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ARTICLE

# Expressions of self-ageism in four European countries: a comparative analysis of predictors across cultural contexts

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## Abstract

Self-ageism has a significant negative impact on older people's ageing experiences and health outcomes. Despite ample evidence on cross-cultural ageism, studies have rarely looked into the way cultural contexts affect self-ageism. In this article, we compare expressions of self-ageism and its possible predictors across four European countries based on two questionnaires in a study sample of 2,494 individuals aged 55 and older. We explore how predictors of self-ageism are moderated by cultural values in a comparative fixed-effects regression model. We empirically show that similarly to ageism, self-ageism is not present in the same way and to the same extent in every country. Moreover, the level to which cultures value hierarchy and intellectual autonomy significantly moderates the association between self-ageism and individual predictors of self-ageism. Our study adds to the small existing body of work on self-ageism by confirming empirically that certain expressions of self-ageism and individual predictors are susceptible to change in different cultural contexts. Our research results suggest that self-ageism interventions may benefit from a culturally sensitive approach and imply that more culturally diverse comparisons of self-ageism are necessary to figure out fitting ways to reduce self-ageism.

**Keywords:** ageism; attitudes; cultural values; cross-cultural comparisons; self-ageism; older people; ageing

## Introduction and rationale

In the broader characterisation of the term, ageism is defined as prejudice against people on the basis of their age (Palmore, 1990). In the context of this paper, we discuss and define ageism as stereotypes, attitudes, and prejudice specifically regarding older people (Butler, 1969, 1975), which appears to be common and

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widespread (McConatha *et al.*, 2003; Angus and Reeve, 2006; Butler, 2009). Stereotypes underlying ageism are not straightforwardly negative but rather multi-dimensional. Evaluatively mixed stereotypes of older people as incompetent and unproductive yet warm and wise appear to be especially pervasive, also in different cultural contexts (Cuddy and Fiske, 2002; Cuddy *et al.*, 2005). Such ambivalent stereotyping creates problematic ageist expectations and even avoidance of older people, thus contributing to their exclusion and discrimination in everyday life (Palmore *et al.*, 2005).

Prejudice against older people is not restricted to younger generations; older people themselves are also known to hold ageist attitudes towards older people: a phenomenon designated as 'self-ageism' (Bodner, 2009). Unfortunately, research into self-ageism of older people is more scarce than research about ageism in the general population or amongst younger generations. Whilst ageism appears to be pervasive across different cultural and national contexts (McConatha *et al.*, 2003; Löckenhoff *et al.*, 2009; Swift *et al.*, 2018), self-ageism is rarely studied in a cross-cultural context, even though culturally shared social contexts are arguably important in shaping people's perceptions of age and their ageing selves (Swift *et al.*, 2018). There are still many questions open when it comes to self-ageism amongst older people, especially regarding its possible factors of influence and its variation in different cultural contexts. More insights into the processes and manifestations of self-ageism are needed to find fitting ways in which self-ageism and its harmful outcomes might be reduced. In this article, we address this gap in knowledge and investigate self-ageism in a cross-cultural context.

### Underlying mechanisms of self-ageism

There is mixed evidence on the underlying mechanisms of self-ageism in older people. Self-ageism might be the result of internalisation of prejudice (McConatha *et al.*, 2003), as proposed in the embodiment theory of lifelong internalised ageist stereotypes (Levy, 2009). When viewed through the lens of social identity theory (Tajfel, 1981), self-ageism could also be connected to older people's negative perceptions of their own age group and its social status. The latter could be explained by social identity mechanisms in which older people distance themselves from other older people as a so-called 'inner outgroup' (Kite and Wagner, 2002; Bodner, 2009). Studies have found similarities as well as differences in ageism among older people compared to ageism in younger people, with perceptions of social roles and identity appearing to be much more likely to be related to ageist attitudes in older people (social identity/role theory), than explained by the widely researched Terror Management Theory in which death anxiety results in ageist attitudes (Kite and Wagner, 2002; Bodner, 2009; Lev *et al.*, 2018).

Regardless of the underlying mechanisms of self-ageism, there is ample evidence on its significant negative role in older people's ageing experiences and health outcomes (Minichiello *et al.*, 2000; Levy *et al.*, 2008, 2016; Westerhof and Wurm, 2015). When negative ageist attitudes are held by older persons themselves, the confrontation with age-based discrimination might prime negative self-stereotyping and corresponding stereotypical behaviour, adversely influencing older persons' mental and physical health (Kite and Wagner, 2002; Whitbourne and Sneed,

2002; Levy, 2003). In this regard, self-ageism could function as a self-fulfilling prophecy through which ageist expectations might be confirmed and ageist attitudes increased, both in the affected older persons and in society at large. Much of the rather sparse research on self-ageism appears to focus on these effects. Lower levels of ageist attitudes may turn this perpetual mechanism of self-ageism around and allow older people to have a more positive ageing experience, which in turn could contribute to more positive attitudes towards the ageing self and others. A first study evidencing this mechanism in self-ageism was conducted by Bodner and Cohen-Fridel (2010). They looked into explanations of various affective dimensions of self-ageism and found that older people's ability to relate positively to themselves as well as to other people decreased their ageism.

### Self-ageism in cultural context

Cultural values, to the extent that they are shared in a society, provide the cultural context in which individual attitudes and personal experiences exist. In different cultural contexts, individual attitudes might be evaluated more positively or negatively, depending on the extent to which they are supported and enabled by society. Individual attitudes are impacted and structured by social identity processes (Smith and Hogg, 2008), including social identity processes that are theorised to influence self-ageism (Kite and Wagner, 2002; Bodner, 2009; Lev *et al.*, 2018). We start from the idea that older people's positive ageing experiences and more positive attitudes towards themselves as well as others might decrease their self-ageism (Bodner and Cohen-Fridel, 2010); an effect which could be explained by theorising that more positive experiences and perceptions of older people's social identity and social roles might lead to less ageism (Kite and Wagner, 2002; Bodner, 2009). Our expectation, based on the earlier studies on cross-cultural ageism, is that cultural contexts might have a moderating effect on individual attitudes that influence self-ageism. Our analytical presumptions are directed towards how likely positive attitudes towards oneself, expressed in individual attitudes – (self-)confidence in daily life, appreciation of intergenerational contact and the need for control over important aspects of one's life – are evaluated differently in different cultural contexts there-with influencing self-ageism.

This study uses survey data to measure self-ageism of older people in four European countries (France, Poland, Portugal and the Netherlands) with distinct societal features with regards to ageing, such as life expectancy, secularism and retirement age. To follow up on previously conducted cross-cultural studies on ageism and to explore whether self-ageism is also prone to cross-cultural variation, we included individual attitudes as well as country-level cultural values (McConatha *et al.*, 2003; Cuddy *et al.*, 2005; Löckenhoff *et al.*, 2009; North and Fiske, 2015; Swift *et al.*, 2018).

### Research design and methods

#### Survey

The data we use in our study are part of a larger survey that was originally conducted by the Leyden Academy on Vitality and Ageing in 2013, with support of

the Medical Delta. In 2016, with the support of EIT Health, additional surveys were held in France, Poland and Portugal, with the aim of covering culturally and demographically distinct regions in the European Union while taking into account limited resources. The survey was informed by focus groups with older people and explicitly developed to capture the perspectives of older people aged 55 and over. To ensure face and content validity of the survey items, these questions were based on the statements and wordings of those participating in the focus groups (see Lindenberg and Westendorp, 2015; Huijg *et al.*, 2016). It included a total of 95 questions which mainly focused on wishes, ambitions and attitudes of older people, among which two questionnaires were dedicated to ageism. The entire survey was translated and then cross-checked by professional translators and native-speaking social scientists in the respective countries. All survey respondents were sampled from research panel participants. The survey was administered digitally, except for participants of 75 years and older in Poland and Portugal, who were surveyed by phone following the recommendations of local social scientists, in order to ensure a sufficient number of respondents aged 75 and older in these countries. The different ways of administering the survey are regarded to be of no influence on the quality of data collection (Schillewaert and Meulemeester, 2005). The number of respondents varied between 604 and 650 people aged 55 and over for each country (see the online supplementary material), with an average age of 67 in Poland (range 55–94) and Portugal (range 55–92), 68 in France (range 55–90) and 69 in the Netherlands (range 55–89). Table 1 shows the descriptive information on gender, age, education and income characteristics of the survey respondents.

### Ageism

The ageism items in the survey consist of the Aging Semantic Differential scale (ASD; Rosencranz and McNevin, 1969) and the negative and positive subscales of Kogan's Attitudes Toward Old People scale (KAOP; Kogan, 1961). The ASD, although over 50 years old, is still a widely used instrument to measure ageist attitudes (Gluth *et al.*, 2010). Its 32 items consist of a seven-point scale between pairs of adjectives which have opposite meanings, *e.g.* active *versus* passive and neat *versus* tidy. The KAOP consists of 32 items, divided between 17 statements about older people that are worded negatively (the negative subscale) and 17 statements that are worded positively (the positive subscale). On a seven-point scale respondents indicate how much they agree or disagree with a certain statement. Like the ASD, the KAOP is an older instrument, yet frequently used and validated in various countries, also in more recent years (see Yen *et al.*, 2009; Küçükgüçlü *et al.*, 2011; Bleijenberg *et al.*, 2012; Vitman-Schorr *et al.*, 2014). In the data preparation for our analysis, certain items were reverse-coded, so that on all ageism items, higher scores represent a more negative attitude towards older people.

Reliability and construct validity testing was conducted on the ageism items as well as on the specific scales, both for internal consistency and the correlation of item scores with the total (sub)scale scores. The factor matrix and the scree plot of an exploratory factor analysis pointed to a three-factor structure of the ageism items, corresponding to the three (sub)scales from which the items originated. The scales were then also analysed through a confirmatory factor analysis grouped

**Table 1.** Descriptives of the study

	%	Mean	SD	Minimum	Maximum
Demographics:					
Gender (female)	45.3				
Age groups:					
55–64	36.9				
65–74	35.1				
75+	28.0				
Education:					
Low	34.3				
Middle	31.4				
High	34.2				
Income:					
Low	34.3				
Middle	31.4				
High	34.2				
Questionnaires:					
ASD score		107.083	34.071	31	217
KAOP positive score		33.194	7.646	11	74
KAOP negative score		53.089	12.582	14	98
Individual attitudes:					
Need for control (1–5)		4.394	0.504		
Intergenerational contact (1–5)		3.737	0.653		
Lack of confidence (1–5)		2.306	1.037		

Notes: N = 2,494. SD: standard deviation. ASD: Aging Semantic Differential scale. KAOP: Kogan's Attitudes Toward Old People scale (positive and negative subscales).

Source: European Institute for Innovation & Technology Health, Survey Ambitions of 55+ 2013–2016.

by country. In the factor analyses, the ordinal nature and possible correlation of the ageism items were taken into account. On the basis of these, the reliability tests as well as the factor analysis results, various items had to be excluded for each scale. The revised new scales were then again tested for reliability and internal consistency, resulting in satisfactory Cronbach's  $\alpha$  scores. The total scores of each revised scale were used in the following analyses. Since the three scales did not sufficiently correlate with one another, we did not combine their scores into one single dependent item and continued to analyse them as three separate expressions of self-ageism. An overview of the specific items that are included in each revised scale and the mean country scores and Cronbach's  $\alpha$  per revised scale can be found in the online supplementary material. Analyses were conducted using SPSS 21 (with R Essentials) and R 3.2.3.

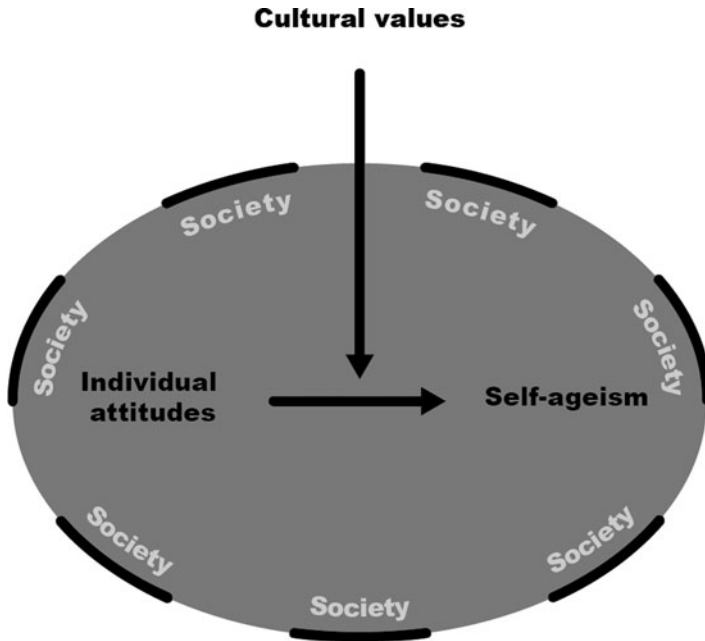
### **Individual attitudes**

To enable a statistically sound and theoretically coherent cross-cultural and cross-level analysis, we chose to focus on individual attitudes that can be theorised to influence (self-)ageism as outlined in the background and objectives, are more or less likely to be evaluated differently in different socio-cultural contexts, and could be aggregated solely from the survey data. Given that self-ageism has been shown to be strongly related to the physical decline inherent in ageing, concomitant with a loss of control that may impact self-image and by extension social identity, we include in this study individual attitudes related to this process. These are: lack of confidence in daily life, appreciation of intergenerational contact and the need for control over important aspects of one's life.

The individual attitudes appreciation of intergenerational contact and the need for control over one's life were aggregated from multiple items in our survey, which intended to measure the same underlying attitude constructs and used similar phrasing. The need to control important aspects of one's life was aggregated by combining four survey items asking respondents how important is it for them to have control and responsibility concerning four different domains of their lives. Appreciation of intergenerational contact was aggregated by combining three survey items that asked respondents if they like to come into contact with young people during (voluntary) work, if they like to maintain social contacts with young people and if they would prefer to live in a neighbourhood where younger as well as older people reside. Lack of confidence in daily life was measured by a single item in which respondents could indicate if they lack the confidence to carry out daily activities. The specific composition and aggregation procedures of all variables can be found in the online supplementary material.

### **Macro-level cultural values**

Our starting point was that a society is shaped by certain shared cultural values and our analysis is thus best served by including values that are explicitly conceptualised to relate to structures, relationships and social roles within societies – in contrast to an approach that assumes one score describing an entire cultural value system and applies that assumption to an entire country. Therefore, we chose to include Schwartz's (2006, 2008) data on cultural value orientations in our analysis, which shares these premises in its conceptualisation. Schwartz makes a clear distinction between individual human values and cultural value orientations, of which cultural value orientations emphasise the normative aspects of culture and take cultural distance into account, which can be considered a different approach addressing in some way often-raised limitations of two other widely used cultural value dimension scores by Hofstede (2001) and Inglehart and Baker (2000). The Schwartz cultural value orientations were not gathered in an effort to identify representative cultural traits of a society, but rather to reflect orientations towards cultural values that, according to Schwartz's (2006, 2014) theory, are assumed to be present in most if not all societies, though to different extents. Therefore, the scores are not an indication of, or necessarily representative of, individual cultural norms – which could indeed be dynamic over time. They are decidedly intended as a macro-level variable that is indicative of the societal organisation and social policies of a



**Figure 1.** Visual model of the study's analytical presumptions.

country and its implicit and explicit normative cultural expectations to which its citizens have to relate all the time. Indeed Schwartz (2014) himself already proposed that cultural value orientations as moderators might help us to understand cross-cultural differences in the relations between individual variables, which is exactly what we aim to investigate in our study.

The macro-level, country-specific variables in our model are the cultural values of intellectual autonomy and hierarchy, based on Schwartz's (2008) dataset of cultural value orientation scores. Though a quantitative analysis of cultural values always carries contestable assumptions about homogeneity and pace of cultural change, by using these value orientation scores we at least aim to avoid conflation of the notions of country and culture, and of individual human values and societal value orientations.

The two cultural value orientations included follow the line of reasoning of our analytical presumptions, focusing on cultural values that may influence and contextualise the individual attitudes deemed of importance in regard to self-ageism. Figure 1 further clarifies our analytical presumptions in a visual model. Specifically, intellectual autonomy values indicate the extent to which a society encourages individuals to develop and pursue their own preferences and ideas independently and take control of their own directions in life. Hierarchy values indicate the extent to which societies rely on a hierarchical distribution of prescribed social roles and corresponding power, rules and obligations (Schwartz, 2008).



**Table 2.** Convergence across countries

	Null model ASD	Null model KAOP+	Null model KAOP–
Country fixed effects	Included	Included	Included
$R^2$ of country fixed-effects null model (comparable to ICC)	0.002	0.001	0.156

Notes: ASD: Aging Semantic Differential scale. KAOP: Kogan's Attitudes Toward Old People scale (positive and negative subscales). ICC: intraclass correlation coefficient.

Source: European Institute for Innovation & Technology Health, Survey Ambitions of 55+ 2013–2016.

## Analyses

We performed regression analyses (in SPSS 21) to investigate the association of individual characteristics with self-ageism, while accounting for the hierarchical, nested structure of the survey data and allowing for country comparison where the regression results indicated that to be relevant (see Table 2). Since the number of countries in our dataset is arguably too small for a multi-level model (Maas and Hox, 2005), we used a fixed-effects model as described by Allison (2009), following the fixed-effects approach as explained and advocated by Möhring (2012). We included country fixed effects in our model through the use of country dummy variables to avoid both the risk of omitted variable bias and the assumption of a normally distributed country-specific error term (Allison, 2009; Möhring, 2012). This fixed-effects approach allows for a first investigation of the relevance for cross-cultural investigation by looking at the  $R^2$  results of the fixed-effects null models, which can be compared to the intraclass correlation coefficient (ICC) of a multi-level model in determining the between-country variance.

Following up on the  $R^2$  results, this specific fixed-effects approach allows us to investigate the influence of individual characteristics (as control variables) and individual attitudes as well as the moderating effects of macro-level indicators on these individual attitudes, by including cross-level interaction effects (Möhring, 2012). In our model, the interaction effect of macro-level, country-specific cultural value scores with individual attitudes enables us to investigate if the cultural values of intellectual autonomy and hierarchy have a moderating effect on individual attitudes that influence self-ageism.

## Results

### Summary

The three analysed ageism scales represent different dimensions and expressions of self-ageism, prevalent in each country in our study. The KAOP+ scale scores barely differed between countries. Poland and the Netherlands scored somewhat lower on the ASD scale than average (104.85 and 106.23 *versus* 107.08). Poland scored higher and the Netherlands lower on the KAOP– scale (60.32 and 46.22) than the average score of the four countries (53.09). An overview of the country scores can be found in the online supplementary material. The ASD scale representing the semantic expression of self-ageism and the KAOP+ scale representing low positive self-ageism both show convergence among countries (Table 2). However, we observe

a significant amount of country-level variance in the KAOP– scale representing the negatively formulated expression of self-ageism (Table 2). Following further analysis of this country-level variance, the results indicate that the influence of individual attitudes in different countries is moderated by the country-specific cultural values of hierarchy and intellectual autonomy (Table 3).

### **Convergence and divergence across countries**

The  $R^2$  results of the fixed-effects model estimations show that the explained variance at the country level indicates convergence among countries regarding the semantic expression of self-ageism and low positive self-ageism (Table 2). These  $R^2$  results are comparable to the ICC in a multi-level model, therewith indicating that considering the lack of between-country variance for those scales in our data, no further cross-cultural investigation of these scales was considered useful.

The  $R^2$  results for the KAOP– scale clearly imply between-country variance and warrant further cross-cultural investigation for negatively formulated self-ageism. We therefore investigated if there are possible cultural explanations for the (in)significant influence of individual attitudes on negatively formulated self-ageism by using Schwartz's (2006, 2008) cultural value scores, which point to different cultural value orientations in the four countries in our study.

Figure 2 illustrates how the slopes of individual attitudes vary across countries in steepness and direction in a model that is not controlled for country differences, in contrast to the fixed-effects model which is controlled for country differences.

As illustrated by the country slopes, lack of confidence is a significant individual attitude that influences ageism, yet without much divergence across countries. We do, however, identify random slopes for the need for control and intergenerational contact, underscoring the relevance of investigating moderating country-level effects on these specific individual attitudes by adding to our country fixed-effects model cross-level interactions with cultural value orientation scores (Schwartz, 2008). Since in a country fixed-effects model no variance is left to be explained on the country level and we cannot model the direct or main effect of any country-level predictors, these cross-level interaction effects solely represent the moderator effect of the country-level variable. The assumptions underlying our model are that the coefficients and significance levels of the individual-level variables as well as of the cross-level interaction effect are nearly identical to those of multi-level models and can be interpreted as such (Allison, 2009; Möhring, 2012). From the results of this analysis, presented in Table 3, we then identify that there are indeed significant moderating effects of cultural values on the association between individual attitudes and self-ageism. Taking into account how introducing cross-level interactions in our model magnify the formerly insignificant main effects of individual attitudes, we will solely discuss the interaction effects and how they moderate the individual attitudes that influence self-ageism. In our study, we find two interaction effects. First, the need for control over one's life increases self-ageism, except in countries with a high emphasis on the value of intellectual autonomy. Second, more appreciation of intergenerational contact predicts less self-ageism, yet this effect decreases in countries scoring higher on the cultural value of hierarchy.

**Table 3.** Effects on self-ageism

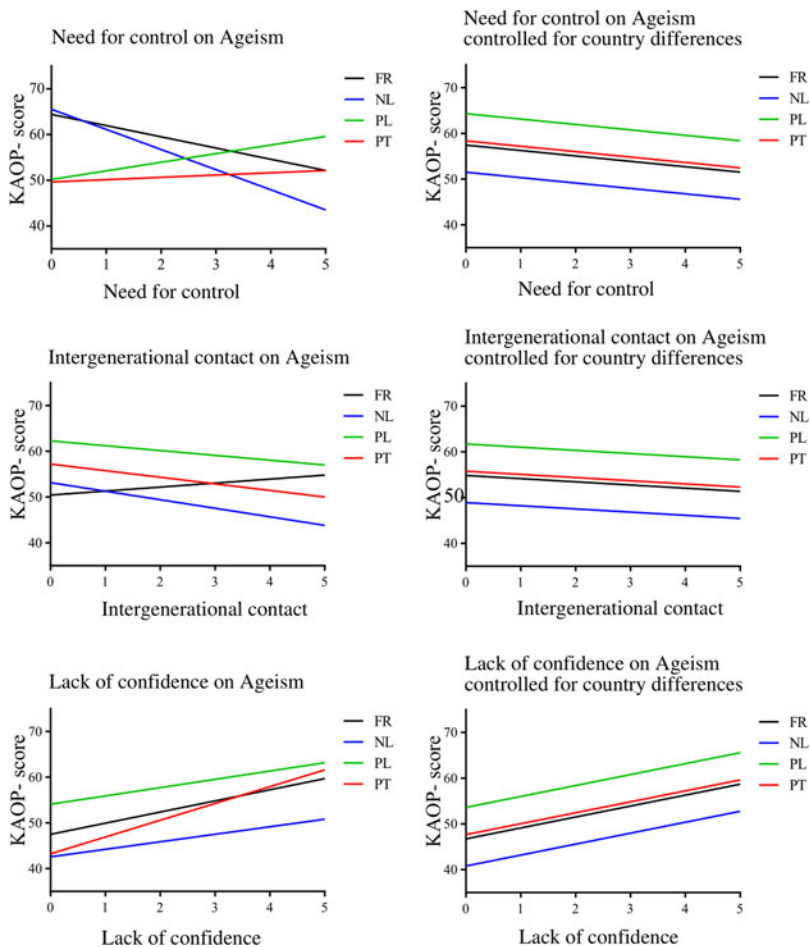
	Model 0		Model 1		Model 2		Model 3	
	<i>B</i>	SE	<i>B</i>	SE	<i>B</i>	SE	<i>B</i>	SE
Constant	46.222***	0.454	44.956***	0.792	48.593***	3.143	55.342***	3.609
Country fixed effects	Included		Included		Included		Included	
Age groups (Ref. 55–64):								
65–74			0.838	0.607	0.747	0.594	0.680	0.591
75+			0.995	0.907	1.108	0.887	1.052	0.884
Gender (Ref. Male):								
Female			–1.282*	0.591	–1.069	0.579	–1.178*	0.578
Education (Ref. High):								
Middle			1.038	0.688	0.688	0.673	0.749	0.670
Low			1.536*	0.753	0.428	0.745	0.424	0.742
Income (Ref. High):								
Middle			0.760	0.716	0.108	0.703	0.209	0.700
Low			1.317	0.780	0.597	0.765	0.655	0.762
Individual attitudes:								
Need for control					–1.182	0.633	26.137***	8.927
Intergenerational contact					–0.693	0.469	–8.807*	3.918
Lack of confidence					2.391***	0.284	2.417***	0.283

Cross-level interactions:					
	Need for control × Intellectual autonomy			−5.809***	1.889
	Intergenerational contact × Hierarchy			3.835*	1.836
$R^2$	0.156	0.147	0.190	0.198	

Notes: Fixed-effects model, ordinary least squares regression. Dependent: Kogan's Attitudes Toward Old People negative subscale score. SE: standard error. Ref.: reference category.

Source: European Institute for Innovation & Technology Health, Survey Ambitions of 55+ 2013–2016; Schwartz (2008).

Significance levels: \*  $p < 0.05$ , \*\*\*  $p < 0.001$ .



**Figure 2.** Comparison of individual attitudes with or without control for country differences. Notes: KAOP—: Kogan's Attitudes Toward Old People scale (negative subscale). FR: France. NL: The Netherlands. PL: Poland. PT: Portugal.

### Discussion and implications

Our findings seem to confirm the pervasiveness of ageism even among older individuals themselves and to a large extent across the countries under study (for country scores, see the online supplementary material). Similar to the multiple dimensions of ageism in younger generations (Cuddy *et al.*, 2005; Löckenhoff *et al.*, 2009), we found that self-ageism is multi-dimensional, mirrored by the fact that we found that each scale captured a different expression of ageist attitudes. Our results on self-ageism largely confirm findings of comparative cross-cultural studies on ageist attitudes in the general population. These studies found ageism to be a pervasive and global phenomenon, even when particular attitudes towards older people might vary across different cultures (McConatha *et al.*, 2003; Cuddy

*et al.*, 2005; Löckenhoff *et al.*, 2009). As expected, this finding appears also applicable to self-ageism.

Both the semantic and the low positive expressions of self-ageism show convergence across countries in our data. This may be due to the pervasive and pan-cultural nature of these expressions. Alternatively, it might be that the specific four countries in our dataset are not distinct enough when it comes to these specific expressions of self-ageism, a hypothesis that evidently needs further exploration of these expressions across more or other countries.

As common and pan-cultural as ageism has been argued to be, studies have already established that there are variations in expression and intensity, and have found associations between cultural values and cross-cultural variation in ageism. These studies have hypothesised links between traditional values and respect for older people, yet without identifying which specific dimensions and expressions of ageism might vary across cultures (McConatha *et al.*, 2003; Löckenhoff *et al.*, 2009). In this study, we confirm these expectations empirically by showing that not every expression of self-ageism is present to the same extent in every country. We observed a considerable amount of country-level variance in the negatively formulated expression of self-ageism – meaning that although this particular expression of self-ageism can be found in every country in our study, the individual attitudes that influence it might do so differently in each of the studied countries, perhaps as a result of differing extents to which they embrace cultural values, as illustrated by Figure 2. We found significantly moderating effects of the cultural values intellectual autonomy and hierarchy on individual attitudes that influence negatively formulated self-ageism. The need for control over one's life increases self-ageism, except in countries with a higher emphasis on the cultural value of intellectual autonomy. More appreciation of intergenerational contact predicts less self-ageism, yet this effect decreases in countries scoring higher on the cultural value of hierarchy. This suggests that in countries that value hierarchical social relations between generations, intergenerational contact is less effective in decreasing self-ageism than in countries that value more egalitarian relations between generations.

We can only make informed speculations about the exact nature of the moderating effects of cultural values on individual attitudes. In countries with less appreciation for intellectual autonomy, the need for control could be considered a more negative and undesirable attitude. When independent decision-making is considered to be less desirable by one's social environment, the need to be independent and in control might lead towards more negative attitudes towards an ageing self that is not able to live as autonomously as one would feel the need to do so. However, in countries with a high emphasis on the value of intellectual autonomy, making individual decisions is more appreciated and enabled. The need for control over aspects of one's life is therefore evaluated as a more positive and desirable attitude in such a cultural context. For example, it has been theorised that strong control beliefs, when supported, help older people to engage in preventive behaviour regarding healthy ageing and make them less inclined to accept negative stereotypes about ageing and age-related decline (Wurm *et al.*, 2007; Nelson, 2016). Thus, in brief, although rather speculative, it may be that in countries with higher emphasis on intellectual autonomy the need for control does not increase self-ageism,

because it fits with socio-cultural valued behaviour and opportunities to exert this need for control in these countries.

Our results show that appreciation of intergenerational contact predicts lower levels of self-ageism, yet this effect is less pronounced in hierarchical societies. This could be explained by the contact hypothesis (Allport, 1954): it is known that it is not merely intergenerational contact that can result in less ageism, the quality of this contact is of crucial importance (Wright *et al.*, 1997; Dovidio *et al.*, 2003). Conditions that influence the quality of this contact are equal status and mutual respect and co-operation. In more hierarchical societies, social contact is more strongly tied to hierarchical societal roles, which likely reproduces unequal and stereotype-confirming statuses and dependencies – thereby diminishing the quality of intergenerational contact. Another possible interpretation for the found effect is rooted in social identity theory explanations of self-ageism. This theory suggests that ageism in older people is connected to their perception of their own age group as having a low social status in interactions with other groups (Kite and Wagner, 2002; Bodner, 2009). In this context, hierarchical societies that put more emphasis on social status could perceive intergenerational interactions as a more negative experience, since it might stir fears about an age-related decline in social status. In turn, such a negative assessment of one's own social status could contribute to self-ageism (Bodner, 2009; Butler, 2009).

We have to emphasise that our explanations of the moderating effects of cultural values apply specifically to individual attitudes that influence negatively formulated self-ageism. Self-ageism in older people is triggered by mechanisms other than ageism in young people or the general population, which might also not necessarily be moderated by cultural values in the same way or to the same extent. As the effect of a lack of confidence in daily life underscores, not all of the individual attitudes in our analysis might be applicable to ageism among the general population or susceptible to change in different cultural contexts. The latter is illustrated in Figure 2, where we can see that the slope of 'lack of confidence' does not take a different direction across countries, in contrast to the other two variables in this illustration. The influence of lack of confidence could be specific to self-ageism and irrelevant for ageism in the general population, following Bodner and Cohen-Fridel (2010), who state that insecurity in social attachments increases self-ageism. They explain this effect through proposing that social attachment is a central issue in old age, when people become increasingly dependent on other people for their daily care and functioning. The association between lack of confidence in daily life and self-ageism might also work the other way around: negative ageist perceptions could contribute to problems with activities in daily life, wellbeing and health (Nelson, 2016).

The two individual attitudes in our study that turn out to be moderated by cultural values on the societal level only apply to one particular expression of self-ageism: the negatively formulated kind. Therefore, the results of our research imply that future studies need to investigate if effects of individual attitudes are specific for certain expressions of self-ageism, or are also applicable to expressions of ageism among the general population. Such future research would benefit from a focus on explanations for moderating effects of cultural value orientations that go beyond theoretical conjecture. In order to achieve this, we would recommend incorporating methodologies that allow for a more nuanced and culture-centred

understanding of these complex processes of influence, as well as for comparison between different expressions of self-ageism.

Another implication of our findings is that in certain contexts, cultural value variation might very well influence the effectiveness and outcomes of social interventions that aim to reduce (self-)ageism. This knowledge has to be taken into consideration in future interventions as well as in policies designed around this issue. Taking the outcomes of our study into account, intergenerational contact interventions need adaptation to the cultural dynamics of more hierarchically inclined societies, in order to be as effective as they would be in a more egalitarian cultural context. Improving older people's confidence in social contact, however, could help to reduce self-ageism regardless of a society's appreciation of intellectual autonomy and hierarchy. A culturally sensitive approach to interventions might be of key importance in enabling more positive ageing experiences and outcomes, without the detrimental effects of self-ageism.

Although being unique in its cultural contextualisation of self-ageism, a limitation of the current study is that our research was limited to four European countries that served as proxies for different cultural contexts. Regarding our study, the theoretical assumptions behind cultural value orientations line up with our analysis and data. It is up to future research to establish whether our findings will hold in studies with other, culturally more distinct or heterogeneous countries. For instance, certain effects that did not vary across the four countries in our study – such as lack of confidence in social contact – may turn out to be influenced by cultural values after all when non-European or other European societies, with different cultural meanings of confidence, are part of the comparison. A more culturally diverse comparison would therefore be welcomed to study the pan-cultural pervasiveness of self-ageism further and the moderating effects of cultural values on (certain) expressions of self-ageism. Preferably, such a cross-cultural comparison would not be limited to assumptions of cultural homogeneity within countries – which the cultural value scores in our study are to a large extent – and instead find better ways to account for variations in cultural value orientations within and between countries, as well as the perceptibility of cultural value orientations to change over time.

Though cultural variation in ageism has been investigated before, to our knowledge this is the first study that empirically investigated the influence of different cultural contexts on individual attitudes that influence self-ageism. More insight into the different expressions of self-ageism in diverse cultural contexts will contribute to finding new, culturally sensitive and fitting ways in which self-ageism can be diminished. Ultimately, those new-found ways may reduce the ambivalent (self) ageist attitudes that perpetuate the exclusion and discrimination of older people in societies across the globe and will lead to more positive ageing experiences for the generations to come.

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**Ethical standards.** Data collection was done through an international marketing agency, Trendbox. Recruitment and data collection followed the ICC/ESOMAR international code on market and social research, including their ethical guidelines (ICC/ESOMAR, 2008).

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