

Demographic Dissimilarity, Information Access and Individual Performance

Demographic Dissimilarity, Information Access and Individual Performance

Demografische verschillen, toegang tot informatie en individuele prestatie

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by

Burcu Subaşı

born in Izmir, Turkey

Erasmus University Rotterdam



Doctoral Committee

Doctoral dissertation supervisor(s): Prof.dr. D.L. van Knippenberg

Other members:

Prof.dr. S. Giessner
Prof.dr. G. Jacobs
Prof.dr. E. Kearney

Co-supervisor(s):

Dr. W. P. van Ginkel

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Contents

Declaration of Contribution.....1

Chapter 1: Introduction.....3

**Chapter 2: Nationality Minority Status, Access to Distributed
Information, and Individual Performance.....8**

 Abstract.....8

 Introduction.....9

 Theory and Hypotheses.....13

 Nationality Dissimilarity and Nationality Status.....13

 Nationality Minority Status Differences and Performance in the
 Face of Cultural Dissimilarity.....16

 Public Observability.....22

 Hypothesis-1.....24

 Access to Distributed Information and Individual Performance.24

 Hypothesis-2.....25

 Hypothesis-3.....25

 Figure-1.....26

 Method.....26

 Pilot Study.....27

 Participants and Design.....29

 Manipulations.....30

 -Status.....30

-Public Observability.....	31
Distributed Information Task.....	31
Measures.....	34
-Access to Distributed Information.....	34
-Individual Performance.....	35
-Status.....	36
-Public Observability.....	36
-Demographic Questions.....	36
Procedure.....	37
Results.....	38
Manipulation Checks.....	38
-Nationality Background.....	38
-Status.....	38
-Public Observability.....	38
Multilevel Data Strucure.....	39
Hypothesis Testing.....	39
Figure-2.....	42
Figure-3.....	44
Discussion.....	46
Theoretical Implications.....	47
Limitations and Suggestions for Future Research.....	51

Managerial Implications.....	53
Conclusion.....	54
Chapter 3: Moderating Effect of Nationality Diversity on the Relationship between Nationality Dissimilarity and Individual Performance.....	56
Abstract.....	56
Introduction.....	57
Theory and Hypotheses.....	60
Nationality Dissimilarity.....	60
Nationality Diversity.....	62
Hypothesis-1.....	63
Information Access and Individual Performance.....	64
Hypothesis-2.....	65
Hypothesis-3.....	65
Figure-4.....	65
Method.....	66
Participants and Design.....	66
Measures.....	67
-Nationality Dissimilarity.....	67
-Nationality Diversity.....	67
-Individual Performance.....	68
-Information Access.....	68

-Demographic Questions.....	68
Results.....	68
Table-1.....	68
Hypotheses Testing.....	69
Discussion.....	71
Theoretical Implications.....	72
Limitations and Suggestions for Future Research.....	74
Managerial Implications.....	75

Chapter 4: Moderating Effect of Specific Status on the Relationship between Gender Dissimilarity and Individual Creativity.....77

Abstract.....	77
Introduction.....	78
Theory and Hypotheses.....	80
Gender Dissimilarity.....	80
Specific Status.....	82
Hypothesis-1.....	84
Access to Information and Individual Creativity.....	84
Hypothesis-2.....	85
Hypothesis-3.....	86
Method.....	86
Participants and Design.....	86

Measures.....	87
-Gender Dissimilarity.....	87
-Individual Creativity.....	87
-Specific Status.....	87
-Information Access.....	88
-Access to Colleagues Knowledge.....	88
-The Number of Colleagues who Provide Information.....	89
-Demographic Questions.....	89
Results.....	90
Table-2.....	90
Test of Hypotheses.....	90
Discussion.....	94
Theoretical Implications.....	94
Limitations and Suggestions for Future Research.....	98
Managerial Implications.....	99
Chapter 5: General Discussion.....	101
Summary of the Main Results.....	101
Chapter 2: Status Differences between Nationality Minority Groups.....	101
Chapter 3: Nationality Diversity as a Way to Decrease the Negative Effects of Nationality Dissimilarity.....	102

Chapter 4: Specific Status as a Way to Decrease the Negative Effects of Gender Dissimilarity.....	102
Theoretical Implications and Suggestions for Future Research.....	104
References.....	107
Summary.....	122
Samenvatting (Dutch Summary).....	125
About the Author.....	128
Portfolio.....	130
The ERIM PhD Series.....	137

Declaration of Contribution

I wrote this section in order to declare my contribution to the chapters of this dissertation and acknowledge the contribution of my promoter and co-promoter.

Chapter 1: In this chapter, I introduced the overall topic of the effects of demographic dissimilarity on information access and individual performance. I did the majority of the work in this chapter, and I implemented the feedback of my promoter and co-promoter.

Chapter 2: This chapter consists of our first study. I came up with the hypotheses, did the literature review, designed a laboratory experiment, collected the data, coded the video-recordings, analyzed the data and wrote the manuscript. I received detailed feedback from my promoter and co-promoter during the whole process, and improved this manuscript thanks to this feedback. This chapter is under revise and resubmit (R&R) process at a renowned management journal. I am the first author of this manuscript, my co-promoter is the second author, and my promoter is the third author.

Chapter 3: This chapter consists of our second study. I came up with the hypotheses, did the literature review, designed a field study, collected and analyzed the data, and wrote the manuscript. I received feedback from my promoter and co-promoter during the process, and improved this manuscript thanks to this feedback.

Chapter 4: This chapter consists of our third study. I came up with the hypotheses, did the literature review, designed a field study, collected and analyzed the data, and wrote the manuscript. I received feedback from

my promoter and co-promoter during the process, and improved this manuscript thanks to this feedback.

Chapter 5: This chapter consists of the general discussion of my dissertation. I did the majority of the work in this chapter, and I implemented the feedback of my promoter and co-promoter.

Chapter 1: Introduction

Demographic Dissimilarity, Information Access and Individual Performance

With the rise of globalization and the emancipation of women, work places are diversifying in terms of demographic attributes, such as nationality and gender (Jackson & Joshi, 2010; van Dijk, van Engen, & van Knippenberg, 2012). This means that various employees work with colleagues who are different to themselves in terms of these attributes. Nationality and gender dissimilarities are the most noticeable demographic dissimilarities observed in the work place, and therefore likely to influence work related outcomes (Riordan, 2000). Basically, intergroup biases, that are evident in society manifest themselves in the work place and may work against individuals who are different to their colleagues in terms of nationality and gender (Tajfel & Turner, 1986). In fact, there is ample amount of evidence demonstrating the negative effects of nationality and gender dissimilarity in the work place (Guillaume, Brodbeck, & Riketta, 2012; Joshi, Liao, & Roh, 2011; Tsui & O'Reilly, 1989).

Firstly, previous research shows that individuals who are dissimilar to their colleagues in terms of their nationality tend to hold negative perceptions, emotions and attitudes towards their colleagues (Chattopadhyay, 1999; Chattopadhyay, Finn, & Ashkanasy, 2010; Riordan & Shore, 1997). The aforementioned negative perceptions, emotions and attitudes are in turn reciprocated by their colleagues (Elfenbein & O'Reilly, 2007; Flynn, Chatman, & Spataro, 2001; Park & Westphal, 2013; Tsui & O'Reilly, 1989).

Secondly, individuals who are dissimilar to their colleagues in terms of their nationality are more likely to have bad relationships with their colleagues (Joshi et al., 2011). They are less likely to interact (Chatman, Polzer, Barsade, & Neale, 1998), collaborate (Chatman & Flynn, 2001) and integrate (Guillaume et al., 2012; O'Reilly, Caldwell, & Barnett, 1989; Pelled, Ledford, & Mohrman, 1999) with their colleagues. They offer less support to their colleagues (Klein, Lim, Saltz, & Mayer, 2004) and they receive less support from them (Mueller, Finley, Iverson, & Price, 1999).

Finally, those who are dissimilar to their colleagues in terms of nationality have negative work outcomes such as lower attachment to the organization (Tsui, Egan, & O'Reilly, 1992; Wagner, Pfeffer, & O'Reilly, 1984), less organizational citizenship behavior (Chattopadhyay, 1999), lower salary (Joshi, Liao, & Jackson, 2006), less promotion opportunities (Zhu, Shen, & Hillman, 2014), lower level of creativity (Chatman et al., 1998; Choi, 2007) and lower individual performance (Brodbeck, Guillaume, & Lee, 2011; Chatman & Flynn, 2001; Chattopadhyay, Tluchowska, & George, 2004; Elfenbein & O'Reilly, 2007; Guillaume et al., 2012; Guillaume, van Knippenberg, & Brodbeck, 2014; Tsui & O'Reilly, 1989).

Earlier research regarding nationality dissimilarity determined that nationality status moderates the relationship between nationality dissimilarity and work related outcomes (e.g., Guillaume et al., 2014; Tsui et al., 1992). In our first study, that constitutes the second chapter of this thesis, we tackled the effects of nationality status differently from the previous studies. Earlier research established, whether one is a member of

the nationality majority or of the nationality minority, moderates the effects of nationality dissimilarity on individual performance (Guillaume et al., 2014; Tsui et al., 1992). However, the research did not pay attention to the status difference between separate minority groups. With our first study, we tried to find an answer for how the status differences between different minority groups affect the performance of the individuals who belong to these groups. Therefore, we extended the literature by showing that not only does the status difference between a majority and a minority group matter, but also the status difference between minority groups. In addition, we determined public observability as a moderator and access to distributed information as a mediator in the relationship between nationality minority status and individual performance.

Previous studies also established that besides nationality status, factors like organizational culture (Chatman et al., 1998), team interdependence (Guillaume et al., 2012) and person-workgroup fit (Elfenbein & O'Reilly, 2007) moderate the relationship between nationality dissimilarity and work related outcomes. With our second study which constitutes the third chapter of this thesis, we contributed to the literature by finding a new moderator of the relationship between nationality dissimilarity and individual performance, namely nationality diversity. We figured out that nationality diversity alleviates the negative effects of nationality dissimilarity on individual performance and that access to information mediates the relationship between nationality dissimilarity and individual performance.

In chapter 4, we extended our analysis of demographic dissimilarity with our third study by tackling the effects of gender dissimilarity on individual creativity, which is another form of individual performance. The negative effects of gender dissimilarity at the work place were well established by previous research (e.g., Elfenbein & O'Reilly, 2007; Joshi et al., 2011). For example, dissimilar individuals (in terms of gender) and their colleagues hold more negative perceptions of each other and they like each other less (Chattopadhyay, 2003; Elfenbein & O'Reilly, 2007; Flynn et al., 2001; Park & Westphal, 2013; Tsui & O'Reilly, 1989). Therefore, dissimilar individuals are less likely to interact (Chatman et al., 1998) and cooperate with their colleagues (Chatman & Flynn, 2001). They give (Klein et al., 2004) and receive less advice (Turban, Dougherty, & Lee, 2002), and tend to be less integrated (Guillaume et al., 2012; Pelled et al., 1999) and less attached to their organization (Elfenbein & O'Reilly, 2007; Sacco & Schmitt, 2005; Tsui et al., 1992). The negative effects of gender dissimilarity were also evident on direct work outcomes such as individual performance (Avery, Wang, Volpone, & Zhou, 2013; Elfenbein & O'Reilly, 2007; Guillaume et al., 2012; Tsui & O'Reilly, 1989) and individual creativity (Choi 2007). Studies that examined the negative effects of gender dissimilarity on work-related outcomes determined diffuse status (e.g., gender and ethnic status) as a moderating factor in this relationship (e.g., Joshi et al., 2006; Tsui et al., 1992). With our third study, we extended the literature by establishing specific status (e.g., training and expertise) as a moderating factor and access to information as a mediating factor in this relationship.

Finally, in the fifth chapter of this thesis, I gave a short summary of the results of our three studies, and discussed their main implications for the research on relational demography, information access and individual performance.

Chapter 2: Nationality Minority Status, Access to Distributed Information, and Individual Performance

Abstract

With growing nationality diversity in organizations, the question under which circumstances differences in nationality background between team members affect individual performance increases in importance. Previous research showed that dissimilarity may negatively affect individual performance, and that the status difference between nationality majority and nationality minority moderates this effect. We take this analysis an important step further by recognizing that not all nationality minorities are low status, and propose that status differences among nationality minority groups influence the extent to which nationality minority background affects individual performance, such that the performance of low-status nationality minorities is lower than the performance of high-status nationality minorities. We identify access to distributed information in the team as a mediator and public observability as a moderator in this effect. Results supported our hypotheses, testifying to the value of status-based distinctions between minority groups in the study of relational demography effects.

Keywords: relational demography, nationality status, distributed information, public observability, individual performance

Introduction

Demographic diversity is steadily increasing in organizations (Ely & Thomas, 2001; Jackson & Joshi, 2010), and with growing globalization, differences in especially nationality background demand attention in this respect. Compared to other types of demographic dissimilarity, nationality dissimilarity capturing differences in cultural background and ethnicity has high potential to affect individual performance because it typically is the most salient dissimilarity in organizations (Riordan, 2000). Nationality dissimilarity may relatively easily invite intergroup biases because of its salient (Tajfel & Turner, 1986), which may negatively affect the performance of individuals that are dissimilar to their team in terms of nationality (Chattopadhyay, Tluchowska, & George, 2004; Guillaume, Brodbeck, & Riketta, 2012; Joshi, Liao, & Roh, 2011). Previous studies on relational demography (i.e., demographic dissimilarity) have shown that nationality status moderates the effects of nationality dissimilarity on work related outcomes (e.g., Guillaume, van Knippenberg, & Brodbeck, 2014; Tsui, Egan, & O'Reilly, 1992). Moreover, whether the dissimilar individual in question is a member of the nationality majority or of a nationality minority affects the work related outcomes of the dissimilar individual because of the status differences associated with nationality majority (high status) and nationality minority (low status) membership (e.g., Guillaume et al., 2014; Tsui et al., 1992). Following from the very definition of majority and minority, however, nationality minority members find themselves in a dissimilar position within a team more frequently than nationality majority members, and therefore, a greater concern is attached to figuring out how such dynamics related to nationality background, affect individuals with a

nationality minority background.

We extend earlier research in this respect by providing a new lens in recognizing that classifying all nationality minority groups as low status does not do justice to status differences between minority groups (Charles, 2006). For example, in the US, Mexicans have lower status than Canadians, because majority groups are more prejudiced towards minority groups that are more dissimilar to them (Mummendey & Wenzel, 1999; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). We propose that such status differences impact the performance of nationality minority members. Status is important in teams, as people are less inclined to identify, collaborate, and share information with low-status than with high-status people (Berger, Wagner, & Zelditch, 1985; Chattopadhyay et al., 2004; George & Chattopadhyay, 2008). Therefore, we argue that low nationality minority status leads to reduced access to distributed information (information for which one is depended on others in the work context). In addition, because individuals are increasingly engaged in knowledge work for which they rely on their team as source of information, and because individual performance benefits from access to distributed information (e.g., Burt, 2004; Hirst, van Knippenberg, Zhou, Quintane, & Zhu, 2015; Richter, Hirst, van Knippenberg, & Baer, 2012; Rodan & Galunic, 2004), we suggest that having low nationality minority status deteriorates individual performance. We thus propose that nationality majorities share less information with low-status nationality minorities than with high-status nationality minorities, and that as a consequence low-status nationality minority members perform worse than high-status nationality minority members. As a result, studying the effects of status differences between

nationality minority groups helps us identify the individuals at the highest risk of being less likely to benefit from the team context.

Building on the analysis of the social categorization basis of these effects – perceiving a person by making use of social categorization and stereotypes that include status connotations – we develop this analysis further to propose that situational factors that stimulate team members to consider their actions more carefully and thus lead them to look beyond category-based perceptions (cf. Fiske & Neuberg, 1990) moderate the effect of minority group status. We determine the extent to which the team works under public observability – a situation in which interactions between team members can be observed by third parties such as managers or clients – as an important situational factor because public observability has a high potential to shape within-team interactions, and thus to alleviate the negative effects of low nationality minority status. Job contexts differ substantially in public observability – open office spaces versus private offices, service work in the presence of clients versus behind-the-scenes jobs, monitoring by supervisors or its absence, etc. – High public observability may invite a sense of accountability, which is associated with a greater concern with judgment accuracy, more careful information processing, and greater awareness of how one performs one's tasks (Lerner & Tetlock, 1999; Scholten, van Knippenberg, Nijstad, & De Dreu, 2007). As a result of such a heightened focus on accurate judgment and the process of task performance, members of teams that are of diverse nationalities can be expected to display less intergroup bias (cf. Kearney, Gebert, & Voelpel, 2009; Nderveen Pieterse, van Knippenberg, & van Dierendonck, 2013). Accordingly, we may expect public observability to attenuate the effect of

nationality minority status on individual performance of nationality minorities.

Our study contributes to the relational demography literature by recognizing that nationality minority groups differ in their status, and by introducing a more nuanced way of looking at minority group status that complements previous work on the relational demography effects of majority versus minority group membership. This is important as it helps us understand that the experience of nationality dissimilarity may not only be different for individuals with a nationality majority group background as compared with a nationality minority group background, but may also differ for the members of different nationality minority groups. Additionally, our study makes a step towards the integration of the relational demography literature and the team diversity literature by linking the effect of nationality minority group status to access distributed information. The relational demography literature has paid little attention to team interaction processes (cf. Chattopadhyay et al., 2004; Guillaume et al., 2012), however the team diversity literature has highlighted team dynamics with an emphasis on the exchange and integration of distributed information (van Knippenberg, De Dreu, & Homan, 2004). However, information sharing in diverse teams has so far not been empirically linked to relational demography (George & Chattopadhyay, 2008), and the empirical investigation of access to distributed information in relation to nationality minority and majority status is a potentially important step towards integration of these research traditions.

Theory and Hypotheses

Nationality Dissimilarity and Nationality Status

As nationality background tends to be a salient demographic attribute (Riordan, 2000), nationality differences at work may readily invite social categorization-based perceptions that are rooted in stereotypes about different nationalities rather than in person-specific information about the individual (Fiske & Neuberg, 1990). It is because such stereotypes often reflect intergroup biases – an evaluation favoring the ‘own’ group over the other group (Tajfel & Turner, 1986) – perceptions based on nationality stereotypes often lead to more favorable perceptions of individuals who are similar, rather than those who are dissimilar, in terms of their nationalities. This notion of biases rooted in nationality (or other demographic) dissimilarity is a cornerstone of research in relational demography – the study of the effects of demographic dissimilarity at work. Research in relational demography suggests that such biases are important because they may make individuals form more negative impressions of their dissimilar colleagues (Flynn, Chatman, & Spataro, 2001; Park & Westphal, 2013). They may render people less willing to interact (Chatman, Polzer, Barsade, & Neale, 1998), integrate (O’Reilly, Caldwell, & Barnett, 1989), and collaborate (Chatman & Flynn, 2001) with dissimilar others, and thus create a situation in which individuals face greater challenges functioning effectively the more dissimilar they are to their fellow team members in terms of their nationality (Chattopadhyay et al., 2004; Guillaume et al., 2012).

Based on this notion of a bias in favor of members of the own demographic group over members of other groups, empirical research in

relational demography has documented how nationality dissimilarity can be associated with such undesirable outcomes at work as shorter tenure, less likelihood for promotion (Zhu, Shen, & Hillman, 2014), lower psychological attachment (Tsui et al., 1992; Wagner, Pfeffer, & O'Reilly, 1984), less organizational citizenship behavior (Chattopadhyay, 1999), lower performance (Brodbeck, Guillaume, & Lee, 2011; Guillaume et al., 2014), and lower salary (Joshi, Liao, & Jackson, 2006). Speaking most robustly to these issues, a meta-analysis by Guillaume, Brodbeck, and Riketta (2012) links nationality dissimilarity to lower social integration, citizenship behavior, and performance.

Research in relational demography also shows that these effects of nationality dissimilarity are not independent on one's nationality background. More specifically, this research identifies an important role for whether one is a member of the nationality majority or of the nationality minority, so that the negative outcomes of being dissimilar are more pronounced for nationality majority members than for nationality minority members (Guillaume et al., 2014; Tsui et al., 1992). This can be explained by taking the status associated with different majority and minority nationality backgrounds into account. By virtue of their dominant position in society, the nationality majority typically (and in the Western world probably without exception) has higher status than nationality minority groups¹ (Chattopadhyay et al., 2004). As a consequence, for a nationality majority member (i.e., societal majority, not numerical majority within the

¹ Anecdotal evidence shows that in some Eastern societies like Dubai, Westerners as the nationality minority may have higher status than Easterners as the nationality majority. However, there is no empirical evidence that has tested this notion, and our study is valid only in the Western world where the nationality majority group has higher status than nationality minority groups (Chattopadhyay et al., 2004).

team) being nationally dissimilar to his/her team means being in a team of mostly lower-status others (i.e., nationality minority members). In contrast, for nationality minority members, being nationally dissimilar to the team would typically mean being surrounded by mostly higher-status others. A group's status is also shaped by the status of its members, and higher-status groups are more attractive targets of identification because group status reflects on the self through social identification (Tajfel & Turner, 1986). Nationality dissimilarity may thus discourage identification and engagement with the group for (high-status) nationality majority members more than for (low-status) nationality minority members.

This perspective on majority and minority reactions to nationality dissimilarity is important in understanding some of the mechanisms involved in relational demography effects, and explains the observations of greater disengagement of majority than of minority members in response to nationality dissimilarity (e.g., Tsui et al., 1992). Arguably, however, the contrast between majority and minority members in positions of nationality dissimilarity partly concerns situations with a relatively low frequency of occurrence – members of a society's nationality majority in a nationally dissimilar position. The very definitions of majority and minority imply that individuals with a nationality majority background are less likely to find themselves in a situation of high nationality dissimilarity at work than individuals with a nationality minority background. Nationality minorities may be relatively overrepresented in some lower-level menial jobs but for most jobs and especially for most knowledge-intensive jobs demanding higher levels of education, the nationality majority tends to be also the majority in the work context. Since nationality minorities find themselves

in a numerical minority position at work more often than nationality majorities, it is crucial to consider how members of different nationality minorities may respond to nationality dissimilarity.

Nationality Minority Status Differences and Performance in the Face of Cultural Dissimilarity

Even though relational demography research has examined the effects of the status associated with nationality background on organizational attachment (Tsui et al., 1992) and on individual performance (Brodbeck et al., 2011; Guillaume et al., 2014), this research focused exclusively on status differences between the nationality majority and nationality minority groups. These comparisons did not take into consideration that nationality minorities can and do differ in societal status (Charles, 2006; Verkuyten, Hagendoorn, & Masson, 1996). A general psychological mechanism capturing and explaining such differences in status between minority groups is provided by the in-group projection model (Mummendey & Wenzel, 1999), which posits that a society's nationality majority will see its own characteristics as the standard to judge other groups. Because of intergroup biases (i.e., favoring in-group), greater similarity to the own group results in higher social status, and more culturally dissimilar groups are accorded lower status. That is, the cultural distance of nationality minority groups to the nationality majority group is a strong indicator of the status of nationality minority groups, at least in the Western world (Charles, 2006; Emerson, Chai, & Yancey, 2001; Verkuyten et al., 1996). In general, cultural differences between groups go to a greater or lesser extent, hand-in-hand with nationality and ethnic differences

between these groups, which means that culture, nationality and ethnicity usually overlap with each other even though this may not be always the case. The more they overlap, the more likely it is that the nationality minorities who have dissimilar culture to the nationality majorities get low status within the host nationality context. One cannot distinguish the relative contributions of culture, nationality and ethnicity to status. However, this is irrelevant to our theory, which is based on the in-group projection notion of more broadly defined dissimilarity and status (Mummendey & Wenzel, 1999).

Focusing on knowledge work contexts, where the nationality majority is also the majority group at work, the question thus arises whether and how individuals with a high-status compared to a low-status nationality minority background, may differ in their performance. Existing research on cultural dissimilarity effects, moderated by nationality majority versus nationality minority status, cannot answer this question as it entails a different comparison than the comparison of a high-status nationality minority individual (e.g., a Canadian in the US) versus a low-status nationality minority individual (e.g., a Mexican in the US) working in a context of cultural dissimilarity to the nationality majority (i.e., Caucasian Americans in the US). However, the social categorization theory underlying much of the research in relational demography is well suited to address this question.

In the Western world, the level of dissimilarity to the majority probably is the most important determinant of nationality status for minorities (Mummendey & Wenzel, 1999) and therefore, nationality status cannot be studied as a concept separate from cultural dissimilarity. Because

lower status and greater cultural dissimilarity go hand-in-hand (Charles, 2006; Emerson et al., 2001; Verkuyten et al., 1996), low-status nationality minorities may invite stronger social categorization effects than high-status nationality minorities. Indeed, it is such covariance between cultural dissimilarity and nationality status that renders social categorization and associated stereotypes subjectively more meaningful and that makes a stronger basis for attitudes and behavior (Turner et al., 1987). An important element of such stereotypes in the work context is the tendency to see higher-status nationality groups as more competent (Berger, Rosenholtz, & Zelditch, 1980; Cohen & Roper, 1972). Social categorization processes in general and the associations with competence in particular may thus invite stronger inter-group biases discouraging collaborative efforts for individuals with a low-status minority background than for individuals with a high-status minority background.

One particularly relevant behavioral expression of such social categorization processes in the context of knowledge work is access to distributed information. A key aspect of knowledge work is the reliance on others for information (i.e., distributed information refers to information for which one is depended on others in the work context; Stasser & Titus, 1985). Access to distributed information has an important influence on performance and creativity in knowledge work (Burt, 2004; Perry-Smith & Shalley, 2003; Richter et al., 2012; Rodan & Galunic, 2004; Stasser & Titus, 1985). Such access to distributed information is contingent, however, on others' willingness to share distributed information with the individual, and ideally to discuss its implications to help the individual integrate it into his or her existing knowledge base. Research in distributed information

established that sharing distributed information in and of itself, is only part of the story; even when shared, distributed information still runs the risk of being ignored in task performance (Winguist & Larson, 1998). It is important that distributed information is not only shared in team interaction, but also discussed and integrated with other task-relevant information (van Knippenberg et al., 2004). Discussion and integration of distributed information have been shown to be more predictive of performance than information sharing in and of itself (Hoever, van Knippenberg, van Ginkel, & Barkema, 2012; van Ginkel & van Knippenberg, 2008). In contrast to earlier work that conceptualizes access to distributed information as a team level concept and as a predictor of team performance (van Knippenberg et al., 2004), we focus on an individual-level extension of the concept in recognition of the fact that individuals in teams may differ in the extent to which they have access to distributed information. That is, some members may exchange, discuss, and integrate more distributed information than others. As a consequence, members' individual performance may differ as a function of these different levels of access to distributed information.

As George and Chattopadhyay (2008) note in their conceptual analysis, intergroup biases inspired by nationality dissimilarity will discourage nationality majority members from sharing information with others who are dissimilar in terms of their nationalities. We propose that this tendency to withhold access to distributed information from others who are dissimilar in terms of their nationalities will hold more strongly in interaction with others with lower nationality status, because of the stronger stereotyping and intergroup biases against members of nationality groups with lower status. In addition, people who have low status are often aware

of the prejudice directed towards them (Major & O'Brien, 2005). When low-status people realize that they are considered incompetent at a task, they become anxious (Blascovich, Spencer, Quinn, & Steele, 2001; Bosson, Haymovitz, & Pintel, 2004; Spencer, Steele, & Quinn, 1999) and agitated (Ben-Zeev, Fein, & Inzlicht, 2004). In order to cope with this situation, they may disengage their self-esteem from the task in question by devaluing the task and putting in less effort for their own success (Major & O'Brien, 2005). As a result, compared to a high-status nationality minority individual, a low-status nationality minority individual may be more reluctant to approach a nationality majority individual to request information. This too contributes to the tendency for low-status nationality minority individuals to have less access to distributed information than high-status nationality minority individuals.

This analysis implies an asymmetry in access to distributed information as a function of nationality status. When working together in the same team, individuals with a low-status nationality background as well as individuals with a high-status nationality background are more inclined to identify with those with a high-status nationality background rather than those with a low-status nationality background (Chattopadhyay et al., 2004). Therefore, both parties are more likely to share distributed information with individuals with a high-status nationality background than those with a low-status nationality background (George & Chattopadhyay, 2008). Even though low-status people get anxious for being stigmatized as incompetent (Blascovich et al., 2001; Bosson et al., 2004; Spencer et al., 1999), and hence they may ask less information from high-status people, they still identify with high-status people rather than low-status people in

the team in order to increase their self-esteem (Chattopadhyay et al., 2004), and they still share distributed information with high-status people rather than low-status people in order to get the approval of high-status people (George & Chattopadhyay, 2008). In the context of teams that are diverse in terms of nationalities and that are dominated by the nationality majority, this implies that members of the nationality majority have relatively uninterrupted access to distributed information. Not only are there no intergroup biases to discourage information sharing between majority members, individuals with a minority background will also not be reluctant to share distributed information with (high-status) nationality majority members. For individuals with a nationality minority background, however, their nationality status will make an important difference to the willingness of the nationality majority to give them access to distributed information: Low-status nationality minorities' access to distributed information will tend to suffer more from intergroup biases than high-status nationality minorities' access. Because access to distributed information is such an important driver of individual performance in knowledge work, we may propose that these information access asymmetries translate into performance differences as well.

Intergroup biases inspired by nationality dissimilarity in teams are not inevitable, however (van Knippenberg et al., 2004). Factors that invite more careful consideration of one's perceptions, attitudes, and actions may reduce biases against individuals who are dissimilar in terms of their nationalities (cf. Fiske & Neuberg, 1990; Kearney et al., 2009; Nederveen Pieterse et al., 2013). Therefore, we develop our analysis of the effects of nationality minority status on individuals' access to distributed information

and performance by proposing the moderating role of one instance of such a stereotype-reducing factor: public observability.

Public Observability

Workplaces and jobs differ in the extent to which the way people perform their job is observable by others such as managers, clients, or the general public. Such differences in public observability may affect the extent to which individuals let their responses to nationally dissimilar team mates be stereotype-driven, as public observability may increase feelings of accountability for one's actions (Lerner & Tetlock, 1999). When one realizes that one's actions are observed by others, they may consciously or unconsciously focus on how they can account for their actions. The feeling of accountability stimulates individuals to consider their attitudes and actions more carefully, and to process information more wisely, and may thus reduce stereotyping and intergroup biases (Petty, Brinol, Loersch, & McCaslin, 2009). Deliberate consideration of one's attitudes and actions is further associated with reduced stereotyping and intergroup bias because more elaborate consideration of information in person perception leads one to take more individuating information (i.e., information that captures attributes of a person that would not be suggested by stereotypes about the person's demographic background; Fiske & Neuberg, 1990) into account and to rely less on stereotypes in forming impressions (Pendry & Macrae, 1996; Petty et al., 2009). Moreover, more carefully considered action may lead people to become more aware of and more attentive to the needs of their fellow team members (e.g., LePine, Piccolo, Jackson, Mathieu, & Saul, 2008; Marks & Panzer, 2004), which may also concern informational

needs that invite information sharing.

Our focus on public observability as a moderator of social categorization processes is important in and of itself, both because it helps develop our analysis of access to distributed information as a behavioral expression of intergroup biases and because it identifies a factor that could lend itself to managerial interventions. The focus on public observability is also important, however, because it represents an instance of factors influencing epistemic motivation – the motivation to form accurate perceptions, attitudes, and judgments (Kruglanski & Webster, 1996; Lerner & Tetlock, 1999). Even when our research only focuses on public observability and thus cannot prove that results generalize to other influences on epistemic motivation (e.g., personality, time pressure; Kruglanski & Webster, 1996), the implication would be clear. The current focus on public observability is thus also important as a representative of a class of situational and dispositional influences associated with social categorization-reducing epistemic motivation.

We propose that this social categorization-reducing influence of public observability more strongly affects those individuals whose performance is most compromised by stereotyping and intergroup biases: low-status nationality minority individuals. As per the analysis we presented earlier, social categorization processes that can lead to reduced information sharing, and thus also reduced performance, can be expected to play out stronger for individuals with a low-status nationality minority background than for individuals with a nationality majority or high-status nationality minority background. Accordingly, when team members consider their perceptions, attitudes, and actions more carefully under high

compared to low public observability, this social categorization-reducing influence should become most beneficial for low-status nationality minorities. Access to distributed information for low-status minority members should thus improve under higher public observability, whereas similar effects should be absent for high-status minority and majority members, who are less prone to suffer from social categorization-based reduced access to distributed information under low public observability. Consequently, we advance the following hypothesis.

Hypothesis 1: The relationship between nationality status and access to distributed information is moderated by public observability such that low-status nationality minorities have less access to distributed information than nationality majorities and high-status nationality minorities under low public observability, whereas this effect is reduced under high public observability.

Access to Distributed Information and Individual Performance

For any task with information processing components, such as making decisions based on information about a variety of aspects of different decision options, access to distributed information can be crucial for individual performance (Stasser & Titus, 1985). The more there is a variety of performance-relevant pieces of information to consider, the less likely it will be that any single individual possesses all the relevant information that could lead to high-quality performance. Accordingly, the individual needs to rely on others as sources of distributed information, and gaining access to this distributed information becomes a key aspect of high-

quality task performance. The importance of access to distributed information for individual performance has been established for decision making performance (Stasser & Titus, 1985), job performance (Burt, 2004; Rodan & Galunic, 2004), and creative and innovative performance (Perry-Smith & Shalley, 2003; Rodan & Galunic, 2004).

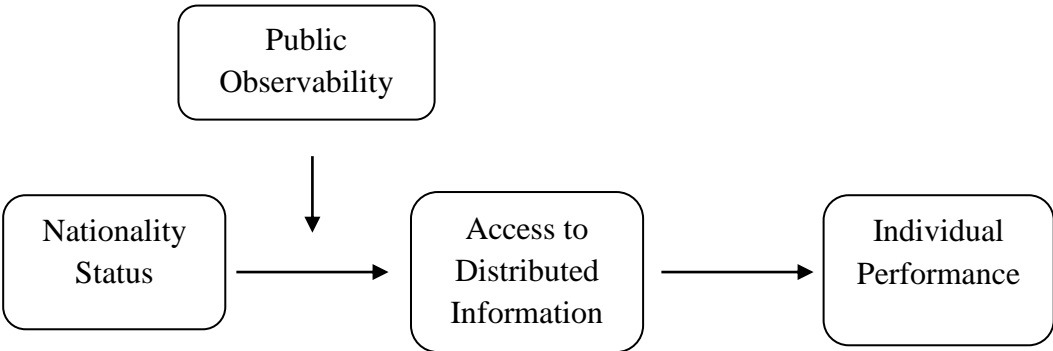
As a result, based on our analysis of the effects of nationality status on access to distributed information, and our focus on task contexts that require information processing, we propose that nationality status affects individual performance moderated by public observability following the same pattern predicted for access to distributed information. Moreover, building on the important role of access to distributed information in driving performance in knowledge work, we propose that the individual performance of team members as a function of their nationality status is mediated by access to distributed information.

Hypothesis 2: The relationship between nationality status and individual performance is moderated by public observability such that low-status nationality minorities perform worse than nationality majorities and high-status nationality minorities under low public observability, whereas this effect is reduced under high public observability.

Hypothesis 3: Access to distributed information mediates the interaction effect of nationality status and public observability on individual performance.

In summary, our research model is graphically depicted in Figure 1.

Figure 1. Research model with the interaction between nationality status and public observability, the mediating process access to distributed information, and the outcome variable individual performance.



Method

For three interrelated reasons, we tested our hypotheses in an experiment. A first and obvious reason was that with an experimental design, we can draw the inferences about causality that are critical to strong theory tests. Secondly, field test of information exchange is not well suited to distinguish the exchange of distributed information from the discussion of information already known to all discussion partners (i.e., because people remain unaware of distributed information when it is not shared and thus cannot report about information not being shared). An experimental set-up in contrast is uniquely suited to assess the exchange and discussion of distributed information with high validity because the distribution of

information is under experimental control, and it can be behaviorally coded (cf. Stasser & Titus, 1985; van Ginkel & van Knippenberg, 2008). Third, the experimental set-up allowed us to gather process evidence through behavioral observation, which is not only important in terms of objectivity of measurement (i.e., our second reason to opt for the experimental set-up), but also in terms of timing of measurement (van Ginkel & van Knippenberg, 2008; Weingart, 1997). Field settings typically only allow for retrospective subjective ratings of team process in quantitative research. This leaves open the possibility of reverse causality in which outcome knowledge informs process ratings. Moreover, ratings by team members rather than by trained observers may introduce other rating biases that cannot be brought under control as they can in experimental settings by training raters and using the same raters for all teams. We also recognized that the downside of lab experiments, as opposed to field studies, is that they do not produce evidence that the observed relationships can also be found in the organizational setting we would like to generalize to. In this respect, it is important to realize that a comprehensive meta-analysis suggests that laboratory and field studies do not differ in their conclusions about the effects of team diversity (van Dijk, van Engen, & van Knippenberg, 2012).

Pilot Study

We manipulated team composition such that a high-status majority worked with either a low-status or a high-status minority member. This manipulation was based on status differences associated with nationality background. We therefore deemed it important to first establish in a pilot

study that the nationalities we enlisted for our study were indeed perceived to differ in status as we expected they would. The study was conducted in the Netherlands, and our focus was thus on the Dutch as the local nationality majority. From the Dutch perspective, Germans are an obvious choice for a high-status minority group, as the cultural distance between Germans and Dutch is relatively small (i.e., both are from the Germanic cultural cluster; Chhokar, Brodbeck, & House, 2007). Following the same analysis, that identifies cultural distance as informing nationality status judgments, we focused on the considerably more culturally distant Chinese as a low-status minority group.

Questions about the nationality status of Germans and Chinese were embedded in a survey also including questions about other nationality backgrounds as filler items. The study had a within-subjects design with six levels assessing status judgment of four different nationality minority groups – German, Chinese, Moroccan, and Turkish (the latter two added as fillers) – and in addition assessing status judgments of the broader categories of Western European and East Asian (to cross-validate the more general principle of cultural distance and status perceptions).

Forty-five Dutch students (27 women, 17 men, 1 unknown, $M_{age} = 22.51$ years, $SD_{age} = 1.87$ years) participated in the study in exchange for a chocolate bar. Participants rated each group's status on a 10-item measure with 7-point response scales. The measure consisted of two items adapted from the social distance scale (Bogardus, 1933) that were previously used to measure the status hierarchy between minority groups (e.g., Verkuyten et al., 1996), three items adapted from the socio-cognitive dimensions of interpersonal judgments (Fiske, Cuddy, & Glick, 2007), and five items that

were more specific about status in work contexts. The mean score for this measure constituted each group's status score.

We performed a repeated measures general linear model (GLM) with as within-factor the status scores of Chinese ($\alpha = .83$), Moroccan ($\alpha = .94$), Turkish ($\alpha = .94$), German ($\alpha = .90$), Western European ($\alpha = .93$), and East Asian ($\alpha = .87$) groups. The status scores of the minority groups were significantly different from each other, $F(5, 40) = 14.54, p < .001$; Wilks' $\Lambda = .36, \eta^2 = .65$. Post-hoc analyses with an LSD procedure revealed that Germans ($M = 5.21, SD = .82$) had significantly higher status than Chinese people ($M = 4.71, SD = .83, p < .001$), confirming our theory-based inference about their relative status in the Netherlands. We therefore concluded that a team composition manipulation in terms of a German versus a Chinese minority group member would constitute a valid operationalization of minority group status.

Participants and Design

One hundred and eighty Dutch, German, and Chinese students (72 women, 108 men, $M_{age} = 20.63$ years, $SD_{age} = 2.62$ years) participated in the study, and were assigned to three-person teams. All teams were same-sex and consisted of two members with a nationality majority (Dutch) background and one member with a nationality minority background – either low-status (Chinese) or high-status (German). The study had a multilevel design in that individuals were nested in teams and public observability was a team level manipulation (teams were randomly assigned to public observability condition), whereas individuals' nationality status (majority, high-status minority, or low-status minority), the

mediating variable access to distributed information, and the outcome variable performance were analyzed at the individual level.

In our design, nationality co-varied with culture and ethnicity. More specifically, nationality majorities were Dutch individuals who were born and raised in the Netherlands, and who have Dutch parents; high-status nationality minorities were German individuals who were born and raised in Germany, and who have German parents; and low-status nationality minorities were Chinese individuals who were born and raised in China, and who have Chinese parents. In a sense then, nationality is confounded with culture and ethnicity, but as we outlined in the introduction this is the reality of nationality differences, and it is impossible to study more different nationalities without accepting that culture and ethnicity co-vary. Indeed, as elaborated in the introduction, it is this very co-variation that renders categorizations based on nationality dissimilarity subjectively meaningful and a basis for differential status perceptions.

We removed nine teams from the analyses because during the experiment either: at least one person in these teams indicated that he or she had Moroccan, Surinamese, Chinese, or Afghan nationality background, even though he or she was assigned to the team as Dutch on the basis of his/her earlier stated nationality background; or a person in these teams stated that he/she had a bi-national background.

Manipulations

Status. As outlined above variations in minority status, were induced by composing three-person teams, such that two Dutch majority members were paired with either a Chinese member – low-status minority –

or a German member – high-status minority. Studies that show the attitudes of nationality majorities towards nationality minorities generally had a between-group design (Emerson et al., 2001; Tajfel & Turner, 1986). Therefore, we decided to assign Chinese and German participants to the separate teams (even when noting that our theory and hypotheses do not favor either between-team or within-team comparison of minority member performance). Because acting on status differences associated with nationality background assumes awareness of nationality background, we asked team members to introduce themselves to each other by telling their names and nationality backgrounds.

Public observability. In the high public observability condition, we introduced a Dutch male confederate to the team as an expert on team processes. We told participants that he would observe how they behaved in interaction with their fellow team members, and that he might ask some questions about this at the end of the study. The confederate then proceeded to observe the team members during their team interaction. In the low public observability condition, there was no observer in the laboratory room.

Distributed Information Task

To create a team setting with distributed information in which team members would be responsible for their individual performance, we adapted the well-established distributed information paradigm (Stasser & Titus, 1985). The original paradigm is a team decision making paradigm, however we adapted the task to individual decision making so that we

could reveal how nationality status differences of individuals within a team influence information access of those individuals, and as a result their individual performance. This so-called “hidden profile” task is a task in which each team member is dependent on fellow team members for information, and thus fits our focus on studying how nationality status impacts individuals’ access to distributed information and individual performance. In the hidden profile task we created, there were six issues to address, and each individual team member was responsible for two of these six issues. Team members needed to rely on their fellow team members to have access to distributed information that was relevant to the issues they had to address individually. Therefore, there could be differences between team members in having access to the distributed information which could be relevant to their individual performance.

Participants received a package describing the task including the background information that differed between team members to result in distributed information. They were instructed that a city theater planned to display musicals and that they were assigned to a three-person team to make a number of decisions in this respect: which musicals they were going to show, how much they were going to charge for the tickets, which theater groups they were going to contract, how many performances they would show on weekdays and on the weekend, how they were going to sell the tickets, and which advertisement strategies they would adopt. All participants were aware of these six decision issues. However, the order of the issues was different on each handout, and the decisions each participant had to make individually appeared as the first two issues of their handout. Decision issues were counter-balanced between nationality backgrounds so

that the specifics of the issue would not affect the results (i.e., there is no relationship between nationality background and the issues assigned to individuals).

Part of the decision-relevant information was given to all members. Part of the information, however, was distributed across team members such that each member uniquely held some information only known to him or her. The information was distributed such that for optimal decision making, each team member needed information uniquely held by the two other team members. For each decision issue, each of the two other members uniquely held one piece of decision-relevant information. Thus, each member could receive a maximum of four new pieces of information from the other members (i.e., two new pieces of information from each). Each piece of information could increase the performance of the receiver when the receiver used it correctly.

For instance, one team member had to choose two advertisement strategies out of four (radio, TV, newspaper, and direct mail of flyers). From his/her information handout, it could be concluded that TV and radio advertisements were the most effective strategies even though direct mail of flyers and newspaper advertisement were also effective, and direct mail of flyers was a bit more effective than newspaper advertisement. However, one of the other team members had additional information that radio advertisement was only possible after August because all the time slots before that date were sold out. This was particularly relevant information, as all team members were informed that the musicals would be shown in July. In addition, the other team member held the information that TV advertisement would be too costly and if they used this option, they would

not have enough money left for the advertisements of any other show in future, resulting in a financial loss. As a result, if the team member faced with this decision would not receive any information from the other team members, he/she would be likely to make the wrong decision. If he/she would get information from one of the team members, he/she would be inclined to pick one correct and one wrong strategy. Furthermore, if he/she was to receive information from both team members, he/she would presumably select two correct strategies. The decision making task thus had the characteristics of a so-called “hidden profile” task (i.e., a task in which distributed information would point to another decision than fully shared information), but at the individual level rather than at the team level. To confirm that the implications of the full package of information were clear, we ran another pilot study that showed that the more information people received from their team members, the more likely they were to make the correct decisions.

Measures

Access to distributed information. Two independent judges coded access to distributed information from the audio-video records of the team discussion (The mean Cohen’s Kappa for the inter-rater agreement was .78 and the mean correlation coefficient for the inter-rater agreement was .94). The coding scheme was based on van Ginkel and van Knippenberg’s (2008) behavioral coding measure for access to distributed information, which relies on behavioral anchors to classify the level of access to distributed information – the extent to which distributed information is exchanged, discussed, and integrated with other pieces of information – on

a scale from 1 to 5. By coding the level of access to distributed information separately for each piece of distributed information, we could assign individual team members' scores for the extent to which the team shared distributed information with them and helped them integrate this information with other relevant information through discussion.

For each piece of distributed information, a score of 1 was assigned when the information was not brought up in discussion. A score of 2 was assigned when the information was brought up, but the other team members (i.e., the ones not possessing the information before discussion) did not react to it (either by saying something or by nodding). A score of 3 was assigned when the information was brought up and one of the other members reacted to it, but after this the team failed to integrate it with other decision-relevant information. A score of 4 was assigned when the information was brought up and both of the other members reacted to it, but after this the team failed to integrate it with other information. A score of 5 was assigned when the information was brought up and the team discussed its implications in relationship to other pieces of information. Thus, each team member could get an integer score between 1 and 5 for each piece of distributed information relevant to one of their individual decision issues. As there were four pieces of decision-relevant distributed information for each team member, each member's overall score for access to distributed information could vary between 4 and 20.

Individual performance. Each team member had to individually make a decision about two issues choosing one of four options for each issue (see for instance the advertisement example above). Each option

consisted of two parts. When the individual chose the option for which both parts were wrong, it led to the score of 0. When the individual chose the option with either the first part correct and the second wrong or vice versa, it resulted in a score of 1. When the individual selected the option with both parts correct, it led to a score of 2. Because each individual made decisions about two issues, this resulted in a performance score between 0 and 4.

Status. To check whether participants were aware of the nationality background of their fellow team members, we asked them to indicate their own nationality background and the nationality backgrounds of their team members on a list with the following options: Chinese, German, Dutch, British, French, Spanish, and Other (other had to be specified). Participants also filled out the same status scale used in the pilot study (see the *pilot study* section above) for Dutch ($\alpha = .83$), Germans ($\alpha = .84$), Chinese ($\alpha = .88$), Turkish, and Moroccans (the latter two added as fillers to reduce awareness of the fact that we were assessing status differences associated with team member differences in nationality background).

Public Observability. To check the public observability manipulation, we asked participants whether there was someone in the room observing them. They could choose between ‘yes’ or ‘no’. Afterwards, they rated to what extent they felt that they had been observed during the study on a 7-point scale with anchors ‘*not at all*’ and ‘*very much*’.

Demographic questions. Participants answered questions about

their nationality background, gender, age, and study field.

Procedure

Teams were welcomed into the lab, which contained three separate tables next to a wall and one table in the middle of the room. Each table next to the wall had a number on it from 1 to 3. The researcher seated the participants at these tables randomly, and these numbers became their team member number. After having signed the informed consent form and introducing themselves to each other by telling their names and nationality backgrounds, participants had 22 minutes to read the task information package. After 22 minutes, the researcher came to the room, let participants start the team discussion, and then left the room. The discussion was at the table in the middle of the room, audio-video recorded, and participants had 8 minutes to discuss. After 8 minutes, the researcher stopped the discussion and seated the participants at their individual tables, where participants indicated their decisions for the two issues assigned to them individually. Next, they filled out a questionnaire, which consisted of the status scales, demographic questions, and manipulation checks. Their answers to the questions about the task determined their individual score. The sum of the individual scores of people within a team constituted the team score for that particular team. There was a lottery among the best performing teams and the best performing individuals who participated in the study. The 10 best performing individuals won €50 each, and each member of the best performing team won €10. At the end of the experiment, we debriefed the participants, and paid them €10 for their participation.

Results

Manipulation Checks

Nationality background. Participants were asked to indicate the nationality backgrounds of their two team members. Ninety-eight percent of the participants chose the correct option, which shows that this manipulation was effective. Binary logistic regression analysis showed that participants were more likely to choose the correct option than wrong option, $b = 3.89$, Wald $\chi^2(1) = 14.45$, $p < .001$.

Status. We performed a repeated measures GLM analysis with a within-factor (nationality background: Dutch, German, Chinese). The status scores of Dutch, German and Chinese were significantly different from one other, $F(2, 176) = 70.45$, $p < .001$; Wilks' $\Lambda = .56$, $\eta^2 = .45$. Post-hoc analyses with the LSD procedure revealed that the scores of the status hierarchy of Dutch ($M = 5.75$, $SD = .57$) are significantly higher than those of Germans ($M = 5.68$, $SD = .60$, $p = .02$), and than those of Chinese ($M = 5.03$, $SD = .89$, $p < .001$) while the scores of Germans are significantly higher than those of Chinese ($p < .001$).

Public observability. Ninety-six percent of the participants correctly indicated whether there was someone in the experiment room observing them, which shows that this manipulation was effective. Binary logistic regression analysis also showed that participants were more likely to choose the correct option than wrong option, $b = 1.81$, Wald $\chi^2(1) = 9.71$, $p = .01$. We also asked participants to what extent they felt they have been observed during the study. Regression analysis showed that the participants

who were in the high public observability condition scored significantly higher ($M = 3.94$, $SD = 1.65$) than those who were in the low public observability condition ($M = 3.31$, $SD = 1.96$), $\beta = .64$, $t(173)=2.32$, $p = .02$, which again shows that the manipulation was successful.

Multilevel data structure

The ICC1, ICC2 and Rwg values of access to distributed information ($ICC(1) = .07$, $ICC(2) = .19$, $Rwg = .40$) and individual performance ($ICC(1) = .02$, $ICC(2) = .06$, $Rwg = .31$) showed that there was sufficient individuality to these scores to treat them as individual level variables. To see whether access to distributed information varied between teams (second level) and between persons (first level), we used a 2-level null random intercepts regression model. The analysis showed that the second level variance was not significant ($b = .76$, $p = .67$), whereas the first level variance was ($b = 22.10$, $p = .001$). In addition, in order to see whether individual performance varied between teams (second level) and between persons (first level) or not, we again used a 2-level null random intercepts regression model. Once more, the second level variance ($b = .00$, *ns.*) was not significant whereas the first level variance was significant ($b = 1.36$, $p = .001$). Because the public observability manipulation was a team level manipulation, we conducted multilevel analyses in SPSS to test our hypotheses.

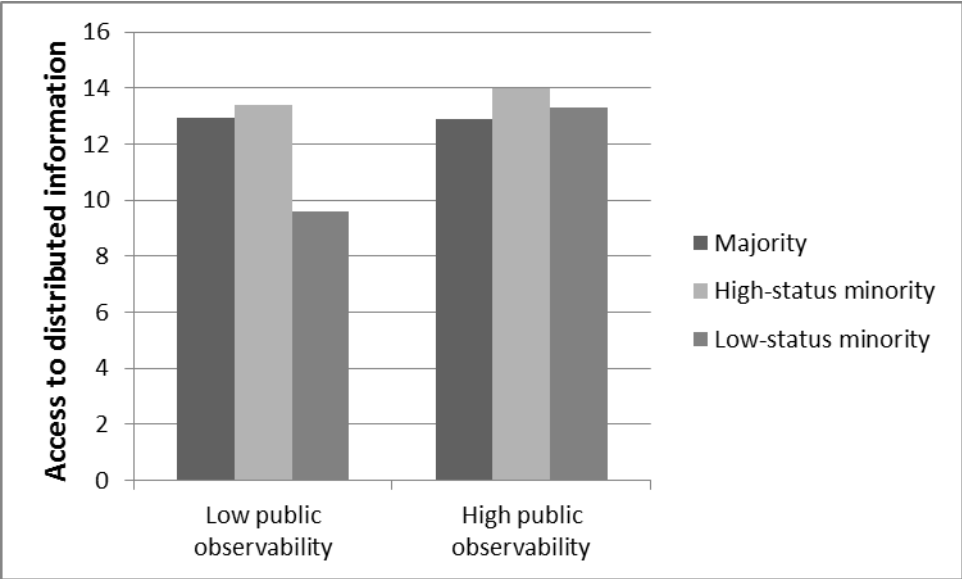
Hypotheses Testing

To test Hypothesis 1, we used a 2-level random intercepts regression model in which (mean-centered) access to distributed

information was the dependent variable. Predictor variables were two dummy variables representing nationality background (majority dummy: 1 = majority, 0 = minority; high-status minority dummy: 1 = high-status minority, 0 = non-high-status minority), public observability (1 = high, 0 = low), the interaction term of majority dummy and public observability, and the interaction term of high-status minority dummy and public observability, as well as team gender composition (1 = all-male versus 0 = all-female) as a control variable. As we expected, first level variance was significant ($b = 21.86, p = .001$) while second level variance was not significant ($b = .61, p = .73$). In line with our hypothesis, public observability moderated the relationship between nationality status and access to distributed information. When we took low-status minorities under low public observability as a reference group, the interaction term of majority dummy and public observability was significant ($b = -3.83, t(168) = -1.96, p = .05$), whereas when we took high-status minorities under low public observability as a reference group, the interaction term of majority dummy and public observability was not significant ($b = -.64, t(168) = -.33, p = .74$). More specifically, under low public observability, nationality majorities did not significantly differ from high-status nationality minorities in terms of having access to distributed information ($b = -.54, t(168) = -.41, p = .68, 95\% \text{ CI } [-3.17, 2.08], \text{ SE} = 1.33$). However, under low public observability, nationality majorities ($M = 12.92, SD = 4.95$) had more access to distributed information than low-status nationality minorities ($M = 9.60, SD = 5.03$), ($b = 3.44, t(168) = 2.52, p = .01, 95\% \text{ CI } [.74, 6.14], \text{ SE} = 1.36$). Also, under low public observability, high-status nationality minorities ($M = 13.38, SD = 4.00$) had more access to distributed

information than low-status nationality minorities, ($b = 3.98$, $t(168) = 2.31$, $p = .02$, 95% CI [.58, 7.38], $SE = 1.72$). In addition, low-status nationality minorities under high public observability ($M = 13.29$, $SD = 4.58$) had more access to distributed information than low-status nationality minorities under low public observability, ($b = 3.82$, $t(168) = 2.16$, $p = .03$, 95% CI [.33, 7.30], $SE = 1.77$; see Figure 2). Thus, the results fully supported our first hypothesis.

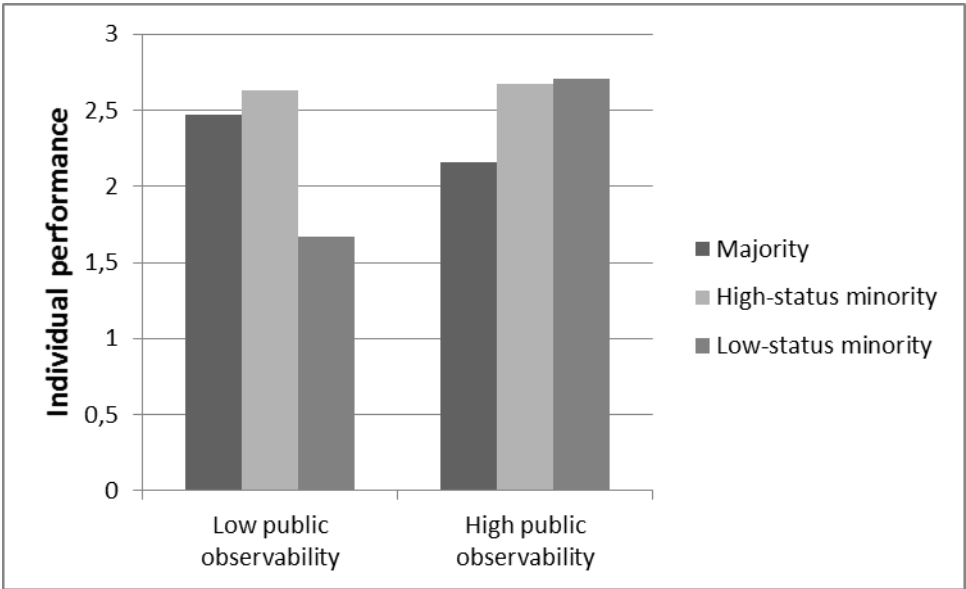
Figure 2. The interaction between nationality status and public observability on individuals’ access to distributed information.



To test Hypothesis 2, we used a 2-level random intercepts regression model in which (mean-centered) individual performance was the dependent variable. Predictor variables were once again two dummy variables representing nationality background (majority dummy: 1 = majority, 0 = minority; high-status minority dummy: 1 = high-status minority, 0 = non-high-status minority), public observability (1 = high, 0 = low), the interaction term of majority dummy and public observability, and the interaction term of high-status minority dummy and public observability, besides team gender composition (1 = all-male versus 0 = all-female) as a control variable. As we predicted, first level variance was significant ($b = 1.31, p = .001$) while second level variance was not

significant ($b = .00$, $ns.$), and public observability moderated the relationship between nationality status and individual performance. When low-status minorities under low public observability were the reference group, the interaction term of majority dummy and public observability was significant ($b = -1.39$, $t(173) = -2.92$, $p = .01$), whereas when high-status minorities under low public observability were the reference group, the interaction term of majority dummy and public observability was not significant ($b = -.35$, $t(173) = -.75$, $p = .45$). To be more precise, under low public observability, nationality majorities did not significantly differ from high-status nationality minorities in terms of their individual performance ($b = -.18$, $t(173) = -.59$, $p = .56$, 95% CI $[-.83, .45]$, $SE = .32$). Yet, under low public observability, nationality majorities ($M = 2.47$, $SD = 1.13$) had higher individual performance than low-status nationality minorities ($M = 1.67$, $SD = 1.05$), ($b = .83$, $t(173) = 2.52$, $p = .01$, 95% CI $[.18, 1.49]$, $SE = .33$), and high-status nationality minorities ($M = 2.63$, $SD = .96$) had higher individual performance than low-status nationality minorities, ($b = 1.02$, $t(173) = 2.46$, $p = .02$, 95% CI $[.20, 1.85]$, $SE = .42$). Moreover, low-status nationality minorities under high public observability ($M = 2.71$, $SD = 1.20$) had higher individual performance than low-status nationality minorities under low public observability, ($b = 1.08$, $t(173) = 2.53$, $p = .01$, 95% CI $[.24, 1.92]$, $SE = .43$; see Figure 3). Hence, the results fully confirmed our second hypothesis, too.

Figure 3. The interaction between nationality status and public observability on individual performance.



To test Hypothesis 3, the mediation hypothesis, we conducted a moderated mediation analysis following Edwards and Lambert’s (2007) first stage moderation model. Firstly, we tested whether the positive effect on performance of being a nationality majority and a high-status nationality minority under low public observability, compared to being a low-status nationality minority under low public observability, is mediated by access to distributed information or not. In order to do this, we first estimated the coefficients for the sample with multilevel analysis as per our test of Hypothesis 1 above (see Equation 5 in Edwards & Lambert, 2007). Afterwards, we regressed the (mean-centered) individual performance

scores on the (mean-centered) scores of access to distributed information controlling for majority dummy, high-status minority dummy, and gender (see Equation 4 in Edwards & Lambert, 2007). The first level variance was significant ($b = .48, p = .001$), whereas the second level variance was not ($b = .00, ns.$). The effect of access to distributed information on individual performance was significant, ($b = .20, t(170) = 17.68, p < .001, 95\% \text{ CI } [.17, .22], \text{ SE} = .01$). Then, we estimated the coefficients of Equation 5 and Equation 4 from 1000 bootstrap samples with the constrained nonlinear regression modules. In order to find the indirect effect, we placed these coefficients in the indirect effect formula of Equation 9 in a Microsoft Excel file (see Equation 9 in Edwards & Lambert, 2007). We used bias corrected confidence intervals based on the bootstrap coefficients to test the indirect effect (Stine, 1989, p. 277). As we anticipated, under low public observability, access to distributed information mediated the positive effect on performance of being a nationality majority compared to being a low-status nationality minority. The indirect effect was significant (point estimate = .66, 95% BCCI [.22, 1.16]). In the same way, under low public observability, access to distributed information mediated the positive effect on performance of being a high-status nationality minority compared to being a low-status nationality minority. The indirect effect was once more significant (point estimate = .76, 95% BCCI [.25, 1.31]).

Secondly, we tested whether the positive effect on performance of being a low-status nationality minority under high public observability, compared to being a low-status nationality minority under low public observability, is mediated by access to distributed information or not. In order to test this, we followed exactly the same procedure that we used to

test the previous two mediation effects above except that this time we used low-status minority dummy (1 = low-status minority, 0 = non-low-status minority) and the interaction term of low-status minority dummy and public observability instead of majority dummy, and the interaction term of majority dummy and public observability on the equation 5; and low-status minority dummy instead of majority dummy on the equation 4. As we predicted, access to distributed information mediated the positive effect on performance of being a low-status nationality minority under high public observability compared to being a low-status nationality minority under low public observability. The indirect effect was significant (point estimate = .74, 95% BCCI [.11, 1.36]). To sum up, the result of this analysis provided full support for Hypothesis 3.

Discussion

Our study shows that in a team context where the nationality majority is also the numerical majority, status differences between nationality minority groups affect the performance of individuals with a nationality minority background. Results link this effect to the access to distributed information as the mediating process, and identify public observability as an attenuating influence. The findings complement earlier research in relational demography that showed that nationality minority versus majority status moderates dissimilarity effects, and underscore the value of a more nuanced treatment of minority group status. In linking minority status effects to access distributed information, these findings are also important in bridging relational demography and team diversity perspectives.

Theoretical Implications

The differentiation between different nationality minorities in terms of their status in society adds a nuance to relational demography research that is important in unraveling the influence of holding a nationality minority position on individuals' functioning in organizations. Previous research already showed that being dissimilar to one's fellow team members in terms of nationality affects nationality majority and nationality minority individuals differently (e.g., Guillaume et al., 2014; Tsui et al., 1992). In this study, we shifted focus to a comparison between individuals with different minority group backgrounds to demonstrate that further differentiation beyond the difference between nationality majority and nationality minority is necessary for our understanding of the influence of holding a nationality minority position within a team. The importance of this insight lies in the fact that it helps us understand that different nationality minorities may face different challenges to a different degree. It also helps us appreciate that the prosperous functioning of one nationality minority group in an organization (i.e., most likely a relatively high-status minority group) cannot be taken to be an indication of the functioning of other minority groups (i.e., lower-status minorities).

In more conceptual terms, the current insights are important because they raise awareness of the fact that there is more to nationality dissimilarity than being either a low-status individual in a high-status team (i.e., an individual with a nationality minority background in a team dominated by the nationality majority) or being a high-status individual in a low-status team (i.e., an individual with a nationality majority background in a team dominated by one or more nationality minorities). Taking as a

given that the nationality majority is also the largest group within a team (i.e., as it is typical of most knowledge work contexts) and thus that the team is relatively high-status in terms of nationality background, our study shows that there are also influential differences in terms of the higher or lower status associated with a minority individual's nationality background. For such situations, the notion of disengagement from a low-status team versus identification with a high-status team used to explain differences between nationality majority and nationality minority individuals' reactions to nationality dissimilarity (e.g., Chattopadhyay et al., 2004) does not apply.

Rather, what our findings show is that nationality minority status invites differences in team member interactions that result in less access to distributed information, and as a consequence lower performance, for low-status nationality minority individuals than for high-status nationality minority and nationality majority individuals. These findings are better understood in terms of intergroup biases in team interactions than in terms of psychological engagement or disengagement from the team. Importantly, what these findings also show is that this team interaction influence has individual-level consequences. Access to distributed information and performance are individual-level consequences of nationality status; even when these consequences come about in team interaction, nationality majority individuals' access to distributed information or performance is not affected by whether they work with a high-status or low-status nationality minority individual. The evidence for access to distributed information, as the mediating process linking nationality status to individual performance is especially relevant in view of the growing

reliance on knowledge work in organizations. Evidence that access to distributed information is key to performance, creativity, and innovation is growing, both from team research (e.g., Richter et al., 2012) and from social network research (e.g., Hirst et al., 2014), and it thus is a particularly relevant and worrying conclusion that individuals with a low-status minority background may be cut off of informational resources even when they contribute to the sharing of distributed information themselves.

Viewed from that perspective, our evidence for the moderating role of public observability as an attenuating influence in this respect is important. This evidence is important not only because it helps paint a coherent picture of the processes involved – social categorization processes put information access and performance at stake, and public observability as a factor that reduces social categorization tendencies attenuates this negative effect. It is also important because it speaks to a broader category of factors that may attenuate social categorization processes inspired by a low-status nationality background: factors that are associated with epistemic motivation. Kruglanski and Webster (1996) outline how dispositional as well as situational influences may inspire more carefully considered perceptions, attitudes, and actions, as they are associated with epistemic motivation – the desire for accurate judgment. Public observability can be understood as an instance of such situational influences (Lerner & Tetlock, 1999; Scholten et al., 2007). Accordingly, even though our data do not speak to this directly, it is not too much of a leap of faith to propose that other factors that are associated with epistemic motivation may also reduce intergroup biases that stand in the way of low-status minorities' access to distributed information. Such influences would

include dispositional variables such as need for cognitive closure (Kruglanski & Webster, 1996), need for cognition (Caccioppo & Petty, 1982), and learning orientation (Dweck, 1999), but also other situational influences such as (low) time pressure (Kruglanski & Webster, 1996) and (low) job stress (Cicero, Pierro, & van Knippenberg, 2007). Put differently, the implication of the moderating role of public observability is that it points not to just public observability but rather to a set of influences.

The fact that high-status minority members did not differ in access to information or performance from majority members is in line with the results of our manipulation check for nationality status. Where the difference in status between Chinese on the one hand and Dutch (.72, $p < .001$) and Germans (.65, $p < .001$) on the other was substantial, the difference between Dutch and Germans, even when significant, was very small (.07; $p = .02$). It would seem that this difference was too small to cause meaningful differences in the level of access to distributed information or performance. Whereas this is obviously for future research, the implication would be that for other relatively high-status minorities, their access to information and performance could be lower than that of the majority when the status difference with the majority is more substantial (e.g., in this context Eastern Europeans, who can be expected to be somewhere in-between Germans and Chinese in status).

A noteworthy and potentially important aspect of our analysis is that it bridges research in relational demography and diversity. Relational demography research is typically focused on the individual level of analysis – individual perceptions, attitudes as predictors of individual level outcomes (e.g., Guillaume et al., 2012) – whereas team diversity research is

typically focused on the team level of analysis – team processes as predictors of team outcomes (e.g., van Knippenberg & Schippers, 2007). The present study bridges these research traditions in its focus on team interaction processes as predictor of individual level outcomes. As such, it paves the way for further integration of these research streams. On the one hand, this would entail extending insights from diversity research to relational demography research to understand how team processes may influence individual outcomes – and differentially so for team members with different backgrounds (i.e., like in the present study). On the other hand, this would entail extending insights from relational demography research to understand how different processes and outcomes at the individual level (i.e., as a function of relational demography) may feed back into team level processes and outcomes. For instance, if individual performance is hampered by dynamics invited by the individual's low-status nationality background (e.g., like in the present study), how does this feed back into team process and performance when the team would be dependent on the quality of the individual's performance? Exploring such issues in future research would be valuable in building a more integrated understanding of diversity at work.

Limitations and Suggestions for Future Research

Choice of research methods is a trade-off in which the strengths of any approach inevitably are associated with limitations on other counts. The current experiment is no exception to that rule. An obvious strength of our experimental set-up is that we can reach conclusions about causality, and moreover conclusions with high internal validity not only because of our

experimental manipulations but also because of the controlled introduction of distributed information, behavioral coding of access to distributed information, and the chronology of assessment of our independent, mediating, and dependent variables. At the same time, we have to recognize that our laboratory set-up can give us no guarantee that the same processes can also be observed in organizations. Meta-analytic comparison of findings from field surveys and laboratory experiments in team diversity suggests that there are no differences between lab and field in diversity effects (van Dijk et al., 2012), but we should recognize that this is no evidence that the specific findings of the current study would also generalize to the field. Even though meta-analytic findings would thus give reason to expect replication, conclusions regarding generalizability will inevitably have to await future research in the field.

We should also realize that our conclusions regarding minority group status effects are based on the comparison of the performance of members from only two nationality minority groups in The Netherlands (i.e., German and Chinese). Our interpretation in terms of status differences has the advantage of parsimony as well as of being well aligned with earlier analysis of nationality status effects in teams (e.g., Chattopadhyay et al., 2004; Guillaume et al., 2014). Even so, we cannot rule out that other attributes associated with the difference between Germans and Chinese also contributed to the observed effects, nor that attributes that are more specific to the Dutch context contributed. In addition, we have a limited design, in that our hypotheses are about nationality minorities when they are in a numerically minority position, and nationality majorities when they are in a numerically majority position in a team. We do not have comparison

conditions of teams where nationality majorities are in a numerically minority position and where nationality minorities are in a numerically majority position. We do not have teams that consist of all nationality majorities or all nationality minorities either. Whereas this makes sense in terms of reflecting the realities of knowledge-intensive work, it does mean that our study does not speak to these other composition constellations, and that conclusions are limited to the primary experimental comparison between the high-status and the low-status minority groups. In that sense, our study is no exception in the relational demography and diversity fields where comparisons typically revolve around a limited number of nationality groups within one nationality setting in any given study (cf. Troester & van Knippenberg, 2012). Even so, we should recognize that whereas the conceptual implication of our analysis is that our findings should hold regardless of country (in the Western world at least) or specific minority groups involved, design limitations do not allow us to draw this broader conclusions. Future research replicating our findings and developing our analysis in other nationality contexts focusing on other minority groups would therefore be particularly valuable.

Managerial Implications

One of the implications for practice of our findings was already alluded to in the previous: Efforts to monitor the effects of diversity management should not take the performance of one minority group as an indication of that of other minority groups, especially not when there are differences in societal status between the groups. Another implication that might more directly feed into diversity management is that circumstances

like public observability that are associated with epistemic motivation may reduce intergroup biases that stand in the way of low-status nationality minority individuals' performance. To some extent at least, these are situations that can be created through managerial intervention, and the present findings may thus translate into actionable knowledge for practice – even when we would prefer replication in the field before we would advise such interventions.

More tentatively, we would also suggest that such interventions could form a more focused and more direct alternative or complement to diversity training. Diversity training is typically targeted at reducing stereotyping and intergroup biases by creating awareness of such processes and appreciation of differences (Pendry, Driscoll, & Field, 2007). Arguably, diversity training thus sets out to achieve a similar bias reducing influence as we observed for public observability. The effectiveness of diversity training tends to be disappointing, however (Pendry et al., 2007), one possible reason for this is that such effectiveness asks that insights be transferred from the training context to the job context. The present results, in contrast, point to influences within the job context itself – influences that do not rely on the problematic transfer from off-the-job context to on-the-job context. Clearly this is an implication for future research to substantiate, but one reading of the current findings vis-à-vis the diversity training literature is that on-the-job interventions like public observability may effectively complement or even substitute for diversity training.

Conclusion

Our study extends research in relational demography by

demonstrating that status differences between nationality minority groups affect the performance of individuals with a nationality minority background. To establish this, our findings link nationality status to access to distributed information, and in doing so our study provides a potentially important bridge between research in relational demography and research in team diversity that may set the stage for the development of a more integrated understanding of diversity at work. In identifying public observability as a moderating, intergroup bias-attenuating influence, our study also points to a set of dispositional and situational influences that may reduce such intergroup biases.

Chapter 3: Moderating Effect of Nationality Diversity on the Relationship between Nationality Dissimilarity and Individual Performance

Abstract

As nationality diversity at the work-place keeps increasing, the question under which circumstances nationality dissimilarity has an impact on individual performance becomes vital. Earlier studies revealed that nationality dissimilarity may have a negative effect on individual performance. We propose that nationality diversity at the work-place moderates the effects of nationality dissimilarity on individual performance. Furthermore, we determine individuals' access to information as a mediating factor in this relationship. Our survey has been filled out by 153 knowledge workers, and the results provided partial support for our propositions. We discuss the implications of our findings for the relational demography literature.

Keywords: relational demography, nationality dissimilarity, nationality diversity, individual performance, information access

Introduction

Nationality diversity at work places keeps growing (van Dijk, van Engen, & van Knippenberg, 2012; van Knippenberg & Schippers, 2007). As a result, an increasing number of employees is likely to work with individuals who are different from them in terms of nationality. Since nationality dissimilarity reflects the differences in ethnicity and culture, it is the most noticeable dissimilarity at the work place (Riordan, 2000). Therefore, it may create intergroup biases between different nationality groups (Tajfel & Turner, 1986). These biases may have a negative impact on the performance of people who are dissimilar to their colleagues in terms of their nationality (Chattopadhyay, Tluchowska, & George, 2004; Guillaume, Brodbeck, & Riketta, 2012). Earlier studies in demographic dissimilarity revealed that factors such as organizational culture (Chatman, Polzer, Barsade, & Neale, 1998), team interdependence (Guillaume et al., 2012) and person-workgroup fit (Elfenbein & O'Reilly, 2007) moderate the negative impact of nationality dissimilarity on individual performance. More specifically, when a company has a collectivistic culture (Chatman et al., 1998), when team interdependence is high (Guillaume et al., 2012), when the values of the dissimilar person fit the values of the workgroup (Elfenbein & O'Reilly, 2007), the negative effects of nationality dissimilarity on individual performance decrease.

We extend previous studies in demographic dissimilarity by identifying the role of diversity on the relationship between nationality dissimilarity and individual performance. We suggest that when the nationality diversity of a dissimilar person's workgroup increases, the negative effect of this person's nationality dissimilarity decreases. For

example, a Moroccan employee who works with two other Moroccan colleagues, and fifteen other colleagues who are Dutch, Chinese, Portuguese, Turkish, German, and Swiss can be less negatively affected by his/her nationality dissimilarity than a Moroccan employee who works with two other Moroccan colleagues and fifteen other Dutch colleagues. In both cases, the degree of nationality dissimilarity to the rest of the workgroup is the same for the Moroccan employee. But in the former condition, the workgroup is more diverse in terms of nationality. We advocate that this diversity should make it easier for the employees to identify with their workgroup, rather than with their separate nationalities, which should result in more distributed information (information for which employees are dependent on each other at the work place) sharing, and thus higher performance.

Research reveals that individuals may be negatively biased towards dissimilar individuals because of social categorization processes (Tajfel & Turner, 1986), and they share less distributed information with them (van Knippenberg, De Dreu, & Homan, 2004). Information access is very important for people who do knowledge work (e.g., Hirst, van Knippenberg, Zhou, Quintane, & Zhu, 2015; Rodan & Galunic, 2004). People need to consider various information, perspectives and ideas to perform well at a job which requires knowledge, and they often rely on their colleagues to receive them. Since information access is positively related to the performance of individuals who do knowledge work (e.g., Hirst et al., 2015; Rodan & Galunic, 2004), those who are more dissimilar to their colleagues in terms of nationality may end up having lower level of performance as a result of having less access to information. We argue that

working in a highly diverse setting in terms of nationality may alleviate the negative impact of nationality dissimilarity on information access and as a result on individual performance. In workgroups which have high diversity, compared to those which have low diversity, it is more difficult for employees to make a strong distinction between the in-group and the out-group in terms of nationality, and therefore, it is more difficult for them to recognize and identify with their nationality-in-group (Messick & Mackie, 1989). As a result, we expect that employees see their workgroup as a single entity, and they become more likely to identify with their workgroup as a superordinate social category in a high-diversity workgroup, compared to in a low-diversity workgroup. According to the common in-group identity model, when members of different groups perceive themselves as a single, superordinate group rather than as separate groups, intergroup biases between former out-group members decrease (Gaertner, Dovidio, Anastasio, Bachman, & Rust, 1993). When individuals are less biased towards each other, they are more likely to cooperate (Tajfel & Turner, 1986) and share distributed information with each other (van Knippenberg et al., 2004). Since having more access to information result in higher individual performance (e.g., Hirst et al., 2015; Rodan & Galunic, 2004), we suggest that diversity of a workgroup mitigate the negative effects of nationality dissimilarity on individual performance through access to information. As a result, we contribute to the relational demography literature by revealing that individuals who are dissimilar to their colleagues in terms of nationality receive different levels of distributed information from their colleagues in a high-diversity-workgroup than in a low-diversity-workgroup, and this affects their individual performance. By

doing this, we open the doors of the relational demography literature to diversity research.

Theory and Hypotheses

Nationality Dissimilarity

Nationality is a very noticeable feature of an employee at work (Riordan, 2000). For that reason, nationality dissimilarity may result in stereotyping (Fiske & Neuberg, 1990) and in-group favoritism that is favoring demographically similar in-group members over demographically dissimilar out-group members (Tajfel & Turner, 1986). Studies in relational demography focus on how these demographic dissimilarities affect the work related outcomes of individuals (Tsui, Egan, & O'Reilly, 1992). Research often revealed the negative effects of nationality dissimilarity on relationships (Joshi, Liao and Roh, 2011). Individuals who are dissimilar to their colleagues in terms of their nationality are more likely to feel negative emotions (Chattopadhyay, Finn, & Ashkanasy, 2010) and hold negative attitudes towards their colleagues (Riordan & Shore, 1997). As individuals' nationality dissimilarity increases, their self-esteem, organizational citizenship behaviour, attraction and trust to their colleagues decrease (Chattopadhyay, 1999). These negative emotions and attitudes are generally mutual. Supervisors and employees also tend to dislike those who are dissimilar in terms of nationality (Elfenbein & O'Reilly, 2007; Tsui & O'Reilly, 1989). In general, people hold negative impressions of dissimilar individuals in the work place (Flynn, Chatman, & Spataro, 2001; Park & Westphal, 2013). As a result, as individuals' dissimilarity in nationality increases, they become less inclined to interact (Chatman, Polzer, Barsade,

& Neale, 1998), cooperate (Chatman & Flynn, 2001) and integrate (Guillaume et al., 2012; O'Reilly, Caldwell, & Barnett, 1989; Pelled, Ledford, & Mohrman, 1999) with their colleagues. They experience more conflict (Pelled et al., 1999), they become less likely to have friends and to give advice to their colleagues (Klein, Lim, Saltz, & Mayer, 2004). They receive less support from their colleagues (Mueller, Finley, Iverson, & Price, 1999) as well as from their organization (Liao, Joshi, & Chuang, 2004), and they get less promotion opportunities (Riordan & Shore, 1997). Therefore, they get less satisfaction from their job (Mueller et al., 1999) and become more prone to show organizational deviance (Liao et al., 2004). Since they have lower organizational attachment (Mueller et al., 1999; Tsui et al., 1992; Wagner, Pfeffer, & O'Reilly, 1984), they are more inclined to have shorter tenure (Zhu, Shen, & Hillman, 2014) and to quit the job (O'Reilly et al., 1989; Sacco & Schmitt, 2005).

The negative effects of nationality dissimilarity manifest themselves not only on relationships and organizational attachment but also on more direct work-related outcomes. Increased nationality dissimilarity often means greater work challenges (Kirchmeyer, 1995). It has a very negative impact on individuals' access to information (van Knippenberg et al., 2004), and thus, on individuals' performance (Brodbeck et al., 2011; Chatman & Flynn, 2001; Elfenbein & O'Reilly, 2007; Flynn et al., 2001; Guillaume et al., 2012; Guillaume, van Knippenberg, & Brodbeck, 2014; Tsui & O'Reilly, 1989), creativity (Chatman et al., 1998; Choi, 2007), salary (Joshi, Liao, & Jackson, 2006) and promotion opportunities (Zhu et al., 2014). We suggest that a diverse work place in terms of nationality may diminish the negative effects of nationality dissimilarity.

Nationality Diversity

Organizations have become highly diverse over the years in terms of demographic attributes such as nationality because of globalization and higher levels of mobility (Jackson, Joshi, & Erhardt, 2003). Nationality diversity can be defined as an attribute of social group that indicates the extent to which differences in nationality exists between group members (van Knippenberg & Schippers, 2007). According to social identity theory (Tajfel & Turner, 1986), people categorize themselves and others in terms of common social attributes such as nationality, and they identify with those who are in the same category with themselves. Therefore, they are more likely to trust, favor, cooperate and share information with those who have the same nationality with them than with others while they are more likely to discriminate against those who have a different nationality (Tajfel & Turner, 1986; van Knippenberg et al., 2004). When a workgroup has low levels of diversity in terms of nationality, people can easily form sub-groups in terms of nationality to identify with, and hence, they can easily differentiate the in-group from the out-group in terms of nationality (Messick & Mackie, 1989). Because of their biases against the out-group members, they become less likely to share information with individuals who are dissimilar in terms of their nationality (George & Chattopadhyay, 2008; van Knippenberg et al., 2004). As a result, we expect that dissimilar individuals get less access to information in a workgroup which has low levels of diversity in terms of nationality. However, when a workgroup is highly diverse in terms of nationality, it becomes very difficult to define the in-group and the out-group in terms of nationality (Messick & Mackie, 1989). In this case, since all group members are dissimilar to each other,

they cannot form sub-groups in terms of nationality to identify with. Consequently, we anticipate that individuals perceive their workgroup as a sole unit on its own without subgroups, and they get more inclined to identify with their workgroup as a superordinate category when the workgroup is more diverse rather than less diverse. The proponents of common in-group identity model assert that when members of different social categories start seeing themselves under one superordinate category instead of separate categories, the prejudices between these individuals against each other decrease (Gaertner et al., 1993). When individuals hold less prejudices against each other, then they become more inclined to collaborate (Tajfel & Turner, 1986) and share distributed information with each other (van Knippenberg et al., 2004). This means that dissimilar individuals get more opportunities to have access to information in a more diverse workgroup than in less diverse workgroup. In addition, differences in nationality are usually related to differences in viewpoints (Alderfer & Smith, 1982), reasoning, thinking styles (Antonio, Chang, Hakuta, Kenny, Levin, & Milem, 2004; Choi, Nisbett, & Norenzayan, 1999; Dahlin, Weingart, & Hinds, 2005; Nisbett, Peng, Choi, & Norenzayan, 2001) and work-related knowledge and information (Cox, 1993; Ely & Thomas, 2001). This also provides dissimilar individuals with more diverse and useful pieces of distributed information that they need at work. As a consequence, we propose the following hypothesis:

Hypothesis 1. The relationship between nationality dissimilarity and information access is moderated by nationality diversity such that this relationship is negative when the workgroup has low levels of

nationality diversity, whereas this negative relationship disappears when the workgroup has high levels of nationality diversity.

Information Access and Individual Performance

Research shows that information access plays an essential role for individual performance as well as team performance (e.g., Stasser & Titus, 1985; Stasser, Stewart, & Wittenbaum, 1995; van Knippenberg et al., 2004; Homan, van Knippenberg, van Kleef, & De Dreu, 2007; Homan et al., 2008; Kooij-de Bode, van Knippenberg, & van Ginkel, 2008; Kearney & Gebert, 2009; Kearney, Gebert, & Voelpel, 2009; Hoever, van Knippenberg, van Ginkel, & Barkema, 2012; Nederveen-Pieterse, van Knippenberg, & van Dierendonck, 2013). When individuals at the work place discuss over unique information which each employee holds individually rather than focusing on information which all employees know, they become more likely to acquire extensive knowledge, and gain a broader perspective, and thus they become more likely to increase both their individual and team performance (Stasser & Titus, 1985). For instance, several experiments revealed that teams who had access to the distributed information were more likely to find the guilty suspect in a homicide mystery than teams who did not have access to it (e.g., Stasser & Stewart, 1992; Stasser et al., 1995). In another study, individuals who had access to distributed information were more successful at finding the best candidate for an employment position than those who did not have access to it (Stasser & Titus, 1985). In line with this finding, recent research demonstrated that employees who receive more information from their colleagues have higher individual performance than those who receive less

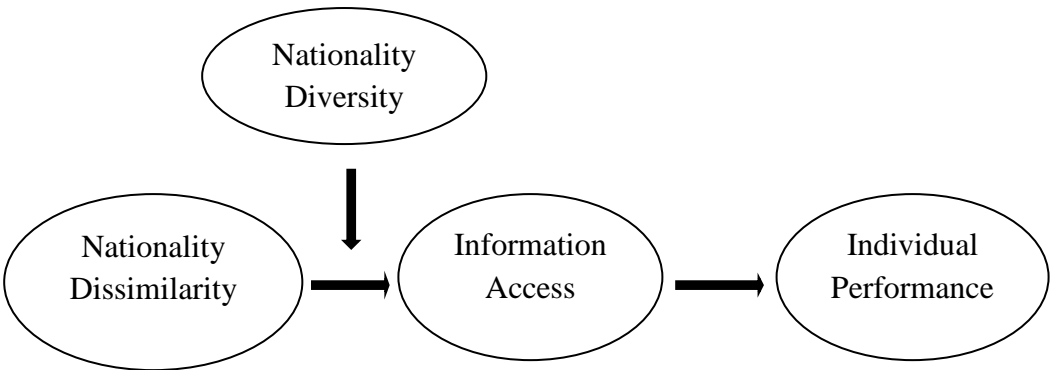
information from their colleagues (Baer, 2010; Richter, Hirst, van Knippenberg, & Baer, 2012). This shows that individuals benefit from their colleagues as a source of distributed information in order to increase their individual performance. Therefore, we advance the following hypotheses:

Hypothesis 2. The relationship between nationality dissimilarity and individual performance is moderated by nationality diversity such that this relationship is negative when the workgroup has low levels of nationality diversity, whereas this negative relationship disappears when the workgroup has high levels of nationality diversity.

Hypothesis 3. Information access mediates the interaction of nationality dissimilarity and nationality diversity on individual performance.

Our research model is demonstrated in Figure 4.

Figure 4. The model of our study.



Method

Participants and Design

We promoted our study on social media indicating that we were looking for voluntary participants who do knowledge work at their work place. Initially, one hundred eighty-five employees participated in the study. However, only one hundred fifty-three of them (83% of the initial participants) completely filled our online survey. They were from twenty-three different job-sectors (e.g., information technology, law, marketing, advertising and PR, engineering and manufacturing) working in ninety-seven different job positions (e.g., implementation and optimization manager, lawyer, budget analyst, software engineer). Sixty-three of them (41.18%) work in the Netherlands, twenty-three of them (15%) work in Germany, fifteen of them (9.80%) work in the USA, eleven of them (7.19%) work in Belgium, seven of them (4.58%) work in Denmark, and the rest work in seventeen different countries all over the world. Twenty-nine of them (19%) had Dutch nationality, twelve of them (7.8%) had American nationality, ten of them (6.6%) had Turkish nationality, nine of them (5.9%) had British nationality, eight of them (5.2%) had German nationality, six of them (3.9%) had Romanian nationality, and the rest of them had nationalities from fifty-three different countries all over the world. Among these, a hundred and six of them (69.3%) were expats, forty-seven of them (30.7%) were locals. Ninety-two (60.1%) were women, sixty-one (39.9%) were men. Majority of them had a bachelor (35.3%), a master (51%) or a Ph.D. (7.2%) degree, and the rest of them had lower level degrees such as a pre-university, a high school or an elementary school degree. The mean age

of the participants was 33.02, the mean field tenure was 91.38 months, and the mean tenure in the current company was 54.12 months.

Measures

Nationality dissimilarity. We asked participants to state their own nationality, the nationalities of their colleagues and how many colleagues they have from each specific nationality at their work-place. Afterwards, to be able to calculate the nationality dissimilarity scores of the participants, we used the formula of Tsui, Egan and O'Reilly (1992). Firstly, we summed the squared differences between a participant's nationality score ($0 = \text{a participant's nationality}$, $1 = \text{all the other nationalities at the work-place}$) and each of his/her colleague's nationality score. Secondly, we divided this sum by the total number of employees at the work-place and found a number. Finally, we took the square root of this number. The final result was the nationality dissimilarity score for each employee. The nationality dissimilarity scores we found were between 0 and .99. As the number increased, the level of dissimilarity increased.

Nationality diversity. By using the participants' answers to the questions about nationality that we mentioned above, we measured the nationality diversity at the work-place. We calculated the nationality diversity scores of the participants via Blau's Index (Blau, 1977). First, we took the square of the proportion of each nationality at the work-place. Then we summed these scores up. Afterwards, we subtracted the result from 1. This gave us the nationality diversity of the work-place, which ranged between 0 and .90. A higher score meant higher level of nationality diversity.

Individual performance. In line with some of the earlier research (e.g., Carmeli & Schaubroeck, 2007; Volmer, Spurk, & Niessen, 2012), we measured individual performance by a self-report. We asked participants how they would rate their overall performance at work. They chose one of the following options: 5 = Far Exceeds Performance Expectations, 4 = Exceeds Performance Expectations, 3 = Meets Performance Expectations, 2 = Needs improvement, 1 = Fails to Meet Performance Expectations. As a result, a higher score meant higher individual performance.

Information access. We measured participants’ access to their colleagues’ information via the information access scale of Bunderson and Sutcliffe (2002). This scale consisted of three items. An example item is “To what extent do you think you receive information which you use to make key decisions at work from your colleagues?” This was a seven-point scale ranging from 1=Not at all to 7=Very much. The reliability of this scale was very high ($\alpha = .86$).

Demographic questions. Participants gave answers to the demographic questions about their nationality, gender, education level, age, job sectors, job positions, company tenure and field tenure.

Results

Table 1 demonstrates descriptive statistics for the variables.

Table 1. Means and Standard Deviations of the Variables

Variables	M	SD
Nationality dissimilarity	.67	.36

Nationality diversity	.44	.29
Information access	5.09	1.25
Individual performance	3.35	.78

Hypotheses Testing

We mean-centered all continuous variables before testing all the hypotheses.

With Hypothesis 1, we claimed that nationality diversity moderates the effect of nationality dissimilarity on information access such that this effect is negative under low nationality diversity, however, this negative effect disappears under high nationality diversity. We tested this hypothesis with Hayes' (2012) moderation analysis, conceptual model 1 at SPSS Process. With this model, we could test the effect of nationality dissimilarity moderated by nationality diversity on information access. The result of the analysis showed that the interaction effect of nationality dissimilarity and nationality diversity on information access is not significant ($b = -.05$, $t(149) = -.03$, $p > .05$, 95% CI [-3.10, 2.99], SE = 1.54). However, the simple slope analysis revealed that when nationality diversity is one standard deviation low, the effect of nationality dissimilarity on information access is negative ($b = -1.17$, $t(149) = -2.79$, $p < .01$, 95% CI [-2.00, -.34], SE = .42) whereas when nationality diversity is one standard deviation high, this negative effect disappears ($b = -1.20$, $t(149) = -1.16$, $p > .05$, 95% CI [-3.25, .84], SE = 1.03). For a more detailed analysis, we used the Johnson-Neyman technique (Hayes, 2013). This gives

us for which value of nationality diversity, nationality dissimilarity starts to have an effect on information access. When the score of nationality diversity is equal or lower than $-.08$, nationality dissimilarity has a negative influence on information access ($b = -1.18$, $t(149) = -2.11$, $p = .04$, 95% CI $[-2.29, -.07]$, $SE = .56$). However, when the score of nationality diversity is equal or higher than $-.04$, the negative influence fades away ($b = -1.19$, $t(149) = -1.98$, $p = .05$, 95% CI $[-2.37, 0]$, $SE = .60$). This means that high nationality diversity at the work place alleviates the negative impact of nationality dissimilarity on information access. This result partially supports Hypothesis 1.

With Hypothesis 2, we argued that the effect of nationality dissimilarity on individual performance is moderated by nationality diversity such that this effect is negative when nationality diversity is low, and this effect fades away when nationality diversity is high. We again used Hayes' (2012) moderation analysis, conceptual model 1 at SPSS Process to test this hypothesis. The results revealed that the interaction effect of nationality dissimilarity and nationality diversity on individual performance was not significant ($b = .44$, $t(152) = .46$, $p > .05$, 95% CI $[-1.44, 2.32]$, $SE = .95$). Nationality dissimilarity did not have a significant effect on individual performance when nationality diversity is one standard deviation low ($b = .23$, $t(152) = .87$, $p > .05$, 95% CI $[-.29, .75]$, $SE = .26$) or when it is one standard deviation high ($b = .48$, $t(152) = .75$, $p > .05$, 95% CI $[-.78, 1.74]$, $SE = .64$). The more detailed Johnson-Neyman technique revealed that there are not other significance transition points either. Therefore, we could not find any evidence to support Hypothesis 2.

Afterwards, in order to test the Hypothesis 3, we used Hayes' (2012)

moderated mediation analysis, conceptual model 7 at SPSS Process. This model allowed us to test the impact of nationality dissimilarity moderated by nationality diversity on individual performance through information access. We found that even though the index of moderated mediation is not significant, (*index* = -.01, 95% CI [-.36, .40], SE = .18), the indirect effect of nationality dissimilarity on individual performance through information access is significantly different at the lower values and at the higher values of nationality diversity. More specifically, when the value of nationality diversity is equal to or lower than .04 which means the lowest 50 per cent of the values of nationality diversity, then nationality dissimilarity has a negative indirect impact on individual performance through information access (*b* = -.16, 95% CI [-.41, -.02], SE = .10), when the value of nationality diversity is equal to or higher than .27 which means the highest 50 per cent of the values of nationality diversity, then the negative indirect impact of nationality dissimilarity on individual performance through information access disappears (*b* = -.17, 95% CI [-.48, .01], SE = .12). This provided a partial evidence for Hypothesis 3.

Discussion

Consequently, we found that nationality dissimilarity has an impact on individual performance at the work-place. Even though the index of moderated mediation is not significant, we found evidence indicating that the impact of nationality dissimilarity on individual performance through information access is negative when nationality diversity at the work-place is low, and this negative impact fades away when nationality diversity at the work-place is high. We revealed that the path showing the negative

impact of nationality dissimilarity on individual performance through information access is significant when nationality diversity is low, however, this path is not significant anymore when nationality diversity is high. With this study, we determined the role of nationality diversity on the relationship between nationality dissimilarity and individual performance, and thus we extended earlier research in demographic dissimilarity that determined the importance of variables like organizational culture (Chatman et al., 1998), team interdependence (Guillaume et al., 2012) and person-workgroup fit (Elfenbein & O'Reilly, 2007) in the relationship between nationality dissimilarity and individual performance.

Theoretical Implications

We introduced the effects of nationality diversity to the demographic dissimilarity research by revealing how essential to have a highly nationally diverse work-place for employees who have high nationality dissimilarity. Previous studies showed that environmental factors at the work-place such as collectivistic culture (Chatman et al., 1998), high interdependence among colleagues (Guillaume et al., 2012) and high person-workgroup fit (Elfenbein & O'Reilly, 2007) alleviate the negative effect of nationality dissimilarity on individual performance. With our study, we added another environmental factor which extinguishes this negative effect, namely nationality diversity. The result of the study is theoretically crucial because it gives us insight about how different organizational settings in terms of nationality diversity facilitate information access of nationally dissimilar individuals, and thus improve their individual performance. It also gives us insight about why nationally

dissimilar individuals have information access and performance problems in some organizations while they do not have these problems in other organizations.

In addition, our finding about the mitigating impact of nationality diversity on the negative effect of nationality dissimilarity is crucial because it makes us realize how social categorization processes operate differently in various settings. Individuals put themselves and others into certain categories in terms of various characteristics, and see others either as in-group members or out-group members (Tajfel & Turner, 1986). One of the most salient of these categories is nationality. As a result, they tend to identify, cooperate and share information with those who belong to the same category with themselves (i.e., the ones who have the same nationality with themselves), rather than those who belong to different categories (i.e., those who have different nationalities) (Tajfel & Turner, 1986; van Knippenberg et al., 2004). When nationality diversity is low at the work-place, individuals naturally form nationality sub-groups and the distinction between the in-group and the out-groups becomes too salient (Messick & Mackie, 1989). This leads them to be prejudiced against the out-group members and to share less information with them (George & Chattopadhyay, 2008; van Knippenberg et al., 2004). Therefore, we found that nationally dissimilar individuals have less access to information at the work-places which have low nationality diversity. On the contrary, when a work-place has a high level of nationality diversity, individuals cannot categorize an in-group and an out-group in terms of nationality (Messick & Mackie, 1989). Since they cannot form nationality sub-groups, they perceive themselves as one superordinate group, and thus their prejudices

diminish (Gaertner et al., 1993). As a result, we demonstrated that nationally dissimilar individuals have more access to information when their work-place is highly nationally diverse. That is, we revealed that nationality diversity mitigates the negative influence of nationality dissimilarity on information access.

Furthermore, the result of the current study showing that nationality dissimilarity has a negative effect on individual performance through information access is important because knowledge work started to become much more common at the work-places nowadays. Information access is an indispensable prerequisite of performance (e.g., Stasser & Titus, 1985; van Knippenberg et al., 2004; Kooij-de Bode et al., 2008). For that reason, it is crucial to discover that people who are dissimilar to their colleagues in terms of nationality may have more obstacles on the way of information access, and therefore, may have lower level of individual performance when they work at a low nationality diversity setting compared to when they work at a high nationality diversity setting. That is, these obstacles and performance deficiencies disappear at a high nationality diversity setting which means that high nationality diversity alleviates the negative impact of nationality dissimilarity on information access and individual performance.

Limitations and Suggestions for Future Research

First, because this is a cross-sectional study, the results do not imply causality. Even though a recent meta-analysis about diversity research revealed that the results of field studies are not different from the results of laboratory studies (van Dijk, van Engen, & van Knippenberg, 2012), it

would be useful for future research to test the role of nationality diversity on the relationship between nationality dissimilarity and individual performance via laboratory studies.

Second, since we measured nationality dissimilarity and nationality diversity with objective techniques, we do not have a problem of common method bias for these variables. However, we measured information access and individual performance with self-ratings of the participants which means the measurements of these variables were subjective, and they came from the same source. In addition, we did not find a significant moderated mediation index. Nevertheless, the path showing the negative effect of nationality dissimilarity on individual performance through information access was significant under low nationality diversity setting, and this path lost its significance under high nationality diversity setting. In addition, there is already lots of research demonstrating the positive effect of information access on performance in literature (e.g., Stasser & Titus, 1985; van Knippenberg et al., 2004; Homan et al., 2008; Hoeve et al., 2012; Nederveen-Pieterse et al., 2013). Nonetheless, we accept that our methodology is weak because of subjective ratings, and we suggest future researchers to test these effects with more objective measurements.

Managerial Implications

Since we discovered that high nationality diversity at the work place mitigates the negative effects of nationality dissimilarity on individual performance through information access, we recommend managers to create more nationally diverse work environments. We recognize that changing the hiring policies might take time and energy but it would pay

off by increasing the information access and individual performance of nationally dissimilar employees.

Chapter 4: Moderating Effect of Specific Status on the Relationship between Gender Dissimilarity and Individual Creativity

Abstract

Previous research showed that gender dissimilarity has mainly a negative impact on individuals' work related outcomes. We hypothesized that individuals' specific status at the work place moderates the effects of gender dissimilarity on individual creativity such that high specific status serves as a buffer against the negative effects of gender dissimilarity on individual creativity. In addition, we suggested that individuals' access to information mediates this relationship. Our survey completed by 95 knowledge workers provided full support for our hypothesis over the moderating role of specific status and it provided partial support for our hypothesis over the mediating role of information access. We discuss results in terms of their implications for the performance perspective in relational demography.

Keywords: relational demography, gender dissimilarity, individual creativity, specific status, information access

Introduction

Work places are becoming increasingly diverse in terms of gender since the number of women who enter the job market increases steadily (Jackson & Joshi, 2010; Oerlemans, Peeters, & Schaufeli, 2008). Therefore, examining the effect of gender dissimilarity on work related outcomes gains importance. Gender dissimilarity is likely to affect work related outcomes because it is one of the most visible dissimilarities at the work place (Riordan, 2000). Past research provided support for mainly the negative effects of gender dissimilarity on work related outcomes such as relations with colleagues (Joshi, Liao, & Roh, 2011), relations with supervisors (Tsui & O'Reilly, 1989), individual performance (e.g., Avery, Wang, Volpone, & Zhou, 2013; Elfenbein & O'Reilly, 2007), and individual creativity (Choi, 2007).

These negative effects of gender and other types of dissimilarity for an individual depend on demographic characteristic, such that they tend to unfold differently for people with a characteristic associated with higher status (men, white) than with a lower status (women, non-white; e.g., Brodbeck, Guillaume, & Lee, 2011; Tsui, Egan, & O'Reilly, 1992). This linkage with what is called a diffuse status characteristic, social category attribute that invite attributions about competence and ability based on stereotypic beliefs (Berger, Rosenholtz, & Zelditch, 1980), points to the interesting and so far unexplored possibility that specific status characteristics, task-relevant characteristics such as training, expertise, and experience, that invite attributions about competence and ability (Berger et al., 1980) may have a similar moderating effect. This would be an important piece of the puzzle, because based on status characteristics theory

(Berger et al., 1980; Hembroff & Myers, 1984; Ridgeway & Nakagawa, 2014) we may expect that specific status characteristics are more important than diffuse status characteristics in determining people's responses. In short, we propose that specific status serves as a buffer against the negative effects of gender dissimilarity on work related outcomes.

Research shows that social categorization processes may lead people to be biased towards dissimilar individuals (Tajfel & Turner, 1986), and lead them to share less information with these individuals (van Knippenberg, De Dreu, & Homan, 2004). Information access is crucial for individuals engaging in knowledge work, especially for those engaging in types of works which require high levels of individual creativity (Baer, 2012; Richter, Hirst, van Knippenberg, & Baer, 2012). More specifically, individuals should take a diverse range of information, ideas, and perspectives into account in order to be creative, and they are dependent on their network as a source of information. Because information access is positively associated with individual creativity, having more limited access to information may be associated with lower individual creativity of more gender-dissimilar people. We suggest that high specific status may attenuate the negative effects of gender dissimilarity on both information access and individual creativity because individuals are more likely to identify, collaborate, and share information with their high-status than low-status colleagues (Berger, Wagner, & Zelditch, 1985; Chattopadhyay, Tluchowska, & George, 2004; George & Chattopadhyay, 2008), and information access is likely to increase individual creativity (Baer, 2012; Richter et al., 2012). Thus, we contribute to research in relational demography – dissimilarity in demographic attributes – by showing that

people who are equally gender dissimilar to their colleagues may still be treated differently based on their specific status, and this may impact the level of their individual creativity. For example, an expert female machine engineer who works among nine male machine engineers may be treated differently by her colleagues than a non-expert female machine engineer who works among nine male machine engineers. An expert female engineer may receive more information from her colleagues, and thus she may increase her individual creativity more than a non-expert female engineer even though their level of gender dissimilarity to their colleagues is the same.

To sum up, previous studies provided evidence for the negative effects of gender dissimilarity on individual performance and creativity (e.g., Avery et al., 2013; Choi, 2007). We extend previous research by showing that high specific status attenuates the negative effects of gender dissimilarity on access to information and individual creativity. By determining specific status as a moderator of the relationship between gender dissimilarity and work related outcomes, we open up the study of relational demography to specific status characteristics.

Theory and Hypotheses

Gender Dissimilarity

Gender is a highly visible demographic characteristic in the work place (Riordan, 2000). Therefore, it might easily lead to stereotyping (Fiske & Neuberg, 1990) and intergroup bias, favoring the demographically similar individuals who belong to the in-group over the demographically dissimilar individuals who belong to the out-group (Tajfel & Turner, 1986).

Research in relational demography examines the effect of this bias which is the result of demographic dissimilarity on the outcomes for individuals at the work place (Tsui et al., 1992). A number of studies documented the negative effects of gender dissimilarity on individuals' relationships with others (Joshi et al., 2011). For instance, people who are dissimilar to others in terms of their gender are perceived more negatively (Flynn, Chatman, & Spataro, 2001; Park & Westphal, 2013) and liked less by their colleagues and supervisors (Elfenbein & O'Reilly, 2007; Tsui & O'Reilly, 1989). This negativity is often reciprocated. As their gender dissimilarity increases, individuals become less inclined to like and trust their colleagues (Chattopadhyay, 2003), they experience stronger negative emotions (Chattopadhyay, Finn, & Ashkanasy, 2010; Pelled, 1996), they become more likely to be deviant (Liao, Joshi, & Chuang, 2004), and less likely to be cooperative (Chatman & Flynn, 2001). As a result, they become less integrated at the work place (Guillaume, Brodbeck, & Riketta, 2012; Pelled, Ledford, & Mohrman, 1999), less likely to receive advice (Turban, Dougherty, & Lee, 2002), to give advice (Klein, Lim, Saltz, & Mayer, 2004), to interact with their colleagues (Chatman, Polzer, Barsade, & Neale, 1998), and to attach to their organization (Elfenbein & O'Reilly, 2007; Sacco & Schmitt, 2005; Tsui et al., 1992).

Moreover, the negative effects of gender dissimilarity are often evident on more direct work outcomes for individuals. It is well established that as the gender dissimilarity of people increases, they encounter greater work challenges (Kirchmeyer, 1995), their individual creativity (Choi 2007), performance (Avery et al., 2013; Elfenbein & O'Reilly, 2007; Guillaume et al., 2012; Tsui & O'Reilly, 1989) and salary decrease (Joshi,

Liao, & Jackson, 2006) as well as their likelihood of promotion (Zhu, Shen, & Hillman, 2014). Research also showed that these negative effects of gender dissimilarity differed for men and women (i.e., indicative of potential status effects; e.g., Joshi et al., 2006; Tsui et al., 1992). Such evidence of the role of diffuse status point to the promise of the investigation of a moderating role for specific status in the effects of gender dissimilarity.

Specific Status

Research in relational demography examined status, the extent to which a person is respected, admired, and highly regarded by others because of his/her characteristics (Anderson, Srivastava, Beer, Spataro, & Chatman, 2006; Fragale, 2006), as a moderating factor between demographic dissimilarity and work related outcomes (Chattopadhyay et al., 2004; George & Chattopadhyay, 2008; Holliday-Wayne, 1998; Joshi et al., 2006; Kirchmeyer, 1995; Tsui et al., 1992). However, these studies took only diffuse status (e.g., gender and ethnic status) into consideration while they overlooked the effect of specific status. By examining the interplay between specific status and gender dissimilarity, we build a bridge between the study of relational demography and specific status characteristics.

According to status characteristics theory, individuals assume that there is a positive relationship between someone's status and skills (Berger et al., 1980). Because individuals associate high status with high competence, they expect high performance from a person who has high status. When they expect high performance from a particular person, they give that person more opportunity to express his/her opinions and to make

decisions. In addition, they prefer to collaborate with a person who comes across as competent, skillful, and a high achiever over a person who appears incompetent, unskillful, and an underachiever so that they can reach their goals at the work place (Berger et al., 1985). Therefore, they become more likely to collaborate with a person who has high status than a person who has low status. Studies show that people are inclined to use especially specific status cues in order to form expectations about someone, whenever these cues are available (e.g., Berger, Cohen, & Zelditch, 1972; Berger et al., 1980; Hembroff & Myers, 1984; Wagner & Berger, 1997; Webster & Driskell, 1978). They make a strong association between specific status and competence (Berger et al., 1980; Freese, 1974; Freese & Cohen, 1973; Hembroff & Myers, 1984; Webster & Driskell, 1978; Zelditch, Lauderdale, & Stublarec, 1980). Because individuals prefer to collaborate with a person whom they consider competent rather than incompetent (Berger et al., 1985), they may become more likely to collaborate with a dissimilar person who has a high specific status rather than with a dissimilar person who has a low specific status. This means that specific status of a dissimilar person may serve as a buffer against people's negative bias towards that person.

In general, people are inclined to be negatively biased against dissimilar others such as people of opposite gender because of social categorization processes (Tajfel & Turner, 1986). As the gender dissimilarity of a person increases, his/her relationship with others deteriorates (Joshi et al., 2011), and people get less likely to cooperate with the dissimilar person (Chatman & Flynn, 2001). We propose that when people realize that a dissimilar person has a low specific status, they may

use this information to confirm their negative bias against this person. As a result, this may reduce the number of people who are willing to share information with the person as well as it may reduce the amount of information people share with him/her. However, we suggest that when they notice that a dissimilar person has a high specific status, they may become able to look beyond the gender category of that person. This may decrease their negative bias towards him/her and remove the barriers in the way of information exchange. More specifically, individuals may expect high performance from a person who has a high specific status even though this person is dissimilar to others at the work place in terms of his/her gender. Therefore, they may be more inclined to discuss over work related subjects with a dissimilar person who has a high specific status than with a dissimilar person who has a low specific status. Thus, a dissimilar person who has a high specific status may have more opportunity to exchange his/her ideas, knowledge and perspective, and may become more likely to have access to information than a dissimilar person who has a low specific status. Consequently, we advance the following hypothesis:

Hypothesis 1. The relationship between gender dissimilarity and information access is moderated by specific status such that this relationship is negative for people who have a low specific status, whereas high specific status attenuates the negative relationship of gender dissimilarity with information access.

Access to Information and Individual Creativity

Creativity is the production of new, original and useful ideas

regarding products, procedures and processes at the work place (Amabile, 1988; Hirst, van Knippenberg, & Zhou, 2009; Oldham & Cummings, 1996). Access to information is vital for especially works which require high levels of creativity (e.g., Richter et al., 2012; Rodan & Galunic, 2004). In order to be creative, an individual needs to consider a various range of knowledge, ideas, and perspectives, and most of the time a single individual does not hold diverse knowledge and perspectives in various subjects. Therefore, he/she is dependent on other people as informational resources. Consistently, studies revealed that having access to informational resources which provide new knowledge, ideas, and viewpoints improves individual creativity (Baer, 2010; Hirst, van Knippenberg, Zhou, Quintane, & Zhu, 2015; Perry-Smith & Shalley, 2003; Richter et al., 2012; Rodan & Galunic, 2004; Tortoriello & Krackhardt, 2010) as well as team creativity (Hoever, van Knippenberg, van Ginkel, & Barkema, 2012; cf. Homan, van Knippenberg, van Kleef, & De Dreu, 2007; Kearney & Gebert, 2009; Kearney, Gebert, & Voelpel, 2009).

Accordingly, in view of the importance of information access for individual creativity, we propose that the pattern we predicted for the interaction effect of gender dissimilarity and specific status on information access will be evident for individual creativity as well. Furthermore, we propose that the interaction effect of gender dissimilarity and specific status on individual creativity will be mediated by information access.

Hypothesis 2. The relationship between gender dissimilarity and individual creativity is moderated by specific status such that this relationship is negative for people who have a low specific status,

whereas high specific status attenuates the negative relationship of gender dissimilarity with individual creativity.

Hypothesis 3. Information access mediates the interaction of gender dissimilarity and specific status on individual creativity.

Method

Participants and Design

We advertised the study through various social media channels and asked for voluntary participation of people who work in Turkey in positions which require knowledge work rather than physical work. Participants filled out the survey online by using the advertised link. One hundred forty-seven employees who work in nineteen different job-sectors (e.g., engineering and manufacturing, accountancy, banking and finance, business, consulting and management) in sixty-nine different positions (e.g., machine engineer, architect, graphic designer) participated in the study, and ninety-five of them which are 65 percent of the participants filled the survey completely. Among the respondents who completed the survey, seventy-eight (82.1 percent) were Turkish, seven (7.4 percent) were Kurdish, and the rest was Laz, Azerbaijani, Circassian, Albanian, Zaza, Georgian, Arab, or Macedonian. Twenty-seven (28.4 percent) were women, sixty-eight (71.6 percent) were men. Majority of them were bachelor (63.2 percent) and master graduates (17.9 percent), and the rest was high school, associate, and doctorate graduates. Their mean age was 31.97, their mean field tenure was 72.24 months, and their mean tenure in the current

company was 53.38 months.

Measures

Gender dissimilarity. In order to measure gender dissimilarity of the participants to their colleagues, we asked participants to report their own gender and how many male and female colleagues they have in their work unit. Then, we calculated gender dissimilarity scores by using Tsui, Egan and O'Reilly's (1992) formula: first, we summed the squared differences between a focal individual's gender score (0=female, 1=male) and each of his/her colleague's gender score. Then, we divided the result by the total number of employees in the same work unit. After that, we took the square root of the result, and this gave us the gender dissimilarity score. Gender dissimilarity scores ranged from 0 to .94, and a higher score meant more dissimilarity.

Individual creativity. Consistent with previous studies (e.g., Atwater & Carmeli, 2009; Carmeli & Schaubroeck, 2007; González-Gómez & Richter, 2015; Volmer, Spurk, & Niessen, 2012), we relied on participants' self-ratings to measure their individual creativity. Participants filled out the Tierney, Farmer, and Graen's (1999) creativity scale which consisted of nine items such as "I demonstrated originality in my work" and "I tried out new ideas and approaches to problems". For each item, participants indicated on a seven-point scale (1 = never, 7 = always) how frequently they acted in a certain manner. The reliability of the scale was very high ($\alpha = .95$).

Specific status. We measured the specific status by combining two scales: Generalized Expertise Measure (Germain & Tejada, 2012) which

consisted of eighteen items such as “I can talk my way through any work-related situation” and Perceived Workplace Status (Djurdjevic, Stoverink, Klotz, & da Motta Veiga, 2014) which consisted of seven items such as “I have a great deal of prestige in my organization”. Participants pointed out to what extent they agreed with the statements about their expertise level and work place status on a seven-point scale (1 = strongly disagree, 7 = strongly agree). The reliability of the combined scales was very high ($\alpha = .95$).

Information access. Because we believed that the number of people who provide information to an individual is important as much as that individual’s ability to access his/her colleagues’ knowledge, we assessed information access through two separate indicators: *access to colleagues’ knowledge* and *the number of colleagues who provide information*.

Access to colleagues’ knowledge. We measured access to colleagues’ knowledge with the following question which was taken from Borgatti and Cross’ (2003) study: “One issue in getting information or advice from others is your ability to gain access to their thinking. The extent to which you can access another person’s thinking and knowledge is a continuum. At one end of the spectrum are people who do not make themselves available to you quickly enough to help solve your problem. At the other end of the spectrum are those who are willing to engage actively in problem solving with you in a timely fashion. With this continuum in mind, how would you rate your overall ability to access your colleagues’ thinking and knowledge?” Participants indicated to what extent they are able to access their colleagues’ thinking and knowledge on a seven-point scale (1 = extremely weak, 7 = extremely strong).

The number of colleagues who provide information. We measured the number of colleagues who provide information with the question that we took from Baer's (2010) research: "People may discuss work related matters with others inside their work unit, such as colleagues and supervisors. These discussions may result in people getting intended or unintended new information or insights about work related problems or issues they face. Thinking back over the past year, please write down how many people in your work unit provided you with new information or insights about work related problems or issues?" Respondents reported how many people provided them with new information.

Demographic questions. Respondents answered the questions about their gender, age, ethnicity, education level, job sectors, job positions, field tenure, and tenure in the current company.

Results

Table 2 displays descriptive statistics for our study variables.

Table 2. Means and Standard Deviations of the Variables

Variables	M	SD
Gender dissimilarity	.53	.23
Specific status	5.62	1.18
Access to colleagues' knowledge	5.53	1.34
The number of colleagues who provide information	5.58	11.08
Individual creativity	4.72	1.31

Tests of Hypotheses

We tested the hypotheses with SPSS Process by using Hayes' (2012) moderated mediation analysis, conceptual model 7. With this model, we could test the effect of gender dissimilarity moderated by specific status on individual creativity through access to colleagues' knowledge and the number of colleagues who provide information while we controlled the effect of gender. We centered all continuous variables around their mean before conducting the analyses.

Hypothesis 1 states that the relationship between gender dissimilarity and information access is moderated by specific status such

that this relationship is negative when people have a low specific status whereas this negative relationship disappears when people have a high specific status. As we discussed earlier, we have two variables measuring information access: the number of colleagues who provide information and access to colleagues' knowledge. Our analysis revealed that the interaction effect of gender dissimilarity and specific status on the number of colleagues who provide information is not significant, ($b = 1.48$, $t(95) = .36$, $p = .72$, 95% CI [-6.62, 9.59], $SE = 4.08$), whereas the interaction effect of gender dissimilarity and specific status on access to colleagues' knowledge is significant, ($b = 1.17$, $t(95) = 2.70$, $p < .01$, 95% CI [.31, 2.03], $SE = .43$; see Figure 2). This provided partial support for Hypothesis 1.

To further explore this interaction, we used the Johnson-Neyman technique (Hayes, 2013) to determine regions of significance. Rather than testing simple slopes at in principle arbitrary values of the moderator (i.e., plus and minus one standard deviation; Aiken & West, 1991), the regions of significance approach determines the range of values of the moderator variable for which the predictor variable has a positive relationship with the criterion (if any), a negative relationship with the criterion (if any), and no relationship with the criterion, to get a more comprehensive picture of the interaction than two arbitrary slope tests allow. This approach showed that there is a significant negative relationship between gender dissimilarity and access to colleagues' knowledge for people with lower specific status, whereas there is no relationship between gender dissimilarity and access to colleagues' knowledge for people with higher specific status. Specifically, when the score of specific status is equal to or lower than the value of -1.04,

gender dissimilarity has a negative effect on access to colleagues' knowledge ($b = -1.42$, $t(96) = -2.17$, $p = .03$, 95% CI $[-2.72, -.12]$, SE = .65). However, when the score of specific status is equal to or higher than the value of $-.87$, this negative effect disappears ($b = -1.22$, $t(96) = -1.99$, $p = .05$, 95% CI $[-2.44, 0]$, SE = .61). That is, high specific status provides a buffer against the negative effects of gender dissimilarity on access to colleagues' knowledge.

Hypothesis 2 indicates that the relationship between gender dissimilarity and individual creativity is moderated by specific status such that this relationship is negative for people who have a low specific status but this negative relationship disappears for people who have a high specific status. Our analysis showed that specific status moderated the effect of gender dissimilarity on individual creativity, ($b = 1.17$, $t(101) = 3.23$, $p < .01$, 95% CI $[.45, 1.89]$, SE = .36; see Figure 3). Probing the interaction with Johnson-Neyman technique showed that there is a significant negative relationship between gender dissimilarity and individual creativity for people who have a low specific status; there is no significant relationship between gender dissimilarity and individual creativity for people who have an average specific status; and there is a significant positive relationship between gender dissimilarity and individual creativity for people who have a high specific status. To be precise, when the score of specific status is equal to or lower than the value of -2.96 , gender dissimilarity has a negative effect on individual creativity ($b = -2.21$, $t(96) = -2.07$, $p = .04$, 95% CI $[-4.34, -.09]$, SE = 1.07). However, when the score of specific status is equal to or higher than the value of $-.08$, gender dissimilarity has a positive effect on individual creativity ($b = 1.16$, $t(96) =$

2.46, $p = .02$, 95% CI [.22, 2.09], SE = .47). When the score of specific status falls between the ranges of these two aforementioned values, gender dissimilarity does not have a significant effect on individual creativity.

Finally, Hypothesis 3 states that information access mediates the interaction of gender dissimilarity and specific status on individual creativity. We determined that the index of moderated mediation is not significant when the mediator is the number of colleagues who provide information ($index = .03$, 95% CI [-.04, .19], SE = .07), which is consistent with the nonsignificant interaction for number of colleagues. That is, the indirect effect of gender dissimilarity on individual creativity through the number of colleagues who provide information is significant neither for people who have a low specific status, ($b = -.01$, 95% CI [-.14, .15], SE = .07), nor for people who have a high specific status, ($b = .05$, 95% CI [-.12, .44], SE = .16). However, we found that the index of moderated mediation is significant when the mediator is access to colleagues' knowledge ($index = .44$, 95% CI [.13, .86], SE = .19). More specifically, we established that the indirect effect of gender dissimilarity on individual creativity through access to colleagues' knowledge is not significant for people who have a high specific status ($b = .45$, 95% CI [-.03, 1.21], SE = .32), whereas it is significant for people who have a low specific status, ($b = -.60$, 95% CI [-1.41, -.14], SE = .30). This means that access to colleagues' knowledge mediates the negative relationship between gender dissimilarity and individual creativity for people who have a low specific status.

Discussion

Our results revealed that gender dissimilarity has an effect on individual creativity in the workplace. We identified access to colleagues' knowledge as a mediator, and specific status as a moderator in this relationship. By introducing specific status as a moderator to the relational demography literature, our study extends previous research in relational demography that found that diffuse status such as gender or ethnic status moderates the effects of dissimilarity.

Theoretical Implications

We opened the doors of relational demography research to the effects of specific status by demonstrating the importance of having a high specific status for employees who have high gender dissimilarity in the workplace. Earlier research already revealed that dissimilarity to colleagues may influence individuals who have high diffuse status (e.g., men, white) and those who have low diffuse status (e.g., women, non-white) differently (Brodbeck et al., 2011; Tsui et al., 1992). With the current study, we changed the focus of relational demography research from diffuse status to specific status in order to show that the impact of specific status on the effects of gender dissimilarity may be different from the impact of diffuse status. For example, while high diffuse status increases the negative effects of dissimilarity on work-related outcomes (Tsui et al., 1992), we argue that high specific status alleviates the negative effects of dissimilarity on work-related outcomes. Our findings are theoretically important because they call attention to the fact that there is more to gender dissimilarity than having either a low diffuse status in a team which consists of people with a high

diffuse status (i.e., being a woman in a team dominated by men) or having a high diffuse status in a team which consists of people with a low diffuse status (i.e., being a man in a team dominated by women). To sum up, our study shows that having a high specific status influences dissimilar people in a different way than having a high diffuse status. In addition, having a low specific status affects dissimilar people in a different way than having a low diffuse status.

Our results supporting the moderating role of specific status as an alleviating influence on the negative impact of gender dissimilarity are important because they help us understand the bigger picture and the process behind the negative impact of gender dissimilarity. More specifically, social categorization processes lead people to be negatively biased towards dissimilar individuals like individuals of opposite gender (Tajfel & Turner, 1986). As people's gender dissimilarity increases, their relationship with others gets worse (Joshi et al., 2011), and people get less inclined to cooperate with dissimilar people (Chatman & Flynn, 2001). Therefore, we suggested that when people notice that a dissimilar person has a low specific status, they may try to justify their bias against him/her. We proposed that this would reduce the number of people who share information with the dissimilar person as well as it would reduce the amount of information people share with him/her. Our data showed that the number of people who share information with the dissimilar individuals who have a low specific status did not decrease even though the dissimilar individuals' access to their colleagues' knowledge decreased significantly. This shows that people keep communicating with dissimilar others who have a low specific status but they do not share important information with

them. Because they work at the same organization, they may feel obliged to communicate with them but this feeling of obligation does not show itself in sharing important information. The reason behind this may be the fact that individuals associate low status with low capability, and see further cooperation with low-status individuals beyond communication as a waste of time (Berger et al., 1980). However, when dissimilar others have a high specific status, individuals may look beyond their gender category. This may remove the barriers which are caused by negative bias in the way of information sharing. Thus, dissimilar individuals who have a high specific status have more access to their colleagues' knowledge.

In addition, our findings about information access as a mediator between gender dissimilarity and individual creativity is noteworthy when we consider the increasing importance of knowledge work in companies. Access to information is crucial for individual creativity (e.g., Baer, 2010; Tortoriello & Krackhardt, 2010). Therefore, it is important to know that dissimilar individuals who have a low specific status may have difficulties to have access to information, and thus, they may have lower individual creativity even when they share information themselves with others, and contribute to other people's creativity. It is also essential to know that dissimilar individuals who have a high specific status do not have difficulties to have access to information, and therefore, they do not suffer from lower individual creativity which means having a high specific status serves as a buffer against the negative effects of gender dissimilarity on information access and individual creativity.

Surprisingly, our findings showed that having a high specific status serves not only as a buffer against the negative effects of gender

dissimilarity on individual creativity but also it converts those negative effects on individual creativity to positive ones. A possible explanation for this may be that when gender-dissimilar people have high specific status, they start thinking and behaving freely without the obligation of following their colleagues' opinions (Berger et al., 1985), while they still benefiting from the variation of the viewpoints of their dissimilar colleagues, and this may increase their individual creativity (Sternberg & Lubart, 1999). That is, what we may observe here is a further instantiation of the creative benefits of exposure to diverse information. To the extent that gender differences are associated with differences in information and perspectives (cf. van Knippenberg et al., 2004), it should hold that the more gender-dissimilar the individual is, the more others in the work environment may expose the individual to new information and insights that may benefit creativity. Focusing on the role of specific status may thus not only be relevant in understanding how to address negative effects of gender dissimilarity but also be useful in understanding how to reap the potential benefits of gender differences in the workplace. This is a particularly interesting avenue for future research, because relational demography research by and large has focused on the potential negative effects of demographic dissimilarity, and has not engaged with the notion from diversity research that such potential negative effects are complemented by potential positive, information-based effects (cf. van Knippenberg & Schippers, 2007; Williams & O'Reilly, 1998). Future research developing this perspective further may thus be particularly worthwhile.

Another obvious further development is to investigate the role of specific status in the effects of other demographic attributes such as cultural

background (i.e., including race/ethnicity) and age. Research in relational demography has understood the effects of demographic dissimilarity through the same notion of social categorization process (Chattopadhyay et al., 2004) and meta-analytic evidence also supports the conclusion that dissimilarity on different demographic attributes has similar effects (Guillaume et al., 2011). It would thus be an obvious extension to propose that what holds for specific status in gender dissimilarity effects by and large holds for the effects of other demographic dissimilarities. Obviously, this is for future research to substantiate, but doing so would be important to establish that consideration of specific status is important to relational demography research at large and not just to the study of gender dissimilarity.

Limitations and Suggestions for Future Research

Our research has the obvious limitation of a cross-sectional design, which does not allow for conclusions about causality. Also, even when gender dissimilarity is by and large an objective variable and concerns with common method variance effects in percept-percept relationships do not apply to findings for gender dissimilarity, these concerns do apply for our mediator to dependent variable path, which is based on subjective ratings from the same source. In that respect, it is important to realize that common method variance does not account for statistical interactions (McClelland & Judd, 1993). The stronger findings from our study thus are the gender dissimilarity by status interactions on information access and creativity, and the mediation evidence for the information access to creativity path in that sense is weaker. Fortunately, informational effects on creativity are so well-

established within a variety of research methodologies (e.g., experimentally; Hoever et al., 2012; social networks analysis; Hirst et al., 2015) that the relationship (and causality) implied here in a more general sense are uncontested, but that obviously does not prove that the current findings are not influenced by this methodological weakness. Future research mapping the role of specific status in gender dissimilarity effects thus would do well to diversify in its methodology for stronger evidence. Meta-analytic evidence from diversity research showing no differences between findings from the lab and the field (van Dijk, van Engen, & van Knippenberg, 2012) gives at least some confidence that such diversification would result in converging evidence – but obviously the proof of the pudding is in the eating.

Managerial Implications

Because our main finding shows that having a high specific status serves as a buffer against the negative effects of gender dissimilarity on information access, and that it even changes the negative effects of gender dissimilarity on individual creativity to positive ones, we suggest that employers may consider introducing interventions aimed at developing and highlighting the specific status of dissimilar employees. Greater awareness of people's expertise and further developing this through education and experience is of course a sound human resource management strategy across the board. Our findings more specifically suggest, however, that these efforts may be especially important for gender-dissimilar employees. This importance lies not only in removing potential barriers to effective functioning to remove a disadvantage, but also to create a diversity

advantage through the potentially greater creativity of more gender dissimilar employees. Our findings only speak to gender dissimilarity, but should future research show, as we predict, that the same conclusions hold for other forms of demographic diversity, this provides a potentially important angle to make a diverse workforce more effective that is not limited to gender.

Chapter 5: General Discussion

With this thesis, I aimed to tackle the question of which factors and processes get involved in reducing the negative effects of nationality and gender dissimilarity on individual performance at the work place. Below I summarized the results of our three experimental and field studies which try to answer this question.

Summary of the Main Results

Chapter 2: Status Differences between Nationality Minority Groups

In line with our expectations, the results from our laboratory study demonstrated that status differences between minority groups affect individual performance of team members, and public observability moderates this effect. More specifically, we found that the performance of low-status nationality minorities is lower than the performance of high-status nationality minorities under low public observability but this effect disappears under high public observability. Moreover, we could discover the team process behind this effect thanks to the video-recordings of the team task. As we anticipated, we discovered that access to distributed information mediates the interaction effect of nationality status and public observability on individual performance, such that low-status nationality minorities have less access to distributed information than high-status nationality minorities under low public observability which in turn is associated with lower individual performance. To sum up, the findings of chapter 2 emphasize the role of having a high nationality minority status to

have more access to distributed information, and thus, having a higher individual performance under low public observability.

Chapter 3: Nationality Diversity as a Way to Decrease the Negative Effects of Nationality Dissimilarity

Although the index of moderated mediation is not significant, the results of our field study showed that the path from nationality dissimilarity to individual performance through information access is significantly negative when the nationality diversity of the work place is low whereas this path is not significant when the nationality diversity of the work place is high. This means that there is a strong trend indicating that nationality diversity decreases the negative effects of nationality dissimilarity on information access, and consequently on individual performance. In summary, the results of chapter 3 show the importance of working at a highly diverse work place for the information access, and thus, for the individual performance of dissimilar people.

Chapter 4: Specific Status as a Way to Decrease the Negative Effects of Gender Dissimilarity

In chapter 4, we extended our focus from nationality dissimilarity to gender dissimilarity. In line with our predictions, the outcomes from our field study show that gender dissimilarity is negatively associated with individual creativity at the work place, and specific status moderates the

relationship between gender dissimilarity and individual creativity. More specifically, we established that as the gender dissimilarity of people increases, their individual creativity decreases if these people have a low specific status. However, as the gender dissimilarity of people increases, their individual creativity also increases if these people have a high specific status. This means that specific status not only serves as a buffer for the negative effects of gender dissimilarity but also converts these negative effects to the positive ones. Moreover, we anticipated that there would be two mechanisms explaining the negative relationship between gender dissimilarity and individual creativity under the condition of low specific status. More specifically, we predicted that dissimilar individuals' access to their colleagues' knowledge and the number of people who share information with dissimilar individuals would mediate the negative relationship between gender dissimilarity and individual creativity when dissimilar individuals have a low specific status. We found that only access to colleagues' knowledge mediates this relationship. That is, gender dissimilarity is negatively related to access to colleagues' knowledge which in turn is negatively associated with individual creativity when dissimilar individuals have a low specific status. However, gender dissimilarity did not affect the number of people who share information with dissimilar individuals who have a low specific status. This shows that people continue communicating with dissimilar individuals who have a low specific status but they do not share essential information with them. To sum up, the results of chapter 4 underlines the importance of specific status as a way to decrease the negative effects of gender dissimilarity on information access, and consequently on individual creativity.

Theoretical Implications and Suggestions for Future Research

Our experimental and field studies contribute to the literatures on relational demography, information sharing, status and individual performance in various ways. We already explained the theoretical and managerial implications of our studies in detail and gave specific suggestions for future research at the end of each study. Here I will mainly explain general implications and give suggestions for future research.

One of the major implications of our studies is that the effects of status on the relationship between demographic dissimilarity and individual performance changes depending on two main factors:

- Between which nationality groups the status differences exist
- The status type – whether it is diffuse status or specific status –

First, previous studies showed that the effects of demographic dissimilarity on work outcomes change depending on whether dissimilar individuals have a nationality majority status or a nationality minority status (e.g., Guillaume, van Knippenberg, & Brodbeck, 2014; Tsui, Egan, & O'Reilly, 1992). They considered the position of nationality majority as a high status and the position of nationality minority as a low status. Unlike previous studies, our findings demonstrate the importance of recognizing that not all nationality minorities have a low status, and that status differences are prominent not only between a nationality minority and a nationality majority group but also between nationality minority groups. Most importantly, we found that the status differences between nationality minority groups influence the relationship between demographic

dissimilarity and individual performance through information access. In our study, the status difference between the high status nationality minority group and the nationality majority group was too small to observe a meaningful difference on information access and individual performance. Therefore, for future research, we suggest researchers to conduct a study with a different high status nationality minority group whose status is relatively lower than the nationality majority group.

Second, previous studies demonstrated that having a high status (e.g., being a man or white) - compared to having a low status (e.g., being a woman or non-white) - worsens the negative effects of demographic dissimilarity on work outcomes (e.g., Brodbeck, Guillaume, & Lee, 2011; Tsui et al., 1992). However, these studies examined only the effects of diffuse status which means a status that comes from a social category attribute such as sex or race, and they ignored the effects of specific status which means a status that comes from a task-relevant attribute such as training, expertise or experience (Berger, Rosenholtz, & Zelditch, 1980). With our studies, we established that specific status influences the effects of demographic dissimilarity in a different way than diffuse status does. More specifically, while high diffuse status exacerbates the negative effects of gender dissimilarity on work outcomes (e.g., Tsui et al., 1992), we determined that high specific status converts these negative effects to the positive ones. Specific status may have a potential to convert the negative effects of other demographic dissimilarities such as nationality dissimilarity and age dissimilarity to the positive ones. Therefore, we suggest researchers to examine this potential in future studies.

Besides the dispositional moderators like nationality status and specific status, our studies in this thesis address to also a number of other essential situational moderators of demographic dissimilarity such as public observability and nationality diversity. Thus, with the findings of our studies, we extended the existing literature demonstrating the importance of situational moderators like collectivistic culture (Chatman, Polzer, Barsade, & Neale, 1998), high interdependence among colleagues (Guillaume, Brodbeck, & Riketta, 2012) and high person-workgroup fit (Elfenbein & O'Reilly, 2007).

Finally, another important feature of our studies is that they serve as a bridge between the literature on relational demography and diversity. The literature on relational demography examined the individual level predictors such as demographic dissimilarity and individual perceptions, and the individual level outcomes such as individual performance and the individual's attachment to the work-place (e.g., Guillaume et al., 2012; Tsui et al., 1992). On the other hand, the literature on diversity examined the team level predictors such as team diversity and team members' interdependence, and the team level outcomes such as distributed information sharing and team performance (e.g., van Knippenberg & Schippers, 2007). By focusing on demographic dissimilarity, distributed information access and individual performance at the same time, our studies bridge the research practices of the relational demography literature and the diversity literature. This improves our understanding of how team processes affect individual level outcomes and how individual level predictors affect team processes.

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Summary

With this thesis, we tried to provide an answer for

- How being different affects individual performance of minority group members and majority group members within a group differently,

- How the status differences between different minority groups affect individual performance of the members of these groups,

- How the access to distributed information mediates the effects of demographic differences on individual performance,

- How the public observability moderates the effects of demographic differences on individual performance

- How the diversity of a work place moderates the effects of nationality dissimilarity on individual performance

- How specific status moderates the effects of gender dissimilarity on individual creativity

In order to answer these questions, we conducted three studies. You can find the short summaries of these studies below.

First study: Although previous research has looked at the effects of being a minority (in terms of nationality) in the workplace on work performance, our research is the first to take status differences between different nationality minority groups into account. Specifically, we discovered that low-status nationality minorities perform worse than high-status nationality minorities because the former receive less information

than the latter from nationality majority members. However, we found that this difference disappears under conditions of high public observability of the work team. Thus, low-status nationality minorities perform best under conditions of high public observability, because they get more access to information under these circumstances.

Second study: We established that when the nationality diversity is high in the workplace, the negative effects of nationality dissimilarity on information access and individual performance decrease. For example, a Moroccan employee who works with 3 other Moroccan colleagues, and 16 other colleagues who are Dutch, Chinese, Portuguese, Turkish, German, and Swiss can have more access to information than a Moroccan employee who works with 3 other Moroccan colleagues and 16 other Dutch colleagues. In both cases, the degree of nationality dissimilarity to the rest of the group is the same for the Moroccan employee. But in the former condition, the group is nationally more diverse. This diversity makes it easier for the team members to identify as a team, rather than along nationality lines, which results in more information sharing and consequently higher performance.

Third study: We have also studied the role of a different type of status, namely specific status (e.g. the level of expertise). We studied this in the context of gender dissimilarity in the workplace. Previous research has shown that gender dissimilarity mainly has a negative impact on individuals' work-related outcomes. We discovered, however, that this effect is moderated by the individual's specific status at the workplace. In particular, we found that high specific status serves as a buffer against the

negative effects of gender dissimilarity on individual creativity. In addition, we found evidence suggesting that individuals' access to information mediates this relationship.

Samenvatting (Dutch Summary)

In deze thesis hebben wij geprobeerd te beantwoorden

-Hoe anders-zijn de individuele prestaties van leden van minderheids- en meerderheidsgroepen verschillend beïnvloedt,

-Hoe de statusverschillen die bestaan tussen verschillende minderheidsgroepen de individuele prestaties van leden van deze groepen beïnvloeden,

-Hoe toegang tot informatie de effecten van demografische verschillen op individuele prestaties medieert,

-Hoe publieke observeerbaarheid de effecten van demografische verschillen op individuele prestaties modereert,

-Hoe de diversiteit van een werkplaats de effecten van het hebben van een andere nationaliteit (in vergelijking met collega's) op individuele prestaties modereert,

-Hoe specifieke status de effecten van het hebben van een andere sekse (in vergelijking met collega's) op individuele creativiteit modereert.

Deze vragen hebben we getracht te beantwoorden in drie onderzoeken, die hieronder kort worden samengevat:

Eerste onderzoek: Hoewel eerder onderzoek heeft gekeken naar de effecten van het behoren tot een minderheidsgroep (wat betreft nationaliteit) op werkgerelateerde prestaties, is ons onderzoek het eerste dat de rol van statusverschillen *tussen* verschillende nationaliteit-

minderheidsgroepen bekijkt. Onze resultaten laten zien dat leden van minderheidsgroepen met een lage status slechter presteren dan leden van minderheidsgroepen met een hoge status, omdat eerstgenoemden minder informatie verkrijgen van leden van meerderheidsgroepen. Echter laten onze resultaten zien dat dit effect verdwijnt wanneer een team onder omstandigheden van hoge publieke zichtbaarheid werkzaam is. Leden van lage status nationaliteits-minderheidsgroepen presteren dus het beste onder omstandigheden van hoge publieke zichtbaarheid, omdat ze onder deze omstandigheden meer toegang tot informatie verkrijgen.

Tweede onderzoek: In ons tweede onderzoek hebben we vastgesteld dat de negatieve effecten van het hebben van een andere nationaliteit (in vergelijking met collega's) op de toegang tot informatie en individuele prestaties, verdwijnt wanneer er sprake is van een hoge mate van nationale diversiteit op de werkvloer. Een Marokkaanse werknemer die in een team werkt met 3 andere Marokkaanse collega's en 16 andere collega's met een Nederlandse, Chinese, Portugese, Turkse, Duitse en Zwitserse afkomst, heeft bijvoorbeeld meer toegang tot informatie dan een Marokkaanse werknemer die in een team werkt met 3 andere Marokkaanse collega's en 16 Nederlandse collega's. In beide gevallen is de mate waarin de werknemer anders is (wat betreft nationaliteit) in vergelijking met de rest van het team hetzelfde. Echter kent het eerstgenoemde werkteam een hogere mate van diversiteit. Deze diversiteit maakt het makkelijker voor teamleden om zich met het team te identificeren, in plaats van aan de hand van hun nationaliteit. Dit leidt er vervolgens toe dat er meer informatie gedeeld wordt en de prestaties omhoog gaan.

Derde onderzoek: We hebben eveneens de rol van een ander type status onderzocht: specifieke status (bijv. de mate van expertise). We hebben dit bekeken in de context van sekseverschillen op de werkvloer. Eerder onderzoek heeft aangetoond dat wanneer een individu een andere sekse heeft (dan zijn/haar collega's), dit een negatieve invloed op werkgerelateerde uitkomsten heeft. Wij hebben echter ontdekt dat dit effect gemodereerd wordt door de specifieke status van het individu op de werkvloer: wanneer een individu een hoge specifieke status heeft (bijv. veel expertise) dan dient dit als buffer tegen de negatieve effecten die het hebben van een andere sekse op creativiteit heeft. Daarnaast laten onze resultaten eveneens zien dat dit buffer-effect gemedieerd wordt door de mate waarin de werknemer toegang heeft tot informatie.

About the Author



Burcu Subasi was born in 1984 in Izmir, Turkey. She received a scholarship from the Middle East Technical University fund and got her Bachelor of Science degree in Psychology with a *High Honor* distinction (the highest cum laude distinction). During her bachelor studies she spent a semester at the University of Groningen in the Netherlands, and did a summer school at the Humboldt university in Germany receiving scholarships from the Erasmus Exchange fund and the DAAD fund. During her bachelor program, she worked as a research assistant. Afterwards, she worked as a psychologist in a kindergarten and then in a rehabilitation center. Receiving a scholarship from the University of Groningen, she finished her research master program in Social and Organizational Psychology with a *Cum Laude* distinction while she was working as a student assistant during this time period. In 2012, Burcu started her Ph.D. at Rotterdam School of Management. Her research interests include relational demography (e.g., nationality dissimilarity and gender dissimilarity), status, information access/sharing, individual creativity and individual performance. She is mainly interested in the effects of nationality and gender dissimilarity on individual creativity and performance for individuals within a team. She examines the moderating and mediating processes behind these effects. During her Ph.D. program, Burcu attended summer schools at the University of Essex in the U.K. She supervised several bachelor and master students for their theses.

She presented her work at various international conferences such as AOM and SIOP. Her work is currently under review at renowned international journals. Currently, Burcu works as a post-doctoral researcher in the Department of Economics and Business at the University of Groningen.

ACADEMIC DEGREES AND HONORS

- 01/2012-08/2016 Ph.D. Candidate in the Department of Organization and Personnel Management, Rotterdam School of Management, Erasmus University, Netherlands. I submitted my thesis. I am waiting for the defence date.
- 2009-2011 *Cum Laude* distinction, Research Master's Program in Behavioural and Social Sciences, Specialization: Social and Organizational Psychology,

University of Groningen, Netherlands
- 2004-2008 *High Honour* distinction (equivalent to *Summa Cum Laude* distinction),

Psychology Department, B.Sc., Middle East Technical University, Turkey
- 2003-2004 Middle East Technical University, English Preparatory Class

PUBLICATION

2017 My article ‘Nationality Minority Status, Access to Distributed Information, and Individual Performance’ is in the process of R&R at Organizational Behavior and Human Decision Processes. I am the first author. My supervisor Dr. Wendy van Ginkel is the second author. My promotor Prof. Dr. Daan van Knippenberg is the third author.

2017 I submitted my article ‘Moderating Effect of Specific Status on the Relationship between Gender Dissimilarity and Individual Creativity’ to the Journal of Applied Social Psychology. I am the first author. My supervisor Dr. Wendy van Ginkel is the second author. My promotor Prof. Dr. Daan van Knippenberg is the third author.

TEACHING

12/2015-07/2016 In Rotterdam School of Management, Erasmus University, I supervised the bachelor theses of 20 teams, each of which consists of 3 students. 10 of the teams are from the International Business

Administration Program while the other 10 teams are from the Business Administration Program.

12/2014-07/2015 In Rotterdam School of Management, Erasmus University, I supervised the bachelor theses of 9 teams, each of which consisted of 3 students. All teams were from the International Business Administration Program.

12/2013-07/2014 In Rotterdam School of Management, Erasmus University, I supervised the bachelor theses of 8 teams, each of which consisted of 3 students. All teams were from the International Business Administration Program.

09/2013-07/2014 In Rotterdam School of Management, Erasmus University, I supervised the master thesis of a student from Human Resource Management.

ATTENDED CONFERENCES

08/2016 I presented my paper ‘Moderating Effect of Specific Status on the Relationship between Gender

Dissimilarity and Individual Creativity’ at the Academy of Management Conference in Anaheim, the USA.

04/2015 I participated in ‘Leiden, Delft, Erasmus Diversity Symposium’ at Erasmus University

05/2014 I presented my paper 'Effects of Relational Demography, Status and Accountability on Individual Performance' at the symposium ‘Powerful Management of Diversity’ at the SIOP Conference in Hawaii, the USA.

02/2013 I participated in a Small Group Meeting ‘Team Diversity, Status, Power and Performance’ in Tilburg University

REVIEWING

2013- I do reviews for the Journal of Organizational Change Management.

SUMMER SCHOOLS and OTHER ACADEMIC ACTIVITIES

- | | |
|-----------------|---|
| 07/2013 | I completed the course ‘Social Network Analysis’ at the summer school of University of Essex in United Kingdom |
| 07/2012 | I completed the course ‘Multilevel Analysis with Applications’ at the summer school of University of Essex in United Kingdom |
| 08/2007 | I completed the course ‘German Language and Culture Lecture Series’ at the summer school of Berlin Humboldt University in Germany |
| 02/2007-07/2007 | I was an exchange student at University of Groningen |

RECEIVED SCHOLARSHIPS, FUNDS and AWARDS

- | | |
|---------|---|
| 08/2016 | Erasmus Trust Funds given by Erasmus University to cover the costs of the Academy of Management |
|---------|---|

Conference which was held in Anaheim, the USA in 2016.

- 05/2014 Erasmus Trust Funds given by Erasmus University to cover the costs of SIOP conference which was held in Honolulu, Hawaii in 2014
- 09/2009-08/2011 Monthly scholarship and tuition payment by the Faculty of Behavioural and Social Sciences, University of Groningen
- 09/2003-06/2008 Monthly scholarship and free accommodation given by Middle East Technical University
- 07/2007-08/2007 Summer school scholarship in Germany, given by DAAD (German Academic Exchange Service)
- 02/2007-07/2007 Erasmus Exchange Student Scholarship given by Turkish National

Agency

Dean's High Honour List: 2004 Spring, 2005 Spring,
2006 Fall, 2006 Spring, 2007 Fall, 2007 Spring;
Dean's Honour List: 2004 Fall and 2005 Fall

The ERIM PhD Series

The ERIM PhD Series contains PhD dissertations in the field of Research in Management defended at Erasmus University Rotterdam and supervised by senior researchers affiliated to the Erasmus Research Institute of Management (ERIM). All dissertations in the ERIM PhD Series are available in full text through the ERIM Electronic Series Portal: <http://repub.eur.nl/pub>. ERIM is the joint research institute of the Rotterdam School of Management (RSM) and the Erasmus School of Economics at the Erasmus University Rotterdam (EUR).

Dissertations in the last five years

Abbink, E.J., *Crew Management in Passenger Rail Transport*, Promotors: Prof.

L.G. Kroon & Prof. A.P.M. Wagelmans, EPS-2014-325-LIS, <http://repub.eur.nl/pub/76927>

Acar, O.A., *Crowdsourcing for Innovation: Unpacking Motivational, Knowledge and Relational Mechanisms of Innovative Behavior in Crowdsourcing Platforms*, Promotor:

Prof. J.C.M. van den Ende, EPS-2014-321-LIS, <http://repub.eur.nl/pub/76076>

Akin Ates, M., *Purchasing and Supply Management at the Purchase Category Level:*

Strategy, structure and performance, Promotors: Prof. J.Y.F. Wynstra & Dr E.M.

van Raaij, EPS-2014-300-LIS, <http://repub.eur.nl/pub/50283>

Akpınar, E., *Consumer Information Sharing*, Promotor: Prof. A. Smidts, EPS-2013-297-MKT, <http://repub.eur.nl/pub/50140>

Alexander, L., *People, Politics, and Innovation: A Process Perspective*, Promotors:

Prof. H.G. Barkema & Prof. D.L. van Knippenberg, EPS-2014-331-S&E, <http://repub.eur.nl/pub/77209>

Alexiou, A. *Management of Emerging Technologies and the Learning Organization: Lessons from the Cloud and Serious Games Technology*, Promoters: Prof. S.J. Magala, Prof. M.C. Schippers and Dr I. Oshri, EPS-2016-404-ORG, <http://repub.eur.nl/pub/93818>

Almeida e Santos Nogueira, R.J. de, *Conditional Density Models Integrating Fuzzy and Probabilistic Representations of Uncertainty*, Promoters: Prof. U. Kaymak & Prof. J.M.C. Sousa, EPS-2014-310-LIS, <http://repub.eur.nl/pub/51560>

Bannouh, K., *Measuring and Forecasting Financial Market Volatility using High-frequency Data*, Promotor: Prof. D.J.C. van Dijk, EPS-2013-273-F&A, <http://repub.eur.nl/pub/38240>

Ben-Menahem, S.M., *Strategic Timing and Proactiveness of Organizations*, Promoters: Prof. H.W. Volberda & Prof. F.A.J. van den Bosch, EPS-2013-278-S&E, <http://repub.eur.nl/pub/39128>

Benschop, N, *Biases in Project Escalation: Names, frames & construal levels*, Promoters: Prof. K.I.M. Rhode, Prof. H.R. Commandeur, Prof. M. Keil & Dr A.L.P. Nuijten, EPS-2015-375-S&E, <http://repub.eur.nl/pub/79408>

Berg, W.E. van den, *Understanding Salesforce Behavior using Genetic Association Studies*, Promotor: Prof. W.J.M.I. Verbeke, EPS-2014-311-MKT, <http://repub.eur.nl/pub/51440>

Beusichem, H.C. van, *Firms and Financial Markets: Empirical Studies on the Informational Value of Dividends, Governance and Financial Reporting*, Promoters: Prof. A. de Jong & Dr G. Westerhuis, EPS-2016-378-F&A, <http://repub.eur.nl/pub/93079>

Blik, R. de, *Empirical Studies on the Economic Impact of Trust*, Promotor: Prof. J. Veenman & Prof. Ph.H.B.F. Franses, EPS-2015-324-ORG, <http://repub.eur.nl/pub/78159>

Boons, M., *Working Together Alone in the Online Crowd: The Effects of Social Motivations and Individual Knowledge Backgrounds on the Participation and Performance of Members of Online Crowdsourcing Platforms*, Promoters: Prof. H.G. Barkema & Dr D.A. Stam, EPS-2014-306-S&E, <http://repub.eur.nl/pub/50711>

Brazys, J., *Aggregated Macroeconomic News and Price Discovery*, Promotor: Prof.

W.F.C. Verschoor, EPS-2015-351-F&A, <http://repub.eur.nl/pub/78243>

Byington, E., *Exploring Coworker Relationships: Antecedents and Dimensions of Interpersonal Fit, Coworker Satisfaction, and Relational Models*, Promotor: Prof. D.L. van Knippenberg, EPS-2013-292-ORG, <http://repub.eur.nl/pub/41508>

Cancurtaran, P., *Essays on Accelerated Product Development*, Promoters: Prof. F.

Langerak & Prof. G.H. van Bruggen, EPS-2014-317-MKT, <http://repub.eur.nl/pub/76074>

Caron, E.A.M., *Explanation of Exceptional Values in Multi-dimensional Business Databases*, Promoters: Prof. H.A.M. Daniels & Prof. G.W.J. Hendrikse, EPS-2013-296-LIS, <http://repub.eur.nl/pub/50005>

Carvalho, L. de, *Knowledge Locations in Cities: Emergence and Development Dynamics*,

Promotor: Prof. L. Berg, EPS-2013-274-S&E, <http://repub.eur.nl/pub/38449>

Cranenburgh, K.C. van, *Money or Ethics: Multinational corporations and religious organisations operating in an era of corporate responsibility*, Prof. L.C.P.M. Meijs, Prof. R.J.M. van Tulder & Dr D. Arenas, EPS-2016-385-ORG, <http://repub.eur.nl/pub/93104>

Consiglio, I., *Others: Essays on Interpersonal and Consumer Behavior*, Promotor: Prof. S.M.J. van Osselaer, EPS-2016-366-MKT, <http://repub.eur.nl/pub/79820>

Cox, R.H.G.M., *To Own, To Finance, and To Insure - Residential Real Estate Revealed*,

Promotor: Prof. D. Brounen, EPS-2013-290-F&A,
<http://repub.eur.nl/pub/40964>

Darnihamedani, P. *Individual Characteristics, Contextual Factors and Entrepreneurial Behavior*, Promotors: Prof. A.R. Thurik & S.J.A. Hessels, EPS-2016-360-S&E, <http://repub.eur.nl/pub/93280>

Deng, W., *Social Capital and Diversification of Cooperatives*, Promotor: Prof. G.W.J. Hendrikse, EPS-2015-341-ORG, <http://repub.eur.nl/pub/77449>

Depecik, B.E., *Revitalizing brands and brand: Essays on Brand and Brand Portfolio Management Strategies*, Promotors: Prof. G.H. van Bruggen, Dr Y.M. van Everdingen and Dr M.B. Ataman, EPS-2016-406-MKT, <http://repub.eur.nl/pub/93507>

Dollevoet, T.A.B., *Delay Management and Dispatching in Railways*, Promotor: Prof. A.P.M. Wagelmans, EPS-2013-272-LIS, <http://repub.eur.nl/pub/38241>

Duyvesteyn, J.G. *Empirical Studies on Sovereign Fixed Income Markets*, Promotors: Prof. P. Verwijmeren & Prof. M.P.E. Martens, EPS-2015-361-F&A, hdl.handle.net/1765/79033

Duursema, H., *Strategic Leadership: Moving Beyond the Leader-Follower Dyad*, Promotor: Prof. R.J.M. van Tulder, EPS-2013-279-ORG, <http://repub.eur.nl/pub/39129>

Elmes, A., *Studies on Determinants and Consequences of Financial Reporting Quality*, Promotor: Prof. E. Peek, EPS-2015-354-F&A, <http://hdl.handle.net/1765/79037>

Ellen, S. ter, *Measurement, Dynamics, and Implications of Heterogeneous Beliefs in Financial Markets*, Promotor: Prof. W.F.C. Verschoor, EPS-2015-343-F&A, <http://repub.eur.nl/pub/78191>

Erlemann, C., *Gender and Leadership Aspiration: The Impact of the Organizational Environment*, Promotor: Prof. D.L. van Knippenberg, EPS-2016-376-ORG, <http://repub.eur.nl/pub/79409>

Eskenazi, P.I., *The Accountable Animal*, Promotor: Prof. F.G.H. Hartmann, EPS-2015-355-F&A, <http://repub.eur.nl/pub/78300>

Evangelidis, I., *Preference Construction under Prominence*, Promotor: Prof. S.M.J. van Osselaer, EPS-2015-340-MKT, <http://repub.eur.nl/pub/78202>

Faber, N., *Structuring Warehouse Management*, Promotors: Prof. M.B.M. de Koster & Prof. A. Smidts, EPS-2015-336-LIS, <http://repub.eur.nl/pub/78603>

Fernald, K., *The Waves of Biotechnological Innovation in Medicine: Interfirm Cooperation Effects and a Venture Capital Perspective*, Promotors: Prof. E. Claassen, Prof. H.P.G. Pennings & Prof. H.R. Commandeur, EPS-2015-371-S&E, <http://hdl.handle.net/1765/79120>

Fisch, C.O., *Patents and trademarks: Motivations, antecedents, and value in industrialized and emerging markets*, Promotors: Prof. J.H. Block, Prof. H.P.G. Pennings & Prof. A.R. Thurik, EPS-2016-397-S&E, <http://repub.eur.nl/pub/94036>

Fliers, P.T., *Essays on Financing and Performance: The role of firms, banks and board*, Promotor: Prof. A. de Jong & Prof. P.G.J. Roosenboom, EPS-2016-388-F&A, <http://repub.eur.nl/pub/93019>

Fourne, S.P., *Managing Organizational Tensions: A Multi-Level Perspective on Exploration, Exploitation and Ambidexterity*, Promotors: Prof. J.J.P. Jansen & Prof. S.J. Magala, EPS-2014-318-S&E, <http://repub.eur.nl/pub/76075>

Gaast, J.P. van der, *Stochastic Models for Order Picking Systems*, Promotors: Prof. M.B.M de Koster & Prof. I.J.B.F. Adan, EPS-2016-398-LIS, <http://repub.eur.nl/pub/93222>

Glorie, K.M., *Clearing Barter Exchange Markets: Kidney Exchange and Beyond*, Promotors: Prof. A.P.M. Wagelmans & Prof. J.J. van de Klundert, EPS-2014-329-LIS, <http://repub.eur.nl/pub/77183>

Hekimoglu, M., *Spare Parts Management of Aging Capital Products*, Promotor: Prof. R. Dekker, EPS-2015-368-LIS, <http://repub.eur.nl/pub/79092>

Heyde Fernandes, D. von der, *The Functions and Dysfunctions of Reminders*, Promotor: Prof. S.M.J. van Osselaer, EPS-2013-295-MKT, <http://repub.eur.nl/pub/41514>

Hogenboom, A.C., *Sentiment Analysis of Text Guided by Semantics and Structure*, Promotors: Prof. U. Kaymak & Prof. F.M.G. de Jong, EPS-2015-369-LIS, <http://repub.eur.nl/pub/79034>

Hogenboom, F.P., *Automated Detection of Financial Events in News Text*, Promotors: Prof. U. Kaymak & Prof. F.M.G. de Jong, EPS-2014-326-LIS, <http://repub.eur.nl/pub/77237>

Hollen, R.M.A., *Exploratory Studies into Strategies to Enhance Innovation-Driven International Competitiveness in a Port Context: Toward Ambidextrous Ports*, Promotors: Prof. F.A.J. Van Den Bosch & Prof. H.W. Volberda, EPS-2015-372-S&E, <http://repub.eur.nl/pub/78881>

Hout, D.H. van, *Measuring Meaningful Differences: Sensory Testing Based Decision Making in an Industrial Context; Applications of Signal Detection Theory and Thurstonian Modelling*, Promotors: Prof. P.J.F. Groenen & Prof. G.B. Dijksterhuis, EPS-2014-304-MKT, <http://repub.eur.nl/pub/50387>

Houwelingen, G.G. van, *Something To Rely On*, Promotors: Prof. D. de Cremer & Prof. M.H. van Dijke, EPS-2014-335-ORG, <http://repub.eur.nl/pub/77320>

Hurk, E. van der, *Passengers, Information, and Disruptions*, Promotors: Prof. L.G. Kroon & Prof. P.H.M. Vervest, EPS-2015-345-LIS, <http://repub.eur.nl/pub/78275>

Iseger, P. den, *Fourier and Laplace Transform Inversion with Applications in Finance*, Promotor: Prof. R. Dekker, EPS-2014-322-LIS, <http://repub.eur.nl/pub/76954>

Jaarsveld, W.L. van, *Maintenance Centered Service Parts Inventory Control*, Promotor: Prof. R. Dekker, EPS-2013-288-LIS, <http://repub.eur.nl/pub/39933>

Khanagha, S., *Dynamic Capabilities for Managing Emerging Technologies*, Promotor: Prof. H.W. Volberda, EPS-2014-339-S&E, <http://repub.eur.nl/pub/77319>

Kil, J., *Acquisitions Through a Behavioral and Real Options Lens*, Promotor: Prof. H.T.J. Smit, EPS-2013-298-F&A, <http://repub.eur.nl/pub/50142>

Klooster, E. van't, *Travel to Learn: the Influence of Cultural Distance on Competence Development in Educational Travel*, Promotors: Prof. F.M. Go & Prof. P.J. van Baalen, EPS-2014-312-MKT, <http://repub.eur.nl/pub/51462>

Koendjibiharie, S.R., *The Information-Based View on Business Network Performance: Revealing the Performance of Interorganizational Networks*, Promotors: Prof. H.W.G.M. van Heck & Prof. P.H.M. Vervest, EPS-2014-315-LIS, <http://repub.eur.nl/pub/51751>

Koning, M., *The Financial Reporting Environment: The Role of the Media, Regulators and Auditors*, Promoters: Prof. G.M.H. Mertens & Prof. P.G.J. Roosenboom, EPS-2014-330-F&A, <http://repub.eur.nl/pub/77154>

Konter, D.J., *Crossing Borders with HRM: An Inquiry of the Influence of Contextual Differences in the Adoption and Effectiveness of HRM*, Promoters: Prof. J. Paauwe & Dr L.H. Hoeksema, EPS-2014-305-ORG, <http://repub.eur.nl/pub/50388>

Korkmaz, E., *Bridging Models and Business: Understanding Heterogeneity in Hidden Drivers of Customer Purchase Behavior*, Promoters: Prof. S.L. van de Velde & Prof. D. Fok, EPS-2014-316-LIS, <http://repub.eur.nl/pub/76008>

Krämer, R., *A license to mine? Community organizing against multinational corporations*, Promoters: Prof. R.J.M. van Tulder & Prof. G.M. Whiteman, EPS-2016-383-ORG, <http://repub.eur.nl/pub/94072>

Kroezen, J.J., *The Renewal of Mature Industries: An Examination of the Revival of the Dutch Beer Brewing Industry*, Promotor: Prof. P.P.M.A.R. Heugens, EPS-2014-333-S&E, <http://repub.eur.nl/pub/77042>

Kysucky, V., *Access to Finance in a Cross-Country Context*, Promotor: Prof. L. Norden, EPS-2015-350-F&A, <http://repub.eur.nl/pub/78225>

Lee, C.I.S.G., *Big Data in Management Research: Exploring New Avenues*, Promoters: Prof. S.J. Magala & Dr W.A. Felps, EPS-2016-365-ORG, <http://repub.eur.nl/pub/79818>

Legault-Tremblay, P.O., *Corporate Governance During Market Transition: Heterogeneous responses to Institution Tensions in China*, Promotor: Prof. B. Krug, EPS-2015-362-ORG, <http://repub.eur.nl/pub/78649>

Lenoir, A.S. *Are You Talking to Me? Addressing Consumers in a Globalised World*, Promotors: Prof. S. Puntoni & Prof. S.M.J. van Osselaer, EPS-2015-363-MKT, <http://repub.eur.nl/pub/79036>

Leunissen, J.M., *All Apologies: On the Willingness of Perpetrators to Apologize*, Promotors: Prof. D. de Cremer & Dr M. van Dijke, EPS-2014-301-ORG, <http://repub.eur.nl/pub/50318>

Li, D., *Supply Chain Contracting for After-sales Service and Product Support*, Promotor: Prof. M.B.M. de Koster, EPS-2015-347-LIS, <http://repub.eur.nl/pub/78526>

Li, Z., *Irrationality: What, Why and How*, Promotors: Prof. H. Bleichrodt, Prof. P.P. Wakker, & Prof. K.I.M. Rohde, EPS-2014-338-MKT, <http://repub.eur.nl/pub/77205>

Liang, Q.X., *Governance, CEO Identity, and Quality Provision of Farmer Cooperatives*, Promotor: Prof. G.W.J. Hendrikse, EPS-2013-281-ORG, <http://repub.eur.nl/pub/39253>

Liket, K., *Why 'Doing Good' is not Good Enough: Essays on Social Impact Measurement*, Promotors: Prof. H.R. Commandeur & Dr K.E.H. Maas, EPS-2014-307-STR, <http://repub.eur.nl/pub/51130>

Loos, M.J.H.M. van der, *Molecular Genetics and Hormones: New Frontiers in Entrepreneurship Research*, Promotors: Prof. A.R. Thurik, Prof. P.J.F. Groenen, & Prof. A. Hofman, EPS-2013-287-S&E, <http://repub.eur.nl/pub/40081>

Lu, Y., *Data-Driven Decision Making in Auction Markets*, Promotors: Prof. H.W.G.M. van Heck & Prof. W. Ketter, EPS-2014-314-LIS, <http://repub.eur.nl/pub/51543>

Ma, Y., *The Use of Advanced Transportation Monitoring Data for Official Statistics*, Promotors: Prof. L.G. Kroon and Dr J. van Dalen, EPS-2016-391-LIS, <http://repub.eur.nl/pub/80174>

Manders, B., *Implementation and Impact of ISO 9001*, Promotor: Prof. K. Blind,
EPS-2014-337-LIS, <http://repub.eur.nl/pub/77412>

Mell, J.N., *Connecting Minds: On The Role of Metaknowledge in Knowledge Coordination*, Promotor: Prof. D.L. van Knippenberg, EPS-2015-359-ORG,
<http://hdl.handle.net/1765/78951>

Meulen, van der, D., *The Distance Dilemma: the effect of flexible working practices on performance in the digital workplace*, Promotors: Prof. H.W.G.M. van Heck & Prof. P.J. van Baalen, EPS-2016-403-LIS,
<http://repub.eur.nl/pub/94033>

Micheli, M.R., *Business Model Innovation: A Journey across Managers' Attention and Inter-Organizational Networks*, Promotor: Prof. J.J.P. Jansen, EPS-2015-344-S&E,
<http://repub.eur.nl/pub/78241>

Milea, V., *News Analytics for Financial Decision Support*, Promotor: Prof. U. Kaymak, EPS-2013-275-LIS, <http://repub.eur.nl/pub/38673>

Moniz, A., *Textual Analysis of Intangible Information*, Promotors: Prof. C.B.M. van Riel, Prof. F.M.G de Jong & Dr G.A.J.M. Berens, EPS-2016-393-ORG, <http://repub.eur.nl/pub/93001>

Mulder, J. *Network design and robust scheduling in liner shipping*, Promotors: Prof. R. Dekker & Dr W.L. van Jaarsveld, EPS-2016-384-LIS,
<http://repub.eur.nl/pub/80258>

Naumovska, I., *Socially Situated Financial Markets: A Neo-Behavioral Perspective on Firms, Investors and Practices*, Promotors: Prof. P.P.M.A.R. Heugens & Prof. A. de Jong, EPS-2014-319-S&E, <http://repub.eur.nl/pub/76084>

Neerijnen, P., *The Adaptive Organization: the socio-cognitive antecedents of ambidexterity and individual exploration*, Promotors: Prof. J.J.P. Jansen, P.P.M.A.R. Heugens & Dr T.J.M. Mom, EPS-2016-358-S&E, <http://repub.eur.nl/pub/93274>

Oord, J.A. van, *Essays on Momentum Strategies in Finance*, Promotor: Prof. H.K. van Dijk, EPS-2016-380-F&A, <http://repub.eur.nl/pub/80036>

Pennings, C.L.P., *Advancements in Demand Forecasting: Methods and Behavior*, Promotors: Prof. L.G. Kroon, Prof. H.W.G.M. van Heck & Dr J. van Dalen, EPS-2016-400-LIS, <http://repub.eur.nl/pub/94039>

Peters, M., *Machine Learning Algorithms for Smart Electricity Markets*, Promotor: Prof. W. Ketter, EPS-2014-332-LIS, <http://repub.eur.nl/pub/77413>

Porck, J., *No Team is an Island: An Integrative View of Strategic Consensus between Groups*, Promotors: Prof. P.J.F. Groenen & Prof. D.L. van Knippenberg, EPS-2013-299-ORG, <http://repub.eur.nl/pub/50141>

Pronker, E.S., *Innovation Paradox in Vaccine Target Selection*, Promotors: Prof. H.J.H.M. Claassen & Prof. H.R. Commandeur, EPS-2013-282-S&E, <http://repub.eur.nl/pub/39654>
Protzner, S. *Mind the gap between demand and supply: A behavioral perspective on demand forecasting*, Promotors: Prof. S.L. van de Velde & Dr L. Rook, EPS-2015-364-LIS, <http://repub.eur.nl/pub/79355>

Pruijssers, J.K., *An Organizational Perspective on Auditor Conduct*, Promotors: Prof. J. van Oosterhout & Prof. P.P.M.A.R. Heugens, EPS-2015-342-S&E, <http://repub.eur.nl/pub/78192>

Retel Helmrich, M.J., *Green Lot-Sizing*, Promotor: Prof. A.P.M. Wagelmans, EPS-2013-291-LIS, <http://repub.eur.nl/pub/41330>

Rietdijk, W.J.R. *The Use of Cognitive Factors for Explaining Entrepreneurship*, Promotors: Prof. A.R. Thurik & Prof. I.H.A. Franken, EPS-2015-356-S&E, <http://repub.eur.nl/pub/79817>

Rietveld, N., *Essays on the Intersection of Economics and Biology*, Promotors: Prof. A.R. Thurik, Prof. Ph.D. Koellinger, Prof. P.J.F. Groenen, & Prof. A. Hofman, EPS-2014-320-S&E, <http://repub.eur.nl/pub/76907>

Rösch, D. *Market Efficiency and Liquidity*, Promotor: Prof. M.A. van Dijk, EPS-2015-353-F&A, <http://repub.eur.nl/pub/79121>

Roza, L., *Employee Engagement in Corporate Social Responsibility: A collection of essays*, Promotor: L.C.P.M. Meijs, EPS-2016-396-ORG, <http://repub.eur.nl/pub/93254>

Rubbaniy, G., *Investment Behaviour of Institutional Investors*, Promotor: Prof. W.F.C. Verschoor, EPS-2013-284-F&A, <http://repub.eur.nl/pub/40068>

Schoonees, P. *Methods for Modelling Response Styles*, Promotor: Prof.dr P.J.F. Groenen, EPS-2015-348-MKT, <http://repub.eur.nl/pub/79327>

Schouten, M.E., *The Ups and Downs of Hierarchy: the causes and consequences of hierarchy struggles and positional loss*, Promotors; Prof. D.L. van Knippenberg & Dr L.L. Greer, EPS-2016-386-ORG, <http://repub.eur.nl/pub/80059>

Shahzad, K., *Credit Rating Agencies, Financial Regulations and the Capital Markets*, Promotor: Prof. G.M.H. Mertens, EPS-2013-283-F&A, <http://repub.eur.nl/pub/39655>

Smit, J. *Unlocking Business Model Innovation: A look through the keyhole at the inner workings of Business Model Innovation*, Promotor: H.G. Barkema, EPS-2016-399-S&E, <http://repub.eur.nl/pub/93211>

Sousa, M.J.C. de, *Servant Leadership to the Test: New Perspectives and Insights*, Promotors: Prof. D.L. van Knippenberg & Dr D. van Dierendonck, EPS-2014-313-ORG, <http://repub.eur.nl/pub/51537>

Spliet, R., *Vehicle Routing with Uncertain Demand*, Promotor: Prof. R. Dekker, EPS-2013-293-LIS, <http://repub.eur.nl/pub/41513>

Staad, J.L., *Leading Public Housing Organisation in a Problematic Situation: A Critical Soft Systems Methodology Approach*, Promotor: Prof. S.J. Magala, EPS-2014-308-ORG, <http://repub.eur.nl/pub/50712>

Stallen, M., *Social Context Effects on Decision-Making: A Neurobiological Approach*, Promotor: Prof. A. Smidts, EPS-2013-285-MKT, <http://repub.eur.nl/pub/39931>

Szatmari, B., *We are (all) the champions: The effect of status in the implementation of innovations*, Promotors: Prof J.C.M & Dr D. Deichmann, EPS-2016-401-LIS, <http://repub.eur.nl/pub/94633>

Tarakci, M., *Behavioral Strategy: Strategic Consensus, Power and Networks*, Promotors: Prof. D.L. van Knippenberg & Prof. P.J.F. Groenen, EPS-2013-280-ORG, <http://repub.eur.nl/pub/39130>

Tuijl, E. van, *Upgrading across Organisational and Geographical Configurations*, Promotor: Prof. L. van den Berg, EPS-2015-349-S&E, <http://repub.eur.nl/pub/78224>

Tuncdogan, A., *Decision Making and Behavioral Strategy: The Role of Regulatory Focus in Corporate Innovation Processes*, Promotors: Prof. F.A.J. van den Bosch, Prof. H.W. Volberda, & Prof. T.J.M. Mom, EPS-2014-334-S&E, <http://repub.eur.nl/pub/76978>

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