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## More is not always merrier: does leader-team perceptual distance on context influence leadership training transfer?

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### ABSTRACT

Although the organizational context has been identified as an important factor contributing to the success or failure of leadership training initiatives, exploration of the interaction between differing contextual perceptions in relation to the transfer of leadership training is lacking. Building on Oc's framework on context and leadership, we examine how the degree of perceptual alignment of leader and teams on two contextual factors, formalization and employee orientation, were related to followers' ratings of transformational leadership after a leadership training in the forest industry ( $n = 37$  leaders). Polynomial regression with response surface analysis revealed that agreement between leaders and their teams on formalization and employee orientation predicted improvements in transformational leadership but only up to a certain point. At high levels of formalization agreement negatively impacted leaders' development of transformational leadership, and at high levels of employee orientation the positive impact of agreement flattened out. Leaders who rated formalization and employee orientation higher than their teams increased their transformational leadership to a lesser extent as rated by their followers. Our findings extend the framework developed by Oc and offer a new perspective on the complex interplay between leader, follower, and contextual factors that all matter for successful leadership training transfer.

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### KEYWORDS

Leader-team perceptual distance; formalization; employee orientation; leadership training; context

Oc (2018) criticized leadership research for failing to consider the organizational context in which leadership takes place. The same can be said for research on the transfer of leadership training. Even though prominent training transfer models suggest that contextual factors are important for translating new knowledge into behaviours at work (Baldwin & Ford, 1988; Burke & Hutchins, 2007), empirical focus on context in leadership training research is lacking. For example, in a recent meta-analysis on leadership training effectiveness, researchers failed to consider the impact of context on training outcomes (Lacerenza et al., 2017). Arguably, the context is particularly important in the case of transfer of leadership training, as the ultimate beneficiaries of leadership training are not leaders themselves but their followers (Kelloway & Barling, 2010). Hence, the context that the leaders return to after training is likely to play a substantial role in the extent to which training leads to changes in behaviours.

Context may be defined as the situational and environmental stimuli that impinge upon focal actors, which provide constraints and opportunities that affect the occurrence of organizational behaviour (Johns, 2006). Previous researchers have found that contextual factors have an important impact on the outcomes of training (Randall & Nielsen, 2012). Other

scholars have found that differing perceptions between leaders and their followers on context have a detrimental impact on employee, leader, and organizational outcomes (Fleenor et al., 2010; Gibson et al., 2009). In the present study, we integrate these findings of the importance of context and align perceptions to explain the transfer of leadership training. We examine the (dis)agreements (i.e., perceptual distance) between leaders and their followers on two contextual factors (i.e., the degree of formalization and employee orientation) on transfer of leadership training in terms of followers' ratings of changes in their leaders' transformational leadership behaviours as a result of a leadership-training intervention.

In the present study, we extend the literature on leadership training transfer and context in three ways. First, we build on Oc's (2018) integrative framework linking context and leadership to further research on contextual influences on the transfer of leadership training. Although the transfer literature suggest that context is important (Baldwin & Ford, 1988), transfer models offer no specific guidelines on what aspects of the context that may be important. Based on Johns (2001), Oc (2018) suggested that discrete contextual factors may help us understand the effects of leadership. Second, transfer models have failed to consider whether leaders' and followers' perceptions of the

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context converge or what the impact of such (dis)agreements is on leadership training outcomes. In previous research, scholars most often considered these discrepancies in perceptions to be errors (Bliese, 2000; Tinsley & Weiss, 1975; Toegel & Conger, 2003) rather than phenomena of interest. In the present study, we extend the work on context and transfer of leadership training by introducing the concept of leader – team perceptual distance. We explore how differing perceptions between leaders and their followers, both in terms of agreement and level of overestimation or underestimation by the leader compared to their followers, on two contextual factors may influence leadership training transfer in terms of followers' perceptions of their leaders' transformational leadership behaviours post-training. These two factors, formalization and employee orientation, reflect the discrete social context, and Oc (2018) argued that they influence leadership styles. Third, we challenge the linear relationships between contextual factors and transfer as suggested by Baldwin and Ford (1988). Instead, building on the vitamin model (Warr, 2017), we propose that contextual factors may also display curvilinear relationships with the transfer of leadership training where high levels of certain contextual factors may be too much of a good thing and have detrimental effects on leadership.

## Hypothesis development

### *Contextual influences on transfer of leadership training*

Transfer of training is commonly viewed as consisting of two dimensions: generalization and maintenance. The former involves the extent to which skills and knowledge learned in training are applied in a different setting, while the latter captures the extent to which these newly acquired skills persist over time (Blume et al., 2010). One common framework in the transfer of training literature is the model developed by Baldwin and Ford (1988). Their model suggests that any transfer after training is dependent on training inputs (trainee characteristics, training design, and context) and training outputs in terms of learning (acquisition of knowledge and skills during training). In the leadership training literature, the focus has primarily been on investigating the role of individual leader characteristics such as ability, motivation, personality, and skill (e.g., Seeg et al., 2021). Focus has also been on training design factors including the objectives and methods of the training, as well as learning principles in terms of multiple training techniques and opportunities to practise skills learned during training (Lacerenza et al., 2017). Although the role of context, in terms of, for example, peer and supervisor support, has been explored in the wider training literature (e.g., Massenberg et al., 2017; Reinhold et al., 2018), relatively little effort has been invested in understanding the role of contextual factors for outcomes of leadership training. This is surprising given that leadership training through improved leadership behaviours, should transform the context, in terms, for example, an improved climate in the organization or working conditions for employees.

One reason for this shortage of knowledge may be that transfer models do not specify which aspects of the context are relevant for the leadership process, and thereby do not offer

any guidelines for researchers on what contextual aspects to include. In a recent review, Oc (2018) suggested an integrative framework for understanding how contextual factors relate to the leadership process and its outcomes. The framework is based on Johns' (2006) categorical dimensions of context and includes the task, social, physical, and temporal context in which leaders interact with their followers (Oc, 2018). We argue that Oc's (2018) framework may be helpful to identify which contextual elements that are salient in the leadership process, and, therefore, imperative when a leader is attempting to perform newly learned leadership behaviours after training. In the current paper, we focus on the discrete social context, which is a contextual dimension that may be regarded as particularly important during leadership training. This is because it involves not only the transformation of the leaders themselves but also that of their followers. More specifically, we focus on the organizational culture, which is an important aspect of the discrete social context suggested to affect the interplay between leaders and followers as well as moderate the effect of this interplay (Oc, 2018). In turn, the visible side of an organization's culture is the specific organizational practices (e.g., behaviours, rituals, and ceremonies) that appear within an organization (Glisson & James, 2002). These practices mirror the beliefs and values of a specific organization, thus being the operationalization of guidelines that regulate the interplay in organizations (Fischer et al., 2014; Kostova, 1999). Two aspects of organizational practices are employee orientation and formalization (Fischer et al., 2014).

Employee orientation refers to the balancing of interest between employee objectives (employee well-being) and organizational objectives (productivity). Employee orientation can thus be seen as manifestations of an organization's values and beliefs when it comes to supporting employees' well-being versus prioritizing production (Fisher et al., 2005). Formalization, on the other hand, focuses on the conflicting needs between employees' autonomy and leaders' control. It is the manifestation of an organization's values and beliefs regarding employees' freedom to make their own decisions versus having to follow formalized procedures and await managerial decisions (Argote & McGrath, 1993; Fischer et al., 2014). Thus, organizations' cultural manifestations in employee orientation and formalization are part of an organization's discrete social context that influences organizational members' behaviours (Fisher et al., 2019; Oc, 2018). Although formalization was initially seen as having a negative impact on employee behaviour, recent studies suggest that it rather facilitates work with improved coordination and communication (Eva et al., 2021; Rahaman et al., 2022; Walter & Bruch, 2010). Formalization may unburden leaders from specific demands by contributing to organizational efficiency through the provision of written rules and procedures that substitute for operational, efficiency-oriented leadership. Instead, the leader can focus on transformational behaviours such as articulating a vision and role modelling behaviours. Empirical studies confirm these suggestions, and formalization has been associated with transformational leadership behaviours (Podsakoff et al., 1996; Walter & Bruch, 2010). Thus, employee orientation and formalization are two aspects of the social context that are important for the leadership process and therefore also has the potential to

positively impact the transfer of leadership training. For example, if leaders perceive that the organization is employee oriented, they may perceive their employees to be more supportive of their efforts to improve their leadership. This may enable leaders to exhibit newly trained behaviours after training. In a similar vein, leaders who perceive that the organization is formalized, may feel unburdened by the structure provided by the organization, and therefore have more time and energy to invest in developing new constructive leadership behaviours during leadership training.

### ***The importance of aligned contextual perceptions***

Various stakeholders seldom see eye to eye (Murphy & Cleveland, 1991; Salam et al., 1997). Work teams and their leaders are particularly prone to form different perceptions on organizational phenomena (Bass & Yammarino, 1991; Beus et al., 2012). Their separate work contexts together with a power differentiation may lead to different sense-making regarding their work context (Beus et al., 2012; Patterson et al., 2004). Information sharing, social interactions, and discussions about work tasks, organizations' events, and priorities are assumed to happen more frequently within organizational subgroups (e.g., work teams) than between the subgroups (work teams vs. leaders). This can cause different perceptions among these subgroups. Indeed, a large body of the literature suggests that teams' and leaders' perspectives on shared organizational factors are often divergent (Bashshur et al., 2011; Gibson et al., 2009; McKay et al., 2009; Nielsen et al., 2022; Tafvelin et al., 2017). Gibson et al. (2009) proposed the term leader-team perceptual distance and suggested that polynomial regression with response surface analysis should be used to analyse these interlinked relationships. Perceptual distance is similar to the concept of self – other agreement in leadership research. However, rather than focusing on various stakeholders' perceptions of leaders' behaviours, perceptual distance refers to studies on the same social stimulus – in this case, the organizational context. Gibson et al. (2009) argued that perceptual differences between a leader and a team should not be disregarded as error. Instead, they can, in and of themselves, have effects on team outcomes. In line with these arguments, Gibson et al. (2009) demonstrated that team performance was higher when the team's and leaders' agreement on goal accomplishment and constructive conflict was high (i.e., the perceptual distance was low). In a similar manner, Bashshur et al. (2011) showed that agreement in leader's and team's perceptions of organizational support resulted in increased team performance. Furthermore, McKay et al. (2009) found that the highest levels of performance were observed when teams and leaders agreed on their perceptions of diversity climates and rated high levels of diversity climates. The importance of aligned perceptions are in line with the literature on climate strength, where agreement among team members on climate perceptions have been found to strengthen the relation between climate and various outcomes (González-Romá et al., 2009; Schneider et al., 2002).

The impact of leader-team perceptual distance may be understood through theories of social exchange (SET: Blau, 1964). When a leader and the team disagree and leader-team

perceptual distance, therefore, is high, based on SET, these differences in perceptions reduce the obligation to reciprocate and over time to perform at high levels. On the other hand, if the leader and the team agree, congruence in perceptions between leaders and teams may, based on SET, reinforce the obligation to reciprocate thereby improving team performance. Translating these ideas into the case of leadership training and context, we suggest that congruence between leaders and their team on the perception on context may have a reinforcing effect and accelerate the impact contextual factors have on leadership training transfer. These ideas, that aligned perceptions of context may accelerate its impact is also in line with theorizing on climate strength, where aligned perceptions create a strong situation, which is expected to accelerate the impact of climate (Schneider et al., 2002). Following this line of reasoning, we argue that leaders who agree with their teams on contextual factors will experience a stronger impact of the contextual factor on transfer, and therefore improve the most as a result of a leadership training.

We propose, however, that certain contextual factors can have a positive impact on training outcomes at certain levels and that levels that are too low or too high can moderate the impact or even reverse the direction of the effect. Such effects are in line with the vitamin model (Warr, 2017) of work-related stress that suggests some specific aspects of working conditions have linear whereas others have curvilinear effects. The vitamin model (Warr, 2017) proposes that the effects of work-related factors may be analogue with the effects of vitamins on the human body – that is, vitamins are important for physical functioning but only up to a certain level. At low levels of intake, vitamin deficiency has a negative impact; however, beyond a moderate level of intake, there are various effects of vitamin intake. For some vitamins (i.e., C and E vitamins), the positive effects wane out, and taking higher doses has no additional positive effects. For other vitamins, overdoses may be toxic, and high levels of A and D vitamins may be toxic and have a detrimental impact on physical health. As such, the vitamin model may be a useful lens to understand the perceptual distance literature in that it helps us understand why levels of agreement may influence outcomes of training.

In the present study, we explore how agreement between leaders and their teams on formalization and employee orientation pre-training influence followers' perceptions of their leader's transformational leadership behaviour post-training. We suggest that formalization may be considered an AD vitamin reflecting what Warr (2017) classified as environmental clarity in terms of clear requirements and low future ambiguity. We therefore expect that agreement between leaders and their teams on formalization may only be beneficial up until a certain point such as at moderate levels of formalization, and that agreement between leader and their teams at high levels of formalization, based on the AD vitamin proposition, may be "toxic" or negative and therefore reduce transfer. We also suggest that employee orientation may be considered a CE vitamin reflecting what Warr (2017) classifies as supportive supervision, including sympathetic consideration and fair treatment by leaders. We, therefore, suggest that agreement between leaders and their teams on employee orientation, based on the CE vitamin proposition, is beneficial for transfer of leadership

training up until a certain point such as moderate levels, but then rather having a constant effect not increasing at higher levels. Thus, based on the vitamin model we propose our first and second hypotheses:

**Hypothesis 1:** Followers' ratings of training transfer in terms of transformational leadership post-training will be highest when leaders and teams agree there is a moderate level of formalization, and lowest when leaders and teams either agree that formalization is low or high.

**Hypothesis 2:** Followers' ratings of training transfer in terms of transformational leadership post-training will be highest when leaders and teams agree that there is a moderate or high level of employee orientation, and lowest when leaders and teams agree that employee orientation is low.

Regarding disagreement between leaders and their teams, Bashshur et al. (2011) found that team performance was lowest when leaders perceived a higher climate for organizational support than their team. In another study, Cole et al. (2013) found that team performance was poorest when leaders' perceptions of power distance were higher than their teams. Bashshur et al. (2011) suggested that when a leader's rating is higher than his or her followers' ratings, this may translate into *laissez faire*, or passive, leadership simply because the leader has failed to understand that the team needs additional support. This is in line with the training transfer literature that has identified motivation as an important predictor of transfer (Fischer et al., 2005; Tafvelin et al., 2021). This situation, where the leader is passive and takes no action, may be troublesome for followers, not only because they experience low levels of, for example, organizational support but also because their leader is taking no actions to deal with the low levels of organizational support perceived by the team. Translating these findings into the transfer of leadership training would suggest that leaders who rate the organizational context as more favourable than their teams will develop less during the leadership-training. This is because they see little need for change and, therefore, lack motivation to learn and apply new knowledge and skills from the training (Yammarino & Atwater, 1997).

However, in the context of leadership training, there may also be other mechanisms at play. Another consequence of leaders rating the organizational context as more favourable than their teams may be that initial attempts to transfer new knowledge and skills are hampered by a context that is not as favourable and helpful as the leader expected. Hence, the leader that initially perceived the organizational context as supportive in terms of employee orientation and with helpful rules, procedures, and regulations in terms of formalization may realize that these perceptions are not shared with their team, and therefore adjust their perception of the context. Therefore, transfer attempts by the leader may be withdrawn or less successful based on a less supportive context. We test the following hypotheses:

**Hypothesis 3:** Followers' ratings of training transfer in terms of transformational leadership post-training will be lower when

the leader's perceptions of formalization are higher than the team's perceptions rather than when the team's perceptions are higher than the leader's perception.

**Hypothesis 4:** Followers' ratings of training transfer in terms of transformational leadership post-training will be lower when the leader's perceptions of employee orientation are higher than the team's perceptions rather than when the team's perceptions are higher than the leader's perception.

## Method

### *Leadership training*

The leadership training was conducted in a Swedish process industry setting before and at the initial stages of a planned organizational change program that stretched over 3 years. The change included new hardware investments and restructuring of the organization to increase the effectiveness of work processes and procedures. The overall aim being to increase productivity. Senior management of the factory initiated the training with the objective of strengthening transformational and transactional leadership skills to manage change and aligning leaders' change communication and support. The training involved all leaders at all levels and was conducted as an on-job training. Thus, in combination, the design and outline of the training focused on increasing the chances of training transfer (Lacerenza et al., 2017) and increase performance of a successful change leadership (Higgs & Rowland, 2011), across the organizations. Transactional and transformational leadership behaviours can improve both employee wellbeing and productivity outcomes (Montano et al., 2017), but also (if the latter is prioritized) improve productivity at the cost of employee wellbeing (Nielsen & Daniels, 2016). Furthermore, these leadership behaviours have been suggested to take both directive and participatory forms (Bass & Riggio, 2006), suggesting that how the social context is understood may shape the direction and form of these desired behaviours.

On an individual level, all leaders were provided with 180-degree feedback on their leadership behaviours from their followers at the start of the training. The feedback was based on leaders' and followers' answers to the multiple leadership questionnaire (MLQ; Avolio & Bass, 2004). Consultants provided an individual feedback session with each leader, during which leaders were able to discuss the results and receive help in writing an action plan based on the results. The leaders were also encouraged to communicate the results of the feedback in their work groups to get further suggestions on what leadership skills they deemed important for their leader to develop. The individually tailored action plans focused on increasing transactional and/or transformational leadership behaviours. Which behaviours were focused upon depended on the feedback but also on the likelihood of being able to produce these behaviours at a reasonable frequency. However, on a general level, these behaviours all could be considered relational, as an effective leadership would demand active and recurrent interactions. For example, a leader could receive feedback indicating a potential to listen more to employee suggestions and

concerns He/she would then be encouraged to develop a plan for creating room for increased dialogue with employees (e.g., asking for employees' opinions within their regular meetings). The follow-up of action plans was integrated into the regular individual meetings held between a leader and his/her immediate leader. Leaders who wished to could also receive individual coaching from consultants based on their individual action plan.

On a group level, two consultants led leadership-training days, including all those conducted by leaders within the time frame of the present study, with 6 months in between. The leadership training during these days was conducted in four organizationally cross-departmental groups, with the main objective to (a) mobilize a common drive for change (e.g., communication of change plans); (b) handle the change process (e.g., being present to answer to employees' questions and concerns); (c) discuss how to manage operations (e.g., making prioritizations); and (d) increase communication and empower relations between managers in different positions and at various departments (e.g., how to align operations between departments and over shift teams). Between the two leadership-training days, small group meetings were held (including three to five leaders) from a mixed part of the organization to discuss challenges, share experiences from their departments, and lend each other support. Dialogue between the participating leader and his or her senior manager was also planned in between these days to set the stage for integration and vertical alignment of each leader's planned change. The consultants provided training tasks (i.e., communicating change, feedbacking results, and initiating dialogue with employees) to the leaders to work on individually between the meetings.

Additionally, a consultant first led a startup workshop that included all leaders. The startup workshop focused on clarifying the contextual pressure and need for change at the factory. This included: establishing a common vision among the leaders of how the future will look after the changes, clarifying their responsibility and displaying successful change examples in the organization, lifting obstacles, and inspiring and motivating the leaders with the objective of instilling a sense of pride and confidence in their work with leading change.

### Participants and procedure

We invited all managers participating in the leadership training ( $N = 89$ ), as well as all of their team members ( $N = 754$ ), to participate in the study. Using an online survey, we administered both the baseline and the follow-up questionnaire (approximately 6 months after baseline) in collaboration with the consultants of the leadership training.

At baseline, all 89 managers and 716 of their team members returned the questionnaire. In the manager sample, 77% were men, and 23% women. The average age was  $M = 46.35$ ,  $SD = 9.57$ , and the average tenure was  $M = 9.79$ ,  $SD = 10.01$ . In the team member sample, 81% were men, and 19% women. The average age was  $M = 49.28$ ,  $SD = 11.80$ , and the average tenure was  $M = 18.47$ ,  $SD = 14.56$ . Of these,  $N = 37$  managers (42% of the managers at baseline) and 373 team members (52% of the team members at baseline) responded to questions used for the present study in both the baseline and the follow-up

questionnaire. These respondents thus constitute the panel sample of the study. In the manager panel sample, 81% were men, and 19% were women. In addition, the average age was  $M = 47.95$ ,  $SD = 8.70$ , and the average tenure was  $M = 9.03$ ,  $SD = 9.99$ . In the team member panel sample, 84% were men, and 16% were women. The average age was  $M = 49.28$ ,  $SD = 12.01$ , and the average tenure  $M = 18.67$ ,  $SD = 14.72$ . Comparing the manager panel sample with the manager baseline sample, using chi-square and one-sample t-test statistics, we found no statistically significant differences for gender ( $\chi^2 = 0.49$ ,  $df = 1$ ,  $p = .60$ ), age ( $t = -1.12$ ,  $df = 36$ ,  $p = .27$ ), or tenure ( $t = -0.002$ ,  $df = 36$ ,  $p = .99$ ). Likewise, by comparing the team member panel sample with the team member baseline sample, we found no statistically significant differences for sex ( $\chi^2 = .31$ ,  $df = 1$ ,  $p = .71$ ), age ( $t = -.001$ ,  $df = 316$ ,  $p = .99$ ), or tenure ( $t = -.24$ ,  $df = 316$ ,  $p = .81$ ).

## Measures

### Transformational leadership

We measured the transformational leadership using MLQ (Avolio & Bass, 2004). At baseline, we administered the entire questionnaire as part of the leaders' 180-degree feedback survey. To achieve a less extensive follow-up questionnaire, and thereby enhance our chances of a higher response rate, we selected eight questions and used them at follow-up. We selected these eight items on the basis of both theoretical and psychometrical considerations. In practice, we used the responses on the baseline questionnaire within factor scores and used correlations to select two items each to represent the four transformational leadership sub-dimensions (i.e., idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration; Bass & Riggio, 2006). For the purpose of the present study, we thus used the eight items as a short scale of transformational leadership at both baseline and follow-up. Employees rated each item on a 5-point Likert scale (1 = *not at all*, 5 = *frequently, if not always*). Internal consistency ( $\omega$ ) of the scale was 0.91 at baseline and 0.95 at the follow-up. The following is an example of the statements we used: "The person I am rating articulates a compelling vision of the future."

### Formalization

We measured formalization practices using the 7-item scale developed by Fischer et al. (2014). Managers and employees rated each item on a 7-point Likert scale (1 = *never*, 7 = *always*). In the present study, the internal consistency ( $\omega$ ) of the scale was 0.89. We presented the scale with the following: "Please indicate how frequently each of these situations occurs in the organization in which you work." The following is an example of the statements we used: "Everything in the organization is done according to previously defined procedures."

### Employee orientation

We measured the employee orientation practices using the 10-item scale developed by Fischer et al. (2014). Managers and

**Table 1.** Subscale intraclass correlation coefficients (ICC) and within group agreement.

| Subscale                            | Number of items | ICC   | Mean rWG (j) |
|-------------------------------------|-----------------|-------|--------------|
| Transformational leadership, time 1 | 8               | .29** | .88          |
| Transformational leadership, time 2 | 8               | .29** | .88          |
| Formalization                       | 7               | .28** | .85          |
| Employee orientation                | 10              | .30** | .83          |

$K = 37$  leaders, \* $p < .05$ , \*\* $p < .01$

employees rated each item on a 7-point Likert scale (1 = *never*, 7 = *always*). In the present study, internal consistency ( $\omega$ ) of the scale was 0.96. We presented the scale with the following: "Please indicate how frequently each of these situations occurs in the organization in which you work." The following is an example of the statements we used: "Managers encourage employees to speak up when they disagree with a decision."

### Analysis

First, we examined whether the relevant statistics justified the aggregation of the employees' ratings of formalization, employee orientation, and transformational leadership to the team level. As presented in Table 1, the analyses yielded a satisfactory ICC(1) and mean  $r_{WG(j)}$  and thus supported the aggregation of the employees' ratings, with an average number of 10 employee ratings for each leader rating. As recommended when studying leader – follower perceptual distance (Gibson et al., 2009), we then followed the three-step procedure outlined by Shanock et al. (2010). We first assessed the level of agreement between leaders and their teams to ensure that the level of disagreement was sufficient for proceeding with further analysis. We set the minimum level to 10% disagreement, defined as at least 0.5 standard deviation of the standardized mean score on the two predictors, as Fleener and Prince (1997) suggested. In the second step, we performed two polynomial regressions: one for formalization and one for employee orientation. We conducted the polynomial regressions on scale-centred variables to aid the interpretation of the findings (Edwards, 1994). Transformational leadership at Time 2 was thus regressed on leaders' ratings, teams' ratings, the cross product of leaders' and teams' ratings, and the square of leaders' and teams' ratings of formalization and employee orientation, respectively. We also included transformational leadership at Time 1 as a covariate. If the predictors explain variance in the outcome variable,  $R^2$  of the polynomial regression is significant, and further analysis is justified that would include conducting four surface tests:  $a_1$ ,  $a_2$ ,  $a_3$ , and  $a_4$ , based on unstandardized regression coefficients (Atwater et al., 1998; Edwards, 2002). In

the third step, we plotted the surface test values in graphs, which we then interpreted.

### Results

Table 2 shows descriptive statistics and correlations between all study variables. The correlations between the leaders' and teams' ratings of formalization and employee orientation were non-significant, suggesting that variation exists between the ratings of leaders and teams and thus that perceptual distance analyses are justified. As recommended by Shanock et al. (2010), we then analysed agreement levels between leaders' and followers' perceptions of formalization and employee orientation. For formalization, 29% of the leaders and their teams were in agreement, 33% of the leaders rated formalization higher than their team, and 38% of the leaders rated lower than their team. For employee orientation, 34% of the leaders and teams were in agreement, 34% of the leaders rated higher, and 32% of the leaders rated lower than their teams. Thus, the discrepancies in leader and team ratings were larger than 10%, implying that further analyses are warranted.

Next, we used polynomial regression with response surface analysis to examine if leader – team perceptual distance of formalization and employee orientation was related to leaders' development of transformational leadership (Shanock et al., 2010). Thus, we investigated whether linear effects, nonlinear effects, and the interaction of the teams' and leaders' perceptions of formalization and employee orientation at Time 1 predicted leaders' development of transformational leadership at Time 2 as rated by their followers. Table 3 shows the findings of the two separate polynomial regressions: one for leader – team perceptual distance on formalization and one for employee orientation. Both polynomial regressions explained a significant amount of variance ( $R^2$ ) in transformational leadership at Time 2; therefore, we examined a response surface analysis and surface tests  $a_1$  to  $a_4$ .

Figures 1 and 2 show the plots of the response surface analysis. The surface tests present the slope and curvature of two important lines in the graph. First, *the line of congruence* extends from the nearest to the farthest corners of the graph where both leaders and their teams are in perfect agreement. Surface test  $a_1$  represents the slope, and  $a_2$  represents the curvature along the line of congruence. The second important line is *the line of incongruence*, extending from the left to the right corner where leaders and their teams disagree. Surface tests  $a_3$  and  $a_4$  represent the slope and curvature along this line.

**Table 2.** Descriptive statistics and correlations among all study variables.

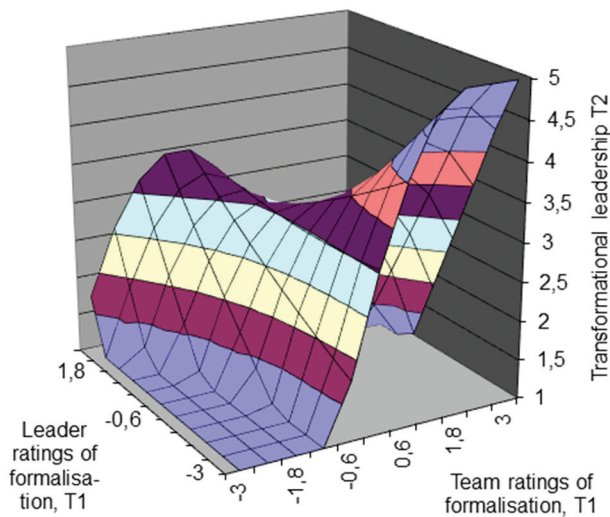
|                                     | M    | STD  | 1.    | 2.    | 3.    | 4.    | 5.  | 6.  |
|-------------------------------------|------|------|-------|-------|-------|-------|-----|-----|
| (1) TL T1, team                     | 3.40 | .53  | .91   |       |       |       |     |     |
| (2) TL T2, team                     | 3.10 | .72  | .37*  | .95   |       |       |     |     |
| (3) Formalization T1, leader        | 4.07 | .85  | .04   | -.03  | .76   |       |     |     |
| (4) Formalization T1, team          | 4.30 | .67  | .50** | .20   | .29   | .96   |     |     |
| (5) Employee orientation, leader T1 | 5.25 | 1.14 | -.11  | .05   | .31** | .14   | .95 |     |
| (6) Employee orientation T1, team   | 4.89 | .90  | .56** | .44** | .09   | .66** | .14 | .89 |

TL = Transformational leadership, reliabilities (Cronbach's alpha) are reported in the diagonal. \*\* $p < .01$

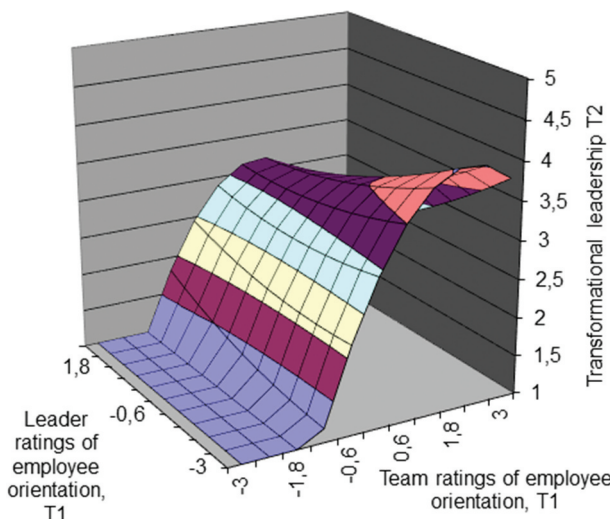
**Table 3.** Polynomial regression analyses and surface values for the organizational practices subscales.

| Employee rated transformational leadership at Time 2 |               |                      |
|--|---------------|----------------------|
| Time 1 Predictors                                    | Formalization | Employee orientation |
| Constant   | 2.99**        | 2.77**               |
| TL   | .62*          | .19                  |
| Leader-rated   | .02           | -.01                 |
| Team-rated   | .59**         | .84**                |
| Leader-rated squared                                 | .01           | .02                  |
| Leader-rated *team-rated                             | -.44*         | -.09                 |
| Team-rated squared                                   | -.40*         | -.28**               |
| $R^2$  | .29*          | .42*                 |
| <i>Surface tests</i>                                 |               |                      |
| $a_1$  | .61**         | .83**                |
| $a_2$  | -.82**        | -.35**               |
| $a_3$  | .56           | .85**                |
| $a_4$  | .05           | -.17                 |

$N = 37$  leaders, TL = Transformational leadership. \*\*  $p < .01$



**Figure 1.** Leader-team perceptual distance regarding formalisation before training and teams' ratings of transformational leadership after training.



**Figure 2.** Leader-team perceptual distance regarding employee orientation before training and teams' ratings of transformational leadership after training.

In **Figure 1**, the slope of the line of congruence shows how the leaders' and their teams' agreement on formalization at Time 1 relates to transfer of leadership training in terms of transformational leadership at Time 2 as rated by their followers. It was significant and positive, implying that agreement between leaders and their teams on formalization at Time 1 positively influenced transfer in terms of transformational leadership ratings at Time 2 ( $a_1 = .61, p < .001$ ). However, to fully understand this effect, we also need to consider the curvature of the line of congruence, which was negative and significant ( $a_2 = -.82, p = .003$ ). This indicated that there was a curvilinear effect along the line of congruence, which means that Hypothesis 1 was supported. Thus, when leaders and their teams agree that formalization is low, ratings of transfer in terms of transformational leadership at Time 2 is also low. However, when leaders and their teams agree on moderate levels of formalization, ratings of transfer in terms of transformational leadership at Time 2 are high. Also, when leaders and their team agree that formalization is high, transfer in terms of transformational leadership ratings at Time 2 are low. These findings suggest that leaders develop less during leadership training when both leaders and their teams agree that the level of formalization in the organization is high. Regarding Hypothesis 3 and the role of disagreement, the slope and curvature of the line of incongruence represent how leaders' and their teams' disagreement on formalization at Time 1 relates to transformational leadership at Time 2. Both the slope and the curvature were non-significant ( $a_3 = 0.56, p = .052$ , and  $a_4 = 0.05, p = .90$ ), suggesting no relationship between leaders' and their teams' disagreement in formalization at Time 1 on transformational leadership at Time 2, thereby contradicting Hypothesis 3.

For employee orientation, the slope of the line of congruence was positive and significant ( $a_1 = .83, p < .001$ ). This means that leaders' and their teams' agreement on employee orientation at Time 1 positively predicted transfer of leadership training in terms of transformational leadership at Time 2 (see **Table 3** and **Figure 2**). In addition, the curvature of the line of congruence was also significant ( $a_2 = -.35, p = .003$ ), indicating a curvilinear effect along the line of congruence. This curvilinear effect can be seen in **Figure 2**; when leaders and their teams agree that employee orientations are at high levels, followers' ratings of transfer in terms of transformational leadership at Time 2 flattens out and even decline. This offers partial support for Hypothesis 2, as the ratings of transformational leadership as expected did not increase from moderate to higher levels of employee orientation, but not full support as the ratings of transformational leadership decreased rather than stayed stable at high levels of employee orientation. In support of Hypothesis 4, the slope along the line of incongruence was positive and significant ( $a_3 = 0.85, p = .001$ ), suggesting that when the leaders rated employee orientation as higher compared to their team, teams' ratings of transfer (i.e., transformational leadership at Time 2) were low. The curvature along the line of incongruence was non-significant ( $a_4 = -.17, p = .48$ ), suggesting that disagreement in general between leaders and their teams on employee orientation does not impact on leaders training transfer in terms of transformational leadership ratings at Time 2. Instead, it is only when the leader

rates employee orientation as higher than their team that transfer is affected and reduced.

## Discussion

In the present study, we examined the role that leader – team perceptual distance on contextual factors plays towards the transfer of leadership training. We found that leaders' and their followers' agreement on two discrete contextual factors, formalization and employee orientation, impacted the training transfer in terms of the development of transformational leadership behaviours during a leadership training.

We found that agreement between leaders and their teams on formalization and employee orientation positively predicted transfer in terms of changes in leaders' transformational leadership behaviours as rated by employees post-training. This is in line with previous studies of leader – team perceptual distance (Bashshur et al., 2011; Gibson et al., 2009; McKay et al., 2009; Tafvelin et al., 2017), suggesting that agreement between leaders and their teams leads to positive organizational outcomes (Yammarino & Atwater, 1997). In our study, we extend previous findings on leader – team perceptual distance by demonstrating that leader – team perceptual distance not only has consequences for employee performance and well-being but also for leaders' performance and the extent that they develop and transfer new knowledge and skills after attending leadership training.

Our findings confirmed Hypothesis 1 in that, based on the vitamin model (Warr, 2017), agreement between leaders and teams on formalization may be negative above a certain level. We found that agreement at high levels of formalization may reduce leaders' transfer of training in terms of development of transformational leadership behaviours. Although the findings are in line with the vitamin model, this finding is somewhat unusual in the leader – team perceptual distance literature, where agreement in general has shown to have a positive impact, regardless of the level of the construct of interest (Gibson et al., 2009; Tafvelin et al., 2017). Our finding challenges this assumption by suggesting that for formalization, agreement at high levels reduces leaders' development during training. The negative impact of a highly formalized organization is in line with early studies of formalization (Walter & Bruch, 2010), and our findings suggest that although formalization in terms of rules and regulations may unburden the leader this is only true up until a certain point. If it is too high it may hinder the transfer of leadership training, as it may leave the leader with less space to try and experiment with new behaviours. We also revealed a curvilinear relationship for the agreement between leaders and their teams on employee orientation and the leaders' development, offering partial support to Hypothesis 2. Our finding implies that leaders developed most in teams where the leaders and their followers agreed that employee orientation was moderate and transfer did not increase at higher levels of employee orientation. This is in line with the Vitamin CE proposition, where more of a good thing does not increase outcomes (Warr, 2017). Thus, having moderate levels of employee orientation is good enough to stimulate transfer, and improving perceptions of employee orientation does not automatically improve transfer.

In fact, our findings even suggested that transfer was somewhat reduced at high levels of employee orientation. Although this effect was small, one possible explanation for this finding may be that leaders and teams who both already perceive high levels of employee orientation in terms of autonomy, support, and personal attention pre-training may see little need for improvement in transformational leadership behaviours. This is because both parties already perceive that the leader, as a representative of the wider organization, is caring and empowering. There might simply be more need and room for improvement when both parties agree that the employee orientation is moderate.

Furthermore, Hypotheses 3 and 4 suggested that leaders who disagreed with their teams and rated formalization and employee orientation higher than their teams would be perceived to increase their transformational leadership to a lesser extent by their followers. Our analyses confirmed the hypothesis for employee orientation (Hypothesis 4). For formalization, the significance level was just above the  $p < .05$  threshold, leading us to reject Hypothesis 3. These results suggest that when leaders perceive higher levels of employee orientation than their employees, this overrating negatively impacted transfer in terms of followers' perceptions that leaders had increased their transformational leadership post-training. This finding is particularly relevant for the leadership-training literature and is in line with the studies on self – other agreement. These studies have shown that leaders' overrating of their leadership behaviour is negatively associated with outcomes of leadership training (e.g., their leadership) and a number of employee outcomes such as job satisfaction and commitment (Fleenor et al., 2010). We extend these findings by suggesting that for a leadership training to have optimal effects, it is not only negative for a leader to overrate his or her leadership behaviours but the organizational context also plays an important role on either hindering or facilitating training transfer. As shown in the self – other agreement literature, leaders who have more favourable ratings than their employee may see no need for improvement in their leadership behaviours (Yammarino & Atwater, 1997) and may therefore not make much effort towards changing their behaviours. The same may be the case for context, as leaders who perceive the context more favourably than their teams may not realize what changes and actions are needed and may see less need for improvement.

## Implications for future research

Our findings have a number of implications for future research on context and leadership training. First, we extend the literature on the transfer of leadership training by introducing Oc's (2018) framework and demonstrate that the proposed contextual factors not only is relevant as a predictor of leadership but also of leadership training transfer. Although the role of context for outcomes of training has been widely studied in the transfer of training literature (e.g., Blume et al., 2010), suggesting that the transfer climate matters for training outcomes (Burke & Hutchins, 2007), the impact of context received little attention in the leadership-training literature (Lacerenza et al., 2017). In addition, the transfer of leadership

training is fundamentally different from the transfer of other types of training given that the target of the training is not the trainee him- or herself (i.e., the leader) but rather a third party (i.e., followers). Therefore, the impact of context may be even more salient for the transfer of leadership training. In our study, we examined two contextual factors proposed in the Oc (2018) framework and demonstrated their impact on leaders' ability to exhibit leadership behaviours following a training intervention. This study should be considered a first step, and future studies are needed to expand this type of analysis to other contextual factors. Oc (2018) also suggested that contextual factors such as task, physical, and temporal factors impact leadership, and we propose that the potential impact of leader – team perceptual distance should also be evaluated for those factors.

Second, our findings extend transfer models by suggesting that it is not only the level of contextual factors that plays a role in leadership but also the extent to which leaders and followers agree on the context (perceptions of the context). We have demonstrated that leader – team perceptual distance on two discrete contextual factors in terms of formalization and employee orientation explains how these factors were related to leaders' display of transformational leadership post-training over and above the mean level of the contextual factor of interest. Our results show that, to get a full understanding of how context influences transfer of leadership training, we need to consider not only leaders' or employees' perceptions of context in isolation but also their congruence. This demonstrates the relativity of context and the difficulties in approaching context as something objective and static. Our findings show that various stakeholders may perceive contextual factors such as formalization differently and that the degree of congruence in those perceptions matters.

Third, we used the vitamin model (Warr, 2017) to examine how the two discrete contextual factors in the Oc (2018) framework affect the transfer of leadership training. Transfer models (Baldwin & Ford, 1988) suggested linear relationships between context and transfer. The vitamin model and our findings challenge this assumption and suggest that some contextual factors may in fact have a curvilinear relationship with the transfer of leadership training. With our findings, we suggest that moderate levels of formalization were the most favourable in relation to leadership development as a result of a leadership training. This has major implications for future research on the impact of context on the outcome of leadership training, as it shows that the impact of a leadership-training intervention may be hiding in the differences in perceptions rather than in the mean values. Thus, we suggest that future researchers, based on the predictions of the vitamin model, examine the existence of other curvilinear relationships between contextual factors and leadership training transfer.

### **Strengths and limitations**

In this study, we had the advantage of using a prospective design with multisource ratings that reduces the risk of common method bias influencing the results (Podsakoff et al., 2012). This risk is even further reduced by using multilevel

data (Hox, 2010) and polynomial regressions, and this builds on the interaction between determinants (Siemsen et al., 2010).

To the best of our knowledge, we are the first to introduce the concept of perceptual distance to further our understanding of how context influences leadership training transfer. We thus take a first step to delineate the impact of perceptual distance between teams and leaders on Oc's (2018) social context dimension in terms of formalization and employee orientation on leadership training. We did not test all context variables in Oc's framework; thus, there is a need for future researchers to address the impact of leader – team perceptual distance on the other parts of the model (i.e., time pressure and physical distance). Additionally, the leadership training was conducted in the onset of an organizational change initiative. Organizational change is an omnibus context factor in itself that may affect outcomes of the leadership (training) process, both directly and indirectly through elements of the discrete context (Oc, 2018). For example, it could potentially influence variability in perceptions of employee orientation. However, the influence of different omnibus context factors is always present, also in a non-organizational change setting, and, therefore, should be always acknowledged. Because of this, we recommend that future studies replicate our findings in other settings before drawing strong conclusions on generalizability.

A second limitation is that the study took place in one organization only, limiting generalizability. Exploring how the findings translate to other settings is vital in moving forwards in this field. Our findings add nuance to the general recommendation of replicating findings in additional settings by showing that when it comes to contextual factors, perceptions, and (dis)agreement of perceptions matter. Thus, this means that although replication in objectively different settings (e.g., other sectors or geographical locations) is needed, there is also a need for careful consideration of how various actors' perceptions of those factors may influence findings.

Third, the theory underlying the leadership training and the evaluation was the full-range leadership theory. A strength of this is the substantial body of literature showing that transformational leadership is effective in terms of both performance and employee well-being (Arnold, 2017; Harms et al., 2017; Hoch et al., 2018; Inceoglu et al., 2018; Skakon et al., 2010). However, the theory has also been criticized for having an unclear conceptual definition and for its lack of distinctiveness of the sub-dimensions, both theoretically and psychometrically (Antonakis et al., 2016; Van Knippenberg & Sitkin, 2013). In this study, our main objective in choosing leadership theory was to ensure that it was aligned with the organization's strategies for developing the training and the training content.

Furthermore, in line with previous research (e.g., Bass & Riggio, 2006; Carless et al., 2000; Nielsen & Daniels, 2016), we used a short scale to assess transformational leadership. This can be considered a limitation because the sub-dimensions can only be studied with a longer questionnaire. Although the sub-dimensions can provide additional information about the relationships between context and leadership, these have also gained the most criticism, both in terms of theory and the high correlation between the subscales (e.g., Van Knippenberg & Sitkin, 2013). We selected short scales as these have the benefit of reducing the burden on respondents and

thus might improve response rates. The included short scale consisted of eight items, two for each dimension, of the MLQ. We selected two items that seemed to represent the concept best, based on theory and psychometric properties from Time 1 (where the full MLQ was used). This implies that the short scale may capitalize on characteristics specific to this sample, and the validity of the short scale needs to be further evaluated before being considered in other settings.

Fourth, a limitation of all studies using statistical analysis to illuminate agreement and disagreement, as well as the impact thereof, is that they fail to capture the subjective experience of those involved (Fleenor et al., 2010; Lee & Carpenter, 2018). Thus, although the type of analysis used in this study allows an objective calculation of perceptual distance, we do not know how leaders and followers themselves experience the situation. For example, we assume that leaders and teams perceive things differently based on our statistical analysis. Combining the analysis done here with other sources of data, such as interviews, may deepen the understanding of the role of leader – team perceptual distance on context and its impact on leadership training.

Finally, the employee orientation scale, although it intends to capture how employees are treated in the organization in general, it does include some items directed towards how leaders treat employees, hence there may be some overlap between this scale and the transformational leadership scale that needs to be taken into consideration when interpreting our findings.

### **Implications for practice**

The findings of this study also hold several important implications for practice, should they be replicated. The main takeaway from a practical perspective is the considerations that can and should be done before training leaders so that the organization can maximize return of investment in terms of positive changes in leaders' behaviours following training. It is important to consider context. Otherwise, the effects of training may be reduced.

Through this study's findings, we add further support to the importance of making sure leaders agree with their employees on contextual factors since agreement between the two groups may influence the leaders' ability to transfer the experiences from a leadership training to behaviour change in practice. This is an addition to the previous research showing that leaders need to have a shared view of their leadership with their subordinates to obtain good results (Nielsen et al., 2022). Our study highlights the need for shared understanding on two contextual factors: degree of formalization and employee orientation; however, we believe the results can also yield other types of contextual factors. Thus, we suggest complementing leadership training with activities that support the development of shared understandings of the context in which the leader operates. This could include adding contextual factors to 180-degree assessments, which are common in leadership training, and ensuring that leaders are receiving feedback on their levels of agreement with the team also in those variables (i.e., not only

in leadership variables as is often done). It could also include introducing activities that in other ways aim to ensure that leaders and employees are on the same page (e.g., Nielsen et al., 2022).

Our findings further show that leaders in highly formalized organizations may encounter obstacles during leadership training, particularly when leaders and their teams agree that the organization is highly formalized. It is possible that the room for individual leaders to change their behaviours may be more limited in an organization that is perceived to be a highly formalized organization. Thus, we encourage organizations to carefully consider whether the aim of a leadership training (e.g., increase transformational leadership) aligns with what is otherwise asked from the leaders (Nielsen, 2013) – that is, if the leaders have the possibility or latitude to change after training and if the type of leadership that is being trained aligns with the organizational processes and structures. In fact, highly formalized organizations may want to consider other types of leadership trainings than those focusing on transformational leadership that encourages individualization and creativity. Alternatively, highly formalized organizations may take leadership training as an opportunity to lessen the degree of formalization somewhat, thereby empowering leaders and giving them sufficient space to change.

### **Conclusion**

To conclude, our study extends the literature on transfer of leadership training by suggesting that the social context in terms of employee orientation and formalization shapes leaders' ability to develop transformational leadership behaviours during leadership training. It is not simply a matter of how the leaders perceive context themselves; what matters is their perception in relation to their employees. Agreement between leaders and their teams regarding the context is beneficial for outcomes of leadership training but only up to a certain point, as our findings show that contextual influences on leadership training are curvilinear. The findings in our study may be a starting point, thus guiding a new stream of research focused on the complex interplay between leaders, followers, and context in an effort to understand when and why leaders develop after attending leadership training.

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Sadly our beloved colleague and co-author Karina Nielsen passed away before this article was accepted. We dedicate this article to Karina and to her monumental contribution to the field of organizational interventions.

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No potential conflict of interest was reported by the author(s).

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## Data availability statement

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

## Ethical approval statement

The study is approved by the Regional Ethical Review Board in Umeå Sweden, reference number 2015/23-31Ö.

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