Task conflict and relationship conflict: the key to effective intercultural communication?

The role of task conflict, relationship conflict, and diversity beliefs in the relationship between culturally diverse teams and team performance.

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TASK CONFLICT AND RELATIONSHIP CONFLICT: THE KEY TO EFFECTIVE INTERCULTURAL COMMUNICATION?

ABSTRACT

Today, organizations are more culturally diverse than 30 years ago, and this is only likely to increase. These developments require individuals from different backgrounds to work together as a team. For these groups to successfully function, effective interaction and communication are essential. When different perspectives are shared in groups this may result in conflicts. Task conflict and relationship conflict are expected to be influenced by cultural diversity and to influence group performance. An important indicator that influences the group's behavior is believing in the positive or negative value of diversity. Previous research has resulted in ambiguous findings regarding diversity, intragroup conflict and group performance. To date, little is known about the effects of task conflict and relationship conflict under different conditions or the explanatory factors between cultural diversity and group performance. Therefore, this research looked at task conflict and relationship conflict as mediating the relationship between cultural diversity and group performance, moderated by diversity beliefs. In a two-group (positive vs. negative diversity beliefs) experimental design participants were assigned to culturally diverse workgroups. They worked individually and collaboratively on a manipulation task and the desert survival situation as decision-making task. This research shows that cultural diversity was linked to task conflict, which in turn was linked to more favorable group performance. The relationship between cultural diversity and task conflict was moderated by diversity beliefs (under condition of negative diversity beliefs, not positive). The current study contributes by presenting evidence that task conflict acts as an important explanatory factor between workgroup diversity and group performance under condition of diversity beliefs. A heterogeneous team can provide useful insights and enhance task performance through task conflict. This study recommends managers to benefit from the culturally diverse nature of their workforce and stimulate collaboration and information exchange.

KEYWORDS: Task conflict, Relationship conflict, Cultural diversity, Intercultural communication, Group performance

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1. Introduction

During my exchange semester abroad I made a good friend from The Middle-East. One of the first times we met up she messaged me that she was about to leave her house and would be at our meeting point in ten minutes. When I arrived on the agreed time, she was nowhere to be found. After waiting for a while I called her to ask where she was and maybe something happened on the way? My phone call surprised her and she told me that she was fine and about to put on her shoes. Where I took her words literally, she meant something else. By saying she was about to leave her house she meant that she started to pack her bag with the intention to leave. On top of that, the walking distance from her house to our meeting point was longer than ten minutes.

This anecdote shows that dealing with people from different cultural backgrounds requires understanding and interpretation. Culture determines how people shape, transfer and interpret messages. In an international environment, the intended meaning of these messages may be obstructed by culture (Lauring, 2011). In order to successfully communicate with a culturally diverse team, it is important that people accurately interpret the message with consideration of the cultural filters (Gudykunst & Kim, 1997). This is not only relevant when two individuals interact, but intercultural communication also plays an important role in today's workforce. Organizations have been becoming more diverse for several years already and diversity is likely to increase and play a more important role in the years ahead (Mor Barak, 2016). For example, organizations are becoming more diverse in terms of demographical differences such as ethnicity (Van Knippenberg and Schippers, 2007). These developments often require people from different backgrounds and cultures to work together, which ideally would result in a workforce with a wide variation of knowledge and skills. However, for these groups to successfully function, effective interaction and communication are key (Mischel and Northcraft, 1997).

When looking at workgroup diversity research the importance of successful intercultural interaction becomes evident. Many studies have shown that working in heterogeneous groups can have significant effects on the functioning of the group (e.g. Williams & O'Reilly, De Dreu & Weingart, 2003). However, group outcomes (for example, task attainment, satisfaction) in culturally diverse groups cannot always be solely or directly linked to the culturally diverse nature of the group (Williams & O'Reilly, 1998). Other important aspects are for instance, diversity in educational and practical backgrounds. This may lead to a broader range of relevant knowledge and expertise (Williams & O'Reilly, 1998). Extensive research over the past decades has shown ambiguous findings of the influence of cultural diversity on group effectiveness (e.g. Williams & O'Reilly, 1998; De Dreu & Weingart 2003; De Dreu & West, 2001; Van Knippenberg & Shippers, 2007; Stahl,

Maznevski, Voigt, & Jonson, 2010). There is evidence that heterogeneous teams are not necessarily more successful than homogeneous teams (Paulus & van der Zee, 2014). Cultural differences are likely to lead to negative consequences such as provoking stereotypes, prejudice and negative work outcomes (Milliken & Martins, 1996). Diversity in teams would generate more resistance between the members, which has a negative impact on the team performance (Williams & O'Reilly, 1998; Hofhuis, Van der Zee, & Otten, 2014). Additionally, Bell and colleagues (2011) showed that there is little evidence of a positive influence of demographic and cultural diversity on group performance. Other researchers however, emphasize the positive values of workgroup diversity for increased creativity and satisfaction (Stahl, Mäkelä, Zander, & Maznevski, 2010). Diversity may contribute to a variety of skills, divergent thinking, viewpoints, and personal experiences that can be beneficial for an organization (De Dreu & West, 2001; Van Knippenberg et al., 2004). It is also argued that heterogeneous teams would benefit from their diverse nature by cooperating more effectively than homogeneous teams (Cox et al., 1991). Overall, the literature shows contradictory evidence regarding the impact of cultural diversity (Williams & O'Reilly, 1998; Van Knippenberg & Schippers, 2007). Diversity seems to function as a double-edged sword; it can increase creativity and inventive visions. But the other edge leaves group members with the probability to feel dissatisfied and unable to identify the group (Milliken and Martins, 1996).

Individuals participate in a group through both social contributions and task contributions. When different perspectives are shared in groups this may result in conflicts (Paulus, Van der Zee, & Kenworthy, 2016). Group interactions might evoke issues that can address task related difficulties as well as interpersonal matters (Jehn, 1995, 1997). Therefore, scholars have divided intragroup conflict in task conflict and relationship conflict (e.g. Jehn, 1995; Amason & Sapienza, 1997; Simons & Peterson, 2000; De Dreu, 2006). Task conflict is a perception of disagreements among group members about the content of their choices regarding task related issues (Jehn, 1995; Simons, & Peterson, 2000). Task issues or task conflicts include discrepancies about the distribution of resources, procedures and policies, and judgments and interpretation of facts (De Dreu, 2006). Relationship conflict is a perception of interpersonal mismatch (Jehn, 1995; Simons, & Peterson, 2000). Examples of relationship conflict can be found in personal style, political preferences, values and interpersonal style (De Dreu, 2006). Task and relationship conflict have been studied by many researchers over the past two decades, and similar to workgroup diversity the views on the influence of intragroup conflict remain divided (e.g. Jehn, 1995, 1997; Simons & Peterson, 2000; De Dreu & Weingart, 2003; De Dreu, 2006).

The perception of task conflict is that when groups experience task conflict they may benefit from it by developing ideas of higher quality and higher satisfaction about the group

decision. Especially when groups are dealing with a non-routine and complex, task conflict can have a positive impact on the task performance. (Jehn, 1995; Simons, & Peterson, 2000). The reason for this is that groups tend to become more effective and innovative when they are assigned a task without evident solutions (Jehn, 1995; De Dreu & West, 2001). On the other hand, it is argued that there is little evidence for the positive influence of task conflict on group performance and satisfaction (De Dreu & Weingart, 2003). Relationship conflict is a perception of interpersonal mismatch and includes tension, annoyance and dislike among group members (Jehn, 1995; Simons, & Peterson, 2000). Contrary to task conflict relationship conflict tends to have a negative effect on the quality of ideas and satisfaction of group decisions. When relationship conflict appears group members focus their time and energy on each other instead of on the task (Simons, & Peterson, 2000). Relationship conflict can become more evident when a team is culturally diverse (Jehn, Norhtcraft, & Neale, 1999). The overall perception of intragroup conflict is that whereas task conflict would have a positive impact on a group's effectiveness, relationship conflict would negatively impact the group (De Dreu, 2006).

According to Hofhuis and colleagues (2014), an important aspect of successful communication and teamwork is the diversity climate in an organization. There are multiple indicators that influence the group's behavior and may affect team performance (Hofhuis et al., 2014). One of these indicators is believing in the value of diversity. Diversity beliefs are conceptualized as beliefs about the value of diversity for group functioning. This implies that the more people believe in a positive value of diversity, the more positively they react to their group's diversity (Homan et al., 2010; Van Knippenberg & Haslam, 2003; Homan et al., 2007). Diversity beliefs are considered to have an important impact on intragroup relations and feelings as well as the feeling of appreciation and satisfaction of group members. People feel more valued and respected when their organization believes in the value of diversity. More specifically, believing in the positive value of diversity would be beneficial for overcoming interaction barriers in heterogeneous groups and improve communication effectiveness (Ely & Thomas, 2001).

Although researchers acknowledge the importance of diversity and intragroup conflict, they have mainly focused on the direct effects of diversity on group performance and intragroup conflict on group performance. However, as Mischel and Northcraft (1997) noted, a workgroup's accomplishments do not just rely on its ability to perform a task. The group's ability to manage its own interactions effectively (including communicating, cooperating, and coordinating its collective efforts) is vital as well. Thus, the group's interactions are important in order to successfully act as a group. Reputable studies in diversity research have described the role of cognitive processes such as intragroup conflict in a cultural diverse workgroup (e.g. Jehn, 1995, 1997; Simons & Peterson, 2000). The main focus in many of

these studies, however, concerned the influence of diversity increases on task conflict and relationship conflict (e.g. Pelled et al., 1999; Tatcher, Jehn, & Zanutto, 2003; Harrison & Klein, 2007). Next to that, there has been much attention for the influence of task and relationship conflict on group performance (e.g. De Dreu & Weingart, 2003 Dreu, 2006; Farh, Lee, & Farh, 2010). More recent meta-analysis studies DeChurch and colleagues (2013) and De Wit and colleagues (2012) looked beyond task and relationship conflict at the processes of intragroup conflict and conditions under which conflict influences performance respectively. What the existing research has not fully explored yet is how intragroup conflict may interfere with workgroup diversity and group performance. Little is known about which roles task and relationship conflict behold in the relationship between cultural diversity and group performance.

Jehn, Northcraft, and Neale (1999) did study task conflict as a mediator of the effects informational diversity on group performance. But the researchers did not look at cultural diversity and group performance. Vodosek (2007) did look at intragroup conflict as a mediator of the effects of cultural diversity on group performance. He found supporting evidence for the mediating effect of intragroup conflict. However, the methodology used by Jehn and colleagues (1999) and Vodosek (2007) was a survey. Surveys may indicate correlations, but lack in determining causal relationships or explanations for the causal effect. In a literature review, Paulus and colleagues (2016) propose that in culturally diverse groups effective cognitive processes, such as conflict, may enhance creativity. Nonetheless, to date an experimental study to test the role of conflict in the relationship between cultural diversity and group performance has not been conducted. Therefore, this research will conduct an experiment to investigate whether intragroup conflict may be the explanatory factor in the ambiguous findings that previous research presented in culturally diverse workgroups and group performance. The current study will provide a quantitative test and examine whether task and relationship conflict mediates the relationship between cultural workgroup diversity and group performance moderated by diversity beliefs. By taking a different perspective this research aims to provide an explanatory factor to bridge the gap in existing diversity and group performance research.

Even though scholars are divided about the benefits of diversity for workgroups and organizations, a diverse workplace has become inevitable. However, it is no secret there is no natural process to working and living harmoniously in a culturally diverse setting. In a time where views on cultural diversity are polarizing and people worry about losing their national identity understanding discrepancies between people with different backgrounds may be a key factor in accepting one another and creating a harmonious environment. Diversity beliefs are believed to be an important predictor of intergroup relations (Ely & Thomas, 2001). Homan and colleagues (2010) showed that diversity beliefs

can play a moderating role in perceived and objective diversity. For example, believing in the positive value of diversity may reduce the likelihood of experiencing subgroups. The emerge of subgroups also acts as an indicator of relationship conflict (Lau & Murnigham, 1998). Another consequence of believing in the positive value of diversity is the increased likelihood of perceiving individual diversity. Individual diversity may stand for divergent thinking and informational diversity which can be linked to task conflict (Jehn & Mannix, 2001; Farh et al., 2010). Therefore, this research will examine the moderating role diversity beliefs on the relationship between workgroup diversity and task and relationship conflict.

This research will not primarily focus on whether homogeneous or heterogeneous groups perform better, instead it will look at the role of intragroup conflict and diversity beliefs might play in culturally diverse groups. By learning more about a groups interaction processes this study aims to provide insights in how organizations can emphasize certain ways of interacting in diverse groups and how to minimalize conflictual escalations.

Summarizing, this research will focus on intercultural communication in diverse teams. More specifically, the purpose of this research is to explore the mediating role of task and relationship conflict in the relationship between cultural workgroup diversity and group performance moderated by diversity beliefs. Moreover, the current study will examine whether there is a link between team performance of culturally diverse groups and higher or lower levels of intragroup conflict. It will also assess whether diversity beliefs influence the levels of intragroup conflict in culturally diverse groups. These aspects lead to the formulation of the research question of this study as:

Research Question:
What is the influence of diversity beliefs on task conflict and relationship conflict and which role plays intragroup conflict in the relationship between (cultural) diversity in workgroups and team performance?

In order to provide a complete answer on the research question, this thesis is stricter into four chapters. First of all, an overview of existing literature in intercultural communication, workgroup diversity, task conflict, relationship conflict, and diversity beliefs is provided. Based on this body of literature hypotheses and a conceptual model will be developed. Following the theoretical framework, the methodological approach of this research will be assessed. Moreover, the sampling and experimental design, experimental procedure and measures will be discussed in detail. Subsequent, statistical evidence that approve or reject the hypotheses will be outlined in the third chapter. Finally, conclusions will be drawn and an overall discussion of the findings, limitations, and implications are established in the last chapter of this thesis.

2. Theoretical framework

This research will focus on interpersonal communication in culturally diverse workgroups. In an overview of existing literature, the key concepts will be explained. First, intercultural communication will be defined. Second, workgroup diversity will be discussed and the divided outcomes of the benefits and disadvantages of diverse teams will be presented. Third, the concepts of task conflict and relationship conflict are explained by their definitions, how they are associated with each other, and their relationship with diverse workgroups and group performance. Fourth, this chapter will elaborate on the role of diversity beliefs in this research. Lastly, the conceptual model according to the developed hypotheses will be presented.

2.1. Intercultural communication

Culture is a dynamic concept where frequently used definitions include racial, sexual, organizational, professional and national heterogeneity (Shachaf, 2008). In some circumstances, nationality might be an important indicator but in other cases, professional position, gender or personal relationships may play a key role in understanding culture. Following Shachaf (2008) cultural diversity is here defined as heterogeneity of national cultures of group members. Moreover, in the current study, an individual's national culture is considered that of his or her country of origin.

Culture has been considered to create differences in the way messages are sent and received (Lauring, 2011; Kim, 2005). When crossing cultural boundaries, the message that has been sent is often not the same as how the message is received (Neuliep, 2017), Intercultural communication "*occurs when large and important cultural differences create dissimilar interpretations and expectations about how to communicate competently*" (Koester & Lustig, 2015). Thus, intercultural communication focusses on the communication between people from different cultural/language backgrounds (Bowe, Martin, Manns, 2014). More specifically Lauring (2011) explains that culture determines the way people encrypt messages, which mediums are chosen to transmit them, and how the messages are interpreted. This implies that culture may disturb the intended meaning of the message when transmitted in an international setting (Lauring, 2011). Individuals cannot accurately interpret the message of others without understanding their cultural filters (Gudykunst & Kim, 1997). Thus, intercultural communication is obstructed when signs are not recognized because people use values and standards of one culture to understand the behavior from another culture. To conquer these difficulties knowledge and understanding of various cultural factors are essential (Beamer, 1992; Lauring, 2011).

This understanding and knowledge of factors is defined as intercultural communication competence (ICC). This has been described as the capability to effectively and appropriately communicate with people from different cultures (Arasaratnam, 2009; Perry & Southwell, 2011). Conceptualizing intercultural communication competence three aspects are distinguished; affective, behavioral, and cognitive skills shapes an individual's ICC. Affective skills entail respect, open-mindedness, empathy, and attitudes. Looking at behavioral skills, both flexibility, social skills, as message skills belong to this category. Recognized cognitive skills are self-knowledge and cultural knowledge as well as language skills (Chen, 2014; Spitzberg & Changnon, 2009). Additional factors as motivation, communication and relational satisfaction, task effectiveness should also be taken into account (Spitzberg & Changnon, 2009). It is often neglected that intercultural communication competence should be narrowly associated with interpersonal communication. After a long duration of contact among individuals, they will be more likely to develop understanding and respect for each other. This enables them to effectively communicate. Bigger obstacles in communicating and working together can then be found in personality differences rather than national cultural differences (Kealey, 2007; Martin & Nakayama, 2015).

2.2. Workgroup diversity

Harrison and Klein (2007) define diversity as the distribution of differences among group members, with respect to a common characteristic. Heterogeneity of team members can be measured by demographic factors (gender, race, nationality), psychosocial traits (personality, intellect), and background characteristics (education, work experience) (Stewert, 2006). In diversity, a distinction is made between surface-level diversity and deep-level diversity. Surface-level diversity is defined as differences among group members in explicit demographic characters such as age, gender. Nationality, and ethnicity are recognized as cultural surface-level characteristics (Harrison, Price, & Bell, 1998; Ely & Thomas, 2001; Mannix & Neale, 2005). Surface-level traits are likely to initiate similarity-attraction and categorization processes, which has a detriment effect on intergroup communication and performance (Harrison et al., 1998; Stahl, Maznevski, et al., 2010). Deep-level diversity refers to differences among group members' psychological characteristics, such as personalities, values, and attitudes. Cultural deep-level traits would be values or attitudes towards cultures (Harrison et al., 1998; Stahl, Maznevski, et al., 2010). Usually, deep-level attributes are not directly visible to others, but signs to individual differences become visible over time after members interact with one another. Deep-level attributes are expressed in behavior patterns, verbal and nonverbal communications and exchanges of personal information (Harrison et al., 2002). These deep-level attributes may account for both negative

and positive outcomes. On the one hand, deep-level attributes may lead to the exposure people's grounding values. When there is a discrepancy in group member's values this usually implies that group members do not have a mutual understanding on which to communicate. On the other hand, deep-level attributes are associated with informational diversity as well (Mannix & Neale, 2005). Informational diversity may have a positive influence on a workgroup's effectiveness through multiple perspectives, different problem-solving styles and new ideas that enhance creativity (Williams & O'Reilly, 1998). Looking at workgroup interactions research found that when diversity was measured on surface-level interaction and communication would be less effective in heterogeneous groups than in homogeneous groups (Williams & O'Reilly, 1998). However, when looking at studies where deep-level characteristics were measured communication was more effective in heterogeneous groups (Jehn & Mannix, 2001).

Theory distinguished three potentially opposing ways in which diversity influences groups (Mannix & Neale, 2005; Stahl, Maznevski, et al., 2010). First, rendering the similarity-attraction theory, people are attracted to interact and work with the people they perceive as similar in terms of values, beliefs and attitudes (Byrne, 1971; Williams & O'Reilly, 1998). Second, according to the social identity and social categorization theory (Tajfel et al., 1971; Tajfel, 1982), people tend to categorize themselves and others in particular groups. They treat the members of their own group with preference and may judge outsiders according to stereotypes. Third, following the information processing theory, diversity accounts for different contributions to groups. Diverse groups have a broader range of networks and perspectives, multiple problem-solving techniques, and increased creativity, innovation and flexibility (Cox, 1994). The first two viewpoints imply that diversity is detriment for a group's functioning because it complicates communication and other social processes. The third perspective, however, understands diversity as beneficial for the groups functioning, due to the range of perspectives and creativity that diversity generates.

The overall influence of diversity on group performance remains ambiguous. Meta-analysis studies have shown that there is no clear and corresponding evidence for the advantages of working with diverse teams (Van Knippenberg & Schippers, 2007). Some studies even show that cultural diversity is negatively associated with group performance (Williams & O'Reilly, 1998). Cultural diversity in teams can have a negative impact on performance due to conflict (Williams & O'Reilly, 1998; Hofhuis et al., 2014) and decreased integration (Stahl, Mäkelä, et al., 2010). On top of that is diversity is believed to disrupt team processes, because of the possible emergence of subgroups (Van Knippenberg, De Dreu, & Homan, 2004; Williams & O'Reilly, 1998). Observable differences such as gender and race are likely to lead to negative consequences such as prompting stereotypes, prejudice and negative work outcomes (Milliken & Martins, 1996).

Stahl, Mäkelä, and colleagues (2010) argue that much of the existing literature in the regarding cultural diversity in workgroups is negatively biased. Scholars would overemphasize the negative aspects of cultural diversity, which limits the understanding of the positive conditions of diversity. In a literature review, the researchers explored the key concepts of cultural diversity that are beneficial for group performance, such as creativity, satisfaction and communication. Diversity may contribute to more diversity in skills, viewpoints and experiences in an organization. People coming from different backgrounds can provide unexpected and original perspectives to issues (De Dreu & West, 2001; Van Knippenberg et al., 2004). Team members with different educational and functional backgrounds can be associated with positive group performance through increased relevant knowledge and expertise (Williams & O'Reilly, 1998). Cox and colleagues (1991) argue that heterogeneous teams act more cooperatively than homogenous teams. This difference becomes particularly evident when the situation demands collaborative teamwork.

Interesting is that in situations of a non-routine and complex task heterogeneous groups are likely to perform better than homogenous groups (Jackson, 1996). Another remarkable finding is that people who are often placed in Western majority positions (men, Caucasians) often find it harder to work in diverse group than people in minority positions (women, ethnical minority groups) (Van Knippenberg & Schippers, 2007).

2.3. Task conflict and relationship conflict

When diverse perspectives are shared in groups it may often result in conflicts (Paulus, Van der Zee, & Kenworthy, 2016). Much of the research in workgroup diversity has highlighted the occurrence of intragroup conflict (e.g. Jehn, 1995, 1997; Simons & Peterson, 2000; De Dreu & Weingart, 2003; De Wit et al., 2012). Other studies regarding intragroup conflict primarily focused on the influence of task and relationship conflict on group performance (e.g. De Dreu & Weingart, 2003 Dreu, 2006; Farh, Lee, & Farh, 2010). This indicates that task and relationship conflict are relevant in the relationship between workgroup diversity and group performance. Therefore, the following paragraph will focus on conceptualizing task conflict and relationship conflict, the relationship between workgroup diversity and intragroup conflict, and the influence of intragroup conflict on group performance.

Task conflict is a perception of disagreements among group members about the content of their choices and includes differences in viewpoints, ideas and opinions (e.g. Jehn, 1995; Simons, & Peterson, 2000; De Dreu, 2006). Task conflict is associated with cognitive disagreement arising from a difference in perspectives (Amason & Sapienza, 1997). Researchers describe task conflict as the 'constructive' form of conflict, which in the context of a cognitively complex task can stimulate the discussion, information exchange,

and divergent thinking (Jehn & Mannix, 2001; Amason, 1996; Jehn, 1995, 1997; Farh et al., 2010). Relationship conflict is a perception of interpersonal mismatch and includes tension, annoyance and dislike among group members (Jehn, 1995; Simons, & Peterson, 2000) and is also referred as emotional conflict (Pelled, Eisenhart, & Xin, 1999). Relationship conflict is related to affective disagreement arising from personal dislike and disaffection (Amason & Sapienza, 1997). High levels of relationship conflict in a team involve strong interpersonal disagreements and tensions between group members. These are usually expressed with negative communication and lack of cooperation in teams, revealing feelings of anger, distrust, fear, and frustration (Jehn, 1995, 1997; Jehn & Mannix, 2001).

Literature is clear in the division of task conflict and relationship conflict. They are characterized by different underlying causes and outcomes on satisfaction and performance. Where task conflict is proposed to have positive consequences, scholars have solely found negative consequences of relationship conflict (De Dreu, 2006). However, solely encouraging task conflict and discouraging relationship conflict would be misplaced. For example, DeChurch and colleagues (2013) propose that the nature of the conflict (task or relationship) is not the determining factor, but the way the conflict is processed. The scholars have shown that styles as collaborating, avoiding, and competing significantly predict performance over the nature of the conflict. More specifically, a collaborating process of conflict was beneficial for group performance, but avoiding and competing conflict styles reflected negatively on group performance. Furthermore, conflict processes that concern individuals were negatively associated with task performance, while conflict processes where the concern is about the collective were positively connected to performance.

Other studies that have measured outcomes of task conflict and relationship conflict also found correlations between the two types of conflict. Groups that experience increased levels of task conflict are likely to experience higher levels of relationship conflict as well (Simons & Peterson, 2000). One of the explanations that scholars provide is that task conflict can lead to relationship conflict through a process of misattribution. While interacting with each other, group members constantly interpret the behavior of the other group members. Both verbal and non-verbal cues are taken into account while processing their fellow member's information and argumentation. Through misinterpretation other group members might feel personally attacked, which may prime relationship conflict (Jehn, 1997; Simons & Peterson, 2000; Amason & Sapienza, 1997). Another underlying cause highlighted by scholars are behavioral processes. When task conflict appears and discussions about task related issues arise, group members may use emotionally insensitive language (Pelled, 1996). This can leave other group members offended and attacked. These negative emotions that are evoked by poor communication and interaction can easily shift task conflict into relationship conflict (Simons & Peterson, 2000). Another circumstance where task

conflict can lead to relationship conflict is when the ideas or perspectives of a group member are criticized by other group members. When their ideas are challenged they might feel that their opinions and judgements are not valued appropriately (Pelled et al, 1999).

Contrariwise may relationship conflict lead to task conflict as well. Group members who feel annoyed with other group members, may tend to challenge their ideas (Jehn, 1997). A negative halo effect might occur when an individual feels irritated by another person, the individual tends to disagree with that person's ideas (Pelled et al., 1999).

Although, a clear distinction can be made between task conflict and relationship conflict they are highly associated with each other. Task relationship tends to stimulate relationship conflict and vice versa. It is therefore expected that:

Hypothesis 1. There will be a positive correlation between task conflict and relationship conflict. Increased levels of task conflict are associated with increased levels of relationship conflict.

2.4. Intragroup conflict in diverse workgroups

2.4.1. Task conflict and diversity

Members of diverse groups are often characterized as having different demographic backgrounds. According to the information processing theory, this means that members have different perspectives, problem-solving techniques, interpretations of tasks, view at creativity and innovation and separated individual networks (Cox, 1994). These are all ingredients for evoking task conflict. Diversity in a workgroup usually implicates that individual group members interact with dissimilar others. Members are more likely to exchange ideas, perspectives, and understandings that differ from their own. Therefore, it is likely that when diversity in a group increases, task conflict will become more prevalent (Pelled et al., 1999).

Demographic attributes that are determining in the perception of group tasks are more likely to affect task conflict. This is called the job-relatedness of the demographic characteristics. Job-relatedness is the degree to which the demographic characteristic entails experiences and skills that are relevant to cognitive tasks at work (Pelled, 1996). If group members are dissimilar in a demographic attribute that is low in job-relatedness, their dissimilarity might not affect their work and contrasting perspectives and thus task conflict may not evoke. When the group members are diverse in high job-relatedness characteristics however, their different perspectives on the task will be likely to evoke task conflict (Pelled et al., 1999).

Diversity characteristics recognized as highly job-related are functional background and tenure. They are both defined by a member's workplace experiences. Functional background and company tenure determine someone's expertise and perspectives and

therefore relevant to group work (Milliken & Martins, 1996; Pelled, 1996). It is therefore likely that dissimilarity in these highly job-related characteristics may account for increased task conflict (Pelled et al., 1999). Nonetheless, observable characteristics may be not as relevant to the task, they do shape people, perceptions, and behaviors (Pelled, 1996). A group formed around mixed demographical traits such as age, gender, and race might further increase discussion and conflict about the task (Lau & Murnighan, 1998; Jehn, Chadwick, & Tatcher, 1997). It is therefore argued that these diversity traits that are not directly task related are also likely to increase task conflict (Tatcher et al., 2003). However, it is argued task conflict arises from diversity in job-related aspects, the influence of demographical differences cannot be ignored. Cultural diversity can also contribute to a broader range of perspectives which can increase task related discussions. Therefore, it is expected that:

Hypothesis 2. There is a positive relationship between diversity and task conflict. Moreover, a highly cultural diverse workgroup will experience increased levels of relationship conflict.

2.4.2. Relationship conflict and diversity

Relationship conflict can be associated with aspects in which diversity influences group outcomes like the similarity attraction theory (Williams & O'Reilly, 1998) and the social categorization theory (Tajfel, 1982). According to the similarity-attraction theory, people prefer to interact and work with the people they perceive as similar in values, beliefs, and attitudes. Following this theory, it is likely that higher levels of relationship conflict are experienced when people work in a diverse group. Likewise, people often base the categories they place themselves and others in on demographical attributes (Tajfel et al., 1971; Tajfel; 1982). They perceive members of their own category as superior and are likely to engage in stereotyping, distancing and disapproving members of other categories (Tajfel, 1982). When diversity in a group increases, people in different social categories will interact with one another and they will be confronted with each other's negative stereotypes. This may evoke higher levels of relationship conflict (Pelled et al., 1999).

Different diversity traits have an impact on the appearance of relationship conflict. According to Pelled (1996) the more visible a specific characteristic of diversity is the stronger its association with relationship conflict. Visible diversity characteristics are often surface-level traits such as demographical attributes (e.g. gender, age, ethnicity). Multiple studies have found supporting evidence for this theory. Gender heterogeneity for instance seems to increase relationship conflict (Jehn et al., 1997, 1999). Another example that is likely to increase relationship conflict is diversity in ethnicity. Race is an unchangeable characteristic that is hard to identify with by people from a different race. A culturally diverse workgroup is therefore sensitive to relationship conflict (Pelled et al., 1999).

Diversity that entails deep-level differences can be associated with negative outcomes such as, distrust, reduced cohesiveness, and conflict (Harrison & Klein, 2007). Because dissimilar group members are less likely to value each other, and because perceived dissimilarity can lead to fundamental differences in opinions and important work-related tasks and goals, perceived deep-level diversity is likely to increase the level of relationship conflict (Harrison & Klein, 2007). This argument is supported by other studies that imply that perceived deep-level diversity is associated with higher levels of relationship conflict (Jehn & Mannix, 2001; Mohammed & Angell, 2004). Both surface-level as deep-level diversity attributes are likely to increase relationship conflict. It is therefore expected that:

Hypothesis 3. There is a positive relationship between diversity and relationship conflict. Moreover, a highly cultural diverse workgroup will experience increased levels of relationship conflict.

2.5. The influence of intragroup conflict on group performance
2.5.1. Task conflict, performance, and perceived performance
It is often believed that task conflict can have a positive impact on group performance and effectiveness. Task conflict can be beneficial for producing ideas of higher quality and satisfaction about group decisions (Jehn, 1995; Simons & Peterson, 2000). Disagreements about the task may be especially beneficial for creative thinking. This conflict will encourage group members to reevaluate and adapt their objectives, approaches or practices more suitable to the task (West & Richter, 2008). However, meta-analyses showed an overall negative correlation between task conflict, group performance, and group member satisfaction. (De Dreu & Weingart, 2003). De Dreu (2006) emphasizes that the meta-analysis by De Dreu and Weingart (2003) mainly focused on overall group effectiveness or goal achievement. The argumentation that task conflict is beneficial for team performance, however, does not solely rely on these components. It primarily focuses on the learning, development of insight and understanding, and the ability to solve complex problems, which would require effort, time and energy. This implicates that task conflict would hinder the efficiency of work processes and goal achievement in the short term. On the other hand, task conflict could be beneficial for other components that are affected by the ability to learn, develop and implement new insights, and to solve complex problems (De Dreu, 2006). In a recent meta-analysis, De Wit and colleagues (2012) discovered that task conflict was especially beneficial for group performance when the relationship between task conflict and relationship conflict was weak or when it was measured in decision quality or financial effectiveness instead of overall performance.

Completing a task is a dynamic process. Group members are likely to follow a more or less structured process in completing this task. At early phases of the task (period of time between the start and midpoint of the task) group members engage primarily in idea and strategy generation. At later phases (period of time between the midpoint and task deadline) groups mainly focus on task execution and strategic implementation to meet the deadline (Gersick, 1988; Chang, Bordia & Duck, 2003). Just like the process that appears in tasks, task conflict is believed to be a dynamic process and should be approached correspondingly (Jehn & Mannix, 2001). According to Jehn and Mannix (2001), moderate levels of task conflict at the midpoint of the process had a positive impact on the task performance. However, Farh, Lee, and Farh (2010) found that task conflict had a more positive effect at earlier phases of the task, namely the phase of orientation and generating ideas.

Another important aspect of task conflict in regard to group performance is the amount of task conflict that the group experiences. As before mentioned, Jehn and Mannix (2001) found a positive impact of moderate levels of task conflict on group performance. Moderate levels of task conflict also encourage group member's motivation to work together and solve their problems in order to benefit from new insights and ideas. High levels of task conflict, on the other hand, reduce the motivation to work together as a group (Anderson, De Dreu, & Nijstad, 2004). De Dreu (2006) presents an inverted U-shaped relationship between task conflict and innovation in teams. Low and high levels of task conflict show less innovation in team performance than moderate levels. The inverted U-shaped relationship is supported by Farh and colleagues (2010) who found that creativity was highest at moderate levels of task conflict.

Jehn (1995, 1997) found that task conflict can be beneficial to task performance when working on non-routine tasks. A non-routine task is recognized as being complex without standard solutions. Therefore, a non-routine task requires deliberation from the group. Task conflict stimulates group members to consider all aspects of the tasks and process task-relevant information. This encourages creative thinking and may lead the group to become more innovative and effective (Jehn, 1995; De Dreu & West, 2001). Contrary, routine tasks typically have highly developed and effective standard processes. In these cases, task conflict is more likely to interfere with those processes than improve them (Amason, 1996; Jehn, 1995, 1997; De Dreu & Weingart, 2003). Research shows mixed findings of the conditions wherein task conflict is beneficial for group performance. In this research groups will perform a cognitive complex non-routine task. Following Jehn's (1995) findings it is therefore expected that:

Hypothesis 4. There is a positive relationship between task conflict and group performance. Groups that experience higher levels of task conflict will perform better.

Anderson and colleagues (2004) showed that high levels of task conflict reduced group member's motivation to work together as a group. It is therefore expected that:

Hypothesis 5. There is a negative relationship between task conflict and perceived performance. Groups that experience higher levels of task conflict, will be less satisfied with their performance.

2.5.2. Relationship conflict, performance and performance perception
In contrary to task conflict, relationship conflict tends to have a negative effect on the quality of ideas and satisfaction of group decisions and is therefore seen as having a negative impact. (Simons & Peterson, 2000). Group performance is likely to decrease, due to group members are focusing their time and energy on each other instead of on the task (Jehn, 1995; Simons, & Peterson, 2000). Low levels of relationship conflict are therefore associated with more harmonious and collegial interpersonal relationships among group members. Expressed by positive communication that reveals feelings of trust and mutual respect (Chen, Sharma, Edinger, & Shapiro, 2011).

Group members who experience higher levels of relationship conflict are more likely to withdraw effort from their tasks (Jehn, 1995). Avoidance is one of the most common responses to conflict. This aligns with the threat-rigidity theory by Staw, Sandelands and Dutton (1981). According to this theory, individuals withdraw, freeze up, and limit their perceptional field of input when they feel threatened by their environment. Wageman (2001) refers to the term 'behavioral interdependence', which is explained as the extent to which group members try to disengage and limit their interactions with those people with whom they experience conflict. In other words, when a higher level relationship conflict appears, the likelihood increases that group members will reduce interaction with each other. When group members reduce their interaction, they automatically reduce communication and knowledge sharing. This implicates that relationship conflict will result in reduced information exchange (Langfred & Moye, 2014).

High levels of relationship conflict have a negative impact on the motivation of individual team members (Chen et al., 2011). In contrary to the ambiguous findings of the effectiveness of task conflict, scholars seem to agree on the negative influence of relationship conflict. A meta-analysis showed that overall, relationship conflict has a negative impact on both group perceived effectiveness and satisfaction (De Dreu & Van Vianen, 2001). However, relationship conflict is negatively associated with group satisfaction and perceived performance, it is not necessarily related to objective performance. Multiple studies have found no evidence that relationship conflict decreased performance (Jehn, 1995; De Dreu & Van Vianen, 2001; Mohammed & Angell, 2004). Jehn (1995) explains this

by stating that although relationship conflict causes dissatisfaction, the conflict might not influence work as much as expected, because the members involved in the conflicts, normally avoid working with those they experience the conflict with.

De Dreu and Vianen (2001) emphasize that although it might be evident to look for ways to prevent relationship conflict, this is simply not always possible. To a certain extent diversity in a group composition cannot be controlled. Additionally, is trust an important antecedent of relationship conflict, but is known for its dynamic and unstable characteristics. It is important to acknowledge that relationship conflict will occur in diverse teams at one point and they will have to manage them. Following these theories and research, the next is predicted:

Hypothesis 6. There is a negative relationship between relationship conflict and group performance. Groups that experience higher levels of relationship conflict will show weaker group performances.

Hypothesis 7. There is a negative relationship between relationship conflict and perceived performance. Groups that show higher levels of relationship conflict, will be less satisfied with their performance.

2.6. Diversity beliefs

The diversity climate of an organization is a determining factor of successful group work. Believing in the positive or negative value of diversity is an important indicator for the diversity climate, as well as the motivation of group members to work in a culturally diverse group. This paragraph will define diversity beliefs and discuss the outcomes of previous research.

Diversity beliefs can be defined as beliefs about the value of diversity for group functioning. Implicating, the more people believe in a positive value of diversity, the more positively they react to their group's diversity (Homan et al., 2010; Van Knippenberg & Haslam, 2003; Homan et al., 2007). Diversity beliefs are not general beliefs about diversity. The beliefs are specified to the dimensions of diversity as well as task contexts. One person might believe that gender diversity is valuable to the functioning of management teams, but cultural diversity is deficient for management teams. The same person might also believe that gender diversity should be avoided in military teams (Van Dick et al., 2008). People who believe in the positive value of diversity, show more openness toward cultural differences, are more open for intercultural interaction and feel less intercultural threatened or anxious. This indicates that positive diversity beliefs have a positive effect on intercultural interaction

(Van Knippenberg & Haslam, 2007; Van Knippenberg, Haslam, & Platow, 2007). Positive diversity beliefs have also shown to positively affect the group's functioning and effectiveness. For instance, Van Knippenberg, Haslam and Platow (2007) found that diversity was positively related to group identification when group members believed in the value of diversity. According to Ely and Thomas (2001), diversity beliefs of an organization is an important predictor of intergroup relations and sense of appreciation and satisfaction of group members. In organizations that emphasize the value of diversity, people feel more valued, respected and successful. This implicates that pro-diversity beliefs may encourage diverse groups to conquer obstacles that hinder them to benefit from their informational diversity. Supporting these findings, Homan and colleagues (2007) showed that demographically diverse workgroups exchanged and processed more information and reached a better decision when they were exposed to the value of diversity beliefs opposed to the value of similarity beliefs. Research on diversity beliefs focus on individual cognition and have been showed to respond to experimental manipulations (Homan et al., 2007; Van Knippenberg, Van Ginkel, & Homan, 2013).

The outcomes described above are focused on the influence of diversity beliefs in the workplace. Nevertheless, researchers have also shown the value of diversity beliefs in society. Beliefs about the value of an ethnically diverse society reduce discriminatory behavioral intentions against immigrants (Kauff & Wagner, 2012). People who value diversity in society are less likely to distance themselves from immigrants (Tropp & Bianchi, 2006). Previous research has not only shown the effects of diversity beliefs on group performance, but studies have also shown the influence on intergroup communication. The value that the majority group attaches towards diversity is a strong predictor of the feeling of acceptance the minority group experiences. A positive value of diversity is beneficial for the intergroup contact. Pro-diversity beliefs may lead group members to respond favorably to the diverse nature of its composition (Van Knippenberg et al., 2004). Supporting this, Homan and colleagues (2007) implicated that the believing in the value of diversity may increase the probability that diverse groups can benefit from their composition. By encouraging group members to proactively seek new perspectives and information from their fellow group members, they may increase performance.

Building on these findings, Homan and colleagues (2010), assessed that diversity beliefs may reduce the likelihood that group members perceive subgroups within their workgroup. The emerge of subgroups based on demographic characteristics may lead to power dynamics in groups which increase the negative effects of conflict (Lau & Murnigham, 1998). Moreover, diversity beliefs may moderate the negative effects of conflict that are evoked by demographic aspects such as culture. Diversity beliefs may also increase the likelihood that group members perceive individual differences (Homan, 2010). When group

members believe in the positive value of the culturally diverse nature of their group they may benefit from each group member's personal differences (Ely & Thomas, 2001). When informational diversity leads to effective information exchange this may result task conflict that positively influences the group's effectiveness (e.g. Ely & Thomas, 2001 Jehn & Mannix, 2001; Farh et al., 2010). It is therefore expected that:

Hypothesis 8a. Diversity beliefs will interact on the relationship between workgroup diversity and task conflict.

Hypothesis 8b. Diversity beliefs will interact on the relationship between the diversity in a group and relationship conflict.

2.7. Conceptual model

Based on the concepts discussed above, two more hypotheses are developed. It is expected that diversity will enhance task conflict and relationship conflict. Another expectation is that task conflict and relationship conflict will influence group performance. Therefore, the additional assumption is made that task conflict and relationship conflict act as mediating factors between workgroup diversity and group performance. On top of it is expected that diversity beliefs will interact on the effect of workgroup diversity on task conflict and relationship conflict. Therefore it is expected that:

Hypothesis 9a: Task conflict mediates the relationship between workgroup diversity and group performance. This is moderated by diversity beliefs.

Hypothesis 9b: Relationship conflict mediates the relationship between workgroup diversity and group performance. This is moderated by diversity beliefs.

Hypothesis 10a: Task conflict mediates the relationship between workgroup diversity and perceived performance. This is moderated by diversity beliefs.

Hypothesis 10b: Relationship conflict mediates the relationship between workgroup diversity and perceived performance. This is moderated by diversity beliefs.

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All 10 hypotheses and sub-hypotheses have led to the development of the conceptual model that is displayed below in figure 1. In order to test the hypotheses and eventually the research question, this model will be tested for each hypothesis.

Figure 1. Conceptual model
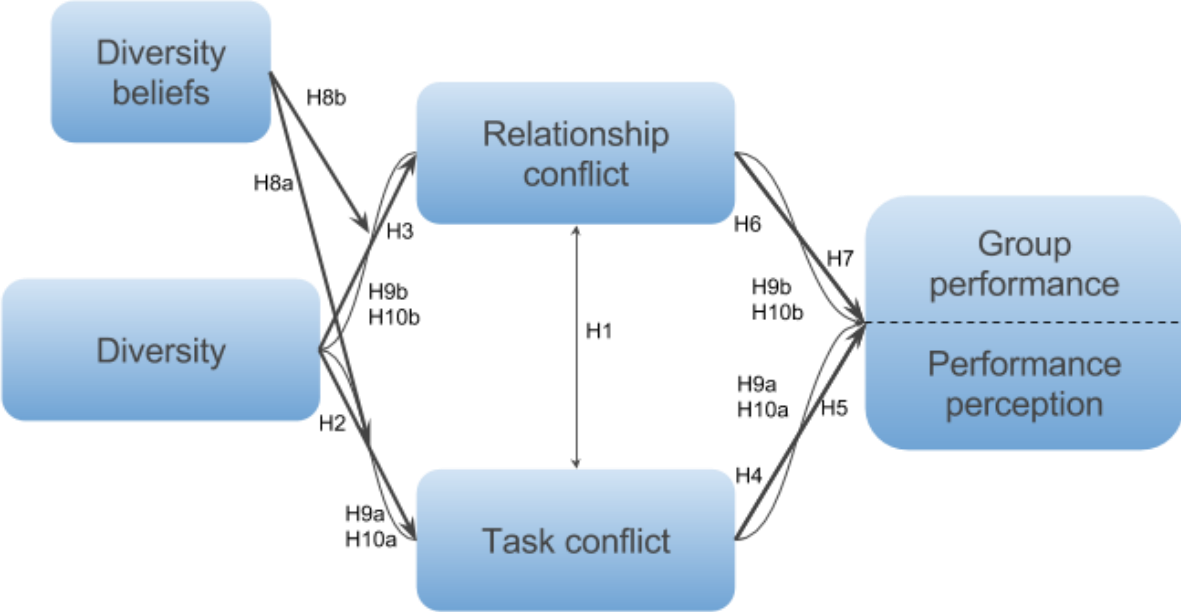
3. Methodology

3.1. Research design

The current study focusses on the mediating role of task- and relationship conflict in the relationship between workgroup diversity and group performance (task attainment, task satisfaction), moderated by diversity beliefs. For this study, a quantitative method was applied. More specifically, a two-group experimental design was conducted. The use of experimental studies is a well-established approached in workgroup diversity research. Various researchers have conducted an experiment to study the role of different factors and relationships regarding workgroup diversity and group effectiveness (e.g. Thomas, 1999; Homan et al., 2007; Phillips et al., 2006; Van Knippenberg et al., 2007; Homan et al., 2010). The benefit of this approach is that an experiment provides the opportunity to create workgroups and evoke interaction that represents workgroup interactions in organizations. Another advantage of using an experimental design is the ability to study causal relationships (Shadish, Cook and Campbell, 2002). Other methods, such as surveys, may indicate correlations but lack when it comes to determining causal relationships. Furthermore, experiments can test specific effects of manipulated variables. Experiments enable the possibility to establish whether a causal relationship varies in direction or strength under different conditions (the condition as a moderator variable that explains the conditions under which the effect holds). Experiments also enable explanatory factors (mediator variables) to study explanations for the causal effect (Shadish et al., 2002).

In a two-group (positive vs. negative diversity beliefs) experimental design participants were assigned to a small workgroup to work both individually and collaboratively on a manipulation task and a decision-making task. The experiments started by completing the manipulation task followed directly by the decision-making task. After the participants completed the decision-making task, they were asked to fill in an online questionnaire to measure the key concepts of the study. The experiment ended by discussing the answers of the decision-making task and a debriefing.

To cover the purpose of the study, the participants were told that they would participate in an experiment about decision-making processes in teams. The purpose of the research was explained as investigating how people make decisions both individually as collaboratively under pressure of time.

3.2. Sampling method

For this study young adults between the age of 18 to 35 years were invited to participate in the experiment. People in this age category start going to university and their first or second job. They are likely to find themselves in multi-cultural environments (either professionally or

privately) and expected to successfully communicate and work in those environments. They are also likely to communicate in English. Young adults are therefore a relevant group for this research. Although the wide range of the group, they have in common that they grew up without war and are computer savvy. Participants were recruited through the social network of the researcher and networks around the researcher. They were invited to participate through public messages on Facebook, in Facebook groups, and on LinkedIn. Participants were also invited through private messages via Facebook and WhatsApp, and e-mails. The researcher recruited a few participants by asking around in the university's cafeterias. After they participated in the experiment, participants were asked to think of others who might be interested in participating as well. This kind of sampling is often not the most desired form of sampling because it is often not representative of the population (Saunders & Lewis, 2009). However, for this research, this was the most feasible sampling strategy. The researcher tried to address the problematic nature of the sampling method by approaching people from different backgrounds and walking around at the university's cafeteria to invite people the researcher did not know before. In order to achieve heterogeneous groups, people from different nationalities were approached to participate. Furthermore, people from different education levels (from university to vocational education), occupations (working and studying), and living regions (South-Holland, Utrecht, Gelderland).

People who received an invitation were able to participate by clicking on a link to an online reservation tool. The web agenda gave the participants an overview of available timeslots and the ability to sign up for a specific timeslot. While reserving a timeslot participants were asked to leave their name and e-mail address, it was also optional to leave their phone numbers. This data was not saved by the researcher and could only be accessed when contacting the participants in case of unexpected events regarding the experiment. After a participant registered for a timeslot, the system automatically sent a confirmation e-mail, stating the purposes of the research, the date, time, and location, and the contact details of the researcher. In order to start on time and avoid delays, participants were asked to be present 10 minutes before the start of the experiment.

The experiment relied on group work and was ideally performed in groups of four or five people (three was the ultimate minimum). To eliminate the risk of last-minute cancellations and no-shows as much as possible, participants were urgently requested to notify the researcher at least 24 hours in advance in case of unexpected events. An automatic reminder e-mail was sent 24 hours before the appointment. An additional measure to guarantee the experiment was able to go through, the bookings were made for five people per experiment. When on the appointed day and time three or four people made the appointment, it was possible to continue with the experiment. When all five participants arrived, they would evidently all participate in the experiment (Webster & Sell, 2014).

Through this sampling method, the researcher had no influence on the composition of the groups. This is how people were randomly assigned to the groups. Some groups were more diverse (mixed gender, all different nationalities) and other groups were less diverse (one nationality and one gender). Group diversity was measured by using Gini-Simpson's/ Blau's index for heterogeneity. This index has been widely used in social science research and gives an index between 0 and 1 where the higher the score the more diverse the group's composition is.

In this research, 50 individuals participated. All participants were able to finish the manipulation task, decision-making task, and the questionnaire. Of the participants 42% was male ($n = 21$) and 58% ($n = 29$) was female. People originating from 18 different countries participated in this experiment. The majority of the people was Dutch ($n = 31$) and the second biggest group was Italian ($n = 3$), other nationalities appeared once or twice and were: American, Austrian, Belarusian, Brazilian, Croatian, Egyptian, Finnish, German, Greek, Montenegrin, Norwegian, Russian, Spanish, and Swiss.

Most of the participants were students ($n = 34$) or working for an employer ($n = 13$). Most participants were highly educated, 46% of the participants had participated in a Master's degree program ($n = 23$), 30% in a Bachelor's degree program at an academic university ($n = 15$), and 18% had participated in a Bachelor's degree at a university of applied sciences ($n = 9$).

Participants were divided into 13 groups and were randomly assigned to one of the two conditions. The conditions were determined by an online randomizer tool that equally assigned the groups in either the negative ($n = 6$) or positive ($n = 7$) condition. The researcher did not interfere in the randomnization.

3.3. Stimulus material, task, and procedure:

3.3.1. Manipulation diversity beliefs
Homan and colleagues (2007) showed that a simple prime concerning diversity beliefs can influence the way people perceive diversity in their group. The researchers primed their participants by exposing them with a pro-diversity or pro-similarity prime at the start of the experiment. Similar manipulations in diversity beliefs research have shown supporting findings (Homan et al., 2007; Van Knippenberg, Van Ginkel, & Homan, 2013). The manipulation in this experiment concerned a prime regarding positive or negative diversity beliefs. Following Hofhuis and colleagues (2016) participants assigned to the positive condition were asked to write down two 'potential positive outcomes of diversity in the workplace, which organizations should aim for'. Participants in the negative condition were asked to formulate two 'potential negative outcomes of diversity in the workplace, which organizations should try to avoid'. The participants were given 5 minutes to write their ideas

down individually. Afterward, the participants were asked to share their ideas in the group and make a collaborative decision on the best three examples. The prime was presented as an introduction task for the decision-making task. Both tasks were constructed in the same way: participants were asked to complete the task individually at first and collaboratively later. The positive and negative conditions were assigned randomly to groups by a randomizing tool that assigned 13 groups to a condition equally.

3.3.2. Decision-making task
The task that was chosen for this experiment had to stimulate interaction and communication. It had to be a cognitively complex task in order to make group members think elaborately and discuss their viewpoints. Next to that, in order to measure group performance the task had to have a standardized solution. The desert survival situation was chosen for this experiment because it contained all mentioned requirements. The desert survival situation places participants in an airplane crash scenario where they have to survive with their other group members. There are fifteen items that participants have to rank in order of their importance for survival (Johnson & Johnson, 1994; Lafferty, Eady, & Elmers, 1974). The task has first to be performed individually, and afterward as a group. This results in an individual ranking and a group ranking. The performance is measured by the difference between the correct answer and the individual and group ranking for each item. This results in an individual error and a group error. The total sum of the differences between all items indicates the individual and group performance, where a lower score accounts for a better performance.

The desert survival situation was chosen for several reasons. The task and variations of the task have been used frequently in workgroup research (e.g. Homan et al., 2007; Haslam et al.,1998; Staples & Zhao, 2006). It is an interdependent intellective task that requires teams to solve a problem that has correct answer. It was unlikely that participants would have relevant experience and therefore it shows aspects of a decision-making task since participants cannot prove the correctness of their answer. It also shows aspects of a negotiation/cognitive-conflict task, because participants have to discuss different opinions regarding survival strategies and item ranking (Staples & Zhao, 2006; Thompson & Coovert, 2003). It is assumed that diverse groups may benefit from their composition and can generate more perspectives and alternatives that encourage divergent thinking and cognitive elaboration (Van Knippenberg et al. 2004). The full explanation of the Desert Survival Situation, including task information for the researcher, the plane crash situation, answer sheet, consensus decision form, and answer key plus explanation are documented in Appendix C.

3.3.3. Diversity homogeneity/heterogeneity

For the experiment participants worked in groups of three, four, or five on the task. Participant signed up for a specific timeslot through a link to an online reservation system. Participants were free to choose any open timeslot (it closed after five people had signed up for that specific slot). The participants were not able to see which other participants had signed up. Preferably the experiment was performed in groups of four or five people. However, an experiment would get a green light when three or more people had signed up for the specific slot. The researcher did not influence the composition of the groups by assigning participants to a certain timeslot. Through this process, little diverse and highly diverse groups were created randomly.

3.3.4. Experimental procedure

The nature of the experiment, working in a task both individually as in a group, required a place where people could work without being interrupted by other people or unexpected events, therefore a private room was required. People had to be able to write down their answers, so a table and chair were needed. Most of the experiments took place at a research lab at the Erasmus School of History, Culture and Communication. The lab is designed for experiments and eliminates distracting factors. Remaining experiments took place in an office building. All experiments were conducted in a closed room where the groups were not disturbed and could interact and communicate freely.

In order to avoid delays participants were asked to arrive 10 minutes before the starting time of the experiment. Upon arrival, participants were welcomed by the researcher and given the informed consent form (see Appendix A) for the participants to read and sign. After all participants had arrived and signed the informed consent form the audiotape was turned on and the experiment started. The participants introduced themselves by saying their name, age, occupation and nationality. After that he participants were given a participant number to keep throughout the experiment and write down on their answer sheets. The participants received instructions for an introduction task (the manipulation of diversity beliefs) that existed of individually writing down either two potential positive outcomes of diversity in the workplace which organizations should aim for or two potential negative outcomes of diversity in the workplace, which organizations should avoid. Groups did not take more than 5 minutes to each write down two examples. After this groups were given 5 to 10 minutes to discuss their example and make a group decision on the three best examples.

Next, the groups were handed out the Desert Survival Situation. Participants individually read the situation and were asked to rank the list of 15 items of their importance on survival individually and in silent. When all participants completed the task they were instructed to read a form about making a consent decision. After reading this the groups

were asked to discuss their rankings and make a group ranking. The participants were given 20 minutes to complete the task. After 15 minutes the researcher gave a 5-minute wrap up time warning. All groups succeeded to complete the ranking in 20 minutes.

Before discussing the answers, the participants were asked to fill out a questionnaire (see Appendix D) with questions about task- and relationship conflict, their satisfaction about their performance as a group and demographic characteristics. When each participant successfully completed the questionnaire, they received the answer key to the task. The researcher walked the participants through the answers and explained that the purpose experiment was to examine how intragroup conflict was present in diverse groups and how it influenced group performance. The researcher also addressed that the introduction task where participants wrote down positive/negative outcomes of working in diverse groups was a manipulation affecting diversity beliefs, to investigate whether this had a moderating effect on intragroup conflict. After the debriefing, the participants were thanked for their participation which marked the end of the experiment. The total duration of the experiments variated from 45 minutes to 60 minutes and depended on how quickly the participants completed the tasks, questionnaire, and debriefing. An outline of how the experiment step-by-step was led by the researcher can be found in Appendix B.

3.3.5. Manipulation check

In order to measure whether participants were aware of the environment they were placed in, the questionnaire contained two questions for the manipulation check. Participants were asked about the composition of their group by indicating how many people were in the group and how many of them were male or female. They were also asked to indicate how many nationalities were present in the group. This question was developed in order to measure whether people were aware of the diversity in their group. The other question regarding the manipulation check asked participants to indicate what the researcher asked them to write down at the start of the experiment. The questionnaire was performed after completion of the tasks, in order to not influence the outcomes. The manipulation checks were included after the measurements of the concepts and before the latter demographic questions. This was done to avoid people's guessing of the real purpose of the study and therefore influence the results. Out of all participants, 98 % ($n = 49$) indicated the composition of their group correctly and 88 % ($n = 44$) was right in naming the initial manipulation task. The question regarding the manipulation task was phrased: *"What did the experiment leader ask you to write down at the beginning of the experiment?"* The participants who did not correctly answer this question all noted answers regarding the informed consent. None of the participants noted the inaccurate condition; for example, two negative examples when they were placed in the positive condition. It was therefore expected that this did not influence the

validity and reliability of the research and the participants were included in the analysis. The participant who did not accurately answer the manipulation check regarding the group composition made an error in the gender division of the group members. This research focused on cultural diversity and gender diversity was not included in the analysis. Thus, it was decided to contain the participant in the analysis.

3.4. Measures

3.4.1. Workgroup diversity

McGrath, Berdahl, and Arrow (1995) define diversity as: "*Diversity is a characteristic of groups of two or more people and typically refers to demographic differences of one sort or another among group members.*" Diverse teams can contribute to more diversity in skills, viewpoints, and experiences in an organization. But can also cause friction through misattribution and misinterpretation of the message (Williams & O'Reilly, 1998). In this research cultural diversity is measured by nationality. The Gini-Simpson index of heterogeneity, also known as Blau's index, was used to measure cultural diversity in groups (Blau 1977). This is a recommended index for calculating diversity of categorical variables and used in reputable diversity research (e.g. Harrison & Klein, 2007; Van Dick et al., 2008; Pieterse, Van Knippenberg, & Van Dierendonck, 2013). The index measures diversity on a number varying from .00 to 1.00, where .00 indicates a non-diverse group and 1.00 a very diverse group. Overall was the composition moderately diverse, but a varied from .00 to .80 (M = .39, SD = .34). The diversity index was not normally distributed. Workgroup diversity was solely used as independent variable in Hayes Conditional Process Analysis (PROCESS). This analysis does not require the assumption of normal distribution, because the generation of confidence intervals for significance testing are performed by bootstrapping. Whether testing the complete model or single effects, non-normality is assumed (Hayes, 2013). Therefore, it was able to use the diversity index for measuring cultural diversity in this research.

3.4.2. Task conflict

Task conflict is a perception of disagreements among group members about the content of their choices and includes differences in standpoints, ideas, and opinions (Jehn, 1995; Simons, & Peterson, 2000). Jehn (1995) developed an intragroup conflict scale where task conflict and relationship conflict were distinguished. The task conflict scale consisted of 4 items and the scale. The individual items on the scale were: 'How often did people in your group disagree about how things should be done', 'how frequently were there conflicts about ideas in your group', 'how much conflict about the work you did was there in your group', and 'to what extent were there differences of opinion in your group'. The items were measured on

a 5-point Likert scale, ranging from 'not at all' (1) to 'a great deal' (5). The scale of task conflict was reliable (Cronbach's α = 0.83) and could not be improved by removing one of the items. Overall, participants experienced moderate levels of task conflict (M = 2.44, SD = .70).

3.4.3. Relationship conflict

Relationship conflict is a perception of interpersonal mismatch and includes tension, annoyance and dislike among group members (Jehn, 1995; Simons, & Peterson, 2000). Relationship conflict is measured by the 4-item scale Jehn (1995) developed and has been used by multiple scholars to indicate relationship conflict. The individual items ask: 'how much tension was there among the members of your group', 'how much were personality clashes evident in your group', 'how much friction was there among the members of your group' and, 'how much jealousy or rivalry (grudges) was there among the members of your group'. Participants indicated the amount of relationship conflict on a 5-point Likert scale ranging from 'not at all' (1) to a 'great deal' (5). The scale of relationship conflict was reliable (Cronbach's α = 0.68) and could not be improved by removing one of the items. Overall, participants did not experience high levels of relationship conflict (M = 1.58, SD = .57).

3.4.4. Perceived performance

The performance perception was measured by a 10-item instrument developed and tested by Green and Taber (1980). The instrument measured satisfaction about both the decision process satisfaction as well as outcome satisfaction (five items for each sort) and was also used by Staples and Zhoa (2006). Outcome satisfaction was measured with five statements regarding the solution of the task such as 'how satisfied are you with the quality of the solution (or outcome) which you and the other party reached' or 'to what extent do you feel committed to the solution (or outcome)'. Participants indicated their feelings on a seven-point Likert scale ranging from 'not at all' (1) to 'completely' (7). The scale of performance outcome perception was reliable (Cronbach's α= 0.80), but could be improved by removing the item '*to what extent does the final solution (or outcome) reflect your inputs*' (Cronbach's α = .82). Because the scale could only be improved with the small amount of .02 it was decided to keep the item in the scale and create the scale with all five items. Overall, participants were satisfied with their solution to the task (M = 5.12, SD = .67). Process satisfaction was measured by a bipolar matrix asking participants 'how you would describe the problem solving (or negotiation) process you and the other party used'. They indicated their feelings on a 7-point scale between inefficient vs. efficient (rotated), coordinated vs. uncoordinated, unfair vs. fair (rotated), confusing vs. understandable (rotated), and dissatisfying vs. satisfying. The scale of performance process perception was reliable (Cronbach's α = 0.82), however, the scale could be improved by removing the item '*coordinated-uncoordinated*'

(Cronbach's α = .83). Because the scale could only be improved with the small amount of .01 it was decided to keep the item in the scale and create the scale with all five items. Overall, participants were not highly satisfied with the process of solving the task (M = 2.3, SD = .79). There was found a strong positive relationship between process perception and outcome perception ($r(48)$ = .62, p < .001). This indicates that when participants felt more satisfied with the process of solving the task they felt more satisfied with the final solution as well.

3.4.5. Group performance
The group performance is the score of the group on the desert survival situation. The score is measured by how similar the group's answers are to the established correct expert ranking. Specifically, the discrepancy between the group ranking and the correct ranking was calculated. This was calculated for all 15 items and no negative points were given. For instance, when the correct answer was rank 6 and the group ranking was 2, then the score was 4. If the correct ranking was 3 and group ranking was 7, the score was 4. The sum of the discrepancy over all items indicates the group performance; where a lower score means a better performance (Johnson & Johnson, 1982; Lafferty, Eady, & Elmers, 1974). Overall, groups varied a lot in their performance on the task (M = 66.88, SD = 14.73). There was no significant correlation between group performance and neither process perception ($r(48)$ = .17, p = .278) nor outcome perception ($r(48)$ = .20, p = .173). This means that there was no relationship between objective performance and subjective performance.

3.4.6. Control variables
The demographic questions in the questionnaire included the variables of age and educational level. These variables were measured to examine whether they influenced the relationships of the concepts. All participants were 18 to 35 years old. The highest participated educational level varied from university master (n = 23), university bachelor (n = 15), and applied science bachelor (n = 9).

3.5. Descriptives
To gain insights in all variables a table with an overview of the scores on all variables is provided in Table 1. The table shows relevant descriptive statistics as the mean, standard deviation, minimum and maximum, and the Cronbach's alpha is applicable.

Table 1.

*Descriptives of main variables (N = 50)*

	M	SD	Minimum	Maximum	Cronbach's α
Workgroup diversity	.39	.57	.00	.80	
Task conflict	2.44	.70	1.00	4.25	.83
Relationship conflict	1.58	.57	1.00	3.25	.68
Group performance	66.88	14.73	44	98	
Process perception	2.30	.79	1.00	4.80	.82
Outcome perception	5.12	.12	3.00	6.25	.80

3.6. Analysis

Most of the constructs were measured by questions in the online questionnaire. The raw data was exported from Qualtrics to SPSS, which was used to analyze the data. This data did not contain the diversity index and the desert survival situation performance scores. The diversity index was calculated separately for each group through an online Gini-Simpson/Blau index calculator. The performance scores were calculated using Excel formulae. The outcomes for these variables were entered manually in SPSS. The raw dataset was checked for errors cleaned by recoding the string variables nationality and age into numeric variables. The analyses were performed on the clean dataset including the diversity index and performance scores. The analysis started by performing reliability analyses on the scales for task conflict, relationship conflict, performance process perception, and performance outcome perception. A correlation reflects the dynamic quality of the relationship between variables. A correlation analysis is performed to provide insights in whether variables tend to move in the same or opposite directions when they change (Salkind, 2011). A frequently used analysis to measure correlation is the Pearson product-moment correlation, developed by Karl Pearson. In the Pearson correlation analysis, the relationship between two continuous variables is examined. The correlation coefficient indicates whether there is a positive or negative direct, indirect or no relationship between the variables and how strong the relationship is. The Pearson correlation is the most fitting analysis to test hypothesis 6. Task- and relationship conflict are both measured on a 5-point Likert scale that can be treated as an interval and therefore continuous variable. It is unknown whether in which way task conflict and relationship conflict influence each other. It is therefore hard to point out an independent and dependent variable. With these conditions. the Pearson correlation was able to examine hypothesis 1.

To test the remaining hypotheses 2, 3, 4, 5, 6, 7, 8ab, 9ab, 10ab, a more advanced analysis was used. Hayes' (2013) PROCESS Macro made it possible to test the complete conceptual model in once. PROCESS is a tool (macro) available for SPSS that simplifies the implementation of mediation, moderation, and conditional process analysis with observed variables (Hayes, Montoya, & Rockwood, 2017). PROCESS uses regression-based analyses. As mentioned above, task- and relationship conflict were treated on interval level. Process perception and outcome perception are both measured on a 7-point Likert scale that can be treated as continuous variables. Group performance was a continuous variable as well. Therefore, all variables were suitable for the analysis. PROCESS model 8 was analyzed to assess the extent to which diversity beliefs moderated the mediational impact of diversity in workgroups on group performance through relationship conflict and task conflict. The model is displayed below in figure 2 and may contain up to 10 mediators.

Figure 2. PROCESS model 8 (Hayes, 2013)
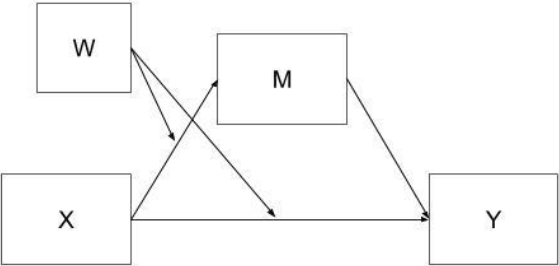
4. Results

Hayes' (2013) PROCESS MACRO model 8 was used to examine the extent to which diversity beliefs moderated the mediational impact of diversity in workgroups on group performance, outcome perception, and process perception through relationship conflict and task conflict. This chapter will give an overview of the analysis and will step-by-step discuss the results according to the hypotheses. A Pearson product-moment correlation analysis was conducted to test hypothesis 1. For the remaining hypotheses (H2, 3, 4, 5, 6, 7, 8ab, 9ab, 10ab) PROCESS model 8 was used to examine both direct and indirect effects.

4.1. Link between relationship conflict and task conflict

Relationship conflict and Task conflict are often believed to correlate. A Pearson product-moment correlation coefficient was performed to measure the relationship between relationship conflict (M = 1.58, SD = .57) and task conflict (M = 2.44, SD = .70). The analysis showed a significant positive correlation between the two variables $r(48)$ = .36, p = .009. This indicates that there is a positive moderately strong relationship between relationship conflict and task conflict. Meaning that increase in levels relationship conflict were connected to increase in levels of task conflict. Therefore, hypothesis 1 is approved.

4.2. Moderation, mediation, and moderated mediation

To test the remaining hypotheses, Hayes' (2013) model 8 by entering the diversity index as the independent variable, the experimental condition of diversity beliefs as moderating variable, the two mediating variables were task conflict and relationship conflict. The analyses were performed separately for three different outcome variables: 'group performance', 'process perception', and 'outcome perception'. Education level and age were entered as covariates of both mediating (M) and dependent variables (Y).

   The overall model regarding group performance was significant $F(7, 42)$ = 11.75, SD = 86.20, R^2 = .66, p < .001. The direct effect of diversity in workgroups on group performance after controlling for task conflict and relationship and the interaction of intragroup conflict did not remain significant (t = -1.57, p = .125). The direct and indirect effects of this model are presented in Table 4.

   Looking at perceived performance two models were tested. The overall model for process perception was not significant $F(7, 42)$ = .53, SD = .67, R^2 = .08, p = .810. Additionally, there was no direct effect of diversity in workgroups on process perception after controlling for task conflict and relationship and the interaction of intragroup conflict (t = -.12, p = .908). The overall model for outcome perception was also found not to be significant $F(7, 42)$ = 1.40, SD = .36, R^2 = .19, p = .230. The direct and indirect effects of this model are

presented in Table 2. Additionally, there was no direct effect of workgroup diversity on outcome perception after controlling for task conflict and relationship and the interaction of intragroup conflict did not remain significant ($t = -.43$, $p = .403$). The direct and indirect effects of this model are presented in Table 4.

4.2.1. The effect of workgroup diversity on task conflict and relationship conflict
The PROCESS Macro provides a comprehensive overview of the model with all its direct and indirect effects. To test hypothesis 2, the direct relationship between workgroup diversity and task conflict was examined. The regression model of task conflict as dependent variable and workgroup diversity as the independent variable was significant, $F(5, 44) = 4.34$, $SD = .37$, $R^2 = .33$ p $= .003$. This indicates that the regression model is useful for predicting the appearance of task conflict. The prediction level is high because 35% of the differences in task conflict can be explained by the diverse nature of workgroups Workgroup diversity has a significant positive effect on the level of task conflict (see Table 2). The levels of task conflict increased by 1.86 points for each additional point on the diversity index ($b = 1.86$). As can be seen in Table 2, neither of the control variables had a significant effect on task conflict. Correspondingly, hypothesis 2 was approved.

Table 2.

Direct effect workgroup diversity on task conflict and the moderating effect of diversity beliefs

	b	SD	t	p	CI (lower)	CI (upper)
Diversity index	1.87	.42	4.43	< .001***	1.02	2.71
Diversity beliefs	.80	.30	2.66	.011*	.19	1.41
Diversity index * Diversity beliefs	-1.48	.57	-2.62	.012*	-2.62	.34
Age	.00	.00	.42	.676	-.00	.00
Education level	-.16	.10	-1.57	.123	-.35	.04

Note. $N = 50$, * p < .05, ** p < .01, *** p < .001

To test hypothesis 3, the direct relationship between workgroup diversity and relationship conflict was examined. The regression model of relationship conflict as dependent variable

and workgroup diversity as independent variable was significant, $F(5, 44) = 1.15$, $SD = .33$, $R^2 = .12$, p = .350. This indicates that the regression model cannot be used for predicting the appearance of relationship conflict. Workgroup diversity does not have a significant effect on the level of task conflict (see Table 3). As presented in Table 3, neither of the control variables had a significant effect on task conflict. According to these results hypothesis 3 was rejected.

Table 3.

Direct effect workgroup diversity on relationship conflict and the moderating effect of diversity beliefs

	b	SD	t	p	CI (lower)	CI (upper)
Diversity index	.13	.40	.32	.747	-.67	.93
Diversity beliefs	.32	.29	1.11	.272	-.26	.89
Diversity index * Diversity beliefs	-.38	.53	-.72	.479	-1.45	.69
Age	.00	.00	1.35	.183	-.00	.00
Education level	.11	.09	1.22	.230	-.07	.30

Note. N = 50, * p < .05, ** p < .01, *** p < .001

4.2.2. The influence of task conflict on actual and perceived performance
In order to test hypothesis 4, the direct relationship between task conflict and group performance was examined. As mentioned before the overall model regarding group performance was significant. Looking at the direct effect of task conflict on group performance, the analysis shows that task conflict has a significant negative direct effect on group performance (see Table 3). The indication of group performance in this research is reversed, which means the lower the score on group performance, the better the performance. This indicates that groups which experience higher levels of task conflict, mark lower scores and thus stand for better group performances. For each increased point of task conflict the performance improves by 7.41 points ($b = -7.41$). As Table 4 shows, neither of the control variables had a significant effect on group performance. Subsequent to these results hypothesis 4 was approved.

To test hypothesis 5, it was examined whether task conflict influenced perceived performance. Performance perception was divided into process perception and outcome perception. The direct relationship between task conflict and process perception and outcome perception were examined. The analyses showed that task conflict did not have a significant effect on process perception (see Table 5). This implies that there is no relationship between task conflict and performance process perception. Lower or higher levels of task conflict do not affect the group's performance process perception. As Table 6 shows, task conflict did have a significantly influence outcome perception. The analysis shows a negative direct effect of task conflict on outcome perception (see Table 6). For each point that task conflict increases, outcome perception decreases with .43 points ($b = -.43$). This indicates that increased task conflict accounts for reduced outcome satisfaction. Overall, the analyses showed that task conflict did not significantly influence process perception, but did significantly influence outcome perception. This implies that there is a negative relationship between levels of task conflict and perceived performance. However, this only applies for outcome performance, therefore, hypothesis 5 was partly approved.

Table 4.

Moderated mediation Group performance

	b	*SD*	*t*	*p*	*CI* (lower)	*CI* (upper)
Task conflict	-7.41	2.56	-3.07	.004**	-13.01	-2.69
Relationship conflict	9.70	2.71	3.57	< .001***	4.22	15.18
Diversity index	12.43	7.94	1.57	.125	-3.59	28.45
Diversity beliefs	-18.86	5.00	-3.77	.001**	-28.95	-8.76
Diversity index * Diversity beliefs	-5.37	9.35	-.57	.569	-24.23	13.49
Age	.00	.01	.72	.47	-.01	.01
Education level	.63	1.63	.38	.703	-2.66	3.91
Task conflict: Conditional mediation for negative diversity beliefs	-14.63	5.05			-26.60	-6.60
Task conflict: Conditional mediation for positive diversity beliefs	-3.00	2.73			-9.03	1.85

Relationship conflict: Conditional mediation for negative diversity beliefs	1.25	4.75	-10.43	8.46
Relationship conflict: Conditional mediation for positive diversity beliefs	-2.44	3.11	-12.34	1.61
Task conflict: Index for moderated mediation	11.63	5.15	3.98	24.50
Relationship conflict: Index for moderated mediation	-3.69	5.36	-15.01	6.46

Note. $N = 50$, * $p < .05$, ** $p < .01$, *** $p < .001$

4.2.3. The influence of relationship conflict on actual and perceived performance

To examine hypothesis 6, the direct effect between relationship conflict and group performance was measured. The analysis showed positive direct effect of relationship conflict on group performance (see Table 4). This implies that higher levels of relationship conflict increased the group performance score. However, an important factor in this research is that the indication of group performance is reversed meaning the lower score on group performance, the better performance. Thus the positive relationship truly indicates that higher levels of relationship conflict account for poorer group performance. Moreover, each increased point of relationship conflict reduces group performance by 9.70 points ($b = 9.70$). As Table 4 shows, neither of the control variables had a significant effect on group performance. These results are in line with the expectations of hypothesis 6, which, therefore, was approved.

To test hypothesis 7, it was examined whether relationship conflict influenced perceived performance. Performance perception was divided into process perception and outcome perception. The direct relationship between relationship conflict and process perception and outcome perception were examined. The analyses showed that relationship conflict did not have a significant effect on process perception (see Table 5). This implies that there is no relationship between relationship conflict and performance process perception. Lower or higher levels of relationship conflict did not affect the group's performance process perception. Relationship conflict also did not have a significant effect on outcome perception (see Table 6). This indicates that there is no relationship between relationship conflict and performance outcome perception. Reduced or increased levels of relationship conflict did not

affect the group's performance outcome perception. Overall, the analyses showed that relationship conflict did not significantly influence process and outcome perception. Hypothesis 7 was therefore rejected.

Table 5.

Moderated mediation – Performance Process Perception

|	b	SD	t	p	CI (lower)	CI (upper)
Task conflict	-.21	.23	-.93	.360	-.67	.25
Relationship conflict	-.07	.24	.31	.758	-.56	.41
Diversity index	.08	.70	.12	.908	-1.50	1.33
Diversity beliefs	-.28	.44	-.64	.528	-1.17	.61
Diversity index * Diversity beliefs	.05	.83	.06	.951	-1.62	1.72
Age	-.00	.00	-.28	.777	-.00	.00
Education level	.07	.14	.52	.606	-.22	.37
Task conflict: Conditional mediation for negative diversity beliefs	-.39	.46			-1.42	.44
Task conflict: Conditional mediation for positive diversity beliefs	-.08	.13			-.54	.07
Relationship conflict: conditional mediation for negative diversity beliefs	-.01	.19			-.33	.32
Relationship conflict: Conditional mediation for positive diversity beliefs	-.05	.36			-.11	.41
Task conflict: Index for moderated mediation task conflict	.31	.39			-.28	1.33
Relationship conflict: Index for moderated mediation	-.03	.24			-.30	.56

Note. N = 50, * p < .05, ** p < .01, *** p < .001

4.2.4. The moderating effect of diversity beliefs

Task conflict

In order to test hypothesis 8a, the manipulation condition of diversity beliefs was examined to be a moderator on the relationship between diversity in workgroups and task conflict. It was expected that both positive and negative diversity beliefs would increase task conflict. As mentioned before, the model regarding task conflict was significant. Both the main effect of the diversity index of a group's composition and the interaction effect of the diversity index and diversity beliefs were significant (see Table 2).

Figure 3 shows the interaction effect of diversity beliefs on the group's diversity and the appearance of task conflict. More specifically, the figure shows that when little diverse groups are exposed to a negative prime regarding diversity beliefs, there are low levels of task conflict. However, when a group is highly diverse and they are exposed to a negative prime regarding diversity beliefs, higher levels of task conflict appear. In the positive condition, only a small effect is evident between groups with little diversity and a highly diverse group. It is interesting to see that groups with little diversity, who are exposed to the positive condition regarding diversity beliefs, show higher levels of task conflict compared to the negative condition. For highly culturally diverse groups the effect of the prime appears to be smaller. Based on these results, hypothesis 8a was approved. In highly diverse groups, task conflict is more evident than in less diverse groups. Additionally, diversity beliefs moderated the relationship between the diversity index of a group and task conflict.

Figure 3. Moderation effect diversity belies on group diversity and task conflict.
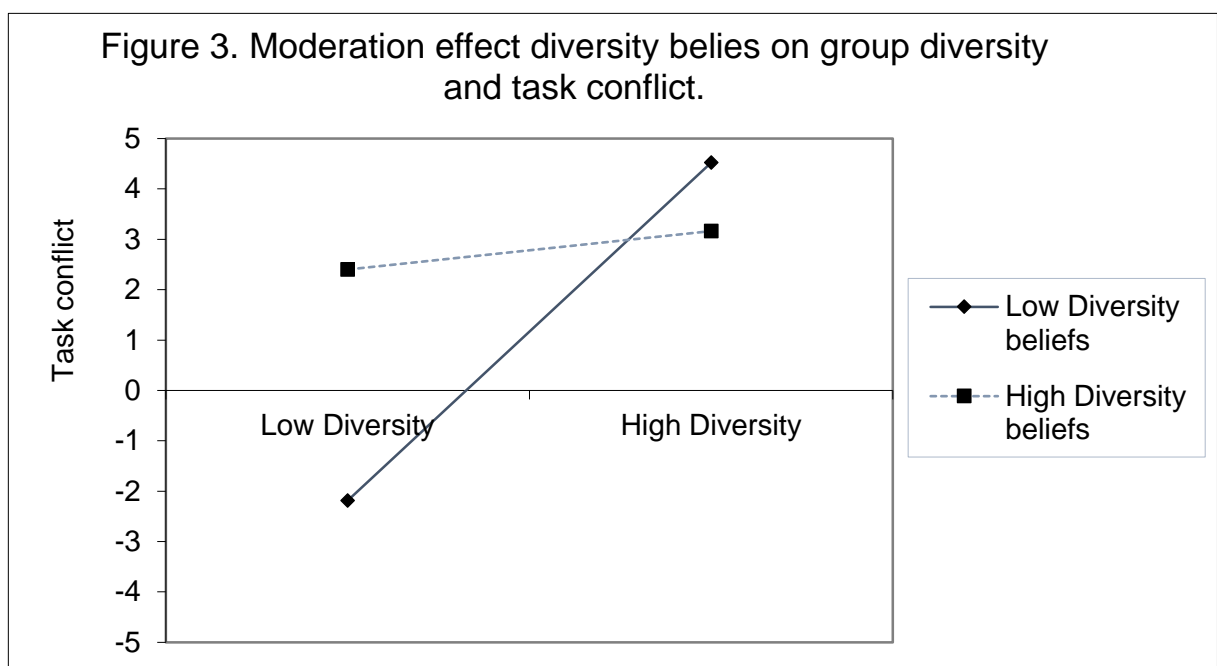
Relationship conflict

To test hypothesis 8b, the manipulation condition of diversity beliefs was examined as a moderator of the relationship between diversity in workgroups and relationship conflict. Neither the direct effects or the interaction effect predicting relationship conflict were found significant (see Table 3). This indicates that there was no relationship between the diversity index of a workgroup and relationship conflict. The results also implicate that believing in the value of diversity or believing in the determent of diversity does cannot be associated with higher or lower levels of relationship conflict. Hypothesis 8b was therefore rejected.

4.2.5. Moderated mediation effect for group performance

In order to test hypothesis 9a the moderated mediation effect of diversity beliefs and task conflict on the relationship between workgroup diversity and group performance was assessed. The analysis showed a significant indirect effect for workgroup diversity on group performance through task conflict and negative diversity beliefs (see Table 4). However, no significant effect was found for positive diversity beliefs (see Table 4). As Table 4 further reveals, there is significant moderated mediation effect in regard to task conflict. This indicates that there is a mediation effect for diversity in workgroups and group performance through task conflict, interacted by diversity beliefs. As mentioned earlier, no direct effect was found between diversity in groups and group performance. This implies that there is a full mediation effect of task conflict on the relationship between diversity and group performance. Hence, the extent to which task conflict accounted for the link between diversity in workgroups and group performance was conditional for diversity beliefs. Based on these results hypothesis 9a was approved.

In order to test hypothesis 9b the moderated mediation effect of diversity beliefs and relationship conflict on the relationship between workgroup diversity and group performance was assessed. The analysis showed a non-significant indirect effect of diversity in workgroups on group performance through relationship conflict for both negative diversity and positive diversity (see Table 4). Table 4 further reveals that the moderated mediation effect in regard to relationship conflict is not significant. This indicates that there is no mediation effect of relationship conflict and moderated by diversity beliefs in the relationship between workgroup diversity and group performance. Thus, the extent to which relationship conflict accounted for the link between diversity in work groups and group performance was not conditional for diversity beliefs. Hypothesis 9b was therefore rejected.

An additional interesting finding is the significant direct effect of diversity beliefs on group performance. Table 4 reveals a significant negative effect which indicates that a positive diversity beliefs prime accounts for better group performance. Positive diversity beliefs increased the group performance by 18.86 points ($b = $ -18.86). As earlier established

there was no significant direct effect between workgroup diversity and group performance. Therefore, it is not surprising that there was no significant moderation effect of diversity beliefs on the relationship between workgroup diversity and group performance for either negative diversity beliefs ($b = 12.43$, SD = 7.94, $t = 1.57$, $p = .125$, 95% CI [-3.59, 28.45]) and positive diversity beliefs ($b = 7.06$, SD = 5.79, $t = 1.22$, $p = .229$, 95% CI [-4.62, 18.75]).

4.2.6. Moderated mediation effect perceived performance

In order to test hypothesis 10a the moderated mediation effect of diversity beliefs and task conflict on the relationship between workgroup diversity and perceived performance was assessed. Corresponding to hypotheses 5 and 7 perceived performance was divided between process perception and outcome perception. A separate PROCESS model analysis was performed for both perception measurements. The analysis regarding process perception showed a non-significant indirect effect of diversity in workgroups on process perception through task conflict for both negative diversity beliefs and positive diversity beliefs (see Table 5). As presented in Table 5 the bootstrapped estimates also revealed a non-significant moderated mediation effect. This indicates that there is no moderated mediation effect of workgroup diversity on process perception through task conflict and interacted by diversity beliefs. The extent to which task conflict accounted for the link between workgroup diversity and process perception was not mediated by task conflict and conditional for diversity beliefs.

Looking at outcome perception, the analysis showed a significant indirect effect for workgroup diversity on outcome perception through task conflict, under condition of negative diversity beliefs (see Table 6). However, no significant effect was found under condition of positive diversity beliefs (see Table 6). As Table 6 further reveals, there was significant moderated mediation effect in regard to task conflict. This indicates that there was a mediation effect for diversity in workgroups and outcome performance through task conflict, under condition of negative diversity beliefs. As mentioned before, no direct effect was found between workgroup diversity and outcome performance. This implies that there is a full mediation effect of task conflict on the relationship between cultural workgroup diversity and outcome perception. Hence, the extent to which task conflict accounted for the link between diversity in workgroups and group performance was conditional for negative diversity beliefs. Hypothesis 10a was therefore approved in regard to outcome perception, but not for process perception.

In order to test hypothesis 10b the moderated mediation effect of diversity beliefs and relationship conflict on the relationship between workgroup diversity and perceived performance was assessed. A separate PROCESS model analysis was performed for both process perception and outcome perception. The analysis regarding process perception

showed a non-significant indirect effect of diversity in workgroups on process perception through relationship conflict for both negative diversity beliefs and positive diversity beliefs (see Table 5). Table 5 further revealed a non-significant moderated mediation effect. This indicates that there is no moderated mediation effect through relationship conflict and interacted by diversity beliefs. Additionally, the extent to which relationship conflict accounted for the link between workgroup diversity and process perception was not conditional for diversity beliefs. Looking at outcome perception, there was no significant indirect effect of workgroup diversity on outcome perception through relationship conflict for both negative diversity beliefs and positive diversity beliefs (see Table 6). As Table 6 further shows there was no significant moderated mediation effect. This indicates that there is no moderated mediation effect through relationship conflict and interacted by diversity beliefs. The extent to which task conflict accounted for the link between workgroup diversity and outcome perception was not conditional for diversity beliefs. Overall there was no significant effect for the moderated mediation effect regarding relationship conflict and perceived performance. Hypothesis 10b was therefore rejected.

Table 6.

Moderated mediation – Performance Outcome Perception

	b	SE	t	p	CI (lower)	CI (uppe
Task conflict	-.43	.17	-2.60	.013*	-.76	-.10
Relationship conflict	-.02	.17	.12	.907	-.33	.37
Diversity index	.43	.51	.84	.403	-.60	1.46
Diversity beliefs	-.00	.32	-.01	.990	-.65	.65
Diversity index * Diversity beliefs	-.21	.60	.34	.734	-1.42	1.01
Age	.00	.00	.32	.752	-.00	.00
Education level	-.07	.10	-.63	.530	-.28	.15
Task conflict: Conditional mediation for negative diversity beliefs	-.80	.41			-1.76	-.09
Task conflict: Conditional mediation for positive diversity beliefs	-.16	.17			-.62	-.07

|				
Relationship conflict: Conditional mediation for negative diversity beliefs	-.00	.13	-.19	.39
Relationship conflict: Conditional mediation for positive diversity beliefs	-.01	.07	-.24	.10
Task conflict: Index for moderated mediation	.63	.37	.06	1.55
Relationship conflict: Index for moderated mediation	-.01	.16	-.48	.23

Note. N = 50, * p < .05, ** p < .01, *** p < .001

4.3. Summary

To sum up all findings, Pearson's correlation effectively proved hypothesis 1. As expected there was a link between task conflict and relationship conflict. Hypothesis 1 was therefore approved. Next, Hayes' (2013) PROCESS macro was used to test hypotheses 2, 3, 4, 5, 6, 7, 8ab, 9ab, and 10ab. Looking at task conflict hypotheses 2, 4, 8a, and 9a were successfully approved. Hypotheses 5 and 10a were partly approved. No significant results were found for process perception, however outcome perception did show significant results for both hypotheses 5 and 10a. Another important note is, the moderated mediation effect of task conflict on the relationship between workgroup diversity and group performance and outcome performance was conditional for negative diversity beliefs, but not for positive diversity beliefs. Looking at relationship conflict, the results revealed a significant direct effect for group performance, therefore hypothesis 6 was approved. However, this effect appeared not to have a moderating effect or moderated mediation effect. Accordingly, hypotheses 3, 8b, and 9b were rejected. Lastly, relationship conflict also did not influence performance perception, thus hypotheses 7 and 10b were rejected as well. These results reveal that except for the correlation between process perception and outcome perception, no other variable was linked to process perception. Thus, process perception was an inadequate variable in this research. Besides the hypostasized relationships the analyses revealed an additional relationship between diversity beliefs and group performance. Positive diversity beliefs accounted for a better group performance. The outcomes of the analysis are presented in the conceptual model, where the green arrows stand for proven effects and red

arrows for rejected effects. The unexpected direct effect of diversity beliefs on group performance is represented by an interrupted green line.

Figure 4. Conceptual model showing supported and rejected hypotheses
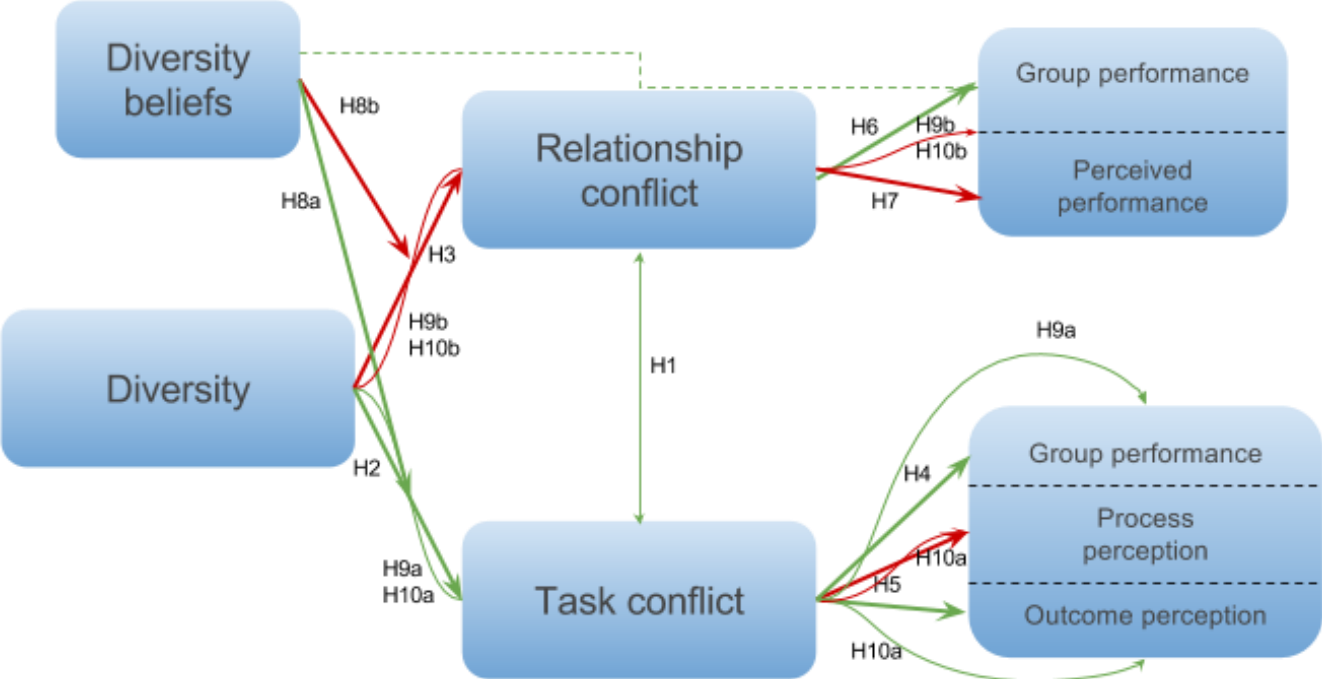
5. Conclusion and discussion

An important challenge faced by today's corporate leaders and managemers is to successfully manage the increasingly diverse workplace. The global economy moves diversity to higher levels. Immigration, worker migration, religious, and cultural differences continue to drastically change the composition of the workforce (Mor Barak, 2016). Diversity at organizations is not just the latest tendency, instead, it is today's reality. The once homogeneous society has become heterogeneous. However, the problems occurring while dealing with a diverse group cannot solely be linked back to the diverse nature of the workforce, but to the way people act and interact in the diverse workspace (Mor Barak, 2016).

It was the goal of the current study to examine the interactions of diverse groups. More specifically, this research focused on how task conflict and relationship conflict influence the relationship between workgroup diversity and group performance. Moreover, it included the role of diversity beliefs on the relationship between diverse workgroups and intragroup conflict. The main research question of this study was: *What is the influence of diversity beliefs on task conflict and relationship conflict and which role plays intragroup conflict in the relationship between (cultural) diversity in workgroups and team performance?*

This question was examined by conducting a two-group experiment. One condition was primed with a pro-diversity stimulus and the other condition was primed with a negative stimulus towards diversity. Thereafter the groups individually and collaboratively worked on a decision-making task. This experiment examined whether the stimuli interacted on the relationship between diversity in a group and task conflict and relationship conflict. Besides, this research examined to what extent task and relationship conflict could be associated with the group's diversity and group performance. The conceptualization resulted into ten hypotheses and sub-hypotheses. These were all tested and this chapter will discuss the implications of the results. Thereafter, it will deliberate on the limitations of this research, recommendations for future research, and finally, practical implications are provided.

5.1. Theoretical implications
5.1.1. Relationship conflict
As became clear from the analysis no evidence was found for the mediation effect of relationship conflict on the relationship between workgroup diversity and group performance, moderated by diversity beliefs. Workgroup diversity conflict was not associated with relationship conflict. This finding is contrary to previous research which proposes that in highly diverse workgroups it is very likely that relationship conflict increases (e.g. Jehn 1997; Pelled, 1996; Pelled et al., 1999; Harrison & Klein, 2007). It is argued that when people from

different social categories are placed together in a group, it is likely that they will be confronted with each other's negative stereotypes (Pelled, et al., 1999). The arise of negative stereotypes is an important indicator of relationship conflict. A possible explanation for the lack of supporting evidence of the effect of diversity on relationship conflict could be that participants were able to look beyond the surface-levels of diversity. Where surface-level diversity traits like social categorization often increase relationship conflict, deep-level characteristics may account for positive outcomes (Mannix & Neale, 2005). Additionally, individuals are likely to develop understanding and respect for one another when they get to know one another, and thereby enabling more effective intercultural communication (Kealey, 2007; Martin & Nakayama, 2015). Subsequently, it can be concluded that there was no supporting evidence for the interaction effect of diversity beliefs on the relationship between work group diversity and relationship conflict. Exposing groups to a positive or negative stimulus regarding diversity beliefs did not moderate the relationship between workgroup diversity and relationship conflict. However pro-diversity beliefs are often believed to lead group members to favorably interact with each other (Van Knippenberg et al., 2004), empirical studies mainly addressed the benefits for task related issues such as proactively seeking new information and perspectives (Homan et al., 2007).

Interesting, was that however there was no evidence for a mediation effect of relationship conflict on the relationship of workgroup diversity and group performance, relationship conflict did directly affect group performance. Increased levels of task conflict negatively affected task performance. These findings are backed by earlier findings regarding the influence relationship conflict on group performance (e.g. Simons & Peterson, 2000; Langfred & Moye, 2014). Group members that experience high levels of relationship conflict often spend more time and energy focusing on the interaction between each other than on the task (Jehn, 1995; Simons & Peterson, 2000). Additionally, relationship conflict is associated with avoidance, thus reducing interaction, which in turn leads to less information exchange (Langred & Moye, 2014).

5.1.2. Task conflict

Multiple interesting conclusions can be drawn when looking at task conflict. The analyses showed supporting evidence for hypotheses 9a and 10a. There was a significant moderated mediation effect for diversity in workgroups and group performance and outcome perception through task conflict, interacted by diversity beliefs. Moreover, the results implied task conflict accounted for the variation in task performance in diverse workgroups. First, there was a positive relationship between diversity in a group and increased levels of task conflict. In groups that were highly diverse higher levels of task conflict were experienced. These findings are in line with previous work that emphasizes that people from different

demographical backgrounds account for divergence in perspectives, problem-solving techniques, and information exchange (Pelled et al., 1999; Lau & Murnighan, 1998; Jehn, 1995, 1997; Amason, 1996; Farh et al., 2010). This shows that the findings of this research regarding diversity in workgroups and the appearance of task conflict are in line with the work of notable scholars. It, can, therefore be concluded that diversity in workgroups increases task conflict.

Second, the effect was conditional for diversity beliefs. There appeared to be an interaction effect of diversity beliefs on the relationship between diversity and task conflict. When groups were primed with a pro-diversity stimulus, they showed higher levels of task conflict than groups that were primed with a negative stimulus towards diversity. This effect was especially evident in non-diverse groups. These groups showed low levels of task conflict when exposed to negative diversity beliefs, but higher levels of task conflict when primed with positive diversity beliefs. Remarkably, the opposite was found in highly diverse groups. When people were exposed to the negative stimulus they showed higher levels of task conflict than when exposed to the positive values of diversity. It must be noted however that this was a small difference. The outcome that a simple manipulation of diversity beliefs influences experimental outcomes is in line with previously established findings (Homan et al., 2007; Van Knippenberg et al., 2013). However, research has also shown that believing in the value of diversity may be beneficial for heterogeneous groups (Van Knippenberg et al., 2004). It may encourage group members to seek for new information and different perspectives. This implies that higher levels of task conflict can be found in heterogeneous groups when exposed to pro-diversity beliefs. The results of this research, however, showed conflicted evidence for this assumption. A possible explanation could be that groups that were exposed to the pro-diversity stimulus focused on a collaborative style of dealing with conflict (DeChurch et al., 2013) and therefore did not recognize their task related issues as conflict.

Third, the analysis showed a positive direct effect of task conflict on team performance and outcome perception. When levels of task conflict increased teams performed better on the task, but teams were also less satisfied with their performance. Higher levels of task conflict were associated with reduced motivation to work as a team (Anderson et al., 2004). The negative relationship between task conflict and outcome perception is in line with these findings. Research has shown ambiguous findings regarding task performance and group performance. For example, De Dreu & Weingart (2003) showed with a meta-analysis that task conflict was negatively correlated to group performance. However, other scholars proved that groups can benefit from task conflict to reach higher goals (Jehn & Mannix, 2001; Simons & Peterson, 2000; Farh et al., 2010). The findings of this research are in line with research that found that groups were able to take advantage of

task conflict. A likely explanation for this may be the nature of the task. Jehn (1995, 1997) argues that when performing on a non-routine task, task conflict may be beneficial for the group performance. A non-routine task is characterized by its complexity and lack of obvious solution. Therefore, this type of task requires deliberation. Task conflict stimulates groups to become more innovative and creative (Jehn, 1995; De Dreu & West, 2001). The desert survival situation that was used for the crrent study places people in an unfamiliar situation. It required creative thinking and collaboration to solve the task.

Finally, this research showed that task conflict mediates the relationship between workgroup diversity and group performance and outcome perception under condition of diversity beliefs. Diversity did not directly influence group performance or outcome perception, but evidence was found for task conflict to be the explanatory factor in this relationship. The finding that task conflict acts as a mediating factor between workgroup diversity and group performance is in line with Vodosek's (2007) conclusions. However, where Vodosek (2007) presented a negative influence of task conflict as mediating factor, the current study shows the contrary. The positive mediation effect of task conflict is in line with the proposition of Paulus and colleagues (2016). The scholars argue that in culturally diverse teams, cognitive processes may enhance positive outcomes such as creativity. The major theoretical implication of this research is that workgroup diversity does not directly influence group performance or outcome perception. Task conflict, under condition of diversity beliefs, is the explanatory factor in this relationship.

5.2. Limitations

Although the researcher has taken multiple measurements to ensure this research is valid, reliable and generalizable, a few limitations could not have been foreseen. Those will be discussed below.

First of all, the sampling method that was used focused on the social network of the researcher and the social networks around the researcher. People around the researcher were personally invited to participate in the experiment by signing up for a timeslot. This type of convenience sampling accounts for a sampling bias, as the sample is not representable for the whole population. Where with random sampling everyone has an equal chance to be selected to participate, this was not the case for this research. It has to be taken into consideration that accessibility was an important aspect in the choice of this method. The researcher did not have a database with possible participants and had to rely on the willingness of people to participate in the experiment for an hour without compensation.

An important consequence of the sampling method, plus another limitation to this research, are the group compositions. Whereas the intention of the experiment was to place

people who did not know each other on beforehand in a team to perform on a task. This turned out to be unrealistic. The majority of the participants were recruited through the social network of the researcher, this resulted in groups consisting of people who often times knew each other. Although they would separately sign up for a timeslot, many of the participants were either fellow students, colleagues, or friends and had worked together as a team before. However, experience as a team was not taken into account in this research, but can be seen as an important indicator for both communication effectiveness and team performance. Cultural differences among group members might restrain communication when they first come together. However, when a group develops and get to know each other, the trust in a team and feeling of cohesion might increase. This may lead groups members to be more open to their group member's unique perspectives (Van der Zee & Paulus, 2008). Whereas relationship conflict is often build on misattribution and misinterpretation, experience as a team seems to eliminate this. Likewise, is experience in performing as a group also seen as beneficial for the group performance. Group members know what to expect from each other and can more effectively access each other's strong points (Salas et al., 2009). Team experience can therefore also influence the group's performance. The effect of experience as a group was not measured, but might have influenced the scores on intragroup conflict and group performance. This can therefore be seen as a major limitation to this research.

Furthermore, the manipulation prime regarded diversity beliefs. Groups were exposed to either a positive or negative view regarding diversity in workgroups. The manipulation only seemed to have a small significant effect on the appearance of task conflict. However, this research did not take into account the group member's existing opinions towards diversity. By measuring how participants valued diversity it could have been established whether the effect of manipulation could be associated with the participant's existing beliefs towards diversity.

Likewise, the only significant findings regarding relationship conflict was the positive relationship between relationship conflict and task conflict and the negative effect on group performance. Out of all created scales, relationship conflict also showed the lowest reliability score. Contrary, researchers have often found high reliability scores on relationship conflict in the past (Jehn, 1995).

Finally, the experiment was conducted in a laboratory setting. This means that the external validity may have been affected. The setting of a laboratory experiment is often different for participants than the natural settings they are familiar with. Participants may find it hard to relate to the laboratory setting, which can affect their behavior and thus the results (Martin, 2007). The lab that was used for this experiment however, was designed to appear as a familiar situation. The room was equipped with a couch, a table and some chairs and

had a view over the University campus. It was a space that people would come across in their daily lives as well. Next to that, were participants placed in groups of four or five to discuss and decide on a collaborative answer. People in the age of 18 to 35 often find themselves working in teams either on a professional or personal level. Generally speaking, they are used to work together with different people, and will perceive this as a familiar situation. On top of that, did the laboratory setting provide the opportunity to control other conditions, such as the use of participant's phones for distraction or to look up the answers.

5.3. Future research directions

This research has showed multiple openings in need of further investigation. First, drawing upon an important limitation of the current study, it would be interesting to see how groups with people who did not know on another beforehand would interact and perform in this experiment. As discussed before, experience as a group can have a determining effect on the group's interaction and performance. Eliminating the experience would show how newly formed groups would react on the task and each other. This would provide important insights in how new people in organizations behave. Likewise, further studies regarding the role of experience as a group would be interesting to examine its effect on intragroup conflict and group performance.

Second, the current set up of the study was kept simple in order to examine whether intragroup conflict could be the explaining factor of the ambiguous results on the effects of workgroup diversity. Future research could also focus on the role of intercultural communication competence (ICC) in this relationship. ICC is the capability to effectively and appropriately communicate with people from different cultures (Arasaratnam, 2009; Perry & Southwell, 2011). In ICC three aspects are distinguished; affective, behavioral, and cognitive skills. It would be interesting to see how these skills influence effective interaction and relate to intragroup conflict, as well as group performance in culturally diverse groups.

Third, further research could possibly explore how pre-existing diversity beliefs mediate the effect of positive and negative diversity beliefs as a manipulation and intragroup conflict. In other words, it would be interesting to see to what extent the prime effects on intragroup conflict is influenced by people's already existing beliefs towards diversity. When people believe in the benefits of diverse groups for group functioning they may value the heterogeneous composition equally as or more than homogeneous groups (Van Knippenberg et al., 2004; Van Knippenberg et al., 2007). Measuring diversity beliefs before group members are informed about the composition of the group and exposing the participants to the stimulus may provide interesting insights in understanding how group interactions and processes are related.

Finally, recent research regarding task conflict and relationship conflict has looked at different research perspectives. Whereas the nature of intragroup conflict is often considered as determining for its outcomes, new research suggest that the ay conflict is processed accounts for its consequences (DeChurch et al., 2013). The researchers showed in a meta-analysis that the conflict styles of collaborating, avoiding, and competing were a stronger prediction of group performance than the nature of the conflict (personal or task related). More specifically, a collaborating process of conflict was beneficial for group performance, but avoiding and competing conflict styles reflected negatively on group performance. The current study focused on the traditional distinction between task conflict and relationship conflict, but did not show strong relationships between the nature of the conflict and the group performance. This new perspective deserves to be investigated further and would fit in the line of research the current study provided.

5.4. Practical implications

This research extends our knowledge of how intragroup conflict acts in culturally diverse workgroups and how this can contribute to group performance. Next to that, the findings of this study have a number of important implications for future practice. As society and the workforce is becoming more and more diverse, corporate leaders and managers must find new ways to encourage people to harmoniously interact and collaborate with each other. This study has shown that relationship conflict can negatively affect group performance. Interpersonal grudges and disaffection can not only affect performance, but also cause avoidance. People tend to look for similarities in people they interact with and often judge people on their social category. When this happens in a diverse workplace it is likely that subgroups will arise which is unbeneficial for the diversity climate. It is important for managers to understand these processes and build on antecedents of relationship conflict such as trust (De Dreu & West, 2001).

Research has shown that in organizations that emphasize the value of diversity, people feel more respected and appreciated (Ely & Thomas, 2001). What became clear from this research is that a simple manipulation of diversity beliefs interacts on the relationship between workgroup diversity and task conflict. Task conflict on its turn contributed to a better task performance. Therefore, it would be recommended for corporate managers to underline the value of diversity with emphasis on learning from each other's unique perspectives and visions on creativity and innovation, problem-solving, and informational exchange. This would contribute to more effective corporation and performance.

Elaborating on this, the current study showed that task conflict is an important explanatory factor between workgroup diversity and task performance. Task conflict showed

to have a positive effect on group performance. Therefore, it is advised for managers to make use of the diverse nature of their workforce and stimulate collaboration of diverse groups and their knowledge. Especially when performing on a non-routine task heterogeneous teams can provide useful insights and enhance task performance through task conflict. Nonetheless, an important remark on the relationship between task conflict and relationship conflict cannot be neglected. This research has found supporting evidence for a positive link between task and relationship conflict. And whereas this research has found positive effects for task conflict, if also found a negative effect for relationship conflict on task performance. This assumption is supported by De Wit and colleagues (2012) who found that task conflict is especially beneficial for group performance when the relationship between task conflict and relationship conflict is week. Hence, managers should be cautious that task conflict does not transition in relationship conflict with all its consequences.

To conclude, the present study confirms several previous findings and contributes by providing additional evidence that suggests that task conflict acts as an important mediator between workgroup diversity and group performance. Additionally, this study provided evidence for the moderating role of diversity beliefs on the relationship between culturally workgroup diversity and task conflict.

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Appendix A Informed consent

CONSENT REQUEST FOR PARTICIPATING IN RESEARCH

FOR QUESTIONS ABOUT THE STUDY, CONTACT:
Anne Lyza de Koning, 454284jk@student.eur.nl, +316- 57316178.

DESCRIPTION
You are invited to participate in a research about working The purpose of the study is to understand how groups perform on a task under time pressure.

Your acceptance to participate in this study means that you accept to participate in an experiment. In general terms:
- your participation in the experiment will be related to performing a task that requires team work.

Unless you prefer that no recordings are made, I will use an audiotape during the experiment.
You are always free not to answer any particular question, and/or stop participating at any point.

RISKS AND BENEFITS
As far as I can tell, there are no risks associated with participating in this research. Yet,
I will not keep any information that may lead to the identification of those involved in the study. I will only pseudonyms to identify participants.

I will use the material from the experiment exclusively for academic work, such as further research, academic meetings and publications.

TIME INVOLVEMENT
Your participation in this study will take one and an half hour. You may interrupt your participation at any time.

PAYMENTS
There will be no monetary compensation for your participation.

PARTICIPANTS' RIGHTS
If you have decided to accept to participate in this project, please understand your participation is voluntary and you have the right to withdraw your consent or discontinue participation at any time without penalty. You have the right to refuse to answer particular questions. If you prefer, your identity will be made known in all written data resulting from the study. Otherwise, your individual privacy will be maintained in all published and written data resulting from the study.

CONTACTS AND QUESTIONS
If you have questions about your rights as a study participant, or are dissatisfied at any time with any aspect of this study, you may contact –anonymously, if you wish, Joep Hofhuis –
hofhuis@eshcc.eur.nl.

SIGNING THE CONSENT FORM
If you sign this consent form, your signature will be the only documentation of your identity. Thus,

you DO NOT NEED to sign this form. In order to minimize risks and protect your identity, you may prefer to consent orally. Your oral consent is sufficient.

I give consent to be audiotaped during this study:

Name   Signature   Date

This copy of the consent form is for you to keep.

FOR QUESTIONS ABOUT THE STUDY, CONTACT:
Anne Lyza de Koning, 454284jk@student.eur.nl, +316- 57316178.

I give consent to be audiotaped during this study:

Name   Signature   Date

This copy of the consent form is for the researcher to keep.

Appendix B Outline experimental procedure

Experiment design:

- walk in

- informed consent

- start experiment

- 2 things to write down (positive /negative) (3 min)

- Discussion and write down the 3 best examples (5-10 min)

- explanation desert survival situation (5 min)

- 5-10 minutes for themselves to write down (5-10 min)

- 20 minutes to complete the task (20 min)

- fill in questionnaire (7 min)

- debriefing (10 min)

Good morning/afternoon, thank you for coming in today and making the time to participate in this experiment. Before we start I would like you to read through this informed consent form and sign it twice. One copy is for me and the other one is for you to keep. If you have any questions or doubts, do not hesitate to ask me. Today's session will be audiotaped, unless you don't want it to. The audio tape will only be used for academic purposes and will not be spread.

Time to read and sign the consent form

–

Now it is time to start with the experiment. It will go down as follows: First I will give you a small individual task as introduction, then discuss the task in your group and form a team answer. After that you will perform another task in similar format. First you will perform the task individually and after that you will discuss it in your team and formulate a collective answer. After this I'll ask you to complete a questionnaire and then we will discuss your answers. Everything together will take approximately 1 hour. Is everything clear?

Hand out first task. I would like to ask you to individually think about and write down: *2 potential positive/negative outcomes of cultural diversity in the workplace which organizations should aim for/avoid.* I'll give you a few minutes for that.
Now I would to ask you to discuss your examples together and formulate the 3 best examples you came up with.

–

This was the introduction to the bigger task that I will explain now: the desert survival situation. *Hand out the papers, read through the situation and explain how the ranking works. Give 5-10 minutes to complete the task individually.* After that explain that they now have to make a team ranking and read through the 'achieving consensus' part. Give them 20 minutes to complete the task and give a sign 5 minutes before the time is up.

Send the link with the survey to the participant's e-mail addresses during the task

–

After the task walk in, ask if they were able to complete the task. Explain they will now fill out the questionnaire (online) and after that we will discuss their outcomes of the desert survival situation. Ask if they all have a phone or laptop they can access the survey on. Use paper back-ups if it doesn't work. Hand out the participants number (group .. p ..).

Give participants the time to complete the questionnaire and continue when everyone finished

–

Debriefing

Walk through the desert survival situation answers with everyone.

Explain that the experiment was about working in diverse teams. That the question at the beginning was a prime for diversity beliefs.

Ask them not to share the nature of the experiment with people who are still participating. Thank participants.

Appendix C Desert survival task

<div align="center">

THE TASK

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- Issue the scenario and read through this with participants.

- Issue the Score Sheet and ask participants to first work individually to put the items in order of importance (assume all are in good condition) and record this in the "My Ranking" column of the score sheet. They should not discuss this with anyone else at this stage. Give them 5-10 minutes to do this.
- Split the group into 2-3 teams and explain that they are the real people who have crashed on the plane. Use the opportunity to discuss some of the characteristics of a good team. Give the groups 20-30 minutes to come to a consensus on each item on the list and to write their agreed responses in the "Team's Ranking" column. Before letting them start, read the "Consensus Decisions" section of the packet. Instruct them not to change their individual responses. Remind participants when there are 5 minutes left. When the time is up bring the group back together and go through the correct answers.
- Ask them what thought process they followed for addressing the problems? What issues or questions did they consider? What order did they approach these issues? Ascertain how difficult it was to work out a team consensus and whether everyone finally agreed.
- Score the score sheet – participants must work out the numerical difference between their ranking and the actual ranking ie if the answer is rank 7 and they said rank 1, then the difference is 6. If the ranking was 1 and they answered 3, the difference is 2. Do not use minus figures. They need to do this for their own ranking and their team ranking. The participant and team with the lowest score wins!

<div align="center">

CONSENSUS DECISIONS

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When your group reaches the point where each person can say, "Well, even though it may not be exactly what I want, at least I can live with the decision and support it," then the group has reached consensus. This doesn't mean all of the group must completely agree, but all of the group must minimally agree.

Consequently, any one of you can block a decision. This is precisely why consensus decisions are both more difficult and more effective that other group decision methods, such as voting. It forces the group to consider all aspects of the problem and objections to possible courses of action. Treat differences of option as a way of 1. gathering additional information, 2. clarifying the issues, and 3. forcing the group to seek better alternatives.

- Try to get underlying assumptions regarding the situation out into the open where they can be discussed. The team needs all the info it can get so encourage everyone offer ideas.
- Listen and pay attention to what others have to say. This is the most distinguishing characteristic of successful teams.
- Be caution of early, quick, easy, agreements and compromises. They are often based on erroneous assumptions that need to be challenged.
- Avoid competing and arguing. In this situation either the group wins or no one wins.

- **DO NOT VOTE**. It will split the group into "winners" and "losers," it encourages either/or thinking (when there may be other ways), and fosters argument rather than discussion.

DESERT SURVIVAL SITUATION

It is approximately 10:00 A.M. in mid August and you have just crash-landed in the Sonoran Desert in southwestern United States. The light twin-engine plane, containing the bodies of the pilot and co-pilot, has completely burned. Only the airplane frame remains. None of the rest of you has been injured.

The pilot was unable to notify anyone of your position before the crash. However he had indicated before impact that you were 70 miles south-southwest from a mining camp which is the nearest known habitation, and that you were approximately 65 miles off the course that was filed in your VFR Flight plan.

The immediate area is quite flat and rather barren, except for an occasional barrel and saguaro cacti. The last weather report indicated that the temperature would reach 110 degrees that day, which means that the temperature at ground level will be 130 degrees. You are dressed in lightweight clothing—short sleeved shirts, pants, socks, and street shoes, everyone has a handkerchief.

DESERT SURVIVAL SITUATION

Before the plane caught fire, your group was able to salvage the 15 items listed on the sheet. Your task is to rank these items according to their importance to your survival, starting with "1" being the most important to "15" the least important. You may assume you are the actual people in the situation, the group has agreed to stick together, and all the items are in good working condition.

Item	My Ranking	Team Ranking	Correct Answer	My Error	Team Error
Flashlight (4 battery size)					
Jackknife					
Sectional air map of the area					
Plastic raincoat (large size)					
Magnetic Compass					
Compress kit with gauze					
.45 caliber pistol (loaded)					
Parachute (red & white)					
Bottle of 1,000 salt tablets					
A cosmetic mirror					
Book ("Edible Animals of the Desert")					
A pair of sunglasses per person					
2 quarts of 80 proof Vodka					
1 overcoat per person					
1 quart of water per person					
Score					

DESERT SERVIVAL ACTIVITY
ANSWER KEY

The answers to this Desert Survival Activity are based on over 2,000 actual cases in which men and women lived or died depending upon the survival decisions they make. The following answers and rationale were developed for this activity by Mr. Alonzo Pond, former Chief of the Desert Branch, Tropic Information Center of the Air Force University at Maxwell Air Force Base. During World War II, Mr. Pond spent much of his time working with the Allied Forces in the Sahara on desert survival problems. He encountered the countless survival cases that serve as a basis of the rationale for these rankings.

1. Cosmetic Mirror – Of all the items the mirror is absolutely critical. It is the most powerful tool you have for communicating your presence. In sunlight a simple mirror can generate 5 to 7 million candlepower of light. If you had no other items you would still have better than 81% chance of being spotted and picked up within the first 24 hours.

2. 1 Overcoat Per Person - Once you have a communication system to tell people where you are, your next problem is to slow down dehydration. Forty percent of the body moisture that is lost through dehydration is lost through respiration and perspiration. Moisture lost through respiration can be cut significantly by remaining calm. Preventing the hot, dry air from circulating next to the skin can cut moisture lost through perspiration. The overcoats, ironic as it may seem, are the best available means for doing this. Without them survival time would be cut by at least a day.

3. 1 Quart of Water Per Person – You could probably survive 3 days with just the first 2 items. Although the quart of water would not significantly extend the survival time, it would help to hold off the effect of dehydration. Once dehydration begins it would be impossible to reverse it with the amount of water available in this situation. Therefore, it would be best to drink the water during the first day so you can remain as clear-headed as possible when important decisions have to be made. Rationing it would do nothing at all.

4. Flashlight (4 battery size) – The only quick, reliable night signaling device is the flashlight. With it and the mirror you have a 24 hour signaling capability. Also,

with batteries removed, the case can be used as a scoop or a container for a plastic still.

5. <u>Parachute (red and white)</u> – The parachute can serve as both shelter and a signaling device. The cactus could serve as ten poles and by folding the parachute give enough shade to reduce the temperature underneath it by as much as 20%.

6. <u>Jackknife</u> – Although not as crucial as the first 5 items, the jackknife would be useful for rigging the shelter and for cutting up the cactus for moisture. It's innumerable other uses give it the high ranking.

7. <u>Plastic Raincoat (large size)</u> – Can create a plastic sill by digging a hole and placing the raincoat over it, the temperature differential will extract some moisture and produce condensation on the underside of the plastic. The amount of water produced would be minimal, and might not be worth the effort.

8. <u>.45-Caliber Pistol (loaded)</u> – To be used as a sounding device such as firing three quick shorts in succession, the international distress signal. Probably not useful for hunting (effort would expel too much water/energy), but could be used as an option for producing a fire. Dangerous item to have because of physical and emotional stress of the group.

9. <u>A Pair of Sunglasses Per Person</u> - The intense sunlight of the desert could be a serious problem. However, the dark shade of the parachute shelter would reduce the problem. Sunglasses would however make things more comfortable.

10. <u>Compress Kit with Gauze</u> – Because of the desert's intensity, it is considered one of the least infectious places in the world. Due to the fact that blood thins with dehydration, there is little danger from bleeding unless a vein is severed. Any serious risks from infection would take days to develop, long after the water would have been gone. The kit materials might be used as rope, for wrapping your legs, ankles and head, including face, as a further protection against dehydration and sunlight.

11. <u>Magnetic compass</u> – The compass is of little use. It would be even dangerous to have around once the effects of dehydration take hold. It might give someone the notion of walking out. Possible usage – only as an auxiliary signaling device.

12. <u>Sectional Air Map of the area</u> – Might be helpful for starting a fire or for toilet paper, head cover, or eye shade. It is essentially useless and perhaps dangerous because it too might encourage walking out.

13. <u>A Book Entitled "Edible Animals of the Desert"</u> – The problem confronting the group is dehydration not starvation. Any energy expanded in hunting would be costly in terms of water loss. Even if you actually killed an animal, digestion of proteins takes too much water to be worthwhile. Can be used only as paper – see no. 12

14. <u>2 Quarts of 180 Proof Vodka</u> - When severe alcoholism kills someone, they usually die of dehydration. Alcohol absorbs water. There is a loss of 2 to 3 oz. of water per oz of alcohol. The vodka consumed could be lethal in this situation. Vodka could be helpful for a fire or as temporary coolant for the body. However, it represents more dangers than help.

15. <u>Bottle of Salt Tablets (1000 tablets)</u> – Wide spread myths about salt tablets exist. The first problem is that with dehydration and loss of water, blood salinity increases. Sweat contains less salt than extra cellular fluids. Without lots of extra water, the salt tablets would require body water to get rid of the increased salinity. The effect would be like drinking sea water. Even the man who developed salt tablets now maintains they are of questionable value except in geographical areas where there are salt deficiencies.

Appendix D Questionnaire

Experiment

Q1 intro Thank you for your participation in this experiment. This part of the experiment is a questionnaire that contains questions about the task, your experience, and some demographical questions. This part is vital for the experiment, therefor we would like to request to take this questionnaire serious. Please read all questions and answer categories carefully and answer them accordingly.

Q2 participant numbe Please indicate your participant number (The number the experiment leader handed out)

Q3 info The following part of the questionnaire will focus on how you and your group experienced and approached the task. Please click continue to proceed. Q4 info We are interested in how you and your group approached and experienced the task. Please indicate in the space provided the degree to which each statement applies to you. There are no right or wrong answers. Please read the statements carefully. Many of the statements are similar to other statements – do not be concerned about this.

Q5 perception1 Five statements about the solution of the task are displayed below. Please indicate in the space provided the degree to which each statement applies to you.

Not at all (1), Very little (2), Little (3), Moderate (4), Big (5), Very big (6), Extremely (7)

1. How satisfied are you with the quality of the solution (or outcome) which you and the other party reached?
2. To what extent does the final solution (or outcome) reflect your inputs?
3. To what extent do you feel committed to the solution (or outcome)?
4. To what extent are you confident that the solution (or outcome) is optimal?
5. To what extent do you feel personally responsible for the solution (or outcome) which you and the other party reached?

Q6 perception 2 How would you describe the problem solving (or negotiation) process you and the other party used?

1. Efficient vs. Inefficient
2. Uncoordinated vs. Coordinated
3. Fair vs. Unfair
4. Understandable vs. Confusing
5. Dissatisfying vs. Satisfying

Q7 conflict We are interested in how you and your group approached and experienced the task. Please indicate in the space provided the degree to which each statement applies to you.
There are no right or wrong answers. Please read the statements carefully. Many of the statements are similar to other statements – do not be concerned about this.

Not at all (1), A little (2), A moderate amount (3), A lot (4), A great deal (5)

1. How much tension was there among the members of your group?
2. How much were personality clashes evident in your group?
3. How much friction was there among the members of your group?
4. How much jealousy or rivalry (grudges) was there among the members of your group?
5. How often did people in your group disagree about how things should be done?
6. How frequently were there conflicts about ideas in your group?
7. How much conflict about the work you did was there in your group?
8. To what extent were there differences of opinion in your group?

Q8 info For the last part of this questionnaire, we would like to ask you to answer some questions about the design of the experiment and following, some demographical questions. Please click continue.

Q9 group comp What was the composition of your group? Please indicate the amount of:
_____ People (1)
_____ Males (2)
_____ Females (3)
_____ Nationalities (4)

Q10 manip check What did the experiment leader ask you to write down at the beginning of the experiment?

Q11 gender What is your sex?
❍ Male (1)
❍ Female (2)

Q12 birthyear What is your year of birth?

Q13 edulevel What is the highest level of school you have completed or the highest degree you have received?
❍ Less than high school degree (1)
❍ High school graduate (high school diploma or equivalent including GED) (2)
❍ Some college but no degree (3)
❍ Bachelor's degree in university (4)
❍ Master's degree (5)
❍ Doctoral degree (6)

Q14 occupation Which statement best describes your current employment status?
- ◯ Student (6)
- ◯ Working (paid employee) (1)
- ◯ Working (self-employed) (2)
- ◯ Employer (5)
- ◯ Not working (looking for work) (4)
- ◯ Not working (temporary layoff from a job) (3)
- ◯ Not working (other) (7) _____
- ◯ Prefer not to answer (8)

Q15 nationality What is your nationality?

Q16 language What is your native language?

Q17 nationality2 Please indicate the nationality/nationalities which you consider yourself to be on a scale from 1 to 5. If you feel attached to more nationalities than one, you can indicate this below by writing your nationalities in the boxes and indicate how much you consider yourself to be from each nationality. If you feel attached to one nationality, please write your nationality in the box and indicate how much you consider to be from that nationality
_____ 1 (1)
_____ 2 (2)
_____ 3 (3)
_____ 4 (4)

Q18 outro Thank you for participating in this experiment and completing this questionnaire. Please click the continue button to complete the survey.