

Age diversity and its performance implications – Analysing a major future workforce trend

Stephan A. Boehm, Miriam K. Baumgaertner, David J. G. Dwertmann,
Florian Kunze*

Demographic change, increased retirement age, and efforts to shorten the duration of education will lead to a more age-diverse workforce in future. Age diversity's successful management will therefore become an important business issue for company practitioners. Unfortunately, knowledge concerning the outcomes of diversity in general and age diversity in particular lacks consistency. On the basis of the similarity-attraction paradigm, social identity and self-categorisation theory, token status, and inequality, some scholars argue that diversity has negative effects. On the basis of the information/decision-making perspective, other scholars predict that diversity has positive outcomes.

In order to shed light on these conflicting findings, this chapter discusses and analyses the age diversity literature. Consequently, it investigates prior research on the possible moderators and mediators of the age diversity-performance relationship. Following this review, this chapter provides practical recommendations on how to deal with an age-diverse workforce.

* Dr. Stephan A. Boehm, Senior Lecturer and Director of the Center for Disability and Integration at the University of St. Gallen, Switzerland.

Miriam K. Baumgaertner, Research Associate and Ph.D. candidate at the Center for Disability and Integration at the University of St. Gallen, Switzerland.

David J. G. Dwertmann, Research Associate and Ph.D. candidate at the Center for Disability and Integration at the University of St. Gallen, Switzerland.

Dr. Florian Kunze, Senior Research Fellow at the Institute for Leadership and Human Resources Management of the University of St. Gallen, Switzerland.

Table of Contents

1 Introduction	123
2 Increasing age diversity: A major workforce trend	123
2.1 Reasons for growing age diversity in the workplace	123
2.2 Implications for organisations	124
3 Theoretical basis of diversity effects	125
3.1 Reasons for potentially negative diversity effects	125
3.2 Reasons for potentially positive diversity effects	126
4 Summary of knowledge on age diversity	126
4.1 Outcomes of age diversity	126
4.2 Explanations for inconsistencies in findings	130
4.3 Diversity context factors	131
5 Practical implications and recommendations	134
5.1 Organisational level	134
5.2 Supervisor level	135
6 Conclusion	136
References	137

1 Introduction

Effective management of *diversity* is a critical success factor for companies and will become even more important in future. This not only applies to diversity dimensions such as gender, ethnicity, and nationality, but also to age diversity (Smola and Sutton 2002; Shore et al. 2009). Despite several recent reviews (e.g., van Knippenberg and Schippers 2007; Jackson et al. 2003; Williams and O'Reilly 1998) and meta-analytical analyses of diversity's effects in the workplace (e.g., Joshi and Rho 2009), there is no systematic knowledge on age diversity's potential outcomes in organisational settings.

This seems problematic for a number of reasons. Firstly, *age* is becoming one of the most relevant diversity dimensions. Triggered by demographic change, age diversity in the workplace is increasing more strongly than other diversity dimensions such as gender and nationality. Secondly, companies currently have only a vague idea of how the increase in age diversity will impact their internal processes and states, including their employees' well-being, commitment, and performance. Compared to other diversity dimensions, handling of an age-diverse personnel is a rather new challenge for companies. Consequently, it is not yet an established component of corporate training and development initiatives.

This chapter aims at closing this relevant knowledge gap by providing scholars and practitioners with insights into age diversity's distinct effects and recommendations on how to handle an age-diverse workforce successfully.

2 Increasing age diversity: A major workforce trend

2.1 Reasons for growing age diversity in the workplace

Demographic change is a major workforce trend. However, employees are not only ageing (a mean increase), the variation in age between co-workers is also on the rise (a variance increase).

This growing age diversity is caused by multiple influences. Firstly, the demographic change and the resulting shift in the workforce's distribution will lead to further diversity. To date, most companies in Western Europe have tended to hire mainly young employees. In 2001, more than 50% of German companies had no employees older than 50 (Bellmann and Kistle 2003). In 2006, more than one third of the small and medium-sized companies (SMEs) had not yet employed any older people (Watt 2006). In contrast, older employees have often been offered early retirement. Thus, the age distribution of the employees does not follow a normal distribution. Instead, employees' age distribution is skewed to the right, resulting in a comparatively low mean or average age. Owing to relatively low birth rates, there will be a lack of young employees over the next decades. Therefore, companies will be forced to hire or retain older employees in their workforce (Dychtwald et al. 2004; Tempest et al. 2002), which will lead to more diversity.

Secondly, the increasing number of retired people is starting to be a heavy financial burden on social welfare systems (Hayashi et al. 2009). The ratio between taxes

paid and pensions received is shifting, since life expectancy is increasing, and people are receiving pensions for a longer time. This can be balanced out in part if people work for longer and, consequently, pay more taxes. Therefore, to cope with the effects of demographic change, governments have started raising retirement age (e.g., in Germany and Austria). Increased retirement age, which is in fact an extension of the workforce's age range, results in a higher variance and thus diversity.

Thirdly, governments not only try to lengthen the duration of working time at the higher end but also at the lower one. In Europe, for example, university degrees have changed. Countries have started adopting the Anglo-Saxon bachelor and master system. By doing so, they hope to shorten the duration of academic studies (Kaube 2008). In Germany, the high school diploma was shortened by one year as well. Therefore, people can start working earlier than before. Again, this extension of the age range within the workforce increases the age diversity.

2.2 Implications for organisations

All three influences (the demographic change, the extension of older workers' retirement age, and the shortening of young people's education time) will cause an increasing age diversity within the workforce. While these basic trends are equally valid for most Western European countries, Germany is facing particular challenges due to the demographic change. Figure 1 shows the German workforce's projected development until 2050.

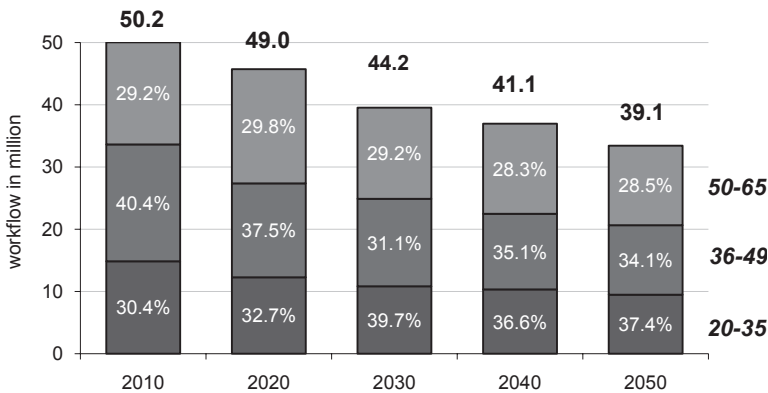


Figure 1: Projected development of the German workforce from 2010 until 2050 (Source: Destatis 2006).

Two major tendencies have become obvious. On the one hand, the overall workforce is continually shrinking from approximately 50 million individuals in 2010 to projected 40 million in 2050. This is different in Switzerland, for example, where the workforce is expected to remain stable over the next 40 years. On the other hand, the group of older employees (aged 50-65) is going to become the largest subgroup within the German workforce. This will be the start of a growing trend towards a

greater number of old workers in firms and organisations and hence a growing overall age diversity within the workplace. This second tendency is also affecting Switzerland and other European countries with higher birth or migration rates.

To date, organisations seem to be ill-prepared for an increase in age diversity. They only have a vague idea of the emerging potential challenges and opportunities, and have not yet taken measures regarding age diversity's active management in the workplace (e.g., Goerges 2004; Saba et al. 1998; Shore et al. 2009). This might be due to increased age diversity seeming to have mixed outcomes.

3 Theoretical basis of diversity effects

3.1 Reasons for potentially negative diversity effects

There is an ongoing debate on the effects of diversity in general as well as age diversity in particular. This debate is based on different psychological theories on social interaction processes. Various theories imply that diversity has negative effects. Among these are the similarity-attraction paradigm (Byrne 1971), social identity (Tajfel and Turner 1986), self-categorisation (Turner 1987), token status (Kanter 1977; Young and James 2001), as well as inequality (Blau 1977) theories.

The similarity-attraction paradigm assumes that individuals prefer to interact with others who are similar to them (Byrne 1971). The assumption of similarity can be drawn from various attributes such as demographics (e.g., age, gender, and ethnicity), attitudes, opinions, and beliefs. The psychological rationale for this assumption is that people seem to obtain more affirmative feedback from people who are similar to them, which in turn reduces uncertainty (Hinds et al. 2000; Rand and Wexley 1975). Diversity's similar negative effects might also be based on the social identity (Tajfel and Turner 1986) and self-categorisation (Turner 1987) theories. Both theories state that people form certain in and out-groups based on personally relevant attributes. Again, these attributes may comprise demographics, attitudes, opinions, and beliefs. Groups to which the individual belongs (in-groups) will be perceived as superior to other groups (out-groups). This is due to a basic human need to strengthen one's self-esteem (Hogg and Abrams 1988; Hogg 2001). Consequently, individuals favour members of their in-group, which results in higher levels of trust, cooperation, and communication. Out-group members are seen in a more sceptical light, which could lead to stereotyping and discrimination (Brewer 1979; Brewer and Brown 1998; O'Reilly et al. 1989). In short, 'otherness' is perceived as a deficiency (Loden and Rosener 1991).

In addition, Kanter (1977) describes 'token status'. Based on her assumptions, minorities (usually less than 15% of the total group) are less represented as individuals but rather as members or symbols of their category (Young and James 2001). With regard to age diversity, an example would be a small group of older employees in a primarily young organisation, or vice versa. In a software firm, for example, older members among a predominantly young group might not be perceived as equal colleagues with individual strengths and weaknesses, but rather as members of the same group who all tend to miss a few relevant competencies and

attitudes. The consequences of such a token status include stereotyping, unfair performance pressure, and the formation of interpersonal boundaries – which all lead to diversity having negative outcomes.

Finally, the concept of inequality (Blau 1977; Blau and Blau 1982; Blau 1986), which stems from sociological literature, is another model assuming that diversity has negative implications. It focuses on the distribution of goods, mainly income. However, especially in the organisational psychology literature, attention has also been paid to other resources such as power, status, and prestige (Harrison and Klein 2007). Nevertheless, research on inequality is generally limited (Harrison and Klein 2007). Inequality means that relevant resources are allocated unequally across group members. The resulting different levels of power or influence can lead to negative outcomes such as communication problems or intra-group conflicts (Smith et al. 1994). Keltner and colleagues (2003, p. 277) conclude that powerful members in teams “*talk more, interrupt others more, are more likely to speak out of turn, and are more directive of others’ verbal contributions than are low power individuals*”.

3.2 Reasons for potentially positive diversity effects

Contrary to prior rationales, scholars also argue in favour of positive diversity effects. This assumption is based on the *information/decision-making perspective* (van Knippenberg and Schippers 2007, p. 518; Hoffman et al. 1962), which emphasises the greater information richness in diverse surroundings. This richness, which focuses on cognitive resources, may be based on a variety of demographic attributes like age, gender, and ethnicity, which foster different experiences and knowledge bases. In addition, individuals with different backgrounds may have productive external and internal networks, leading to complementing information (Austin 2003; Beckman and Haunschild 2002). This information richness is assumed to be especially rewarding when dealing with non-routine problems (Carpenter 2002) and when striving for creative solutions (Burt 2002; Jackson et al. 1995). Moreover, groupthink (Janis 1972) might be successfully prevented as heterogeneous groups tend to discuss problem solutions in more detail and with more divergent perspectives (Fiol 1994).

4 Summary of knowledge on age diversity

4.1 Outcomes of age diversity

The diversity research field is characterised by different theoretical perspectives predicting diversity’s either positive or negative results. These theoretical arguments have also been applied to predict age diversity’s outcomes or effects (see Table 1 for an overview). On the one hand, individuals are likely to develop stronger personal ties with employees who are more or less the same age, since they “*share comparable experiences and therefore develop like attitudes and beliefs*” (Lawrence 1988, p. 313). With employees of different age groups, such personal connections are likely to be less pronounced, paving the way for the social identity

processes (Tajfel and Turner 1986) and self-categorisation (Turner 1987) described above. Such a formation of age-related in and out-groups may, in turn, lead to more conflicts between employees of different age groups and to heightened levels of strain, conflict, and perceived discrimination within age heterogeneous workgroups and organisations (Kunze et al. 2010).

Table 1: Overview of age diversity outcomes (source: own illustration)

Outcomes	Description	Study
Team performance in working teams	<ul style="list-style-type: none"> ■ Negative relationship between age diversity and performance in working teams 	Wegge et al. 2008 Timmerman 2000 Ely 2004 Leonard et al. 2004
Team performance in top management teams	<ul style="list-style-type: none"> ■ Positive relationship between age diversity and performance in top management teams ■ No relationship between age diversity and performance in top management teams ■ Negative relationship between age diversity and performance in top management teams 	Kilduff et al. 2000 Bunderson and Sutcliffe 2002 Simons et al. 1999 West et al. 1999
Cognitive diversity	<ul style="list-style-type: none"> ■ Negative relationship between age diversity and cognitive diversity 	Kilduff et al. 2000
Turnover	<ul style="list-style-type: none"> ■ Positive relationship between age diversity and turnover ■ Employees who differ most from the rest of their working group are those most likely to turn over ■ Not diversity but isolation from co-workers and customers is associated with increased turnover 	Cummings et al. 1993 Jackson et al. 1991 Milliken and Martins 1996 O'Reilly et al. 1989 Wiersema and Bird 1993 O'Reilly et al. 1989 Wagner et al. 1984 Leonard and Levine 2006
Absenteeism	<ul style="list-style-type: none"> ■ Positive relationship between age diversity and absenteeism 	Cummings et al. 1993
Innovation	<ul style="list-style-type: none"> ■ No relationship between age diversity and innovation ■ Negative relationship between age diversity and innovation 	Bantel and Jackson 1989 O'Reilly et al. 1993 O'Reilly et al. 1997 Wiersema and Bantel 1992 Zajac et al. 1991
Conflict	<ul style="list-style-type: none"> ■ Positive relationship between age diversity and emotional conflict ■ No relationship between age diversity and task conflict ■ Negative relationship between age diversity and affective conflict 	Jehn et al.1997 Pelled et al. 1999 Pelled et al. 2001 Pelled 1993 Pelled et al. 1999
Communication	<ul style="list-style-type: none"> ■ Negative relationship between age diversity and professional communication 	Zenger and Lawrence 1989

On the other hand, drawing on the information/decision-making perspective, one could also expect age dissimilar groups to have positive outcomes, with different perspectives, experiences, and information leading to a broader knowledge base and, consequently, to more creative, innovative, and productive team processes. However, which theoretical positions are supported by empirical studies' findings?

Various potential outcome variables have been investigated in respect of age diversity, including team performance, cognitive diversity, turnover, innovation, and group processes such as conflict and communication. They have revealed an unclear pattern.

Team performance

Empirical studies' findings on age diversity's performance consequences are not consistent. There is no strong evidence for age diversity's effects on performance (Williams and O'Reilly 1998). Primarily, the positive expectations drawn from the information/decision-making perspective were not supported by empirical investigations. In contrast, most studies reveal a negative relationship between age diversity and performance (Wegge et al. 2008). Timmerman (2000) showed age diversity to be negatively related to performance in professional basketball teams. Ely (2004) reported similar results in a sample of 486 branches of a financial service company. Furthermore, Leonard and colleagues (2004) reported that, in a sample of 700 retail stores, age heterogeneity had similar negative effects on sales figures.

However, focusing on top management teams solely, Kilduff and colleagues (2000) found age heterogeneity to be the only demographic diversity measure to positively affect overall performance. In their experimental study, diversity in a top management team had significantly positive effects on organisational performance. Nonetheless, even top management team research is characterised by mixed findings. For example, Bunderson and Sutcliffe (2002) as well as Simons and colleagues (1999) found no link between age diversity and performance. Furthermore, West and colleagues' longitudinal study (1999) of 42 UK manufacturing organisations showed that age diversity in top management teams is a negative predictor of company performance.

Cognitive diversity

Kilduff and colleagues (2000) examined the relationship between demographic and cognitive diversity, testing whether age diversity predicts cognitive diversity. Contrary to their expectations, the authors found that age diverse teams are not more cognitively diverse even though they perform better. The authors conclude that "*the link between demographic and cognitive diversity may be more complex than generally assumed (...)*" (Kilduff et al. 2000, p. 22). They further argue that "*Age diversity does matter, but not because it predicts cognitive diversity. Teams heterogeneous on demographic variables may be better able to build on the diverse experience base of the team to validate diverse cognitions, and thus take advantage of innovative suggestions*" (p. 32).

Turnover

Most studies investigating the relationship between age diversity and turnover found a positive association between the two constructs, meaning that higher age diversity typically leads to higher turnover among employees (e.g., Jackson et al. 1991; O'Reilly et al. 1989; Wiersema and Bird 1993). Furthermore, Wagner and colleagues (1984) showed that the employees who differ most from the rest of their working group are most likely to turn over. This was confirmed by O'Reilly and colleagues (1989). Milliken and Martins (1996, p. 408) state that: *“Not surprisingly, the people who are different from their group members in terms of age are more likely to turn over”*. In addition, Cummings and colleagues (1993) discovered that, in addition to turnover, absenteeism is more likely for those who differ most from their group in terms of age. However, these findings are not supported by Tsui and colleagues' (1992) study. Moreover, Leonard and Levine (2006) found that, not diversity, but isolation from co-workers and customers was often associated with increased turnover.

Innovation

Most studies found age diversity and innovation to be uncorrelated. Bantel and Jackson (1989) tested two conflicting hypotheses on the association between age heterogeneity and innovativeness among top management team members. They concluded that age diversity predicted neither total, technical, nor administrative innovation. Other studies by Wiersema and Bantel (1992), O'Reilly et al. (1997) as well as by O'Reilly and colleagues (1993) also found no association between age diversity and innovation. Zajac and colleagues (1991) investigated innovation across 53 internal corporate joint ventures among physicians. They found age diversity to be negatively related to innovativeness.

Conflict

As described earlier, social categorisation (Tajfel 1974; Tajfel and Turner 1986) may lead to stereotyping and subgroup formation that may produce conflict as well as less cooperation. There are mixed results concerning the relationship between age diversity and conflict. Generally, research differentiates between task-related/substantive and emotion-based/affective conflict (Pelled 1996; Pelled et al. 2001; Pelled et al. 1999). Compared to task-related conflict, emotion-based conflict is assumed to affect performance less favourably (Dos Reis et al. 2007). Contrary to her hypothesis, Pelled (1993) found age diversity to be negatively related to affective conflict. Pelled and colleagues (1999) found no association between age diversity and task conflict, and a negative link between the former and emotional conflict. Task routineness and group longevity moderated these relationships. Hambrick (1994) explained the rationale behind the relationship between age heterogeneity and less emotional conflict. Since age is related to career, people compare themselves with individuals of a similar age. Accordingly, rivalry is more likely to occur between employees of the same age (e.g., Hambrick 1994). These findings indicate that *“any tendency for age differences to trigger emotional conflict*

appears to be overshadowed by the tendency for age similarity to trigger social comparison and, ultimately, emotional conflict" (Pelled et al. 1999, p. 21).

However, other studies found opposing results: Jehn and colleagues (1997), for example, found age diversity to be positively related to relationship conflict. In line with these findings, Pelled and colleagues (2001) found individual dissimilarity in age to be positively associated with emotional conflict in a Mexican employee sample. Consequently, culture may also be a moderator in the age diversity-conflict relationship.

Communication

With regard to communication, Zenger and Lawrence (1989) investigated the relationship between organisational demography and communication frequency. They found age diversity to be a negative determinant of professional communication in technical project groups.

4.2 Explanations for inconsistencies in findings

In general, reasons for these inconsistent results can be subsumed under one of three categories: (1) diversity's different *outcome measures*, (2) diversity's different *conceptualisations*, and (3) diversity's *context factors*. The first category refers to the diverse measurement outcomes. It seems logical that age diversity's effects may vary according to the outcome variable targeted in a study (e.g., team performance versus turnover) or might even be influenced by the same outcome variable's operationalisation (e.g., self-rated, peer-rated or objective performance). The previous section focused on this topic by summarising research on various outcome measures. The other two categories are explained in the following section.

When researching age diversity, the construct conceptualisation should determine its measurement. Harrison and Klein (2007) argue that failure to do so leads to ambiguous empirical findings. They describe three distinctive types of diversity, namely separation, variety, and disparity. In turn, these types of diversity may have different consequences. Firstly, separation represents differences in opinion such as opposing views and disagreement. There is separation if individuals differ in terms of attitudes or values. Secondly, variety refers to differences in knowledge and experiences among group members, resulting in an increased pool of information on which a group can draw. The third type of diversity, which is called disparity, describes "*differences in concentration of valued social assets or resources such as pay and status among unit members*" (Harrison and Klein 2007, p. 1200). These findings are also consistent with the third section of this chapter's propositions. Processes, such as similarity attraction, self-categorisation, and token status are typically attributed to separation; inequality is attributed to disparity (both with negative effects), and the information/decision-making perspective corresponds to variety (with diversity having positive effects on potential outcomes).

The third aspect contributing to the mixed empirical results on age diversity relates to the phenomenon of opening the "*black box of organizational demography*" (Lawrence 1997, p. 1; Pelled et al. 1999). Researchers have largely focused on

the direct effects between demographic characteristics and outcome variables, without paying too much attention to the intervening factors. In recent studies, the need to develop more complex theories and undertake research on the moderating variables that may explain diversity effects has become apparent (e.g., Van Knippenberg and Schippers 2007). Thus, considering aspects like the working context or the importance of social interaction should be the main effort when studying diversity. Shore and colleagues (2009) state, for example, that *“older employees are likely to have knowledge and experience that is useful within groups, but such human capital may only be utilized in an environment in which positive relations among members are conducive to appreciating different types of contributions”* (p. 121).

4.3 Diversity context factors

An overview of the context factors influencing the relationship between age diversity and performance is presented in Table 2.

Table 2: Overview of age diversity context factors (source: own illustration).

Context factor	Description	Study
Cooperation and teamwork	<ul style="list-style-type: none"> ■ Higher levels of cooperation lead to performance losses ■ Lower levels of cooperation and teamwork lead to performance gains or no relationship 	Ely 2004
Task complexity	<ul style="list-style-type: none"> ■ Diverse groups perform complex tasks better than homogeneous ones (but not routine tasks) 	Bowers et al. 2000 Wegge et al. 2008
Leadership	<ul style="list-style-type: none"> ■ The better the leader-member exchange relationship, the weaker the diversity-turnover relationship ■ Age diversity is negatively related to team performance when transformational leadership is low but not related to team performance when transformational leadership is high ■ Transformational leadership is a positive context factor for the relationship between age diversity and performance 	Nishii and Mayer 2009 Kearney and Gebert 2009 Kunze and Bruch 2010
Faultlines	<ul style="list-style-type: none"> ■ Certain combinations of different dimensions lead to more negative diversity effects 	Bezrukova et al. 2009 Homan et al. 2008 Lau and Murnighan 1998 Lau and Murnighan 2005 Migdal et al. 1998

Team processes: Cooperation and teamwork

Ely (2004) investigated 486 retail bank branches and found team processes to be a significant moderator in the relationship between age diversity and performance. Contrary to her expectations, she discovered that cooperation and teamwork have a counterintuitive effect on performance losses, whereas lower levels of cooperation

and teamwork were related to either performance gains or no relationship between diversity and performance. High cooperation and teamwork were associated with a negative relationship between age diversity and the attainment of goals set regarding revenue from new sales and total performance. Ely (2004) concluded that “[m]anagers should take from this research a degree of caution in the way they address differences. While one would be hard pressed to suggest that enabling teamwork and cooperation is not a worthy goal in any team, managers should take care that such processes do not inadvertently suppress differences from which the workgroup could otherwise benefit” (p. 777). The results of this study indicate that the complexity of team processes has not yet been comprehensively understood.

Task complexity

In their meta-analysis, Bowers and colleagues (2000) showed that diverse groups only performed complex tasks better than homogeneous ones. A recent study by Wegge and colleagues (2008) confirmed this boundary condition in a European sample of the public administration sector by showing that age diversity is positively correlated with performance in complex task, but not in routine ones. The authors could also replicate this finding a year later. They explained their line of reasoning by proposing that “*task complexity (defined in terms of strong demands for complex decision making) is critical for obtaining a positive relationship between age composition in teams and team performance. That is, in complex group decision-making tasks, older workers may have the knowledge (and time) to help younger workers, thereby facilitating each group member’s individual work. In contrast, when the group task is routine and does not benefit from knowledge sharing, there should be no advantage for age diversity*” (Wegge et al. 2008, p. 1303).

Leadership

The successful development of a team in general and of a diverse team in particular is a leadership challenge. Thus, one may think that leaders’ influence on diverse teams’ outcomes is well researched. However, little is known about leadership’s role in the relationship between age diversity and performance. To our knowledge, only three studies have examined leadership as a boundary condition of age diversity effects. Nishii and Mayer (2009) examined leader-member exchange as a moderator of the relationships between demographic (i.e. race, age, and gender) and tenure diversity, and group turnover. The authors showed that leaders can have a positive impact on group diversity’s effect on turnover. The better the relationship between leaders and subordinates, the weaker the diversity-turnover relationship.

Kearney and Gebert (2009) discovered that age diversity was not related to team performance when transformational leadership was high, but negatively related to team performance when transformational leadership was low. The authors conclude that “*transformational leadership could be a key factor in fostering performance and preventing process losses in diverse teams*” (Kearney and Gebert 2009, p. 88).

Furthermore, Kunze and Bruch (2010) researched the effects of the relationship between age-based faultlines (e.g., faultlines that foster sub-group formation of age

in alignment with other demographic characteristics) and transformational leadership on productive energy. Transformational leadership was once again identified as a positive moderator of the relationship between age diversity and team outcome. Consequently, the authors conclude that transformational leadership may enable productivity and performance increases in teams with strong age-based faultlines.

Interaction of age with other demographic characteristics

A more recent stream of reasoning follows the idea that diversity processes may not occur as a result of a single demographic attribute, but as consequence of a bundle of demographic characteristics (Bezrukova et al. 2009; Lau and Murnighan 2005). *“Diversity research needs to move beyond conceptualizations and operationalizations of diversity simply as dispersion on a single dimension of diversity. Rather, it should conceptualize diversity as a combination of different dimensions of differentiation, take asymmetries into account, and be open to nonlinear effects”* (van Knippenberg and Schippers 2007, p. 534).

In this vein, the faultlines concept has recently been the focus of research attention. This concept, introduced by Lau and Murnighan (1998), describes hypothetical dividing lines within teams. These faultlines are based on visible attributes such as demographics. The authors describe faultlines as *“an alignment of several characteristics that heightens the possibility of internal subgroup dynamics”* (Lau and Murnighan 1998, p. 327). For example, in a team of four members, Case 1 is the team consisting of two 60-year-old men, and two 25-year-old women. Case 2 is the team consisting of one 60-year-old man, and one 60-year-old woman, and one 25-year-old man, and one 25-year-old woman. It is not difficult to imagine that the team in Case 1 is potentially divided by a stronger faultline than the team in Case 2. The combination of age and gender in Case 1 may easily lead to the formation of two opposing subgroups (‘old men’ versus ‘young women’) within the team. In Case 2, on the other hand, while the level of diversity is the same, the potential for the formation of such in and out-groups is much smaller as age and gender are distributed equally.

In most cases, the literature has found faultlines to be negative for team outcomes, which is in line with Lau and Murnighan’s (1998) proposition that faultlines reflect a group’s potential to split into subgroups, leading to less positive interaction and conflict. The authors state *“that strong faultlines may lead to recurring and salient subgroups, which then may become a more likely basis for self-identity and social categorization”* (Lau and Murnighan 1998, p. 336). Homan and colleagues (2008) mention two main reasons for faultlines’ negative effects. Firstly, cross-cutting categories make social categorisation more complex leading to a decreased probability to differentiate between in and out-group. Secondly, if employees belong to multiple groups at the same time, perceptions of subgroup differences and categorisations decrease. In line with these arguments, in their meta-analysis, Migdal and colleagues (1998) showed that intergroup bias is reduced when diversity attributes diverge which, in turn, reduces conflict.

5 Practical implications and recommendations

The presented research findings have several practical implications for companies on the organisational and supervisor levels. An overview is presented in Table 3.

Table 3: Overview of practical implications (source: own illustration).

Level	Action to be taken	Description & Examples
Organisational level	Deliberate team composition	<ul style="list-style-type: none"> ■ Age diverse teams for complex, non-routine tasks ■ Avoiding faultlines ■ Younger employees learn from older ones and vice versa ■ Mentoring and knowledge management ■ Setting up heterogeneous teams with a clear business objective (facilitating inter-generational knowledge-transfer, capturing new markets, developing innovative products, etc.) and communicating it
	Diversity trainings (age awareness seminars)	<ul style="list-style-type: none"> ■ Age awareness seminars
Supervisor level	Transformational leadership	<ul style="list-style-type: none"> ■ Creating a common social identity ■ Acting as an appropriate role model ■ Fostering the acceptance of common goals ■ Identifying and articulating a clear vision for the future ■ Setting high performance expectations ■ Providing individualised support ■ Providing intellectual stimulation for follower
	Enhanced interaction	<ul style="list-style-type: none"> ■ Assigning tasks to a whole team ■ Architectural considerations ■ 'Off-site' activities

5.1 Organisational level

Deliberate team composition

The teams' composition within organisations determines whether age diversity has positive or negative effects (Bruch et al. 2010). Organisations can group their employees in age homogeneous teams, age heterogeneous teams or even randomly. While 'preventing' diversity's possible negative effects by forming age homogeneous teams, organisations also miss out on the chance of younger employees learning from their older and more experienced colleagues, and vice versa. Especially in challenging work environments, effective mentoring and knowledge management can be crucial success factors (Allen et al. 2006; Grover and Davenport 2001). However, as prior research outlined in the fourth part of this chapter indicates, the formation of age diverse teams runs some risks.

These risks, namely discrimination (Goldman et al. 2006; Kunze et al. 2010) and decreased communication, can dramatically increase, if organisations do not consider certain aspects. Firstly, companies should set up age heterogeneous teams with a clear business objective and also communicate these ideas to the team members. Among such objectives might be the facilitation of inter-generational knowledge transfer, the capturing of new markets (e.g., silver markets with more

mature consumers), and the development of innovative products that call for the competencies of the different age groups within an organisation. In all of these cases, the reason for being in an age-heterogeneous team becomes very obvious for the team members, and they know that their particular skills and experiences are equally needed and valued. The formation of age-related in and out-groups is very unlikely when inter-generational cooperation is one of the team's key targets.

Secondly, companies should strive to form age-heterogeneous teams, especially to fulfil non-routine tasks. As described above, Bowers and colleagues (2000) showed that complex tasks are more suited for age-diverse teams as they can exert their special skills, and competencies.

Thirdly, as described in the previous section, organisations should be aware of potential faultlines in age-heterogeneous teams. In practice, management and HR should take care that age heterogeneity does not coincide with other variables such as gender, nationality, and functional background. In such cases, it is likely that in and out-groups will form, thereby triggering conflict and reduced levels of cooperation.

Diversity trainings

An often neglected aspect of diversity implications in general and age diversity implications in particular is that people in organisations are unaware of the opportunities and pitfalls (Kunze et al. 2010). Therefore, an important step in managing an age-diverse workforce is to raise awareness of the issue (Kunze and Bruch 2010). This holds true for all employees, especially supervisors. As will be outlined in the next section, supervisors can make a meaningful contribution to the prevention of discrimination, and the facilitation of interaction among subordinates. One way to sensitise both employees and supervisors is through special age awareness seminars (Armstrong-Stassen and Templer 2005; Rynes and Rosen 1995).

5.2 Supervisor level

Transformational leadership

Discrimination within teams, resulting from diversity (i.e. faultlines), can be prevented by creating a common identity among team members (Bezrukova et al. 2009). One way to do so is by enhancing the unit attachment and team cohesiveness through the use of transformational leadership (House and Shamir 1993; Jung and Sosik 2002). Bass (1985) created a transformational leader construct, namely someone who can, according to Antonakis and colleagues (2003), act “*proactive, raise follower awareness for transcendent collective interests, and help followers to achieve extraordinary goals*”. According to Podsakoff and colleagues (1996), transformational leadership comprises a combination of six key behaviours, namely: (1) acting as an appropriate role model, (2) fostering the acceptance of common goals, (3) identifying and articulating a clear vision for the future, (4) setting high performance expectations, (5) providing individualised support and (6) intellectual stimulation for followers. By following these guidelines, leaders can create a new

predominant social identity (team membership). Hereby, team members perceive each other as in-group members, regardless of their demographic attributes such as age.

Transformational leadership's general positive effects on performance were confirmed in meta-analytic studies by Lowe and colleagues (1996), and Patterson and colleagues (1995). More interestingly for the purpose of this chapter, Kearney and Gebert (2009) as well as Kunze and Bruch (2010) have recently discovered that transformational leadership has positive effects on the relationship between age diversity and performance.

Enhanced interaction

Another way of supporting the formation of a common identity is by enhancing the interaction between team members (Gaertner and Dovidio 2000). In addition to interaction's positive effects on group performance (Chatman and Spataro 2005; Wageman 1995), the resulting common identity can prevent discrimination (Pettigrew 1998).

Supervisors can facilitate the interaction between group members in multiple ways. Firstly, tasks can be assigned to the whole team or groups instead of individuals. Secondly, architectural considerations can improve contact. Open team offices, shared coffee corners, and group work rooms can make a substantial contribution (Bruch et al. 2010). Thirdly, so-called 'off-site' activities can improve team spirit. Outdoor-training events are a well-known example. These outdoor team activities may serve especially well in age diverse teams since older employees tend to prefer experience and behaviour-based forms of learning (Bruch et al. 2010).

6 Conclusion

The future workforce will be increasingly age diverse. This shift in the workforce composition will have a strong influence on organisational and workgroup diversity. However, the outcomes of this change are less clear. On the one hand, different theories predict that age diversity can have either positive or negative effects. On the other hand, many scientific studies do not explicitly address which processes are expected to take place and why.

Therefore, empirical findings are also mixed. Scholars have only recently started taking contextual factors and boundary conditions into account. Previous research found some results to be more stable than others (e.g., the positive effects of diversity in complex task situations). Based on a diversity research review, practical recommendations are also offered in this chapter. By being aware of the possible risks and opportunities resulting from age diversity, practitioners can take action on different organisational levels to improve their company's efficiency, which should lead to a strategic advantage in future.

References

- Allen, T. D., Eby, L. T., & Lentz, E. (2006). The relationship between formal mentoring program characteristics and perceived program effectiveness. *Personnel Psychology*, 59(1), 125-153.
- Antonakis, J., Avolio, B.J., & Sivasubramaniam, N. (2003). Context and leadership: An examination of nine-factor full-range leadership theory using the Multifactor Leadership Questionnaire (MLQ Form 5X). *Leadership Quarterly*, 14(3), 261-295.
- Armstrong-Stassen, M., & Templer, A. (2005). Adapting training for older employees: The Canadian response to an aging workforce. *Journal of Management Development*, 24(1), 57-67.
- Austin, M.P. (2003). Antenatal screening and early intervention for "perinatal" distress, depression and anxiety: where to from here? *Arch Womens Ment Health*, 7(1), 1-6.
- Bantel, K., & Jackson, S. (1989). Top management and innovation in banking: does the composition of the team make a difference?. *Strategic Management Journal*, 10, 107-124.
- Bass, B.M. (1985). *Leadership and performance beyond expectations*. New York: Free Press.
- Beckman, C.M., & Haunschild, P.R. (2002). Network learning: The effects of heterogeneity of partners' experience on corporate acquisitions. *Administrative Science Quarterly*, 47(1), 92-124.
- Bellman, E. & Kistler, W. J. (2003). Betriebliche Sicht- und Verhaltensweisen gegenüber älteren Arbeitnehmern. *Aus Politik und Zeitgeschichte*, 20, 26-34.
- Bezrukova, K., Jehn, K.A., Zanutto, E.L., & Thatcher, S.M.B. (2009). Do workgroup faultiness help or hurt? A moderated model of faultiness, team identification, and group performance. *Organization Science*, 20(1), 35-50.
- Blau, F. (1977). *Equal pay in the office lexington*. Mass.: D.C. Heath.
- Blau, P.M. (1986). *Exchange and power in social life*. New York: Wiley.
- Blau, J.R. & Blau, P.M. (1982). The cost of inequality: Metropolitan structure and violent crime. *American Sociological Review*, 47(1), 114-129.
- Brewer, M.B. (1979). In-group bias in the minimal intergroup situation: A cognitive-motivational analysis. *Psychological Bulletin*, 86(2), 307-324.
- Brewer, M.B., & Brown, R.J. (1998). *Intergroup relations. The handbook of social psychology*. Boston: McGraw-Hill.
- Bruch, H., Kunze, F., & Boehm, S. (2010). *Generationen erfolgreich führen: Konzepte und Praxiserfahrung zum Management des demographischen Wandels*. Wiesbaden: GWV Fachverlage GmbH.
- Bunderson, J.S., & Sutcliffe, K.M. (2002). Comparing alternative conceptualizations of functional diversity in management teams: Process and performance effects. *Academy of Management Journal*, 45(5), 875-893.
- Burt, R.S. (2002). Bridge decay. *Social Networks*, 24(4), 333-363.
- Byrne, D. (1971). *The attraction paradigm*. New York: Academic Press.
- Carpenter, S.R. (2002). Ecological futures: Building an ecology of the long now. *Ecology*, 83(8), 2069-2083.
- Chatman, J.A., & Spataro, S.E. (2005). Using self-categorization theory to understand relational demography-based variations in people's responsiveness to organizational culture. *Academy of Management Journal*, 48(2), 321-331.
- Cummings, A., Zhou, J., & Oldham, G. (1993). *Demographic differences and employee work outcomes: Effects on multiple comparison groups*. Paper presented at the annual meeting of the Academy of Management, Atlanta, GA.

- Destatis. 2006. *Bevölkerung Deutschlands bis 2050 – 11. Koordinierte Bevölkerungsvorausberechnung*. Wiesbaden.
- Dos Reis, C.R.D.A., Castillo, M.Á.S., & Dobón, S.R. (2007). *Diversity and business performance: 50 years of research*. Heidelberg: Springer.
- Dychtwald, K., Erickson, T., & Morison, B. (2004). It's time to retire retirement. *Harvard Business Review*, 82, 48-57.
- Ely, R.J. (2004). A field study of group diversity, participation in diversity education programs and performance. *Journal of Organizational Behavior*, 25(6), 755-780.
- Fiol, C. M. (1994). Consensus, diversity, and learning in organizations. *Organization Science*, 5(3), 403-420.
- Gaertner, S.L., & Dovidio, J.F. (2000). *Reducing intergroup bias: The common ingroup identity model*. Philadelphia: Psychology Press.
- Grover, V., & Davenport, T.H. (2001). General perspective on knowledge management: Forstering a research agenda. *Journal of Management Information System*, 18(1), 5-21.
- Goldman, B.M., Gutek, B.A., Stein, J.H., & Lewis, K. (2006). Employment discrimination in organizations: Antecedents and consequences. *Journal of Management*, 32(6), 786-830.
- Görges, M. (2004). *Gesellschaftliche Alterung als Herausforderung für betriebliche Arbeitsmärkte*. Münster: Universität Münster.
- Hambrick, D.C. (1994). Top management groups: A conceptual integration and reconsideration of the 'team' label. In B. M. Staw & L. L. Cummings (Eds), *Research in organizational behavior* (pp. 171-213). Greenwich, CT: JAI Press.
- Harrison, D.A., & Klein, K.J. (2007). What's the difference? Diversity constructs as separation, variety, or disparity in organizations. *Academy of Management Review*, 32(4), 1199-1228.
- Hayashi, C., Olkkonen, H., Sikken, B.J., & Jermo, J. (2009). Transforming pensions and healthcare: Opportunities and collaborative strategies. Mercer perspectives.http://www.mercer.com/attachment.dyn?idContent=1355455&filePath=%2fattachments%2fEnglish%2f02664-RE_WEF_Perspective_PW.pdf&fileType=DB&siteLanguage=100. Accessed 14 June 2010.
- Hinds, P.J., Carley, K.M., Krackhardt, D., & Wholey, D. (2000). Choosing work group members: Balancing similarity, competence, and familiarity. *Organizational Behavior and Human Decision Processes*, 81(2), 226-251.
- Hoffman, L.R., Harburg, E., & Maier, N.R.F. (1962). Differences and disagreement as factors in creative group problem solving. *The Journal of Abnormal and Social Psychology*, 64(3), 206-214.
- Hogg, M.A. (2001). A social identity theory of leadership. *Personality & Social Psychology Review*, 5(3), 184-200.
- Hogg, M.A., and Abrams, D. (1988). *Social identifications: A social psychology of intergroup relations and group processes*. London and New York: Routledge.
- Homan, A.C., Hollenbeck, J.R., Humphrey, S.E., Van Knippenberg, D., Ilgen, R.D., & Van Kleef, G.A. (2008). Facing differences with an open mind: Openness to experience, salience of intragroup differences, and performance of diverse work groups. *Academy of Management Journal*, 51(6), 1204-1222.
- House, R., & Shamir, B. (1993). Toward the integration of transformational charismatic and visionary theories. In M. M. Chemers & R. Ayman (Eds.), *Leadership theory and research: Perspectives and directions* (pp. 167-188). San Diego: Academic Press.
- Jackson, S.E., Brett, J.F., Sessa, V.I., Cooper, D.M., Julin, J.A., & Peyronnin, K. (1991). Some differences make a difference – individual dissimilarity and group heterogeneity as correlates of recruitment, promotions, and turnover. *Journal of Applied Psychology*, 76(5), 675-689.

- Jackson, S.E., Joshi, A., & Erhardt, N.L. (2003). Recent research on team and organizational diversity: SWOT analysis and implications. *Journal of Management*, 29(6), 810-830.
- Jackson, S.E., May, K.E., & Whitney, K. (1995). Understanding the dynamics of diversity in decision-making teams. In R. A. Guzzo & E. Sales (Eds.), *Team decision-making effectiveness in organizations* (pp. 204-261). San Francisco: Jossey-Bass.
- Janis, I.L. (1972). *Victims of groupthink: A psychological study of foreign-policy decisions and fiascoes*. Boston: Houghton Mifflin.
- Jehn, K.A., Chadwick, C., & Thatcher, S.M.B. (1997). To agree or not to agree: the effects of value congruence, individual demographic dissimilarity, and conflict on workgroups outcomes. *International Journal of Conflict Management*, 8(4), 287-305.
- Jung, D.I., & Sosik, J.J. (2002). Transformational leadership in work groups. *Small Group Research*, 33(3), 313-336.
- Kanter, R.M. (1977). *Men and woman of the corporation*. New York: Basic Books.
- Kaube, J. (2008). Schneller am Markt? Frankfurter Allgemeine Zeitung. <http://www.faz.net/s/RubC3FFBF288EDC421F93E22EFA74003C4D/Doc~E1D95D73DFD714F029496E13A338C03D6~ATpl~Ecommon~Scontent.html>. Accessed 14 June 2010.
- Kearney, E., & Gebert, D. (2009). Managing diversity and enhancing team outcomes: The promise of transformational leadership. *Journal of Applied Psychology*, 94(1), 77-89.
- Keltner, D., Gruenfeld, D.H., & Anderson, C. (2003). Power, approach, and inhibition. *Psychological Review*, 110(2), 265-284.
- Kilduff, M., Angelmar, R., Mehra, A. (2000). Top management team-diversity and firm performance: examining the role of cognitions. *Organization Science*, 11(1), 21-34.
- Kunze, F., Boehm, S., & Bruch, H. (2010). Age diversity, age discrimination climate, and performance consequences – A cross-organizational study. *Journal of Organizational Behavior*, 31(6), 1-30.
- Kunze, F., & Bruch, H. (2010). Age-based faultiness and perceived productive energy: The moderation of transformational leadership. *Small Group Research*, 41(4), 1-27.
- Lau, D.C., & Murnighan, J.K. (1998). Demographic diversity and faultiness: The compositional dynamics of organizational groups. *Academy of Management Review*, 23(2), 325-340.
- Lau, D.C., & Murnighan, J.K. (2005). Interactions within groups and subgroups: The effects of demographic faultiness. *Academy of Management Journal*, 47(4), 645-659.
- Lawrence, B.S. (1996). Organizational age norms: Why is it so hard to know one when you see one? *The Gerontologist*, 36(2): 209-220.
- Lawrence, B.S. (1997). The black box of organizational demography. *Organization Science*, 8(1), 1-22.
- Leonard, J., & Levine, D. (2006). The effect of diversity on turnover: a large case study. *Industrial & Labor Relations Review*, 59(4), 547-572.
- Leonard, J. S., Levine, D. I., & Joshi, A. (2004). Do birds of a feather shop together? The effects on performance of employees' similarity with one another and with customers. *Journal of Organizational Behavior*, 25(6), 731-754.
- Loden, M., & Rosener, J.B. (1991). *Workforce America: Managing employee diversity as a vital resource*. Homewood, IL: Business One Irwin.
- Lowe, K.B., Kroeck, K.G., & Sivasubramaniam, N. (1996). Effectiveness correlates of transformational and transactional leadership: A meta-analytic review of the MLQ literature. *Leadership Quarterly*, 7(3), 385-425.
- Migdal, M., Hewstone, M., & Mullen, B. (1998). The effects of crossed categorization in intergroup evaluations: A meta-analysis. *British Journal of Social Psychology*, 37(3), 303-324.

- Milliken, F.J., & Martins, L.L. (1996). Searching for common threads: understanding the multiple effects of diversity in organizational groups. *Academy of Management Review*, 21(2), 402-433.
- Nishii, L.H., & Mayer, D.M. (2009). Do inclusive leaders help to reduce turnover in diverse groups? The moderating role of leader-member exchange in the diversity to turnover relationship. *Journal of Applied Psychology*, 94(6), 1412-1426.
- O'Reilly, C.A., Caldwell, D.F., & Barnett, W.P. (1989). Work group demography, social integration, and turnover. *Administrative Science Quarterly*, 34(1), 21-37.
- O'Reilly, C.A., Snyder, R., & Boothe, J. (1993). Effects of executive team demography on organizational change. In G. Huber & W. Glick (Eds.), *Organizational change and redesign* (pp. 147-175). New York: Oxford University Press.
- O'Reilly, C.A., Williams, K.Y., & Barsade, S. (1997). Group demography and innovation: Does diversity help? In E. Mannix & M. Neale (Eds.), *Research in the management of groups and teams* (pp. 183-207). Greenwich, CT: JAI Press.
- Patterson, C., Fuller, J.B., Kester, K., & Stringer, D.Y. (1995). *A meta-analytic examination of leadership style and selected compliance outcomes*. Paper presented to the Society for Industrial and Organizational Psychology, Orlando, FL.
- Pelled, L.H. (1993). *Work group diversity and its consequences: The role of substantive and affective conflict*. Stanford, CA: Doctoral Dissertation, Stanford University.
- Pelled, L.H. (1996). Demographic diversity, conflict, and work group outcomes: An intervening process theory. *Organization Science*, 7(6), 615-631.
- Pelled, L.H., Eisenhardt, K.M., & Xin, K.R. (1999). Exploring the black box: An analysis of work group diversity, conflict, and performance. *Administrative Science Quarterly*, 44(1), 1-28.
- Pelled, L.H., Xin, K.R., & Weiss, A.M. (2001). No es como mí: relational demography and conflict in a Mexican production facility. *Journal of Occupational and Organizational Psychology*, 74(1), 63-84.
- Pettigrew, T.F. (1998). Intergroup contact theory. *Annual Review of Psychology*, 49(1), 65-85.
- Podsakoff, P.M., MacKenzie, S.B., & Bommer, W.H. (1996). Transformational leader behaviors and substitutes for leadership as determinants of employee satisfaction, commitment, trust, and organizational citizenship behaviors. *Journal of Management*, 22(2), 259-298.
- Rand, T.M., & Wexley, K.N. (1975). A demonstration of the Byrne similarity hypothesis in simulated employment interviews. *Psychological Reports*, 36, 535-544.
- Rynes, S., & Rosen, B. (1995). A field survey of factors affecting the adoption and perceived success of diversity training. *Personnel Psychology*, 48(2), 247-270.
- Saba, T., Guerin, G., & Wils, T. (1998). Managing older professionals in public agencies in Quebec. *Public Productivity & Management Review*, 22(1), 15-34.
- Shore, L.M., Chung-Herrera, B.G., Dean, M.A., Erhart, K.H., Jung, D.I., Randel, A.E., & Singh, G. (2009). Diversity in organizations: Where are we now and where are we going? *Human Resource Management Review*, 19(2), 117-133.
- Simons, T., Pelled, L.H., & Smith, K.A. (1999). Making use of difference: Diversity, debate, and decision comprehensiveness in top management teams. *Academy of Management Journal*, 42(6), 662-673.
- Smith, K. G., Smith, K. A., Olian, J. D., Sims Jr, H. P., O'Bannon, D. P., & Scully, J. A. (1994). Top management team demography and process: The role of social integration and communication. *Administrative Science Quarterly*, 39(3), 412-438.
- Smola, K.W. & Sutton, C.D. (2002). Generational differences: revisiting generational work values for the new millennium. *Journal of Organizational Behavior*, 23(4), 363-382.

- Tajfel, H. (1974). Social identity and intergroup behavior. *Social Science Information*, 13(2), 65-93.
- Tajfel, H., & Turner, J.C. (1986). The social identity theory of intergroup conflict. In S. Wochel & W.G. Austin (Eds.), *Psychology of intergroup relations* (pp. 7-24). Chicago: Nelson-Hall.
- Tempest, S., Barnatt, C., & Coupland, C. (2002). Grey advantage – new strategies for the old. *Long Range Planning*, 35, 475-492.
- Timmerman, T.A. (2000). Racial diversity, age diversity, interdependence and team performance. *Small Group Research*, 31(5), 592-606.
- Tsui, A., Egan, T., & O'Reilly, C. (1992). Being different: relational demography and organizational attachment. *Administrative Science Quarterly*, 29(4), 897-901.
- Turner, M.G. (1987). Spatial simulation of landscape changes in Georgia: A comparison of 3 transition models. *Landscape Ecology*, 1(1), 29-36.
- Van Knippenberg, D.L., & Schippers, M.C. (2007). Work group diversity. *Annual Review of Psychology*, 58, 515-541.
- Wageman, R. (1995). Interdependence of group effectiveness. *Administrative Science Quarterly*, 40(1), 145-180.
- Wagner, G.W., Pfeffer, J., & O'Reilly, C.A. (1984). Organizational demography and turnover in top-management groups. *Administrative Science Quarterly*, 29(1), 74-92.
- Wegge, J., Roth, C., Neubach, B., Schmidt, K.H., & Kanfer, R. (2008). Age and gender diversity as determinants of performance and health in a public organization: The role of task complexity and group size. *Journal of Applied Psychology*, 93(6), 1301-1313.
- West, M., Patterson, M., Dawson, J., & Nickell, S. (1999). *The effectiveness of top management groups in manufacturing organizations*. CEP Discussion Paper No. 0436. London, England: Centre for Economic Performance, London School of Economics.
- Wiersema, M.F., & Bantel, K.A. (1992). Top management team demography and corporate strategic change. *Academy of Management Journal*, 35(1), 91-121.
- Wiersema, M.F., & Bird, A. (1993). Organizational demography in Japanese firms – group heterogeneity, individual dissimilarity, and top management team turnover. *Academy of Management Journal*, 36(5), 996-1025.
- Williams, K., & O'Reilly, C. (1998). Demography and diversity in organizations: A review of 40 years of research. *Research in Organizational Behavior*, 20, 77-140.
- Young, J.L., & James, E.H. (2001). Token majority: The work attitudes of the male flight attendants. *Sex Roles*, 45, 299-319.
- Zajac, E., Golden, B., & Shortell, S. (1991). New organizational forms for enhancing innovation: The case of internal corporate joint ventures. *Management Science*, 37(2), 170-184.
- Zenger, T.R., & Lawrence, B.S. (1989). Organizational demography: The differential effects of age and tenure distributions on technical communication. *Academy of Management Journal*, 32(2), 353-376.