



Towards a Sociology of Happiness: The Case of an Age Perspective on the Social Context of Well-Being

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Abstract

This article examines what can be the contribution of Sociology to the 'new science of happiness', and what can such happiness studies contribute to Sociology? It does so by presenting the example of a quantitative analysis of European Social Survey data for the UK on social capital and life satisfaction by age. It reveals heterogeneity in the relationship between social capital and SWB by age with, for instance, socialising being more strongly associated with SWB among younger and older people compared to a mid-age group. Using this analysis as a case study, the first aim is to illustrate how sociological theory can crucially enrich research on SWB by relating the under-theorised field to broader narratives. While a range of empirical findings on the correlates of subjectively reported happiness have been dutifully collected over decades, solid theory building has often been neglected. It is crucial, however, to draw the various pieces of evidence together in order to formulate viable theoretical frameworks. Sociology is a science rich in useful approaches for the study of well-being. Role-identity theory as well as socialisation theory allow us in this paper to develop testable hypotheses for well-being data and give the research field a much-needed grounding. At the same time, it is demonstrated in this article how analysing data on life satisfaction can deliver much needed empirical tests of and new perspectives on long-standing sociological theories. For instance, the unresolved debate about homo sociologicus and homo economicus as competing conceptions of man can gain new perspectives from data on SWB.

Keywords: Happiness, Homo Sociologicus, Role-Identity Theory, Social Capital, Subjective Well-Being

Introduction

1.1 Over the past years a 'new science of happiness' has emerged at the intersection of Psychology and Economics to study the people's evaluations of their lives (Diener et al. 1999), i.e. their subjective well-being (SWB). While within the first discipline a school of 'Positive Psychology' was able to emerge to complement the study of depression and other negative states with analyses of what makes people satisfied with their lives (Seligman and Csikszentmihalyi 2000), within the latter field a many studies in 'Happiness Economics' were produced. Interest in this endeavor is growing rapidly and the research area has become very influential in the policy world, as governments are becoming increasingly keen to measure SWB through official statistics with 200,000 individuals being asked annually about their SWB in the UK Integrated Household Survey (Cameron 2010, Matheson 2011).

1.2 Happiness^[1], however, is not yet a big topic in Sociology and it is not mentioned in Sociological textbooks (a rare exception being Nolan and Lenski 2004). Perhaps not surprisingly, the seminal introductory books on happiness research have been written by Economists and Psychologists, most notably Frey & Stutzer (2002), Huppert et al. (2005), Kahneman et al. (1999), and Layard (2005). At the same time, Sociological perspectives are still very few in the academic debate on SWB, despite the fact that the discipline would have a lot to offer. First of all, there are a number of social correlates of SWB that are not simply reducible to economic factors or individual psychological processes. More importantly, Sociology is well-suited to counteract the problem that happiness research in its current state is heavily 'over-researched and under-theorised' (Reeves 2009: 24). That is to say that although over the past two decades a lot of empirical results have been produced within the 'science of happiness' (see e.g. Dolan et al. 2008 for an overview), it remains unclear how these can be related to broader theoretical narratives.

This has led some to even conclude that 'SWB is often - and appropriately - viewed as an atheoretical research topic' (George 2010: 332). Sociology, by contrast, is an academic discipline rich in theories relevant for well-being. Therefore, this article aims to bring both worlds together by illustrating possible pathways between them based on the case study of a more nuanced look at the social context of well-being.

1.3 Veenhoven^[2] (Veenhoven 2008: 44) argues that the absence of happiness as a concept in Sociology was due to a number of reasons, which are pragmatic (i.e. Sociologists focus rather on people's behavior than their emotions), ideological (i.e. there is a widespread tendency within the discipline to prefer objective well-being as measured by for instance social equality), and theoretical (i.e. sociologists tend to think of subjective well-being as a 'whimsical state of mind'). Nonetheless, there could be a wealth of applications of the SWB concept in Sociology. In fact, according to Veenhoven, studies on life satisfaction and happiness address questions that lie at the heart of Sociology, as 'subjective wellbeing is both an outcome of social systems and a factor in their functioning. As such the subject belongs to the core business of sociology' (ibid.: 58).

1.4 Sociological classics actually were already making subtle statements about SWB in their works, even though they did not explicitly call it by this name. In particular, Durkheim examined the relationship between social cohesion and anomie, while Comte argued that 'bonheur' was the final reference point for Positivism, and Simmel considered individualism as a foundation of happiness (Glatzer 2000). Moreover, there is a long tradition in Sociology of empirical 'social indicators' research (as institutionalized in the International Sociological Association's Research Committee 55 on Social Indicators).

1.5 Building on the aforementioned traditions within the discipline, this paper ought to outline potential ways towards a *Sociology of Happiness*. To this end, the article will illustrate what could be the contribution of Sociology to the expanding 'science of happiness' especially by addressing current blind spots, as well as what that new research field on SWB has to offer in order to advance Sociology. As an illustrative example, a quantitative analysis of the association between social capital and SWB over the life cycle will be presented which connects sociological theory with empirical research on happiness. It follows in Durkheim's footsteps who proposed that social connectedness is crucial to human well-being in his studies on *Le Suicide* (Durkheim 1997 [1897]). In particular, the recent happiness literature shows the paradox that despite a positive effect of social capital on SWB, 'subjective well-being appears to be lowest in the phase of life where participation in public life is highest' (Veenhoven 2008: 10), i.e. the middle life years. The following paper addresses this puzzle by comparing how social capital is associated with SWB in different ways across age groups. Furthermore, an important addition to the current happiness literature shall be made by challenging the assumption of homogeneity in the social determinants of SWB by age.

Theoretical Background and Related Studies

2.1 A number of studies have examined the relationship between social capital, defined as 'connections among individuals - social networks and the norms of reciprocity and trustworthiness that arise from them' (Putnam 2000: 19), and SWB. The vast majority of empirical studies comes to the conclusion that social capital has a positive effect on SWB (e.g. Bjørnskov 2008, Helliwell and Putnam 2004, Helliwell 2003, Kroll 2008). However, it is not known how the social context of well-being varies by age, despite the fact that Sociological theory would argue that the nature of social connections and the associated benefits in terms of well-being change as people grow older. In this regard, a complementary paper has examined the role of parental status and gender in mediating the effect of social capital on SWB (Kroll 2011). It has found that formal social capital and SWB are more strongly related for childless people, and also that the association between informal social capital and SWB is stronger for women^[2].

2.2 So why would the link between social capital and SWB vary by age? First, a *life course perspective* on the social context of well-being seems promising in this regard. This is both a concept and theoretical approach that views an individual's existence in terms of life stages (e.g. childhood, adulthood), status passages (e.g. from youth to adulthood, from professional to pensioner), and life events (e.g. marriage, retirement). Thus, the life course perspective considers age to be a social construction which allocates individuals into social statuses. It is therefore closely linked to role-identity theory and provides a framework for identifying the mechanisms that connect lives with social structures, since it views one's life as an 'age-graded sequence of events and social roles that is embedded in social structures' (Elder 2007: 1) (see also Henz 2004, Crosnoe and Riegle-Crumb 2007).

2.3 According to the life course perspective, the roles which people occupy change as they get older. Hence, the role context in which social capital is accumulated changes, too. As the personal circumstances of the adults change over the years, so does potentially the form and importance of their social environment to their well-being (Moen et al. 1992, Morrow-Howell et al. 2003). For instance, very young and old people are less likely than people in middle age to be involved in employment and child rearing. That is to say that the latter 'occupy more extensive social roles' (Li and Ferraro 2006: 511). In fact, their social capital in terms of volunteering and socialising may be a mere outcome of role expectations and social obligations as a work colleague or parent (Krause and Wulff 2005, Sundeen 1990, Wilson and Musick 1997, Van Willigen 2000). Here, the 'paradox is that "voluntary" association activity may not be purely voluntary' (Li and Ferraro 2006: 500).

2.4 With particular regard to older people, some researchers claim that in later life people strive for social ties that are more emotionally meaningful, and disengage from more peripheral social relationships. This view is elaborated in socio-emotional selectivity theory (SST) (Carstensen 1992, Charles and Carstensen 2009, Krause and Wulff 2005). According to this approach, people who reach the latter decades of their

lives reprioritise goals and shift the balance to activities that are fulfilling to them. From this perspective, social activities may become more selective in old age and increasingly rewarding, possibly with higher SWB as an outcome.

2.5 Moreover, being productive, having a purpose in life and doing 'something useful' is an important part of social approval, and a significant source of self-esteem in our society. Many people experience these feelings of recognition when they have a job or raise children. Exiting the work or active parent role may pose a challenge to many older adults. Civic engagement and socialising can be a substitute and become more important sources of SWB as a result (Musick and Wilson 2003). Social capital can provide meaningful social roles that act as a way to ensure a feeling of fulfilment and usefulness for this group, as proposed by activity theory which assumes that well-being in old age is ensured if people remain engaged and active (Van Willigen 2000, Willis 1996, Musick et al. 1999).

2.6 One can also think of the varying benefits from social capital to SWB across the life course in terms of *role enhancement* and *role strain*. Role enhancement means that accumulating multiple social roles, e.g. through volunteering and socialising, can be a source of meaning in life and protect individuals from social isolation (Li and Ferraro 2006, Thoits 1985, Sieber 1974). At the same time, too many roles may lead to problems: *Role strain* occurs if the demands of the multiple roles are conflicting, if one's assessment concerning one's performance in roles deviates from the assessment of others, or if an individual has accepted roles that are beyond his or her capacity. Up to a certain degree, the benefits of multiple roles (role enhancement) tend to outweigh the stress that comes with occupying several roles (role strain) resulting in a 'net gratification' (Sieber 1974: 567). It is likely that the point of net gratification (i.e. role enhancement minus role-strain) depends largely on the role context, i.e. the setting and content of the roles (Moen et al. 1992). Since people in the middle life years are more likely to already have a range of demanding roles in the work and family sphere, an increase in social capital through additional roles as volunteer or because of heavy socialising might lead them to experience role strain earlier than old and young people.

2.7 Similarly, an argument of differences in the social context of well-being between age groups can be made on the basis of socialisation theory. According to this view, the environment in which one grows up has a lasting effect on a person's values and attitude, such as the importance of social factors in relation to well-being. For example, cohorts that grew up in more materialistic (Inglehart 1990) decades may differ in the value they attach to social capital compared to those whose formative years fall in a post-materialistic era. The same is true for so-called period effects, i.e. events that may have affected some age groups but not others, most notably the drive for race, gender, and sexual orientation equality in the 1960s and early 1970s. In sum, it is hypothesised here that the effect of social capital on SWB will vary across age groups.

2.8 Last but not least, a fascinating paradox is that the association between age and SWB is usually u-shaped (Clark and Oswald 2006, Blanchflower and Oswald 2007) while at the same time, levels of civic engagement are usually highest during those years (Putnam 2000). These findings seem puzzling to a certain extent since usually civic engagement is positively related to SWB. The diminished SWB for people in their middle years despite higher engagement in public life during that period therefore leads to a hypothesis of smaller returns from social capital in terms of SWB for this particular age group.

What have previous studies found?

2.9 Musick and Wilson (2003: 261) have criticised that 'rarely are the effects of volunteering on the psychological well-being of younger and older populations compared.' Indeed, the few studies who do examine populations by age in this regard most often focus on health (Lee et al. 2008) or mental illness (Krause and Wulff 2005, Musick and Wilson 2003, Li and Ferraro 2006) as outcomes, not SWB. Furthermore, existing evidence has often restricted the comparison to two age groups and sometimes focused on volunteering as only one facet of SC. Hence, this analysis will make a valuable contribution to the state of the knowledge by proposing a design that goes beyond those studies.

2.10 Positive mental outcomes were studied in this regard in terms of self-esteem as an outcome of volunteering in a hospice (Omoto et al. 2000) while time use studies indicate that people in their mid-life period rarely rate socialising as the most enjoyable activity of the day - unlike younger and older people (Michelson 2010). Finally, the study that is closest in the design to this one is Van Willigen's (2000) analysis of the effects of volunteering on life satisfaction and perceived health in the USA for the age groups below and above 60 separately. Separate regressions were run for a sample of respondents under 60 and a sample of those aged over 60, followed by a comparison of the unstandardised coefficients. It turned out that the number of volunteer hours was associated in a positive and linear manner with satisfaction among older adults, while the relationship was curvilinear for younger adults. The study at hand shall use such results as an important starting point. However, besides studying a different country (the UK instead of the US), a range of refinements will be introduced. First of all, this article will investigate four age groups instead of two, in order to reflect the stages of the life course more accurately (youth, early adulthood, later adulthood, retirement). Secondly, it will incorporate various facets of social capital instead of volunteering only. Third, the method will be different, as interaction terms are used to make valid statements about slope heterogeneity across age groups instead of comparing the unstandardised coefficients of sub-samples. The latter procedure was deemed inappropriate on methodological grounds by Jaccard and Turrisi (2003: 43).

2.11 Last but not least, as mentioned earlier a complementary paper to this article has found gender and parental status differences with regard to the association between social capital and SWB (Kroll 2011). Therefore, a second step in this article will be to examine if any variations in the social context of well-

being over the life cycle differ between men and women. This approach is based on the idea that socialisation produces gender differences with regard to preferences and personality characteristics, in particular concerning affiliative style, following Chodorow's (1978) theory of the reproduction of mothering and Gilligan's (1982) theory of differentiated moral development.

Hypotheses

3.1 The following hypotheses result directly from the theoretical remarks in the previous section.

- H₁: The relationship between social capital and SWB will vary by age.
- H₂: The relationship between social capital and SWB will vary by age and gender.
- H₃: The relationship between social capital and SWB will be weaker for the mid-age group.

Methods and Data

Dataset and variables

4.1 The empirical analysis uses UK data from the third round of the European Social Survey (N = 2934) from 2006. For 1768 cases there is information on all the variables needed (including the income variable for which there are traditionally many misses values). The response variable to measure well-being is the widely used 11-point generalised life satisfaction question: All things considered, how satisfied are you with your life as a whole nowadays? Please answer using this card, where 0 means extremely dissatisfied and 10 means extremely satisfied. It is considered a reasonably valid and reliable indicator of the cognitive aspect of human well-being (see e.g. Kahneman and Krueger 2006). Social capital ought to be measured in a comprehensive and yet clear manner. The literature often distinguishes three aspects of social capital: Formal social capital (i.e. civic engagement / volunteering), informal social capital (i.e. socialising) and trust. This operationalisation allows distinguishing the respective effect of three facets of social capital on life satisfaction. Trust was included as the standard 'rough-and-ready indicator' of social capital (Halpern 2005: 34) and was measured by an 11-point index of whether respondents think that most people can be trusted or you can't be too careful, most people try to take advantage of you or try to be fair, and most of the time people are helpful or are mostly looking out for themselves (Cronbach's alpha: 0.70). Formal social capital is measured by an index of the respondents' involvement in work for voluntary or charitable organisations, as well as how often the respondent has helped with or attended activities in the local area over the last 12 months. Both items contain a 6-point answer scale ranging from never to at least once a week (Cronbach's alpha: 0.66). Informal social capital captures respondents' statement about how often they meet regularly with friends, relatives or colleagues. The answers range on a 7-point scale from never to every day. Answers are recoded where necessary so that high scores uniformly indicate high social capital.

4.2 To conduct a life course analysis that distinguishes certain important life stages, age groups are computed in the form of dummies for 15 -29, 30 - 44, 45 - 64, above 65 years. For a more precise subgroup analysis and in accordance with the aims of this paper, the gender and age group dummies are once again divided in tables 5 and 6 into 6 subgroups: young men, young women, mid-age men, mid-age women, old men and old women. Furthermore, standard control variables from the well-being literature are included in the study (see e.g. the review by Dolan et al. 2008): Health (measured by asking people to rate their general health on a 5-point scale from very bad to very good), income (respondent's net household income in twelve income bands), education (years of full-time education), religiosity (on an 11-point scale from being not at all religious to very religious), marital status, unemployment, gender, and parental status.

Analytical strategy

4.3 As the aim of this analysis is to distinguish the effects across the relevant societal subgroups and to make valid statements about possible slope heterogeneity, interaction effects are examined. Interaction terms are formed by multiplying the various social capital variables with each of the relevant subgroup dummies. Consequently, ordinary least squares (OLS) and ordered logit regressions are run. The reason behind including the latter is that strictly speaking, the response variable (generalised life satisfaction) is ordinal in nature. Nonetheless, many past SWB studies have treated it as numerical by using OLS regression based on the idea that 'assuming cardinality or ordinality of the answers to general satisfaction questions is relatively unimportant to results' (Ferrer-i-Carbonell and Frijters 2004: 655). However, this paper will check whether the method makes a difference to the results in this regard by using both OLS and ordered logit estimation methods. Although cross-sectional data cannot solve the question of causation, this paper might shed light on the interesting issue of potential slope heterogeneity in the relationship between the relationships under study.

4.4 The results section present the descriptive levels of social capital and SWB, followed by OLS and ordered logit estimates. Slope heterogeneity is visualised based on the OLS coefficients using fitted values for the main results. For all figures displaying such fitted values, the control and the hidden social capital variables are fixed at the mean.

Results

5.1 Table 1 displays the levels of social capital and SWB across age groups. First of all, it is apparent that - not controlling for other factors - life satisfaction is u-shaped over the life cycle also in these data. Moreover, trust increases with age in a linear way. This could either be a cohort effect of old people

having been socialised in a 'more trustworthy world', or a sign of the fact that - in line with socio-emotional selectivity theory - older people are more selective in choosing their social environment and thus have opted for a more trustworthy one.

Table 1. Descriptive statistics, life satisfaction and social capital by age

Means (Std. Dev.)	Life Satisfaction	Trust	Civic Engagement	Socialising	N
Young (15 – 29)	7.26 (1.65)	5.36*** (1.50)	1.02*** (1.31)	4.78*** (1.36)	514
Lower Mid-age (30 - 44)	7.17 (2.03)	5.50 (1.47)	1.45* (1.45)	3.85*** (1.50)	569
Upper Mid-age (45 - 64)	7.14 (1.99)	5.63 (1.70)	1.37 (1.50)	3.80*** (1.57)	803
Old age (65 plus)	7.42* (2.01)	5.91*** (1.76)	1.34 (1.66)	4.13 (1.59)	474
Total	7.23 (1.95)	5.60 (1.62)	1.31 (1.49)	4.09 (1.56)	2394

t-test for equality of means: *** $p \leq 0.001$, ** ≤ 0.01 , * ≤ 0.05 .

N.B. When there are subgroups of more than two categories, the t-test reflects the distinction dummy variable (e.g. old) vs. rest of the sample.

5.2 Civic engagement is highest in (lower) mid-age according to these data, while it is lowest among the young. By contrast, socialising is lowest in (upper) mid-age and highest among the young. Thus, from a life course perspective there is an important switch in how people accumulate social capital at the threshold between youth and middle age (around age 30) from informal to formal social capital. As people reach this age they stop meeting friends informally to a certain extent and shift their social connections to formal voluntary associations. In sum, from a revealed preferences perspective, the (lower) mid-age group should benefit most and young people should benefit least from civic engagement. Likewise, the (upper) mid-age group should benefit least and young people should benefit most and from socialising.

5.3 Table 2 contains OLS estimates for the dependent variable life satisfaction, while Table 3 is based on ordered logit estimation to serve as a further robustness test of the OLS results. Model 1 in both tables examines the control variables and Model 2 displays the social capital coefficients in addition. Ceteris paribus, old age is significantly associated with higher life satisfaction than the reference category lower mid age. Moreover, SWB is significantly higher among healthy, rich, married, not unemployed and religious respondents. Likewise, Model 2 shows a positive association between all three facets of social capital and life satisfaction. Life satisfaction is higher for those who trust others and have more formal as well as informal social capital.

Table 2. Unstandardised OLS estimates, correlates of life satisfaction; social capital by age

	1	2	3
constant	5.280***	4.018***	4.653***
health	0.517***	0.431***	0.425***
income	0.164***	0.132**	0.126**
female	0.024	-0.002	-0.009
aged 15-29 (<i>ref. 30-44</i>)	0.245	0.227	-0.726
aged 45-64	0.093	0.064	-0.691
aged 65+	0.635***	0.441**	-0.747
Single (<i>ref. married</i>)	-0.349*	-0.409**	-0.409**
separated	-0.972**	-0.989**	-0.982**
divorced	-1.087***	-0.990***	-0.984***
widowed	-0.537**	-0.612**	-0.630**
unemployed	-0.705**	-0.809**	-0.813**
education in years	-0.006	-0.019	-0.018
parent	0.030	0.035	0.024
religiosity	0.063***	0.046**	0.044**
trust		0.204***	0.129*
civic engagement		0.068*	0.157**
informal socialising		0.161***	0.077
aged 15-29 x trust			0.026
aged 15-29 x civic eng.			-0.081
aged 15-29 x socialising			0.209*
aged 45-64 x trust			0.128
aged 45-64 x civic eng.			-0.149*
aged 45-64 x socialising			0.067
aged 65+ x trust			0.115
aged 65+ x civic eng.			-0.117
aged 65+ x socialising			0.175*
Observations	1768	1768	1768
R square	0.134	0.186	0.194
Adjusted R square	0.127	0.179	0.181

*** indicates significance at $p < 0.001$. ** $p < 0.01$. * $p < 0.05$.

Table 3. Ordered logit, correlates of life satisfaction; social capital by age

	1	2	3
Life Satisfaction = 0	-3.253***	-2.111***	-2.792***
Life Satisfaction = 1	-2.702***	-1.554***	-2.231***
Life Satisfaction = 2	-2.110***	-0.957**	-1.630***
Life Satisfaction = 3	-1.182***	-0.029	-0.700
Life Satisfaction = 4	-0.531	0.636*	-0.034
Life Satisfaction = 5	0.322	1.523***	0.857*
Life Satisfaction = 6	0.907**	2.124***	1.460***
Life Satisfaction = 7	1.803***	3.064***	2.406***
Life Satisfaction = 8	3.236***	4.545***	3.902***
Life Satisfaction = 9	4.423***	5.763***	5.128***
health	0.536***	0.457***	0.452***
income	0.130**	0.103*	0.098*
female	0.068	0.039	0.022
aged 15-29 (ref. 30-44)	0.180	0.176	-0.771
aged 45-64	0.101	0.062	-0.724
aged 65+	0.693***	0.509***	-0.913
single (ref. married)	-0.247	-0.338*	-0.347*
separated	-0.747**	-0.888**	-0.899**
divorced	-0.982***	-0.914***	-0.912***
widowed	-0.456*	-0.563**	-0.575**
unemployed	-0.658**	-0.756**	-0.779**
education in years	-0.011	-0.026*	-0.024*
parent	0.043	0.027	0.017
religiosity	0.058***	0.044**	0.044**
trust		0.211***	0.122*
civic engagement		0.084**	0.197***
informal socialising		0.148***	0.067
aged 15-29 x trust			0.036
aged 15-29 x civic eng.			-0.082
aged 15-29 x socialising			0.199*
aged 45-64 x trust			0.148*
aged 45-64 x civic eng.			-0.214**
aged 45-64 x socialising			0.070
aged 65+ x trust			0.156*
aged 65+ x civic eng.			-0.125
aged 65+ x socialising			0.177*
Observations	1768	1768	1768

*** indicates significance at $p < 0.001$. ** $p < 0.01$. * $p < 0.05$.

5.4 Model 3 examines age group differences in the association between social capital and SWB by featuring interaction terms of age and social capital. Two noteworthy results emerge from Table 2: First, socialising is more strongly associated with SWB among young and old people compared to the reference category, i.e. people in the lower mid-age group. Figure 1 illustrates that, ceteris paribus, young people who do not have any informal social capital have the lowest life satisfaction. However, young people who socialise daily report a life satisfaction that is 1.7 points higher than that of their peers who do not socialise at all. Their SWB scores at higher social capital levels also surpass the average life satisfaction of people in the mid-age group. A similar result is found for old people who report a life satisfaction that is lower than that of the mid-age group during lower levels of informal social capital but among heavier socialisers is higher than that of the mid-age group. Thus, socialising seems to make less of a difference to SWB among the mid-age group, while it matters more to old and young people. At the

same time, age makes the biggest difference to SWB at very high and very low levels of informal social capital. Finally, no significant differences were found in this regard between the lower and upper mid age groups.

5.5The second result to emerge from this model is that civic engagement and SWB are more strongly correlated for the (reference category) lower mid-age group than for the upper mid-age group. In fact, for the latter, civic engagement does not seem to matter at all for life satisfaction, while there is quite a strong positive association for people aged between 30 and 44, as illustrated by Figure 2.

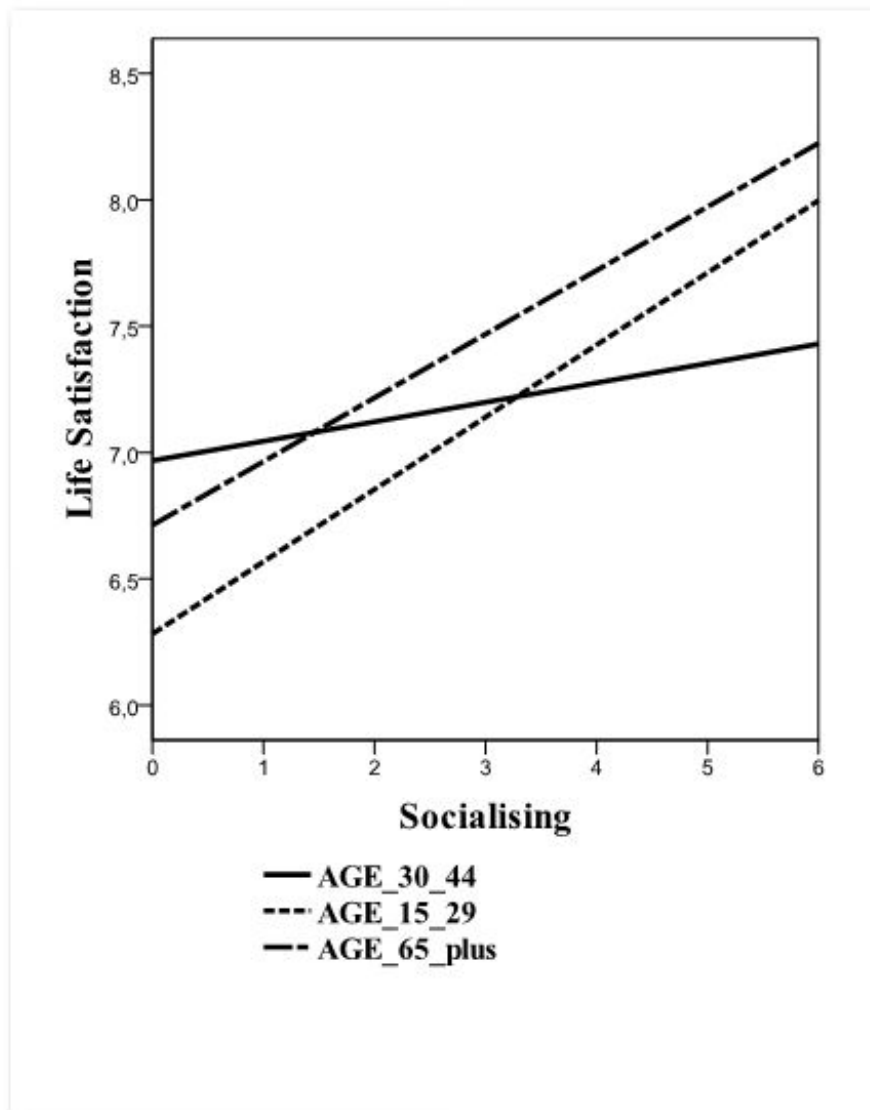


Figure 1. Fitted values for socialising and life satisfaction by age

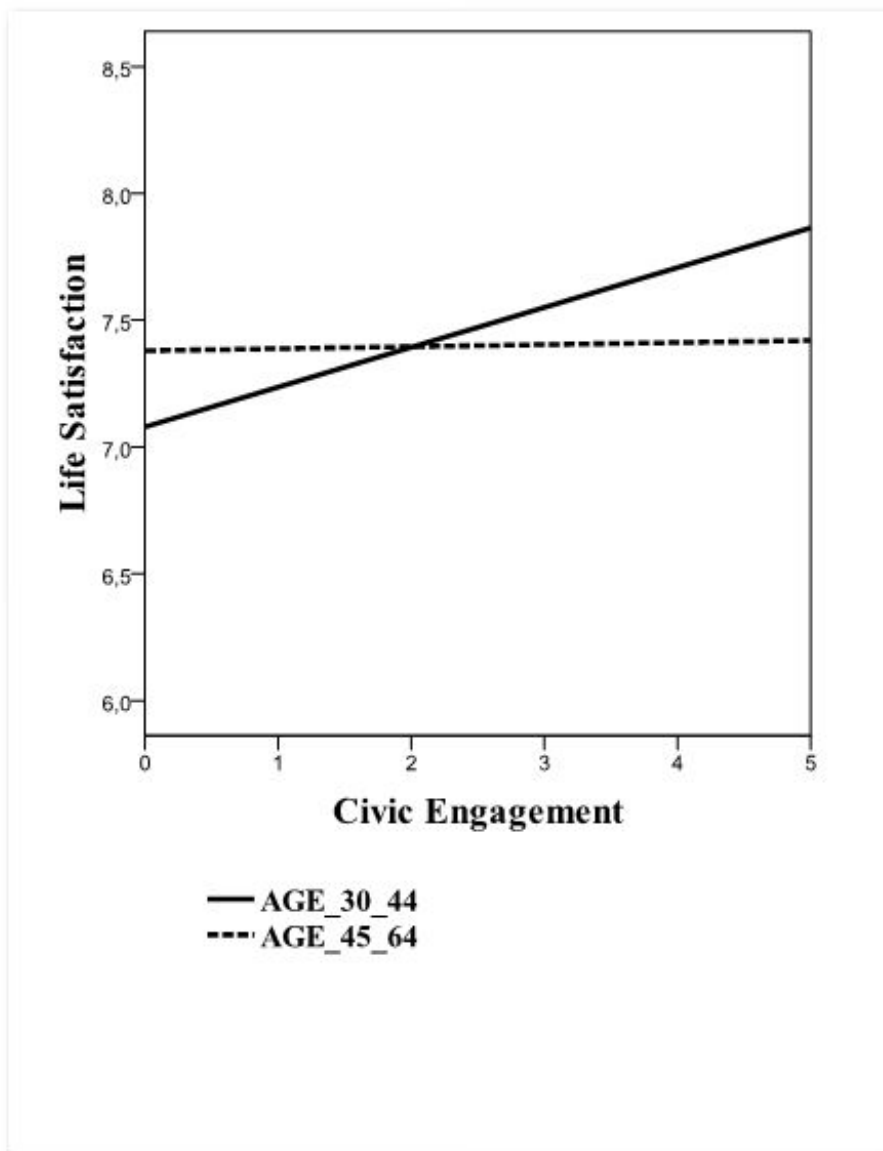


Figure 2. Fitted values for civic engagement and life satisfaction by age

5.6 The ordered logit analysis confirms the results from the OLS regression mentioned above regarding the direction and significance of the coefficients. In addition, however, Model 3 in Table 3 shows that the association between trust and SWB is stronger for the upper mid-age group and older people compared to the reference category, the lower mid-age group. Finally, a model regarding a non-linear association featuring squared terms for social capital and its related interaction terms (not shown) did not yield significant results for both OLS and ordered logit. Hence, there are no curvilinear differences in the association across age groups.

Analysis by age and gender

5.7 Given the previously mentioned finding of gender differences in the association between social capital and SWB it seems promising to investigate whether the reported age-related variations in the social context of well-being work differently for men and women. The descriptive statistics in Table 1 have shown that SWB is u-shaped over the life cycle^[3]. Table 4 confirms that this pattern is roughly identical for both sexes. However, the interesting switch noted in Table 1 from accumulating informal to formal social capital when entering middle age actually plays out differently for men and women. More precisely, the reduction in socialising during middle age is stronger for men, while the increase in civic engagement is smaller for them. In fact, socialising rates are highest among young men and lowest among mid-age men, making for a more drastic reduction of informal social capital for men who reach middle age.

5.8 Table 5 (OLS) and Table 6 (ordered logit) examine whether the previously found age group differences in the social capital SWB relationship hold for both genders. Focusing on the interaction terms in Model 2 of Table 5, it turns out that informal social capital is significantly more strongly associated with life satisfaction for all subgroups compared to the reference category middle aged men, except from young women for whom the interaction term is not significant^[5]. This finding means that the weaker association reported earlier regarding informal social capital and SWB for people in the (lower) mid-age group is actually only due to the men of that age.

Table 4. Descriptive statistics, life satisfaction and social capital by gender and age

Mean (Std. dev.)	Life Satisfaction	Trust	Civic Engagement	Socialising	N
Young women (15 - 29)	7.24 (1.60)	5.37* (1.43)	1.04** (1.31)	4.73*** (1.37)	250
Young men (15 - 29)	7.28 (1.70)	5.35** (1.57)	1.00*** (1.32)	4.83*** (1.36)	264
Mid-age women (30 – 64)	7.14 (2.05)	5.59 (1.60)	1.50*** (1.51)	3.85*** (1.53)	730
Mid-age men (30 – 64)	7.15 (1.94)	5.58 (1.60)	1.30 (1.44)	3.78*** (1.54)	642
Old women (65 plus)	7.40 (2.13)	5.95*** (1.74)	1.33 (1.68)	4.18 (1.57)	255
Old men (65 plus)	7.44 (2.01)	5.85* (1.79)	1.36 (1.64)	4.08 (1.61)	219
Total	7.23 (1.95)	5.60 (1.62)	1.31 (1.49)	4.09 (1.56)	2394

t-test for equality of means: *** $p \leq 0.001$, ** $p \leq 0.01$, * $p \leq 0.05$.

N.B. When there are subgroups of more than two categories, the t-test reflects the distinction dummy variable (e.g. young men) vs. rest of the sample.

Table 5. Unstandardised OLS estimates, correlates of life satisfaction; social capital by gender and age

	1	2
constant	4.110***	4.674***
health	0.428***	0.422***
income	0.129**	0.126**
Single (<i>ref. married</i>)	-0.421**	-0.433**
separated	-1.005**	-0.959**
divorced	-0.980***	-0.951***
widowed	-0.666**	-0.689***
unemployed	-0.822**	-0.834**
education in years	-0.018	-0.019
parent	0.040	0.044
religiosity	0.047**	0.045**
aged 15-29 female (<i>ref. age 30-64 male</i>)	0.189	0.034
aged 15-29 male	0.107	-1.254
aged 30-64 female	-0.120	-0.798
aged 65plus female	0.489**	-0.214
aged 65plus male	0.227	-1.169
trust	0.203***	0.186***
civic engagement	0.068*	0.135*
informal socialising	0.161***	0.027
aged 15-29 female x trust		-0.120
aged 15-29 male x trust		0.044
aged 30-64 female x trust		0.031
aged 65plus female x trust		-0.017
aged 65plus male x trust		0.108
aged 15-29 female x civic eng.		0.105
aged 15-29 male x civic eng.		-0.199
aged 30-64 female x civic eng.		-0.114
aged 65plus female x civic eng.		-0.171
aged 65plus male x civic eng.		-0.012
aged 15-29 female x socialising		0.179
aged 15-29 male x socialising		0.312**
aged 30-64 female x socialising		0.174*
aged 65plus female x socialising		0.259*
aged 65plus male x socialising		0.201*
Observations	1768	1768
R square	0.188	0.199
Adjusted R square	0.179	0.184

*** indicates significance at $p < 0.001$. ** $p < 0.01$. * $p < 0.05$.

Table 6. Ordered logit, correlates of life satisfaction; social capital by gender and age

	1	2
Life Satisfaction = 0	-2.185***	-2.676***
Life Satisfaction = 1	-1.627***	-2.112***
Life Satisfaction = 2	-1.029**	-1.511***
Life Satisfaction = 3	-0.100	-0.579
Life Satisfaction = 4	0.566	0.092
Life Satisfaction = 5	1.454***	0.987*
Life Satisfaction = 6	2.057***	1.595***
Life Satisfaction = 7	2.999***	2.549***
Life Satisfaction = 8	4.480***	4.049***
Life Satisfaction = 9	5.699***	5.276***
health	0.456***	0.459***
income	0.102*	0.099*
single (<i>ref. married</i>)	-0.356*	-0.374**
separated	-0.908**	-0.829**
divorced	-0.907***	-0.876***
widowed	-0.641**	-0.653**
unemployed	-0.770**	-0.816**
education in years	-0.025*	-0.026*
parent	0.035	0.047
religiosity	0.045**	0.044**
aged 15-29 female (<i>ref. age 30-64 male</i>)	0.132	0.068
aged 15-29 male	0.120	-1.100
aged 30-64 female	-0.069	-0.561
aged 65plus female	0.649***	-0.295
aged 65plus male	0.271	-1.166
trust	0.211***	0.204***
civic engagement	0.084**	0.141**
informal socialising	0.148***	0.021
aged 15-29 female x trust		-0.108
aged 15-29 male x trust		0.015
aged 30-64 female x trust		0.002
aged 65plus female x trust		0.041
aged 65plus male x trust		0.095
aged 65plus male x trust		0.095
aged 15-29 female x civic eng.		0.211
aged 15-29 male x civic eng.		-0.212
aged 30-64 female x civic eng.		-0.121
aged 65plus female x civic eng.		-0.189
aged 65plus male x civic eng.		0.074
aged 15_29 female x socialising		0.121
aged 15-29 male x socialising		0.318**
aged 30-64 female x socialising		0.172*
aged 65plus female x socialising		0.238*
aged 65plus male x socialising		0.197
Observations	1768	1768

*** indicates significance at $p < 0.001$. ** $p < 0.01$. * $p < 0.05$.

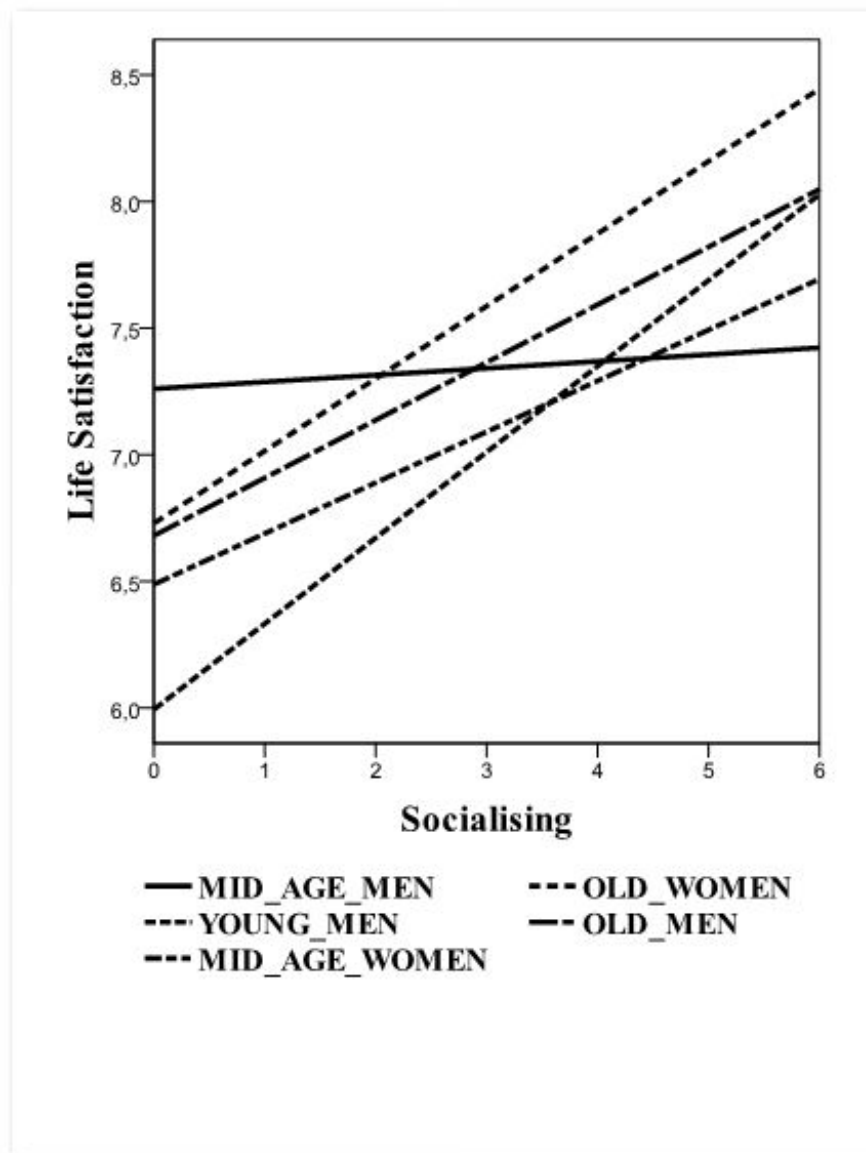


Figure 3. Fitted values for socialising and life satisfaction by gender and age

5.9 It is remarkable to see how much middle aged men stand out in figure 3. There is almost no difference in life satisfaction between middle aged men who socialise a lot and those who do not socialise at all. This is especially noteworthy given the fact that *young* men have the steepest slope in this regard. Something seems to happen with men as they reach middle age, in a way that they not only reduce their frequency of socialising (see descriptive statistics in Table 4), but also the intensity of their socialising ceases to matter for their life satisfaction. It is only in old age that men return to a positive relationship between socialising and SWB. The ordered logit coefficients in table 6 confirm the results, with the exception that the interaction term for old men and socialising is no longer significant. This means that when ordered logit is used, there is no significant slope difference for informal social capital and SWB between middle aged and old men^[6].

Conclusions

6.1 The broader aim of this article is to illustrate with an example how the new science of happiness can benefit from Sociological perspectives. At the same time, contributions from the happiness research area for Sociology shall be explored. A re-examination of the social context of well-being by age and gender as a case study was performed to illustrate such a sociological approach to happiness.

6.2 During the analyses it was found that socialising is less strongly associated with SWB among the mid-age group. This finding is in line with the life course perspective indicating that the social context of well-being changes as people grow older. The societal roles of young, middle aged and old people are different, resulting in varying slopes and a varying importance of social capital for people's life satisfaction. Informal social capital for the mid-age group (that may be simply the outcome of other social roles as parent or work colleague) and formal social capital for the upper mid-age group were not positively related to life satisfaction in contrast to the other subgroups examined here. Additional analyses show that the diminished effect of informal social capital during the middle life years is actually mainly due to the men in that age group. These results indicate that the life course approach may further be qualified by a gender dimension. It seems as if the roles that men occupy during their middle life years do have an effect on their social context of well-being. Socialising matters less for their life satisfaction which could mean that either the nature of the informal social capital that they acquire is of

inferior quality, or that the typical utility function for a member of this group does not include socialising - at least not to the extent of the other groups examined here. One might also theorize that the heterogeneity in the correlations between social capital and SWB reflect a variation in the discrepancy between aspiration and achievements according to age and gender as discussed by George (2010). Similarly, a strategic investment of resources (ibid.) among the mid-age group might lead them to invest less emotionally in their social life and thus get lower returns in terms of SWB, although no conclusive evidence is provided by these data.

6.3 Similarly, one could argue from this cross-sectional analysis that the age differences yield a period or cohort effect. Regarding the result on the differing benefits from informal social capital, for instance, it could be proposed that older people were socialised in a less individualised age that put more emphasis on maintaining good social relations with friends, relatives and colleagues. Yang (2008) argued in this context that baby-boomer cohorts report lower levels of happiness due to the influence of early life conditions and formative experiences. On the other hand, as there was also a stronger effect for the young respondents, it seems more plausible to attribute the differences to life course effects and the changing role context. As long as no compelling argument can be made why those born between 1942 and 1977 (the mid-age group) should stand out from the rest based on events that would have affected people's socialisation during that period, the life course approach appears more convincing to this author.

6.4 Two limitations of this study need to be discussed. The first limitation is of course the issue of causation - as it is the case with all correlational analyses. This investigation cannot establish whether high levels of social capital cause higher life satisfaction or vice versa. Two criteria of causation are fulfilled: a statistical association was found between the two concepts and a lack of spuriousness was ensured, at least to the extent in which certain standard control variables were included in the analyses.

6.5 The third criterion of causation, temporal precedence, however, is unclear given that the European Social Survey has a one-shot design rather than a longitudinal one. Answering such a causal question was not the aim of this paper, though. Rather than finding out what causes what, the objective of this article was to examine slope heterogeneity in the association between two concepts. So although this study cannot prove if social capital causally affects life satisfaction, its focus is more on whether the link between the two concepts varies across age groups. This in itself is an important addition to the existing literature. Some existing longitudinal evidence, however, has also established that social capital and SWB have a reciprocal relationship (see e.g. Meier and Stutzer 2008, Thoits and Hewitt 2001, Van Willigen 2000). If one was to consider the results found here from a reverse causality perspective, then it could be concluded that a possible self-selection mechanism which makes satisfied people more likely to socialise does not apply to middle aged men. Instead, members of this subgroup seem to take part in socialising regardless of a more satisfied or happy nature. Nonetheless, the professional consensus is that 'most researchers now agree that social ties have a salutary effect on mental health and psychological well-being' (Kawachi and Berkman 2001: 459). Hence, this study will rather look at this correlation from the latter perspective, although the discovery of slope heterogeneity is the main finding regardless of causal arrows.

6.6 Second, age is only a proxy for different life stages. Ideally, more interaction terms should be studied at the same time and people should simultaneously be distinguished by age and employment status and parental status and marital status, etc. (although these factors were at least controlled for in the regression models). However, this analysis shall only be first step towards disentangling the complex social context of well-being, and there is also a more practical issue of a diminishing sample size the more specific the subgroups become.

6.7 Nonetheless, hypothesis 1 receives some support in a sense that there are variations in the relationship between *informal* social capital and SWB by age, as well as between formal social capital at least as far as the upper and lower mid-age groups were concerned. Hypothesis 2 was furthermore supported to some extent as there were significant differences between *informal* social capital and SWB for mid-age men versus almost all other subgroups. The weaker relationship for the (especially male) mid-age group finally gives some support to hypothesis 3.

Discussion: Towards a Sociology of Happiness

7.1 It was proposed earlier that the 'new science of well-being' can deliver much-needed empirical tests of Sociological theories. At the same time, it was argued that Sociological theory can be a significant gain to the very empirically-oriented research field of SWB. The study presented here aimed to serve as an illustration of such win-win situations. In sum, the gains for the happiness literature from this investigation were that new insights into social context of well-being (i.e. variations by age and gender) were found. More importantly, these findings can be fruitfully applied to broader theoretical narratives of the life course perspective, gender socialisation theory, socio-emotional selectivity theory, and role-identity theory. It was demonstrated here how these theories can be used to formulate three testable hypotheses with regard to SWB, in particular about the changing societal role-context as people get older and its significant implications for the relationship between social capital and SWB.

7.2 The main point of hypothesis three was in fact to address the paradox that civic engagement is usually higher during the middle life years when SWB is generally at its lowest - despite social capital being positively related to SWB in general. In this context, it was hypothesised that the 'returns' from social capital may be smaller for the people in their middle life years. Indeed the analysis found in this dataset that SWB is lower and formal social capital is higher during the middle life years. Also, people in the upper mid-age group did show a non-association between formal social capital and SWB. However, this explanation for the paradox does not fit for the lower mid-age group who actually had the highest rates of formal social capital, thus leaving room for further exploration of this phenomenon. The

detrimental side of social capital, such as excess claims on group members, restrictions on individual freedom, and downward leveling norms (Portes 2008) appear to concern certain age groups more strongly.

7.3 At the same time, this study has shown that socialising seems to matter less for SWB for the mid-age group - and in relation to that middle aged respondents do show a lower intensity of socializing. This particular result is in line with a revealed preferences perspective and can be linked to the broader debate around homo economicus vs. homo sociologicus. The homo economicus model proposes that people act in order to maximize utility. Indeed, in this study middle aged respondents show reduced levels of socializing and at the same time a lower importance of socializing for SWB. Related analyses, however, have shown that some subgroups in this context rather act in the way that a homo sociologicus would behave. More precisely, mothers had shown the highest levels of civic engagement, despite a slightly negative association between such formal social capital and SWB for them - a finding which suggests that they may get involved rather out of a sense of obligation than to maximize utility (Kroll 2011). In sum, these examples illustrate how SWB research can offer new perspectives and approaches on long standing theoretical debates in the social sciences such as the one on homo economicus and homo sociologicus.

7.4 Such sociological theories as the ones presented in this paper would lend themselves to further empirical applications in SWB research. For instance, studies could investigate the association between income (or unemployment, or marital status, etc.) and happiness from such a life course perspective. Sociology can in turn benefit from SWB research as a test for the aforementioned theories in a new context: For instance, happiness research can be an innovative method to study the suitability of the homo sociologicus vs. homo economicus concept in different settings.

7.5 At the end of the last century, a new research field called 'Positive Psychology' has been established to complement the study of mental problems with the investigation of positive outcomes, such as well-being. Hence, it could be the time for a 'Positive Sociology'. The potential is there and it is increasingly being exploited. Valuable first approaches to explore sociological perspectives on SWB include Bartram's conceptual notes on a sociological contribution to happiness studies (Bartram 2012), Brockmann's analysis of age and SWB (2010), studies of postmodern values and SWB by Delhey (2010), Inglehart & Welzel (2005), as well as studies by Veenhoven (e.g. 2008). Finally, George (2010) claims to have identified four groups of emerging theoretical approaches in SWB research: Discrepancy theories, social comparison, strategic investments of resources, the social stratification of SWB, and the social indicators perspective. Out of these five new classifications, at least four can be considered to contain a sociological argumentation.

7.6 The particular contribution of sociology to happiness research could be a thorough examination of the social factors associated with well-being, firmly rooted in sociological theory and robust empirical investigation. Moreover, the vast majority of empirical research on SWB has been quantitative. Sociological research in other areas has resorted to a rich array of qualitative methodologies such as ethnographies and in-depth interviews which could be applied to this field of study. They would make an important contribution to current blind spots in the SWB literature, particularly with regard to the precise mechanisms according to which certain well-documented quantitative correlates influence well-being. Even critical constructivist approaches from Sociology could successfully be applied to the study of happiness to examine underlying mechanisms (see Frawley 2010). Current interdisciplinary and policy debates could benefit a lot from such a Sociology of Happiness, as a science which studies the social context of well-being at the micro-level, and the determinants of 'the good society' at the macro-level.

Notes

¹Happiness is considered the affective component of SWB, while life satisfaction is usually referred to as the cognitive measure of SWB. In line with the majority of the literature on this topic, these terms are used interchangeably in this paper unless precise variables are being described.

²Veenhoven also founded the World Database of Happiness which collects studies on SWB from around the globe at <http://www.worlddatabaseofhappiness.eur.nl>.

³ Although there are some close links to the aforementioned paper in terms of analytical strategy and dataset, this study will focus on the particular effect of age and variations by age and gender.

⁴ For three reasons, the gendered analysis is based on only 3 age groups as opposed to 4 as before: To ensure that the sub-samples are large enough, to prevent the analysis from becoming overly complex especially in its visual illustration, and because the interesting theoretical distinction is between mid-age vs. young and old.

⁵ The latter finding does not seem to be due to sample size, as there are only a few less young women than young men in the sample.

⁶ Attentive readers will have noted that the increase in R^2 when introducing interaction terms is small. This is, however, not to be interpreted as a weakness of the model. The purpose of introducing interaction terms is not to explain more variance, but to analyse whether significant differences by age and gender emerge.

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