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Health, Families, and Work in Later Life: A Review of Current Research and Perspectives

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Zusammenfassung: Während die Zahl sozialwissenschaftlicher Studien im Bereich der Alter(n)sforschung kontinuierlich - und erfreulicherweise - wächst, wird es zunehmend schwierig, einen Überblick auch nur über die wichtigsten neuen Erkenntnisse in diesem Bereich zu behalten. Der vorliegende Artikel zielt daher darauf ab, einen komprimierten Überblick über den aktuellen Forschungsstand in drei zentralen Lebensbereichen älterer Menschen zu geben: Gesundheit, Familie und Arbeit. Darüber hinaus diskutieren wir kurz relevante theoretische Aspekte und stellen den Survey of Health, Ageing and Retirement in Europe (SHARE) vor. Die hier präsentierten Befunde zeigen klar die angesichts einer stetig steigenden Lebenserwartung und eines wachsenden Anteils Älterer in der Bevölkerung vor uns liegenden Herausforderungen und Chancen auf. Allgemein wird hierbei auch der große Wert Lebenslaufund international vergleichenden Perspektiven von in der sozialwissenschaftlichen Alter(n)sforschung deutlich. Der Beitrag schließt mit einem Ausblick auf wesentliche zukünftige Forschungsfelder in diesem Bereich.

Abstract: There is a rapid growth in published knowledge about different aspects of age and aging. While this is highly welcome, it becomes increasingly difficult to keep up even with the main insights provided by this literature. Our review thus aims to provide a compact overview of current social science research in three major domains of older people's life: health, families, and work. Moreover, we briefly discuss some theoretical issues and introduce the Survey of Health, Ageing, and Retirement in Europe (SHARE). The research findings discussed here demonstrate both the challenges and opportunities lying ahead of us as life expectancy is increasing steadily and as the proportion of older people in our societies will grow further. More generally, we find a great value of life course and cross-nationally comparative perspectives in aging research. We conclude with an outlook on perspectives for future studies in this field.

Introduction

Against the background of rapid population aging in Europe and other (demographically) developed regions in the world, extensive *social science* research on aging is necessary to prepare for the challenges (and opportunities!) of *longer individual life spans* and *greater proportions of older people* in the population. The field has already expanded considerably in recent decades and the breadth of today's aging research is obviously reflected by the fact that – in addition to leading general field journals, such as The Gerontologist or the Journal of Gerontology: Social Sciences – a number of flourishing specialized field journals emerged, such as the Journal of Aging & Health, the Journal of Aging and *Social Policy*, the Journal of *Women* and Aging, and most recently the Journal of the *Economics* of Ageing.

While the rapid growth in published knowledge about different aspects of age and aging is highly welcome (and will hopefully continue), it becomes increasingly difficult – particularly for 'non-expert' readers – to keep up even with the main insights provided by this literature. This review thus aims to give a compact overview of current social science research in three core domains of older people's life: *health and well-being*; *family life and intergenerational solidarity*; *work and retirement*. Moreover, we briefly discuss some *theoretical issues* and introduce the *Survey of Health, Ageing, and Retirement in Europe* (SHARE) as an example for recent advances in enhancing the data infrastructure necessary to gain further empirical insights into individual and societal aging processes. Our review concludes with perspectives and suggestions for future research.

Research on health and well-being

While steadily increasing life-expectancy (Oeppen and Vaupel 2002) and – more specifically – the decline in mortality at older ages clearly is one of the greatest successes in the history of mankind, its consequences for population health are not yet fully understood. The two extreme positions in the ongoing debate have been formulated by Gruenberg (1977) and Fries (1980). The former stressed that without a reduction in the incidence of chronic conditions an extension of life would merely be a '*failure of success*', because people would live longer suffering from these conditions. The latter countered this pessimistic view, suggesting that a

continuous increase in the age of disability onset would eventually result in a '*compression of morbidity*' into fewer years at the end of life, once mortality at older ages had reached its minimum (cf. Crimmins 2004).

Ample empirical research has since been conducted testing these two competing hypotheses. Recent evidence suggests that there is no simple answer, but that health in the older population is getting better *and* worse at the same time, depending on which specific health outcomes are considered (Parker and Thorslund 2007; also see Crimmins and Beltrán-Sanchez 2011): while, for example, trends in major disease and mobility functioning loss tend to be negative, we observe a positive trend in disability onset. An important implication of this latter finding is that future trends in needs for long-term care, for example, may not parallel simple demographic projections (e.g., Ziegler and Doblhammer 2008). Moreover, it is important to recognize that the health dynamics in older populations vary significantly between countries, even within the European Union (e.g., Vestergaard et al. 2013).

There is more to older people's *well-being* (cf. George 2010), though, than the biomedical component of health. Corresponding to the World Health Organization's multidimensional definition of health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity", Rowe and Kahn (1997: 439) introduced a highly influential conceptualization of *successful aging* as "avoidance of disease and disability, maintenance of high physical and cognitive function, and sustained engagement in social and productive activities." While, for instance, one in *five* Danes aged 65+ meets Rowe and Kahn's successful aging criteria, the respective proportion in Poland is less than one in *fifty*. Aiming to explain this considerable variation around the Continental European average of about 9 percent, Hank (2011a) related these findings to measures of income inequality in a country, providing some support to the notion that in more egalitarian societies greater proportions of elders succeed in aging well (also see Brandt et al. 2012). Along the same lines, but more specifically, the regional variations observed by Hank also correspond quite well with variations in *welfare state policies* affecting, for example, elders' health care and preventive services utilization (e.g., Santos-Eggimann et al. 2005) or

participation in socially productive activities (e.g., Hank 2011b; see below for further details) – and thus their capacity to age successfully.

Health inequalities in later life not only continue to exist between countries, but also between different socio-economic status' (SES) groups (e.g., von dem Knesebeck and Vonneilich 2009; Schöllgen et al. 2010). Education in particular has been shown to be an important determinant of health status and health dynamics in older populations in a variety of countries (e.g., Avendano et al. 2009; Jürges and Hank 2008). While, in general, studies neither find strong support for a *cumulation* of health disadvantages and an increase of health disparities over individuals' life course, nor for a decrease of the SES-health relationship at older ages (*age-as-leveler* hypothesis), it seems clear that not everybody will benefit equally from overall improvements in population health. It thus seems important to closely monitor possible effects of recent economic developments and challenges to old-age health (such as the financial crisis; cf. Bucher-Koenen and Mazzonna 2013) and to account – at the same time – for long-standing effects of childhood and societal inequalities on older individuals' health (e.g., Brandt et al. 2012; Dal Bianco et al. 2013).

New *perspectives* for research on later-life health result especially from the greater availability of *biomarker data* in social surveys (e.g., Hank et al. 2009; Piazza et al. 2010). Identifying how biological parameters change with age can provide insights into the physiological determinants of morbidity and mortality and even information from relatively simple, non-invasive measures – such as grip strength or gait speed (e.g., Hairi et al. 2010; Martinez et al. 2009) – has been shown to be a powerful complement to subjective and self-reported health data. Moreover, biomarkers have the potential to improve our understanding of the mechanisms underlying the SES-health relationship across the life course (e.g., Gruenewald et al. 2012; Jürges et al. 2013).

Research on family life and intergenerational solidarity

In Western societies, the proportion of elders with at least one child alive is about to be higher than in any preceding period, despite a substantial decline in fertility, resulting from a decrease in premature mortality (e.g., Murphy and Grundy, 2003). Still, demographic, social, and ideational changes in the second half of the past century have triggered increasing concerns about the ability and willingness of families to support the older generation. However, a plethora of recent empirical studies shows that these concerns may be unfounded. Despite an increasing proportion of elders living alone, a large majority of Continental European parents with adult children has at least one child living nearby (e.g., Hank 2007; Isengard and Szydlik 2012). Close proximity and regular contact constitute the opportunity structure for actual intergenerational support and there is ample evidence for significant exchanges of help and care (e.g., Brandt 2013; Haberkern and Szydlik 2010), including care for grandchildren (e.g., Hank and Buber 2009; Igel and Szydlik 2011), as well as financial transfers (e.g., Deindl 2010; Deindl and Brandt 2011). It is important to note that even the very old, on average, remain net providers of support to the younger generation in one way or the other.

While the overall level and intensity of intergenerational support is high throughout Continental Europe, cross-nationally comparative research also suggests considerable variation between welfare states with regard to both upward (e.g., Schmid et al. 2012) *and* downward (e.g., Brandt and Deindl 2013) intergenerational transfers. The pattern we observe here does not follow a simple distinction between 'weak' and 'strong' welfare regimes and family systems, though, but rather suggests a *model of specialization* between families and welfare states where professional providers take over medically demanding and regular physical care, whereas the family is more likely to provide less demanding, spontaneous – but nevertheless crucial – help (e.g., Brandt 2013; Brandt et al. 2009).

The increasing diversity in family structures and households adds another layer of complexity to the analysis of intergenerational relationships and families in later life (e.g., Silverstein and Giarrusso 2010). Older adults today are more likely than previous generations to have experienced multiple transitions into and out of (non-)marital unions, for example, and evidence from the United States suggests that this might weaken individuals' relations to the younger generation in the family (Shapiro 2012; but see Glaser et al. 2008). Moreover, the relationship between children and *step*parents has been shown to be a complex and fragile one (e.g., Henretta et al. 2013; Klaus et al. 2012). Analyses of family (intergenerational) relations

thus need to be conceptualized '*beyond the nuclear family*' (Bengtson 2001). This includes taking a three-generational perspective, because generations today enjoy longer years of shared lives than ever before. Specifically *grandparent-grandchild* relationships – beyond the mere issue of grandparent provided childcare – deserve particular attention (for recent studies see Arránz-Becker and Steinbach 2012; Mahne and Motel-Klingebiel 2012).

There are a number of further important fields for *future research* in the domain of aging and family life (cf. Silverstein and Giarrusso 2010). One issue of concern is the provision of support for older *childless* individuals. The evidence so far suggests that childless elders do not face larger support deficits than parents (e.g., Albertini and Mencarini 2013; Deindl and Brandt 2013), nor do they generally fare worse than parents in terms of their economic, psychological, or social well-being (see, for example, Hank and Wagner 2013). To some extent this might be explained by the fact that close intergenerational family relations tend to be associated with a lower propensity to engage in informal non-kin social interaction (cf. Kohli et al. 2009), that is, childless individuals might partially substitute a lack of kin support by exchanging help with non-relatives. Besides, it seems that marriage – or, more generally, living in a partnership – is more important than parenthood if the availability of support networks are considered (e.g., Wenger et al. 2007; also see Hank and Wagner 2013).

Against this background in particular, having a partner appears especially relevant in later life. It therefore is another issue of concern, whether and how older individuals *repartner* following divorce or widowhood (e.g., Carr 2004; de Jong Gierveld 2004). An important finding reported by Vespa (2012) is that among previously married older Americans the wealthier ones – that is, those having the economic resources to potentially substitute informal support by formal services – are more likely to re-partner than to stay single, regardless of gender. However, recent research on intimate relationships in later life is not only concerned with partners as providers of social support, but also addresses other important elements of partnerships, such as *sexuality* (e.g., DeLamater and Moorman 2007; Lodge and Umberson 2012). The proper investigation of these issues requires specific data collection efforts (e.g., Waite et al. 2009) and – more generally – points to the necessity to

collect dyadic data allowing to analyze intra-household bargaining and exchange processes (e.g., Hank and Jürges 2007)

Research on work and retirement

Population aging brings about a shrinking *and* aging workforce, that is: smaller cohorts enter the labor market and the proportion of older workers increases. While, until recently, work and retirement patterns observed in Europe and the United States were against the demographic trend ("More older people living longer, working less, and saving less" – see Wise 1997), the era of widespread early retirement now is history and policy makers' focus rather is on facilitating longer working lives (Ekerdt 2010; Wise 2010). The *structural factors* determining the situation of older workers on the labor market as well as their transition into retirement, such as welfare state institutions or globalization (e.g., Blossfeld et al. 2011; Ebbinghaus 2006), are well-investigated. One important lesson learned from this research is that there are multiple pathways to retirement (cf. Blanchet et al. 2005) and that the interplay between different pillars of a country's social security system (e.g. the interaction between unemployment insurance and pension institutions; Knuth and Kalina 2002) needs to be considered to understand the observed patterns.

In addition to labor market and pension reforms directed towards purely economic incentives, it seems important to create more hospitable work environments to maintain older workers ability and willingness to stay longer in the labor force (cf. Ekerdt 2010). Researchers thus need to complement their consideration of structural factors influencing elders' employment by relevant *subjective factors*, such as employers attitudes towards older workers (e.g., Roscigno et al. 2007; Van Dalen et al. 2009) or older workers' perception of their job quality (e.g., Hank and Erlinghagen 2011; Siegrist et al. 2007). Moreover, taking a life course perspective accounting for individuals' *midlife work, health,* and *family experiences* has been shown to contribute to a better understanding of the retirement process (see, for example, Avendano and Mackenbach 2011; Damann et al. 2011; Hank and Korbmacher 2013).

Once individuals have entered retirement, their experiences turn out to be quite heterogeneous (cf. Ekerdt 2010). How individuals *adjust to retirement* – whether they

experience the exit from paid work as a relief or burden – thus is an important field of research. Recent studies show that, next to a variety of individual and family-related variables, pre-retirement job characteristics and quality of work are highly relevant determinants of individuals' post-retirement well-being (e.g., Schaan 2013a; Wang et al. 2011). For some, entering retirement does not imply leaving the paid labor force for good, though (cf. McNamara et al. 2013). While some studies on *post-retirement employment* suggest that this is a domain of persons with high socio-economic status (e.g., Komp et al. 2010), others point to significant gender differences, where separated women exhibit an increased risk of labor force re-entry resulting from economic vulnerability (e.g. Pleau 2010).

Research on *productive aging* (cf. Erlinghagen and Hank 2008; Morrow-Howell et al. 2001) stresses the fact that – in addition to paid work – there are many unpaid productive activities in which older people are involved: for the benefit of society as well as for their own good. In this literature, elders' engagement in formal and informal *volunteering* has received particular attention (e.g., Hank and Erlinghagen 2010a; Morrow-Howell 2010). While a significant proportion of older Americans and Europeans already is engaged in voluntary work (more so in the US and in Scandinavian countries than in the Mediterranean and Eastern European countries), their productive potentials may still not be fully tapped. This is unfortunate, because older volunteers are not only an important resource to tackle the challenges of population aging, but volunteering has also been shown to have a salutary effect on those who volunteer (e.g., Sirven & Debrand 2008; Wahrendorf et al. 2006).

The empirical evidence about the role of welfare state policies in promoting voluntary involvement suggests, however, that private initiative requires public support, which is more readily available in the 'strong' Northern European welfare states than in Southern Europe, for example (e.g., Hank 2011b). At the same time, policies aiming to increase elders' civic engagement should be careful to acknowledge the limits of volunteering (both in terms of quantitative participation and in terms of field of volunteer activity) and to avoid conflicts resulting from possible tensions between societal expectations and elders' own preferences for retirement (cf. Hank and Erlinghagen 2010a). It thus seems important to consider the relationship of volunteering with other competing – leisure and productive – activities, which

has been suggested to be complementary rather than substitutive, though (e.g., Burr et al. 2005; Hank and Stuck 2008).

In this context, it is also relevant to look at individuals' transition into retirement, whose effect rather seems to be on the intensity than on the overall propensity of voluntary engagement (e.g., Erlinghagen 2010; Mutchler et al. 2003). Other critical events in later life, such as widowhood or health shocks (e.g., Donelly and Hinterlong 2010; Li and Ferraro 2006), need to be considered as well to appropriately follow the *dynamics* of volunteering in older populations (e.g., Butrica et al. 2010; Hank and Erlinghagen 2010b).

Theories and concepts

Theories of aging are fed by insights from a variety of disciplines (biology, psychology, or the social sciences; see Bengtson et al., 2009, for a comprehensive overview). Although a plethora of such – mostly middle-range – theories is readily available for *and* increasingly used in the investigation of different aspects and dimensions of later life, Alley et al. (2010) still note that the majority of research in social gerontology remains atheoretical. Instead, 'models' are widely employed as a supplement to or substitute for theory.

One commonly applied model particularly relevant in the field of later life *health* is *'successful aging'* (see above). Despite its popularity in the literature, there is little consistency in definitions of the concept, though, and many studies do not even attempt to define it (for an overview see Depp and Jeste 2006). Moreover, some authors are critical about the dominant conceptualizations of successful aging – such as the one proposed by Rowe and Kahn (1997) – especially because of their potentially normative implications (cf. Bowling 2007; Dillaway and Byrnes 2009). This scientific discourse is complemented by lay concepts of *'aging well'*, comprising a set of verbal labels attributed to a positive trajectory of aging, such as healthy, successful, competent, optimal, vital, active, or productive aging (e.g., Fernández-Ballesteros et al. 2013). These models are currently intensely debated and hope is that their further elaboration will eventually result in important theoretical contributions.

Among the already well-developed, established theories relevant to the empirical topics discussed in our review, *exchange theory* and *role theory* clearly stand out. Silverstein and

Giarrusso (2010: 1052), for example, concluded that "[e]xchange theory has provided a useful lense for understanding sequential transfers of time, money, and emotion between generations." In addition, the model of *intergenerational solidarity* – put forward by Bengtson and colleagues (cf. Bengtson 2001) – has guided much of the recent research on intergenerational family relations (see above). With its expansion to include conflict, more recent versions of the intergenerational solidarity paradigm have become compatible with ambivalence theory (see Bengtson et al. 2002). Role theory has been shown to be useful for understanding activity patterns at older ages, particularly following individuals' transition into retirement (e.g., Kaskie et al. 2008). With regard to the relationship between various productive activities, two major approaches with different basic assumptions can be distinguished, *role substitution* and *role extension*. Recent studies not only tend to support the notion of a complementary relationship between various activities (see above), but there also is clear indication for a positive relationship between elders' engagement in multiple productive roles and well-being, i.e. the evidence rather points to *role enhancement* than to *role strain* (e.g., Glaser et al. 2006; Rozario et al. 2004).

More generally, the life course has been considered as a key concept in social gerontology (cf. Alwin 2012). This is important, because *life course theories* have not only been shown to be fruitful for the empirical analysis of many later life outcomes (see, for example, the studies collected in Börsch-Supan et al. 2011), but they also constitute an important conceptual link between gerontology and other social science disciplines, especially sociology. Cumulative (dis-)advantage and, more recently, *cumulative inequality theories* in particular have received growing attention in social gerontology (e.g., Dannefer 2003; Ferraro et al. 2009). It has been suggested that one of their primary contributions to the study of aging is the consideration of intergenerational transmission of inequalities – which, traditionally, is a core topic of sociological research.

Data sources for research on aging - the example of SHARE

Many of the empirical studies cited above – and the insights into older people's lives which they provide – would not have been possible just one or two decades ago, simply because an adequate database was still lacking. Today, however, a growing number of surveys worldwide respond to the challenges of demographic change and population aging. Particularly important is the U.S. Health and Retirement Study (HRS), which started in 1992 and has served as a role model for an entire 'family' of similar national surveys in Europe¹ (e.g. the English Longitudinal Study of Ageing; ELSA), Asia (e.g. the Chinese Health and Retirement Longitudinal Study; CHARLS), and America (e.g. the Mexican Health and Aging Study; MHAS); cf. Lee (2010). Not least, SHARE – the *Survey of Health, Ageing and Retirement in Europe* – also follows the HRS model. SHARE, whose main milestones, features, and research potentials we will briefly introduce in this section, thus is the only ex-ante harmonized cross-national study within this global family of aging surveys.

SHARE started in 2004 as a biennial study and by now encompasses four waves of information about social networks, socio-economics, and health of more than 85,000 Europeans aged 50 and over from 19 countries, plus Israel (cf. Börsch-Supan et al. 2013a). The survey is designed to assess changes in individual lives and the links between different life course domains within different societal and policy contexts - and therefore provides a rich longitudinal database for researchers from multiple disciplines (e.g., epidemiology, economics, demography, geriatrics, gerontology, history, psychology, sociology). Its baseline Wave 1, which was conducted in 2004-05, covers eleven countries, ranging from the Mediterranean states to the Nordic countries (Austria, Belgium, Germany, Denmark, France, Greece, Italy, the Netherlands, Sweden, Switzerland, Spain) and Israel (see Börsch-Supan et al. 2005; Börsch-Supan and Jürges 2005). Longitudinal data collection started in Wave 2 (2006-07); moreover, two post-communist countries, namely the Czech Republic and Poland, as well as Ireland joined the survey (cf. Börsch-Supan et al. 2010). In Wave 3 (2008-09, SHARELIFE), retrospective life histories were collected from all panel respondents to be able to assess where they came from and how their life evolved in terms of, e.g., partnerships, family, work, finances, accommodation, and health and to see what consequences these

¹ Another national survey, which does not belong to the 'HRS family' of aging studies discussed here but is highly relevant for the German context, is the *German Ageing Survey* (DEAS); see Tesch-Römer et al. (2006) as well as Motel-Klingebiel et al. (2010) for a detailed documentation.

developments and events had for lives today (see Börsch-Supan et al. 2011; Schröder 2011). The most recently available data from the survey's Wave 4 (2010-11) include respondents from two more Central European countries (Estonia, Slovenia) and from Portugal (see Börsch-Supan et al. 2013b; Malter and Börsch-Supan 2013). Ten more survey waves are planned till 2024.

Panel data collected via computer assisted personal interviews include health variables (e.g. self-reported health, health conditions, physical and cognitive functioning, health behaviors, use of health care facilities), biomarkers (e.g. grip strength, body-mass index, peak flow), psychological variables (e.g. psychological health, well-being, life satisfaction), economic variables (current work activity, job characteristics, opportunities to work past retirement age, sources and composition of current income, wealth and consumption, housing, education), and social support variables (e.g. assistance within families, transfers of incomes and assets, social networks, volunteer activities). Although SHARE is a panel survey with a stable core questionnaire, innovative physical measurements, questions, and modules have been incorporated in every wave. For example, since Wave 2 share collects information about deceased respondents (conducting so called 'end-of-life' interviews; cf. Hank and Jürges 2010). Linkage to the German pension data allows detailed analyses of working histories and pension entitlements since Wave 3 (see Korbmacher and Czaplicki 2013). In Wave 4, dried blood spots were collected in a German pilot study in order to assess the risks of cardiovascular diseases objectively (cf. Schaan 2013b) – a project which will be extended to all SHARE countries in future waves. In addition, Wave 4 introduced the first crossnationally harmonized ego-centered social networks module to learn more about older individuals' embeddedness and support networks (see Litwin et al. 2013). More information about SHARE and its partners can be found at <u>www.share-project.org</u>. The data are available free of charge to the scientific community.

Conclusions

Our review provided a compact overview of current social science research in three major domains of older people's life: *health*, *families*, and *work*. The research findings discussed

here demonstrate both the *challenges* and *opportunities* lying ahead of us as life expectancy is increasing steadily and as the proportion of older people in our societies will grow further. More generally, they have shown the great value of *life course* and *cross-nationally comparative* perspectives in aging research (cf. Börsch-Supan et al. 2011). We conclude with an outlook on what we consider as some of the most important, most promising *perspectives* for future studies in this field:

- Researchers and practitioners need to recognize the *heterogeneity* of old-age (e.g., Wurm et al. 2010) and the distinction between the 'third' and the 'fourth' age is likely to gain even further relevance as the number and proportion of *oldest-old* is increasing (e.g., Baltes and Smith 2003). However, our knowledge about the oldest-old is yet limited (e.g., Andersen-Ranberg et al. 2005; Motel-Klingebiel et al. 2013) and needs to be enhanced to adapt our general concepts of and strategies for 'successful aging' to the competences and needs of those aged 80 or over (cf. Gondo et al. 2013).
- Despite talk about 'broken limits to life expectancy' (Oeppen and Vaupel 2002) and evidence suggesting significant improvements at least in some dimensions of health in later life (see above), including the immediate years prior to death, the *last year of life* remains a particularly important and difficult period for the near-deceased as well as for their families and health care professionals. The year prior to death has been shown to be characterized by large increases in the propensity to experience significant cognitive and functional decline, which constitutes a huge challenge to next-of-kin and professionals providing end-of-life care (e.g., Hank & Jürges 2010; Williams et al. 2012). Thus, more *end-of-life research* is badly needed.
- It is important to gain further insights into the living conditions of *institutionalized elders*, especially their health status and social integration in comparison to the non-institutionalized older population (e.g., Boeckerman et al. 2012; Désesquelles and Brouard 2003). We also need to understand better the determinants of *entry into institutional* care (e.g., Laferrère et al. 2013; Luppa et al. 2010), not only for adequate social policy interventions, but also to get a better idea of the potential biases of

excluding the institutionalized population from empirical studies (e.g. Peeters et al. 2013).

 Last but not least (and, without doubt, our short list could be easily extended), as many of Germany's and Europe's first generation post-war *immigrants* enter old-age, more attention needs to be paid on their well-being (e.g., Baykara-Krumme et al. 2012; Ladin and Reinhold 2013).

Clearly, to address the issues, further *advancement in theories of aging* is as desirable and necessary as are further *innovations in data collection*. While we are reluctant to claim that we observe much progress in theory development (despite an increasing use of theory in social gerontology; Alley et al. 2010), there are many good examples of promising methodological innovations. These include efforts to enhance survey data with, for example, information from biomarkers or administrative records (e.g., Malter and Börsch-Supan 2013; Simonson et al. 2012) as well as the use of internet surveys as a new, additional mode of data collection in studies of older populations (e.g., Couper et al. 2007; de Bernardo and Curtis 2013). We are thus confident regarding the future prospects of aging research in the social sciences – and expect our knowledge in the field to grow so rapidly and substantially that our current review may soon be outdated ...

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