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**Disentangling the relationship between age dissimilarity and organizational
identification: the moderating role of age diversity climate**

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Introduction

Over the last few decades, the workforce has become increasingly diverse on various dimensions, including age. Studies have used terms such as “demographic time bomb” to describe the dramatic pace of the population aging (Tempest et al. 2002). Due to reducing birth rates and rising life expectancy, by 2060 in the European Union the ratio of people of working age (15-64) for every person aged over 65 will decrease from one to four to one to two. This demographic change raises important fiscal challenges that have forced several governments to adopt legislative reforms in both the public and private pension systems, to remove mandatory retirement ages, and to outlaw discrimination on grounds of age. At an organizational level, one of the implications of the longer working lifespan is that the distance among employees at both extreme ends of the age continuum is growing (Jackson, May, and Whitney, 1995). Very young employees must work together with considerably older colleagues and vice versa, making it compelling for organizations to effectively manage this age diversity (Rabl and Triana, 2014). However, despite the growing relevance of this phenomenon, research on the implication of age diversity in the workplace is still much less developed than that on race and gender (Shore et al., 2009).

In order to contribute in filling this gap, this study integrates the relational demography approach (Chattopadhyay et al., 2004; Tsui, Egan, and O’Reilly, 1992; Tsui and Gutek, 1999) and the diversity climate literature (Van Knippenberg, Homan, and Van Ginkel, 2013) to shed light on the relationship between age diversity and organizational identification. We focused on organizational identification as previous research has proved this construct to be associated to several work behaviours (e.g. absenteeism, turnover, commitment, organizational citizenship behaviours) that are relevant for organizational performance (Dutton, Dukerich, and Harquail, 1994). We suggest that age dissimilarity does not necessarily hinder identification in age-diverse groups/organizations. Rather, we propose that the individuals’ perception of the age diversity climate determines this relationship.

We tested this conceptual model in a sample of 179 teachers from five secondary schools in Italy. This occupational group is of special interest for a number of reasons. In terms of demographic change, an ageing teaching force is one the main challenges for the education sector in the near future. On average across OECD countries, 36% of teachers at secondary level are at least 50 years old. In Italy, Austria, Germany, the Netherlands, New Zealand and Norway 40% or more secondary teachers are at least 50 years old (OECD, 2014). Furthermore, in many countries, the teaching profession – at least in primary and secondary schools – is facing growing constraints. These include lowering status and social prestige, inadequate resources, isolating work, subordinate status, and limited career opportunities (Johnson and Birkeland, 2003). Furthermore, in Italy as in other countries, teachers' salaries only depend upon age, and promotions are relatively rare. Combined, these factors suggest that there are few extrinsic motivators and that psychological variables such as identification should play a relevant role in individual work outcomes (Van Dick and Wagner, 2002).

Conceptual background and model

The relational demography approach suggests that diversity affects individual work-related outcomes (e.g. identification, satisfaction, task and contextual performance) as a function of people's relative level of dissimilarity in a group/organization (Guillaume, Brodbeck, and Riketta, 2012). Dissimilarity is defined as the differences between a focal group member and his/her co-workers with respect to actual demographic (e.g. age, gender) or idiosyncratic characteristics (e.g. personality, beliefs).

Relational demography draws on two main theoretical perspectives: the social identity approach, that includes self-categorization theory (Turner, 1982) and social identity theory (Tajfel, 1978; Tajfel and Turner, 1979), and the similarity-attraction approach, which encompasses the similarity-attraction theory (Byrne, 1971) and the attraction-selection-attrition model (Schneider, 1987).

The social identity approach rests on the concept of psychological group, which assumes that an individual can identify with a group on the basis of his/her perception of similarity or dissimilarity of others, without necessarily engaging in interpersonal interaction with all or any members of that group. Furthermore, groups that contain the self are likely to be considered more positively.

The notion of psychological group is crucial to the tenets of relational demography as it explains social identification processes that are uniquely based on similarity/dissimilarity perceptions, indexed by demographic attributes (Tsui, Egan, and O'Reilly, 1992). These demographic attributes may be relevant categories that individuals use to derive their self-identity in the context of a given organization (Tajfel and Turner, 1986; Ashforth and Mael, 1989). As Tsui, Egan and O'Reilly state, "the organization or unit can be an attractive psychological group to an individual to the extent that it comprises others whose demographic profile is consistent with the categories that the individual has chosen to categorize him or herself" (1992 p. 554). Relational demographers also notice that belonging to a minority group emphasizes distinctiveness, so members of demographic minority groups are more likely to categorize themselves (and to be categorized by others) in terms of demography (Simon, Hastedt, and Aufderheide, 1997).

According to the similarity-attraction approach, individuals are more attracted to others who they believe hold similar psychological characteristics to themselves, because similarity in personality, attitudes, and values facilitates interpersonal communication and friendship, and leads to the verification and reinforcement of people's own attitudes, beliefs, and personality.

As Tsui and colleagues notice, the social identity approach and the similarity-attraction paradigms can operate concurrently and should be treated as complementary (Tsui, Egan, and O'Reilly, 1992), although the social identity approach more adequately explains dissimilarity effects with respect to surface-level individual characteristics (e.g. demographic attributes) while the similarity-attraction paradigm is better suited to accounts for dissimilarity effects with respect to deep-level characteristics (e.g. values) (Guillaume, Brodbeck, and Riketta, 2012).

Building on these theoretical grounds, relational demographers postulate an inverse relationship between dissimilarity and identification (Riordan, 2000; Tsui and Gutek, 1999). However, empirical evidence has often produced mixed results. A recent meta-analysis showed that there is a lot of unexplained variation in the main effect of dissimilarity on individual level work attitudes and behaviours (Guillaume, Brodbeck, and Riketta, 2012).

One possible explanation for this mixed evidence lies on the possibility that other contingency factors may come into play. Following this idea, a first stream of studies has focused on individual moderators such as race and gender, reporting an

asymmetric influence of demographic dissimilarity on individual work outcomes depending on the social status associated to different demographic groups. For instance, Chattopadhyay, George, and Shulman (2008) found that in traditionally male-dominated organizations, women reported lower levels of work group identification and higher perceived levels of task and emotional conflict in conjunction with higher levels of sex dissimilarity. In contrast, men in these work groups were not influenced with regard to their work group identification and perceptions of emotional conflict when they were more dissimilar from their peers.

Other researchers have focused on contextual factors as potential moderators in the relationship between dissimilarity and individual work outcomes. They argued that numerical representation *per se* is not the only factor nor possibly the most important to make demographic differences salient for social categorization. Rather, social identities based on demographic characteristics become relevant when they make sense in the social context. Individual experience and cognition of the social and/or organizational context forge diversity beliefs and this can, in turn, make demographic diversity more or less salient for the individual (Van Knippenberg, Homan, and Van Ginkel, 2013). Consistently with this argument, Avery, Mckay, Wilson and Tonidandel (2007) found that African-Americans reported significantly higher absenteeism rate than their Caucasian counterparts, but this difference was significantly more pronounced when employees believed their organizations placed little value on diversity. Van Knippenberg and colleagues (2003) reported more positive relationships between diversity and identification for group members who believed more in the value of diversity.

Following this view, Gonzales and Denisi (2009) proposed that diversity climate mitigates the effect of diversity on work outcomes. They found evidence that the impact of gender and ethnic diversity on affective organizational commitment, organizational identification, and intention to quit are stronger when members' perception of diversity climate is adverse and weaker when diversity climate is supportive.

Drawing on these findings, the present study seeks to contribute to this new and promising line of investigation by examining the moderating role of age diversity climate in the relationship between age dissimilarity and organizational identification. Although age diversity climate is a relatively new and underexplored construct, initial findings have already proved its relevance and predictive value. In a recent study,

age-diversity climate was associated with collective perceptions of social exchange, which in turn were related to lower employee turnover intentions and higher firm performance (Boehm et al., 2014). In another empirical study, age diversity climate was positively related to altruistic organizational citizenship behaviour towards co-workers (Innocenti, Sammarra, and Profili, 2014). Furthermore, Boehm, Kunze and Bruch (2014) found that age diversity climate was also an important mediator in the age-inclusive HR practices–firm performance relationship.

The conceptual model proposed in this study maintains that individual perception of the age diversity climate can shape the effects of age dissimilarity on organizational identification. We argue that the extent to which employees perceive the organizational context as fair, inclusive and respectful towards all employees regardless of their age will influence age identity salience and therefore shape the impact of age dissimilarity on organizational identification.

Therefore we posit that age diversity climate will moderate the impact of age demographic dissimilarity on organizational identification in such a way that dissimilarity effects will be stronger when age diversity climate is adverse and weaker when diversity climate is supportive.

- Figure 1 –

Method

Participants

The study involved 179 teachers from 5 secondary schools located in central Italy. Care was taken to select urban and suburban schools and public and private institutions in order to include the most relevant dimensions of the education sector in Italy. Fifty-nine percent of the teachers were women, confirming the female predominance in education. On average teachers' age was 48, and the age was distributed as follows: 12 percent of teachers were younger than 35 years old, 49 percent were between 36 and 50 years old, and 39 percent were older than 50 years old. Teachers had an average of 9 years of tenure in the current school, and 17 years practicing as teacher. These demographic characteristics were similar to those of the secondary level school teachers population in Italy reported in recent studies (OECD, 2014).

The principals of the schools were contacted in order to obtain their permission to conduct the survey. Student research assistants distributed structured questionnaires

at each school's faculty during the 2013-2014 school year. Participants were informed that the survey was part of a larger research project. They were assured anonymity and guaranteed that their responses were reported as an aggregate score only.

Measures

Constructs were assessed on a five-point scale (1 = almost always not true, 5 = almost always true). Measures were checked for unidimensionality using factor analysis, and internal consistency, using Cronbach's α coefficient.

Age Diversity Climate was measured on a 5-item scale based on McKay et al. (2009) and Robertson (2006) and adapted to the school context to capture teachers' beliefs of the extent to which their school was inclusive and respectful towards all teachers regardless of their age. Example items are: "My school respects the view of people of my age", "Not everyone of my age in the school is treated fairly (reverse coded)".

Organizational Identification was measured with 6 items from the Mael and Ashfort's scale (1992). Example items included: "When someone criticizes my school, it feels like a personal insult", "When I talk about this school, I usually say 'we' rather than 'they'".

Age Dissimilarity. Following O'Reilly, Caldwell, and Barnett (1989) and Tsui and O'Reilly (1989) we computed the Age Dissimilarity Index as the difference between an individual's age and the ages of all other individuals in his/her school. It was calculated as the square root of the summed squared differences between an individual S_j age and the age for every other individual S_j in the same school, divided by the total number of respondents in the unit $\{n\}$. The following formula was used for this calculation:

$$\left[\frac{1}{n} \sum_{j=1}^n (S_i - S_j)^2 \right]^{1/2} .$$

Control variables. We included in the analysis several control variables that previous studies found to be related to our outcome of interest. The first set of controls comprises individual demographic variables: age (number of years), gender (0=male, 1=female), organizational tenure (number of years), professional tenure (number of years), and teachers' contractual position (0=tenured, 1=non tenured). We also controlled for organizational related variables: school size (number of teachers employed – log) and the type of school (0=private; 1= public).

Results

Descriptive statistics, correlations and Cronbach's α are displayed in Table 1.

- Table 1 –

We tested our conceptual model by means of stepwise regression analysis (Table 2). All the control variables were entered in the first step (Model 1), followed by the independent and moderator variables in the second step (Model 2), and the interaction term computed as the cross-product of Age Dissimilarity and Age Diversity Climate in the third step (Model 3). Before calculating the product term both variables were z-standardized.

- Table 2 –

As predicted, Model 3 shows that the interaction term is significant ($\beta=0.21$, $p < 0.01$). Following the procedure recommended by Aiken and West (1991), Figure 1 shows the nature of the interaction plotting the relationship between organizational identification and age dissimilarity at different levels of perceived age diversity climate (i.e. one standard deviation above/below the mean of age diversity climate). Consistently with our arguments, when perceived Age Diversity Climate is low, there is a negative relationship between Age Dissimilarity and teachers' Organizational Identification. The relationship is instead positive for teachers scoring high on the Age Diversity Climate variable.

- Figure 2 –

Conclusion

This study developed and tested a model that examines how employees' perception of age diversity climate shapes the impact of age dissimilarity on organizational identification. We found that age dissimilarity had a negative impact on organizational identification when school teachers' perception of the age diversity climate was adverse, but that this association was positive when the perceived age diversity climate was supportive.

The first contribution of our study is to extend previous research by pointing at age dissimilarity, while the few existing studies on this topic have focused on race and gender diversity. Our second contribution is to consider the moderating role of a facet specific measure of diversity climate. According to Boehm and Dwertmann (2014), the conceptual justification for introducing a fine-grained concept of climate focused on a single diversity dimension is to enhance the validity of the measure and the quality of predictions. As the authors state "whereas it seems possible for a unit or organization to be generally open to all kinds of diversity, the focus of organizations and potential stereotypes of members might also vary by diversity category" (2014, p. 12).

The present study has also relevant practical implications as it suggests that age dissimilarity in the workplace, if not effectively managed, can have a negative influence on organizational identification and, in turn, become detrimental for organizational performance. It is therefore crucial for organizations to accompany the increasing age dissimilarity in the employee population with appropriate diversity management practices to foster perception of inclusiveness and fairness towards all age groups. Creating a climate where employees are viewed positively regardless of their age is, indeed, "an important way of getting diversity at work to work" (Guillaume et al., 2013, p. 133).

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Figure 1 – Conceptual model



Table 1. Mean, standard deviation and correlations^a among variables

Variables	Mean	S.D.	1.	2.	3.	4.	5.	6.	7.	8.	9.	.10
1. Gender ^b	.61	.49										
2. Age	47.83	9.07	.121									
3. Occupational tenure	17.72	10.27	.104	.853**								
4. Organisational tenure	9.22	7.76	.013	.521**	.649**							
5. Contractual position	.024	.427	.034	-.406**	-.461**	-.416**						
6. Type of school	.78	.41	.197**	.371**	.274**	.069	.012					
7. School Size ^c	4.17	.48	-.116	.180*	.176*	.146	-.169*	.334**				
8. Age Dissimilarity	1.69	.60	-.184*	-.253**	-.162*	-.175*	.353**	-.191*	-.391**			
9. Age Diversity Climate	3.34	.69	.033	.150*	.048	-.100	-.095	.003	-.079	.008	(.84)	
10. Organisational identification	3.70	.66	.175*	.140	.139	.036	-.141	-.046	-.097	-.087	.389**	(.80)

Note: Internal consistency reliabilities are parentheses on the diagonal when applicable; * $p < .05$, ** $p < .01$.

^a Teachers $n=179$;

^b 0=male; 1=female

^c Size on log value expected for means and standard error.

Table 2 – Hierarchical regression analysis results

	<i>Organisational Identification</i>		
	Model 1	Model 2	Model 3
<i>Controls</i>			
Gender	.176*	.161*	.167*
Age	.154	-.029	-.116
Occupational tenure	.047	.152	.130
Organisational tenure	-.091	-.004	.015
Contractual position	-.105	-.023	-.040
Type of school	-.149	-.101	-.064
School Size	-.090	-.081	-.075
<i>Independent Variable</i>			
Age Dissimilarity		-.091	-.124
<i>Moderator Variable</i>			
Age Diversity Climate		.394***	.388***
<i>Interaction Term</i>			
Age Dissimilarity x ADC			.221**
<i>F (df)</i>	2.22*	5.32**	5.88**
<i>R Square</i>	.088*	.232***	.271***
<i>Adj R Square</i>	.049*	.188***	.225***

N=179

Note. Standardized coefficients (betas) are reported. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Figure 2 - Interaction plot

