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Why Does the Subjective Social Status of Older People Vary Across Countries? The  
Role of Societal Modernization and Employment

Revision 4.

### Abstract

**Objectives:** To test and expand upon modernization theory's account of subjective social status (SSS) of older people in society. **It was hypothesized that perceptions of older people's social status should be higher in more modernized countries and that the proportion of older people in employment should moderate the relationship between modernization and SSS of older people.**

**Methods:** Data were from the *Experiences and Expressions of Ageism* module in the fourth round of the European Social Survey. The sample analyzed included 45,706 individuals from 25 countries in the European region. Multilevel modeling was used to test the hypotheses.

**Results:** The subjective social status of older people (over the age of 70) was perceived to be higher in countries with very high levels of modernization and in countries with a higher proportion of older people in employment. **The positive association between modernization and SSS of older people was stronger within countries with a lower proportion of older people in employment.**

**Discussion:** The proportion of older people who are employed is an important factor that is related to perceptions of the social status of older people in less modern societies. The individual and societal implications are discussed, specifically in relation to policies promoting active aging.

*Keywords:* Social status, modernization, employment, older adults, cross-national comparisons

As targets of ageist attitudes, older people may be judged as inferior to middle-aged adults in terms of power and social status, wealth, respect and influence (Abrams, Russell, Vauclair, & Swift, 2011; Garstka, Schmitt, Branscombe, & Hummert, 2004). Perceptions of older people's social status have consequences for the way they are treated in social interactions (Fiske, Cuddy, Glick, & Xu, 2002), and can also influence their health and well-being (Demakakos et al., 2008; Hu et al., 2005). It has even been suggested that subjective status may be a better predictor of older people's health than objective status assessments (Singh-Manoux, Marmot & Adler, 2005).

The status of a group is determined by its relative place or position in society (Parsons, 1951). Subjective social status (SSS) is usually measured by asking respondents to locate a social group's position in society on a 10-rung ladder, where 0 represents the bottom of the status hierarchy and 10 represents the top, similar to "prestige" measures used in sociological studies (e.g., Hodge, Treiman & Rossi, 1966). Evaluations of SSS reflect an individual's estimated 'cognitive average' of standard markers of socioeconomic status (e.g., occupational position, education, income) along with other factors (e.g., life satisfaction) (Singh-Manoux, Adler, & Marmot, 2003).

Numerous studies have noted that the SSS of older people varies across societies. Yet, these studies also have important limitations. No large cross-cultural study has specifically measured the SSS attributed to older people. Most importantly, there have been very few attempts to test theory-based predictors of societal-level differences that might be associated with the social status of older people. Most studies have examined social status indirectly, focusing on related concepts such as representations of aging, attitudes, or stereotypes associated with older people and

providing only descriptive accounts of differences between countries (e.g., Arnhoff, Leon, & Lorge, 1964; Giles, et al., 2000). Studies that included samples from several nations have only conducted comparisons between a few specific Western and Eastern/Asian countries (for a review see Giles, et al., 2003; O'Brien-Suric, 2013) or lack generalizability regarding the samples (Bengtson, Dowd, Smith, & Inkeles, 1975; Chow & Bai, 2011; Löckenhoff, et al., 2009). Moreover, studies testing theories tend to use only objective status indicators of older people, such as occupation and employment levels (e.g., Cowgill & Holmes, 1972; Palmore & Manton, 1974; Simmons, 1945), or do not disentangle objective and subjective status components at all (Balkwell & Balswick, 1981).

The present paper aims to address these limitations. As such, we use data from the European Social Survey (European Social Survey Round 4 Data, 2008) to test predictors of older people's SSS across different societies. We consider a wide sample of European societies rather than just a few pairwise comparisons. We use a direct rather than indirect measure of SSS (Demakakos et al., 2008; Hodge et al., 1966; Hu et al., 2005). We test how theoretically specified country-level variables, i.e. indicators of modernization, predict perceptions of older people's status. Further we propose that an objective status indicator, i.e. the level of employment of older people, may interact with modernization to influence the SSS of older people. These questions are highly relevant in the context of European population aging and the growing importance placed on policies that promote active and healthy aging and extended working lives (Walker, 2002; European Commission, 2006).

The European region is very diverse, with important differences between countries in terms of cultural, socio-economic, and political circumstances (Peace, Dittmann-Kohli, Westerhof & Bond, 2007). Northern and Central European countries

usually fare somewhat better on socio-economic indicators (e.g., economy and education) than Eastern and Southern European countries (Human Development Report, 2007/8). For instance, Switzerland's GDP (PPP) per capita (\$35,633) in 2005 was more than three times that of Bulgaria (\$9,032). There is also great variability in the employment rates of those aged 65. In 2010, the highest employment rates for this age group were in Portugal (16.5%), Romania (13.0%) and Cyprus (12.9%), and the lowest were in France and Slovakia (both 1.6%) and Hungary (1.9%) (Eurostat News Release, 2012). In sum, the European region's diversity on these factors provides an informative context in which to examine the impact of modernization and employment rates on the SSS of older people.

### **The Role of Modernization**

A well-established account of older people's general social status is based on modernization theory (Cowgill, 1974; Simmons, 1945) - a core theory within the sociology of aging (Alley, Putney, Rice, & Bengtson, 2010). Cowgill (1974) identified four key aspects of modernization that undermine the status of older people: health technology, economic advancement, urbanization, and education. He proposed that as societies become more modern – undertaking the shift from farm and craft production within families to more industrialized modes of production – the status of older people would diminish. This would be due to competition for resources and power between age groups, early retirement and lower income for older people, break up of communal ties with the family, and lower education and occupation status of older people compared to younger generations. Consistent with this theory, Cowgill and Holmes' (1972) study of 14 diverse societies revealed that older people's objective status declined with modernization and similar associations have been found

with subjective status measures in small cross-cultural studies (Bengtson, et al., 1975; Chow & Bai, 2011).

Modernization theory has been subjected to much criticism (e.g., Hendricks, 1982; Street & Parham, 2002). One important factor predicting the status of older people seems to be the *stage* of modernization. Palmore and Manton's (1974) cross-cultural analysis of 31 countries revealed a J-shaped relationship between macro-social indicators of older people's objective status and modernization. They suggested that even though the objective status of older people declines in the early stages of modernization, it may increase in more advanced stages of modernization because the funds allocated to support older people also increase (e.g., in terms of pensions). Hence, we expect that when societies reach a certain level of modernization, as it is the case with European countries (United Nations Development Report, 2007), there is a positive linear **association** between modernization and SSS of older people (H1).

### **The Role of Employment of Older People**

In studies testing the effect of modernization, employment status of older people has usually been employed used as an objective status measure (e.g., Palmore & Manton, 1974). Yet, we propose that it might interact in important ways with modernization in determining the SSS of older people.

Older people who are perceived as being generally active and in employment are perceived more positively and as having higher social status (Cohn, 1982; Posner, 1995; Schmidt & Boland, 1986). According to Social Exchange Theory (Turner, 1989), negative societal perceptions of retirement are due to the stigma attached to older people's dependency on state welfare and their inability to reciprocate. Consequently, we could expect that the greater the proportion of older people that is still actively contributing to the economy and society, the greater should be their SSS



in society. Yet, it is also conceivable that the association between employment of older people and their SSS is more complex and depends on the state's resources.

A number of theorists have equated modernization with industrialization or economic development (e.g., Rostow, 1963). In fact, advanced development regarding Cowgill's (1974) four pillars of modernization only seems to be viable if there is also a strong economic development. Hence, less modern societies are primarily characterized by scarcity of, and increased competition for, financial resources. Following the theoretical rationale above (Turner, 1989), in less modern countries the perception of older people's social status may depend on whether they tend to reciprocate by contributing economically to society and being self-sufficient through active employment. If older people do not contribute much, i.e. employment rates of older people are relatively low, they may be perceived as a realistic threat to the economic power of the country, putting at risk the material well-being of those who do contribute actively (see also Stephan & Stephan, 2000). This in turn would lead to more negative perceptions of their status. However, in less modern countries in which the employment rate of older people is relatively high, they are less dependent on state welfare; more self-sufficient and able to maintain a certain standard of living which should have a positive effect on societal perceptions of their social standing (see also Gerth & Mills, 1948). In contrast, in highly modern societies older people are more likely to have sufficient resources to sustain themselves (either through pensions or accumulated wealth) and therefore continued employment would make less difference to their SSS (Posner, 1995). **Hence, we hypothesize that the proportion of older people in employment moderates the relationship between modernization and SSS of older people.** The association between modernization and SSS of older people should be stronger in countries that have a lower proportion of older people in

employment than in countries that have a higher proportion (H2). Stated differently, the gap between the SSS of older people and employment rates of older people should be larger in countries scoring low on modernization than in countries scoring high.

If the subjective status depends indeed on the material wealth of older people in less modern societies, we should find the same **hypothesized associations** with more specific measures of the material situation of older people in a country. Given the importance of economic development in determining the level of modernization, we expect that **the hypothesized relationships** depend primarily on the economic component of modernization (H3a). Furthermore, because our hypotheses are mainly based on theories of economic competition and threat, we expect that the hypothesized interaction model also holds when we use an indicator of older people's material deprivation (**defined as not being able to pay at least three out of nine necessary or desirable items, Eurostat, 2010**) instead of modernization as a more specific economic resource variable for this age group (H3b).

### **Other Predictors of Older People's SSS**

The present research considers a number of other societal-level variables that may plausibly predict the SSS of older people. It is conceivable that countries with a higher proportion of older people in society also perceive them as a greater realistic threat and therefore hold more negative perceptions towards this age group (cf. Schneider, 2008). Moreover, there are important gender differences affecting older people such as shorter working lives and lower average wages for older women (Eurostat Statistical Books, 2011). Hence, people from countries with a higher proportion of older females may assign lower SSS to older people because their image is mostly defined by older females who are more likely to be financially dependent.

We also consider the role of levels of government support. It might be that greater financial independence of older people from the family network contributes to more positive social status perceptions (see Palmore & Manton, 1974). However, it might also be that the more a country invests in its older population, the more negatively older people are perceived because they constitute a burden to economic resources (cf. Turner, 1989; Stephan & Stephan, 2000). Furthermore, unequal societies are characterized by a few very wealthy and many poor citizens and most of older adults are likely to count to the latter ones in these countries once they become more dependent on welfare (Wilkinson & Pickett, 2009). Hence, national income inequality may be negatively related to the SSS of older people. Because each of the variables mentioned above may affect the hypothesized relationships that are in the focus of the current study, we control for them in our models.

## **Methods**

### **Sample**

We used data from the European Social Survey (ESS) from Round 4, 3rd edition (European Social Survey Round 4 Data, 2008). The data were collected through computer-based personal interviews in 27 countries (see Supplementary Table 1) in the years 2008/ 2009 from the European region, plus Israel. These are random probability samples and are nearly representative of the eligible residential populations in each country (aged 15 years and over). Due to missing data for Israel, Ukraine and Russia on some of the country-level predictors, the final dataset was reduced to 25 countries ( $N = 45,706$ ). Supplementary Table 1 shows the descriptive statistics for each country. Note that there were considerable differences in the proportion of female respondents across countries, ranging from 47.29% (in Norway) to 62.27% (in Latvia), as well as in the average age of respondents, ranging from 39

years (in Turkey) to 53 years (in Portugal). Since previous research has shown that age and gender can affect the perceptions of older people (Garstka, et al., 2004; Kite, Deaux, & Miele, 1991), we included these individual-level variables as level-1 covariates into our models in order to take into account compositional effects.

### **Individual-level Variables**

**Subjective Social Status (SSS).** The dependent variable was the subjective social status of older people. The interviewer asked respondents the question: *I'm interested in how you think most people in [country] view the status of people over 70. Using this card please tell me where most people would place the status of people over 70?* The response scale ranged from 0 = 'extremely low status' to 10 = 'extremely high status'. Status was defined for the respondents as referring to prestige, social standing or position in society. The scale was presented in a ladder format.

**Control variables.** Besides age and gender (coded: 0 = male, 1 = female), we also controlled for response sets. Previous research has found that extreme and acquiescent response styles may constitute important sources of bias in cross-national studies and should be taken into account to avoid spurious results that do not reflect genuine societal differences (Cheung & Rensvold, 2000). As evaluations of SSS of older people are relative to the positions of other age groups in society, it is important to ensure that higher status afforded to older people is not just the product of affording higher status to all age groups. Hence, in order to partial out variance that is due to response differences in scale use across countries, and to ensure that evaluations of SSS of older people are relative, we included the SSS of people in their 40s (measured in the same way as SSS of older people) as a covariate in the analyses.

### Country-level Variables

**Modernization.** We followed Cowgill's (1974) definition to operationalize a country's level of modernization. He proposed that societal modernization is characterized by advanced development in the four specific areas health technology, economic technology, education and urbanization. We used the life expectancy, income, and education index from the Human Development Reports (2007/8) in order to assess modernization in regard to Cowgill's first three pillars. The fourth pillar was assessed by the degree of urbanisation in a country (i.e., the proportion of the total population living in urban areas) as published by the Central Intelligence Agency (2008). Data were available for all 28 ESS countries and the four variables were all positively correlated ( $r_{min} = .30$  to  $r_{max} = .88$ ,  $p < .10$ , one-tailed). Hence, we performed a principal component analysis and the screeplot indicated a one-factor solution (eigenvalues: 2.52, 0.73, 0.65, 0.11) accounting for 63% of the total variance. All factor loadings were sizeable with a minimum loading of .63. We created a composite score by z-standardizing each of the four indices and then averaging across the standardized scores. We will refer to this variable as the Modernization Index. Countries that score high on the Modernization Index show a longer life expectancy, higher GDP per capita, more years of education and a greater proportion of the total population living in urban areas. The three countries with the highest level of modernization are Belgium, Denmark, and Sweden, and among those with the lowest level of modernization are Turkey, Romania, and Croatia (see Supplementary Table 1).

**Proportion of people aged 65 and over in employment.** As an indicator of the employment rate of older people as a percentage of the same age population, we used data published by Eurostat<sup>1</sup>. Employed persons are defined as those who

performed any numbers of hours of work for pay, profit or family gain. Data refer to the year 2008 and are available for 25 of the ESS countries.

**Material deprivation of people aged 65 and over.** This variable assesses the proportion of people over 65 who cannot afford to pay at least three out of nine necessary or desirable items (e.g., not being able to afford heating the home or to face unexpected financial expenses, Eurostat, 2010). Data were available from Eurostat for the year 2008 and for 23 ESS countries<sup>2</sup>. Note that it correlated very highly with GDP,  $r(22) = -.94, p < .001$  and therefore we were not able to test both variables in the same model.

**Covariates.** We used data on the proportion of older people (aged 65+) ( $N = 27$  countries) and the proportion of older females (aged 65+) in society ( $N = 23$  countries) in the year 2008 as published by Eurostat<sup>3</sup>. In order to take into account public spending on older people, we used data on old age pension provision as a percentage of GDP ( $N = 23$  countries) from Eurostat for the year 2007. As a measure of income inequality in countries, we used the Gini coefficient, ranging from zero to 100 with higher percentages expressing more inequality. Data on Gini were obtained from Eurostat for the year 2008, but data for Turkey was only available for the year 2006<sup>4</sup>.

### **Analytic Strategy**

To analyze nested data (individuals nested within countries), we used multilevel modelling (using HLM 7, Raudenbush & Bryk, 2002). We employed full maximum likelihood estimation because this method enables us to test any pair of nested models for significant differences with a likelihood ratio test. For the HLM program, the chi-square test is based on the deviance statistic (deviance<sub>complex model</sub> –

deviance<sub>simple</sub> model) and its associated difference in degrees of freedom (see Tabachnick & Fidell, 2007).

HLM employs listwise deletion of missing data at level-1 of the data hierarchy, providing a total sample size of 45,706 respondents for the analysis. The loss of cases due to missing observations was 6.6% which can be considered small; biases and loss of power are likely to be inconsequential (see Graham, 2009). A missing values analysis conducted in SPSS recorded no evidence for a systematic missing value pattern. The average response rate across countries was 62.3% ranging from 45.7% (Croatia) to 78.7% (Cyprus). The multilevel analyses were conducted by using the design weight for level-1 variables. This corrects for slightly different probabilities of selection and therefore renders the sample more representative of the population (aged 15+) in each country (see <http://ess.nsd.uib.no/ess/doc/weighting.pdf>).

The analytic procedure consisted of four steps with increasingly complex models (see also Raudenbush & Bryk, 2002). We included as few level-2 predictors as possible to preserve a maximum degree of freedom.

Model 0 was the null model (without any predictors), revealing how much of the total variance in SSS was associated with country differences (the intraclass correlation coefficient, ICC), rather than individual differences. In Model 1 we added individual-level predictors at level-1, with only the intercepts varying randomly. This model adjusts for differences between countries while indicating effects of the individual-level predictors.

Model 2 included all individual-level predictors from Model 1 and we added country-level predictors separately, i.e. the linear effect of the Modernization Index in

Model 2a, the linear and quadratic effect of the Modernization Index in Model 2b, and employment rate of people aged over 65 in Model 2c.

Model 3 tests the hypothesized interaction between the Modernization Index and employment rate of people over 65 in predicting the SSS of older people. We also probed whether the hypothesized effects hold when including covariates in the model. Note that data for some countries were missing on some of these variables.

Consequently, the models are not directly comparable to Models 1-4 in regard to the level-1 and -2 sample size, the variance components as well as deviance statistics and are therefore not included in Table 1.

Because the Modernization Index consists of different variables, we test whether each specific component and its interaction with the employment variable predicts the outcome variable (Models 4a-4d). We also examine whether the effects are replicable with a specific measure of older people's material situation, i.e. their material deprivation. Note that for this variable data for some countries were missing. For the same reasons as above we do not include the results in Table 1.

The percentage of explained variance for individual-level predictors was computed with  $R^2 = (\sigma^2_{\text{Null model}} - \sigma^2_{\text{Model}}) / \sigma^2_{\text{Null model}}$  and with  $R^2 = (\tau_{00 \text{ Null model}} - \tau_{00 \text{ Model}}) / \tau_{00 \text{ Anova}}$  for country-level predictors (see Raudenbush & Bryk, 2002).

### Results

All level-2 correlations are shown in the Supplementary Table 2. Note that for our hypothesized models, there were no issues of multicollinearity. The multilevel regression results predicting the SSS of people over 70 are displayed in Table 1.

-Table 1 -

The null model yielded an estimated grand mean for SSS of older people of 4.77 ( $SE = 0.19, p < .001$ ) on a scale from 0 to 10, indicating that individuals across



all countries tended to perceive the SSS of older people in society as rather low (Model 0). In comparison, the grand mean for SSS of people in their 40ies was 6.91. All countries (except Cyprus) scored well below or just above the mid-point of the scale (5) for SSS of people over 70. However, as Figure 1 shows, there were considerable differences between countries. The ICC revealed that 16% of the total variance was associated with differences between countries in regard to the SSS of older people.

-Figure 1 -

Adding individual-level predictors to the model (Model 1) showed that women and older respondents perceived the status of older people to be *lower* in society than did men and younger respondents (with status of 40s included as a predictor variable). There was some evidence of response bias effects because respondents who judged the status of middle-aged people to be higher also perceived the status of older people to be higher. Model 1 explained 5.92% of the within-country variance and 19.63% of between-country variance, indicating differences in sample composition across countries as well as country differences in the subjective evaluation of the status of middle-aged people that explain some of the between-country variation.

Next, country-level predictors were added separately into sequential models. Consistent with our hypothesis (H1), we found that the Modernization Index positively predicted the SSS of older people (Model 2a), explaining 36.15% of the between-country variance. A chi-square test for nested models confirmed that this model was significantly better than the model with level-1 predictors only [ $\Delta \chi^2(3) = 5.73, p < .05$ ]. We also found that the association between Modernization and SSS did

not follow a curvilinear trend (Model 2b) and there was no significant gain over the linear effect model in adding the curvilinear effect [ $\Delta \chi^2(1) = 0.02, p = \text{ns}$ ].

Although the employment rate of people aged 65+ was not significantly related to SSS when tested as a single level-2 predictor (Model 2c), it became a significant positive predictor when the Modernization Index and its interaction with employment rate of people aged 65+ were included in the model (Model 3). Most importantly for our hypothesis (H2), the interaction effect turned out to be significant. Figure 2 shows a scatterplot of countries with mean levels of SSS on the y-axis and the Modernization Index on the x-axis including the fitted regression lines for low and high employment rates of people aged 65 and over. The plot of the interaction is consistent with our expectation that employment rates of older people matter most in countries that score relatively low on the Modernization Index. **Within these countries, lower employment rates of older people (e.g., in Bulgaria, Hungary, Slovakia) are related to much lower SSS of older people than high employment rates (e.g., in Turkey, Romania, Portugal).** By testing the simple slopes for effects of employment rates within less modern countries, we found that the difference in status perceptions of older people between these countries was indeed significant ( $B = 3.36, p < .01$ ). As modernization increases, the employment rate of older people becomes less relevant for the perceptions of their social status in society. This is primarily the case for Northern and Central European countries (e.g., Norway, Belgium, France). The simple slopes for effects of employment rates within highly modern countries revealed that the difference in status perceptions of older people was indeed *not* significant ( $B = -0.36, p = .73$ ).

We also tested whether the simple slopes in Figure 2 for low and high employment rates of older people were significant. It turned out that the slope for high

employment rates was only marginally significantly different from zero ( $B = 1.87, p = .08$ ), whereas the slope for low employment rates was significant ( $B = 4.33, p < .01$ ). This indicates that status perceptions of older people are likely to be very similar between modern and not so modern countries if the employment rate of older people is high, yet significantly different if the employment rate is low. The model explained 56% of the between-country differences. A chi-square test for nested models yielded a significant difference from Model 2a, [ $\Delta \chi^2(2) = 9.41, p < .01$ ], which confirms that the interaction model is significantly better than the model containing only the Modernization Index in predicting SSS of older people.

Next, we added one covariate after the other into the model to probe whether the interaction holds when other level-2 variables are taken into account that may also predict the SSS of older people. We found that the proportion of older people in society and pension provision as a percentage of GDP were not significantly related to the outcome variable ( $B = -0.154, p = .294$  and  $B = 0.001, p = .994$ ) and the hypothesized interaction remained unaffected in both models ( $B = -0.425, p < .05$  and  $B = -0.423, p < .05$ ). The proportion of older women in society was a marginally significant and a negative predictor of the SSS of older people ( $B = -0.275, p = .054$ ). Hence, countries with a higher proportion of older females showed also lower average perceptions of the SSS of older people in general. Yet, including this covariate did not have any impact on the hypothesized interaction effect ( $B = -0.467, p < .05$ ). The Gini coefficient, as a country-level indicator of income inequality, was not predictive of older people's SSS ( $B = -0.164, p = .463$ ), and had no impact on the interaction effect ( $B = -0.524, p < .05$ ).

When we repeated the main model using each of the four pillars of modernization instead of the Modernization Index, we found that all components of

modernization, except for the level of urbanization (Model 4d), significantly predicted the SSS of older people (Models 4a-c). In a similar vein, the interaction between each of the components of modernization and the employment rate of older people was predictive of SSS for all components of modernization except urbanization. Hence, urbanization does not seem to have much impact for the SSS of older people. Since these models contain the same degrees of freedom, we were unable to employ a chi-square test in order to compare which of the three components of modernization predicted SSS significantly better. However, the descriptive R-square statistics indicate that life expectancy and GDP accounted for an equal amount of between-country variance (64%) which is not surprising given that these variables are highly correlated ( $r = .90, p < .01$ ). Most importantly, these two models accounted for much more between-country variance than the model containing only education (49%). When we plotted the graphs for GDP and life expectancy we found that they parallel the ones with the Modernization Index. The gap in SSS of older people between countries with high and low employment rates of older people is largest when countries are characterized by a relatively low GDP or life expectancy. The gap closes progressively as GDP and life expectancy increase. Hence, we have some support for our hypothesis that it is the economic component that drives **the association between modernization and SSS** (H3a), yet we are unable to disentangle it completely from life expectancy due to multicollinearity.

-Figure 2 -

When we used the material deprivation rate in place of modernization and re-ran Model 3, we found that, despite reduced power, material deprivation was a highly significant and negative predictor of the SSS of older people ( $B = -0.484, p < .01$ ). There was no significant main effect of the employment rate 65+ ( $B = 0.167, p = .26$ ),

yet, there was a marginally significant interaction effect ( $B = 0.305, p = .05$ ) paralleling the findings obtained with the Modernization Index and supporting our hypothesis (H3b) (see Supplementary Figure 1). As the material deprivation rate increases, the gap in SSS of older people between countries with high and low employment rates of older people increases as well. The slope for high employment rates 65+ was non-significant ( $B = -0.18, p = .39$ ), whereas the one for low employment rates was highly significant ( $B = -0.79, p < .001$ ). This evidence corroborates that underlying the effect of modernization is the economic situation of a country or more specifically the extent to which older people are materially deprived in society. In less economically developed countries, lack of material resources may be compensated for if a greater number of older people are in employment, since this may assure them a better standard of living and therefore raise the perception of their status.

### **Discussion**

This study tested some key theoretical predictors of the subjective social status (SSS) of older people. Using multi-level analyses across representative samples of 25 countries within the European region, we were able to overcome some of the limitations identified in previous research, thus allowing, for instance, a greater cross-cultural generalization (for a review see Giles, et al., 2003). Moreover, we extended previous research by focusing explicitly on older people's *subjective* social status. This area of research has been overlooked in the literature despite the important implications for older people's representation in society and their well-being (e.g., Demakakos et al., 2008; Fiske, et al., 2002; Garstka, et al., 2004). The evidence provides new insights as to how SSS may be determined by a combination of societal

factors including factors that have been conceptualized as objective status assessments in the past (see Palmore & Manton, 1974).

As we expected, older people are generally ascribed a low status across different countries. Given that high status can afford protection from discrimination and ill treatment, this alone is likely to have profound consequences for prejudice towards older people (Fiske, et al., 2002; Garstka, et al., 2004), and highlights the importance of understanding factors that may affect status perceptions.

### **Modernization and Employment of Older People**

The present results extend initial findings by Palmore and Manton (1974) who examined objective indicators of older people's status as a function of modernization.

**We offer substantial new evidence that there is a linear positive association between modernization and the SSS of older people for countries that have progressed beyond early stages of modernization.** Hence, people in more modern societies, assessed in terms of societal development in health, education, income, and levels of urbanization, had more favourable perceptions of the status of older people.

Once modernization has been taken into account, there was also a positive relationship between employment rates of older people and the SSS of older people which corroborates previous cross-national findings (Cohn, 1982). **Furthermore, consistent with our hypothesis, the proportion of older people in employment moderated the relationship between modernization and SSS.** When the percentage of older people still in employment was relatively low, older people were perceived to have significantly lower status in less modern countries compared to more modern countries as well as to countries with higher employment rates of older people.

**However, when the percentage of older people working was relatively high, modernization was not a significant predictor of SSS of older people.** This interaction

between modernization and employment shows that longer term societal modernization interacts with more immediate, potentially alterable, macro-social variables to predict status perceptions. **Moreover, the associations remained significant after controlling for group size (proportion of older people and older females in society), government support for older people and national income inequality.** Indeed none of these covariates, except for proportion of older females, predicted SSS of older people. This suggests that an increasingly aging population together with more government spending for this age group are not necessarily perceived as a threat undermining the SSS of older people. **What matters for the societal perception of older people's social status is more likely to be a question of economic resources.**

Our additional analyses also support this reasoning by shedding light on which of the underlying components of modernization are mostly likely to drive **the associations described above.** We found that life expectancy and economic development explain most of the variance in SSS of older people. Furthermore, our results suggest that a concomitant of low economic development is that older people are likely to be more materially deprived in these societies and that the proportion of older people in employment has the largest bearing on their SSS in these countries. The fact that relatively high employment rates of older people do not make a significant difference in the SSS of older people in countries that have more or less economic resources suggests that it is not the ideological value of “work” *per se* that influences status perceptions. It may be the combination of widespread impoverishment and relative absence from the workplace that is especially detrimental to the SSS of older people (cf. Singh-Manoux et al., 2003).

This may have important policy implications. Investment in active aging is fundamental to sustain aging societies and involves strategies such as fighting age discrimination in employment. This includes both *preventive* (e.g., lifelong education and continuous training) and *remedial* interventions (e.g., training older workers lacking specific skills) (Walker, 2002). Our findings suggest that raising the employment rate of older people in less wealthy countries - even if it is just partial employment - may be an important factor determining both the personal living standards and providing more positive representations of the status of older people.

### **Is it Health or Wealth that Matters?**

Although we tried our best to disentangle the factors that might determine the SSS of older people, we found that life expectancy explained a similar amount of variance as GDP in the prediction of SSS, and interacted in similar ways with employment rates. Hence, an alternative explanation for the significant differences in SSS between more and less modern countries, given a relatively low employment rate of older people, is that older people may have important health motives for not seeking employment in the latter case. It might be that people over 65 are forced to retire in less modern societies because of health issues, whereas they retire voluntarily in more modern societies because of their high replacement income from their pensions. However, the evidence does not support such an interpretation. Using data on the reasons for not working for people over 65 in 2008 (Eurostat Statistical Books, 2011), we found that the proportion of people who indicated own illness or disability did not correlate with the Modernization Index,  $r(21) = -.10, p = .68$ , nor with GDP,  $r(21) = -.06, p = .78$ , or life expectancy,  $r(21) = .07, p = .78$ . Hence, it is unlikely that the SSS difference can be explained by health differences that impede participation in the workforce. This is consistent with our interpretation of the findings that it is not



the perception of ill-health, but a lack of active contribution to the economy by the older population that has a negative effect on perceptions of their social status in societies with a weaker economy (see also Turner, 1989; Stephan & Stephan, 2000).

### **Limitations, Future Research and Conclusions**

The European Social Survey includes relatively modern countries in a global context. Ideally we would explore both early stage modernization and additional cultural factors but this would require identical measures of older people's SSS across an even wider sample of countries from other continents, which is not currently available. Nonetheless, the ESS countries do encompass substantial cultural, socio-economic, and political differences (Peace, et al., 2007). Our findings suggest a general divide between ex-communist countries that transitioned in the 1990s from socialism to capitalism (i.e., Eastern European countries) and non-transition countries (e.g., Northern and Central European countries). We are not aware of any other studies examining SSS of older people in ex-communist countries. Future research using different methods could examine whether status perceptions of older people have changed due to structural changes associated with the transition to capitalism. It would also be important to understand in more detail what the underlying reasons are for not participating actively in the workforce.

The ESS used a single item measure of SSS, preventing us from establishing that the latent concept *status* has the same meaning across the different ESS countries. Despite possible measurement error due to such cultural differences, it is unlikely that between-country differences in the status item can be explained by measurement error. First, we found systematic variation between countries that could be explained with non-cultural variables. Second, the ESS invests in substantial review and pilot research to ensure consistency of meaning in the development and translation of the

items. Third, inclusion of the subjective social status of middle-aged adults as a control variable enabled us to adjust for the individual and cultural differences in the use of the response scales for the status measures. These points bolster our confidence that the findings reveal genuine differences in the perception of older people's social status between countries.

Our models tested theoretically plausible relationships but we are cautious about making strong causal arguments, in part because the ESS data are cross-sectional. Some anthropological evidence suggests that the relationship between modernization and negative attitudes towards older people is characterized as a cycle or wave rather than a linear relationship (Fry, 1997). If future rounds of the ESS measure the SSS of older people it may be possible to consider cohort effects, but ideally there would be a longitudinal cross-national study to establish greater certainty over likely causality. However, because some macro-social variables may change very slowly this may require decades rather than years of data. It seems reasonable to assume that the variables assessing modernization are not caused by the perception of older people's status, so modernization is plausibly 'causal'. We can be less certain that the proportion of older people in employment causes, rather than is caused by their SSS. Experimental studies examining how the SSS of older people changes as a function of their representation in the workforce could shed some light on these issues.

In conclusion, the present research has used a substantial evidence base to test and provide qualified support for modernization theory, particularly its underlying component economic development. We have also shown that the shorter term factor of older people's employment rates has a larger impact on their perceived social status in less modernized countries. Given the importance of perceived status for a host of

health and social outcomes these findings are relevant for policies designed to deal positively with aging populations.

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Endnotes

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<sup>1</sup> [http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=lfsa\\_ergan&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=lfsa_ergan&lang=en)

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