Welfare states and quality of later life: distributions and predictions in a comparative perspective

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Abstract Demographic transitions are a driver of social change and societal ageing influences the resources and chances in life of different age groups. As a contribution to the debate on (potential) results of the transformation of social security in ageing societies, the impact of social security systems on distributions of quality of life in later life is discussed. Quality of life is introduced as a helpful concept to answer the paper's research questions: How are levels of quality of life in later life and the variability of objective and subjective quality of life indicators related to welfare state arrangements? What is the relevance of social structure indicators for this variability, how is it related to old age security, and what can be learned for the perspectives of current debates on equity and social security reforms? In a comparative perspective employing Esping-Andersen's welfare regime typology, three basic hypotheses are thoroughly tested: the 'hypothesis of (relative) levels', the 'distribution hypothesis' and the 'social structure hypothesis'. The analyses apply micro data from ten countries. While most of them are included in the first wave of the international comparative research project SHARE, data for England come from the English Longitudinal Study of Ageing. Descriptive analyses as well as multivariate models prove an interconnection between welfare state systems and quality of life indicators but not all three hypotheses can be fully confirmed. Social policy

implications of these findings are discussed and a basis for extended future analyses is outlined.

Keywords Later life · Social gerontology · Social inequality · Quality of life · International comparisons

Introduction

The ageing of societies is a driver of social and institutional change in late modern societies. It has strong implications for social security as well as for social gerontological analysis, while diversity, social inequality and social justice are traditional core themes of sociology and social policy. Both perspectives are interrelated in the perspective of policy oriented research on ageing and later life. On the one hand, demographic transitions may be influencing the social status attached to age and cohort membership. On the other hand, ongoing reforms of welfare state systems—partly in reaction to demographic shifts, partly motivated by changing basic concepts of society and ongoing processes of globalisation—may have effects on the welfare situations of people of different ages and cohorts and the distribution of these situations within age groups and cohorts. In the current debate, distributive relations between generations as age groups as well as birth cohorts and the role of generational equity in Germany and in other European societies are becoming increasingly dominant. The meaning of this term is still vague and, in particular, popular societal discourses are characterised by a diversity of ideas about social justice, distributive norms and patterns (see Tesch-Römer and Motel-Klingebiel 2004; Clasen and Oorschot 2002).

Beyond doubt, there are problems with distributions and equity in most modern welfare states. The young could be

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disadvantaged by the setting up of modern welfare regimes, while the old stand to gain from social security expansion (Bommier et al. 2004; Price and Ginn 2003). Thus, the welfare of one age group could clash with the welfare of another (e.g. Bäcker and Koch 2003—a perspective featured years ago in the dispute between Preston (1984) and Easterlin (1987)). Even if this may ‘only’ reflect simplified subjective perceptions, a legitimization deficit could result for the extensive redistributive role of modern welfare states and a potential for conflict could ensue. From a social gerontology or—more broadly—from an ageing research perspective, however, intergenerational equity is just one important issue among many. A different core question is the effect of such diverse redistributive systems on inequality patterns in later life. Hence, both aspects—inter- and intra-cohort inequality—are influenced by the system that should guarantee social security. At the same time a shift towards more intergenerational equity should also influence the intra-cohort distribution. But the mode of the interaction is still uncertain.

Both dimensions may have significance for individual life courses and for societies. Decisions on whether or not to embark on projects such as child-bearing, elder care, educational training and employment activity during the life course are influenced by their inequality repercussions or the (dis)advantages associated with them. Hence, reforms leading to further privatisation of social security may not only exacerbate equity problems but also boost conflicts between production and reproduction. These reforms can be described as liberalisation and, thus, shifts of welfare systems.

It is primarily the institutionalisation and the extent of societal redistribution of resources and, consequently, life chances that allow us to differentiate between different types of welfare systems, as for instance defined by Titmuss (1963, 1987), Esping-Andersen (1990, 1999) or others. It is a common characteristic of all of these systems that they basically rearrange distributive patterns between social groups at a certain point in time—employed and unemployed, healthy and sick people, men and women. But conventionally, welfare states do not explicitly redistribute between generations as birth cohorts, although provision for old age can be discussed as redistribution over the individual life course. Hence, over time, pension schemes can contribute to intergenerational risk-sharing and diversification. Intergenerational redistribution by welfare state systems seems to be more a by-product of intra-cohort allocation of resources. While economic growth and prosperity for some time prevented a clash of both perspectives, the relation between them became crucial during the economic and demographic crises of modern societies. Intergenerational equity as a political goal appeared on the agenda and came under discussion as the continuous

improvement of the economic conditions for future birth-cohorts became more and more questionable. This affected both the moral and the political economy of ageing within modern welfare states. And it has implications for current welfare state reforms and the core dimension of intra-generational distributive patterns as such. Reforms based on generational equity figures e.g. as implemented in Germany, mainly focus on a substantial reduction of social security levels in the contribution- and/or tax-based pay-as-you-go-pillar in favour of a basic provision and a strengthening of insurance principles within the public system of old age provision, in earlier as well as in recently established private pillars. Mid- and long-term effects on inequality relations in later life are likely and urgently need to be researched as a substantial social gerontological input to ongoing social policy debates. This was recently done by Motel-Klingebiel (2007), employing data from the international comparative research project “OASIS—old age and autonomy: The Role of Service Systems and Intergenerational Family Solidarity” (Lowenstein et al. 2002; Lowenstein and Ogg 2003; Motel-Klingebiel et al. 2003a; Tesch-Römer et al. 2000), gathered in late 2000 and early 2001. To continue and to add to the substance of these studies, analyses have been conceptually improved and extended applying more recent and significant comparative data from the SHARE study (Börsch-Supan et al. 2005a, b) and data from the English Longitudinal Study of Ageing (ELSA).

While macro-oriented concepts of inequality and later life usually focus on the structural characteristics that axiomatically determine the patterns of allocation of social resources to older people and the potential marginalisation of the old (e.g. Estes et al. 1996), the more differential approach of this article is on the interaction between the intra- and inter-cohort or age group perspective in the context of welfare regimes and their effects. Thus, this article discusses the effects of different types of old age provision: does intragenerational inequality vary by the mode of intergenerational redistribution and old age provision? Patterns of redistribution as well as the extent of security offered by them define the different types of social security systems as described by Esping-Andersen (1990), Esping-Andersen (1999), Titmuss (1963, 1987) and others as well. We are interested in the effects of different types of social security systems on the patterns of diversity and social inequality in later life. To grasp this analytically, distributions of particular quality of life indicators and their relation to basic measures of social structure as core outcomes of welfare state intervention are analysed. Based on key assumptions on anticipated changes in paradigms of security and (re)distribution and of the anticipated relevance for inequality, the association between types of social security arrangements and relative levels, variation and associations with social structure measures will be examined.

In order to discuss the link between welfare systems and inequality in later life empirically, it is useful to define a sphere which is essential for social inequality. Given that later life is basically defined as the part of the life course in retirement, concepts that merely focus on employment as a basic indicator for analyses do not fit well (see Kohli 1990). Hence, a definition of which concept may serve as a basis for gerontological analyses of social inequality is needed.

Quality of life emerges as a valuable category in this perspective, since it can be defined as a marker of pre-conditions as well as significant outcomes of unequally distributed living conditions and opportunities within social frameworks. The term ‘quality of life’ reflects the ‘good life’, its conditions and effects, and it proves to be a convenient concept in this twofold perspective (Veenhoven 2000). Despite the glitzy appearance of the broad quality of life model, it can be argued legitimately that it is an ambiguous notion that lacks conceptual clarity and theoretical elaboration as well as scientific consensus on an adequate measurement especially in a European or international comparative context (Walker 2005). International comparative research on quality of life in old age and its prerequisites would indeed benefit from the development of improved measures beyond the WHOQOL (WHOQOL Group 1998) and others.

Nonetheless, quality of life proves to be a valuable overall concept in the present case and can be recognised as an expression and result as well as a circumstance of individual lives within different cultural, social or historical contexts. In this sense it is a condition as well as a result of life chances. This perception corresponds with a definition of social inequality that focuses on access to societal goods and positions that obstructs or promotes the life chances of individuals, groups or societies. Hence, quality of life and its distribution is to be understood as an expression of social inequality and societal structure. It can be defined as a comprehensive term for analysis that includes objective as well as subjective indicators in the context of life courses and societal contexts.

Two overlapping issues have to be dealt with here. Firstly, there is the question of opportunities to maximise quality of life, as put forward by Walker (2004) when posing the question ‘how can the quality of people’s lives be extended?’. The second issue focuses—against the background of changing economic conditions and social security systems (Becker et al. 2005; Motel-Klingebiel and Arber 2006; Navarro 2002; Tesch-Römer et al. 2008; Walker 2006)—on the (optimal) distribution of quality of life and discusses results of social policy intervention in a social policy perspective. According to an analytical perspective focussing on effects of social policy interventions and institutions, quality of life with its pre-conditions, production, levels and distribution is a criterion for the evaluation of societal welfare production and social policy

intervention. Quality of life in this broad sense is a multidimensional construct and includes material and non-material, objective and subjective, individual and collective aspects (George 2006; Motel-Klingebiel et al. 2003b; Motel-Klingebiel 2008; Veenhoven 2000).

Two main traditions for the conceptualisation and measurement of quality of life can typically be observed (see Noll 1999): One is the ‘level of living-approach’ which comes from the Scandinavian research tradition. It is based on a resource concept (Erikson 1974) accentuating the pre-conditions of the good life—in other words: the objective life chances. The second approach, widely employed in Anglo-American research on well-being, focuses on the subjects’ interpretations and their evaluation of living situations, thus, stressing the subjective outcomes aspect—in other words: the subjective life results.

Within social and behavioural ageing research, the concepts ‘quality of life’ and ‘subjective well-being’ are used (quite often interchangeably) to denote merely the subjective dimension of a good life as opposed to the objective living conditions or resources available to a person (Allardt 1975; Bulmahn 2000; Smith et al. 1996, Smith et al. 1999). Subjective quality of life can be considered as a reaction to the experiences or living conditions with which a person is confronted over his or her life course (Diener 2000; Diener and Suh 1998; Diener et al. 1999; Noll and Schöb 2002). Satisfaction also includes comparisons with expectations and goals, and it has been shown empirically that overall life satisfaction refers holistically to the entirety of a person’s life situation, while specific evaluations refer to genuine differences in life domains (Campbell et al. 1976). Distributions of evaluations reflect key patterns of social inequality and are structurally independent of possible shifts in the relevance of objective indicators over the life course (Motel-Klingebiel et al. 2004). Nevertheless, they represent only a small segment of the entirety of quality of life which leads to a more comprehensive approach as discussed by Veenhoven (2000). Here quality of life is discussed as an ‘umbrella term’ which covers internal and external pre-conditions and life results. Consequently, the present analyses apply a comprehensive approach including subjective and objective measures, since focussing on socio-economic resources and their evaluation as domain specific aspects of quality of life as well as on overall quality of life as a global outcome of societal welfare production are considered. The analyses include the individual’s income resources (as an indicator of objective resources and chances in life), their evaluation (representing their subjective dimension) as well as two overall measures of quality of life (denoting the overall life results).

Social inequality as applied in this article is defined as given if access to available and desirable social assets and/or social positions is constrained—with limited and/or favoured opportunities for individuals, groups or societies evolving

from that (see Kreckel 1992). Such a definition goes beyond pure variability, as it includes normative aspects (e.g. positive or negative evaluations of differences and an agreement on a classification system) and is directly connected to classical theoretical concepts of social inequity (Atkinson 1983; Bolte et al. 1975; Sen 1973). As mentioned above, quality of life can basically be seen as a core outcome of access and restrictions (Fahey and Smyth 2004; Motel-Klingebiel 2004). As these may vary over the individual life course with its different institutionalised stages (Kohli 1985), this definition is sufficiently sensitive to analyse the interaction between age and unequal distribution of assets and resources.

Research questions and hypotheses

The empirical investigation will include the following questions: How do levels of quality of life in later life depend on welfare state arrangements? Is the variability of objective and subjective quality of life related to welfare state arrangements? What is the relevance of social structure indicators for this variability and how is it related to old age security systems? What can be learned for the perspectives of current debates on equity and social security reforms? Taking the above remarks into account, the analyses presented use quality of life as a helpful concept to answer these questions.

Cross-sectional hypotheses are formulated in a welfare state comparative perspective applying Esping-Andersen's typology of welfare regimes. The welfare state comparative approach is chosen to serve as a proxy for the prospective analysis of potential effects of feasible changes in the system of social security (Daatland and Motel-Klingebiel 2007). The analyses employ data from Austria, Denmark, England, France, Germany, Greece, Italy, Netherlands, Spain, and Sweden. These are well-known and well-established examples with Austria, France and Germany representing the conservative-corporatist regime type, Greece, Spain and—with some restrictions—Italy corresponding to the Mediterranean regime type, Denmark, Sweden and (partly) the Netherlands matching with the social-democrat type and, finally, England as a case-type for a liberal welfare regime (Esping-Andersen 1990, 1999; Titmuss 1963, 1987). Esping-Andersen's regime typology is adopted for reasons of illustration and simplification of the empirical argumentation. A thorough discussion of substance and pitfalls of this concept or any concept trying to cluster cases into a welfare state typology will be consciously avoided in this article.

Three hypotheses will be discussed and tested empirically: the hypothesis of (relative) levels, the distribution hypothesis and the social structure hypothesis: The 'hypothesis of (relative) levels' states that levels of quality of life in later life are highest in a well developed Scandinavian social-democratic system and should be lowest in the Mediterranean and under a

liberal regime that is highly privatised and offers relatively poor resources to older people. This should be true for all indicators with the exception of older people's income, where one can expect that older people do best under conservative-corporatist regimes because of their orientation towards cash transfers and a replacement of earnings from occupational activity instead of a more basic and universal provision. The provision of services and the orientation towards in-kind benefits as typical for social-democrat systems are not reflected by this objective measure.

The 'distribution hypothesis' expects variation of quality of life to be highest under a liberal welfare regime, while it should be smaller in highly redistributive systems like the social-democratic regime or even the conservative-corporatist one with the Mediterranean regime in between. The 'social structure hypothesis' assumes that quality of life may vary with socio-economic positions (Blane et al. 2007; Knesebeck et al. 2007; Weidekamp-Maicher and Naegel 2007). The interconnection between social-economic indicators and quality of life is subject to intervention policies and should therefore relate to the particular welfare system. Taking into account what is known about redistribution policies in certain welfare regimes, it predicts the relevance for inequality positions to be highest in England, as the case type for the liberal regime in our analyses, while redistribution by the welfare state should level out the relative impact of social strata, educational levels or gender in Northern and Central Europe. Again the Mediterranean countries should find themselves in between (Motel-Klingebiel 2007).

Methods

The empirical analyses are based on the dataset of the Survey of Health, Ageing and Retirement in Europe (SHARE)¹ and the English Longitudinal Study of Ageing

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(ELSA). SHARE wave 1 is a multidisciplinary and cross-national panel database ($n = 31,115$). Based on probability samples in all participating countries it provides micro data on health, socio-economic status and social and family networks of the non-institutionalised population of age 50+ (respondents' spouses are also interviewed if they are younger than 50). 12 countries are involved in the first wave of the study: Austria, Belgium, Denmark, France, Germany, Greece, Israel, Italy, Netherlands, Spain, Sweden and Switzerland. For conceptual remarks see Börsch-Supan et al. 2005b, for a report on first results see Börsch-Supan et al. 2005a and for methodological details see Börsch-Supan and Jürges 2005. This article will apply data from Austria, Denmark, France, Germany, Greece, Italy, Netherlands, Spain, and Sweden from SHARE wave 1, release 2.0.1.

Data for England come from ELSA, the English Longitudinal Study of Ageing.² ELSA is an interdisciplinary data resource on health, economic position and quality of life as people age. The aim of ELSA is to explore the relationships between health, functioning, social networks and economic position. It is in effect a study of people's quality of life as they age beyond 50 and of the factors associated with it. The ELSA survey sample is drawn from respondents to the Health Survey for England (HSE). A representative sample of the English population aged 50 and over was put together from three waves of the HSE survey involving around 12,100 respondents from the HSE survey. While waves 1 and 2 were conducted in 2002 and 2004 (for results and methodological aspects of waves 1 and 2 see Banks et al. 2006; Marmot et al. 2002), fieldwork for wave 3 was finished in 2007 while the data collection for wave 4 started in late spring 2008. For England this article will apply data from ELSA wave 2. As can be seen in Table 1 sample sizes vary between regime types. However, samples are big enough and differences are only less important from a statistical perspective. See Table 1 for information on the sample structure.

Analyses will be mainly limited to retired respondents. Respondents are defined as pensioners if they themselves and (if applicable) their co-resident partner are of age 65 and indicating that they are retired. On one occasion non-retired people of age 50 and older are used as a reference group for analyses. Respondents are defined as “not retired” if they themselves and (if applicable) their co-resident partner are of age 50 and older as well as indicating that they are active on the labour market (gainfully employed or unemployed but seeking work). Data from other population groups is not selected for analyses in this

Table 1 Sample structure

	Pensioners	Not retired	Total
Country			
Austria	764	497	1,261
Germany	819	731	1,550
France	491	476	967
Denmark	477	509	986
Sweden	907	917	1,824
Netherlands	748	920	1,668
Italy	650	513	1,163
Spain	782	584	1,366
Greece	761	744	1,505
England	4,470	3,317	7,787
Welfare regime			
Conservative	2,074	1,704	3,778
Social-democrat	2,132	2,346	4,478
Mediterranean	2,193	1,841	4,034
Liberal	4,470	3,317	7,787
Total	10,869	9,208	20,077

Source: SHARE 2004, release 2.0.1.; ELSA wave 2, 2004

article. Descriptive analyses apply calibrated individual weights and post-stratification (design) weights to correct for disproportional sampling.

Both datasets, SHARE and ELSA, cover a variety of topics, among them socio-economic status (including education, occupational status, and income), subjective health and functional ability, use of services, family structure and relations (including mutual support), norms and preferences, and subjective indicators of quality of life. Indicators used in the analyses are the ‘overall life satisfaction’ (OLS), the ‘overall quality of life’ (OQoL), the ‘subjective assessment of resources and needs’ (SUBNEED) and the ‘equivalent household income’ (INCOME). While OLS and OQoL denote overall life results, INCOME is an indicator of objective resources and chances in life and SUBNEED represents their evaluation.

Overall life satisfaction is a single indicator representing answers to the question “How satisfied are you with your life in general?” on a 4-level Likert scale (1: very satisfied, 2: somewhat satisfied, 3: somewhat dissatisfied, 4: very dissatisfied—low numbers indicate good quality). Data from ELSA was collected on a slightly different basis with a 7-level scale which was transformed into a 4-level scale for analyses.

Overall quality of life is offered in SHARE and ELSA as a subjective measure of overall quality of life. In a way it differs from common definitions of quality of life but there is no alternative measure in both surveys. It is a construct based on 12 items from the CASP-19 instrument (Blane et al. 2004, 2007; Wiggins et al. 2004). CASP-19 is a needs

² SHARE is intended to be complimentary to the English Longitudinal Study of Ageing (ELSA). Hence, both studies deliver equivalent data.

satisfaction measure of quality of life based on four domains: control, autonomy, pleasure, and self-realization that appears as a useful scale for measuring quality of life in older people. Only the condensed version with 12 items was included in the SHARE survey. Complete ELSA data was reduced to the information available in SHARE. Answers are given on a 4-level scale (often, sometimes, rarely, never). OQoL is computed as a mean value from the 12 answers with high numbers indicating good quality.

SUBNEED measures a subjective evaluation of income resources. It is a single variable incorporating answers to the question “Is the household able to make ends meet? On a 4-level Likert scale (1: with great difficulty, 2: with some difficulty, 3: fairly easily, 4: easily—high numbers indicate good quality). SUBNEED is not available in ELSA.

INCOME is an objective measure of the individual's economic resources. It is defined as household income per capita before taxes adjusted for household size and composition by means of the ‘new’ OECD equivalence scale (Buhmann et al. 1988; Figini 1998). ELSA values are recoded into Euro per year. Data is adjusted for purchasing power parities for all countries included in the analyses, which is useful when comparing differences in living standards between nations. SHARE and ELSA data offer information on income before taxes. The selection of measures offers an extended perspective for the empirical analyses that should not merely become dependent on decisions on certain perspectives of quality of life indicators.

In addition, ‘gender’, ‘education’ and ‘social prestige’ are used as social structure predictors in regression modelling. Gender was coded ‘1’ for males and ‘2’ for females in the analyses. Education was defined by means of ISCED-97. Data was recoded to a three-level-measure (1: low level of education, 2: intermediate level of education, 3: high level of education) with ELSA data on educational levels originally measured with a different scale and transformed into this approximate but nevertheless robust indicator. Occupational or social prestige is a measure based on the Standard International Occupational Scale (SIOPS) by Treiman (see Ganzeboom and Treiman 1996; Treiman 1977). The standardised scale was initially constructed by averaging outcomes of evaluation studies carried out in several countries using the old three-digit version of ISCO-68. It was updated later in the 1990s for ISCO-88. SIOPS is a metric scale ranging from 12 to 78 with low values indicating low prestige of (former) occupational activities and vice versa.

Results

The subsequent analyses will be conducted to test the different hypotheses described above. Firstly, absolute and

Table 2 Mean levels of indicators

	OLS	OQoL	SUBNEED	INCOME
Country				
Austria	1.8	2.1	3.0	30,094
Germany	1.9	2.1	3.0	28,687
France	2.0	1.9	2.9	32,489
Denmark	1.4	2.2	3.2	24,953
Sweden	1.7	2.2	3.0	27,681
Netherlands	1.5	2.2	3.2	32,771
Italy	2.0	1.7	2.3	21,914
Spain	1.8	1.8	2.3	14,453
Greece	1.9	1.6	2.0	12,419
England	2.0	2.2	–	24,326
Welfare regime				
Conservative	1.9	2.0	3.0	30,103
Social-democrat	1.6	2.2	3.1	28,914
Mediterranean	1.9	1.7	2.2	16,069
Liberal	2.0	2.2	–	24,326
Total	1.8	2.1	2.8	24,654

OLS Overall life satisfaction, OQoL overall quality of life, SUBNEED subjective needs, Income PPP adjusted equivalent income (new OECD scale) before taxes. The ranking to be expected in line with the ‘level hypothesis’ is 2-1-3-4 (and 1-2-3-4 for income)

Source: SHARE 2004, release 2.0.1.; ELSA wave 2, 2004; weighted

relative levels of older people's quality of life as measured by the different indicators described above will be shown. This will be done by analysing absolute values for retirees aged 65 and older as shown before (Tables 2, 3) as well as relative levels indicated by age group specific mean values relative to those of the non-retired population of age 50 and older (Fig. 1). Differences between welfare regimes will be tested by *t* tests as well as non-parametric Mann–Whitney-*U*- and Kolmogorov–Smirnov-tests. Secondly, the variation in different dimensions of quality of life in the countries will be analysed. Inter-regime differences of standard deviations (Figure 2 and Table 4) will be shown and tested by *F*-tests. Thirdly, country-specific associations between quality of life and categorical indicators of social structure such as gender, education and social prestige will be studied. To do so, multiple OLS-regression models on the diverse quality-of-life-indicators will be estimated to define standardised net effects of particular social structure indicators on quality of life in old age within the analysed welfare regimes (Table 5).

As can be seen in Table 2, levels of all indicators differ significantly between societies and welfare regime types. Overall life satisfaction (with low numbers indicating high levels here) proves to be highest in the social-democratic welfare states while it is lowest in the liberal. Overall quality of life shows no marked differences, with the exception of the Mediterranean countries where it is lower

Table 3 Test of mean level differences between welfare regime types

Mann–Whitney-test (<i>U</i> test) resp. Kolmogorov–Smirnov test (countries pairwise)				
	Conservative	Social-dem.	Mediterranean	Liberal
<i>t</i> test (countries pairwise)				
OLS				
Conservative	—	**	*	**
Social-democrat	**	—	**	**
Mediterranean	ns	**	—	**
Liberal	**	**	**	—
OQoL				
Conservative	—	**	**	**
Social-democrat	**	—	**	n.s.
Mediterranean	**	**	—	**
Liberal	**	ns	**	—
SUBNEED				
Conservative	—	**	**	
Social-democrat	**	—	**	
Mediterranean	**	**	—	
Liberal				—
Income				
Conservative	—	*	**	**
Social-democrat	n.s.	—	**	**
Mediterranean	**	**	—	**
Liberal	**	**	**	—

The Mann–Whitney-test (*U* test) was applied for OQoL and INCOME while the Kolmogorov–Smirnov-test was used for OLS and SUBNEED
Source: SHARE 2004, release 2.0.1.; ELSA wave 2, 2004; weighted
* $P < 0.05$, ** $P < 0.01$

Fig. 1 Relative levels quality of life, subjective evaluations and income (65+). Values: mean values for retired people of age 65 and older relative to levels for employed population of age 50 and older. *OLS* Overall life satisfaction, *OQoL* overall quality of life, *SUBNEED* subjective needs, *Income* PPP adjusted equivalent income (new OECD scale) before taxes. The ranking to be expected in line with the ‘level hypothesis’ is 2-1-3-4 (and 1-2-3-4 for income). Source: SHARE 2004, release 2.0.1.; ELSA wave 2, 2004; weighted

than elsewhere. The subjective assessment of resources and needs indicates substantial problems in the Mediterranean with only small differences between the two other types (English data is not available for this indicator). Equivalent

Fig. 2 Distribution of income, quality of life and subjective evaluations (65+). Values: Standard deviations for retired people of age 65 and older (values for income: equivalent income per capita/10) and coefficients of variance (for income). *OLS*: Overall life satisfaction; *OQoL*: Overall quality of life; *SUBNEED*: Subjective needs; *Income*: PPP adjusted equivalent income (new OECD scale) before taxes. The ranking to be expected in line with the ‘distribution hypothesis’ is 4-3-2-1. Source: SHARE 2004, release 2.0.1.; ELSA wave 2, 2004; weighted

Table 4 Test of differences in standard deviations between welfare regime types

F-test (countries pairwise)				
	Conservative	Social-dem.	Mediterranean	Liberal
OLS				
Conservative	—	**	**	**
Social-democrat		—	**	**
Mediterranean			—	**
Liberal				—
OqoL				
Conservative	—	**	**	**
Social-democrat		—	**	**
Mediterranean			—	**
Liberal				—
SUBNEED				
Conservative	—	ns	*	—
Social-democrat		—	ns	—
Mediterranean			—	—
Liberal				—
Income				
Conservative	—	**	**	**
Social-democrat		—	**	**
Mediterranean			—	ns
Liberal				—

Source: SHARE 2004, release 2.0.1.; ELSA wave 2, 2004; weighted
* $P < 0.05$, ** $P < 0.01$

income is to a large extent lower in the Mediterranean countries than in the other welfare regime types, with still relevant differences between the liberal and the other types. Mean level differences between welfare regime types are highly significant in most of the cases independent of the test method (*t* test or *U* test; see Table 3).

Table 5 Gender, education and social class in multivariate perspective (multiple OLS regression models)

	Overall life satisfaction (OLS)	Overall quality of life (OQOL)	Subjective income (SUBNEED)	Equivalent income (AEQINC)
Gender				
Conservative	0.00	0.00	0.02	−0.03
Social-democrat	0.02	0.01	0.03	−0.08**
Mediterranean	0.14**	−0.12**	−0.03	0.03
Liberal	−0.01	0.05*	–	−0.02
Education				
Conservative	−0.13**	0.15**	0.07*	0.06*
Social-democrat	−0.06*	0.05*	0.01	0.10**
Mediterranean	−0.07**	0.10**	0.06*	0.18**
Liberal	−0.02	0.06*	–	0.13**
Prestige				
Conservative	−0.03	0.09**	−0.01	0.14**
Social-democrat	−0.04	0.11**	0.02	0.10**
Mediterranean	−0.01	0.06*	0.02	0.06*
Liberal	−0.10**	0.15**	–	0.17**

Standardised beta-coefficients; statistically controlled for age of respondent

Source: SHARE 2004, release 2.0.1.; ELSA wave 2, 2004

OLS Overall life satisfaction, OQoL overall quality of life, SUBNEED subjective needs, Income PPP adjusted equivalent income (new OECD scale) before taxes. As in these models independent variables are considered as metric for the reason of clarity, the effects of that simplification were tested. Tests confirmed no significant differences in the results. The ranking to be expected in line with the ‘distribution hypothesis’ is 3–4–2–1

** $P < 0.01$, * $P < 0.05$

But even if levels of older people’s quality of life differ considerably between societies, the cross-country differences depend to a certain extent on the indicators analysed. Comparing absolute levels of quality of life may to a certain extent be a risky business, as indicators may be affected by country specific answering behaviour, cultural norms, and diverging references for evaluation. Nevertheless, existing data on indicators of subjective well-being prove that such differences between societies are substantive and not merely an artefact (see Diener and Suh 1999). To interpret differences in income levels appropriately the income data must be adjusted to national purchasing power which has been done here according to OECD statistics on purchasing power parities. The Mediterranean countries show considerably lower income levels in retirement than all others, with retired people in the Central European countries from the conservative-corporatist regime cluster receiving the highest incomes (see Table 2). Variations within regime clusters are moderate, with the exception of the Mediterranean countries, with extremely low incomes in Greece and Spain but a substantially higher level in Italy (nevertheless, Italian pensioners report third lowest incomes).

However, it makes a considerable difference whether absolute numbers are considered or if relative levels are examined that relate older people’s quality of life to levels

of quality of life in the countries’ population of younger people (Fig. 1). Here we apply non-retired people of age 50 and older as a point of reference. This is firstly because information on this population group can be assembled directly from the datasets and is thus directly comparable. Secondly and most importantly, this group should have the highest similarity to retired people and effects of cohort compositions, structural differences in life courses and others should be minimised by this approach.

As can be seen, older people still do best with respect to their incomes in conservative-corporatist regimes (even if the level is still to a remarkable extent lower in later life than in earlier ages). Relative incomes of pensioners are smaller under the Mediterranean regime but the distinction is not significant. Nevertheless, pensioners in social-democratic regimes have remarkably lower relative incomes, while the English elderly are worst off. Again the picture could depend on the restriction on incomes before taxes as induced by the data bases applied. In any case, the picture follows what was expected from the ‘level hypothesis’ which was thus confirmed for three out of four indicators. OQoL is an exception with a confused rank order, which partly rejects the hypothesis.

To test the ‘distribution hypothesis’, the variation of different dimensions of quality of life in the country clusters will be analysed. Figure 2 shows standard deviations

and their differences between welfare regime types while Table 4 tests regime differences for significance applying F-tests.

As can be seen, it is the Mediterranean cluster that shows the highest variation in quality of life of older people and not the liberal regime as predicted by the ‘distribution hypothesis’. Income is an exception, with the conservative-corporatist type showing the highest variation. All differences³ are statistically significant. The ‘distribution hypothesis’ is only partly supported by the analyses, as the expected differences can be found between the Northern and Central European countries on the one hand and the Mediterranean countries on the other in relation to an overview of all the indicators, but the highest variation was not generally found in the liberal system and was remarkably higher in the case of Southern European countries.

To test the ‘social structure hypothesis’ on the relevance of social structure indicators, multiple ordinary least square regression models (see Gelman and Hill 2007; Fahrmeir et al. 1996; Gujarati 1995) of quality of life measures on these indicators were estimated to analyse standardised net effects on quality of life. These models also control for chronological age to consider potential effects of diverging age structures of the three countries, but effects are not displayed in Table 5.

Surprisingly, the explanatory power of social structure indicators such as gender and education does not seem to be higher under the English liberal welfare regime than in the social-democratic and the conservative-corporatist system. On the contrary, the absolute explanatory power of gender and education is lower. Strong effects can only be found with regard to older people’s prestige as a proxy for the social class structure in a liberal system. This to a certain extent seems to contradict the social structure hypothesis as discussed before. But, firstly, the indicators applied may be correlated, the lower relative impact is, secondly, based on a higher variability of quality of life measures among older people in England.

Consequently, OLS regression models are calculated to analyse standardised measures. This leads to an ambivalent picture, as can be seen in Table 5. It shows high relevance of gender for subjective indicators in the Mediterranean countries, where women show lower values of life satisfaction and overall quality of life, but not in the other countries, which may be noteworthy, taking into account the research on quality of life and gender (see Tesch-Römer et al. 2008). Substantial effects of educational levels were found for all chosen indicators in all regimes, with the

highest effects of educational levels for income in the liberal and in the Mediterranean cases, which is in line with the hypotheses discussed. Occupational or social prestige as measured by Treimans SIOPS scale (Treiman 1977; Ganzeboom and Treiman 1996) shows strongest effects on all indicators for the liberal regime represented by England in these analyses. There is also a strong effect for occupational prestige on income for the conservative-corporatist regime which is caused by the employment based balancing of contributions in the calculation of pension benefits in this cluster. Results correspond with what is shown by Knesebeck et al. (2007) in a different perspective.

These effects again do not simply confirm the hypothesis as set up above. Instead, a more complex picture needs to be drawn, with differential effects of different welfare models on different sets of indicators and areas. While gender, surprisingly, does not play an important role for quality of life in most of the regimes, education seems to be most differentiating under the Mediterranean and the conservative-corporatist regimes and occupational prestige has a leading role in the liberal welfare regime and—for income—in the conservative-corporatist systems.

Discussion

Current debates on old age security show a shift in paradigms of redistribution. This is the case in Germany as well as in various other modern welfare states. Generational equity becomes predominant, while intragenerational distributions recede into the background. This shift is widely associated with a preference for increased privatisation. With regard to old age security, this means an increasing relevance of insurance principles and extended share of private provision and hence an orientation by so-called conservative-corporatist and social-democratic regimes towards liberal regime patterns. Among other things, this leads to the question of the effects of such changes on social inequality in later life. As a substitute for prospective or retrospective modelling, this article takes an international comparative perspective and discusses several hypotheses on the interconnection between regime types and social inequality in cross-sectional perspective. Indicators of quality of life use and their distributions are engaged to measure social inequality.

Briefly, descriptive analyses as well as multivariate models prove that levels as well as variation of quality of life among older people are significantly influenced by welfare systems. Relatively high absolute and relative levels of quality of life indicators can be found under social-democratic and conservative-corporatist regimes, with older people under liberal systems coming off worst.

The pictures follow what was expected from the ‘level hypothesis’ which was thereby confirmed for three out of

³ Exceptions are a) the difference in income variation between the social-democratic and the liberal regime and b) the effects for subjective needs with the exception the difference between the conservative-corporatist and Mediterranean cluster.

four indicators. OQoL is an exception, which partly rejects the hypothesis. This potentially has effects for individual life planning and the biographical perspectives of later life that need to be tested in future research on quality of life and social inequality among older people.

With regard to the ‘distribution hypothesis’, analyses only partly back previous assumptions. According to the data applied in these analyses, it seems not to be the case that distributions of quality of life indicators are substantially more unequal under a liberal welfare regime than in countries from conservative-corporatist or social-democratic regime clusters. This is of high relevance when discussing the outcomes of ongoing privatisation of old age provision in these regimes. But it conflicts with the results previously published based on data from the OASIS project for Norway, England and Germany which show higher variation (Motel-Klingebiel 2007). This may be explained by data limitations such as the absence of information on net income and certain inconsistencies between the two data sources SHARE and ELSA as well as from different designs of these projects and the OASIS study. Further research is therefore needed.

The ‘hypothesis of social structure’ effect can also only be partly confirmed. The effects of educational levels are in line with the hypotheses discussed and also the impact of occupational prestige, which was highest in England, fits well with the social structure hypothesis. However, the assumed ranking of regimes was only found in the data to a certain extent and the assumptions on the link between social structure and quality of life in different welfare system can only be partly upheld.

In summary, levels of quality of life are principally affected by welfare state arrangements while distributions and the relevant social structure indicators are only shaped by welfare regimes to a certain extent. Consequently, it can be said from a social policy perspective that a liberalisation of welfare systems may only partly lead to increased variation in quality of life and hence, in diversity and social inequality among older people. Unequal distribution of quality of life in later life cannot simply be explained by means of traditional social structure indicators such as education, gender or social class. While absolute levels of quality of life and its distribution currently seem to be undeniably affected by welfare systems, older people seem subjectively to compensate (or even overcompensate) for changing environments and resources.

As a starting point for this paper, we discussed whether, and if so, how, inter- and intra-cohort inequality patterns may interact. The assumption was that both are substantially influenced by the system of social security. Hence, shifts towards more intergenerational equity are expected to have some bearing on the intra-cohort distribution, even if the mode of the interaction is still uncertain. Taking into

account the results displayed and discussed above, one can state that shifts towards a liberalisation of welfare systems indeed weaken older peoples quality of life compared to younger age groups. But effects on inequality within later life remain ambiguous, as variation only partly increases and changes in the relevance of social structure indicators like gender, education and social class show inconsistent patterns. If “worse off but not in general more unequal older people” is a desirable or at least acceptable objective for intergenerational equity policies, shifts in social security in the social democrat and the conservative-corporatist welfare systems are on the right track. It is questionable, however, and not only from the perspective of social gerontology, whether this is a reasonable goal for ageing and life course policies in late modern societies.

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