Universiteit Utrecht

Managing Diversity

The Role of Transformational Leadership on the Effectiveness
of Diverse Teams

Ivo Stronks

Master Thesis

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Faculty of Social Sciences

First supervisor: Dr. M. van Doorn

Second supervisor: Prof. Dr. A.W. Taris

Abstract

In this study, there has been focused on the role of a team's manager on the effectiveness of a diverse organizational team. In recent years, organizations and teams have become increasingly diverse, which can cause challenges for the manager of the team. Literature is not unambiguous about the effect that diversity may have on the team effectiveness. This study ($N = 103$) showed that the individual's perception of team diversity is negatively related to the elaboration of task-relevant information and collective team identification. Furthermore, I have hypothesized that transformational leadership moderates the negative relationship between perceived diversity and information elaboration. Multiple regression analysis cannot substantiate this interaction effect. A positive main effect for transformational leadership has been found. In addition, this study focused on the mediating role of collective team identification on the relationship between perceived diversity and the elaboration of task-relevant information. Results confirm the mediating effect of collective team identification. There has been discussed that the influence of perceived diversity on team effectiveness becomes insubstantial when considering the role of the team's manager and collective team identification. However, high levels of transformational leadership do not counter the negative relationship between perceived diversity and team effectiveness. Future research should focus on developing a revised scale to measure the perception of diversity, to be able to determine whether the perception of diversity has added value above the actual objective diversity in explaining the relationship with team effectiveness.

Keywords: perceived diversity; perceived team heterogeneity; transformational leadership; elaboration of task-relevant information; collective team identification

Introduction

In recent years, diversity management has become increasingly important in scientific literature as well as within organizations, because of the increase of demographic diversity within the societal and thus organizational context (Bell, Villado, Lukasik, Belau, & Briggs, 2011). Also, organizations are making more use of cross functional teams, which leads to more functional diversity within teams on the basis of skills, knowledge, and educational background (Jackson & Joshi, 2011). This has led to the question whether diverse teams perform better or worse than a homogeneous group (van Dick, van Knippenberg, Hägele, Guillaume, & Brodbeck, 2008). Managers need to learn how diverse teams should be managed, in order to be as productive as possible. Diversity is commonly defined as differences between individuals on any attribute that may lead to the perception that another person is different from self (van Knippenberg, De Dreu, & Homan, 2004). In principle, people can be diverse in an infinite number of objectively detectable person-related attributes like gender, age, ethnicity, and religion. But also in less visible and task-related attributes like team tenure, educational level, and formal credentials and titles (Jackson & Joshi, 2011).

Consequences of objective team diversity have been widely investigated, less is known about the effects of perceived team diversity within organizations. Perceived diversity can be defined as the degree to which members are aware of one another's personal differences, as reflected in their mental representations of the team's composition (Shemla, Meyer, Greer, & Jehn, 2014). Perceived diversity has shown to be a relevant aspect when studying the effects of the composition of a team. Moreover, solely measuring objective diversity can be problematic as it presupposes that differences are all salient to team members (Hentschel, Shemla, Wegge, & Kearney, 2013). Previous studies have demonstrated that perceived and objective diversity are not always correlated to each other (Meyer & Greer, 2014). This means that some teams are highly diverse when judged by objective attributes, but can be perceived as less or not saliently diverse by team members. Given that people react and behave on the basis of their perception of the world around them, rather than on the actual reality (Aronson, Wilson & Akert, 2005), perceived diversity seem to be a more valid construct to measure the relation between a homo- or heterogeneous team composition and team outcomes. In recent research, there is already a visible shift in

focus towards perceived diversity (Shemla et al., 2014). This conceptualization of diversity has the potential to improve our understanding of the role of team diversity within organizations.

In order to investigate whether perceived diversity influences team outcomes, the role of the team leader need also be considered. Even though diversity can be seen as a positive characteristic of an organization, it can also bring up some challenges. Different backgrounds, personalities and values can lead to different ways of dealing with tasks and work problems, creating potential conflict in teams. Also, a highly diverse team can have the potential of having a lot of knowledge and skills, but many studies have shown that it should not be taken for granted that team members who have unique information will share this with the rest of the team or elaborate constructively on the input of various team members (Kearney & Gebert, 2009). So, diversity is not guaranteed to be fruitful. Only under the right conditions diversity makes teams thrive. One of those conditions is leadership. A leader has the task to align team goals, tasks and values among his or her subordinates (Bass, 1990). A good team leader has the ability to facilitate the information elaboration process within a team (Hogan & Kaiser, 2005). Even though leadership seems a relevant research topic, there has not been a lot of attention for this aspect in the sense of managing diversity (Jackson & Joshi, 2011).

In the current study I will focus on the role of a specific type of leadership; transformational leadership. A transformational leader is seen as a charismatic leader that focuses on several leadership aspects, such as the promotion of cooperation, aligning team goals with individual goals, and supporting subordinates to be creative and innovative (Bass & Avolio, 1994). These characteristics can foster a diverse team to work towards a common objective and create a climate in which individuals are willing to share - also their deviating - ideas and skills. However, it is not clear what the direct role of transformational leadership is on the perceived diversity of a team member and how he or she can increase the capacity of a diverse team. Transformational leadership literature is promising about the positive effects of transformational leaders creating a shared identity and aligning individual and team goals (Bass & Riggio, 2006). Therefore, it is relevant to investigate the effect of transformational leadership on the effectiveness of a diverse team. Hence, I posit the following research question: *To what extent does transformational leadership*

influence the relationship between the perception of diversity and team effectiveness?
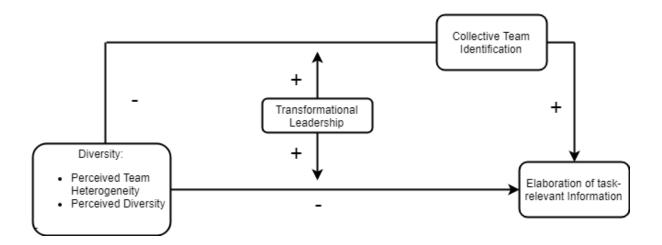See figure 1.

Figure 1. Proposed model of the relationships among the research-variables

Theory

      Perceived Diversity

      As mentioned above, objective diversity has been widely investigated in the
organizational context, which gives a good insight in the operation of heterogeneous
teams. In this study, however, I will focus on members' perception of diversity within
their team and its effects on team functioning. Studying the perception of diversity
rather than actual objective diversity is based upon the fact that not all diversity
attributes are salient for an individual. If certain 'objectively relevant' attributes are
not accessible or less or not important for an individual, these will most likely have
less influence on the perceptions or behavior of the individual (Zellmer-Bruhn,
Maloney, Bhappu, & Salvador, 2008). Perceived diversity takes into account the
dynamic and subjective perspective of an individual categorizing himself and the
others around him. This categorization will then have its influence on the behavior of
an individual towards his or her team members (Hornsey, 2008). Therefore, this
construct may have more explanatory power than measuring objective diversity. This
statement is substantiated by previous research measuring both objective, and
perceived diversity (Harrison et al., 2002; Ries, Diestel, Wegge, & Schmidt, 2010). In
these studies, objective diversity only has an indirect effect on team effectiveness. The
perception of diversity mediated the effects of diversity on team outcomes.

However, in operationalizing and measuring perceived diversity, scholars have been ambiguous (Shemla et al., 2014). Researchers have used different measures to study the same construct. For instance, there is a distinction between the individual's awareness of differences on several specific attributes like age, gender, or educational level on the one hand (Harrison & Klein, 2002) and individual's perception of team diversity as a whole on the other hand (Hentschel, 2013). In this study, I want to focus on both types of diversity to investigate whether there will be a difference in outcome between these two subdivisions. Also, it seems interesting to study how these types of diversity differ in the interaction with the other variables in the model. In this study, the following terms will be used to measure both types of diversity: perceived team heterogeneity and perceived diversity (figure 1).

Perceived team heterogeneity can be defined as a team member's awareness of and judgement on the diversity of different attributes (age, gender, team tenure etc.). Perceived diversity will be measured by asking an individual's perception of the extent to which the team is diverse as a whole.

Diversity and the Elaboration of task-relevant Information

In defining team effectiveness, different aspects can be measured. One of those aspects is the task-related information elaboration process within the team. According to Van Knippenberg et al. (2004), the elaboration of task-relevant information is the primary process underlying the positive effects of team performance and therefore an important part in measuring the effectiveness of diverse teams. The elaboration of task-relevant information is, in short, defined as the exchange of information and perspectives and can lead to discussion and integration of these perspectives within a team (Hinsz, Tindale, & Vollrath, 1997).

In previous research, there has been a lot of discussion regarding the effects of diversity on the elaboration of task-relevant information and other team outcomes. Although some studies show that there is a no or a negative relation between these two (Kirkman, Tesluk, & Rosen, 2004), others have shown that there is a positive link between team heterogeneity and team outcomes (Drach-Zahavy, & Somech, 2002). Especially task-relevant attributes like skill variety, educational background, and team tenure are said to have a positive influence on the effectivity of the team. This is explained by the fact that a large variety of skills, knowledge, and experience leads to a broader pool of resources. However, it is not guaranteed that this advantage will lead to more effective teams. Particularly, a highly demographical or relational

diverse team is negatively related to different team outcomes (Horwitz & Horwitz, 2007). Also, in their categorization-elaboration model, Van Knippenberg et al. (2004) state that the elaboration of task-relevant information is dependent on the level of demographic diversity within the team. Such, that heterogeneous teams are only effective if they are able to overcome the negative effects of demographic diversity. If not, these diverse teams will underperform in relation to more homogeneous teams.

Although much is known about the effect of the actual, objective diversity on the elaboration of task-related information (van Knippenberg et al., 2004), less is known about the role perceived diversity plays in this relationship. Shemla et al. (2014) demonstrated in their literature review that most findings regarding the influence of perceived diversity on team effectiveness are inconsistent. Positive, as well as negative outcomes have been found and no general conclusions can be drawn. The main difference between objective and perceived diversity lies in the evaluative, emotional component of the latter. It is plausible that the evaluation of, and the relation with the other team members influence their perception of team diversity. Therefore, it is questionable if perceived diversity has the same effect on the elaboration of task-relevant information as actual diversity. Hentschel et al. (2013) for example found that individuals who perceive their team to be highly diverse have a more negative affect towards this team. Also, if team members perceive more negative affect, they are less likely to interact with each other, which will lead to less elaboration of task-relevant information. This line of reasoning leads to the following hypotheses:

Hypothesis 1.1: Perceived team heterogeneity is negatively related to the elaboration of task-relevant information.

Hypothesis 1.2: Perceived diversity is negatively related to the elaboration of task-relevant information.

Transformational Leadership

In literature, high levels of transformational leadership are positively related to task-relevant team outcomes, such as creativity, innovation, and productivity (Bass, Avolio, Jung & Berson, 2003; Schaubroeck et al., 2007). Transformational leaders can achieve this by inspiring followers to transcend self-interest and perceptions of

their own limitations to become more effective in pursuing collective goals (Bass, Avolio, Jung, & Berson, 2003). Also, transformational leaders stimulate subordinates (*intellectual stimulation*), act as a role model (*idealized influence*), inspire and motivate to work as a team (*inspirational motivation*), and they show concern for the team member as an individual (*individualized consideration*) (Schaubroeck, Lam, & Cha, 2007). These factors play a core role in influencing the behavior of a team member and can facilitate the process of striving for collective team goals and creating a shared identity. By intellectual stimulation, for example, the team leader inspires an individual to involve in the decision-making process and stimulate his or her efforts to be as creative and innovative as possible to identify solutions (Bass & Avolio, 1993). To this end, the transformational leader challenges assumptions and solicits ideas from followers without criticizing. Moreover, he or she helps to think differently about certain problems and obstacles. The perspective of the team leader helps subordinates to see the bigger picture and to achieve the collective goals (Bass & Riggio, 2006). Furthermore, several studies have investigated the role of transformational leadership on team outcomes, such as the elaboration of task-relevant information. These studies show that high levels of transformational leadership lead to higher team effectiveness (Kearney & Gebert, 2009; van Knippenberg et al., 2004).

Perceived Diversity and Transformational Leadership

Team members must learn to cooperate in a productive way, such that the full potential of the team is being used. (Transformational) Leaders can play an important role in facilitating the cooperation among diverse team members (Hogan & Kaiser, 2005). At first, they are expected to promote the internalization of the objectives and values that lie on the basis of the collective cause (Bass & Riggio, 2006). By doing this in a motivational and inspirational way, followers can adopt a superordinate social identity based on a shared team vision. This vision to collectively reach an overarching goal, can enhance one's self-concept in the interest of the mission stated by the leader (Shamir, House, & Arthur, 1993). To meet the common objectives of the team, and to realize an inspiring vision, followers are more likely to share all of their task relevant information. Even if this means that team members need to criticize or display dissent, they are willing to contribute relevant information, because the collective vision is more important than the individual work-related goals. Also, inspirational motivation, provided by the team manager, will promote shared enthusiasm, optimism and efficacy, which will enhance the effectiveness of the team

(Shin & Zhou, 2007). Thirdly, the team manager's individual considerate behavior can have the effect of subordinates feeling appreciated. By giving attention to their task-related input, as well as their personal life, people feel unique and recognized by their team leader. This will have a positive effect on the way individuals are willing to share their input with the rest of the team (Bass & Riggio, 2006). Lastly, intellectual stimulating leaders inspire their teams to take advantage of diverse input and ideas of their team members. Even if these ideas are deviant from the general norm. This way, he or she encourages subordinates to think outside the box and generate creative perspectives (Kearney & Gebert, 2009).

In sum, transformational leaders are expected to learn and inspire their subordinates to deal constructively with the perceived differences within the team. Such, that the perception of diversity is used positively and leads to an increase of team effectiveness. In other words, high levels of perceived diversity do not lead to less elaboration of task-relevant information if transformational leadership is high. Also, when a leader is perceived as less transformational, perceived diversity can have detrimental effects for the effectiveness of the team. Therefore, I posit the following:

Hypothesis 2.1: Transformational leadership moderates the relationship between perceived team heterogeneity and the elaboration of task-relevant information. Such that this relationship is less negative or positive when levels of transformational leadership are high.

Hypothesis 2.2: Transformational leadership moderates the relationship between perceived diversity and the elaboration of task-relevant information. Such that this relationship is less negative or positive when levels of transformational leadership are high.

Collective Team Identification

To control for the possible positive effects of transformational leadership on the collective team goals and the shared identity of a diverse team, the level of reported *collective team identification* will be measured. Next to the elaboration of task-relevant information, collective team identification can be seen as an important factor in predicting the effectiveness of a team (van der Vegt, van de Vliert, & Oosterhof, 2003). High levels of reported team identification lead to higher levels of

work motivation and performance (van Knippenberg, 2000). Collective team identification is the emotional significance that individuals attach to their membership in a given team (Van der Vegt & Bunderson, 2005). "In teams with high levels of collective team identification, individuals are committed to the team and its goals rather than (or in addition to) their own goals." (van der Vegt & Bunderson, 2005, pp. 535). Collective team identification is then a representation of the degree to which all team members feel emotionally connected to the team, as perceived by an individual member. The extent to which team members identify themselves with the rest of the team depends on several aspects. For example, the act of identification is assumed to be the culmination of self-categorization (van Knippenberg & Schippers, 2007; Hentschel, 2013). According to the self-categorization theory (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987), people are trying to make sense of the world around them by subdividing the self and others into categories, so they can cope more effectively with occurrences in their (social) environment (Hogg & Terry, 2001). When categorizing the self as a member of one group (over another group), it can lead to developing a sense of social identity. In contrast, a sense of personal identity develops when perceiving the self as unique within a certain group. Choosing one level of self-categorization over another, takes place as a function of fit and accessibility (Turner et al., 1987). "Fit refers to the extent to which the social categories are perceived to reflect social reality. Individuals may perceive a high level of fit if the category distinction maximizes perceived inter-category differences and minimizes intra-category differences (comparative fit)" (Hornsey, 2008, pp. 208). Self-categorization theory states that this perception is dynamic and always defined relative to the perceiver. Accessibility, then, determines how individuals will define themselves and others in terms of certain categories. Categories may be easily accessible if they are primed in the situation, or they may be chronically accessible if people are motivated to use them or if frequently activated (Hornsey, 2008). For example, if teams have to perform a demanding physical task on a daily basis, the difference between young and elderly individuals within the team becomes frequently salient. This means that for these people the category age (or degree of fitness) is easily accessible, as for others this attribute may be harder to retrieve.

These phenomena lie on the basis of the extent to which individuals categorize themselves as being a part of their organizational team. When individuals have a strong feeling of being a part of the team, rather than being an unique individual, a

process of depersonalization occurs. If so, an individual tends to bring self-perception and behavior in line with the prototype of their ingroup. If shared among team members, this group-categorization creates a collective behavior, group cohesion, shared norms and emotional contagion within the team (Hogg & Terry, 2001). This can, to a certain extent lead to collective team identification.

Collective Team Identification as a mediator

Perceived Diversity

A team member's perception of high diversity within his or her team can lead to categorization within the team (Harrison et al., 2002), because in general, people tend to interact with those who are most similar to them. This categorization influences the way team members interact and perceive team identification. If an individual identifies him/herself with a certain group, he or she is more likely to make positive attributions towards this group and act accordingly. Likewise, the individual will hold less favorable opinions towards members of the outgroup, which results in less interpersonal contact. As mentioned above, high levels of perceived diversity can lead to negative affect towards the team members, which leads to more intergroup conflict (Hentschel et al., 2013). If so, the extent to which team members identify themselves with the team seems important. For instance, when individuals place the collective objectives above their own, they are more likely to overcome these obstacles and are able to use these conflicts to be more effective (van der Vegt & Bunderson, 2005). The effect of the perception of diversity is then dependent on the level of collective team identification. Subsequently, collective team identification can be viewed as a mediator between the perception of diversity and information elaboration. Therefore, I posit the following:

Hypothesis 3.1: Collective team identification fully mediates the relationship between perceived team heterogeneity and the elaboration of task-relevant information.

Hypothesis 3.2: Collective team identification fully mediates the relationship between perceived diversity and the elaboration of task-relevant information.

Transformational Leadership as a moderator

According to previous studies, transformational leadership has a positive effect on the extent to which employees record perceived collective team

identification (Kearney & Gebert, 2009). For example, charismatic leaders are assumed to have the ability to fundamentally redefine followers' goals, values and aspirations (Hogg & Terry, 2001). Charisma is one of the key elements of transformational leadership and can be subdivided in *inspirational motivation* and *idealized influence*. These aspects are believed to be important to change the social identity of the leaders' followers through connecting followers self-concept to the mission and to the group. Such, that subordinates' team behavior becomes self-expressive (Kark, Shamir, & Chen, 2003).

Moreover, in order to have an extensive elaboration of task-relevant information within a team, a wide range of knowledge, skills and ideas is not enough. Employees must be willing to elaborate constructively on the input of their colleagues. Therefore, an appropriate level of collective team identification is needed (Ruggieri & Abbate, 2013). However, if team members perceive high levels of diversity and do not have the feeling to be part of the team as a whole and have the perception that their opinion is not valued by all team members, it is plausible that less information elaboration will occur (van Knippenberg, De Dreu, & Homan, 2004). As mentioned above, a transformational leader is expected to counter these effects by promoting collective goals and creating a shared identity among subordinates. If levels of transformational leadership are high, it is expected to have higher collective team identification, which will then lead to more information sharing. In sum, the elaboration of task-relevant information is not only determined by the perception of diversity and transformational leadership, but it also seems dependent on the level of collective team identification.

In line with the arguments presented above, I propose that collective team identification mediates the moderating effect of transformational leadership on the relationship between diversity and the elaboration of task-relevant information.

Hypothesis 4.1: Collective team identification fully mediates the moderating effect of transformational leadership on the relationship between perceived team heterogeneity and the elaboration of task-relevant information.

Hypothesis 4.2: Collective team identification fully mediates the moderating effect of transformational leadership on the relationship between perceived diversity and the elaboration of task-relevant information.

Method

Participants

One commercial organization and one public sector organization are being invited to participate in this research. Furthermore, participants are being approached via online voluntary response sampling on social media and via email. Respondents could fill in an online questionnaire via an anonymized link. Participation was voluntary for these employees. The total amount of participants is N = 126. However, 23 participants had to be excluded of the analysis, because they didn't finish the survey. The sample consists of 40 women (38.8%) and 63 men (61.2%). Age was asked by a 5-point scale; 34 participants were younger than 30 33.0%), 19 between 31-40 (18.4%), 23 participants were between 41-50 (22.3%), 21 between 51-60 (20.4%), and 6 respondents were 60 years or older (5.8%). Because of the fact that this research mainly has been executed at two different organizations (private and public), the working sector has been examined. 52,7 % was working in the private sector; 47,3 % was active in the public sector.

Procedure

Participants are being approached via email, LinkedIn, or their HR-department. The survey could be filled in, if the following conditions were met: the participant needed to be working in a team and the participant must not be a team leader his- or herself. The questionnaire was accessible via an anonymized online link. The participants were then asked to read and confirm the informed consent (see appendix 1). The informed consent indicated that participation was totally voluntary, anonymity is being guaranteed, and that participants can stop the survey at all times. To proceed to the questionnaire, respondents were asked to agree with the informed consent.

Measures

In this study, the survey consisted of five different parts, namely: perceived team heterogeneity (Harrison & Klein, 2002; see appendix 2), perceived diversity scale (Hentschel, 2013; see appendix 3), Multifactor Leadership Questionnaire (MLQ;Den Hartog, 1997; see appendix 4), collective team identification scale (Van der Vegt & Bunderson, 2005; see appendix 5), information elaboration scale (Homan, 2007; see appendix 6) and demographic data (see appendix 7).

Perceived Team Heterogeneity

To assess how team members perceive the difference on certain diversity attributes, a 10-item team heterogeneity scale has been used (Harrison & Klein, 2002). In this scale, participants had to rate the extent to which the team differs on the following ten attributes: gender, age, religion, sexual orientation, ethnicity, personality, educational level, educational specialization, skills, and team tenure. An example of one of the statements was: "I am aware that the age of my team members is…". Participants had to assess their perception on a 5-point Likert scale, ranging from 1 = very different to 5 = very similar. These ten items have been recoded prior to the analysis. The Chronbach's alpha of the scale was $\alpha = .70$.

Perceived Diversity

Three items are being used to assess the extent to which participants perceive themselves as different from their team member (Hentschel, 2013): a Dutch translation of "I am very aware of the differences among my colleagues", "When I am supposed to describe my team, I automatically think about the differences among my colleagues", and "The composition of my team is very diverse" ($\alpha = .58$). The items were accumulated to get a specific score for this construct. The variable is measured using a 5-point Likert scale, with alternatives ranging from 1 = never to 5 = always.

Transformational Leadership

To assess the extent to which respondents see their team leader as transformational, a 30-item scale is being used (Multifactor Leadership Questionnaire, Den Hartog, 1997; $\alpha = .96$). The original questionnaire of Den Hartog (1997) consists of sixteen subscales. However, in this research only Transformational leadership is being measured. Therefore, only four subscales are being included in de questionnaire, namely: intellectual stimulation ($\alpha = .78$), idealized influence ($\alpha = .90$), individualized consideration ($\alpha = .88$), and inspirational motivation ($\alpha = .95$). The first dimension consists of five questions, for example: "My team leader stimulates me to solve problems on my own". Idealized influence is a seven-item dimension, which, for example, consists of the following statement: "My team leader is a good example for me". The third dimension, individualized consideration, has five items. One of the items is: "My team leader gives me advice when I need to". Inspirational motivation, lastly, consists of thirteen items. One of the statements is, for example: "My team leader makes me proud to work with him". Statements are being measures

on a 5-point Likert scale, with options ranging from 1 = don't agree at all to 5 = very much agree.

Elaboration of task-relevant Information

A translated version of the 7-item Information Elaboration Scale (Homan, 2007) is used to measure the extent to which respondents perceive information elaboration within their team (α = .86). Participants gave their opinion about a specific task on a 5-point Likert scale. Answer options varied from 1 = don't agree at all to 5 = very much agree. One of the question of this construct was: "My team members share a lot of information about carrying out this specific task".

Collective Team Identification

To measure the final variable, collective team identification, a translated version of Van der Vegt & Bunderson (2005) is being used (α = .86). This 4-item scale consists of the following statements: Rate the extent to which the team members of your team… "Feel emotionally attached to the team"; "Have a strong feeling to be part of the team"; "Have the feeling that problems of the team are also their problems" and "Have the feeling to be 'part of the family' within their team". Respondents answered these statements using a five-point Likert scale, ranging from 1 = don't agree at all to 5 = very much agree.

Demographic data

Ultimately, demographic data has been collected. The following aspects have been investigated: gender, age, organizational tenure, team tenure, number of team members, religion, ethnicity, highest completed education, and working sector.

Data Analysis

The data has been analyzed using IBM SPSS Statistics 22. A data inspection was done prior to the main analysis. There is been controlled for extreme data or outliers. No noticeable data has been detected. Then the averages, standard deviations, the minimum and the maximum of the demographic data were calculated. As described above, items were recoded if necessary and Chronbach's alpha scale scores were calculated. Also, to perform a regression analysis of the demographic variables, dummy coding has been used in the following variables: religion, ethnicity, and working sector. Subsequently, the hypotheses were tested.

Prior to these tests, and to determine the mutual relationships among the research variables, a Pearson correlation matrix has been conducted. Next, to assess how the different independent variables predict the elaboration of task-relevant

information, an hierarchical multiple regression has been executed. Furthermore, to test the remaining hypotheses, mediation and moderation analyses have been conducted using Process (Hayes, 2012). None of the analyses gave rise for concern for the assumptions of multiple linear regression, moderation, and mediation analysis.

Results

Descriptives

First, the relationship between all demographic variables and the elaboration of task-relevant information has been measured. A regression analysis has been conducted. The working sector of the respondent was shown to be a significant predictor of the elaboration of task-relevant information ($B = .53$, $SE\ B = .17$, $p < .01$). This analysis showed that the extent to which team members of the private sector elaborate on information is larger than the public sector. However, this variable is not included in the research model, as it is questionable if this difference in team effectiveness among different sectors is due to an actual sectorial characteristic or that it can be attributed to the fact that only two different organizations have been studied. Therefore, the added value of this variable is uncertain.

Table 1 shows the means, standard deviations for, and Pearson correlations among the research variables. At first, a positive relation is found between the two types of diversity. Although significant, note that the correlation is not very high ($r = .55$, $p < .01$). Furthermore, the correlation between perceived team heterogeneity and the elaboration of task-relevant information is negative, but non-significant. In contrary, perceived diversity shows a significant negative correlation with information elaboration ($r = -.28$, $p < .01$). Also, the relationship between both diversity measures and collective team identification has shown to be significantly negative. Next, the correlation between transformational leadership and collective team identification is strongly positive ($r = .68$, $p < .01$), which indicates that high levels of transformational leadership are related to higher reported team identification. In addition, high levels of transformational leadership and collective team identification are related to high levels of the elaboration of task-relevant information. Finally, note that the standard deviation of perceived team heterogeneity is rather low, indicating that the sample of this study may not be very diverse. This can have an influence on the following analyses.

Table 1

Means, Standard deviations, and Correlations among all research variables

Variable	*M*	SD	1	2	3	4	5
1. Perceived Team Heterogeneity	3.23	.56	-				
2. Perceived Diversity	3.31	.78	.55**	-			
3. Transformational Leadership	3.34	.69	-.31**	-.35**	-		
4. Collective Team Identification	3.48	.84	-.21*	-.37**	.63**	-	
5. Elaboration of task-relevant Information	3.54	.67	-.16	-.28**	.64**	.70**	-

*Note. N = 101. *p < .05. **p < .01*

Hypothesis 1.1 & 1.2

Next, two hierarchical multiple regression analyses of the research variables are carried out. The hierarchical steps in the analysis are based on the relative order of the variables in the research model. In step 1 of the first analysis, I entered perceived team heterogeneity. In step 2, collective team identification was added to the model to control for possible mediation effects of this variable. Finally, in step 3, transformational leadership has been entered to determine what the influence of transformational leadership is on the elaboration of task-relevant information. In the second analysis, these steps are replicated. However, in step 1, team heterogeneity is replaced by perceived diversity to test the two diversity measures separately. The regression analyses are presented in table 2 & 3.

Table 2 shows that perceived team heterogeneity is not a significant predictor of the elaboration of task-relevant information; hypothesis 1.1 cannot be confirmed. Subsequently, no mediation analysis can be conducted, as one of the assumptions is to have a significant relationship between the independent and dependent variable. In step 2, when entering collective team identification into the model, note that the model becomes significant ($R^2 = .49$). Finally, in step 3, transformational leadership has shown to be a significant predictor of the elaboration of task-relevant information ($B = .34$, *SE B* $= .09$, $p < .01$). The added value of transformational leadership to the model is $R^2 = .07$. The total explained variance of the model is $R^2 = .56$ ($F(3, 98) = 41,43$, $p < .01$).

Table 2

Hierarchical Regression of predictors of Elaboration of task-relevant Information. IV:

Perceived Team Heterogeneity

Variable	Step 1			Step 2			Step 3		
	B	SE B	β	B	SE B	β	B	SE B	β
Step 1									
Perceived Team Heterogeneity (TH)	-.20	.12	-.16	-.03	.09	-.02	.06	.09	.05
Step 2									
Collective Team Identification				.56	.06	.70**	.39	.07	.49**
Step 3									
Transformational leadership (TL)							.34	.09	.35**
R²		.03			.49			.56	
R² Change		.03			.47**			.07**	

*Note: N = 101. *p < .05. **p < .01*

The first step in table 3 shows that perceived diversity is a significant (negative) predictor of information elaboration ($B = -.24$, *SE B* $= .08$, $p < .01$). Therefore, hypothesis 1.2 can be confirmed. However, when including collective team identification into the model, this effect has shown to be non-significant. On the contrary, in this step, collective team identification is a significant predictor of information elaboration ($B = .55$, *SE B* $= .06$, *p < .01*). In the final step, transformational leadership has shown a significant positive relation with the elaboration of task-relevant information ($B = .33$, *SE B* $= .09$, $p < .01$). The variables in the final model explain a significant proportion of the variance in the elaboration of task-relevant information ($R^2 = .56$, $F(3, 98) = 41,19$, $p < .01$).
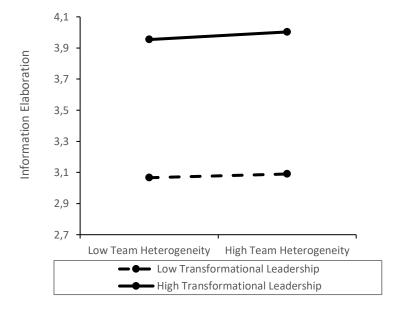
Hypothesis 2

To test hypotheses 2 till 4, mediation and moderation analyses have been conducted. In all analyses PROCESS (Hayes, 2012) and hierarchical multiple regression analyses are being used. Hypothesis 2.1 proposed that the relationship between perceived team heterogeneity and the elaboration of task-relevant information will be moderated by transformational leadership. Table 4 and the simple slopes of the moderation analysis (figure 3) show that there is no significant

interaction effect between these variables. Only a significant main effect is found for transformational leadership ($B = .67$, $SE\ B = .45$, $p < .01$). This analysis demonstrate that hypothesis 2.1 should be rejected.

Table 3

Summary of Hierarchical Regression of predictors of Elaboration of task-relevant

Information. IV: Perceived diversity

Variable	Step 1			Step 2			Step 3		
	B	*SE B*	*B*	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Step 1									
Perceived Diversity (PD)	-.24	.08	-.28**	-.02	.07	-.02	.02	.06	.02
Step 2									
Collective Team Identification				.55	.06	.69**	.40	.07	.50**
Step 3									
Transformational leadership (TL)							.33	.09	.34**
R^2		.08			.49			.56	
R^2 Change		.08			.41**			.07**	

Note: N = 101. *p < .05. **p < .01

Figure 3. Information elaboration as a function of perceived team heterogeneity and transformational leadership. *Note:* Low transformational leadership score corresponds with 1 SD below the mean, high transformational leadership score 1 SD above the mean.

Table 4

Linear model of predictors of Elaboration of task-relevant Information. Interaction effects, hypothesis 2.1 & 4.1

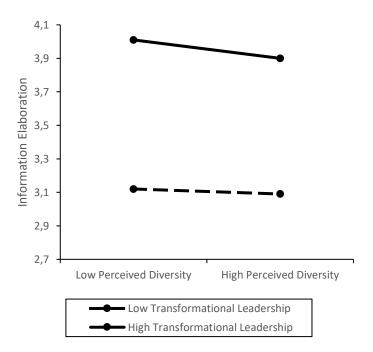|	Step 1			Step 2		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Step 1: Main & interaction effects						
Perceived Team Heterogeneity (TH)	.08	.33	.09	.57	.41	.47
Transformational Leadership (TL)	.75	.35	.76*	.82	.39	.84*
TH x TL	-.04	.09	-.17	-.15	.12	-.55
Step 2: Mediation effect						
Collective Team Identification				.41	.07	.52**
R²		.41			.56	
R² Change		.41**			.15**	

*Note: N = 101. *p < .05. **p < .01*

Hypothesis 2.2 proposed that transformational leadership would moderate the relationship between perceived diversity and the elaboration of task-relevant information. Table 5 shows that there is no interaction effect between above mentioned variables. Although only slightly significant, there is a main effect for transformational leadership on information elaboration ($B = .75$, *SE B* $= .35$, $p = .04$). No main effect is found for the relationship between perceived diversity and the elaboration of task-relevant information. In figure 4, a simple slopes of the analysis is plotted. The main effect of transformational leadership is evident. Also, note that the influence of perceived diversity on information elaboration has become very weak when transformational leadership is added as a moderator.

Table 5

Linear model of predictors of Elaboration of task-relevant Information. Interaction effects

hypothesis 2.2 & 4.2

	Step 1			Step 2		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Step 1: Main & interaction effects						
Perceived Diversity (PD)	.08	.33	.09	.20	.29	.23
Transformational Leadership (TL)	.75	.35	.76*	.52	.31	.53
PD x TL	-.04	.09	-.17	-.05	.08	.23
Step 2: Mediation effect						
Collective Team Identification				.40	.07	.50**
R²		.42			.56	
R² Change		.42**			.14**	

*Note: N = 101. *p < .05. **p < .01*

Figure 4. Information elaboration as a function of perceived diversity and transformational leadership.
Note: Low transformational leadership score corresponds with 1 SD below the mean, high
transformational leadership score 1 SD above the mean.

Hypothesis 3

To determine whether collective team identification mediates the relationship between perceived team heterogeneity and the elaboration of task-relevant information (hypothesis 3.1), a mediation analysis has to be executed. However, as there is no significant relationship between team heterogeneity and information elaboration, no mediation analysis can be executed.

As shown in table 3, perceived diversity does have a significant (negative) relationship with the elaboration of task-relevant information and a mediation analysis can be done. Hypothesis 3.2 proposed that collective team identification mediated this relationship. Note in figure 5 that this hypothesis can be confirmed. The direct relationship between perceived diversity and information elaboration is non-significant when entering collective team identification into the model; collective team identification fully mediates this relationship ($B = -.22$, $SE\ B = .07$, $p < .01$).
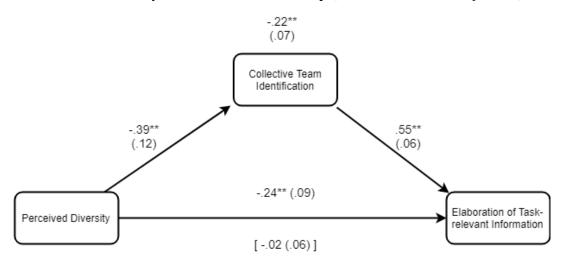

Figure 5. Mediation effect of collective team identification on the relationship between perceived diversity and the elaboration of task-relevant information. *Note: *$p < .05$. **$p < .01$, $N = 101$

Hypothesis 4

Hypotheses 4.1 & 4.2 propose that collective team identification mediates the moderating effect of transformational leadership on the relationship between diversity and the elaboration of task-relevant information. The regression analyses of both hypotheses (table 4 & 5) show that there are no interaction effects in step 2 of the models. This means that the mediating effect of collective team identification is not

dependent on the level of transformational leadership. Therefore, hypothesis 4.1 and 4.2 will be rejected.

Discussion

For managers, as well as for researchers, it is important to understand the role a team's manager can play in a diverse organizational team. The objective of this study was to investigate whether the effects of perceived team diversity can be influenced by different levels of transformational leadership. Such, that high levels of transformational leadership lead to less negative, or even positive, team outcomes. Results show that transformational leadership indeed has an influence on team outcomes as the elaboration of task-relevant information, but it does not interact with the perception of diversity. So, in this sample, transformational leadership does not counter the negative effects of diversity. In fact, perceived team heterogeneity and perceived diversity have little influence on the elaboration of task-relevant information, while the role of transformational leadership is large. This can explain the fact that no interaction effects were found. Following (objective) diversity literature, this result was not expected. Kearney & Gebert (2009) found that transformational leadership interacts with different diversity attributes. However, previous studies focused on the actual, observable differences among team members. The current study investigates the perception of diversity and is, to the best of my knowledge, the first study to take the role of transformational leadership into account.

Hypothesis 1.1 proposed that team heterogeneity is negatively related to information elaboration. Results show that this hypothesis cannot be confirmed in this sample. In short, perceived team heterogeneity had no effect on the information elaboration process within a team. This is contrary to expectations and former research (van Knippenberg et al., 2004; Horwitz & Horwitz, 2007). It is possible that the relatively small standard deviation ($SD = .56$) of perceived team heterogeneity can be a cause. This tells us that in this sample the variance in team heterogeneity, and thus the diversity, was rather small, what could lead to less meaningful effects on team outcomes. The proposition of hypothesis 1.2 that perceived diversity is negatively related to the elaboration of task-relevant information is confirmed.

Hypothesis 3.2 claimed that collective team identification would mediate the relationship between perceived diversity and the elaboration of task-relevant

information. Results show that this proposition can be confirmed. In line with Van Knippenberg et al. (2004), the extent to which team members elaborate on information within their team, is dependent on a social aspect; the level of identification with the team as a whole.

The last hypotheses (4.1 & 4.2) proposed that collective team identification would mediate the moderating effect of transformational leadership. However, since no moderation effect is found, these hypotheses are rejected.

Theoretical Implications

This study intended to make a contribution to the (perceived) diversity and transformational leadership literature. With regard to diversity research, this study tried to investigate how the perception of diversity relates to different team outcomes. The results show a negative relationship between perceived diversity and collective team identification and the elaboration of task-relevant information. This conclusion contributes to the diversity literature, which states that there is uncertainty whether the effects of diversity are positive or negative for the team effectiveness (Horwitz & Horwitz, 2007). Of course, more research on this specific topic is needed to fully understand how perceived diversity relates to linked team outcomes.

Secondly, in the Pearson correlation matrix (table 1) it is shown that perceived diversity is stronger related to information elaboration (and the other research variables) than perceived team heterogeneity. Therefore, I can conclude that in this sample perceived diversity has more explanatory power than perceived team heterogeneity. However, as presented in the results, the influence of perceived diversity on the elaboration of task-relevant information becomes insubstantial when entering transformational leadership and collective team identification into the model. Evidently, in this sample the effect of the perception of diversity is minor and questionable. In comparison to other perceived diversity literature, this is the first study that has incorporated leadership (and collective team identification) into the model. It is clear that this has led to the question if studying (the perception of) diversity is a substantial or meaningful area of research.

Practical Implications

As mentioned above, managers and employers can benefit from this study. At first, I can conclude that a high perception of diversity is non-beneficial for different team outcomes. This opens up challenges for managers and employers to be as productive as possible despite perceptions of differences within the team. Results

have shown the substantial influence a transformational leader can play in the elaboration of task-relevant information. Although transformational leadership didn't moderate the relation between perceived diversity and information elaboration (and couldn't counter the negative effects) it showed that high levels of transformational leadership can have a meaningful effect on team performance. Moreover, transformational leadership may even eliminate the effect of (perceived) team diversity. This means that the role of the manager can have far-reaching influence that goes beyond the impact of diversity. In fact, not only diverse teams, but also more homogeneous groups can benefit from the positive role the transformational leader can play (Bass & Avolio, 1994) In general, the recommendation towards mangers would be to focus on implementing aspects of the behaviour of a transformational leader. This can, for instance, be achieved by specific trainings aimed at improving transformational leadership skills (Barling, Weber, & Kelloway, 1996). As shown in this study, transformational leadership is positively related to collective team identification and the elaboration of task-relevant information.

Limitations and future Research

I acknowledge several limitations of this study. At first, the design of this study may be a concern. As it entails a cross-sectional research, no causal conclusions can be drawn. Also, as a consequence, I cannot clearly state that the directions in the proposed model are accurate. Results should therefore be interpreted with care. However, following diversity literature, objective diversity has a direct effect on the variables used in this model (van Knippenberg et al., 2004; Kearny & Gebert, 2009). This presupposes that team differences itself have beneficial or detrimental effects on team outcomes. If so, an evaluative or cognitive component towards these differences should be operating, in order to have an effect on the attitudes or behaviour of the team member (Hentschel, 2013). Future research has to investigate whether the perception of diversity has added value above the actual objective diversity in explaining the relationship with team effectiveness.

Secondly, the reliability of the perceived diversity scale is alarming ($\alpha = .58$). According to Gliem & Gliem (2003) this alpha level is questionable and can therefore have had an influence on the conclusions presented in this study. The three-item perceived diversity scale is a Dutch translation of Hentschel et al. (2013). In that study, a reliability of $\alpha = .72$ was found. As mentioned, a review by Shemla et al. (2014) showed a lot of ambiguity regarding the scales that have been used in previous

research. Literature is not yet clear in what measure is most appropriate to assess the team members' perception of the differences within their team. In selecting the three-item scale of Hentschel et al. (2013), I followed the majority of the literature, using the perception of the team member on the team as a whole. In order to get a better insight in how employees perceive the possible differences within their teams, a new scale has to be developed. To do so, researchers first have to be unambiguous in their definition of perceived diversity. Because research on perceived diversity is relatively young, there is no clear definition that is been used in all studies (Shemla et al., 2014). By creating a shared definition, operationalizing this construct will be more effective and results will be better comparable among different studies. If so, perceived diversity has the potential to explain the connection between objective diversity and the attitudes and actual behaviour of individuals and groups.

The third limitation of this study is, linked to the above, the fact that no actual observable measure of diversity has been taken into account in this research. An argument for this decision is that the scope and the timespan of this research did not allow to study multiple teams separately. Therefore, in this sample, no clear conclusions could be drawn from the difference between objective and perceived diversity and how these two relate to each other. However, in previous research it is shown that the perception of diversity fully mediates the relation between the actual team diversity and several team outcomes, showing that objective diversity only has an indirect effect on team effectiveness (Harrison et al., 2002; Ries, Diestel, Wegge, & Schmidt, 2010). These results demonstrate that the perception of diversity should be studied more intensively in the future to better understand the effect of diversity on the work floor.

The final limitation of this research is the fact that in this study the survey is mainly collected at two different organizations; the municipality and a private agricultural company. In doing so, two different sectors (public and private) could be compared. However, because of the limited number of organizations, it is possible that the results are biased. When mainly focusing on two organizations, it is less evident to extend the results of this sample to the general population and the work floor; the external validity and generalizability of this research may be lower. However, focusing on these two sectors gave the insight that both sectors may elaborate differently on information within their team. Results show that employees of the municipality (public sector) elaborate less on the information of their team

members. Future research has to give insight whether the results found in this study are a consequence of specific organizational characteristics or if it can be extended sector wide. Such, that the elaboration of task-relevant information is dependent on the working sector of the employee. If so, these conclusions can have important implications for employers and managers, as well as for scholars.

Conclusion

In this study, I have focused on the role a team's manager plays in the effectiveness of a (perceived) diverse team. In the last decades, organizations and teams have become increasingly demographically and functionally diverse, which can cause challenges for the employer, as well as for the manager of the team. Literature is not unambiguous about the effect that diversity may have on the team effectiveness. In this research, I have shown that the perception of team diversity is negatively related to the elaboration of task-relevant information and the collective team identification. Also, transformational leadership has shown to be an important predictor of information elaboration. However, none of the research variables (transformational leadership and collective team identification) was able to counter the negative relation of diversity into a positive relation with information elaboration. As research on perceived diversity is relatively young, these results ask for further investigation in the future.

Reference

Aronson, E., Wilson, T., & Akert, R. (2005). *Social Psychology*, New Jersey, NY: Pearson Education.

Bass, B. M., & Avolio, B. J. (1989). Potential biases in leadership measures: How prototypes, leniency, and general satisfaction relate to ratings and rankings of transformational and transactional leadership constructs. *Educational and psychological measurement*, 49(3), 509-527.

Bass, B. M., & Avolio, B. J. (1994). Transformational leadership and organizational culture. *The International Journal of Public Administration*, 17(3-4), 541-554.

Avolio, B. J., & Bass, B. M. (2004). MLQ: Multifactor leadership questionnaire. *Mind Garden.*

Barling, J., Weber, T., & Kelloway, E. K. (1996). Effects of transformational leadership training on attitudinal and financial outcomes: A field experiment. *Journal of applied psychology*, 81(6), 827.

Bass, B. M. (1990). From transactional to transformational leadership: Learning to share the vision. *Organizational dynamics*, 18(3), 19-31.

Bass, B. M., & Avolio, B. J. (1993). Transformational leadership and organizational culture. *Public administration quarterly*, 112-121.

Bass, B. M., Avolio, B. J., Jung, D. I., & Berson, Y. (2003). Predicting unit performance by assessing transformational and transactional leadership. *Journal of applied psychology*, *88*(2), 207.

Bass, B. M., & Riggio, R. E. (2006). *Transformational leadership*. Psychology Press.

Bell, S. T., Villado, A. J., Lukasik, M. A., Belau, L., & Briggs, A. L. (2011). Getting specific about demographic diversity variable and team performance relationships: A meta- analysis. *Journal of management*, 37(3), 709-743.

Bergami, M., & Bagozzi, R. P. (2000). Self-categorization, affective commitment and group self-esteem as distinct aspects of social identity in the organization. *British Journal of Social Psychology*, *39*(4), 555-577.

Drach-Zahavy, A., & Somech, A. (2002). Team heterogeneity and its relationship with team support and team effectiveness. *Journal of Educational Administration*, 40(1), 44-66.

Field, A. (2009). *Discovering statistics using SPSS*. Sage publications.

Gliem, J. A., & Gliem, R. R. (2003). Calculating, interpreting, and reporting Cronbach's alpha reliability coefficient for Likert-type scales. Midwest Research-to-Practice Conference in Adult, Continuing, and Community Education.

Harrison, D. A., Price, K. H., Gavin, J. H., & Florey, A. T. (2002). Time, teams, and task performance: Changing effects of surface-and deep-level diversity on group functioning. *Academy of management journal*, 45(5), 1029-1045.

Hartog, D. N., Muijen, J. J., & Koopman, P. L. (1997). Transactional versus transformational leadership: An analysis of the MLQ. *Journal of occupational and organizational psychology*, 70(1), 19-34.

Hayes, A. F. (2012). PROCESS: A versatile computational tool for observed variable mediation, moderation, and conditional process modeling.

Hentschel, T., Shemla, M., Wegge, J., & Kearney, E. (2013). Perceived diversity and team functioning: The role of diversity beliefs and affect. *Small Group Research*, 44(1), 33-61.

Hinsz, V. B., Tindale, R. S., & Vollrath, D. A. (1997). The emerging conceptualization of groups as information processors. Psychological bulletin, 121(1), 43.

Hogan, R., & Kaiser, R. B. (2005). What we know about leadership. *Review of general psychology*, *9*(2), 169.

Homan, A. C., Van Knippenberg, D., Van Kleef, G. A., & De Dreu, C. K. (2007). Bridging faultlines by valuing diversity: diversity beliefs, information elaboration, and performance in diverse work groups. *Journal of applied psychology*, 92(5), 1189.

Horwitz, S. K., & Horwitz, I. B. (2007). The effects of team diversity on team outcomes: A meta-analytic review of team demography. *Journal of management*, 33(6), 987-1015.

Jackson, S.E., & Joshi, A. 2011. Work team diversity. In S. Zedeck (Ed.), *APA handbook of industrial and organizational psychology:* Vol. 1. Building the organization: 651-686. Washington, DC: American Psychological Association

Jung, D. I., & Avolio, B. J. (2000). Opening the black box: An experimental investigation of the mediating effects of trust and value congruence on transformational and transactional leadership. *Journal of organizational Behavior*, 949-964.

Jung, D. I., & Sosik, J. J. (2002). Transformational leadership in work groups: The role of empowerment, cohesiveness, and collective-efficacy on perceived group performance. *Small group research*, *33*(3), 313-336.

Kark, R., Shamir, B., & Chen, G. (2003). The two faces of transformational leadership: Empowerment and dependency. *Journal of applied psychology*, 88(2), 246.

Kirkman, B. L., Tesluk, P. E., & Rosen, B. (2004). The impact of demographic heterogeneity and team leader-team member demographic fit on team empowerment and effectiveness. *Group & Organization Management*, 29(3), 334-368.

Knippenberg, D., & Schie, E. (2000). Foci and correlates of organizational identification. *Journal of occupational and organizational psychology*, 73(2), 137-147.

Ries, B. C., Diestel, S., Wegge, J., & Schmidt, K. H. (2010). Die rolle von alterssalienz und konflikten in teams als mediatoren der beziehung zwischen altersheterogenität und gruppeneffektivität. *Zeitschrift für Arbeits-und Organisationspsychologie A&O*.

Ruggieri, S., & Abbate, C. S. (2013). Leadership style, self-sacrifice, and team identification. *Social Behavior and Personality: an international journal*, 41(7), 1171-1178.

Schaubroeck, J., Lam, S. S., & Cha, S. E. (2007). Embracing transformational leadership: team values and the impact of leader behavior on team performance. *Journal of applied psychology*, *92*(4), 1020.

Shamir, B., House, R. J., & Arthur, M. B. (1993). The motivational effects of charismatic leadership: A self-concept based theory. *Organization science*, *4*(4), 577-594.

Shemla, M., Meyer, B., Greer, L., & Jehn, K. A. (2016). A review of perceived diversity in teams: Does how members perceive their team's composition affect team processes and outcomes?. *Journal of Organizational Behavior*, 37(S1).

Shin, S. J., & Zhou, J. (2007). When is educational specialization heterogeneity related to creativity in research and development teams? Transformational leadership as a moderator. *Journal of applied Psychology*, 92(6), 1709.

Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S. (1987). *Rediscovering the social group: A self-categorization theory*. Basil Blackwell.

Van Der Vegt, G. S., & Bunderson, J. S. (2005). Learning and performance in multidisciplinary teams: The importance of collective team identification. *Academy of management Journal*, 48(3), 532-547.

Van Der Vegt, G. S., Van De Vliert, E., & Oosterhof, A. (2003). Informational dissimilarity and organizational citizenship behavior: The role of intrateam interdependence and team identification. *Academy of Management Journal*, 46(6), 715-727.

Van Dick, R., Van Knippenberg, D., Hägele, S., Guillaume, Y. R., & Brodbeck, F. C. (2008). Group diversity and group identification: The moderating role of diversity beliefs. *Human Relations*, *61*(10), 1463-1492.

Van Knippenberg, D. (2000). Work motivation and performance: A social identity perspective. *Applied psychology*, 49(3), 357-371.

Van Knippenberg, D., De Dreu, C. K., & Homan, A. C. (2004). Work group diversity and group performance: an integrative model and research agenda. *Journal of applied psychology*, 89(6), 1008.

Williams, K. Y., & O'Reilly III, C. A. (1998). Demography and diversity in organizations. *Research in organizational behavior*, *20*, 77-140.

Zellmer-Bruhn, M. E., Maloney, M. M., Bhappu, A. D., & Salvador, R. B. (2008). When and how do differences matter? An exploration of perceived similarity in teams. *Organizational Behavior and Human Decision Processes*, 107(1), 41-59.

Appendix

Appendix 1 – Informed consent

Beste deelnemer,

Hartelijk dank voor uw deelname aan mijn Master-onderzoek naar de rol van de leidinggevende op de effectiviteit van het team. Het doel van het onderzoek is inzicht te krijgen in de relatie tussen teamdiversiteit, de rol van de leidinggevende en de prestatie van het team.

Aan het begin van de vragenlijst worden een aantal achtergrondgegevens gevraagd. De overige vragen hebben betrekking op uw werk. De informatie die u verstrekt, zal geheel anoniem en strikt vertrouwelijk behandeld worden. Dit betekent dat de resultaten alleen verwerkt worden door de Universiteit Utrecht.

Het invullen van de vragenlijst kost 10 tot 15 minuten, afhankelijk van de snelheid waarmee u de vragen beantwoordt. Probeer niet te lang na te denken over uw antwoord, het gaat om uw eerste ingeving. Bovendien bestaan er geen goede of foute antwoorden. Let op: u kunt geen vragen overslaan. Voor de verwerking van de data is het van belang dat u alle vragen invult. Wanneer u de vragenlijst heeft ingevuld is het noodzakelijk om op het zwarte pijltje te drukken om de vragenlijst te verzenden.

Uiteraard is deelname geheel vrijblijvend en kunt u gedurende het onderzoek op elk moment stoppen. Uw gegevens worden dan niet verwerkt. Wanneer u voor, tijdens of na het onderzoek vragen of suggesties heeft, kunt u mij bereiken via i.stronks@uu.nl. Zodra u naar de volgende pagina gaat, stemt u in met deelname aan dit onderzoek. Alvast hartelijk dank hiervoor!

Met vriendelijke groet,

Ivo Stronks
Masterstudent Organisational Psychology aan de Universiteit Utrecht

In samenwerking met:

dr. Marjoka van Doorn
Onderzoeksbegeleider Universiteit Utrecht

Appendix 2 – Team Heterogeneity scale (Harisson & Klein, 2002)
De volgende stellingen hebben betrekking op het team waarin u werkzaam bent binnen uw organisatie.
N.b. Als u in de meerdere teams werkzaam bent, hebben onderstaande stellingen betrekking op het team waarin u de meeste tijd actief bent.

Geef uw mening over de samenstelling van uw team, door aan te geven of u het gevoel heeft dat de leden van uw team erg verschillend of erg gelijk (5 punt schaal) zijn op grond van onderstaande kenmerken.

(1 = erg verschillend 5 = erg gelijk)

1. Ik ben me bewust dat de leeftijden van de teamleden … zijn
2. Ik ben me bewust dat de religies van de teamleden … zijn
3. Ik ben me bewust dat de seksuele voorkeuren van de teamleden … zijn
4. Ik ben me bewust dat de etnische afkomst van de teamleden … is
5. Ik ben me bewust dat de persoonlijkheden van de teamleden … zijn
6. Ik ben me bewust dat het onderwijsniveau van de teamleden … is
7. Ik ben me bewust dat de educatie achtergrond (studie-specialisatie) van de teamleden … is
8. Ik ben me bewust dat de vaardigheden van de teamleden … zijn
9. Ik ben me bewust dat het aantal jaren dat de groepsleden in dit team werken … is
10. Ik ben me bewust dat de verdeling man/vrouw … is

Appendix 3 – Perceived Diversity scale (Hentschel, 2013)

De volgende stellingen betreffen het team waarin u werkzaam bent binnen uw organisatie.
N.b. Als u in de meerdere teams werkzaam bent, betreffen onderstaande stellingen het team waarin u de meeste tijd actief bent.

Geef uw mening over de onderstaande stellingen (1 = Helemaal niet mee eens – 5 = Helemaal mee eens).

11. Ik ben me erg bewust van de verschillen binnen mijn team
12. Als ik mijn team zou moeten omschrijven, denk ik automatisch aan de verschillen tussen mijn collega's
13. De samenstelling van mijn team is erg divers

Appendix 4 – MLQ scale (Den Hartog, 1997)

Onderstaande stellingen hebben betrekking op uw visie op het functioneren van de leidinggevende van uw team.

N.b. Als er sprake is van meerdere leidinggevenden binnen uw team, betreffen de stellingen de leidinggevende waar u het meest mee samenwerkt.

De leidinggevende van mijn team...
(1 = nooit, 5 = altijd)

De leidinggevende van mijn team..

1. Verwacht van mij dat ik doelen voor mijzelf stel
2. Daagt mij uit oude problemen op een nieuwe manier te bezien
3. Stimuleert mij problemen zelf op te lossen
4. Heeft ideeën die mij dwongen zaken, die ik nooit verder betwijfeld had, opnieuw te overdenken
5. Stelt mij vragen die mij aansporen na te denken over de manier waarop ik dingen doe

6. Geeft zelf het goede voorbeeld
7. Is een goed voorbeeld voor mij
8. Wat hij/zij zegt doet hij/zij ook
9. Komt zijn/haar verplichtingen na
10. Volgt een duidelijke morele gedragscode
11. Zorgt ervoor dat zijn handelingen ethisch verantwoord zijn
12. Is betrouwbaar

13. Luistert naar zaken die voor mij van belang zijn
14. Behandelt mij als een individu, in plaats van zomaar een lid van de groep
15. Geeft advies wanneer dat nodig is
16. Is oprecht geïnteresseerd in de ontwikkeling van zijn medewerkers
17. Houdt rekening met mijn persoonlijk welzijn

18. Maakt mij bewust van gemeenschappelijke waarden, aspiraties en idealen
19. Maakt dat ik trots ben met hem/haar samen te werken
20. Maakt mij enthousiast voor mijn werkopdrachten
21. Wekt in mij de motivatie om harder en beter te werken
22. Stimuleert mij de kwaliteit van mijn eigen werk te beoordelen
23. Creëert het gevoel dat we samen aan een belangrijke missie/opdracht werken
24. Inspireert mij om veel meer voor elkaar te krijgen dan ik zonder hem/haar zou hebben gekund

25. Versterkt mijn gevoel voor optimisme voor de toekomst
26. Inspireert mij zo goed mogelijke prestaties te leveren
27. Motiveert mij meer te doen dan ik oorspronkelijk had verwacht
28. Daagt mij uit hoge doelen voor mijzelf te stellen
29. Krijgt mensen zover dat ze de belangen van de eenheid boven hun eigen belangen stellen
30. Stimuleert medewerkers hun talenten te ontwikkelen

Appendix 5 – Collective Team Identification scale – Van der Vegt & Bunderson (2005)

Onderstaande stellingen hebben betrekking op uw visie op het team als collectief.

Beoordeel de mate waarin de leden van uw team...
(1 = helemaal mee oneens, 5 = helemaal mee eens)

1. …Zich emotioneel gehecht voelen aan het team
2. ...Sterk het gevoel hebben dat zij tot het team behoren
3. ...Het gevoel hebben dat de problemen van het team ook hun problemen zijn
4. …Het gevoel hebben "onderdeel te zijn van de familie" binnen het team

Appendix 6 – Elaboration of task-relevant information (Homan, 2007)

Onderstaande stellingen hebben betrekking op uw visie op de wijze waarop informatie uitgewisseld wordt binnen uw team.

Voor het beantwoorden van onderstaande vragen, is het van belang dat u een specifieke taak in uw hoofd neemt, waar u met het gehele (of groot gedeelte) van het team aan werkt (of gewerkt hebt).

(1 = helemaal mee eens, 5 = helemaal mee oneens)

1. Mijn teamleden wisselen veel informatie uit over het uitvoeren van deze specifieke taak
2. Mijn teamleden hebben vaak taak-gerelateerde opmerkingen wat me aan het denken zet
3. Met mijn team discussiëren we vaak over de inhoud van de taak
4. In mijn team wordt er veel gepraat over de ideeën die we hebben met betrekking tot de taak
5. Mijn teamleden zeggen vaak dingen die me iets nieuws leren over mijn werk
6. Mijn teamleden zeggen vaak dingen die bij mij leiden tot nieuwe ideeën
7. Ik denk vaak diep na over datgene wat andere teamleden zeggen over mijn werk

Appendix 7 – Demographics

1. Wat is uw geslacht?

2. Wat is uw leeftijd?

3. Hoelang bent u werkzaam binnen uw huidige organisatie?

4. Hoelang bent u werkzaam binnen uw huidige team?

5, Uit hoeveel personen bestaat uw team?

6, Wat is uw religie?

7. Wat is uw etnische afkomst?

8. Wat is uw hoogst genoten (afgeronde) opleiding?

9. In welke sector bent u werkzaam?

1. Wat is uw geslacht?

2. Wat is uw leeftijd?

3. Hoelang bent u werkzaam binnen uw huidige organisatie?

4. Hoelang bent u werkzaam binnen uw huidige team?