

## Ageism at work: The impact of intergenerational contact and organizational multi-age perspective

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Despite the prevalence of ageism in the workplace, little empirical effort has been devoted to analysing the contextual factors that may help reduce it. Building upon research on intergroup contact and multiculturalism, we examine in two studies how intergenerational contact and organizational multi-age perspective may contribute toward mitigating ageism and improving work attitudes through a dual identity process. In Study 1, SEM analyses confirm that workers' dual identity is a key mediator of the effects of context on both ageism and attitudes at work. Study 2 replicates and extends the results of Study 1, firstly by showing the mediational effects of perceived procedural justice, and secondly by investigating stereotypes more closely related to the population of older workers. As a set, our findings shed new light on ageism at work as well as on the protective role of two aspects of the social context.

**Keywords:** Intergroup contact; Multiculturalism; Dual identity; Ageism at work.

What is the worst thing that could happen to you in your professional career? According to Rogerson (2003), the biggest fear of many people is to be over the age of 50. In line with this feeling, a large body of research reveals the prevalence of negative stereotypes about older people and discriminatory behaviours toward them (for meta-analyses, see Posthuma & Campion, 2009; for a review, see Finkelstein & Farrell, 2007).

Still, although ageism at work—i.e., stigmatization of and discrimination against people because they are old (Butler, 1969)—is a well-established phenomenon, and despite the fact that studies have shown its devastating effects on older people's attitudes at work (Gaillard & Desmette, 2010), little empirical effort has been made to analyse the way organizations attempt to reduce ageism in the workplace. Within the literature on intergroup relations (for a review, see Yzerbyt & Demoulin, 2010), two main approaches have been offered for the reduction of intergroup bias: the contact hypothesis (Allport, 1954) and the multicultural perspective (Richeson & Nussbaum,

2003; Wolsko, Park, & Judd, 2006). As a matter of fact, research has repeatedly shown that the quality of contact with an outgroup (e.g., Pettigrew & Tropp, 2006, 2008) and fostering a multicultural perspective, that is, a diversity perspective proposing that group differences and memberships should be considered and celebrated (e.g., Richeson & Nussbaum, 2003; Yinger, 1994), are the most influential factors for reducing intergroup bias. Traditionally, however, the literature on multiculturalism has focused on race rather than age. In addition, there is still no clear consensus as to how intergroup contact and fostering a multiculturalist perspective can improve intergroup relations and attitudes at work (Dovidio & Gaertner, 2010).

The aim of the present contribution is to build upon the research on the reduction of intergroup bias (e.g., Dovidio & Gaertner, 2010) and to examine the influence of both intergenerational contact and organizational multi-age perspective on ageism and attitudes at work. Moreover, in recent years, social identity theory (Tajfel, 1978) has led researchers to

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emphasize the role of social categorization in the reduction of intergroup bias (e.g., González & Brown, 2003). Therefore, an additional goal of the present endeavour is to investigate identity processes that can explain the impact of an organizational context related to age diversity (intergenerational contact and organizational multi-age perspective) on intergenerational bias and attitudes at work.

### Intergroup contact and multicultural perspective

For over fifty years, contact between groups, i.e., actual face-to-face interaction between members of distinguishable and defined groups (Pettigrew, 1998), has been conceived as one of the most effective strategies for improving intergroup relations and fighting against group biases (Allport, 1954; for meta-analyses, see Pettigrew & Tropp, 2006, 2008). Contact studies range across a variety of groups. Regarding contact with the elderly in particular, Tam, Hewstone, Harwood, Voci, and Kenworthy (2006) examined the role of grandparent–grandchild communication in improving intergenerational attitudes. These authors showed that contact with one's grandparents was associated with more favourable explicit attitudes toward older adults. More generally, extensive research in diverse settings (Brouwer & Boros, 2010; Pettigrew, Tropp, & Oskamp, 2000; Voci & Hewstone, 2003) leads to the conclusion that the quality of contact (e.g., a pleasant social atmosphere surrounding contact and a high degree of cooperation) is a better predictor of intergroup attitudes than the quantity of contact (e.g., the frequency of contact, the number of persons involved). Moreover, quality of contact could also improve work attitudes. Indeed, it is well known that favourable co-worker relationships influence work attitudes (e.g., Hodson, 1997). For example, studies reveal that satisfaction with one's co-workers is significantly related to engagement (Avery, McKay, & Wilson, 2007) and that social support between co-workers is significantly related to lower intentions to quit (Pomaki, DeLongis, Frey, Short, & Woehrle, 2010). To date, however, the effects of contact on outcomes other than prejudice have seldom been addressed in the contact literature (Dixon, Durrheim, & Tredoux, 2005). In light of this, the present paper aims to examine the way in which high quality contact between age groups has an impact on intergroup relations and work attitudes.

Positive effects of contact can be triggered by several optimal conditions, such as authority support to contact (Allport, 1954; Pettigrew & Tropp, 2006). In a similar vein, there is growing empirical evidence that the reduction of intergroup bias and the creation of a positive diversity climate are promoted by

fostering a multicultural perspective (e.g., Plaut, Thomas, & Goren, 2009; Richeson & Nussbaum, 2003; Wolsko, Park, Judd, & Wittenbrink, 2000). For example, in a study conducted in the Netherlands, Verkuyten (2005) found that the greater the number of Dutch participants who endorsed the ideology of multicultural recognition, the more likely they were to evaluate the Muslim Turkish outgroup positively. This multicultural perspective is closely related to the "integration and learning" organizational perspective put forth by Ely and Thomas (2001), which consists in encouraging all employees to value and express themselves as members of their racial identity groups. Examining the effects of the organizational perspective, Ely and Thomas (2001) showed that the "integration and learning" perspective provided the rationale and guidance needed to secure sustained benefits from diversity, and increasing innovation from and performance of workers. Building upon this message, we hypothesize that fostering an organizational multi-age perspective will likely reduce ageism, as well as improving attitudes at work.

Interesting as they may be, the available studies on multiculturalism have a major limitation in that evidence regarding the processes that mediate the effects of a multicultural perspective remains rather scarce. In a recent contribution, van der Noll, Poppe, and Verkuyten (2010) showed that the reduction of perceived symbolic threat (perceived group differences in values, norms and beliefs) and safety threat (perceived competition over material and economic group interests) explained the relationship between a multicultural perspective and political tolerance. In the same vein, Chang and Le (2010) showed that fostering a multicultural perspective increased ethnocultural empathy, which in turn improved academic achievement for Hispanics. Unfortunately, these studies have not yet investigated those specific processes through which multiculturalism triggers the reduction of prejudice itself. In our view, research on identity processes in contact situations offers some useful ideas in this respect.

### Dual identity processes

Several studies have investigated the social categorization processes that are likely to contribute toward reducing intergroup bias in contact situations. Among the different models inspired from social identity theory (Tajfel, 1978) that have been proposed (e.g., Gomez, Dovidio, Huici, Gaertner, & Cuadrado, 2008; Hornsey & Hogg, 2000), the dual identity model appears to be one of the most promising. This model posits that simultaneously maintaining the ingroup–outgroup distinction and building a superordinate identity in a cooperative encounter is conducive to more harmonious group relations

(Huo, Smith, Tyler, & Lind, 1996; Richter, West, Van Dick, & Dawson, 2006). According to Hornsey and Hogg (2000), a dual identity approach works because whenever two social categories intersect, the accentuation of perceived differences between the categories in one dimension (i.e., the group identity) is weakened by a countervailing accentuation of perceived similarities in the shared category dimension (i.e., the common identity). Most past studies on dual identity have relied on artificial groups (e.g., Dovidio, Gaertner, & Validzic, 1998; González & Brown, 2003), but the few studies which have been conducted in real settings have confirmed that dual identity is a powerful mediator for the link between intergroup contact and the reduction of intergroup bias (Eller & Abrams, 2003, 2004; Guerra et al., 2010). For example, a longitudinal study carried out by Eller and Abrams (2004) in a Mexican organization shows that a strong dual identity (i.e., the perception that Americans are another group and at the same time that Americans share a common identity with Mexicans) explains how high quality contact between American and Mexican co-workers can improve the attitudes of Mexicans toward Americans.

To date, however, no study has addressed the mediating role of dual identity in the larger context of multiculturalism. As Hornsey and Hogg (2000) and Wolsko et al. (2000) have suggested, a multiculturalist context should likely activate a dual identity, thereby providing cognitive mechanisms to reduce the exclusion of disadvantaged groups. In the same way, Dovidio, Gaertner, and Kawakami (2003) outlined the striking similarity between an acculturation strategy of integration (i.e., a multicultural perspective) and dual identity, an integration context implying both the activation of different social categories (the acknowledgement and celebration of

social differences) and the activation of a superordinate category (the promotion of social cohesion). Our aim was therefore to extend previous research on multiculturalism by examining the mediational status of dual identity in the context of age-related diversity in the workplace.

Across two studies we hypothesized that dual identity would mediate the relationships between a favourable intergenerational context at work on the one hand (high quality contact between age groups and multi-age organizational perspective), and less ageism at work and lower intentions to quit on the other.

## STUDY 1

Study 1 tested three hypotheses (see Figure 1). We predicted that participants' dual identity (high identification with both age group and the organization) would mediate the relationships between the quality of contact with older workers on the one hand and positive stereotypes about them and lower intentions to quit on the other (Hypothesis 1). We also hypothesized that participants' dual identity would mediate the relationships between organizational multi-age perspective and the same dependent variables as stated above (Hypothesis 2).

An additional aim of Study 1 was to investigate ageist attitudes at work by considering stereotypes of, behaviours toward, and emotions about older workers. According to the tripartite model of attitudes (Finkelstein & Farrell, 2007), ageist views, like any other intergroup bias, can be thought of as a constellation of three components: cognitive, affective, and behavioural. Along these lines and as an offshoot of the stereotype content model, which depicts groups in terms of competence and warmth

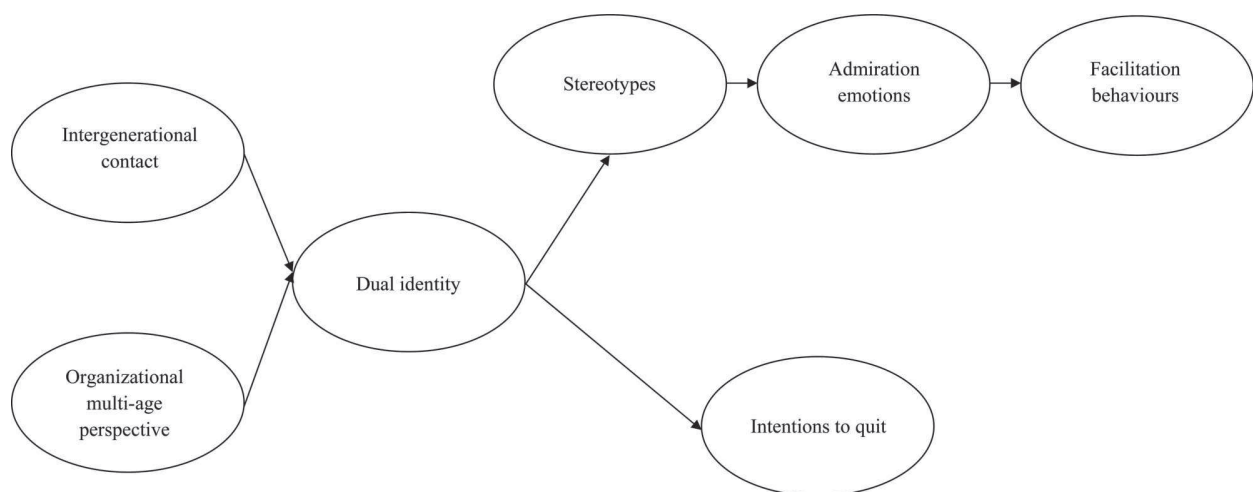


Figure 1. Hypothesized model (Study 1).

(Fiske, Cuddy, Xu, & Glick, 2002; Fiske, Xu, & Cuddy, 1999), the “behaviours from intergroup affect and stereotypes” map model (BIAS; Cuddy, Glick, & Fiske, 2007) predicts emotions about and behaviours toward members of a group as a function of people’s perceptions of this group (Fiske et al., 2002). Specifically, several behavioural patterns are predicted by four affective states (admiration, contempt, pity, and envy), which are induced by stereotypes concerning competence and warmth (Fiske et al., 2002). For example, groups that are perceived as high in both warmth and competence would elicit feelings of admiration as well as (passive and active) facilitation behaviour. In line with the BIAS map model (Cuddy et al., 2007), our final hypothesis held that positive emotions (admiration) would mediate the link between positive stereotypes (perceptions of high competence and high warmth) and facilitation behaviour tendencies (Hypothesis 3).

## Method

### *Participants and procedure*

Data were collected in two financial companies on 496 French-speaking Belgian employees. We had a final sample of 129 employees aged less than fifty (mean age = 37.74,  $SD = 7.68$ , minimum = 21, maximum = 49, 80% of respondents being in the 30 to 49 age range) who completed the entire questionnaire (response rate = 26%). A majority of respondents were males (59%), worked full time (86%), were employees (55%), and had a college education (53%). Participants were invited to complete an open-ended questionnaire available on the internet and created with the DORIS software (UCL/PSP, version 1.5). The link to the questionnaire was included in an email sent by the researchers. This email indicated that the purpose of the study was to examine people’s attitudes toward age diversity and intergenerational relationships at work.

### *Measures*

At the beginning of the questionnaire, participants were informed that the group of older workers included workers of 50 years of age and above, and that the participants had to refer to themselves as members of the younger workers’ generation at work (defined as workers of less than 50 years of age).<sup>1</sup>

<sup>1</sup>This age threshold was chosen on the basis of The Organisation for Economic Co-operation and Development (2006), which defines older workers as those who are 50 years of age and above, and also because it is commonly used in studies on ageism at work to distinguish between older workers and younger workers (Hassell & Perrewé, 1993).

*Predictors.* *Intergenerational contact* was measured by means of five items adapted from Voci and Hewstone (2003). On a seven-point scale ranging from 1 (*totally disagree*) to 7 (*totally agree*), respondents rated the degree to which their contact with older workers was *natural*, *positive*, *unpleasant*, *competitive*, and *involuntary*. The three last items were reverse coded so that higher scores indicated positive contact ( $\alpha = .65$ ).<sup>2</sup>

The *organizational multi-age perspective* was measured with six items ( $\alpha = .95$ ) adapted from the racial diversity scale by Wolsko et al. (2006). Participants were invited to rate on a seven-point scale ranging from 1 (*never*) to 7 (*always*) the extent to which they considered that their company supported a multi-age diversity perspective (e.g., “In its age management diversity, my organization considers that recognizing the specificity of each generation leads to harmony between workers”).

*Mediator.* Participants’ *dual identity* was measured by multiplying their age group (ingroup) identity with their organizational (common) identity (for a similar procedure, see Hofhuis, van der Zee, & Otten, 2012). Age group identity was measured with six items ( $\alpha = .86$ ) adapted from Garstka, Schmitt, Branscombe, and Hummert (2004), and from Kessler and Mummendey (2002) (e.g., “You identify yourself as a member of your generation at work”). Organizational identity (common identity) was measured with the same six items ( $\alpha = .91$ ) adapted to the organizational identity (e.g., “You identify yourself as a member of your organization”). Because each of the six identity scales ranged from 1 (*totally disagree*) to 7 (*totally agree*), participants’ dual identity scores (age identity \* organizational identity) ranged from 1 (lowest possible average score on both components) to 49 (highest possible average score on both components).

*Criteria.* The measure of ageism at work was adapted from Fiske et al. (2002) for stereotypes and from Cuddy et al. (2007) for emotions (admiration) and behaviours (facilitation) toward older workers as a group.

As far as *stereotypes* were concerned, participants used an eleven-point scale ranging from 1 (0%) to 11

<sup>2</sup>The rather low alpha of contact can be attributed to the last item of the scale (i.e., “contact with older workers is involuntary”). Confirmatory factor analyses revealed that this indicator had a lower (but acceptable) standardized loading (.50) than other indicators of contact. However, we did not remove this item for several reasons. Firstly, the whole scale adapted from Voci and Hewstone (2003) has been largely validated in the literature on intergroup contact. Secondly, we wanted to use similar scales in both Study 1 and Study 2 for replication aims, and the reliability score of the whole contact scale in Study 2 was good ( $\alpha = .80$ ). Finally, DeVellis (1991) considers that an alpha of .65 is acceptable.

(100%) in order to indicate the extent to which they perceived older workers as being competent (e.g., “How competent are older workers?”) and warmth (e.g., “How tolerant are older workers?”). Competence (four items,  $\alpha = .77$ ) and warmth (four items,  $\alpha = .81$ ) scales were multiplied so that the highest scores indicated that older workers were perceived as both warm and competent.

*Admiration* was measured with two items ( $r = .37$ ,  $p < .01$ ). Participants were invited to use a seven-point scale ranging from 1 (*totally disagree*) to 7 (*totally agree*) to rate the extent to which older workers elicited admiration (e.g., “You may feel admiration toward older workers”).

*Facilitation behavioural tendencies* were measured with four items (two items for active facilitation,  $r = .29$ ,  $p < .001$ ; two items for passive facilitation,  $r = .60$ ,  $p < .001$ ). Participants were invited to use the same seven-point scale to rate the extent to which they thought that older workers elicited active facilitation (e.g., “You may want to help older workers”) and passive facilitation (e.g., “You may want to cooperate with older workers”). As for stereotypes, the active facilitation scale and the passive facilitation scale were multiplied so that the highest scores indicated high active and passive facilitation.

Finally, *intentions to quit* were measured with four items ( $\alpha = .86$ ) adapted from Price (1997) (e.g., “If I could, I would quit my organization today”).

*Personal and organizational variables.*<sup>3</sup> Age, gender, education, working time, and professional status were each measured using single items. With the exception of age, which was a continuous variable, the other variables were multiple choice questions.

## Results

### *Preliminary analyses*

The relationships between control variables and dependent measures were analysed in line with Becker’s (2005) recommendations. We used one-way

analyses of variance (ANOVAs) for gender, working time, and professional status, and correlations for age. None of the control variables were related to the criterion variables. Therefore, none of the control variables were taken into account in the following analyses. Descriptive statistics and correlations among variables are presented in Table 1.

Our main data were analysed following a two-step procedure. First, using the LISREL software (LISREL, version 8.8), we assessed the measurement model through confirmatory factor analyses. Second, we constructed a structural equation model in order to test our hypotheses. Because of the small size of our sample, we decided to reduce the number of parameters to be estimated per factor, using the partial disaggregation method (Bagozzi & Edwards, 1998).<sup>4</sup> Based on Kline’s (2011) recommendations, we examined the fit of the measurement and structural model by means of the chi-square ( $\chi^2$ ; e.g., Barrett, 2007), the Comparative Fit Index (CFI; Bentler, 1990), the standardized root mean square residual (SRMR; Hu & Bentler, 1999), and the root mean square error of approximation (RMSEA; Steiger & Lind, 1980).

### *Confirmatory factor analyses*

In line with the hypothesized model, we specified seven latent constructs: intergenerational contact, organizational multi-age perspective, dual identity, stereotypes, admiration, facilitation behaviours, and intentions to quit. As expected, this model fitted the data very well:  $\chi^2(98) = 111.37$ ,  $p < .05$  (CFI = .98, SRMR = .05, RMSEA = .03). The standardized loadings were significant (all  $t > 1.96$ ) and large, ranging from .50 to .95.

Next, following Bentler’s (1990) recommendations, we compared this seven-factor model to a series of alternative measurement models to ensure that the predicted model best reflected the data structure. The fit indices of these alternative measurement models are presented in Table 2. The results indicated that our seven-factor model was significantly superior to all models that were more constrained.

### *Tests of hypotheses*

The results indicated that the hypothesized model (see Figure 1) presented an adequate fit to the data:  $\chi^2(112) = 143.86$ ,  $p < .05$  (CFI = .96, SRMR = .09, RMSEA = .05). We then compared this model to alternative models containing additional paths that were theoretically plausible and suggested partial mediation instead of total mediation. The fit indices

<sup>3</sup>Age, gender, education, and professional status are generally controlled for studies on ageism at work (e.g., Redman & Snape, 2002), with several meta-analyses showing that these participant-level variables exert a significant impact on attitudes toward older workers (e.g., Gordon & Arvey, 2004). Working time is controlled less often in the literature on ageism at work. In the present context, this organizational variable was also considered along with the other variables mentioned above because they have been shown to be significant predictors of intentions to quit. In fact, studies showed that men (Chen & Francesco, 2000), employees with more education (Mathieu & Zajac, 1990), younger workers (Arnold & Feldman, 1982), and part-time employees (Burke & Greenglass, 2000) are less willing to quit than women, employees with less education, older workers, and full-time employees.

<sup>4</sup>Path analyses were also conducted for Study 1 and Study 2, and revealed similar results.

TABLE 1  
Means, standard deviations and intercorrelations among the variables (Study 1)

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6
1. Intergenerational contact <sup>1</sup>	5.74	0.67						
2. Organizational multi-age perspective <sup>1</sup>	4.13	1.31	.14					
3. Dual identity <sup>2</sup>	43.50	7.74	.18*	.33***				
4. Stereotypes <sup>3</sup>	62.12	16.34	.19*	.22*	.29**			
5. Admiration <sup>1</sup>	3.94	1.10	.08	.19*	.25**	.21*		
6. Facilitation behaviours <sup>2</sup>	22.62	8.54	.30**	.26**	.22*	.21*	.40***	
7. Intentions to quit <sup>1</sup>	2.19	1.20	-.17 <sup>†</sup>	-.27**	-.37***	-.25**	.03	-.61***

*N* = 129. <sup>†</sup>*p* < .10, \**p* < .05, \*\**p* < .01, \*\*\**p* < .001.

<sup>1</sup>ranges from 1 (=totally disagree) to 7 (=totally agree).

<sup>2</sup>ranges from 1 (=low dual identity, low facilitation behaviours) to 49 (=high dual identity, high facilitation behaviours).

<sup>3</sup>ranges from 1 (=low competence and warmth perceptions) to 121 (=high competence and warmth perceptions).

TABLE 2  
Confirmatory factor analysis fit indices for measurement model (Study 1)

Model	$\chi^2$	<i>df</i>	$\Delta\chi^2$ ( $\Delta df$ )	<i>CFI</i>	<i>SRMR</i>	<i>RMSEA</i>
1. Seven-factor model	111.37	98	–	.98	.05	.03
2. Six-factor model (CONT, MULTI = 1 factor)	206.06	104	94.69(6)***	.92	.09	.09
3. Six-factor model (CONT, DI = 1 factor)	190.73	104	79.36 (6)***	.93	.08	.08
4. Six-factor model (MULTI, DI = 1 factor)	364.81	104	253.44 (6)***	.80	.12	.14
5. Six-factor model (STERE, ADM = 1 factor)	154.48	104	43.11(6)***	.95	.08	.06
6. Six-factor model (STERE, FA = 1 factor)	191.12	104	79.75(6)***	.93	.09	.08
7. Six-factor model (ADM, FA = 1 factor)	132.60	104	21.23 (6)**	.98	.06	.04
8. Six-factor model (DI, STERE = 1 factor)	192.87	104	81.50(6)***	.91	.08	.08
9. Six-factor model (DI, ADM = 1 factor)	153.54	104	42.17(6)***	.96	.07	.06
10. Six-factor model (DI, FA = 1 factor)	184.22	104	72.85(6)***	.93	.09	.08
11. Five-factor model (MULTI, CONT, DI = 1 factor)	465.99	109	354.52(11)***	.75	.14	.16
12. Five-factor model (STERE, ADM, FA = 1 factor)	235.43	109	124.06(11)***	.92	.10	.10
13. Four-factor model (MULTI, CONT = 1 factor; STERE, ADM, FA = 1 factor)	318.11	113	206.74(15)***	.86	.12	.12
14. Three-factor model (MULTI, CONT, DI = 1 factor; STERE, ADM, FA = 1 factor)	567.55	116	456.18(18)***	.68	.16	.17
15. Two-factor model (MULTI, CONT, DI = 1 factor; STERE, ADM, FA, IQ = 1 factor)	631.34	118	519.97(20)***	.60	.18	.18
16. Two-factor model (MULTI, CONT = 1 factor; DI, STERE, ADM, FA, IQ = 1 factor)	442.81	118	331.44(20)***	.72	.14	.15
17. One-factor model	764.57	119	653.02(21)***	.53	.17	.21

*N* = 129. \**p* < .05, \*\**p* < .01, \*\*\**p* < .001.

CONT, intergenerational contact; MULTI, “multi-age” diversity; DI, dual identity; STERE, stereotypes; ADM, admiration emotions; FA, facilitation behavioural tendencies; IQ, intentions to quit; CFI, Comparative Fit Index; SRMR, Standardized Root Mean Square Residual; RMSEA, Root Mean Square Error of Approximation.

of each alternative model are presented in Table 3. The alternative Model 9 (see Figure 2) had the lowest value of  $\chi^2$  and was the most parsimonious. In other words, a model with a direct link between intergenerational contact and behaviours, and between dual identity and admiration (i.e., suggesting partial mediation) showed a significantly superior fit ( $\chi^2(110) = 130.09$ , *p* < .05, *CFI* = .98, *SRMR* = .07, *RMSEA* = .04). Model 9 was thus retained as the best-fitting model.

Our first prediction (H1) was that dual identity mediates the link between intergenerational contact and both positive perceptions and lower intentions to quit. Inspection of the parameters revealed the presence of a marginally significant path between

intergenerational contact and dual identity ( $\gamma = .19$ , *p* < .10), and significant paths between dual identity and both stereotypes ( $\beta = .32$ , *p* < .001) and intentions to quit ( $\beta = -.43$ , *p* < .001). The indirect effects between intergenerational contact and stereotypes (indirect effect = .04,  $z' = 1.37$ , *p* < .05, critical *z*-prime value for statistical significance = .97 in absolute value; see MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002) and between intergenerational contact and intentions to quit (indirect effect = -.06,  $z' = -1.55$ , *p* < .05) were also significant. Moreover, intergenerational contact exerted a significant influence on facilitation behaviours ( $\gamma = .36$ , *p* < .001). In sum, our data suggest that dual identity partially mediates the link between intergenerational contact

TABLE 3  
Fit indices for structural models (Study 1)

Model	$\chi^2$	df	CFI	SRMR	RMSEA	$\Delta\chi^2$ ( $\Delta df$ )	Model comparison
Hypothesized	143.86	112	.96	.09	.05	–	
Alternative 1	140.97	111	.97	.09	.05	2.89(1)	Hypothesized vs. Alternative 1
Alternative 2	141.47	111	.97	.08	.05	2.39(1)	Hypothesized vs. Alternative 2
Alternative 3	134.84	111	.97	.08	.04	9.02(1)**	Hypothesized vs. Alternative 3
Alternative 4	131.61	110	.97	.08	.04	3.23(1)	Alternative 3 vs. Alternative 4
Alternative 5	132.18	110	.97	.08	.04	2.66(1)	Alternative 3 vs. Alternative 5
Alternative 6	131.74	110	.98	.07	.04	3.10(1)	Alternative 3 vs. Alternative 6
Alternative 7	133.03	110	.97	.08	.04	1.81(1)	Alternative 3 vs. Alternative 7
Alternative 8	135.36	110	.97	.08	.04	0.52(1)	Alternative 3 vs. Alternative 8
Alternative 9	130.09	110	.98	.07	.04	4.75(1)*	Alternative 3 vs. Alternative 9
Alternative 10	130.18	109	.98	.07	.04	0.09(1)	Alternative 9 vs. Alternative 10

N = 129. \*p < .05, \*\*p < .01, \*\*\*p < .001.

CONT, intergenerational contact; MULTI, “multi-age” diversity; DI, dual identity; STERE, stereotypes; ADM, admiration emotions; FA, facilitation behavioural tendencies; IQ, intentions to quit; CFI, Comparative Fit Index; SRMR, Standardized Root Mean Square Residual; RMSEA, Root Mean Square Error of Approximation.

Alternative 1: direct path between CONT and STERE; Alternative 2: direct path between CONT and ADM; Alternative 3: direct path between CONT and FA; Alternative 4: direct paths between CONT, FA and IQ; Alternative 5: direct paths between CONT and FA, and between MULTI and STERE; Alternative 6: direct paths between CONT and FA, and between MULTI and ADM; Alternative 7: direct paths between CONT and FA, and between MULTI and FA; Alternative 8: direct paths between CONT and FA, and between MULTI and IQ; Alternative 9: direct paths between CONT and FA, and between DI and ADM; Alternative 10: direct paths between CONT and FA, and between DI, ADM and FA.

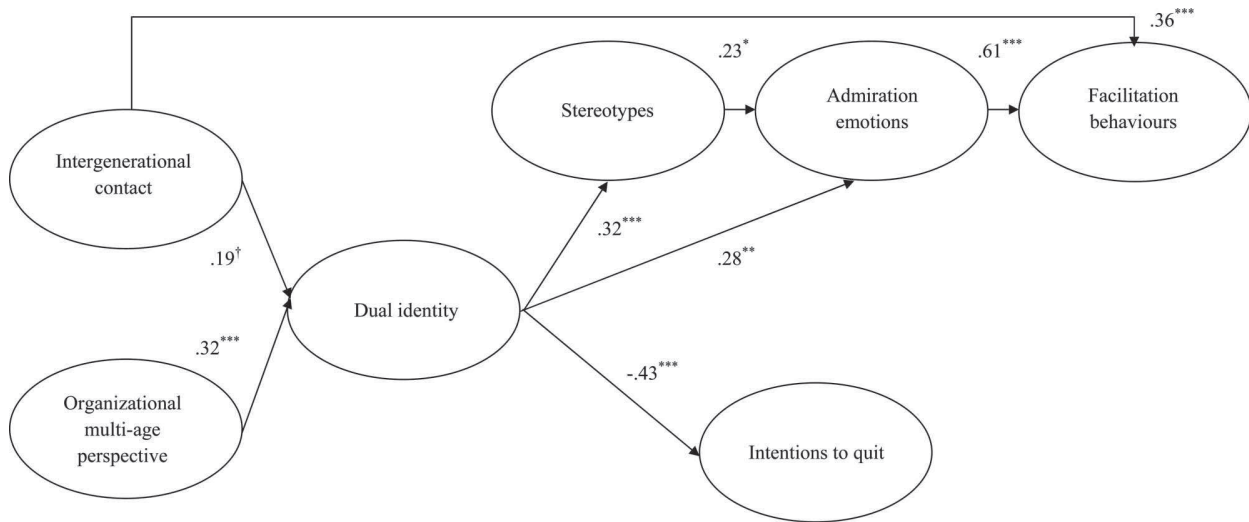


Figure 2. Alternative model 9 (Study 1): Final structural equation model showing relationships between intergenerational contact, organizational multi-age perspective, dual identity, stereotypes, admiration, facilitation behaviours and intentions to quit with standardized coefficients (N = 129). For the sake of clarity, only structural relationships are shown. †p < .10. \*p < .05, \*\*p < .01, \*\*\*p < .001.

and stereotypes, and totally mediates the link between intergenerational contact and intentions to quit. In other words, our first hypothesis was supported for intentions to quit and received only partial support for stereotypes.

Our second prediction (H2) was that dual identity mediates the relationships between organizational multi-age perspective and both stereotypes and lower intentions to quit. In addition to the significant paths described above, we found a significant path between organizational multi-age perspective and dual

identity ( $\gamma = .32, p < .001$ ), and a significant indirect effect between organizational multi-age perspective and both stereotypes (indirect effect = .07,  $z' = 1.81, p < .05$ ) and intentions to quit (indirect effect =  $-.11, z' = -2.38, p < .05$ ). Our second hypothesis was thus clearly supported.

Finally, relying on the BIAS map model (Cuddy et al., 2007), our third hypothesis (H3) posited that admiration mediates the relationship between positive stereotypes and facilitation-behaviours tendencies. We found significant paths between stereotypes

and emotions ( $\beta = .23, p < .05$ ), and between emotions and behaviours ( $\beta = .61, p < .001$ ). Moreover, the indirect effect between stereotypes and facilitation behaviours (indirect effect = .09,  $z' = 1.12, p < .05$ ) was also significant, indicating that admiration fully mediates the link between stereotypes and facilitation behaviours. In sum, our third hypothesis was strongly supported. Moreover, the results indicated an unexpected direct link between dual identity and admiration ( $\beta = .28, p < .01$ ).

## Discussion

Extending the contact hypothesis (e.g., Pettigrew & Tropp, 2006) and the multicultural perspective (e.g., Plaut et al., 2009), this study suggests that dual identity is a relevant mediator regarding the effect of both intergenerational contact and organizational multi-age perspective on both stereotypes and intentions to quit, with the exception of the effect of contact on stereotypes, for which dual identity is a partial mediator. Moreover, building upon the tripartite model of attitudes (Finkelstein & Farrell, 2007) and in line with the BIAS map model, we showed that perceptions of high competence and warmth lead to facilitation behaviours through admiration emotions.

Innovative as Study 1 may be, it also has a number of limitations. First, the partial mediation indicates that mediators other than dual identity may account for the link between context and outcomes at work. Looking at the literature on diversity, organizational justice comes across as a prime candidate if one wishes to understand how a diversity programme at work may affect employees' attitudes. As a matter of fact, research has shown that procedural justice (i.e., the fairness of the decision-making process; see Richard & Kirby, 1998) is a powerful mediator of the relationships between diversity perspective and attitudes at work (Buttner, Lowe, & Billings-Harris, 2010; Crosby & Franco, 2003). In particular, procedural justice was shown to play a mediating role between both racial (Buttner et al., 2010) and gender (Gilson, 2001) diversity management and employee outcomes such as lower intentions to quit.

Clearly, the mediating role of procedural justice between diversity management and stereotypes has seldom been examined in the literature. Still, several studies have shown that diversity procedures like affirmative action result in positive general attitudes toward their beneficiaries when they are justified (Richard & Kirby, 1998, 1999; Roberson & Stevens, 2006). Based on these studies, we may expect that when employees perceive that their organization supports diversity, such as through an organizational multi-age perspective, they will tend to report higher levels of procedural justice (Triana & Garcia, 2009), which in turn may lead to positive outcomes at work

(Gilson, 2001) and lower intergroup bias (Crosby & Franco, 2003).

A second limitation of our study refers to a perception of older people's competence that could be more complex in the workplace than predicted by the stereotype content model. As a matter of fact, although several studies have confirmed the stereotype of older workers being incompetent (e.g., Rosen & Jerdee, 1976), some studies have shown that older employees may be seen as being at least as competent as, and sometimes even more than, younger employees (e.g., McCann & Giles, 2002). In light of this, Warr and Pennington (1993) showed that stereotypical beliefs about older workers are structured in two dimensions: work effectiveness (e.g., experience, reliability, interpersonal skills) and adaptability (e.g., ability to adapt to change, and to new technology). This factor structure was replicated in several studies which showed that, compared to younger workers, older workers were perceived positively in the work effectiveness dimension and negatively in the adaptability dimension (Chiu, Chan, Snape, & Redman, 2001; Redman & Snape, 2002). We thus decided to build on Warr and Pennington's (1993) findings to improve our analysis of the ageist perceptions as a function of the organizational context.

## STUDY 2

The goal of Study 2 was threefold. Firstly, we wanted to replicate Study 1 in another organizational setting. Secondly, we hoped to test the role of perceived procedural justice as another mediator, in addition to dual identity. Finally, we intended to investigate stereotypes that were more closely related to the population of older workers. This time, we did not include emotions or behavioural tendencies. According to the BIAS map model (Cuddy et al., 2007), emotions and behavioural tendencies are predicted by both warmth and competence stereotypes. In Study 2, we decided to focus on the two factors of competence identified by Warr and Pennington (1993), preventing us from evidencing an impact of stereotypes on emotions and behavioural tendencies.

We predicted that dual identity would mediate the relationships between the quality of intergenerational contact on the one hand, and both more positive stereotypes toward older workers and lower intentions to quit on the other (Hypothesis 1). We also expected that dual identity would mediate the relationships between organizational multi-age perspective and the same dependent variables as stated above (Hypothesis 2). Finally, we hypothesized that perceived procedural justice would also mediate the relationships between organizational multi-age perspective and the same dependent variables as stated above (Hypothesis 3, see Figure 3).



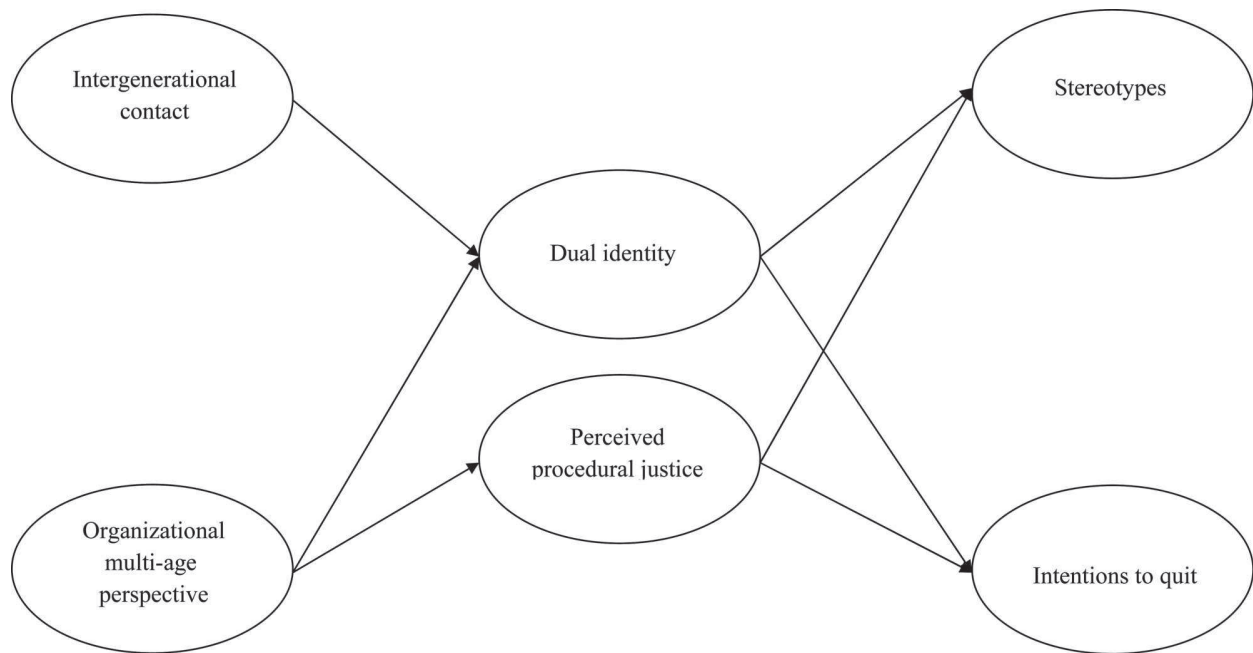


Figure 3. Hypothesized model (Study 2).

## Method

### *Participants and procedure*

Data were collected in a Belgian hospital on 534 French-speaking Belgian employees. We had a final sample of 187 employees aged less than fifty (mean age = 37.08,  $SD = 7.70$ , minimum = 20, maximum = 49, 80% of respondents being in the 30 to 49 age range) who completed the entire questionnaire (response rate = 35%). A majority of respondents were females (86%), worked full time (54%), were employees (89%), and had completed high school (63%).

Participants completed a paper questionnaire which was accompanied by a cover letter signed by the researchers and indicating that the purpose of the study was to examine people's attitudes toward age diversity and intergenerational relationships at work. An envelope was provided so that completed questionnaires could remain anonymous.

### *Measures*

The measures were exactly the same as those used in Study 1 (all  $\alpha > .85$ ), except for perceived procedural justice and stereotypes.

*Perceived procedural justice* was measured with three items ( $\alpha = .91$ ) pertaining to a control-based view of perceived procedural justice adapted from Colquitt (2001), and Houlden, LaTour, Walker, and Thibaut (1978). Using a seven-point scale ranging from 1 (*totally disagree*) to 7 (*totally agree*), participants rated the extent to which they perceived

that their organization was fair about age diversity (e.g., "I have an influence on decisions concerning the management of age diversity in my organization").

The measure of *stereotypes* about older workers as a group (again defined as being workers of 50 years of age and above) was adapted from Warr and Pennington (1993), in Redman & Snape (2002). Work effectiveness was measured with six items ( $\alpha = .87$ ). Participants were invited to use an eleven-point scale ranging from 1 (=0%) to 11 (=100%) to rate the number of older workers who are for example *conscientious*. Adaptability was measured with six items ( $\alpha = .89$ ). Using the same eleven-point scale, participants rated the extent to which they think that older workers *learn quickly* for instance. Stereotype scales (work effectiveness and adaptability) were multiplied so that the highest scores indicated that older workers were perceived as both effective and adaptable in their work.

## Results

### *Preliminary analyses*

As in Study 1, we analysed the relationships between control variables and dependent measures with one-way ANOVAs using gender, working time and professional status as independent variables. None of these variables had a significant impact. Correlations between age and the dependent measures revealed no significant relationships. Therefore, none of the control variables were taken into account in the analyses. Table 4 presents descriptive statistics and correlations among variables. The data were

TABLE 4  
Means, standard deviations and intercorrelations among the variables (Study 2)

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. Intergenerational contact <sup>1</sup>	6.27	0.84					
2. Organizational multi-age perspective <sup>1</sup>	4.03	1.43	.23**				
3. Dual identity <sup>2</sup>	22.18	3.79	.24**	.38***			
4. Perceived procedural justice <sup>1</sup>	2.23	1.23	.02	.30***	.26***		
5. Stereotypes <sup>3</sup>	59.97	18.44	.23**	.24**	.19*	.18*	
6. Intentions to quit <sup>1</sup>	2.27	1.34	-.11	-.34***	-.47***	-.03	-.09

*N* = 129. \**p* < .05, \*\**p* < .01, \*\*\**p* < .001.

<sup>1</sup>ranges from 1 (=totally disagree) to 7 (=totally agree).

<sup>2</sup>ranges from 1 (=low dual identity) to 49 (=high dual identity).

<sup>3</sup>ranges from 1 (=low effectiveness and adaptability perceptions) to 121 (=high effectiveness and adaptability perceptions).

analysed following the same two-step procedure and method as described in Study 1.

#### Confirmatory factor analyses

In line with the hypothesized model, we specified six latent constructs: intergenerational contact, organizational multi-age perspective, dual identity, perceived procedural justice, stereotypes, and intentions to quit. As expected, this model fitted the data very well,  $\chi^2(89) = 109.54$ ,  $p < .05$  (CFI = .99, SRMR = .03, RMSEA = .03). The standardized loadings were significant (all  $t > 1.96$ ) and large, ranging from .67 to .95.

Next, we compared the six-factor model with a series of alternative measurement models to ensure that the hypothesized model best reflected the data structure (see Table 5). The results indicated that the six-factor model was significantly superior to all models that were more constrained.

#### Tests of hypotheses

We tested our hypotheses (see Figure 3) with a structural equation model. This model presented an adequate fit to the data,  $\chi^2(96) = 147.58$ ,  $p < .05$  (CFI = .98, SRMR = .07, RMSEA = .05). We then compared this model to alternative models to ensure that it best reflected the data structure. The fit indices for each structural model are presented in Table 6. The results indicated that the alternative Model 4 (see Figure 4) had the lowest value of  $\chi^2$  and was the most parsimonious. In other words, a model where direct links between intergenerational contact and stereotypes and between organizational multi-age perspective and intentions to quit were added (i.e., indicating partial mediations) showed a fit which was significantly superior ( $\chi^2(94) = 117.01$ ,  $p < .05$ , CFI = .99, SRMR = .05, RMSEA = .04). We thus retained this model as the best-fitting one.

Our first hypothesis (H1) was that relationships between intergenerational contact on the one hand

and stereotypes and work attitudes on the other are mediated by dual identity. The data revealed significant paths between intergenerational contact and dual identity ( $\gamma = .18$ ,  $p < .05$ ), and between dual identity and intentions to quit ( $\beta = -.48$ ,  $p < .001$ ), as well as a marginally significant link between dual identity and stereotypes ( $\beta = .13$ ,  $p < .10$ ). The indirect effects of intergenerational contact (all indirect effects were computed by a Sobel test for each mediator variable) were significant on intentions to quit (indirect effect =  $-.30$ ,  $z = -2.11$ ,  $p < .05$ ) and marginally significant on stereotypes (indirect effect =  $.03$ ,  $z = 1.40$ ,  $p < .10$ ). Moreover, the direct link between intergenerational contact and stereotypes is significant ( $\gamma = .31$ ,  $p < .001$ ). In other words, our first hypothesis was partially supported in that dual identity fully mediates the link between intergenerational contact and intentions to quit, and partially mediates the link between intergenerational contact and stereotypes.

Our second prediction (H2) was that dual identity mediates the relationships between organizational multi-age perspective and both perceptions and work attitudes. In addition to the significant and marginal (the relationship between contact and stereotype) paths described above, the results showed a significant path between organizational multi-age perspective and dual identity ( $\gamma = .37$ ,  $p < .001$ ), as well as a marginally significant indirect effect of organizational multi-age perspective on stereotypes (indirect effect =  $.06$ ,  $z = 1.10$ ,  $p < .10$ ) on the one hand, and a significant indirect effect on intentions to quit on the other (indirect effect =  $-.18$ ,  $z = -3.98$ ,  $p < .001$ ). Our second hypothesis was thus partially supported given that dual identity was a partial mediator of the relationship between organizational multi-age perspective and stereotypes, and a full mediator of the relationship between organizational multi-age perspective and intentions to quit.

Finally, our third hypothesis (H3) was that perceived procedural justice mediates the links between organizational multi-age perspective and

TABLE 5  
Confirmatory factor analysis fit indices for measurement model (Study 2)

Model	$\chi^2$	df	$\Delta\chi^2 (\Delta df)$	CFI	SRMR	RMSEA
1. Six-factor model	109.54	89	–	.99	.03	.03
2. Five-factor model (CONT, MULTI = 1 factor)	317.78	94	208.24(5)***	.91	.10	.11
3. Five-factor model (MULTI, DI = 1 factor)	452.11	94	342.57(5)***	.86	.12	.14
4. Five-factor model (CONT, DI = 1 factor)	316.14	94	206.60(5)***	.91	.10	.11
5. Five-factor model (MULTI, JUST = 1 factor)	835.97	94	345.72(5)***	.92	.10	.09
6. Five-factor model (CONT, JUST = 1 factor)	285.90	94	176.36(5)***	.89	.11	.10
7. Five-factor model (JUST, DI = 1 factor)	264.72	94	155.18(5)***	.90	.09	.10
8. Five-factor model (STERE, IQ = 1 factor)	300.60	94	191.06(5)***	.89	.13	.11
9. Five-factor model (STERE, DI = 1 factor)	488.16	94	378.52(5)***	.81	.13	.15
10. Five-factor model (IQ, DI = 1 factor)	230.60	94	121.06(5)***	.93	.06	.09
11. Five-factor model (STERE, JUST = 1 factor)	493.66	94	348.12(5)***	.81	.14	.15
12. Five-factor model (IQ, JUST = 1 factor)	304.12	94	194.58(5)***	.89	.13	.11
13. Four-factor model (CONT, MULTI, DI = 1 factor)	665.03	98	555.49(9)***	.79	.15	.18
14. Four-factor model (CONT, MULTI, JUST = 1 factor)	478.39	98	368.85(9)***	.80	.14	.14
15. Four-factor model (DI, STERE, IQ = 1 factor)	606.249	98	586.70(9)***	.75	.14	.17
16. Four-factor model (JUST, STERE, IQ = 1 factor)	696.85	98	587.31(9)***	.71	.18	.18
17. Three-factor model (DI, JUST, STERE, IQ = 1 factor)	756.39	101	646.85(12)***	.67	.16	.19
18. Three-factor model (MULTI, CONT = 1 factor; DI, JUST = 1 factor)	652.78	101	543.24(12)***	.74	.17	.17
19. Two-factor model (MULTI, CONT, DI, JUST = 1 factor; STERE, IQ = 1 factor)	962.96	103	853.42(14)***	.63	.19	.21
20. Two-factor model (MULTI, CONT = 1 factor; DI, JUST, STERE, IQ = 1 factor)	962.57	103	853.03(14)***	.60	.18	.21
21. One-factor model	1324.60	104	1215.06(15)***	.47	.20	.25

N = 187. \*p < .05, \*\*p < .01, \*\*\*p < .001.

CONT, intergenerational contact; MULTI, “multi-age” diversity; DI, dual identity; JUST, perceived procedural justice; STERE, stereotypes; IQ, intentions to quit; CFI, Comparative Fit Index; SRMR, Standardized Root Mean Square Residual; RMSEA, Root Mean Square Error of Approximation.

TABLE 6  
Fit indices for structural models (Study 2)

Model	$\chi^2$	Df	CFI	SRMR	RMSEA	$\Delta\chi^2 (\Delta df)$	Model comparison
Hypothesized	147.58	96	.98	.07	.05	–	
Alternative 1	122.36	95	.98	.06	.04	25.22(1)***	Hypothesized vs. Alternative 1
Alternative 2	122.41	94	.98	.06	.04	0.05(1)	Alternative 1 vs. Alternative 2
Alternative 3	120.51	94	.98	.05	.04	1.85(1)	Alternative 1 vs. Alternative 3
Alternative 4	117.01	94	.99	.05	.04	5.35(1)*	Alternative 1 vs. Alternative 4
Alternative 5	114.15	93	.99	.04	.03	2.86(1)	Alternative 4 vs. Alternative 5

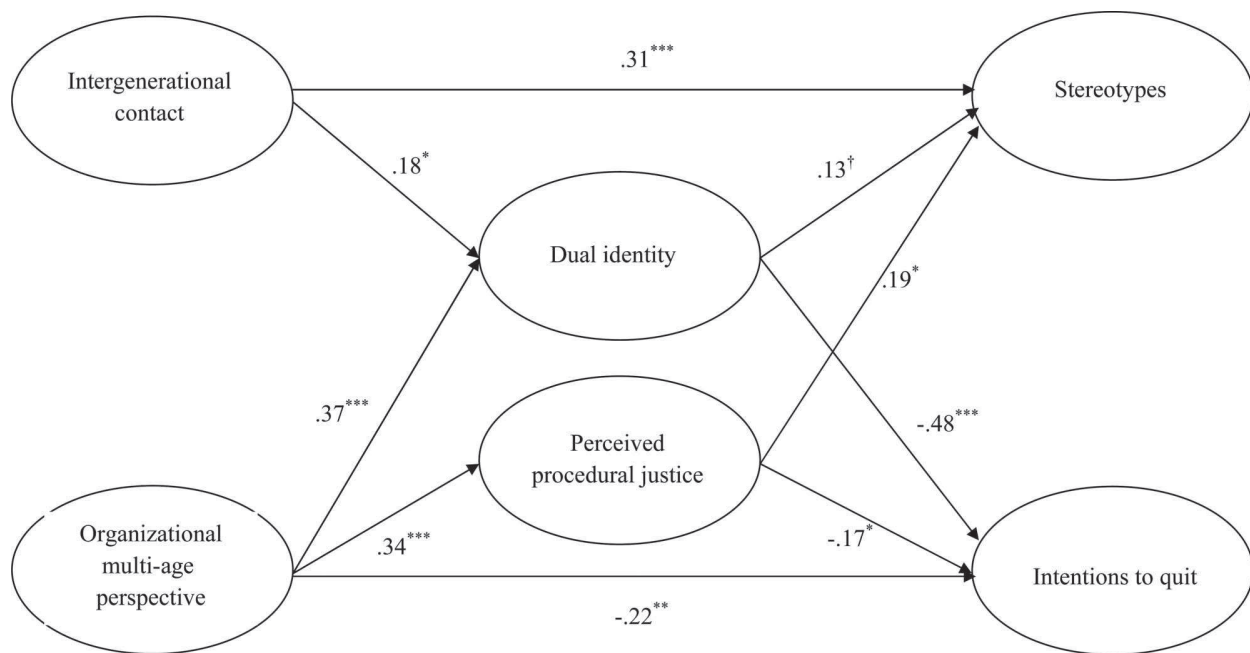
N = 187. \*p < .05, \*\*p < .01, \*\*\*p < .001.

MULTI, “multi-age” diversity; DI, dual identity; JUST, perceived procedural justice; STERE, stereotypes; IQ, intentions to quit; CFI, Comparative Fit Index; SRMR, Standardized Root Mean Square Residual; RMSEA, Root Mean Square Error of Approximation.

Alternative 1: direct path between CONT and STERE; Alternative 2: direct paths between CONT, STERE and IQ; Alternative 3: direct paths between CONT and STERE, and between MULTI and STERE; Alternative 4: direct paths between CONT and STERE, and between MULTI and IQ; Alternative 5: Covariance between DI and JUST was added.

both positive stereotypes and work attitudes. The examination of the parameters indicated significant paths between organizational multi-age perspective and perceived procedural justice ( $\gamma = .34, p < .001$ ), as well as between perceived procedural justice and both stereotypes ( $\beta = .19, p < .05$ ) and intentions to quit ( $\beta = -.17, p < .05$ ). These results indicated that perceived procedural justice mediates the link between organizational multi-age perspective and both positive stereotypes (indirect effect = .06,  $z = 1.90,$

$p < .05$ ) and intentions to quit (indirect effect =  $-.06, z = -2.08, p < .05$ ). Moreover, the direct link between organizational multi-age perspective and intentions to quit is significant ( $\gamma = -.22, p < .01$ ). Our third hypothesis was thus partially supported, as perceived procedural justice fully mediated the link between organizational multi-age perspective and stereotypes, and partially mediated the link between organizational multi-age perspective and intentions to quit.



**Figure 4.** Alternative model 4 (Study 2): Final structural equation model showing relationships between intergenerational contact, organizational multi-age perspective, dual identity, perceived procedural justice, stereotypes and intentions to quit with standardized coefficients ( $N = 187$ ). For the sake of clarity, only structural relationships are shown.  $^\dagger p < .10$ .  $*p < .05$ ,  $**p < .01$ ,  $***p < .001$ .

## Discussion

To sum up, just as in Study 1, Study 2 showed that dual identity is a partial mediator for the relationship between intergenerational contact and organizational multi-age perspective on stereotypes, and a full mediator for the relationship between this favourable context and intentions to quit. Moreover, perceived procedural justice appeared to be a complementary mediator in explaining the effects of a multi-age diversity on attitudes toward older workers and marginally on attitudes at work.

## GENERAL DISCUSSION

Both high-quality intergroup interactions (Pettigrew & Tropp, 2006, 2008) and fostering a multicultural perspective (Richeson & Nussbaum, 2003) have proven to be effective strategies for reducing intergroup bias and improving work attitudes. On this basis, we designed two studies in order to investigate the impact of both contact between age groups and creating an organizational multi-age perspective on younger workers' age-related bias and attitudes in the workplace. Building upon research on identity dynamics in contact situations (Richter et al., 2006), we also aimed to analyse the role of dual identity as a potential mediator.

The present work shows that high-quality contact between age groups in the workplace is linked to positive perceptions of older workers: they are perceived as more sociable and competent in Study

1, and more effective and adaptable in their job in Study 2. In addition, supporting findings that co-worker relationships also influence employees' occupational attitudes (Avery et al., 2007), our studies demonstrate that high-quality intergenerational contact at work is linked negatively to intentions to quit. As such, our studies shed new light on the effects of contact on a series of variables that have often been neglected in the prejudice literature (Dixon et al., 2005).

In line with studies which have shown that dual identity is one of the most successful ways to reduce intergroup bias (e.g., Eller & Abrams, 2003, 2004), our studies indicate that dual identity is indeed a relevant mediator when it comes to the impact of intergenerational contact on stereotypes of older workers, as well as on intentions to quit. At the same time, we also observed direct links between contact and stereotypes in both studies, indicating that other variables may act as mediators of this relationship. In our opinion, the affective processes included in the contact situation, like empathy, could contribute toward modifying perceptions about outgroup members (e.g., Ensari & Miller, 2006).

Extending previous work on diversity (Homan, van Knippenberg, van Kleef, & de Dreu, 2007), our studies underline the role of organizational support of diversity in the still largely unexplored domain of age-related diversity at work. Indeed, in accordance with research on diversity showing that a multicultural perspective reduces race bias (e.g., Wolsko et al., 2000) and improves work attitudes (Plaut et al.,

2009), the present data confirm that fostering an organizational multi-age perspective is linked both to positive perceptions toward older workers and to a reduction of intentions to quit. As we predicted, dual identity was shown to mediate the effects of organizational support of diversity on perceptions about the outgroup as well as on intentions to quit. To the best of our knowledge, this is the first study that provides empirical support for the dual identity model proposed by Dovidio et al. (1998) in the context of multiculturalism.

Interestingly, perceived procedural justice was also shown to mediate the effects of organizational multi-age perspective on stereotypes and intentions to quit. These results are congruent with studies on diversity management which showed that the deleterious effects of procedures like affirmative action on perceptions toward beneficiaries can be reduced when the procedure is seen as fair (e.g., Crosby & Franco, 2003). They also dovetail nicely with work showing that perceived procedural justice is a powerful mediator of the relationship between diversity perspective and attitudes at work (Buttner et al., 2010). Here too, a direct link between organizational multi-age perspective and intentions to quit indicates that other variables, such as distributive justice, may mediate this relationship (Nadiri & Tanova, 2009).

Finally, the present research underlines that the effects of a favourable intergenerational context are linked not only to perceptions of older individuals but also to emotions about and behaviours toward them. In line with the BIAS map model (Cuddy et al., 2007), we found that perceptions of high competence and high sociability were linked to more admiration and facilitation behaviours (e.g., help, cooperation) in a favourable intergenerational context (high quality of intergenerational contact and organizational multi-age perspective). As such, this study fills a gap in the literature on ageism by examining more closely which emotions and behaviours can be expected according to the perceptual pattern related to age. As with stereotypes, the affective component, which is seldom examined and measured in the ageism literature (Finkelstein & Farrell, 2007), appeared both to be impacted by social context and to reinforce the likelihood of increasing favourable behaviours toward older individuals. Thus, our findings clearly offer new insights not only within the literature on ageism at work (Finkelstein & Farrell, 2007) but also for the broader literature pertaining to the tripartite model of attitudes (e.g., Cuddy et al., 2007).

### Limitations and future research

Future work on these issues should take into account the limitations of the present set of studies. Firstly,

the design used in our studies prevents us from drawing causal inferences about relationships between perceptions of the context (e.g., the quality of contact) and consequences. Indeed, structural analyses may well be suited to sanctioning those processes that derive from specific theoretical assumptions about a given causal process, but they do not allow the confirmation of which variables are either antecedents or consequences. In other words, future studies should aim at replicating findings of the present studies by using longitudinal or even experimental designs which are more constrained.

Secondly, the small size of our samples may represent a limitation of our statistical analyses. In fact, this limit led us to use the partial disaggregation method (Bagozzi & Edwards, 1998). This method allows researchers to perform meaningful tests of model fit despite a small sample size (von der Heide & Scott, 2007) but it may also hide a more valid factor structure. Having said this, we note that our two studies yielded similar results, lending reasonable confidence regarding the reliability and generalization of our findings.

Thirdly, common method bias may have caused an inflation in the relationships among simultaneously measured variables using a self-report method. However, the concern over method bias may have been partially addressed by performing analyses for Study 1 and Study 2 showing that a single-factor solution provided an extremely poor fit of the data (i.e., Harman's single factor test; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003).

Finally, in the present work, we were specifically interested in examining a reduction of ageism, which is defined as stigmatization of and discrimination against older people. From this perspective, focusing on younger people seemed relevant. However, future research should focus on the perceptions of both younger and older workers, to explore potential specific reactions to the organizational context related to age diversity. In fact, recent studies have shown that organizations promoting initiatives premised on a multicultural ideology are particularly attractive to minorities, because group identities such as race, ethnicity, and religious affiliation are retained and acknowledged (e.g., Wolsko et al., 2006). Our findings might be explained by the fact that the multi-age perspective is probably similar to both the "integration and learning perspective" (Ely and Thomas, 2001) and the "polyculturalist perspective" recently proposed by Rosenthal and Levy (2010), which encourages all employees to value and express themselves as members of their social group and to learn from each other. This kind of "all-inclusive" perspective could be better valued by majority groups than perspectives which only recognize specificities of the minority group without linking them to majority

members' self-interests (Plaut, Garnett, Buffardi, & Sanchez-Burks, 2011). In other words, younger workers could also see themselves as beneficiaries of a multi-age diversity perspective.

## CONCLUSION

The present research efforts show that high-quality intergenerational contact and the fostering of an organizational multi-age perspective are favourable both for the employees (more intergroup harmony within the organization) and the organization (more positive attitudes at work). Moreover, social categorization processes and perceived procedural justice have been highlighted as relevant and important mediational mechanisms through the way social context relates to intergenerational attitudes and attitudes at work. Finally, our findings complement the literature on ageism by measuring this bias with a proper consideration of its cognitive, affective, and behavioural components, according to the tripartite model of attitudes. Hopefully, the message emanating from our data will provide all parties involved in organizations with effective strategies for allowing further promotion of diversity and tolerance in the workplace.

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