefore, internal communication among team members will often assist in clarifying the shared goals and organising the ensuing task execution (Mohr, Young, & Burgess, 2012). For this to work well, the group needs to be socially coherent with inclusive attitudes that allow individuals to work as a team (Brahm & Kunze, 2012; Homan & Greer, 2013). Such inclusive attitudes, however, will be less attainable when work groups are highly culturally and linguistically diverse as is the case for *global* teams. For example, negative emotions, rather than inclusive group attitudes, have been found to result from differences related to culture and language among team members in multinational teams (Stahl, Maznevski, Voigt, & Jonsen, 2010; Tenzer & Pudelko, 2015). In essence, *global virtual* teamwork involves greater physical distance and less natural communication (due to the nature of virtual teams) as well as difficulties achieving inclusive group attitudes resulting from linguistic and cultural heterogeneity (due to the nature of working globally; Davis & Bryant, 2003; Homan & Greer, 2013; Shin, Kim, Lee, & Bian, 2012). These conditions pose novel challenges to the role of team leaders in managing human resources. They also make leadership particularly important in global virtual teams because one cannot expect the group to manage internal communication under such circumstances. It is therefore more relevant to focus on the role of the leader making up for poor group dynamics rather than the other way around.

Although other inclusive group attitudes (e.g., openness to cultural differences) are also important, the central role of language in a global virtual team has been emphasised (Hinds, Neeley, & Cramton, 2014; Klitmøller, Schneider, & Jonsen, 2015). This can be related to such teams having to communicate mainly via different electronic media (e.g., videoconference, telephone, and email) rather than through direct face-to-face interaction. It has therefore been argued that the virtual environment reduces the significance of culture while increasing the role of language (Shachaf, 2008). Hence, using different languages becomes a great concern in this environment as no translational cue from physical interaction can be registered. For example, Tenzer and Pudelko (2016) found that language created collaboration difficulties in multilingual virtual teams that were not found in monolingual virtual teams. Also, Lauring and Klitmøller (2015) found that language-based collaboration problems increased when teamwork took place in a virtual context compared to face-to-face interaction. We therefore see openness to language diversity as central to teamwork in a global virtual setting.

Although both inspirational motivation leadership and openness to language diversity may have constructive effects on team member performance, it is unknown how they work in combination. To gain a greater understanding

of this relationship, we take as our departure theories of superordinate goals in social interaction (Fay, Borrill, Amir, Haward, & West, 2006; Neuberg, 1989; Sherif, 1958). Based on this, we propose a model on the connection between inclusive attitudes and leadership in global virtual teams.

This article begins with a consideration of the role of inclusive attitudes and leadership in global virtual teams. It then elaborates on a theoretical explanation for how inspirational motivation (transformational leadership) can compensate for lack of inclusiveness in the form of openness to language diversity and why the effect of management by exception (transactional leadership) will be weaker. We argue that using inspirational motivation allows the team leader to provide superordinate goals that will give the global virtual team members a shared direction in their work. In this way, team members will not need to possess openness to language diversity to facilitate internal communication, and this will become less important for their performance. The theoretical explanation forms the basis of the hypotheses tested in the study.

2 | CONCEPTUALISATION AND THEORETICAL DEVELOPMENT

2.1 | Inclusive group attitudes

Global virtual teams are groups of geographically dispersed team members that are connected using telecommunication and information technologies to accomplish a variety of tasks (Kirkman & Mathieu, 2005). Another defining characteristic of such teams is diversity on multiple dimensions such as culture and linguistics (Zellmer-Bruhn & Gibson, 2006). The combination of spatial dispersion and cultural and linguistic heterogeneity reduces team cohesion that is generally known to have negative consequences for group functioning and individual performance (Homan & Greer, 2013; Shin et al., 2012). However, certain inclusive group attitudes have been found to alleviate the unfavourable results of team diversity, namely, a shared openness and tolerance towards internal dissimilarities (Chavez & Weisinger, 2008; McKay, Avery, & Morris, 2009). In this regard, Sawyer, Strauss, and Yan (2005) define inclusive group attitudes in diverse teams as awareness and acceptance of both the similarities and the differences that exist among group members. Such favourable attitudes could assist in reducing the disadvantages of demographic heterogeneity (Hobman, Bodia, & Gallois, 2004; Homan et al., 2008). Inclusive group attitudes have been argued to be even more important in virtual teams due to the documented need for a positive social atmosphere (Coppola, Hiltz, & Rotter, 2004) and for creating feelings of equality and connectedness across a distance (Boros, Meslec, Curseu, & Emons, 2010). Finally, such attitudes have been shown to be especially effective in socially fragmented settings with weak norms, as in the case of virtual teams (Klein, Knight, Ziegert, Lim, & Saltz, 2011). As global virtual teams work together without physical proximity, the positive group attitudes are often directed particularly towards the norms for internal communication and language use (Klitmøller & Lauring, 2013).

2.2 | Openness to language diversity

Openness to language diversity should here be conceived of as team attitudes to internal communications that allow others to take part in the dialogue regardless of inherent language differences, such as variations in accents and in language proficiency levels. Studies have shown that such acceptance may be particularly important because having to communicate in a common language, other than one's own native language, and even where proficiency levels are high, is a nuisance leading to reduced and more shallow interaction (Lauring & Selmer, 2010; Volk, Köhler, & Pudelko, 2014). Moreover, communication will be biased towards those individuals who speak one's own native language (Hinds et al., 2014). Openness to language diversity may thus be critical to global virtual team functioning because it enhances individuals' willingness to communicate internally and potentially diminishes team internal subgroup formation based on variations in language use. However, these inclusive practices do not always materialise (Hobman et al., 2004). In such cases, more direction may be needed from the team leader.

2.3 | Inspirational motivation and management by exception

The transformational and transactional model has been seminal in leadership research (Bass & Riggio, 2006). Here, transformational leadership has been described as a style of leadership where the leader works with subordinates in creating a vision to guide change through inspiration (Schippers, Den Hartog, Koopman, & van Knippenberg, 2008). This style of leadership is composed of idealised charismatic influence, inspirational motivation, individualised consideration, and intellectual stimulation. In general terms, transformational leadership has been argued to be effective for mobilising human resources in distance management (Li, Tan, & Teo, 2012; Purvanova & Bono, 2009).

Transformational leadership has often been contrasted with transactional leadership, which is composed of the "management by exception" and "contingent reward" dimensions (Bass & Riggio, 2006). Transactional leadership does not focus on creating a shared goal to guide subordinates. Instead, it entails an exchange between leader and follower based on control of goal attainment. Transactional types of team leadership have generally been found to be less effective in a virtual context (Purvanova & Bono, 2009; Ruggieri, 2009). This may well be because transactional leadership does not support team cooperation, which is challenging but necessary for performing job tasks in virtual teams (Huang, Kahai, & Jestice, 2010).

In this study, we do not include all transformational and transactional leadership dimensions. Instead, we have chosen to focus on one element in each of these leadership styles that we find most relevant for examining how leaders influence functions in global virtual teams. As a transformational leadership dimension, we include inspirational motivation. This type of leadership relates to the team leader's guidance of team members by proactively articulating a shared goal for the team thus providing meaning through a mental image (Chun et al., 2009; Dionne et al., 2004; Kearney & Gebert, 2009; Schippers et al., 2008).

There are several reasons to include inspirational motivation in the study of global virtual teams. Among the different transformational leadership dimensions, inspirational motivation has often been applied when examining leadership in teams and the promotion of team climate (e.g., Aydin, Sarier, & Uysal, 2013; Bass & Riggio, 2006; Huang et al., 2010; Voon, Monte, Kwang, & Brunswick, 2010). For example, Hirst, van Dick, and van Knippenberg (2009) argue that inspirational motivation leadership helps to build team members' sense of collective value and mobilises team identification. As inspirational motivation espouses collective aims, it renders the team and its goals more salient (van Knippenberg & Hogg, 2003). This helps team members prioritise their goals and channel individual effort (Khoo & Burch, 2008; Pirola-Merlo, Härtel, Mann, & Hirst, 2002).

With regard to work group heterogeneity, inspirational motivation leadership is also of particular relevance. In cognitively diverse teams, Shin et al. (2012) argue that this type of leadership helps individuals that are exposed to a high level of team member dissimilarity to proactively utilise team resources. For example, through inspirational motivation, team leaders can help team members to focus on the task, that is, searching for the different perspectives and ideas among each other. Finally, inspirational motivation has been used in a number of studies on virtual teams (e.g., Dionne et al., 2004; Purvanova & Bono, 2009). This leadership style has, for example, been found to improve task cohesion (Huang et al., 2010) and team formation (Davis & Bryant, 2003) at a distance. In relation to this, Avolio, Waldman, and Yammarino (1991) argue that a specific feature of inspirational motivation is that it can produce individual effort and performance even when the leader is absent. Accordingly, to gain a better understanding of leader influence in global virtual teams, a good starting point is to investigate inspirational motivation leadership.

In order to contrast the effects of inspirational motivation leadership, we also include the management by exception dimension of transactional leadership. Management by exception entails that a leader only takes corrective action when performance criteria are not met, or something goes wrong, but does not give any directions if the present way of working seems functional (Lowe, Kroeck, & Sivasubramaniam, 1996). Management by exception is often used when the leader is forced to have less active involvement with followers, for example, due to geographical distance (Antonakis & Atwater, 2002). We have chosen this particular dimension of transactional leadership because studies show that, for example, compared to contingent reward, management by exception focuses mainly on monitoring problems that may arise (Avolio, Bass, & Jung, 1999). This makes the dimension more relevant as a

contrast to inspirational motivation, which is dealing with the group in a proactive motivational manner. Leaders using management by exception do very little to inspire and unite employees in striving for a shared team goal (Bass & Avolio, 1993).

2.4 | Superordinate goals

We propose that a link between inclusive group attitudes, inspirational motivation leadership, and team member's performance can be explained by theories of superordinate goals. Here, it is suggested that proactive inspiring leaders can help create goals that are compelling to all group members and can be attained only through joint forces (Sherif, 1958). Sherif (1958) argues that such goals become superordinate due to their meaningfulness for the entire group. Subgroup goals or personal goals then become less important. Instead, group members are united in a shared effort to fulfil the superordinate goal. In line with this, Neuberg (1989) theorising on goals in social interaction suggests that providing clear and shared task goals may not change group members' natural tendencies for discrimination towards each other, yet may still override the effects of them. This is because clear and appealing goals redirect the attention of team members from the social environment to the joint work task. More specifically, Neuberg's (1989) theory suggests that a "piecemeal" cognitive process operates whereas people form impressions of others. It is argued that a person takes in information about other persons one bit at a time and composes a profile of these individuals based on the unique set of observed characteristics. Although categorisation, countering openness to diversity, is theorised to be the primary process in initial person perception, what Neuberg (1989) terms "individuation" has been shown to follow under certain conditions, for example, when strong goals for task accuracy are present. In other words, if the individual knows exactly what to do with information coming from other dissimilar individuals, motivated by shared goals, he or she will be less likely to engage with cognitive cues about dissimilarity in categorisation processes and will instead apply his or her energy to solving the immediate task.

Although not relying directly on Neuberg's (1989) theory, Tenzer and Pudelko (2015) theoretically connect leadership and language diversity through shared goals. They argue that leaders can counteract negative emotions caused by language diversity by redirecting attention from the negative situation. They further demonstrate that this can be done by highlighting shared goals. More specifically, it is argued that if the members of a global virtual team focus on a common professional objective, language differences retreat into the background.

Based on this, we propose that inspirational motivation leadership proactively helps to provide superordinate goals that can make individual performance less dependent on language-related inclusive group attitudes in the global virtual team. This is because the individual, despite the disadvantages of language diversity, will primarily focus on achieving the group's superordinate goals with the support of the inspiring leader. We do not expect that the management by exception style of leadership will promote superordinate goals as it is directed reactively towards the individual's performance. Therefore, the team will not be united in the joint work towards a superordinate goal.

3 | HYPOTHESES

3.1 | Openness to language diversity

Useful results on inclusive attitudes have been found at the individual level (e.g., Hobman et al., 2004) and the team level (e.g., Homan et al., 2008). However, examining how team level diversity attitudes affect individuals, as we do here, should demonstrate how context can influence the behaviour of a single person (e.g., McKay et al., 2009). This is relevant because not all individuals respond similarly to the same group environment and because the social organisation of the group can have an important influence on individual outcomes (Shin et al., 2012). Accordingly, we assess how inclusive attitudes at the group level influence individual level performance.

With regard to the effect of openness to language diversity on team member performance, Lauring (2008) describes how individuals often group together along language boundaries in multinational contexts. In consequence,

language differences determine which individuals are isolated and which are included. Hence, individuals in teams that generally have developed negative attitudes to variance in language use can be restricted in their interaction and collaboration with speakers of other languages (Hinds et al., 2014). This behaviour is likely to cut-off team members from valuable information about the job held by others in the team (Shin et al., 2012). However, in cases where there is high openness to language diversity, this will enable individuals to communicate with a wide range of different team members and thus allow them to more fully use the value of the group's knowledge and skill variety (Stahl et al., 2010). The improved collaboration will subsequently increase the individual team member's ability to perform his or her job (Lauring & Selmer, 2011). We therefore hypothesise

> **Hypothesis 1.** *There is a positive association between a team's openness to language diversity and an individual team member's job performance.*

3.2 | Inspirational motivation leadership

Inspirational motivation leadership has been found to have a direct effect on team member performance (Chun et al., 2009). Leadership, however, has also been found to interact with other variables in many team situations. For example, Jansen, George, Van den Bosch, and Volberda (2008) found that senior directors' involved leadership moderated the relationship between co-located top management teams' social integration and organisational outcomes. Moreover, Purcell and Hutchinson (2007) argue that insufficient HR policies can sometimes be rescued by good leadership. Accordingly, a number of studies exist indicating that leadership, as a moderating factor, can make up for insufficient team processes.

With regard to goal setting, Hunger and Stern (1976) found that a superordinate goal could limit conflicts and discrimination among group members although the sources of frustration continued to aggravate. In a more recent study on health professional teams, it was demonstrated that the creation of superordinate goals worked as the integrating "glue" to override team differences and discrimination (Fay et al., 2006). Regarding the role of the team leader, Rico, Sánchez-Manzanares, Antino, and Lau (2012) found that team leaders could design superordinate goals that created more bridging practices between team members, which in turn minimised the attention to team differences. Finally, Davis and Bryant (2003) showed inspirational motivation leadership to be particularly important in the early stages of global virtual team formation. This may well occur when team members themselves have not yet learned to overcome barriers to internal communication. Based on the above, we present the second hypothesis:

> **Hypothesis 2.** *The relationship between a team's openness to language diversity and an individual team member's job performance is moderated by inspirational motivation leadership, such that lack of openness to language diversity has a weaker negative effect on performance when inspirational motivation leadership is strong.*

3.3 | Management by exception leadership

Studies have generally found management by exception leadership to have a lower correlation with performance compared to inspirational motivation (Bass, 1997; Lowe et al., 1996). According to Bass and Avolio (1993), this may be related to management by exception promoting individuals that seek to work as independently from their co-workers as possible. They argue that rather than influencing team members to collaborate to meet a common goal, management by exception will lead to cooperation that is based mainly on individual negotiations. As the team leader rewards the individual effort, the group is not prompted to share information and to communicate on how to solve their tasks. A further distinction between management by exception and inspirational motivation is outlined by Breevaart et al. (2014) arguing that leaders who use management by exception lack inspirational appeal and motivational power. The team leader thereby does not directly aim to inspire and motivate team members to follow

a superordinate goal. Therefore, this type of leadership behaviour is not an optimal compensation for insufficient inclusiveness in a global virtual team (cf. Purvanova & Bono, 2009). We therefore present the last hypothesis:

Hypothesis 3. *Compared to inspirational motivational leadership, management by exception has a weaker moderating effect on the relationship between a team's openness to language diversity and an individual team member's job performance so that management by exception will compensate for lack of openness to language diversity to a lesser degree.*

4 | METHODS

4.1 | Data collection

This study used data from virtual research and development (R&D) teams in a large Danish multinational company in the manufacturing sector. Access was granted to survey all 33 virtual R&D teams. Because Gilson, Maynard, Young, Vartiainen, and Hakonen (2015) have raised concern about the majority of research on virtual teams being based on self-report instruments, two English language questionnaires were created: one for the team leaders and one for their team members. Both questionnaires had to be completed electronically. Although the team members were asked questions concerning their work outcomes, the team leaders had to answer questions concerning the attitudes and dynamics within the virtual team. In total, 33 team leaders and their 300 team members were invited to participate in the survey. Twenty-three team leaders responded to the study (response rate: 70%) as well as 220 team members (response rate: 73%). This made it possible to study 23 teams with between 3 and 13 respondents, forming 174 team members. For the remaining 46 responding team members, we had no data from their team leader and thus had to leave them out of this study.

4.2 | Sample

The 174 virtual team members included in this study had an average age of 41.83 years (SD = 9.91). A clear majority of them was male (80.46%) and of Danish origin (55.75%). Chinese born employees accounted for approximately 16% of the sample. Other well-represented nationalities were American, Hungarian, and German born employees. Teams generally included members from all continents. However, apart from a few exceptions, team members had all experienced a face-to-face meeting with the other team members. The corporate language in the organisation is English, but the mean number of languages spoken in the team was 3.2. On average, the team members had worked for 9.97 years (SD = 9.19) at the company and for 2.09 years (SD = 2.71) in their primary virtual team.

The company has a long history in Denmark. However, in the last decades, there has been an intensive focus on expanding core activities globally. Among the initiatives taken is creating a global R&D department. This has meant that R&D has gone from being an entirely Danish operation to now being located also in the USA, China, and Hungary. To increase the effectiveness within the new global R&D department, a key strategy has been to utilise global virtual teams to reap the benefits of the international organisational structure.

In the R&D department, all virtual teams have a designated leader and start off with a face-to-face meeting, usually in Denmark. From there on, team members communicate by use of email, virtual meetings, telephone, and Yammer, which is a programme that allows individuals to pose questions for the whole team to answer. All employees are organised in a primary virtual team with a designated team leader. However, it is also possible to be connected more loosely to other secondary teams for a longer or shorter duration.

4.3 | Instrument

Background variables used by other virtual team studies (Gilson et al., 2015; Morris & Venkatesh, 2000) were measured by single direct questions to the team members. For example, "How old were you at your last birthday" (age),

"Are you (1) male (2) female?" (gender), "How long have you worked for your company?" (company tenure), "How long have you worked in your current primary global virtual team?" (virtual team tenure), and "What is your current nationality?" (nationality). An additional binary nominal variable was introduced to control for the influence of having a Danish versus having a foreign nationality. All other variables were measured using established multi-item scales and were answered either by the team members or by their respective team leaders. Response categories for all multi-item scales, except for job performance, ranged from (1) *strongly disagree* over (4) *neutral* to (7) *strongly agree*.

4.3.1 | Team members

Job performance was assessed by team members using a four-item, 7-point scale by Earley (1987), which was completed only by the team members. Sample item: "How would you rate your overall performance?" (α = .79). Here, response categories ranged from *poor* (1) over *neutral* (4) to *excellent* (7).

4.3.2 | Team leaders

Openness to language diversity was assessed by a three-item, 7-point scale originally developed by Lauring and Selmer (2012). Instead of the four-item version, we used the three-item version that was also applied in a study on academic team leaders by Lauring, Paunova, and Butler (2015). Team openness to language diversity was rated by the team leaders. Sample item: "In my team, members enjoy doing jobs with people despite of language barriers" (α = .85). *Inspirational motivation leadership* and *management by exception* were assessed by the inspirational motivation leadership and management by exception subscales from Bass and Avolio's (1997) multifactor leadership question- naire S6 index. This was completed by the team leaders. Inspirational motivation leadership was measured using two items: "I help others find meaning in their work" and "I provide appealing images about what we can do" (IIC = .54).[1] One item of the original scale had to be removed in order to improve the reliability: "I express with a few simple words what we could and should do". *Management by exception* was measured using a three-item, 7-point scale by Bass and Avolio's (1997). From the original three items, the following two were retained in the scale: "As long as things are working, I do not try to change anything" and "I feel satisfied when my team members just meet agreed- upon standards" (IIC = .57). This information was also provided by the team leaders.

4.4 | Analysis

The sample consisted of more than one respondent per global virtual team. For this reason, the data of the 174 team members (Level 1) were not statistically independent, as they were nested within their 23 global virtual teams (Level 2). The intraclass correlation coefficient was calculated to be 0.04 for job performance. The full model included an identifying multilevel variable to control for the nested effect, whereas the simplified model did not. The relative fit of the models was evaluated using Akaike's information criterion (AIC) and the Bayesian information criterion (BIC) where a decrease in the information criterion statistics suggests an improvement in goodness-of-fit. In moving from the simplified model to the full model, the AIC and BIC test statistics decreased from 4,381.2 to 4,345.8 and 4,479.2 to 4,415.3, respectively. This suggests an improvement of fit when accounting for the co-dependence of observations on the lower level, thus indicating that a multilevel model should be used to analyse the hypotheses.

5 | RESULTS

Table 1 displays sample means, standard deviations, and Pearson correlations of the variables included in this study at the higher and lower level.

Because the present data were multilevel, the hypotheses were formally tested using hierarchical linear modelling (HLM). The Snijders/Bosker *R*-squared was calculated for both Levels 1 and 2. When comparing two models, the

TABLE 1 Means, standard deviations, and correlations among the lower level and higher level variables

Lower level									
Variables		Mean	SD	1	2	3	4	5	6
1.	Job performance	5.57	0.72	1.00					
2.	Age	41.83	9.91	0.03	1.00				
3.	Gender	0.80	0.40	−0.21***	0.05	1.00			
4.	Nationality	0.56	0.50	0.14	0.34***	−0.06	1.00		
5.	Company tenure	9.97	9.20	0.08	0.66***	0.05	0.35***	1.00	
6.	Virtual team tenure	2.10	2.71	0.16**	−0.00	0.16**	0.05	0.11	1.00
Higher level									
Variables			Mean	SD	1	2	3		
1.	Openness to language diversity		5.36	0.93	1.00				
2.	Inspirational motivational leadership		5.37	0.80	0.26	1.00			
3.	Management by exception		3.61	1.29	−0.04	−0.40*	1.00		

Note. Lower level, *n* = 174; higher level, *n* = 23.

*p < .1.

**p < .05.

***p < .01.

Snijders/Bosker *R*-squared is higher for the model with the greater likelihood (Snijders & Bosker, 2012). The HLM results are displayed in Table 2.

Model 1 shows the HLM results from regressing job performance on individual-level control variables only. Model 2 regresses the work outcome variable on the individual-level control variables and on the team's openness to language diversity. This model is employed to test Hypothesis 1, which suggests that openness to language diversity within a team is positively related to a team member's job performance. A positive and significant relationship between job performance and openness to language diversity supports Hypothesis 1 (β = .12, *p* < .05).

Model 4 additionally regresses the work outcome variables on inspirational motivation leadership and on the interaction term between inspirational motivation leadership and openness to language diversity. This is done in order to test Hypothesis 2 according to which the effect of the team's openness to language diversity on the team member's job performance is moderated by the degree of inspirational motivation leadership. The interaction term is found to be a highly significant negative predictor when Model 4 is estimated (β = −.16, *p* < .05). Consequently, Hypothesis 2 is supported. Comparing Models 3 and 4, it is clear that management by exception has a weaker moderating effect on the relationship between the team's openness to language diversity and the individual team member's job performance compared to inspirational motivation leadership. Thus, Hypothesis 3 is supported.

The AIC, BIC, and deviance indicate the goodness-of-fit of the respective models. The model fit improves after including openness to language diversity as a predictor, and even more so after including the remaining Level 2 effects (though the fit is best when inspirational leadership is included rather than management by exception). This reflects the fact that all the Level 2 effects are estimated to be significant in Model 4. Consequently, the Snijders/Bosker *R*-squared increases from .10 (Model 1) to .23 (Model 2) and finally to .29 (Model 4).

When estimating Model 4 on work performance, the results show that the positive association between individual job performance and the team's openness to language diversity will be more positive when inspirational motivation leadership is low. Figure 1 illustrates this association: The team's openness to language diversity is related more positively to the team member's job performance when inspirational motivation leadership is lower (−1 *SD*, solid line) rather than higher (+1 *SD*, dashed line). Accordingly, inspirational motivation leadership has a buffering interaction effect on the relationship between the team's openness to language diversity and the individual team member's job performance.

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TABLE 2 Results of hierarchical linear modelling

	Job performance			
Variables	Model 1	Model 2	Model 3	Model 4
Level 1: Main effects				
Intercept	5.81*** (0.28)	5.15*** (0.39)	6.57*** (1.34)	0.36 (2.28)
Age	−0.00 (0.01)	−0.00 (0.01)	−0.00 (0.01)	−0.00 (0.01)
Gender	−0.42*** (0.13)	−0.39*** (0.13)	−0.39*** (0.13)	−0.37*** (0.13)
Nationality	0.14 (0.12)	0.15 (0.11)	0.14 (0.11)	0.15 (0.11)
Virtual team tenure	0.05** (0.02)	0.05*** (0.02)	0.06*** (0.02)	0.06*** (0.02)
Company tenure	0.00 (0.01)	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)
Level 2: Main effects				
Openness to language diversity		0.12** (0.05)	−0.13 (0.22)	0.98** (0.40)
Management by exception			−0.39 (0.29)	−0.04 (0.04)
Inspirational leadership			0.03 (0.08)	0.94** (0.42)
Level 2: Interaction				
Management by exception x Openness to language diversity			0.06 (0.05)	
Inspirational leadership x Openness to language diversity				−0.16** (0.07)
Snijders/Bosker $R^2_{within-team}$	0.10	0.12	0.15	0.17
Snijders/Bosker $R^2_{between-teams}$	0.10	0.23	0.28	0.29
ICC	0.03	0.01	0.00	0.00
AIC	376.27	373.64	370.44	367.02
BIC	401.55	402.07	402.03	398.61

Note. ICC = intraclass correlation coefficient; AIC = Akaike's information criterion; BIC = Bayesian information criterion. Two-tailed n = 174 team members (Level 1) in 23 global virtual teams (Level 2).

*$p < .1$.

**$p < .05$.

***$p < .01$.
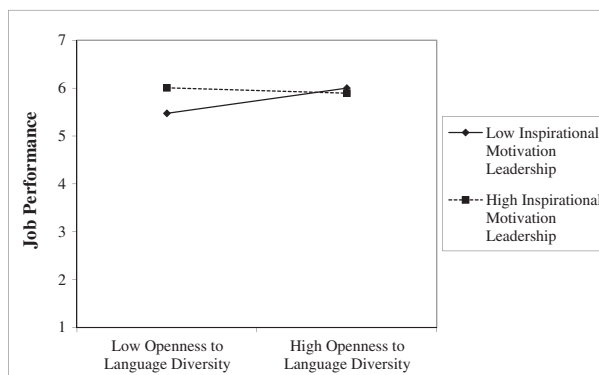
FIGURE 1 Level 2 interaction plot

Simple slope tests indicated that the relationship between the team's openness to language diversity and the team member's individual job performance was significant at low (−1 SD: t = 3.04, p < .01) and medium levels (t = 2.16, p < .05) of inspirational motivation leadership, but not at high levels (+1 SD: t = −0.80, p > .1). The resultant empirical model is depicted in Figure 2.

6 | DISCUSSION

The purpose of this study was to examine the effect of team openness to language diversity on global virtual team member performance and to determine if the team leader's style of leadership affected this relationship. We draw on superordinate goal theory (Neuberg, 1989; Sherif, 1958) to argue that inspirational motivation leadership (a dimension of transformational leadership) can compensate for lacking inclusive attitudes by providing a common goal but this is not the case for management by exception leadership (a dimension of transactional leadership). The empirical study confirmed our theoretical assumptions. This research is important to better understand the possibilities for performance management of team leaders working across geographical, cultural, and linguistic divides.

6.1 | Theoretical contributions

Using superordinate goal theory (Neuberg, 1989; Sherif, 1958), this study offers a model for understanding the role of leadership style in overcoming a low level of inclusive attitudes with regard to language. Openness to language diversity allows effective internal global team communication but is hard to achieve in a virtual setting. We extend the existing literature by providing a new model for the relation between team inclusive group attitudes and leadership in global virtual teams.

6.1.1 | Contribution to the literature on team inclusive group attitudes

A number of studies have explored the effects of team inclusive group attitudes in relation to team and individual level work outcomes (Hobman et al., 2004; Homan et al., 2008). As this body of literature has mainly dealt with domestic team inclusive group attitudes, language has only received scant attention. Our study suggests that openness towards language diversity is important for team members' performance in a global context. This emphasises the need for team members to be able to accept the challenges of having to communicate in different languages. In
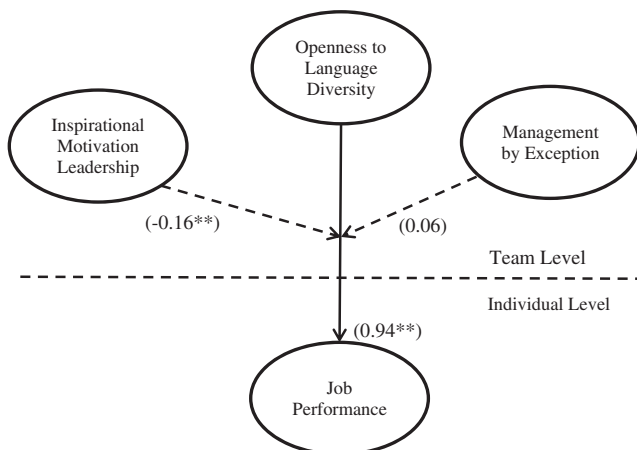
FIGURE 2 Empirical model on the compensating effect of leadership in virtual teams

a self-report sample of academics, Lauring and Selmer (2011) also found a positive association between individual level openness to language diversity and performance. In our study, we use different raters to assess the relation between team openness to language diversity and individual performance in global virtual business teams. Accordingly, we offer more solid evidence for the effects of openness to language diversity on individual performances in a global virtual team context thus supporting existing findings. Our study, however, did not assess the effect of team openness to language diversity on team level performance. As other studies have found positive diversity attitudes to have a general impact also at the team level, it could be speculated that this would also be the case here (Homan et al., 2008; McKay et al., 2009). Nevertheless, to test this, a larger sample would be needed.

6.1.2 | Contribution to the literature on leadership in global virtual teams

The current study also responds to calls for more research on leadership in global virtual teams that has been argued to be a neglected area in international HRM (Zander, Mockaitis, & Butler, 2012). To add new knowledge to the global virtual team field, we combine results from virtual leadership research with recent findings on global team language management. In domestic virtual team research, transformational and transactional leadership styles have generally been found to produce different effects with the latter being the least effective (Huang et al., 2010; Purvanova & Bono, 2009; Ruggieri, 2009). In relation to language and leadership, Tenzer and Pudelko (2015) suggest that a leader of a global team can distract the team from language related problems by setting a clearly formulated goal. By combining these insights on different styles of leadership and on language and leadership, we show that in a global virtual context, where a positive communication climate can be difficult to achieve, goal setting from the team leader is highly important. This supports Purcell and Hutchinson's (2007) argument that leadership can make up for insufficiencies in other HRM activities, for example, related to development of social climate. However, our research shows that not all types of leadership are equally effective in a global virtual team context. Although inspirational motivation leadership provided goal setting that compensated for lacking inclusive team attitudes, management by exception had no effect. We suggest that this is because management by exception does not prompt team members to collaborate to meet a shared goal (Bass & Avolio, 1993). Still, it is unclear what type of shared team goals would be most effective. Although one may speculate that goals related directly to the problems concerning language diversity would be more productive, Hunger and Stern (1976) have shown that even types of superordinate goals not directed at solving a team's problem can have a positive impact on the group outcomes.

Our findings also respond to several calls made for more research on the relation between leadership and context in virtual teams (Avolio, Sosik, Kahai, & Baker, 2014; Huang et al., 2010; Kahai, Huang, & Jestice, 2012). We demonstrate that there is indeed an interaction between team attitudes as a contextual factor and inspirational motivation leadership in producing more favourable individual level outcomes. This could be related to the findings by Brahm and Kunze (2012) showing that virtual team trust climate interacts with goal setting in the prediction of team performance.

A more general conclusion in the HRM area is related to the role of line managers in actually being able to compensate for inefficient group dynamics by applying relevant leadership practices. This may be particularly useful in complex situations where the context provides obstacles to employees' opportunities for communicating. Thus, line managers' compensating leadership practices are a relevant addition to "classic" HRM practices of employee selection, training, and development of internal group norms (cf. Brewster, Brookes, & Gollan, 2015).

Our findings regarding the importance of inspirational motivation leadership in a global virtual team context also add novel insight to the superordinate goal theory. So far, this theory has only been applied in co-located diverse teams (e.g., Gaertner et al., 2000; Hogg, 2015). Our study provides evidence that gathering teams around inspiring shared goals can have positive group effects even at a physical distance. This could be a valuable addition to middle

managers' repertoire of approaches to human resource development in global virtual teams. An additional finding that could contribute to develop superordinate goal theory further is that the type of leadership applied can determine the effectiveness of overcoming problems with internal collaboration. Extant research has mainly aimed at documenting an effect of superordinate goals on internal group processes without taking into account specific types of leadership for advancing such goals (e.g., Fay et al., 2006; Neuberg, 1989; Rico et al., 2012; Sherif, 1958). Taking departure from our findings, more research could explore the role of certain types of leadership for effectively using superordinate goals setting.

Having targeted global multilingual virtual teams, it has been argued that, in comparison with more traditional co-located multilingual teams, differences exist in relation to team dynamics as well as team leadership. When comparing virtual and co-located aspects of teams, it is more difficult to develop shared goals in virtual teams as these teams have less internal communication than co-located teams (Harvey et al., 2004). This could have two consequences for co-located multilingual teams in relation to our results, namely, that openness to language diversity would be easier to develop in the first place due to a higher interaction level. And second, that there would be less need for a team leader to set goals as stronger internal team processes and joint bonding behaviour would better facilitate development and transfer of team goals (Brahm & Kunze, 2012). Additionally, it has been argued that the difference in effectiveness between inspirational motivation leadership and management by exception leadership is more prominent in virtual than in co-located teams (Avolio et al., 2014; Huang et al., 2010; Kahai et al., 2012). Hence, although this could change with the technical circumstances surrounding virtual teams or team member experiences with working in a virtual setting, we predict that our results would not be as clear had we focused on co-located multilingual teams. Moreover, it is likely that our results would be even weaker in a domestic monolingual setting where team openness to language diversity would have little effect thereby rendering the need for compensating leadership practices unnecessary. This could also be true for other types of inclusive group attitudes in global virtual teams. However, due to the scarcity of research on global virtual teams, this proposal needs to be further explored in coming studies. Overall, we suggest that in comparison with domestic co-located teams, the conditions of global virtual teams underpin the importance of specific leadership practices to compensate for lack of team inclusive group attitudes.

6.2 | Limitations

There are several limitations to the study, theoretical as well as methodological. In relation to the theoretical development, we settled upon specific choices for our research. First, in the theoretical model, we assume a direction of the causality where the global virtual team leader will be able to intervene in case of negative group dynamics—instead of positive group dynamics compensating for poor leadership. To elaborate on this, in co-located teams, good group dynamics and internal communication could lead to a self-managing team with little need for a team leader to provide shared goals (Brahm & Kunze, 2012). However, in a global virtual context, due to combined geographical, cultural, and linguistic distances, constructive group dynamics are often weak, and the leader needs to take over (Davis & Bryant, 2003; Huang et al., 2010). In this regard, Avolio, Kahai, and Dodge (2000) have emphasised the important role of the team leader in a virtual team due to leaner communication making the need for directives all the greater. In other words, although leadership may compensate for insufficient inclusiveness in a global virtual team, it will be much more difficult to rely on the group's internal social climate to compensate for weak team leadership. Still, a worthwhile task in future studies would be to assess the role of positive group dynamics in case of poor global virtual team leadership.

We also made a theoretical decision related to selection of the variables employed. Different dimensions of the MLQ S6 could have been applied to represent transformational and transactional leadership. For example, rather than inspirational motivation, we could have used idealised charismatic leadership. According to Barbuto (1997), these styles of leadership imply that the followers view their leader as holding extraordinary power resulting in them showing more loyalty. Although idealised charismatic leadership may also be relevant for global virtual

team research, we have chosen not to focus on loyalty towards the leader. Instead, with inspirational motivation, we assess leader influence that develops a shared direction for the team. This is because the creation of such a shared direction is an overarching challenge in a global virtual team and therefore also an object for much research (Brahm & Kunze, 2012; Davis & Bryant, 2003). Moreover, instead of management by exception leadership, we could also have selected the other transactional leadership variable, namely, contingent reward leadership. However, contingent reward is often found to have an overlap with transformational leadership (including inspirational motivation) rather than transactional leadership and would as such be less useful for showing a contrast to inspirational motivation leadership (Bass, 1997; Lowe et al., 1996; Palmer, Walls, Burgess, & Stough, 2001). Although we, for good theoretical and practical reasons, selected only one transformational and one transactional leadership dimension, further research should try to incorporate the full MLQ index to assess variance among the different types of leadership styles.

With regard to our applied methods, our study is also not without its limitations. First, the sample size is relatively small. However, this is often the case in team research, and our statistical results are quite unambiguous. Moreover, in connection to the sample size on upper level, we follow the recommendations put forth by Rabe-Hesketh and Skrondal (2012) about a minimum of 10–20 clusters for a random effect estimation. Furthermore, we rely on the argumentation done by Bell, Morgan, Schoeneberger, Kromrey, and Ferron (2014) that small upper level observations are not a problem for accuracy, but rather for achieving desired power, which is not a problem in our model. Second, we used self-rating of team leaders' leadership behaviour and of the employees' job performance. This could be a problem although self-report performance measures have been found to be fairly accurate (Goffin & Gellaty, 2001). This argument is supported by the relatively strong cross-rater effect of openness to language diversity on performance. Hence, self-rating is not perceived to be an important problem in this study. Nonetheless, future studies should improve the exploratory design of this research by using aggregated team member evaluations for assessing the team leader's behaviour and team leader ratings for each individual employee. This, however, could result in other methodological problems such as lower response rates. Especially, it could be difficult to have team leaders assess the performance level for all individual team members.

6.3 | Implications for managers

As the number of global virtual teams is increasing dramatically these years, our findings are of practical importance for the HRM area. First, the study demonstrates that HRM personnel could engage in training and development activities aimed to increase global virtual teams' openness to language diversity such as diversity awareness training (cf. Kulik & Roberson, 2008). More importantly, however, our results indicate that inspiration motivation leadership offers the needed goal setting to make global virtual teams overcome problems related to insufficient internal communication. Management by exception, however, will not have the same constructive effect. This provides a foundation for the selection, training, and appraisal of team leaders in order to improve the performance management of global virtual teams.

Although global HRM selection procedures have been argued to be fairly proficient in securing managers with technical expertise, less attention has been directed towards leadership styles (cf. Muethel, Gehrlein, & Hoegl, 2012). Our findings suggest that those responsible for selecting team leaders for global virtual teams should focus on individuals prone to an inspirational motivation style of leadership or at least have the abilities and the willingness to develop such qualities. A number of tools exist to assess the personality and leadership style of individual organisation members (cf. Den Hartog, Caley, & Dewe, 2007). These can be applied when promoting team members to become team leaders.

With regard to training and development, a positive result of transformational leadership training techniques has been documented (Barling, Weber, & Kelloway, 1996). In addition to such development programmes, training in methods to best exercise inspirational motivation leadership in a global virtual environment could be offered. For

example, team leaders could be instructed in how to use video-sharing, instant messaging, and social media, to effectively transmit their leadership with the aim of reinforcing motivational goal setting (Avolio et al., 2014).

Finally, a way to motivate transformational rather than transactional leadership styles among global virtual team leaders would be to assess and reward this type of behaviour by incorporating it into HRM appraisal systems (cf. Purcell & Hutchinson, 2007). This could prevent the perception among team leaders that inspirational motivation leadership is merely an extra role behaviour.

CONFLICTS OF INTEREST

The authors declare that they have no conflict of interest.

ENDNOTES

[1] As Cronbach's alpha to a certain extent is a function of the number of items, the inter-item correlation (IIC) may be a better measure of reliability for two-item scales with a minimum level of IIC = .25 (Nunnally, 1978).

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