Effects of Diversity in Teams and Workgroups: A Qualitative Systematic Review

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Abstract

Over the past few decades, scholars have attempted to explore the effects of diversity on teams and workgroups. This study aims to assess the state of the art, to expose new trends in diversity research, and to consolidate the results of previous studies in order to infer common wisdom about effects of diversity on teams/workgroups in organizations. In this paper, 122laboratory and field studies, and 17 review studies conducted between 1959 and 2016were qualitatively and systematically analyzed. It has been observed that although there is no single commonly accepted effect of diversity on performance per se, it tends to have a negative impact on cohesion, communication, and integration, and is likely to increase conflict and turnover. On the positive side, diversity - up to a certain limit - tends to improve decision-making and problem-solving processes through higher creativity and innovation potential. Furthermore, it was demonstrated that reactions of team members to diversity vary; there is no straightforward association between diversity and team dynamics, as many factors influence this association. Nevertheless, this paper investigates how leaders/managers of multicultural can make the best of a diverse team based on the insights of this review.

Keywords: diversity, heterogeneity, teams, workgroups, review, qualitative analysis

1. Introduction

Organizations have been employing diverse teams and workgroups - either 'by preference' or 'by compulsion' -, in order to increase their competitiveness in this age of globalization, industrial developments, andrapid dissemination of information. As Milliken and Martin (1996) expressed "as organizations increasingly operate ina multinational and multicultural context, understanding how diversity in the composition of organizational groups affects outcomes such as satisfaction, creativity, and turnover will be of increasing importance. In addition, the trend toward using teams to coordinate and manage work in organizations is increasing the amount of time that employees spend with people outside their particular functional or product groups, thereby bringing them into contact with people who may have very different training, skills, functional background, and even values."

Although diversity has many synergistic factors increasing creativity and innovation, it also introduces some conflicting factors such as misunderstandings and role ambiguity. Milliken and Martins (1996) express this dilemma and define diversity as a "double-edged sword". To manage diverse teams effectively, we need to understand how diversity of a team relates to team functioning, i.e., team outcomes and team processes. Thus, in order to benefit from previous studies, an up-to-date comprehensive and complete investigation of the impact of diversity and its management on team dynamics and outcomes is required. Several recent researchers reviewed such studies exploring effects of diversity in workgroups and teams in an attempt to explore some common consequences of diversity.

However many of them meta-analyzed the statistical correlations between diversity, generally diversity in (a)specific dimension/s, and team performance and uncovered a "zero" or "non-significant" relationship(Bowers, Pharmer, & Salas, 2000; Homberg & Bui, 2013; Schneid, Isidor, Li, & Kabst, 2015; Stahl, Maznevski, Voigt, & Jonsen, 2010; Stewart, 2006; Webber & Donahue, 2001) or inconsistent results (Bell, Villado, Lukasik, Belau, & Briggs, 2011; Joshi & Roh, 2009; Schneid et al., 2015; Horwitz & Horwitz, 2007; Stewart, 2016; Webber & Donahue, 2001) with regard to the association between diversity and performance. This is why we chose to interpret the existing literature descriptively when deriving insights regarding the effects of diversity in workgroups, rather than targeting at a statistical model.

Although most of the scholars performed quantitative meta-analyses in exploring the effects of diversity on teamwork, some researchers used qualitative review methods (Jackson, Joshi, & Erhardt, 2003; Mello & Rentsch, 2015; Milliken & Martins, 1996; Shemla, Meyer, Greer, & Jehn, 2016; van Knippenberg & Schippers, 2007. Williams & O'Reilly, 1998), similar to the approach chosen for this paper. The qualitative review method most closely related to our work is the one applied by Williams and O'Reilly (1998) and its follower van Knippenberg and Schippers (2007). Similarly, we employed a systematic and descriptive review in order to provide evidence for common threads with respect to effects of diversity. Our study upgraded their findings that covered a time span until 2006, by including studies conducted after 2006 till now. Even though two studies conducted descriptive review after van Knippenberg and Schippers (2007), our review differs from theirs in some basic aspects: Unlike the study by Mello and Rentsch (2015) which concentrates only on cognitive diversity, we did not concentrate on a specific diversity dimension - or a group of dimensions-, but rather took a multi-factor, integrated point of view by considering the insights from van Knippenberg and Schippers (2007) and Homan, Greer, Jehn, and Koning (2010) who proposed that all diversity dimensions tend to elicit social categorization and information/decision-making processes, since all diversity dimensions provide a basis for differentiation, and might be associated with differences in task-relevant information and perspectives. Thus, we pursued an integrated approach in an attempt to explore overarching threads emerging from diversity and its management context. Unlike the study by Shemla et al. (2014) which investigated perceived diversity, we did not differentiate between objective (actual differences in members' characteristics) and perceived diversity ("members' beliefs about the diversity within the team"; Hentschel, Shemla, Wegge, & Kearney, 2013, p. 35). In fact, in our study, a very restricted amount of studies reviewed (e.g., Harrison et al. 2002; Jehn & Bezrukova, 2010) considered perceived diversity.

In this work, the terms "team", "workgroup", and "group" are used interchangeably for the term "team/workgroup". In addition, *diversity* is considered as "differences between individuals on any attribute that may lead to the perception that another person is different from self" (van Knippenberg & Schippers, 2007, p.517).We define *team diversity* as the heterogeneity of the team regarding attributes its members have, the term *diversity type* is used to describe in which attribute team members differ from one another, such as diversity in age, gender, education, culture, etc. We argue that successful team *outcomes* are achieved through effective team *processes*. Therefore the effects of diversity on team processes are also reviewed. As opposed to most of the previous reviews (e.g., Bell et al. 2011; Stewart, 2006) that concentrated on task-related team outcomes, this study aims to expose the effects of diversity on both social and task-related outcomes.

The paper is structured as follows: Following the introduction, the methodology of the study is presented. The third section reviews the diversity literature, while the last two sections draw main conclusions, highlight avenues for future research, and discuss implications for professionals working in or managing diverse teams.

2. Methodology

Based on the inconsistent results and near-zero-relationships between diversity and team outcomes in meta-analytic review studies, we chose to interpret the existing literature descriptively. While doing this, we built our review according to Fink (2013)'s procedure for a systematic review and we defined following research questions in an attempt to *explore the overarching wisdom regarding effects of diversity on teams and workgroups*?

1. Which advantages and opportunities tend to accrue from diversity in teams and workgroups?
2. What tend to be disadvantages and risks associated with diversity in teams and workgroups?
3. What are the diversity-related features leading to particular positive and negative effects, respectively? Which factors intervene in the association between team diversity and team processes as well as outcomes?
4. What is the state-of-the art in explaining the dynamics of team diversity?
5. What is the trend in diversity research?

Secondly, we searched all related bibliographies and databases which were available through remote access of Vienna University of Economics and Business (WU) and University of Vienna (UNIVIE).These sources provided more than 100 databases including JSTOR, SSCI-Social Science Citation Index, EconLit (EBSCO), ABI/Inform Global (T&I ProQuest), and EBSCO Business Source Premier. Then, databases and bibliographies were searched by using a combination of the search terms "diversity", "heterogeneity", and "fault line" with "team", "workgroup", and "working group" (such as diversity teams, heterogeneity workgroup, etc.) for the articles.

Based on the criteria we set for inclusion into our review, we considered the studies which are empirical (laboratory or field) or reviews of previous empirical studies and explicitly researched effects of diversity on group processes and outcomes (excluded, for example, studies on organizational diversity and studies on minority attitudes in organizations). In this step, we also performed manual search for the studies referenced by the selected articles. In addition, we searched various libraries for other academic studies such as dissertations and working papers. Next, we reported the current knowledge, explained the findings, and identified the contribution of recent studies to the literature, and also the research gaps. In sum, we reviewed a total of 122 field and laboratory studies along with 17 review studies conducted between 1959 and 2016. Although, Williams & O'Reilly (1998) argued that salient and visible characteristics would make up the most important markers of diversity, we considered all diversity attributes which are likely to have an effect on team functioning. The total number of studies on different diversity types is shown in Table 1. As seen in the table we agglomerated the diversity types which are very close to each other, even difficult to differentiate (such as culture, nationality, and ethnicity) and diversity dimensions which are mostly researched together. Table A1 of the Appendix summarizes the studies reviewed, including some important results. In addition, Table A2 of the appendix lists the previous review studies found to be valuable in the longitudinal understanding of the consequences of several diversity dimensions on group dynamics

Table 1. Summary of number of studies by diversity type	
Diversity type	**Number**
Cultural background (race, ethnicity, nationality, citizenship, and cultural values)	54
Demographic attributes (gender and age)	44
Organizational attributes (organization tenure, job tenure, group tenure, career paths, position, and role)	28
Informational attributes (education, curriculum, industrial background, functional background, experience, ability, and expertise)	22
Personal traits and cognitive attributes (personality, beliefs, attitudes, values, approaches, temporal attitudes, and goal orientation)	20
Social attributes (life styles, social category, disability, and minority)	3
Military service	1
Multi-dimensional (faultline) studies	20

3. Analysis of previous diversity studies

At the end of the 1950s and the beginning of the 1960s, researchers began to conduct laboratory and field studies to analyze the composition of teams regarding different personality traits, values, attitudes, and skills, and, to some extent, they compared heterogeneous and homogeneous teams with respect to these attributes. From the 1970s, researchers began to study more visible diversity dimensions such as ethnicity, age, and gender, as well as tenure and educational diversity. Before the 1980s, most of those diversity studies were conducted on students, but by the end of the 1980s, workgroup employees from companies started to be included in the studies. With the globalization of workforce, studies from the early 1990s became more interested in diversity with respect to nationality and ethnicity. During this period, researchers also began to study diversity in industry experience and functional background.

In 2000s, even though cultural diversity was the most researched diversity dimension, directly observable attributes made way for the cognitive attributes such as thinking styles, personality, knowledge, values, skills, and beliefs. In addition, diversity in status, roles, and positions, as well as informational and educational diversity drew more interest from scholars in recent years. The studies conducted in the last couple of decades considered moderating factors such as team size, team tenure, nature of the task, leadership, and team climate. A considerable amount of scholars from this period preferred to integrate the knowledge from earlier research work by reviewing existing literature with different perspectives and different methods; hence produced many fruitful review studies.

In addition studies in recent years integrated fault line approach and considered the alignment of and interaction between the multiple diversity dimensions. The attempt to answer the question 'how diversity affects team processes and outcomes' is largely guided by the following three theories:

(i)   self- and social-categorization (Tajfel, 1981 1985; Turner, 1987) and social identification theory (Hogg & Abraham, 1988; Turner, 1982)
(ii) similarity-attraction paradigm (Byrne, 1971)
(iii) information/decision-making perspective.

Whereas the first two offer argumentations for negative effects/problems of diversity, the last one concentrates on the benefits. According to *social-categorization and social-identification theories*, individuals tend to compare themselves with others in order to bolster and maintain a high level of self-esteem. They classify themselves and others into social categories based on the salient attributes, and these categories allow comparison among the resulting groups. They define themselves in terms of social identity as a member of social category or a member of one group compared to other groups. Social categories cause "us-them" distinction which may cause stereotyping and subgroup formation. In addition, categorizing people into groups can lead individuals to perceive out-group members as less trustworthy, less honest, and less cooperative than members of their own group (in-group) and increase stereotyping, polarization, anxiety, and "otherness". (Williams & O'Reilly, 1998; Mannix & Neale, 2005; van Knippenberg & Schippers, 2007)*Similarity/attraction paradigm* complementing the social-categorization theory offers that individuals with similar attitudinal and demographic characteristics are most attracted to one another, and they perceive individuals similar to them more intelligent, knowledgeable, and well-adjusted (Williams & O'Reilly, 1998; Mannix & Neale, 2005). In contrast, the *information/decision-making perspective* argues that diversity brings variety in terms of knowledge, expertise, and perspectives that promotes higher quality and more creative and innovative outcomes (van Knippenberg & Schippers, 2007).

3.1. Effects of diversity on team processes and outcomes

3.1.1. Similarity-attraction and social- and self-categorization approaches

According to the similarity-attraction theory, members are less attractive to one another in diverse teams, and they prefer to work with people having similar values, attitudes, and beliefs. Similarly, according to social-categorization theory, team members identify themselves as being part of specific groups (in-group), and others as outsiders or as part of other groups (out-group) (Stahl, Maznevski, et al., 2010). This categorization leads to differential expectations from in-group and out-group members and a tendency to judge 'others' according to group traits such as stereotypes (Mannix & Neale, 2005).Studies supporting social- and self-categorization paradigms found that diversity in teams and organizations causes process losses through conflict, lack of integration and interaction, lower cooperation, cohesion, and trust, more difficult communication, more stress and anxiety, high rate of individual turnover, role ambiguity, and less satisfaction (Bjørnstad, Fostervold, & Ulleberg, 2013; Chatman & Flynn, 2001; Chatman et al., 1998; Elron, 1997; Fiedler, Meuwese, & Oonk, 1961; Jackson et al., 1991; Jehn, Northcraft, & Neale, 1999; Krentzel, 2001; Mello & Delise, 2015; O'Reilly, Caldwell, & Barnett, 1989; Pelled, Eisenhardt, & Xin, 1999; Stahl, Maznevski, et al., 2010; Triandis et al., 1965; Tsui, Egan, & O'Reilly, 1992; Watson & Kumar, 1992; Wiersema & Bird, 1993; Woehr, Arciniega, & Poling, 2013).

Moreover, lower participation and contribution tendencies from minority members and higher subgroup formation tendency are expected in culturally diverse teams (Earley & Mosakowski, 2000; Kirchmeyer, 1993; Kirchmeyer & Cohen, 1992; Krentzel, 2001). The risk of conflict is very high in culturally diverse environments due to language problems, different hierarchical thinking, stereotypes, psychological distance, conflicting work and/or interaction norms and habits, and different non-verbal behaviors. The *psychological distance* refers to the situation where communication peers constantly feel that they would not completely understand one another. It is difficult to reach a common communication ground with the existence of high psychological distance (Krentzel, 2001).Köppel (2008) argued that messages may be misunderstood by a target due to differences in the cultural frame of reference. That misunderstanding would hinder communication, increase monetary cost of communication, and lead to emotional stress among members. A culturally determined otherness is prone to be misinterpreted as a personal lack of competence and motivation, or even as having opportunistic intentions. The author also exposed that various forms of rejection arise in culturally diverse teams due to stereotypes and ethnocentrism, and these lead to emotional aversion towards team members from other cultures, and job anxiety among the members.

These kinds of exclusionary emotions prevent team learning and lead to subgroup formation which in turn causes reduction of communication and interaction within the team. Hence, there is a high risk of negative group atmosphere and lack of team cohesion, which might reduce the satisfaction of team members (Köppel, 2008; Krentzel, 2001). Krentzel (2001) highlighted a completely new consequence of cultural diversity which he labeled as "scapegoat finding" tendency. The author argued that the members of a multicultural team tend to look for simple solutions to problems like shifting the blame to foreigners.

3.1.2. Information-Processing Approach

According to the information-processing approach, variety in a team increases skills, abilities, information, and knowledge available within the team. Moreover, individuals in diverse groups might have greater access to informational networks outside of their group. This added information and rich resource pool might therefore enhance the group performance (Williams & O'Reilly, 1998; Mannix & Neale, 2005).

Studies that support the information-processing approach pointed out that diversity brings along creativity and innovation as a consequence of the availability of different viewpoints, knowledge, experiences, and backgrounds; and reduces group-thinking (Bantel & Jackson, 1989; Chatman, Polzer, Barsade, & Neale, 1998; Hoffman, 1959; Hoffman, Harburg, & Maier, 1962; Köppel, 2008; Naqvi, Ishtiaq, Kanwal, Butt, & Nawaz, 2013; Kristinsson, Candi, & Sæmundsson, 2016; Podsiadlowski, 2002; Sastre, 2014; Shin, Kim, Lee, & Bian, 2012; Triandis, Hall, & Ewen, 1965; van Knippenberg & Schippers, 2007; Wang, Kim, & Lee, 2016). Van Knippenberg and Schippers (2007, p. 518) stated that "... diversity prevents groups from moving to premature consensus on issues that need careful consideration". As Stahl, Makela, Zander, and Maznevski (2010) emphasized, cultural diversity brings creativity to the team through not only providing creative inputs into the processes, but also allowing the formation of creative processes. Kristinsson et al. (2016), who researched the relationship between informational diversity and innovation performance of a founder team, found that diversity is positively related to not only the idea generation but also the implementation of ideas into new products and services. Another set of studies supporting the information-processing approach revealed that diversity results in fast and high quality solutions through complementary skills, better decision-making, effective and feasible ideas, more information-processing behaviors, more satisfaction, and more favorable environment (Bochner & Hesketh, 1994; Dahlin, Weingart, & Hinds, 2005; Hoffman, 1959; Hoffman & Maier, 1961; McLeod & Lobel, 1992; Naqvi et al., 2013; Podsiadlowski, 2002). In addition, Köppel (2008) found that including culturally different members provides closeness to the target countries/cultures and more broadly valid outputs.

3.1.3. Direct effect on team performance

Negative Impact. Some of the studies researched the direct relationship between diversity and team performance. Many scholars concluded that diversity disrupts team performance. Tsui, Egan, and O'Reilly (1992) revealed that race and gender diversity has a negative impact on the performance and effectiveness of subordinates. The same was argued by Watson, Kumar, and Michaelsen (1993) and Mayo and Pastor (2005), demonstrating that ethnic and national diversity results in lower performance. Some scholars (e.g., Thomas, 1999; Maderer, Holtbrügge, & Schuster, 2014) suggested that, in addition to cultural diversity, cultural distance among team members negatively influence the effectiveness of a team. In another study, the age and racial diversity in basketball and baseball teams were researched, and it was found that diversity in both variables hurts the performance of the basketball team, but is irrelevant to baseball team's performance (Timmerman, 2000). A study conducted in 2011 (Haas & Nüesch) showed that multinational football teams perform worse than the teams with less national diversity. A similar study showed that national diversity in baseball teams in Japan hurt team performance, whereas age diversity does not have any effect (Sakuda, 2012).Most of the recent studies exhibited also detrimental impact of diversity on team performance (Ding, Bosker, Xu, Rugers, & Heugten, 2015; Kearney, 2013; Maderer et al., 2014; Russo, 2012; Suwannarat & Mumi, 2012). It is concluded in those studies that diversity with respect to culture/nation/ethnicity, goal orientation, and gender results in lower performance and team efficiency, and that time pressure triggers this effect.

Positive Impact. In contrast, some studies suggested a positive relationship between diversity and performance. A positive relationship between gender/age diversity and group performance was found in a number of studies (Cummings, Zhou & Oldham, 1993, as cited in Jehn et al., 1999; Naqvi et al., 2013; Podsiadlowski, 2002; Sargent & Sue-Chan, 2001; Watson, Johnson, & Zgourides, 2002).

Some of the studies showed that cultural diversity increases team success by facilitating team effectiveness, satisfaction, communication, and participatory decision-making processes (García-Cabrera & García-Soto, 2010; Podsiadlowski, 2002). A study from Mohammed and Nadkarni (2011) showed that temporal diversity (time urgency and pacing style) increases team performance. Buengeler, Kearney, and Voelpel (2013) indicated a positive relationship between educational diversity and team performance, especially when a high level of participative and directive leadership is provided. A more recent study (Lee & Pillutla, 2015) demonstrated that heterogeneity (versus homogeneity) in ability levels has a positive effect on performance.

The study exposed three possible underlying mechanisms for this effect: learning (referring that low ability members learn from their high ability counterparts), motivation (referring that both low and high ability members are motivated to perform better because of the abilities of their counterparts or lack thereof), and coordination gains (referring that low and high ability members choose tasks that will create the greatest marginal benefit for their team).

No significant impact. However, some studies showed no effects of diversity on group performance in either direction. For instance, Puck, Rygl, and Kittler (2007) found no significant relationship between diversity and team communication or knowledge transfer. Similarly, Batenburg, van Walbeek, and in der Maur (2013) and Woehr et al. (2013) found that diversity in role and value is irrelevant to the team performance.

3.2. Different responses of team members

In studies that compare the reactions of distant members to the similar members, it was found that not all 'kinds' of team members reflect diversity in the same way. These studies demonstrated that minorities contributed and participated less, connected slowly, and showed lower communication competencies; hence low performance in ethnically diverse teams. However, over time, minorities improved better than non-minorities through increasing utilization of constructive conflicts (Kirchmeyer, 1993; Kirchmeyer & Cohen, 1992). Hence, for teams that work together for some time, conflict resolution efforts with minorities would be an important "investment" in particular.'

The study of O'Reilly et al. (1989) demonstrated that more distant members of diverse teams regarding age and group tenure are more likely to leave the group. Similarly, the members of an ethnically diverse team are more cooperative if they are a part of the majority group (Espinoza & Garza, 1985). Another study investigating ethnic diversity found that diversity leads to less satisfaction and interaction among Hispanic-Americans (Goto, 1997). Liebermann, Wegge, Jungmann, and Schmidt (2013) showed that effects of diversity can even differ among team members of different age groups. The authors found that age diversity harm the health (both psychological and physiological) of younger and older employees, whereas it does not impact the health of middle-aged employees. A more recent study from Lee and Pillutla (2015) demonstrated that ability diversity in teams is more beneficial for low ability team members compared to high ability members as a result of possible learning benefits. In their review study, Williams and O'Reilly (1998) argued that gender diversity negatively effects group members, especially males. When being in minority, men exhibit less satisfaction and commitment, whereas being in minority does not impact women. One should consider that the meaning of being in minority depends not only on the person's own specific attributes but also on how one's social group is perceived and appreciated by the whole group. This is more related with the historical and relational background (Tsui et al., 1992).

3.3 The "zero-relationship" and inconsistent results in meta-analytic review studies

A comprehensive analysis of previous meta-analytic review studies revealed that there is no common and generally accepted direct effect of diversity on team performance (Bowers et al., 2000; Homberg & Bui, 2013; Schneid et al., 2015; Stahl, Maznevski, et al., 2010; Stewart, 2006; Webber & Donahue, 2001). There are many reasons for the "zero-relationship" and inconsistent results found in the review studies. First of all, each diversity study attempted to answer the same question: "how does diversity affect the team performance?" from different points of views. Those studies researched the effects of different kinds of diversity on different types of teams (project team, top management team, etc.) with different sizes and tenure/longevity, and in different organizations. The employed variables were so diverse that the results were not comparable and not sufficient to come up with a conclusion (Güver, 2017).The meaning assigned to the team performance and the measurement of performance varied across studies included. For example, Pelled et al. (1999) defined performance as the efficiency of team operations and the number of innovations/new ideas introduced by the team, while Oetzel (2001)'s performance was measured in terms of productivity and quality.

A recent meta-analysis from Schneid et al. (2015) supported this argument by revealing that gender diversity has different effects on different performance types, i.e. subjective task performance, objective task performance, and contextual performance (which is inherently subjective). Whereas task performance refers to the specific task-accomplishment, contextual performance is related with the aspects of an individual's performance which maintains and enhances an organization's social network and the psychological climate that support technical tasks (e.g. extra-role performance, pro-social behavior, and helping behavior). They found that gender diversity has a negative effect on contextual performance, but not on task performance (neither objective nor subjective).

In addition, the measurement method (self-reported and external-reported), the measurement type (subjective and objective), and the study settings (field and laboratory) also differed across studies. These differences stand in the way of comparing the results of studies meaningfully. Most diversity studies did not identify and incorporate the degree of heterogeneity, and review studies endeavored to reach common results from studies with groups of different diversity structure.

A recent review study conducted on perceived diversity (Shemla et al., 2016), supports this argument by including not only perception of group heterogeneity but also perception of self-to-team diversity (how individual members perceive themselves to be different from their team) and of sub-group splits (how team members perceive their team to be split to sub-groups), while analyzing diversity. Van Knippenberg and Schippers (2007) argued that the reason for inconsistent results is, to some extent, due to grouping diversities into diversity categories (such as highly job-related vs. less job-related and perceived value diversity vs. informational diversity). They argued that the classification of diversity does not expose the real relationship between diversity and group success. In addition, many factors both external (e.g., country, in which the study was conducted) and internal (e.g., organizational culture, team tenure, and context) impact the correlations between diversity and team performance.

3.3. Conceptualizations of Diversity

3.3.1. Diversity-Classifications-Approach

In order to understand the dynamics of team diversity, researchers, in particular those conducting review studies, tended to categorize diversity types, especially based on two variables: visibility and job-relatedness. From the visibility point of view, researchers distinguished between diversity in visible (i.e., observable, readily detectable or surface level) attributes such as age, gender, and nationality and less visible (i.e., underlying or deep level) attributes such as attitudes, values, and knowledge (Harrison, Price, & Bell, 1998; Harrison, Price, Gavin, Florey, 2002; Jackson, May, & Whitney, 1995; Milliken & Martin, 1996; Liang, Shih, & Chiang, 2015; Tekleab & Quigley, 2014). Visible or surface level attributes, are those that are "immutable, almost immediately observable, and measurable in simple and valid ways" (Harrison et al., 1998, p.97). Conversely, deep level attributes are those that are "communicated through verbal and nonverbal behavior patterns and are only learned through extended, individualized interaction and information gathering" (Harrison et al., 1998, p.98). Milliken and Martins (1996) argued that it was important to differentiate between visible and less visible (invisible) types of diversity, since differences in visible attributes, in particular, provoke biased responses, prejudices, or stereotypes. They stated: "One of the major reasons why diversity of any type creates difficulty for groups is attributable to complex, and often implicit, differences in perspectives, assumptions, and causal beliefs with which the more superficial or observable differences are correlated… Underlying differences in the schemas or the conscious and unconscious preconceptions and beliefs, that organize people's thinking can create serious coordination difficulties for groups" (p.404).

From the job-relatedness point of view, researchers distinguished between diversity in highly job-related such as educational background, functional background, an industry experience and less job-related attributes such as age, gender, and race (Horwitz & Horwitz, 2007; Joshi & Roh, 2009; Mayo & Pastor, 2005; Pelled, Eisenhardt, & Xin, 1999; Webber & Donahau, 2011). In this categorization, job relatedness is "the degree to which the attribute captures experiences, skills, or perspectives pertinent to cognitive work tasks" (Webber & Donahue, 2011, p.143). Job-related attributes capture experience and perspectives relevant to the task, and therefore have a stronger influence on the task-relevant group processes and performance (Webber & Donahue, 2011), while less job-related attributes are expected to have stronger influence on social relationships and processes. The review study by van Knippenberg and Schippers (2007) demonstrated that, despite the acceptable reasoning of this categorization-approach, extant studies did not support effectiveness of this approach (e.g., Pelled et al. 1999; Webber & Donahue, 2001).

We would like to ask the same question – which was asked by van Knippenberg & Schippers (2007, p. 520) – again for the current situation; "Do these typologies help in making sense of the effects of diversity?" Similar to the previous studies, recent studies could not succeed in producing common results with respect to consequences of any diversity types or categories. Supporting this categorization-approach, Joshi and Roh (2009)meta-analyzed 39 studies and found a near-zero association between diversity and performance, however when they conducted separate analysis for relations-oriented (gender, race/ethnicity, age) diversity and task-oriented (functional background, educational background, tenure) diversity, they found a significant positive relation of the task-oriented and negative relation of relations-oriented diversity with team performance, even both were very weak. Consistent with the expectations, many recent studies found negative effects of diversity in demographic attributes (i.e., age, gender, nationality, and ethnicity) and positive effect of diversity in informational attributes(i.e., tenure, functional background, ability) on team outcomes (Bjørnstad, Fostervold, & Ulleberg, 2013; Haas & Nüensch, 2011; Kearney & Gebert, 2009; Lee & Pillutla, 2015; Maderer, Holtbrügge, & Schuster, 2014; Pearsall, Ellis, & Evans, 2008).

For example, Bezrukova, Thatcher, and Jehn (2007),considering both informational and demographic attributes, indicated a positive effect of diversity in tenure and functional background, but negative effect of diversity in age on performance. On the other hand, findings of some recent studies contradicted the expectations of the categorization-approach. For example, a study from 2013 (Naqvi, Ishtiaq, Kanwal, Butt, & Nawaz) demonstrated that gender diversity resulted in more creativity and innovation, better decision-making, and better team performance. Another two studies (García-Cabrera & García-Soto, 2010; Van Praag & Hoogendorn, 2012) indicated a positive effect of diversity in culture/ethnicity on team performance and decision-making-processes.

Liang et al. (2015) incorporated surface-level (age and gender) and deep-level (personality) diversity and found mixed results such that age diversity influenced the team helping behavior positively, whereas gender diversity influenced it negatively. Moreover, diversity in personality with respect to extraversion had positive, but with respect to conscientious, agreeableness, and openness had negative effect on the process of team helping behavior. Based on the mixed results revealed by past diversity research, more recent researchers agreed on the fact that more comprehensive approach and theoretical guidance are required to better understand the consequences of diversity (Bezrukova et al. 2007; Jackson et al., 2003; Kunze & Bruch, 2010; Webber & Donahu, 2001). Two important advancements in this respect were concentrating on moderators and offering different conceptualizations of diversity. One of these conceptualizations is the alignment approach, introduced by Lau and Murninghan (1998) and improved considerably after 2005. Another conceptualization of diversity is introduced by Harrison & Klein (2007) who differentiated between three types of diversity; separation, variety, and disparity.

3.3.2. Separation, Variety, and Disparity-Approach

Harrison and Klein (2007) defined three distinctive kinds of diversity; separation, variety, and disparity. *Separation* refers to "differences in position or opinion among unit members" on a horizontal continuum and reflects "*standpoint or position*: the distribution of where members stand on a value, belief, attitude, or orientation";*variety* refers to the "differences in kind or category, primarily of information, knowledge, or experience among unit members", and reflects "*information:* the distribution of what each unit member knows that is unique from other team members, as a function of the distinct content of his or her education, training, or experience"; and *disparity* refers to "differences in concentration of valued social assets or resources, such as pay and status" and reflects "*possession:* the distribution of how much of a socially valued commodity each unit member has (p. 1200, p. 1207).

The authors argued that these three diversity types have different consequences as the theoretical perspectives behind them differ. They expected that separation conceptualization (e.g., separation of opinions, beliefs, values, and attitudes) tend to result in lower cohesion, trust, and performance and increased interpersonal conflict(consistent with social-categorization and similarity-attraction theories) and disparity conceptualization (e.g., disparity in pay, income, prestige, status, authority) is more likely to result in competition, withdrawal, and less contribution as consequence of "distributive justice and equality". On the other hand, consistent with information-processing theory, variety (e.g., variety in expertise, functional background, industry) is more likely to result in more creativity and innovation, higher decision quality, although it would cause some task-related conflicts. A very recent meta-analytic review (Bell et al., 2011) integrated this conceptualization of diversity. This review demonstrated that almost all of the studies on functional background, educational background, and tenure conceptualized diversity in terms of variety reported positive association between diversity and

performance. However, studies on race and gender diversity - consistent with variety diversity - reported a small negative effect of diversity on team performance.

3.3.3. Faultiness-Approach

Whereas traditional diversity researchers (e.g., Harrison et al., 1998; Milliken & Martins, 1996; Oetzel, 2001; Pelled et al., 1999) conceptualized diversity as group heterogeneity based on a singular attribute and considered the degree of dispersion of this attribute among team members, some recent research (e.g., Bezrukova, Jehn, Zanutto, & Thatcher, 2009; Carton & Cummings, 2013; Lau & Murnighan, 2005; Rupert, Blomme, Dragt, & Jehn, 2016; Schölmerich, Schermuly, & Deller, 2016; Thatcher & Patel, 2011; Xie, Wang, & Qi, 2015) integrated a new conceptualization of diversity which considers the interaction and alignment of multiple attributes within the team; *group faultiness* –and subgroups based on these faultlines–. Lau & Murninghan (1998) who introduced this approach define *faultlines* as "hypothetical dividing lines that may split a group into subgroups based on one or more attributes" (p. 328).

Faultline researchers proposed that not diversity but the strength of the group faultlines influences behaviors in teams and that strong faultlines threatens team performance, as they tend to be more polarized, and tend to experience more conflict, and lack of communication, cohesion, trust, and behavioral integration. Studies integrating the alignment approach revealed that strong faultlines raise team process losses by increasing the level of conflict and loafing as well as by attenuating the level of morale, social integration, information sharing, satisfaction, productive energy, and creativity and innovation (Barkema & Shvyrkov, 2007; Bezrukova et al., 2007; Choi & Sy, 2009; Jehn & Bezrukova, 2010; Molleman, 2005; Kunze & Bruch, 2010; Li & Hambrick, 2005; Pearsall et al., 2008; Rico, Molleman, Sánchez-Manzanares,& Van der Vegt, 2007; Sawyer, Houlette, & Yeagley, 2006; Schölmerich et al., 2016; Thatcher, Jehn, & Zanutto, 2003).On the other hand, a restricted number of other studies reported a positive impact of the faultline strength on team processes. For example, Lau and Murninghan (2005) found that teams with strong faultlines experienced less relational conflict, more psychological safety, and higher satisfaction. Rupert et al. (2016) demonstrated that strong (but close in distance) subgroups facilitated learning. In addition, a set of alignment studies reported a curvilinear effect of faultline strength on team dynamics by revealing that faultlines were good for team functioning, but only until a certain level. For example, the study by Thatcher et al. (2003) showed that moderately strong faultlines exhibited less conflict and higher morale, and performed better than strong, weak, or no faultlines.

3.3.4. Moderator-Effect

Some of the studies conducted in the last couple of decades argued that studies produced inconsistent results, since the relationship between diversity and team functioning is not straightforward as expected (van Knippenberg & Schippers, 2007). Thus, those studies investigated factors moderating the effects of diversity such as team size, team tenure, nature of the task, and leadership style. Güver and Motschnig (2017) developed a taxonomy "3T-MAC" for the moderators of diversity-team outcome association; thereby 3T refers to time-, team-, and task-related factors, while MAC refers to managerial, atmosphere-related, and contextual moderators. The authors revealed that time-, task-, and team-related attributes are the most researched and sensitive moderators for diversity. These factors have special importance because they are usually brought by the task naturally, hence less adjustable, and quite decisive on the consequences of diversity. Many scholars demonstrated the "healing" effect of *time* such that over time detrimental effects of diversity on cooperation, cohesion, and conflict decrease, since team members develop common understanding and affinity towards one another (Chatman & Flynn, 2001; Pelled et al., 1999; van Praag & Hoogendoorn, 2012; Watson et al., 1993; Weber & Donahue, 2001).

However, another set of studies indicated that process losses accumulated over time, since deep-level attributes show themselves (surface) in the long turn (e.g., Harrison, Price, & Bell, 1998; Harrison, Price, Gavin, & Florey, 2002; Stahl, Maznevski et al., 2010; Boerner, Linkohr, & Kiefer, 2011).Regarding *task-characteristics*, studies showed that complexity, routineness, and type of the task (e.g., intellectual tasks, productive tasks, and performance) influence the effects of diversity on team dynamics(Bowers et al., 2000; Horwitz & Horwitz, 2007; Jackson et al., 2003; Pelled et al., 1999; Stahl, Maznevski, et al., 2010). These studies showed that diversity is beneficial for complex and creativity-demanding tasks, but at the same time it brings more conflict to these types of tasks.

Team-characteristics such as type (collocated or dispersed; design team, product development team, or top management team), size, and composition of the team is another intervening factor researched by the scholars

(Bell et al., 2011; Bowers et al., 2000; Earley & Mosakowski, 2000; Horwitz & Horwitz, 2007; Kirchmeyer, 1993; Kirchmeyer & Cohen, 1992; Randel, 2002; Stahl, Maznevski, et al., 2010; Stewart, 2006; Van Praag & Hoogendoorn, 2012).

These studies demonstrated that the structure of the team, (i.e., heterogeneity degree, cultural distance, salience of a dimension, and minority status within the team) influences the consequences of diversity and alters the responses of individuals to the diverse team structure. In addition, more recent studies put attention on some other moderating factors such as *leadership style* (e.g., Hoch, 2014; de Poel, Stoker, & van der Zee, 2014), *diversity mind-set* (e.g., Schölmerich et al., 2016), and *study settings* (Thatcher & Patel, 2011). Researchers demonstrated that transformational leadership worked best in diverse teams, since this leadership style appealed more commitment, creativity, motivation, and satisfaction; and better information sharing processes (de Poel et al. 2014, Kearney & Gebert, 2010; Wang et al., 2016).

Positive diversity beliefs mitigate the negative effects of diversity such as sub-groupings and increases team effectiveness, especially in teams where creativity matters (Homan et al. 2010, Schölmerich et al., 2016). Some of the studies (e.g., Horwitz & Horwitz, 2007; Stahl et al., 2010) considering study characteristics showed that the relation of diversity to team processes and outcomes depends on where the study was conducted (country, region), with whom the study was conducted (sample characteristics), and who assessed the team success (self-reported, manager-reported). Last but not least, in some of the recent studies, interim group processes such as cohesion (Lavy, Bareli, & Ein-Dor, 2014), conflict management (Mello & Delise, 2015), and behavioral integration (Tekleab, Karaca, Quigley, & Tsang, 2016) were approached as moderators. These studies indicated that diversity is more beneficial for the teams with a higher level of team cohesion, behavioral integration, and conflict management.

4. Discussion

Similar to the study of Williams and O'Reilly (1998), our study employed the social-categorization, similarity-attraction, and information-processing theories in explaining the effects of diversity on teamwork. Our study supported the notion proposed by Williams and O'Reilly (1998) who argued that diversity affects group processes and performance negatively from a social-categorization and similarity-attraction perspective, and positively from an information-processing perspective. Our review demonstrated that diversity in teams and workgroups has both positive and negative influences on group processes and outcomes as a result of the corresponding conflicting and synergistic factors. Although it is very difficult to draw a conclusion about the direct effects of diversity on group performance, the study further confirmed some common "dark" and "bright" sides of diversity. Diversity facilitates performance as a result of its positive influence on the decision-making/problem-solving process. This positive effect is a consequence of higher creativity and innovation emerging from the availability of different knowledge, experiences, backgrounds, skills, and ideas, reduced group thinking, and cultural affinity/closeness to the target culture. This variety and enriched resource pool expand the number of alternatives to the problems and ensure more thorough discussion of issues.

In contrast, group performance is decreased by diversity as a consequence of role ambiguity and withholding effort of team members. Diversity increases turnover as a result of absence tendency and individual turnover rate of members (especially minority members). Furthermore, diverse teams display lower commitment, cohesion, satisfaction, and viability due to lower cooperation, lower team identity, more subgroup formation, more conflicts, and ineffective communication processes. These mostly relations-related consequences of diversity emerge from an increased level of anxiety and emotional stress, stereotypes, lower trust, and negative group atmosphere within the team. In addition, culturally diverse teams carry a high risk of communication problems through language difficulties and differences in ways of expressing oneself, non-verbal behaviors, values, national regulations, and religious practices. As a consequence, social- and communication skills and competencies of team leaders and members are of utmost importance for the success of any diverse team (Motschnig and Ryback, 2016).

Despite the fact that these three basic theories, i.e., social-categorization, similarity-attraction, and information-processing, contributed considerably to understanding consequences of diversity in teams, inconsistent results in past research, especially in meta-analytic review studies, indicated that diversity research requires more comprehensive approaches.

As a response to this requirement, new research introduced and integrated new conceptualizations of diversity such as the multidimensional diversity approach and distinguishing among different kinds of diversity, i.e.,

separation, variety and disparity (e.g., Harrison & Klein, 2007; Lau & Murningham, 2005; Thatcher & Patel, 2011).Those conceptualizations, especially the multidimensional diversity approach, have contributed to considerable progress. However, these approaches would require more research for deepening the understanding of diversity dynamics and providing reliable guidelines for team leaders and managers.

Importantly, our review has shown that a number of factors moderate the consequences of diversity on teamwork. Among those, characteristics of time, task, and team are essential as they are less adjustable. Found in the task inherently, they remarkably influence the effects of diversity (Güver & Motschnig, 2017). In addition, factors such as leadership style and diversity mind-set must not be underestimated since they impact motivation and satisfaction that essentially contribute to success or cause failure. This review also showed that the perception of and reaction to diversity differs among team members. For example, minorities, and disadvantaged and distant-to-the group members are more sensitive to diversity. Such members are more vulnerable to the disadvantages of diversity. Distant reactions of members to diversity are expected to be apparent especially in culturally diverse teams, since being minority or majority in a team is one of the important determinants in culturally diverse teams and that attribute shapes the behaviors and responses of team members (Güver, 2017).In summary, there is no doubt that diversity in teams is a highly complex phenomenon with several moderating factors.

In particular, the zero-relationship and inconsistent results in review studies suggests that the way teams, individual team members, and team leaders think about and deal with diversity would matter a lot. While reviewing the literature, we observed some interesting cross-cutting trends in the research: Whereas earlier studies (grossly before 2000) were conducted mostly in laboratory settings or in a classroom environment, a considerable amount of the recent studies were conducted in the field.

1. Many of the previous diversity studies (especially diversity in gender and race/ethnicity) analyzed the consequences of diversity on the individual level (perception of others or self-perception, individual satisfaction, individual turnover, etc.). Recent studies (from Williams & O'Reilly, 1998), however, analyze the consequences of diversity on the group level.
2. Previous researchers studied moderating factors very rarely. Recent researchers have investigated those factors frequently and in a great detail, especially by the year of2007 they focused on individual factors intervening diversity-team functioning association.
3. Studies exploring age and gender diversity remained popular but were over-ruled by the interest in cultural diversity.

Interestingly, cultural diversity became the most frequently researched dimension, covering almost 50% of all diversity studies. Studies on cultural diversity have gone beyond investigating race and ethnicity. In this context, diversity in nationality (e.g., Watson et al. 2002; Salk & Brannen, 2000; Haas & Nüesch, 2011; Ding, Bosker, Xu, Rugers, & Heugten, 2015; Maderer et al., 2014) and in individual cultural values such as collectivism, and power distance (e.g., Kirkman & Shapiro, 2005) were researched in the 21th century more frequently than before. Furthermore, rather than exploring the reflection of the diversity on minorities, recent studies have already gone beyond the 'whites and others', and researched multicultural teams consisting of members from several cultures, nations, and ethnical backgrounds, and reflection of this variety on the group dynamics.In a nutshell this review updated the study from Williams and O'Reilly (1998) and van Knippenberg and Schippers (2007) exposing the common wisdoms and threads in the field of diversity by integrating the studies conducted after their review. In line with its antecedents, our work showed that the research continued to produce inconsistent results with respect to consequences of diversity on team dynamics, even across different diversity conceptualizations. Based on these inconsistent results, the researchers are inclined to examine the diversity-concept more deeply considering contextual factors and new conceptualizations.

5. Conclusion and Further Research

This review contributes to the literature by exposing the state of the art and the trend in diversity studies by the year 2016. This is accomplished by revealing the advantages, disadvantages, and consequences of diversity on group processes and outcomes, identifying cross-cutting trends and themes for further research, describing new conceptualization of diversity as a response to prior inconsistent results, and providing insights intended to point managers to issues they may want to take into account in order to lead diverse teams to success.

This review took an integrated perspective by revealing and tracking a multitude of factors that need to be considered when studying or working with diverse teams. This perspective is expected to give important clues to

researchers for future diversity studies. Past research showed that diversity is a multidimensional notion whose effects are influenced by both external and internal variables. Our review implied that moderators have an important impact on the consequences of diversity on team dynamics. Although some of them were researched in the field, moderating effects of *task-characteristics, team environment,* and *study settings* urgently need further empirical evidence. Similarly, a future review concentrating on the moderators and their effects on team dynamics would add value to the research area. Importantly, culture has been established as one of the most important team composition attributes, as cultural diversity in a team is a strong source of social categorization and stereotyping among members as well as a rich resource pool (Güver & Motschnig, 2016). Therefore, cultural diversity in teams along with factors that moderate its effects still deserve to be researched in detail. Our review indicated that recent conceptualizations of diversity have not been supported sufficiently by empirical studies. Future research should examine the effectiveness and aptitude of recent conceptualizations of diversity discussed in this review, i.e., the fault line approach and the separation-variety-disparity-approach. Some researchers argue that there is a benefit in diversity whereas others say that diversity is a disadvantage.

Our review presented that diversity in teams is a complex and multi-faceted phenomenon that does not have straightforward influence on team outcomes or team processes and brings about both opportunities and risks. Moreover, diversity in teams in terms of gender, culture, education, etc. is no longer a decision but a reality in most cases.

Therefore further research can benefit from focusing on how to manage diversity and lead diverse teams. In a nutshell, we suggest asking the question: *What should one do when working with/in a diverse team?* In the authors' view, understanding the dynamics of diversity in teams, the factors influencing these dynamics, and the effects on team processes would add more value to the field than purely demonstrating statistical results on team outcome. The conclusion made by Jackson et al. (2003) in their review remains important: "diversity researchers have not yet focused much attention how to create the changes that appear to be needed" (p. 824). Thus, based on the results demonstrated in this paper, the diversity research can benefit from exploring the ways to manage diversity and live with it in teams. Therefore, future research needs to explore factors of dealing with risks of diversity and realizing potential benefits in more depth. In this regard, we suggest that further research address questions such as:

- How can creativity and innovation potential of diversity be exposed and utilized during teamwork? What kind of environment supports this opportunity, and which managerial issues are important in this regard?
- What are the main causes for stress, anxiety, low motivation, high psychological distance, and lack of trust in diverse teams; and how can they be reduced and dealt with?
- How can a trustful work environment can be created and maintained over time, in particular, in culturally diverse teams? How can the needed competencies and skills be developed?
- Which professional competencies are essential for effective multicultural team work? Which communication challenges are encountered in multicultural teams? How to communicate effectively in those teams and how to deal with language problems? (Güver, 2017; Motschnig and Nykl, 2014)
- Which leadership competencies are most important for particular heterogeneity structures, diversity types, and task characteristics?
- How can misunderstandings, conflicts, and role ambiguity be overcome in (culturally) diverse teams? Which conflict management approaches and techniques help in managing and working in or with diverse teams? (Güver, 2017; Böhm & Motschnig, 2016)

Managerial Implications

Understanding how various diversity-features and task characteristics impact team outcome is indispensable for managing heterogeneous teams/workgroups effectively (Böhm &Motschnig, 2016). This understanding will guide team members, team leaders, project managers, and also employees working in diverse environments with respect to proper behaviors, actions, and attitudes. Thus this study provide important clues by integrating the results of previous studies on the impact of various types and levels of diversity on team work, emphasizing team dynamics and outcomes, and exploring the intervening factors on the diversity-team association. Managing and working in a diverse team requires a thoughtful knowledge about the members of the team, what types of tasks reassigned to the team, and which external factors influence the team.

Moreover, as emphasized by Jackson et al. (2003), most of the larger firms have been employing diversity trainings as a formal component of their diversity management program. "Diversity training on the front end is

beneficial for managers and people within their workplace so they are prepared for dealing with people from different backgrounds" (Stan Davis, COO of iMpact HR Consulting, prismdiversity.com, 2016). Such trainings have a chance to result in mutual understanding, satisfaction and bottom-line success. May this work help to accelerate the process of fruitful collaboration by thoughtfully bridging differences based on the scientific findings spanning over 50 years.

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Acknowledgement

Appendix

Table A1		
Studies about effects of diversity in teams and workgroups [1]		
Study/Sample	**Diversity type**	**Consequences of the diversity**
Hoff1959 / St	Personality	☺ Higher innovative/quality solutions and more satisfaction
Hoff1961 / St	Personality	☺ Faster/higher quality solutions to the problems
Fied1961 / St	Attitudes	☹ More stress experiences
Hoff1962 / St	Values, attitudes	☺ Higher creative solutions to the problems (through tolerance for other attitudes)
Tria1965 / St	Attitudes, abilities	☹ More stress experiences. More qualitative/creative solutions with heterogeneity in attitudes but homogeneity in abilities
Ruhe1977 / St	Ethnicity	☺ Integration is beneficial to Blacks and not detrimental to Whites.
Kova1980[2] / St	Ethnicity	The quality of selected solutions in heterogeneous groups is either clearly better or poorer than the mean for homogeneous groups.
Espi1985 / St	Ethnicity	More cooperative, if one`s own group has the majority.
O'Rei1989 / OT	Age, group tenure	☹ Lower levels of social integration and higher rate of individual turnover with heterogeneity in tenure. ☹ Likeliness of more distant group members to leave

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[1] Studies are indicated with the first four letters of the first author and the date of the study. Abbreavations:Civ: Civilians, Emp: Employees, MT: Management teams, OT: Organizational teams, Sol: Soldiers, RT: Research/Reasearch and Development teams, SpT: Sport teams, St: Students, and TMT: Top management teams.

[2]Kovach, 1980, as cited in Adler, 1991.

Bant1989 / TMT	Age, education, firm tenure, functional background	☺ Reduced groupthink ☺ Increased degree of innovation with greater diversity in functional background
Zeng1989 / Emp	Age, tenure	More frequent technical communication Inside project groups, age diversity has a greater influence than tenure diversity but the reverse relationship outside project groups.
Jack1991 / TMT	Age, experience, tenure, education, alma mater, military service	☹ More anxiety, less integration, higher turnover rate, and more difficult communication
Cox1991 / St	Ethnicity	☺ Greater degree of cooperation (more cooperativity among groups composed of people from collectivist cultures than those of individualistic)
McLe1992 / St	Ethnicity	☺ Higher quality of ideas with regard to effectiveness and feasibility
Kirc1992 / St	Ethnicity	☹ Less contribution and performance of ethnic minorities; slow connection ☺ Greater improvements of ethnic minorities (than those of non-minorities) with increasing use of constructive conflicts
Tsui1992 / Emp	Gender, ethnicity, age, education, job tenure, company tenure	☹ Lower effectiveness, less personal attraction of superiors for subordinates, and increased role ambiguity ☹ Less performance and higher level of role ambiguity by race and gender diversity No effect of age differences on effectiveness
Wats1992 / OT	Nationality	☹ More problems with interaction More conservative decisions (conservative shift) than homogeneous groups (risky shift)
Cumm1993 / Emp [3]	Gender, tenure, age, education	☹ More personnel turnover and absence ☺ 30% of variance in performance is explained with diversity in gender and age.
Wi&Ba1993 / TMT [4]	Education, tenure, age	No effect of demographic heterogeneity on environmental complexity Heterogeneity variables are related to either team turnover or complexity.
Wi&Bi1993 / TMT	Age, team tenure, education, university	☹ Positive relationship between heterogeneity in the prestige of the university attended and turnover
Kirc1993 / St	Ethnicity	☹ Less participation of minority members, lower communication competencies, and higher importance of maintaining social relationships
Wats1993 / St	Ethnicity, nationality	☹ Higher score of homogeneous groups on process and performance effectiveness Improvement in all groups, as between-group differences converge, over time.
Smit1994 / TMT	Education, experience in industry and firm, functional background	☹ Negative relationship between heterogeneity of experience and return on investment ☺ Positive relationship between heterogeneity in the years of education and performance No effect of functional background heterogeneity on firm performance
Boch1994 / Emp	Ethnicity, nationality, personality, values	☹ The out-group non-Anglo-Celt respondents reported greater incidence of discrimination. ☺ Non-Anglo-Celt respondents regarded cultural diversity in workplace more favorably.

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[3]Cummings, Zhou & Oldham, 1993, as cited in Podsiadlowski, 2002.
[4]This and the next study is identified with: The first two letters of the first author & the first two letters of the second author and the date / the subject of the study, as the first four letters and the date are the same for both.

Kirc1995 / St	Age, gender, ethnicity, education, lifestyle	☹ Dissimilarity to one`s workgroup in terms of age, education, and lifestyle leads to lower job challenges and poorer workgroup. ☺ Dissimilarity in terms of gender leads to greater challenge (if the manager is male, greater likelihood of promotion). No impact of dissimilarity in terms of culture
Kizi1996 / OT[5]	Gender, functional background, tenure, ethnicity	☺ Positive effect of diversity in tenure and functional background on pro-social behavior ☹ Negative effect of diversity in gender and ethnicity (marginally) on pro-social behavior
McLe1996 / St	Ethnicity	☺ More effective, feasible, and higher quality ideas ☹ Less attraction to one`s groups
Roge1996 / OT	Gender	The impact of 5 gender compositions (all-male, lone-female, balanced-gender; lone-male, and all-female) on team functioning was studied. It is found that decision quality increased, when the number of males in the team increased. However, lone female teams outperformed all-male teams.
Goto1997 / St	Ethnicity	☹ Less satisfaction and interaction among Hispanic-Americans
Elro1997 / TMT	Nationality	☹ More issue-based conflict ☺ Positive effect on team and organization performance and no negative effect on cohesion
Chat1998 / St	Gender, ethnicity, nationality, approaches	☹ Interaction decreases. ☺ Productivity rises, so does creativity in collectivist organizations, and conflict is beneficial.
Harri1998 / Emp	Demographic diversity, attitudinal diversity	The length of time group members worked together weakens the effects of surface-level diversity (demographic) and strengthens the effects of deep-level diversity (attitudinal)
Thom1999 / St	Nationality	☹ Negative effect of diversity and cultural distance on workgroup effectiveness
Pell1999 / OT	Age, functional background, ethnicity, tenure	☹ Positive effect of diversity in ethnicity and tenure on emotional conflict as well as positive effect of diversity in functional background on task conflict. ☺ Negative effect of diversity in age and functional background on emotional conflict Task routineness and team longevitymoderate the association between diversity and conflict.
Knou1999 / Sol+Civ	Gender, minority, disability	☺ Work-group effectiveness is greatest with a gender and minority diversity (but not with diversity in disability) at the diversity level 11–30%.
Jehn1999 / OT	Social category, values, informational diversity	☺ Positive effect of informational diversity on group performance, and positive effect of social category diversity on group member morale ☹ Decreased satisfaction, intent to remain, and commitment to group by value diversity
Salk2000 / MT	Nationality	☺ Positive effect on quick task-related decision and strategy formulation
Timm2000 / SpT	Race, age	☹ Poorer performance in basketball teams Irrelevant to baseball team performance
Earl2000 / OT	Nationality	Highly heterogeneous and homogenous teams perform better than moderately heterogeneous teams in the long term. Lower cooperation, but this effect faded over time.

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[5] Kizilos, Pelled & Cummings, 1996,as cited in Podsiadlowski, 2002.

Ely2001 / OT	Race	Diversity-perspective (the integration-and-learning perspective[6], the discrimination-and-fairness perspective [7], and access-and-legitimacy perspective[8]) of the team/organization influence how well people function in their teams and how likely their teams are to utilize diversity. The integration-and-learning perspective provides the rationale and guidance for achieving sustained benefits from diversity.
Oetz2001 / St	Age, gender, ethnicity	None of the diversity types showed a significant effect on communication process, i.e., respect, participation, and cooperation
Kren2001 / OT	Nationality	☹ Negative effect on communication, more conflict, subgroup formation, and negative group atmosphere No effect on effectiveness
Govi2001 / OT	Nationality	☹ Negative influences on goal setting process
Chat2001 / St+Emp	Gender, race, citizenship	☹ Lower cooperation, but this effect faded over time.
Sarg2001 / St	Racioethnic diversity	☺ Positive influence on group efficacy
Harr2002 / St	Demographic diversity, psychological diversity	As time passes, increasing collaboration weakens the negative effects of surface-level (demographic) diversity on team outcomes, but strengthens those of deep-level (psychological) diversity
Wats2002 / St	Ethnicity	☺ Higher performance on team project task
Pods2002 / Emp	Education, gender, professional background, position, nationality	☺ Higher creativity with national diversity; higher efficiency with professional, educational, and positional diversity; and more successful, satisfied, and creative teams with cultural diversity
Rand2002 / OT	Gender	Gender identity salience moderates the relationship between group composition and group conflict. The minority status and salience of a culture within the team alter the responses of individuals to the diverse team structure.
Gibs2003 / OT	Gender, age, ethnicity, functional background, tenure	A curvilinear (U-shaped) relationship between diversity and team learning behavior (homogeneous and highly heterogeneous teams reported higher levels of team learning behavior than moderately heterogeneous teams). A curvilinear (U-shaped) relationship between subgroup strength and team learning behavior (moderately strong subgroups reported higher level of team learning than very-weak or very-strong subgroups).
Koch2003 / Emp	Race, gender	No significant direct effects of race or gender diversity on team performance Gender diversity is less problematic than racial diversity. ☺ Gender diversity increases constructive group processes, and racial diversity is positively associated with growth in business portfolios of branches. ☹ Racial diversity inhibits group process.
Moha2003 / St	Personality	☹ Lower performance with higher variability on agreeableness and neuroticism ☺ Higher performance with higher variability on extraversion
Schi2003 / OT	Gender, age, tenure, educational	No significant association between diversity and the team process reflexivity and the team outcomes performance, satisfaction, and commitment Outcome interdependence and team longevity moderate this relationship.
That2003 / OT	Gender, age, race	Curvilinear effect of the strength of group faultlines: teams with moderately strong faultlines reported less conflict and better performance than teams with strong or weak faultlines.

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[6] Diversity is a resource for learning and adaptive change.

[7] Diversity is a moral imperative to ensure justice and the fair treatment of all members of society.

[8] Diversity is a way of gaining access to and legitimacy with culturally diverse markets and constituent groups.

Kirk2004 / Emp	Race	☹ Negative relation with team empowerment and multiple indicators of team effectiveness
Cumm2004 / OT	Structural (organizational affiliation, roles, positions)	Knowledge sharing (the exchange of information, know-how, and feedback with customers) facilitates effectiveness of the teams and it is more valuable when teams are more structurally diverse.
Mayo2005 / OT	Social (gender, age, race), job-related (tenure, education)	☹ Negative effect of age and tenure diversity on team processes and negative effect of race diversity on performance
Dahl2005 / St	Nationality, educational background	☺ Educational diversity (except for most diverse teams) enhances information use in aspects of "range" and "depth" and educational and national diversity provide information-processing benefits ☹ Educational diversity influences integration aspect negatively, and national diversity hinders information use.
Kirk2005 / OT	Cultural value diversity, demographic diversity	☹ High "collectivism" diversity has negative effect on performance in the U.S. but not in the Philippines. High "power distance" diversity has negative effect on performance in the U.S., but positive effect in the Philippines. ☺ "Determinism" diversity has a significant positive effect in performance in the Philippines rather than in the U.S.
Li2005 / OT	Age, tenure, gender, ethnicity	☹ Negative effect of the strength of faultlines on emotional conflict, task conflict, behavioral disintegration, and self-evaluated performance. Degree of the faultlines explained more variance on team functioning than degree of heterogeneity.
Lau2005 / St	Gender, ethnicity	☺ Less relational conflict, more psychological safety, and more satisfaction in teams with strong faultlines than in teams with weak faultlines. Cross-subgroup communications were effective for groups with weak faultlines but not for groups with strong faultlines.
Moll2005 / St	Age, gender, race, personality traits, ability	☹ A direct negative effect of demographic faultlines on team functioning (lower cohesion, more conflict). Ability faultlines seem to emphasize similarities within subgroups, while personality faultlines accentuate dissimilarities between subgroups. Task autonomy influence the impact of faultlines on team functioning.
Sawy2006 / St	Race, functional diversity	Three types of diversity structure was defined: Crosscut [9] (weakest faultline), convergent[10] (strongest faultline), and same race[11] (moderate faultline). Crosscut diversity structure, where racial and job-function subgroup boundaries are crossed, weakened faultlines, increased information sharing and resulted in better decision-making.
Some2006 / OT	Functional background	Leadership style (participative or directive) moderates the association between diversity and performance (participative leadership foster innovation in teams with high functional heterogeneity; while directive leadership is better for innovation in low functional diversity)
Bark2007 / TMTs	Education, tenure	☹ Negative impact of tenure diversity on strategic innovation (investing in new geographic regions) No effect of educational diversity Effects of tenure diversity decreased over time

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9 When members of a subgroup share salient attributes with members outside their subgroup.
10 When members of the faultlines of different subgroups intersect, for example, when members of the functional background subgroup are also members of racial subgroup.
11 When there is a subgroup identifed by the internal alignment of one attirbutes, but there is no salientcross subgroup alignment.

Bezr2007 / OT	Race, gender, functional background, educational background	No effect of diversity on conflict and satisfaction ☺ Positive effect of diversity in tenure and functional background on performance ☹ Negative effect of age diversity on performance ☹ Higher conflict, lower performance, lower satisfaction in teams with strong faultlines
Homa2006 / St	Gender, personality, informational diversity	Diversity mind-set moderated the relationship between informational diversity and performance (better performance, when team members held pro-diversity rather than pro-similarity.
Homa2007 / St	Informational diversity, (gender, personality)	Informational diversity enhanced group functioning when it was crossed rather than converged with the potential faultline.
Puck2007 / OT	Culture	No significant impact on team communication and knowledge transfer within the team
Rico2007 / St	Educational background, personality (conscientiousness)	Teams with weak-faultline performed better and reported higher levels of social integration than teams with strong-faultlines. Team task autonomy moderates these effects, showing that the differences become significant only under high autonomy conditions.
Shin2007 / RT	Education	Transformational leadership moderates the relationship between diversity and creativity (more creativity with a higher level of transformational leadership)
Köpp2008 / OT	Culture	☺ Creativity, no "groupthink", cross-cultural learning, more satisfaction (by possessing intercultural competences), and closeness to the target culture ☹ Intercultural misunderstandings, lack of confidence and cohesion, expectancy violation, more stress and job anxiety, and stereotypes and rejection through job anxiety and ethnocentrism.
Pear2008 / St	Gender	☹ More emotional conflict and lower creativity in teams with gender faultlines on creativity
Bezr2009 / OT	Social category (age, gender), information-based (education, tenure)	☹ Negative effect of social-category and information-based faultlines on performance.Team identification reduces this negative effect.
Kear2009 / RT	Age, nationality, education	Transformational leadership moderates diversity-performance relationship (higher level of transformational leadership, better performance)
Sch2009 / OT	Gender, age, education, tenure	Outcome interdependence and group longevity mediate the relationship between diversity and team outcomes. Satisfaction and commitment was highest when teams were highly outcome interdependent and had low level of diversity and high group longevity.
vanO2009 / St	Ethnicity, gender	More favorable outcomes in cross-categorized groups than outcomes in groups with strong faultlines. Attitudes towards diversity moderate the impact of diversity on anticipated group outcomes, but not so much impact of faultlines.
Choi2010 / St	Gender, age, race, tenure	☹ Negative association between the strength of age-based faultlines (gender-age, race-age, tenure-age) and relationship conflict. ☹ Negative association between the strength of tenure-gender faultlines and task conflict. ☹ Negative effect of task-related faultlines (tenure-gender, tenure-age) on performance ☺ Positive effect of tenure-race faultlines on team citizenship behavior
Garc2010 / OT	Culture	☺ Positive effect on communication and participatory-decision-making processes

Jehn2010 / St	Race	☹ Activated faultlines tend to form coalitions, have high levels of conflict, and lower levels of satisfaction and group performance Strong team identity decreases this effect.
Kunz2010 / OT	Age, (tenure, gender)	☹ Negative effect of age-based faultlines (reinforced by internal alignment with tenure and gender) on perceived productive energy.
Homa2010 / OT	Gender, ethnicity, education, professional tenure	Teams with positive diversity beliefs are less likely to construe their diversity in terms of subgroups. But this is the case for intellectual tasks (where diversity matters), but not for physical tasks.
Haas2011 / SpT	Nationality	☹ Multinational teams perform worse than teams with less national diversity.
Moha2011 / OT	Temporal diversity	☺ Positive effect of diversity in time urgency and pacing style on team performance More positive by a stronger temporal team leadership
Boer2011 / TMT	Age, educational background, organizational tenure, and industry experience	TMT longevity has a curvilinear moderating effect on the TMT diversity-firm performance relationship for age, education, and experience diversity. The form of the moderating effect is u-shaped for organizational tenure diversity.
Rowo2011 / OT	Age, gender, culture	Higher level of performance with transformational leadership and consideration when teams are heterogeneous with regards to gender; and with laissez-faire leadership when teams are heterogeneous with regards to culture.
vanK2011/TMT	Gender, tenure, functional	☹ Negative effect of faultlines on performance Gender-based faultlines are more likely to result in salient subgroups.
Saku2012 / SpT	Nationality, age	☹ Negative effect of national diversity on team performance No effect of age diversity
Suwa2012 / TMT	Culture	☹ Negative effect on team performance and organizational performance Leadership style moderates the relationship between diversity and conflict
Shin2012 / Emp	Cognitive diversity	☺ Positive effect on team member's individual creativity, in case of both a high creative self-efficacy and high transformational leadership
Russ2012 / OT	Goal orientation	☹ Negative effect on team performance Supportive team environment reduces this negative effect
VanP2012 / St	Ethnicity	☺ Positive effect of high degree of diversity on performance No effect of moderate level of diversity
Cart2013 / OT	Identity-based diversity, knowledge-based diversity	2 subgroup configuration has more negative impacton team functioning for identity-based subgroups. A larger number of knowledge-based subgroups is more beneficial for performance Imbalanced identity-based subgroups and balanced knowledge-based subgroups configuration is better for team performance
Coop2013 / TMT	Educational background, functional background, tenure	The strength of faultlines has a positive effect on performance when environmental dynamism is low yet environmental complexity and munificence is high, while it has a negative effect when environmental dynamics is high, but environmental complexity and munificence is low.
Lieb2013 / Emp	Age	☹ Negative effect on the health of younger and older employees No effect on middle-aged employees' health
Bate2013 / St	Role	No relationship between in-team Belbin role diversity and performance

Naqv2013 / Emp	Gender	☺ Positive effect of diversity on creativity and innovation, decision-making, and performance; more positive with an encouraging organizational culture providing trustful environment and regulations supporting utilization of diversity such as strict rules and proper communication channels.
Woeh2013 / St	Value	☹ Lower team cohesion, lower team efficacy, and more conflict No significant effect on task performance
Bjør2013 / OT	Culture	☹ Lower trust in heterogonous teams than homogenous teams
Buen2013 / OT	Educational diversity	☺ Positive effect on team performance with high level of both participative and directive leadership
Kear2013 / OT	Gender, culture	☹ Negative effect on performance, more negative when time pressure is high
Bada2014 / OT	Gender	☺ Positive effect on performance More influence on performance in service industry than manufacturing industry No moderating effect of employee-engagement
Hoch2014 / OT	Demographic	Shared leadership -facilitated through information sharing- has a stronger association with team performance of more diverse teams.
Tekl2014 / St	Personality	☹ Diversity in agreeableness, conscientiousness, and emotional stability strengths the effects of relationship conflict on affective reactions ☺ Diversity in extraversion and preference for teamwork weakens the effects of relationship conflict.
Made2014 / SpT	Culture	☹ Negative relationship between team success and both degree of cultural heterogeneity and degree of cultural distance Negative effect of cultural distance is stronger than that of cultural heterogeneity.
Sast2014 / OT	Gender and functional diversity	An inverted U-shaped relationship between gender diversity and innovation outputs (products, services, process, and organizational innovation), i.e., greatest effect on product innovation and then on service and organizational innovation, and lastly, on process innovation. More influence of diversity in functional expertise than gender diversity, except service innovation on which both has similar effects.
Lavy2014 / St	Attachment diversity (attachment-related anxiety and avoidance)	No direct effect on team functioning. ☺ Diversity in anxiety and avoidance is positively associated with performance, i.e., better team grades, and diversity in anxiety is positively associated with perceived team functioning, i.e., subjective evaluation), when team cohesion is high.
dePo2014 / OT	Organizational tenure	☺ Transformational leadership has a positive effect on organizational commitment, creative behavior, and job satisfaction with high level of organizational tenure diversity. ☹ Participative leadership has a positive effect on innovativeness, performance, and team conflict with low level of organizational tenure diversity.
Xie2015 / TMT	Gender, age, education, tenure	Faultline configuration, i.e., number of subgroups and balance of subgroups influences team functioning ☺ Faultline strength has a positive impact on short-term performance, when the number and the balance of subgroups are high ☺ Faultline strength has a positive impact on innovation, when the number of subgroups is high and the balance of subgroups is low.

Saá2015 / RT	Functional, educational, institutional, and status diversity	☺ Positive effect of status diversity on performance ☹ Negative effect of educational diversity on performance (but when a certain threshold is exceeded) Inverted U-shaped relationship between educational diversity and performance (positive until a certain level, then the relationship reverses) No significant effect of functional diversity on performance
Lian2015 / OT	Surface-level (age and gender) and deep-level (personality) diversity	☺ Positive effect of age and personality diversity with regards to extraversion on team helping behavior ☹ Negative effect of gender and personality diversity with respect to conscientious, agreeableness, and openness to experience on team helping behavior No effect of personality diversity with regards to neuroticism on team helping behavior
Baix2015 / TMT	Gender	TMTs in which there is no female representation are willing to bear more risk than gender diverse TMTs.
Lee2015 / SpT	Ability	☺ Better performance of heterogeneous teams
Ding2015 / St	Ethnicity	☹ Negative effect on students' projects scores
Mell2015 / St	Cognitive diversity	☹ Negative effect on cohesion which facilitates viability of the team, then less negative and turns positive as the level of conflict management increases.
Cheu2016 / OT	Functional diversity	It is found that functional diversity had a negative indirect relationship with team innovation via knowledge sharing when affect-based trust in a team was low, and this relationship became less negative as the level of affect-based trust in a team increased. The relationship was not significant when affect-based trust in a team was high.
Wang2016 / OT	Cognitive diversity	☺ Positive effect on team creativity and intrinsic motivation, more positive with a high level of transformational leadership.
Tekl2016 / OT	Functional diversity	☹ Nonlinear negative effect on cohesion with a low behavioral integration. ☺ Positive effect on cohesion with a high behavioral integration (leveled off at a higher levels)
Kris2016 / TMT	Informational diversity	☺ Positive effect on both generation and implementation of ideas into new products or services. Entrepreneurial decision-making logic moderates the relationships between diversity and both idea generation and realized innovation, the former positively, and the latter negatively.
Rupe2016 / OT	Education, experience	Faultline strength and faultline distance has an influence on team functioning. Strong but close subgroups facilitate task and process learning
Schö2016 / OT	Demographic diversity, experience	☹ Negative influence of faultlines on perceived cohesion and perceived loafing.

Table A2. Review studies about effects of diversity in teams and workgroups		
Study/Type	**Diversity type**	**The subject / Result**
Milliken & Martins, 1996 / Descriptive review	Observable attributes (e.g., age), knowledge/skills-based attributes (e.g., education), personality and values	34 studies from 1989 to 1994 Diversity affects outcomes such as turnover and performance through its impact on affective, cognitive, communication, and symbolic processes.

Williams & O'Reilly, 1998 / Descriptive review	Organizational/group tenure, age, gender, ethnicity, race, educational/functional background	89 studies from 1958 to 1997 ☺ More creativity ☹ Lower integration and cohesion, less commitment and satisfaction, poorer communication, higher turnover, and more conflict.
Bowers, Pharmer, & Salas, 2000 / Meta-analysis	Gender, ability level, personality	13 studies comparing heterogeneous and homogenous teams ☺ Heterogeneous groups perform better, but the effect size is very small.
Webber & Donahue, 2001 / Meta-analysis	Less job-related diversity (e.g., age), highly job-related attributes (e.g., educational background)	76 studies from 1980 to 2001 No effect of diversity on cohesion and performance
Jackson, Joshi, & Erhardt, 2003 / SWOT-analysis	All diversity types	63 studies from 1997 to 2002 The quality of diversity studies was evaluated through a SWOT-Analysis.
Fink, Neyer, Kölling, & Meierewert, 2004 / Descriptive review	National diversity	25 studies from 1996 to 2004 Universal values, norms of behavior, perception of others and self, and personality traits has an impact on team performance. Size of teams, kind of task, learning opportunities, power and interests influences the effects of these variables.
Stewart, 2006 / Meta-analysis	Demographic attributes (race, gender), psychosocial traits (intelligence, personality), background characteristics (career paths, education)	93 studies from 1952 to 2003 No significant correlation between team performance and team heterogeneity
Horwitz & Horwitz, 2007 / Meta-analysis	Bio-demographic diversity (age, race, gender, etc.), task-related diversity (functional expertise, education, organizational tenure, etc.)	35 studies from 1985 to 2006. ☺ Positive relationship between task-related diversity and team performance Non-significant effect of bio-demographic diversity No significant effect of any diversity types on social integration
Van Knippenberg & Schippers, 2007 / Descriptive review	All diversity types	Studies from 1997 to 2005 Concluded that future researchers should conceptualize diversity more complexly, theoretical discourse of effect of diversity should be strengthened through empirical studies, and mediators and moderating influences should be considered.
Joshi & Roh, 2009 / Meta-analysis	Relational diversity (Gender, race/ethnic, age), task-oriented diversity (functional and educational background, tenure)	39 studies from 1992 to 2009 No overall effect of diversity on team performance, but; ☹ Negative effect of relations-oriented diversity on team performance ☺ Positive effect of task-oriented diversity on team performance
Stahl, Maznevski, Voigt, & Jonsen, 2010 / Meta-analysis	Cultural diversity	108 studies from 1966 to 2007 No direct association between cultural diversity and team performance
Bell, Villado, Lukasik, Belau, & Briggs, 2011 / Meta-analysis	Functional background, educational background, organizational tenure, team tenure, sex, age, race	92 studies from 1980 to 2009 ☺ A small positive effect of functional diversity on team performance as well as creativity and innovation ☹ A small negative effect of diversity in race and sex on team performance No effect of age diversity on performance No effect of diversity in organizational tenure on performance

Thatcher & Pantel, 2011 / Meta-analysis	Group faultlines (based on diversity in age, race, tenure, gender, functional background, educational background)	39 studies from 1995 to 2010 Gender and racial diversity increased demographic faultline strength more than diversity in functional background, educational background, age, and tenure. Stronger group faultlines results in increased task and relationship conflict, and decreased team cohesion, satisfaction, and performance.
Homberg & Bui, 2013 / Meta-analysis	Functional, educational, tenure, gender	53 studies of TMT diversity from 2000 to 2010 No relationship between TMT diversity and performance Publication bias effects the results of the review studies.
Schneid, Isidor, Li, & Kabst, 2015 / Meta-analysis	Gender	68 studies from 1996 to 2013 No direct effect on task performance ☹ Negative effect on contextual performance Collectivism and gender egalitarian moderate the relationship between gender diversity and task performance, not contextual performance.
Mello & Rentsch, 2015 / Descriptive review	Cognitive diversity	☺ Some positive effects on objective and subjective team performance ☹ Some negative effects on affective processes
Shemla, Meyer, Greer, & Jehn, 2016 / Descriptive review	Perceived diversity	Three types of diversity-perceptions were defined: perception of self-to-team dissimilarity, of sub-group splits, and of group heterogeneity. ☹ Diversity in perceived self-to-team dissimilarity and perceived subgroup splits has negative effects on group outcomes. ☺ Diversity in perceived group heterogeneity has both positive and negative effects on group outcomes.