No Urban Malaise for Millennials

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Draft: Sunday 12th November, 2017

Abstract

Urban malaise or unhappiness with city life is common in developed countries. City dwellers, particularly those in the largest metropolitan areas, are reported to be the least satisfied with their lives. Using the U.S. General Social Survey (1972-2016) we explore the latest happiness trends. Our results confirm earlier findings of urban malaise: Americans in general are happiest in smaller cities and rural areas. However, the advantage of rural living is declining—rural Americans are becoming less happy relative to urbanites. Most interesting, our results show that the latest generation, Millennials (1982-2004), as opposed to earlier generations are the happiest in large cities (an estimated magnitude larger than earning an additional $100k in family income annually). We explore possible reasons for this trend and discuss directions for future research.

KEYWORDS: Subjective Well-Being (SWB), Happiness, Life Satisfaction, Cities, Urbanicity, Millennials, Gen Y, Generation Y, General Social Survey (GSS)

Empirical evidence demonstrates that unhappiness with city life is common in developed countries (Okulicz-Kozaryn 2015, Sørensen 2014, Morrison and Weckroth 2017, Ala-Mantila et al. 2017). Residents of some of the largest metropolitan cities in the world, report the lowest levels of happiness. For instance, St. Louis, New York City, Detroit, and Philadelphia are the least happy places in the U.S. (Okulicz-Kozaryn and Mazelis 2016, Senior 2006)—New York City being the largest city, and Philadelphia one of the largest. Similarly, London is the largest and least happy place in the U.K. (Office for National Statistics 2011, Chatterji 2013). Toronto, the largest metropolitan area in Canada, is the second least happy (only Vancouver, the third metropolitan area, is less happy) (Lu et al. 2015). Helsinki is the largest and the least happy place in Finland (Morrison 2015). Bucharest is the largest and least happy place in Romania (Lenzi and Perucca 2016). Likewise, the largest metropolitan area in New Zealand, Auckland, is the least happy (Morrison 2011). Australia's largest city, Sydney, is also the least happy and so is Dublin in Ireland (cited in Morrison 2011), and so forth. Incidentally, research shows that urban

* I thank anonymous reviewers, who helped me with this paper more than usual reviewers do. All mistakes are mine.

unhappiness is not only a product of urban problems, such as crime and poverty, but of cities themselves—their core defining characteristics, such as size and density, are related to unhappiness (Okulicz-Kozaryn and Mazelis 2016).[1] While there is a multitude of studies on urban-rural happiness gradient as recently reviewed in Okulicz-Kozaryn (2015), strikingly, no study has focused on this gradient over time. Research on generations does not seem to pay attention to the urban-rural happiness gradient at all (e.g., Howe and Strauss 1992, Twenge et al. 2012, Twenge 2017, Marsden 2012, Moos et al. 2017, Myers 2016), and urban subjective well being (SWB) research simply has not paid attention to time. Two studies come closest to the present study. Berry and Okulicz-Kozaryn (2011) show trends over time until 2008. By then the closing urban-rural happiness gap was not apparent and the study does not focus nor even mention generations or cohorts. Okulicz-Kozaryn (2015) uses data until 2010 when the closing gap is apparent, but without much discussion–generations and Millennials are only briefly mentioned in the endnotes. The relevant findings are scattered without coherent synthesis regarding development of the gap over time. For instance, we already knew in the 1970s that Americans prefer smaller areas (Fuguitt and Brown 1990, Fuguitt and Zuiches 1975) and were happier there (Campbell et al. 1976, Fischer 1973). And we know that Americans overall still prefer smaller areas, though there is some indication of urban affinity among Millennials (e.g., YouGov 2012). However, we do not know how SWB has varied by generations and over time until the present time. In this study, we investigate SWB by complementing the earlier spatial focus on urbanicity with a focus on time. We investigate the American urban-rural happiness gradient over the past four decades. We use consistent measurement of SWB over time including the most recent years (1972–2016). White and White (1977) provides a detailed summary of attitudes towards cities since the founding of the U.S.—Americans, or at least American intellectuals, have always been hostile or ambivalent towards cities. Is this attitude still alive today?

The investigation of the urban-rural happiness gradient over time will proceed as follows. First, we will define generations or cohorts that will become time units. Second, we will define subjective wellbeing or happiness. Then, we will proceed to the empirical part of the study: overview of data, variables, and

[1] Research suggest that this might not be the case in some developing countries (Valente and Berry 2016a).

analysis.

Millennials

Cohorts or generations are typically defined according to Howe and Strauss (1992), as summarized in this paragraph. The length of a generation approximates the span of a life phase and is defined by many commonalities: age, location, beliefs, behavior, and perceptions. A succession of generation cohorts has dominated American life since the earliest days of its settlement. A cohort consists of everyone born in a particular 20-25 year span, sharing a common age bracket as they move through their life cycles, experiencing the same economic and social conditions and sharing a common sequence of life phases. Cohorts typically develop adherence to certain fundamental notions, a generational web of beliefs and attitudes about fundamental questions.

Millennials, also known as gen Y or generation Y, are those born between 1982 and 2004. Some of their shared characteristics include being civically and politically disengaged, but engaged online and being pressed for time (Twenge et al. 2012, Twenge 2017). Yet, Millennials share a desire for more equality, cohesiveness, empathy, and social capital (Twenge et al. 2012). Some scholars argue that Millennials are the generation that prefers cities over smaller places (e.g, YouGov 2012, Kalaidis 2014, Flint 2014, Nielsen 2014, Maney 2015, Walker 2016), others argued that they are not very different from earlier generations and still prefer the suburbs, just a little less (e.g., Institute 2016, Hudson 2015, Delgadillo 2016), or, according to others, a little more (Kolko 2015). In short, there is much discussion and disagreement—it is somewhat clear that Millennials have greater affinity for cities than earlier generations, but it is not clear how different Millennials really are from other generations, and whether the differences are substantial at all, and how long they will last.

In terms of differences in residential status and preferences between Millennials and earlier generations, one point is worth emphasizing: it is not city v suburb, which is surprisingly about the same, but metropolitan areas (city+suburb) v smaller places—almost twice as many Boomers lived in nonmetropoli-

tan areas as compared to Millennials (Jaffe 2014).

This difference in residential status and preference echoes Hanson (2015): the biggest divide is urban-rural (and most suburban areas are arguably more urban than rural). This is one problem with contemporary urban scholarship and media attention: metropolitan areas are given almost all the attention (Fuller 2017). And it seems as if the only choice is suburb v city: the suburbs used to be preferred, now cities are fashionable, and soon, it is likely that the suburbs will be favored again. Smaller areas are forgotten altogether, and surely it must surprise urbanists and "sub-urbanists" that people in general are neither happy in cities, nor in suburbs, but in smaller places (Okulicz-Kozaryn 2015, Sørensen 2014, Morrison and Weckroth 2017).

Happiness

Happiness or SWB (subjective wellbeing) is widely studied in psychology. Other fields are increasingly using it to study factors of interest within their domains. This versatility—being widely studied across social science—is also its limitation. Different fractions, especially across fields, tend to understand SWB differently, and sometimes fiercely defend their convictions, despite the fact that the majority of studies are using the same measurement of SWB based on identical or very similar survey questions. The most widely used surveys contain virtually the same survey questions: the US General Social Survey (GSS; used here), World Values Survey (WVS), Eurobarometers (EB) and the Behavioral Risk Factor Surveillance System (BRFSS). These and other datasets are summarized in Powdthavee (2015). The literature about the link between urbanicity and happiness is summarized in Ballas (2013).

We use the terms SWB and happiness interchangeably, while malaise refers to the opposite—a lack of SWB. The survey measure used here, as defined in the next section, mostly captures the cognitive dimension of SWB. It is mostly an evaluation of life as a whole, and not just a momentary affect. Previous research has shown that well-being is a multidimensional concept, with well-known limitations and dimensions—for recent reviews see Diener (2009), Diener et al. (2013). Here, the measurement is mostly

a cognitive dimension of SWB. Having just one survey item to measure SWB results in the impossible task of measuring it precisely and independently from other dimensions. Yet, even one subjective and self-reported item has at least adequate validity and reliability (Myers 2000, Diener et al. 2013). Specifically, we study here general/overall happiness, and not a domain-specific happiness such as neighborhood or community satisfaction.

Data and model

We use the US General Social Survey (GSS) cumulative dataset (1972-2016) from `gssdataexplorer.norc.org`. The GSS is collected face-to-face and is nationally representative. Since 1994, the GSS is collected every other year (in earlier years it was mostly annually). The GSS surveys persons who are 18 or older. Our sample has about 60 thousand observations, and 2,844 Millennials. The GSS is representative of the universe of Millennials.[2] We should note that the sample size used in our models vary as a result of missing data. In more elaborate specifications, there are more missing data, and hence in those elaborate models, the representativeness of the sample may be limited.

Variables are defined in table 1. The SWB question reads, "Taken all together, how would you say things are these days–would you say that you are very happy, pretty happy, or not too happy?" and answers are coded as 1="not too happy," 2="pretty happy," and 3="very happy."[3]

This study is about Millennials and urbanicity, hence, the key variable of interest is the interaction of a dummy variable identifying Millennials with a measurement of urbanicity, and urbanicity is measured using a sets of dummies for three variables:

1. SIZE DECILES are deciles of population size of a place of residence.

2. SRC BELTCODE distinguishes between medium and large suburbs, and other areas.

[2]The GSS staff replied to our inquiry about the representativeness of the survey stating: "the GSS is almost certainly representative of the universe of Millennials, with some degree of error around any particular question."

[3]This question has been used in many SWB studies (e.g., Blanchflower and Oswald 2003, Oishi et al. 2011, Okulicz-Kozaryn 2016, Berry and Okulicz-Kozaryn 2011, Valente and Berry 2016b). See the appendix for more details about the GSS measurement of SWB.

3. Expanded NORC size code which is an even finer classification according to places' density and size.

The exact definitions for all size variables are at beginning of the appendix and cross tabulations of all size variables are in tables 2, 3, and 4 in the appendix. All variables are defined in table 1. Table 1 also lists the typical controls used in the SWB literature (Okulicz-Kozaryn 2016, Berry and Okulicz-Kozaryn 2011). The distributions of all variables are shown in the appendix in figure 3.

Table 1: Variable definitions.

name	description
SWB	GENERAL HAPPINESS "Taken all together, how would you say things are these days–would you say that you are very happy, pretty happy, or not too happy?"
size deciles	deciles of SIZE variable "Size of Place in thousands-A 4-digit number which provides actual size of place of interview." (see appendix for details)
SRC beltcode	SRC BELTCODE (see appendix for details)
expanded NORC size code	EXPANDED N.O.R.C. SIZE CODE (see appendix for details)
cohort	year of birth
year	gss year for this respondent
family income in $1986, millions	Income variables (INCOME72 , INCOME , INCOME77 , INCOME82 , INCOME86 , INCOME91 , INCOME98 , INCOME06) are recoded in six-digit numbers and converted to 1986 dollars. The collapsed numbers above are for convenience of display only. Since this variable is based on categorical data, income is not continuous, but based on categorical mid-points and imputations. For details see GSS Methodological Report No. 64.
unemployed	"Last week were you working full time, part time, going to school, keeping house, or what?" "Unemployed, laid off, looking for work"
female	RESPONDENT'S SEX
age	age of respondent
highest year of school completed	HIGHEST YEAR OF SCHOOL COMPLETED A. "What is the highest grade in elementary school or high school that (you/your father/ your mother/your [husband/wife]) finished and got credit for? " CODE EXACT GRADE.; B. IF FINISHED 9th-12th GRADE OR DK*: "Did (you/he/she) ever get a high school diploma or a GED certificate?" [SEE D BELOW.]; C. "Did (you/he/she) complete one or more years of college for credit–not including schooling such as business college, technical or vocational school?" IF YES: "How many years did (you/he/she) complete?"
white	RACE "What race do you consider yourself?"
married	MARITAL STATUS "Are you currently–married, widowed, divorced, separated, or have you never been married?" NOTE: variable recoded to 1 if married, 0 otherwise
number of children	"How many children have you ever had? Please count all that were born alive at any time (including any you had from a previous marriage)."
health	CONDITION OF HEALTH "Would you say your own health, in general, is excellent, good, fair, or poor?"

In addition to these variables, we also included in our models three sets of dummy variables: occupation, regions, and years. Occupation dummies are based on the ISCO classification of 1—digit occupations: professional, administrative/managerial, clerical, sales, service, agriculture, production, transport, craft, and technical. It is important to control for occupation because there is arguably much overlap between happiness and certain jobs, and specificity of work differs widely across occupations and places. Also,

since there are regional or cultural differences in just about anything, we included dummies for census regions: New England, Middle Atlantic, E. Nor. Central, W. Nor. Central, South Atlantic, E. Sou. Central, W. Sou. Central, Mountain, and Pacific.

We use ordinary least squares (OLS) to analyze our data. Although OLS assumes cardinality of the outcome variable, and happiness is clearly an ordinal variable, OLS is an appropriate estimation method to use in this case. Ferrer-i-Carbonell and Frijters (2004) showed that results are substantially the same to those from discrete models, and OLS has become the default method in happiness research (Blanchflower and Oswald 2011). Theoretically, while there is still debate about the cardinality of SWB, there are strong arguments to treat it as a cardinal variable (Ng 1996, 1997, 2011). Nonetheless, as a robustness check we also ran multinomial logit regressions, and included the results, which are substantially the same, in the appendix.

Results

We start by looking at SWB over time in figure 1. The first panel shows that urbanites are less happy, albeit becoming happier, and that people living in smaller areas are becoming less happy since the 1970s, and especially in recent years. The second panel plots SWB against 5 cohorts or generations. A similar pattern emerges: the SWB urban-rural gap is closing. There is a considerable gap in SWB between urban and rural areas for all generations, but not for Millennials. These are, of course, simplified patterns but they hold for multiple definitions and cutoffs for cities and generations as shown in the appendix.

Next, we turn to the regression estimates that account for other predictors of SWB, as discussed in the previous section. The results indicate that Millennials do not experience urban malaise relative to smaller areas as other generations do, and appear to be happier in cities than elsewhere. The key estimates of the interactions between the Millennial dummy with the urbanicity measurements are easier to interpret using graphed predicted probabilities, as shown in figure 2.[4] The solid line shows the predicted SWB

[4]The underlying regressions are in the appendix. Refer to tables 6, 7, and 8: model 4.

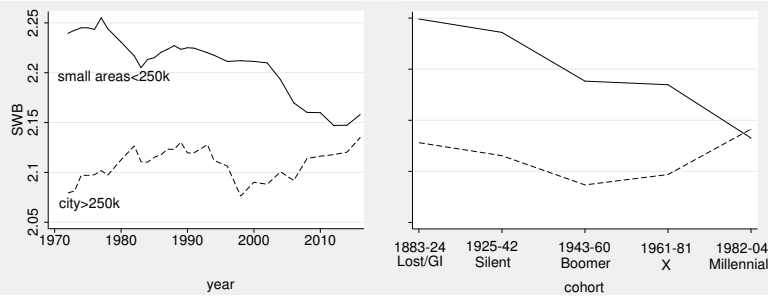

Figure 1: Average SWB (Y axis) for cities $> 250k$ (dashed line) and smaller areas $< 250k$ (solid line) against year in the first panel and against 5 cohorts in the second panel. The series in the first panel are uniformly weighted with a moving average using 4 lagged, 4 forward terms, and the current observation in the filter. A similar pattern indicating a closing SWB gap between urban and rural emerges when using different urbanicity cutoffs—see figure 5 in the appendix.

for Millennials, and the dashed line pertains to older generations. Confidence intervals are much wider for Millennials due to their smaller sample size. We have adjusted for heteroskedascity and used robust standard errors. Multicollinearity is not a problem–correlations among variables are not very strong–for cross-correlations refer to table 5 in the appendix. Again, for robustness, we used three measures of urbanicity, which are quite different.

In the first panel of figure 2, we used SIZE DECILES. Continuous population size is broken into categories to explore nonlinearities between SWB and urbanicity. Among older generations, the larger the place, the lower the SWB. For Millennials, on the other hand, we observe the opposite—they are least happy in small areas (of 4-8 thousand people) and their happiness reach a maximum in large towns (of about 60 thousand people), and is only slightly lower in other larger areas.

The second panel of figure 2 using EXPANDED NORC SIZE CODE differentiates between types of areas, which are not necessarily ordered from the smallest to the largest. Interestingly, Millennials are quite unhappy in large unincorporated areas.[5] Millennials are happiest in cities with a population larger than 50 thousand people.

The third panel using SRC BELTCODE, which has fewer categories and narrower standard errors than the first two panels, show a similar pattern. Millennials are least happy in small rural areas, much happier in small urban areas, a little less happy in the suburbs and the most happy in the largest metropolitan

[5]For detailed definitions of areas see the appendix.

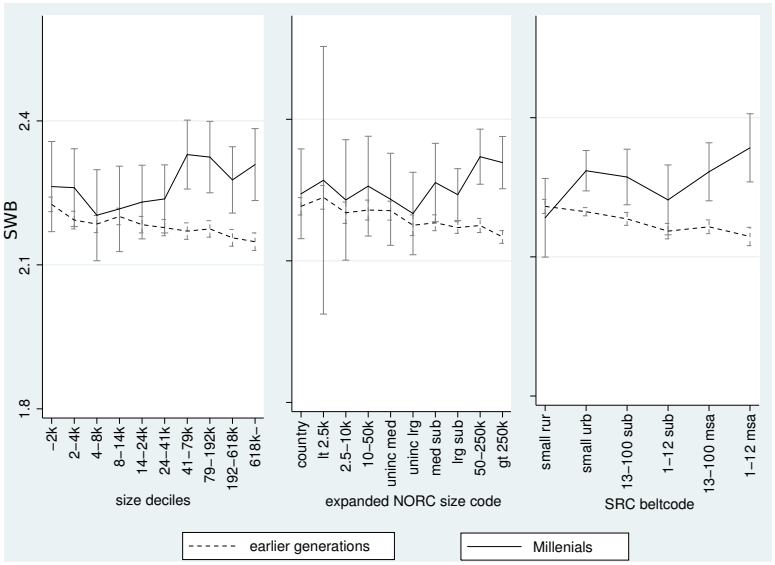

Figure 2: Predicted SWB (Y axis) against measures of urbanicity in three panels. Solid line is for Millennials, dashed line is for earlier generations. 95% CI shown. Underlying regressions are in the appendix in tables 6, 7, and 8: model 4.

areas. The SRC BELTCODE measure is arguably the best fitting to illustrate the urban rural divide: the divide is between metropolitan areas v smaller areas (Hanson 2015), and SRC BELTCODE identifies the MSAs (metropolitan statistical areas).

These results are in line with recent research showing rising happiness in urban areas over the past several years (Okulicz-Kozaryn 2015) as cities experienced a large increase in the number of Millennials. Concurrently, the results provide support for those who argue that Millennials prefer urban areas (e.g, YouGov 2012, Kalaidis 2014, Flint 2014, Nielsen 2014, Maney 2015, Walker 2016), and counter those who claim that there's a suburban preference (e.g., Institute 2016, Hudson 2015, Delgadillo 2016, Kolko 2015) (if we assume that SWB is an indication of preferences).

The interactions of Millennial dummy with urbanicity measures are statistically significant at about 50k and above for the first two panels, and in almost all cases in third panel (base case is always the smallest area). The effect sizes are large: for the largest places, the difference between Millennials and others is about 0.15 on a 1-3 happiness scale (as seen from figure2). The effect is larger than that of gender, race, and as high as three quarters of one step increase on the 4-step health variable.

Perhaps, the large effect size is easiest to understand when comparing to what it would be equivalent

in income.[6] Since the happiness gap between Millennials and others in the largest places is about 0.15—to obtain a comparable change from income, its coefficient, which is about 2.2, would have to be multiplied by about 0.07,[7] and since income is measured in millions, it would yield at least 70k in $1986, which is considerably over $100k (about $150k) in today's dollars.[8] This would indicate a great equivalent difference in income.

An important caveat is age—we have controlled for age and age^2, but the oldest Millennial in sample is 34. Arguably youngsters enjoy cities more[9] and young people tend to be happy,[10] and hence, the results may be biased. Millennials could appear happier in cities simply because they are young, and not because they are Millennials. Thus, we ran additional regressions including only respondents younger than 35, and the results were similar. The results are shown in tables 9, 10, and 11 in the appendix.

Discussion

Why are Millennials happy in the city if all other generations are not?

Our results show that Millennials are happier living in cities. The obvious question is, why? What is different about Millennials that they are happy in cities while earlier generations are happier outside of cities?

Perhaps, it has something to do with urban amenities that appeal better to Millennials. Per central place theory, the number and kind of amenities are proxied by size—the larger the place, the more amenities and the more specialized they are (O'Sullivan 2009). However, there are certain amenities that may better appeal to Millennials than others. For instance, Millennials (and post-Millennials) are very much an internet/smartphone generation (Twenge 2017, Poushter 2016, Valcke et al. 2010), and they drive less than other generations (Jaffe 2013, Nielsen 2014). There is no better place to drive less, and

[6] For instance Sørensen (2014) made a similar calculation to illustrate urban rural differences.

[7] i.e. if we solve for X, we would obtain: 2.2 * X = 0.15, which would result in X = 0.15/2.2 = 0.07

[8] `https://data.bls.gov/cgi-bin/cpicalc.pl?cost1=7000&year1=198601&year2=201709`.

[9] An argument can certainly be made that young people are attracted to cities—cities are exciting, promising, and vibrant (Okulicz-Kozaryn and Valente 2017, Okulicz-Kozaryn 2015).

[10] Most find a U-shaped relationship between age and SWB (Ulloa et al. 2013).

to be more online than in a city, where high speed internet is more easily accessible and one can use it easily in public transportation.

In cities, we find more comparisons and greater relative deprivation (Wirth 1938, Simmel 1903, Veblen 2005, Okulicz-Kozaryn 2015, Ravallion and Lokshin 2009), and arguably urbanites have higher expectations (Okulicz-Kozaryn and Valente 2017). Inequality, (e.g., Okulicz-Kozaryn et al. 2014, Luttmer 2005) relative deprivation, (D'Ambrosio and Frick 2007, Smith et al. 2012) and higher expectations can decrease happiness since:

$$happiness = achievement\ or\ experience - aspirations\ or\ expectations \tag{1}$$

Millennials relative to younger cohorts, at least in some ways, may have lower expectations (Sanghani 2014), and appear to be less materialistic (Kadlec 2015, Malcolm 2015), and more interested in buying experiences than things (Economy 2016), which can increase happiness (Okulicz-Kozaryn 2014, Okulicz-Kozaryn and Tursi 2015). It may also help that Millennials are confident, connected, and open to change (Pew 2010).

On the other hand, Millennials are also found to be disengaged civically and politically, and less concerned about helping the larger community (Twenge et al. 2012). Millennials have been called the generation "Me," although they want more equality, cohesiveness, empathy, and social capital, they are also very much focused on themselves. Millennials are more extrinsic (e.g., money) than intrinsic (e.g., meaning, purpose) motivated, they are less concerned with suffering and disadvantage, and are more narcissistic than earlier generations (Twenge et al. 2012). Some of these traits may actually increase urban happiness, for instance, they will not be upset or bothered by homelessness, poverty, and other urban problems. In general, cities may have more appeal to extrinsically motivated people.

Another possible reason for the unexpected urban happiness of Millennials, could be the fact that Millennials are more diverse (Jaffe 2014) and less prejudiced toward others based on social identities and differences such as race, gender, and sexual orientation (Twenge et al. 2012), and hence, they may be

happier living in cities—heterogeneity is a key defining feature of cities (Wirth 1938).

In addition, Millennials are probably already the most educated generation, [11] and are set to become the most educated generation to ever exist in the near future (Pew Research Center 2017). And education may be the key to urban happiness. Richard Florida argues persuasively in favor of education when considering urban SWB (e.g., Florida et al. 2013). Arguably, there are greater returns from education in cities than elsewhere, and education helps one enjoy more urban amenities such as theaters, concert halls, opera houses, museums, and so forth. Still, the urban happiness of Millennials is in addition to the effect of education since our models control for education.

Importantly, the happiness of Millennials in the largest cities is not necessarily a sign of city greatness or even of city improvement. Rather, Americans are increasingly forced into metropolitan areas because rural jobs are progressively disappearing (Okulicz-Kozaryn 2015). Within metropolitan areas, earlier generations, notably Boomers, chose to live in the suburbs, and were happier there than in cities. Yet, the suburbs have increasingly become problematic—"dull, fake, and boring" (Kay 1997, Kunstler 2012, 2004, Duany et al. 2001). Hence, cities, may be a better (and happier) place for younger generations. Sørensen (2014) and Morrison and Weckroth (2017) provide a detailed discussion on possible causes for the urban-rural happiness gradient.

Fundamentally, however, these are all speculations, and it remains for future research to test what distinctive features of Millennials allow them to be happier in cities.

General Discussion

One interpretation of our results is that the spatial happiness gap follows the temporal Easterlin paradox—increases in income do not translate into increases in SWB (Easterlin et al. 2010). Most income is generated in urban areas, yet these areas are not happy. They are actually less happy, arguably mainly due to

[11] Also in this sample, Millennials are are already slightly more educated than other generations when considering the 25-34 age bracket. The average years of education for all generations: the Silent generation: 12.4 years, the Boomer generation: 13.2 years, generation X: 13.7 years, and Millennials: 13.9 years. There are no Millennials older than 35 in this sample and many are still in school. In the future there will be, arguably, an even greater proportion of Millennials with more education (Pew Research Center 2017). Also see Landrum (2017).

the consequences of income-generating activities, pollution, congestion, etc. The economics point of view upholds the traditional economic axiom, "the more income, the better" (e.g., Autor 2010). Accordingly, it opposes the Easterlin paradox (Stevenson and Wolfers 2013), and the urban-rural happiness gradient (Glaeser et al. 2016, 2014, Glaeser 2014, 2011b,a). The utilitarian explanation for the closing gap in rural-urban happiness can be challenged by the fact that it is arguably the negative effects of cities, particularly its dominance over rural areas that is resulting in this closing gap. As the lack of opportunities and investments in rural areas accentuate, the narrowing gap in happiness increases. This is perhaps best explained by one living in a rural area, like this Californian who said (Fuller 2017):

> We run this state like it's one size fits all. You can't do that[...]
>
> In the rural parts of the state we drive more miles, we drive older cars, our economy is an agriculture- and resource-based economy that relies on tractors. You cant move an 80,000-pound load in an electric truck.
>
> They've devastated ag jobs, timber jobs, mining jobs with their environmental regulations, so, yes, we have a harder time sustaining the economy, and therefore there's more people that are in a poorer situation.

Millennials still prefer low density living, similar to earlier generations. However, there is debate about the strength and durability of this preference: by some accounts the preference is very strong, 75% want to buy a single-family detached home, 66% would prefer to live in the suburbs, 24% would opt for rural areas, and only 10% would choose to live in the central city (Quint 2015). Given this scenario, it is even more striking to find out that Millennials are the happiest in cities, opposite to other generations.

There is no indication that cities have become great in any fundamental way, regardless of all the hype about smart growth, walkability and bikeability (Institute 2014). Rather, it seems that Millennials are the ones who are different and more pro-urban. Surely there are notable generational differences as discussed previously, but then again, Millennials do not seem to be completely different from earlier generations. This happiness with city life may be simply a phase or fashion like others in the past (i.e. rock-n-roll in

the 1960s). It remains to be seen, when more data become available in future years, whether Millennials are really happier in cities.

The main contribution of this paper is to provide the first investigation focused on the urban-rural happiness gradient over time. The results indicate that Millennials are different from all other generations living in the U.S. over the past 40 years—they are the first generation to be more satisfied with urban than rural life. It will be important to continue analyzing this phenomenon as more data become available to determine whether the trend is sustained, and whether it is also visible in other countries.

Limitations and Future Research

This study emphasized generality over specificity—it should be stressed that the relationship between urbanicity and SWB is more nuanced and complex than presented here. While urban unhappiness is common at least in the Western world as elaborated in the introduction, cities vary greatly in all aspects. Yet, the GSS data does not identify specific cities, and hence, we cannot control for their characteristics. Such analysis has been done in Okulicz-Kozaryn (2016)—when controlling for city level attributes, the largest cities were the least happy. However, the data used in Okulicz-Kozaryn (2016) would not allow for long-term analyses—the GSS is best suited for this purpose.

Future research could focus on cross-sectional, and short-term changes. In addition, datasets that would allow researchers to control for city amenities can be important in determining whether amenities are significant to Millennials' happiness. One amenity that is very important for SWB in general is nature (Pretty 2012, 2013, Barton and Pretty 2010, White et al. 2013b,a, Wheeler et al. 2012, Bertram and Rehdanz 2014, Krekel et al. 2016, Larson et al. 2016, Brown et al. 2015). Arguably, some amenities and some cities would appeal more to Millennials than others, and accordingly, Millennials would be happier there. Future research can also use other variables available in the GSS to try to infer amenities that are present—for example, using variables that measure what activities Millennials are engaged in, and the effect, if any, of social life.

The goal of this study was to document the relationship between the urban-rural happiness gradient

and time. We leave the differentiation among city amenities for future research to explore. In addition, different age groups (and other groups, too) are happy or unhappy with different things. Therefore, future research should take into account the environment, or ecology, and explore the person's or group level interactions with the environment. For instance, the age composition of the environment is likely to impact a person's own SWB. Such analysis could be carried out in a multilevel modeling framework.

It is possible that the closing urban-rural happiness gap is not only due to generational changes, but also due to changing cities—it is possible that cities somehow became more friendly to youth (older people are still more happy outside of cities). However, because Millennials are the youth of today, it is impossible to separate the influence, if any, that age and differences in cities might have in our models. It is important to distinguish between mega-cities, large cities, smaller cities—cities differ in size greatly. Although the present study provided some degree of differentiation, notably in terms of size and density, more differentiation is needed in the future. As more years of data become available, and other datasets identifying different types of cities are used, we would be able to make these distinctions. Likewise, we should emphasize that there are multiple complexities of understanding happiness in cities. Ideally, one would need to consider a number of geographical and contextual variables such as various inequalities, lack of social cohesion, poverty, homelessness, and so forth, which are all likely to affect SWB. Thus, whenever possible, local area problems should be controlled for as in Okulicz-Kozaryn and Mazelis (2016). Also, we emphasize that these problems are not only urban problems, but they also affect rural areas. Many problems are increasingly rural, such as the opioid epidemics among rural Whites (Case and Deaton 2015). Therefore, a city or a rural area could be socially cohesive or unequal, and social and spatial contexts are very important to consider (e.g., there are rural areas which have high levels of social cohesion and/or are very affluent, but also poor/very deprived areas with limited access to amenities that would be standard in cities). Naturally, no single study can address all of these issues, but they must be acknowledged. The goal in the present study was to provide a general statement—it was the first study to link urban-rural happiness gradient to cohorts or generations. Future research should explore idiosyncrasies of different

cities.

Another direction for future research is to use panel or longitudinal data. Such approach would better investigate the effect of age (and moving) on SWB by urbanicity controlling for invariant person level characteristics. A respondent could be analyzed over her lifetime as she moves across places of different sizes. It is likely that she could be more satisfied with cities in her adolescence, in her 20s, and even in her 30s: cities provide visual stimulation, exposure to various stimuli, and may satisfy many curiosities of young age. But once a person has children, and grows older, smaller places may be more appealing—larger, quieter, and more affordable. As explained earlier, Millennials have certain unique traits as compared to other generations, and it could be useful to analyze variables proxying those characteristics to examine whether "Millennial attributes" are related to urban happiness in other cohorts as well.

As with datasets that identify locations such as the BRFSS, panel datasets are shorter than the GSS. For the U.S., there is the AddHealth, with only a few waves and inconsistent SWB measurement, and the Panel Study of Income Dynamics with consistent measurement, but also only have a few waves. The British Household Panel Survey (BHPS) and the German Socio-Economic Panel (GSOEP) are longer, but still considerably shorter than the GSS. We have advocated the use of panel data. Yet no amount of statistics or econometrics including panel data techniques can lead to confident causal statements. Experiment or quasi experiment is required. This is an observational or correlational study, and we cannot claim causality—testing the underlying causal mechanism is impossible with this type of study. Correlational studies are not without value, however. Very often causality is first discovered in correlational studies—for instance, smoking was first found to cause cancer in a correlational study (Blanchflower and Oswald 2011, Oswald 2014). More importantly, a true experimental design is usually impossible to accomplish, and experimental designs virtually always suffer from low or non-existent external validity, and hence, an experiment is not an absolute improvement over correlational studies (e.g., Pawson and Tilley 1997). Fundamentally, testing the effect of a variety of settlements over long periods of time with experimental data is virtually impossible. Surely, there must have been random assignments of people to a place, but

we do not know of any large scale assignments to a variety of places that could provide enough data to generalize to a wider population. In addition, people would have to actually live in a place for a considerable amount of time to be able to estimate the effect of the place in their SWB—just being in a place as a visitor or short-term resident would not be enough. Given our research focus on Millennials it would be impossible to have an experimental dataset covering multiple decades and generations, since one of the limitations of experimental studies is their very limited geographic and temporal coverage (Pawson and Tilley 1997).

Appendices

Variables' definitions, coding, distributions, crosstabulations and correlations

Variable size : SIZE OF PLACE IN 1000S (Note, the study uses deciles of the variable)

Literal Question

Size of Place in thousands

A 4-digit number which provides actual size of place of interview

(Cols. 166-169). Remember when using this code to add 3 zeros. Listed below are

the frequencies for gross population categories.

Descriptive Text

This code is the population to the nearest 1,000 of the smallest civil division

listed by the U.S. Census (city, town, other incorporated area over 1,000 in

population, township, division, etc.) which encompasses the segment. If a

segment falls into more than one locality, the following rules apply in

determining the locality for which the rounded population figure is coded.

If the predominance of the listings for any segment are in one of the

localities, the rounded population of that locality is coded.

If the listings are distributed equally over localities in the segment, and the localities are all cities, towns, or villages, the

rounded population of the larger city or town is coded. The same is true if the localities are all rural townships or divisions.

If the listings are distributed equally over localities in the segment and the localities include a town or village and a rural township or division, the rounded population of the town or village is coded.

The source of the data is the 1970 U.S. Census population figures published in the PC (1) -A series, Tables 6 and 10. For cases from the 1980 and 1990 frames analogous tables from the 1980 and 1990 Censuses were used. See Appendix N for changes across surveys.

expanded NORC size code

Literal Question

NORC SIZE OF PLACE

PostQuestion Text

a A suburb is defined as any incorporated area or unincorporated area of 1,000+ (or listed as such in the U.S. Census PC (1)-A books) within the boundaries of an SMSA but not within the limits of a central city of the SMSA. Some SMSAs have more than one central city, e.g., Minneapolis-St. Paul. In these cases, both cities are coded as central cities.

b If such an instance were to arise, a city of 50,000 or over which is not part of an SMSA would be coded '7'.

c Unincorporated areas of over 2,499 are treated as incorporated areas of the same size. Unincorporated areas under 1,000 are not listed by the Census and are treated here as part of the next larger civil division, usually the township.

The source of the data is the 1970 U.S. Census population figures published in the PC (1) -A series, Tables 6 and 10. Practically, the codes '6' and '10' are localities not listed in Table 6 (Population of Incorporated Places and Unincorporated Places over 1,000). For the 1980 frame cases analogous tables

from the 1980 Census were used.

Descriptive Text

See Appendix T, GSS Methodological Report No. 4.

SRC beltcode

Literal Question

SRC (SURVEY RESEARCH CENTER, UNIVERSITY OF MICHIGAN) NEW BELT CODE

Descriptive Text

The SRC belt code is described in Appendix D: Recodes. See Appendix N for changes across surveys. See Appendix T, GSS Methodological Report No. 4.

Intent of Recode

The SRC belt code (a coding system originally devised to describe rings around a metropolitan area and to categorize places by size
and type simultaneously) first appeared in an article written by Bernard Laserwitz (American Sociological Review, v. 25, no. 2, 1960), and has been used subsequently in several SRC surveys. Its use was discontinued in 1971 because of difficulties particularly

evident in the operationalization of "adjacent and outlying areas." For this study, however, we have revised the SRC belt code for users who might find such a variable useful. The new SRC belt code utilizes "name of place" information contained in the sampling units of the NORC Field Department.

Method of Recode

This recode assigns codes to the place of interview. City characteristics were determined by reference to the rank ordering of SMSAs in the Statistical Abstract of the United States, 1972, Table 20. Suburb characteristics were determined by reference to the urbanized map in the U.S. Bureau of the Census, 1970 Census of Population, Number of Inhabitants, Series PC (1) -A. The "other urban" codes were assigned on the basis of county characteristics found in Table

10 of the 1970 Census of

Population, Number of Inhabitants. For cases from the 1980, 1990, and 2000 frames analogous tables from the 1980 or 1990 Census were used.

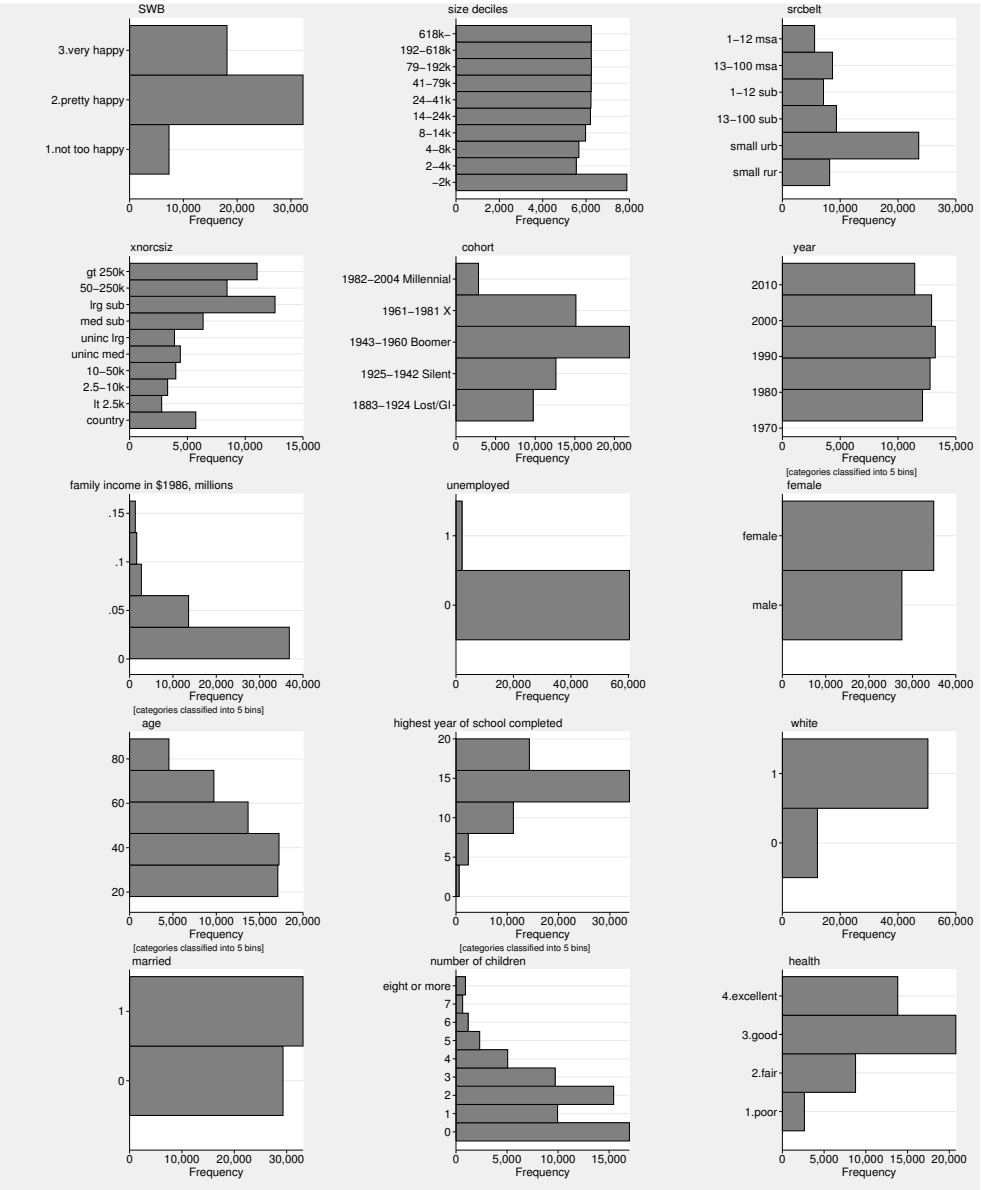

Figure 3: Variables' distribution.

Table 2: Cross tabulation of EXPANDED NORC SIZE CODE and SRC BELTCODE.

	SRC beltcode						
expanded NORC size code	small rur	small urb	13-100 sub	1-12 sub	13-100 msa	1-12 msa	Total
country	3,449	2,262	16	0	0	0	5,727
lt 2.5k	1,598	1,178	0	0	0	0	2,776
2.5-10k	1,924	1,367	0	0	0	0	3,291
10-50k	0	3,996	0	0	0	0	3,996
uninc med	430	3,076	844	41	0	0	4,391
uninc lrg	405	1,260	876	1,343	0	1	3,885
med sub	296	3,869	2,090	106	0	0	6,361
lrg sub	78	1,368	5,513	5,615	5	0	12,579
50-250k	0	5,127	8	8	2,897	389	8,429
gt 250k	0	80	0	0	5,768	5,182	11,030
Total	8,180	23,583	9,347	7,113	8,670	5,572	62,465

Table 3: Cross tabulation of EXPANDED NORC SIZE CODE and SIZE DECILES.

	size deciles										
expanded NORC size code	-2k	2-4k	4-8k	8-14k	14-24k	24-41k	41-79k	79-191k	191-618k	618k-	Total
country	2,842	1,609	704	386	158	10	18	0	0	0	5,727
lt 2.5k	2,632	11	27	29	77	0	0	0	0	0	2,776
2.5-10k	78	1,429	1,396	388	0	0	0	0	0	0	3,291
10-50k	0	0	0	1,192	1,271	1,303	230	0	0	0	3,996
uninc med	608	725	990	601	682	461	241	83	0	0	4,391
uninc lrg	302	535	655	522	553	654	332	159	161	12	3,885
med sub	824	641	901	948	1,192	803	755	297	0	0	6,361
lrg sub	597	598	970	1,891	2,117	2,450	2,224	1,622	104	6	12,579
50-250k	0	0	26	20	152	545	2,437	4,079	1,170	0	8,429
gt 250k	0	0	0	0	0	0	0	4	4,802	6,224	11,030
Total	7,883	5,548	5,669	5,977	6,202	6,226	6,237	6,244	6,237	6,242	62,465

Table 4: Cross tabulation of SIZE DECILES and SRC BELTCODE.

	SRC beltcode						
size deciles	small rur	small urb	13-100 su	1-12 sub	13-100 ms	1-12 msa	Total
-2k	4,075	3,369	319	120	0	0	7,883
2-4k	2,205	2,886	321	136	0	0	5,548
4-8k	1,465	2,891	764	549	0	0	5,669
8-14k	362	3,238	1,399	978	0	0	5,977
14-24k	73	3,049	1,774	1,283	23	0	6,202
24-41k	0	2,589	1,976	1,491	158	12	6,226
41-79k	0	2,418	1,783	1,323	629	84	6,237
79-192k	0	2,624	941	1,025	1,401	253	6,244
192-618k	0	519	70	196	4,847	605	6,237
618k-	0	0	0	12	1,612	4,618	6,242
Total	8,180	23,583	9,347	7,113	8,670	5,572	62,465

From the correlation table 5 several relationships are worth noting—SWB correlates are low, except health for (.26) and income (.17). Correlations among size of place variables are strong at about .75. Cohort correlates moderately with year (.55) and highly with age (.79). At the same time these correlations are very far from being close to perfect ($> .95$), hence, collinearity is not a problem, especially given the relatively large sample size.

Table 5: Pairwise correlations of key variables. All correlations significant at .01 level.

	SWB	size deciles	expanded NORC size code	SRC belt-code	family income in $1986, millions	highest year of school completed	health	age	year	cohort (year born)
SWB	1.00									
size deciles	-0.07	1.00								
expanded NORC size code	-0.06	0.78	1.00							
SRC beltcode	-0.06	0.77	0.74	1.00						
family income in $1986, millions	0.17	0.01	0.06	0.05	1.00					
highest year of school completed	0.09	0.11	0.15	0.10	0.37	1.00				
health	0.26	0.02	0.04	0.03	0.23	0.29	1.00			
age	0.03	-0.07	-0.06	-0.06	-0.04	-0.18	-0.25	1.00		
year	-0.03	0.04	0.09	0.02	0.06	0.21	-0.02	0.07	1.00	
cohort (year born)	-0.04	0.08	0.11	0.06	0.07	0.28	0.20	0.79	0.55	1.00

Additional Descriptive Statistics

Figure 4 shows that the results are similar, or indeed stronger, to those in the body of the paper if we consider cohort as a continuous variable as opposed to categorizing cohort into 5 generations. One difference is that now it is also apparent that among the very oldest respondents, those born around 1900, there was also not much difference between cities and smaller areas, similarly to Millennials. However, this may be due to the fact that since there are fewer people born around that time in this sample, yearly averages are less stable, and survey answers by people older than 70 may be less accurate. And, importantly, this result vanishes when averaged for the generation as seen in figure 1. The bottom panel of figure 4 simply points to a large variability from year to year.

Figure 5 considers deciles of size for each generation separately—the goal is to show that the results are robust for the urban-rural cutoff in figure 1 at 250k. Figure 5 shows a clear drop among older generations in happiness for largest cities (.6-8m). Also, older generations display a more or less clear gradient from the greatest happiness in smallest areas to the lowest happiness in largest areas. Millennials are a clear exception—they are neither least happy in largest cities, nor happiest in smallest areas, nor there is a gradient. Note that there is much uncertainty about Millennials—in this sample there are only about 3 thousand of them (confidence intervals are wide). The GSS contains only people 18+. The purpose of these exercises as well as results in figure 5 is to justify collapsing older generations together for simplicity

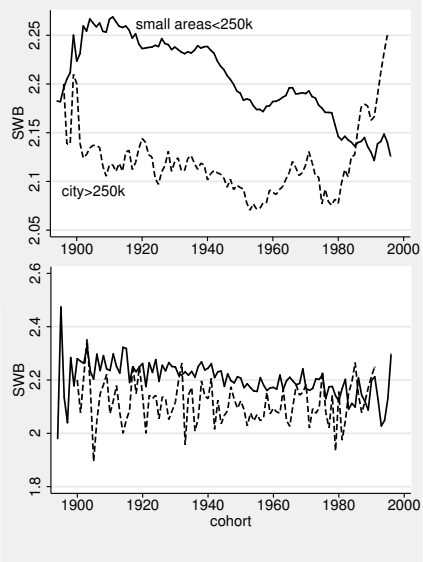

Figure 4: Average SWB (Y axis) for cities $> 250k$ (dashed line) and smaller areas $< 250k$ (solid line) against cohort (birth year of a respondent). Series in the first panel are uniformly weighted with a moving average using 4 lagged, 4 forward terms, and the current observation in the filter. Series in the bottom panel are untransformed.

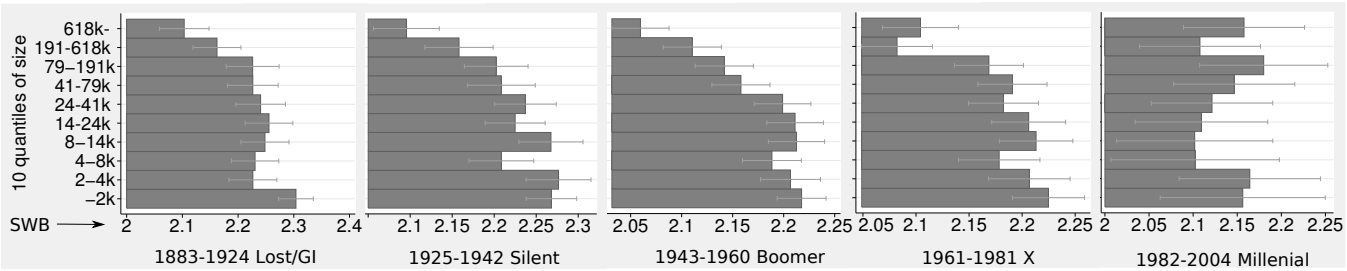

Figure 5: Average SWB (X axis) in five panels for each generation by deciles of population size (Y axis). 95% confidence intervals shown.

as they display a similar SWB gradient by urbanicity. Nevertheless, it is important to show the details for an interested audience, and there are several nuances in figure 5. As argued throughout the paper, Millennials are the first generation to be happy in the largest cities. Still, note that they are equally happy in the smallest areas. In short, they are the first generation that does not experience the urban-rural happiness gradient.

Detailed Regression Results

Table 6 shows that the larger the place, the less happy Americans are there, except for Millennials, who are actually slightly happier in places bigger than 40k. The coefficients of interest are interactions

of being a Millennial with size dummies, especially with largest places. The results on an interaction "Millennial x 618-" are highly significant in the first two columns. Column size3 adds a married dummy, which attenuates the results further. The column size adds number of children, but without attenuation. Both marital status and having children are key variables—arguably married couples with children find smaller areas more attractive. Results become insignificant in columns size4alt*. Column size4alt1 adds a control for health. Column size4alt2 adds controls for occupational dummies, and the last column size4alt3 includes both health and occupational dummies.

Adding health is postponed to later because there are many missing values on health and it is not clear whether health predicts SWB (Diener 2015, Diener et al. 2017) or SWB predicts health (Liu et al. 2016). Since missing data reduces the sample size substantially, the results become less significant. Yet, note that the positive sign remains—had there been fewer missing values on additional variables, the results would have remained significant.

Table 6: OLS of SWB on SIZE DECILES (base case: "-2k").

	size0	size1	size2	size3	size4	size4alt1	size4alt2	size4alt3
Millennial	-0.057	-0.026	0.005	0.038	0.037	0.024	0.040	0.040
2-4k	-0.019	-0.033**	-0.034**	-0.032**	-0.033**	-0.036**	-0.036*	-0.041*
4-8k	-0.042***	-0.053***	-0.050***	-0.040***	-0.041***	-0.054***	-0.029+	-0.038*
8-14k	-0.012	-0.034**	-0.037**	-0.024*	-0.025*	-0.041**	-0.028+	-0.036*
14-24k	-0.023*	-0.056***	-0.057***	-0.040***	-0.042***	-0.053***	-0.042**	-0.044*
24-41k	-0.039***	-0.066***	-0.068***	-0.047***	-0.049***	-0.049***	-0.064***	-0.064***
41-79k	-0.055***	-0.082***	-0.081***	-0.054***	-0.056***	-0.060***	-0.057***	-0.054**
79-192k	-0.078***	-0.091***	-0.081***	-0.049***	-0.051***	-0.060***	-0.064***	-0.069***
192-618k	-0.129***	-0.125***	-0.110***	-0.067***	-0.070***	-0.082***	-0.082***	-0.091***
618k-	-0.144***	-0.154***	-0.123***	-0.075***	-0.078***	-0.089***	-0.085***	-0.090***
Millennial × 2-4k	0.030	0.025	0.028	0.030	0.030	0.079	0.017	0.029
Millennial × 4-8k	-0.005	-0.000	-0.004	-0.020	-0.019	-0.017	-0.088	-0.113
Millennial × 8-14k	-0.026	-0.018	-0.010	-0.022	-0.021	-0.012	-0.048	-0.049
Millennial × 14-24k	-0.010	0.019	0.017	0.009	0.010	0.025	-0.024	-0.021
Millennial × 24-41k	0.009	0.031	0.033	0.023	0.023	0.029	-0.005	-0.015
Millennial × 41-79k	0.059	0.136*	0.136*	0.122*	0.122*	0.150*	0.087	0.090
Millennial × 79-192k	0.102+	0.127*	0.128*	0.112+	0.113+	0.110	0.082	0.065
Millennial × 192-618k	0.080	0.118+	0.110+	0.083	0.084	0.134*	0.063	0.083
Millennial × 618k-	0.162**	0.175**	0.157*	0.123*	0.124*	0.107	0.071	0.046
family income in $1986, millions		3.968***	3.459***	2.197***	2.197***	1.611***	1.923***	1.388***
female			0.025***	0.037***	0.038***	0.042***	0.018*	0.018*
unemployed			-0.245***	-0.205***	-0.205***	-0.199***	-0.189***	-0.174***
age			-0.004***	-0.012***	-0.011***	-0.006***	-0.012***	-0.008***
age squared			0.000***	0.000***	0.000***	0.000***	0.000***	0.000***
highest year of school completed			0.012***	0.014***	0.014***	0.004**	0.012***	0.004*
white			0.095***	0.074***	0.070***	0.066***	0.042***	0.043***
married				0.256***	0.261***	0.254***	0.269***	0.264***
number of children					-0.008***	-0.007**	-0.005*	-0.004
health						0.187***		0.185***
year and region dummies	yes	yes	yes	yes	yes	yes	yes	yes
occupation dummies	no	no	no	no	no	no	yes	yes
constant	2.221***	2.100***	1.933***	1.922***	1.922***	1.351***	2.156***	1.592***
N	57,522	51,933	51,860	51,854	51,753	38,556	30,476	21,860
AIC	110908	98061	97164	95347	95151	69180	55147	38648
R squared	0.01	0.04	0.06	0.09	0.09	0.14	0.09	0.15

+p<0.10 *p<0.05 **p<0.01 ***p<0.001, robust std err

The results for EXPANDED NORC SIZE CODE are significant even when controlling for health, and

for the interaction between the Millennial dummy with the two dummies indicating the largest places, "50-250k" and "gt 250k."

Table 7: OLS of SWB on EXPANDED NORC SIZE CODE (base case: "country").

	norc0	norc1	norc2	norc3	norc4	norc4alt1	norc4alt2	norc4alt3
Millennial	-0.059	-0.030	-0.002	0.028	0.027	0.008	0.026	0.035
lt 2.5k	0.007	0.024	0.016	0.019	0.019	0.008	0.032	0.022
2.5-10k	-0.029*	-0.021	-0.023	-0.012	-0.014	-0.036*	-0.032	-0.040
10-50k	-0.033*	-0.020	-0.024+	-0.006	-0.008	-0.011	-0.005	-0.001
uninc med	0.018	-0.003	-0.012	-0.008	-0.009	-0.016	-0.021	-0.013
uninc lrg	0.011	-0.044**	-0.049***	-0.038**	-0.040**	-0.048**	-0.044*	-0.046+
med sub	-0.025+	-0.043***	-0.049***	-0.034**	-0.035**	-0.049***	-0.032+	-0.031
lrg sub	-0.030**	-0.065***	-0.070***	-0.043***	-0.045***	-0.061***	-0.052**	-0.059**
50-250k	-0.071***	-0.073***	-0.070***	-0.039**	-0.041***	-0.048***	-0.047**	-0.043*
gt 250k	-0.127***	-0.129***	-0.110***	-0.062***	-0.065***	-0.081***	-0.072***	-0.080***
Millennial × lt 2.5k	-0.025	0.034	0.027	0.010	0.010	0.200	0.037	0.126
Millennial × 2.5-10k	-0.024	-0.006	0.012	-0.002	0.001	0.052	0.004	-0.001
Millennial × 10-50k	0.014	0.029	0.026	0.023	0.024	0.044	-0.007	-0.017
Millennial × uninc med	-0.002	-0.012	-0.014	-0.003	-0.002	-0.025	-0.025	-0.065
Millennial × uninc lrg	-0.075	-0.021	-0.008	-0.003	-0.002	0.028	-0.023	-0.039
Millennial × med sub	0.033	0.062	0.061	0.057	0.059	0.116	0.037	0.063
Millennial × lrg sub	0.018	0.042	0.053	0.042	0.043	0.064	0.000	-0.007
Millennial × 50-250k	0.102+	0.145*	0.139*	0.118*	0.119*	0.129*	0.094	0.061
Millennial × gt 250k	0.144**	0.166**	0.157**	0.130*	0.131*	0.154*	0.093	0.082
family income in $1986, millions		4.009***	3.499***	2.236***	2.236***	1.656***	1.969***	1.436***
female			0.025***	0.036***	0.038***	0.042***	0.017*	0.018*
unemployed			-0.244***	-0.205***	-0.205***	-0.199***	-0.188***	-0.173***
age			-0.004***	-0.012***	-0.011***	-0.006***	-0.012***	-0.008***
age squared			0.000***	0.000***	0.000***	0.000***	0.000***	0.000***
highest year of school completed			0.012***	0.014***	0.014***	0.004**	0.012***	0.004*
white			0.096***	0.075***	0.071***	0.066***	0.043***	0.045***
married				0.256***	0.260***	0.254***	0.269***	0.263***
number of children					-0.008***	-0.007**	-0.005*	-0.004
health						0.187***		0.185***
year and region dummies	yes	yes	yes	yes	yes	yes	yes	yes
occupation dummies	no	no	no	no	no	no	yes	yes
constant	2.209***	2.079***	1.915***	1.906***	1.907***	1.336***	2.140***	1.570***
N	57,522	51,933	51,860	51,854	51,753	38,556	30,476	21,860
AIC	110910	98064	97159	95343	95148	69172	55148	38646
R squared	0.01	0.04	0.06	0.09	0.09	0.14	0.09	0.15

+p<0.10 *p<0.05 **p<0.01 ***p<0.001, robust std err

Finally in table 8, the results are very reassuring: on "Millennial∗ 1-12 msa" and also on the second highest category interaction "Millennial∗ 13-100 msa" the results are as expected—Millennials not only enjoy the very largest metropolitan areas (1-12), but also the large ones, the top 100 (1-12 and 13-100). Results are significant for all models except the very last one. SRC beltcode is perhaps the best measure because the urban-rural divide is not about the city itself v other areas, but rather, strictly speaking, about urban areas: metropolitan areas v everything else.

Table 8: OLS of SWB on SRC BELTCODE (base case: "small rural").

	src0	src1	src2	src3	src4	src4alt1	src4alt2	src4alt3
Millennial	-0.132**	-0.086+	-0.049	-0.025	-0.025	0.011	-0.023	-0.003
small urb	-0.006	-0.018*	-0.020*	-0.011	-0.012	-0.020*	-0.007	-0.016
13-100 sub	-0.005	-0.044***	-0.047***	-0.026*	-0.027*	-0.035**	-0.036*	-0.043**
1-12 sub	-0.015	-0.078***	-0.076***	-0.051***	-0.053***	-0.066***	-0.049**	-0.065***
13-100 msa	-0.092***	-0.093***	-0.080***	-0.043***	-0.044***	-0.057***	-0.053***	-0.066***
1-12 msa	-0.126***	-0.143***	-0.112***	-0.061***	-0.065***	-0.075***	-0.058**	-0.068**
Millennial × small urb	0.125**	0.122*	0.112*	0.113*	0.113*	0.075	0.084+	0.057
Millennial × 13-100 sub	0.106*	0.133*	0.123*	0.116*	0.115*	0.081	0.097+	0.080
Millennial × 1-12 sub	0.053	0.076	0.089	0.092	0.092	0.060	0.045	0.020
Millennial × 13-100 msa	0.149**	0.172**	0.161**	0.144**	0.143**	0.127*	0.103+	0.106
Millennial × 1-12 msa	0.264***	0.264***	0.238***	0.215***	0.216***	0.149*	0.171**	0.102
family income in $1986, millions		4.030***	3.523***	2.238***	2.239***	1.656***	1.966***	1.441***
female			0.025***	0.037***	0.038***	0.042***	0.018*	0.018*
unemployed			-0.245***	-0.205***	-0.205***	-0.199***	-0.189***	-0.174***
age			-0.004***	-0.012***	-0.011***	-0.006***	-0.012***	-0.008***
age squared			0.000***	0.000***	0.000***	0.000***	0.000***	0.000***
highest year of school completed			0.012***	0.014***	0.013***	0.004**	0.012***	0.004*
white			0.096***	0.075***	0.071***	0.066***	0.043***	0.044***
married				0.256***	0.261***	0.255***	0.269***	0.264***
number of children					-0.008***	-0.007**	-0.005*	-0.004
health						0.187***		0.185***
year and region dummies	yes	yes	yes	yes	yes	yes	yes	yes
occupation dummies	no	no	no	no	no	no	yes	yes
constant	2.198***	2.077***	1.910***	1.902***	1.903***	1.331***	2.133***	1.571***
N	57,522	51,933	51,860	51,854	51,753	38,556	30,476	21,860
AIC	110936	98068	97171	95343	95148	69180	55147	38644
R squared	0.01	0.04	0.06	0.09	0.09	0.14	0.09	0.15

+p<0.10 *p<0.05 **p<0.01 ***p<0.001, robust std err

Results for respondents younger than 35

As previously mentioned, our results could have been spurious—Millennials could have been happier in cities, simply because they are young—since the oldest Millennial in the sample is 34 years old.

Hence tables 9, 10, and 11 repeat the analysis for a subsample of respondents 34 years old or younger. The results are substantively similar (the direction of the effect is as expected, but the statistical significance is lower than the main results because the sample is smaller—as expected). The results are particularly reassuring for SRC BELTCODE in table 11 where all coefficients in the 2 highest categories interacting with Millennial dummy are significant, or marginally significant at .1, except for the very last column on "Millennial x 1-12 msa."

Two key variables are marriage and children—arguably married people and with children may find cities less appealing as they are more expensive than smaller areas, especially for larger family, and American cities tend to have low-quality schools. This also may be a reason why Millennials are happy in cities–they postpone marriage and childbearing.

Table 9: OLS of SWB on SIZE DECILES (base case: "-2k"). Only people younger than 35.

	size35_0	size35_1	size35_2	size35_3	size35_4	size35_4alt1	size35_4alt2	size35_4alt3
Millennial	-0.080	-0.063	-0.036	-0.015	-0.012	-0.065	0.011	-0.026
2-4k	-0.011	-0.028	-0.030	-0.031	-0.034	-0.035	-0.023	-0.031
4-8k	-0.032	-0.043*	-0.044*	-0.038+	-0.039+	-0.046+	-0.028	-0.042
8-14k	-0.001	-0.021	-0.023	-0.009	-0.011	-0.040+	-0.008	-0.026
14-24k	-0.005	-0.033	-0.038+	-0.022	-0.027	-0.051*	-0.039	-0.053
24-41k	-0.021	-0.032	-0.036+	-0.012	-0.014	-0.025	-0.043	-0.045
41-79k	-0.046*	-0.058**	-0.057**	-0.027	-0.031	-0.055*	-0.019	-0.029
79-192k	-0.068**	-0.066**	-0.060**	-0.026	-0.030	-0.038	-0.033	-0.038
192-618k	-0.134***	-0.129***	-0.114***	-0.073***	-0.077***	-0.100***	-0.095**	-0.117**
618k-	-0.138***	-0.146***	-0.110***	-0.062**	-0.067**	-0.091***	-0.084*	-0.104**
Millennial × 2-4k	0.017	0.013	0.011	0.012	0.012	0.066	-0.006	0.016
Millennial × 4-8k	-0.032	-0.027	-0.034	-0.045	-0.043	-0.049	-0.102	-0.126
Millennial × 8-14k	-0.046	-0.042	-0.042	-0.059	-0.061	-0.039	-0.084	-0.075
Millennial × 14-24k	-0.038	-0.016	-0.014	-0.029	-0.027	0.009	-0.042	-0.016
Millennial × 24-41k	-0.018	-0.011	-0.013	-0.031	-0.032	-0.015	-0.035	-0.042
Millennial × 41-79k	0.040	0.100	0.094	0.073	0.074	0.130+	0.036	0.058
Millennial × 79-192k	0.084	0.094	0.094	0.074	0.073	0.070	0.043	0.024
Millennial × 192-618k	0.079	0.116+	0.108+	0.084	0.082	0.144*	0.076	0.110
Millennial × 618k-	0.144*	0.156*	0.130*	0.094	0.093	0.095	0.059	0.056
family income in $1986, millions		4.114***	3.189***	2.444***	2.381***	2.077***	2.107***	1.908***
female			0.059***	0.043***	0.050***	0.072***	0.025+	0.036*
unemployed			-0.215***	-0.182***	-0.182***	-0.157***	-0.155***	-0.113**
age			0.012	-0.029*	-0.026*	-0.027+	-0.026	-0.027
age squared			-0.000	0.000+	0.000+	0.000+	0.000	0.000
highest year of school completed			0.021***	0.025***	0.022***	0.011***	0.019***	0.011**
white			0.155***	0.134***	0.126***	0.125***	0.088***	0.090***
married				0.232***	0.244***	0.231***	0.263***	0.251***
number of children					-0.020***	-0.020***	-0.017*	-0.016*
health						0.190***		0.175***
year and region dummies	yes	yes	yes	yes	yes	yes	yes	yes
occupation dummies	no	no	no	no	no	no	yes	yes
constant	2.261***	2.130***	1.535***	2.007***	2.011***	1.510***	2.202***	1.742***
N	18,434	17,000	16,986	16,984	16,942	12,608	8,862	6,348
AIC	34463	31256	30750	30244	30152	21894	15483	10865
R squared	0.01	0.04	0.06	0.09	0.09	0.15	0.10	0.15

+p<0.10 *p<0.05 **p<0.01 ***p<0.001, robust std err

Table 10: OLS of SWB on EXPANDED NORC SIZE CODE (base case: "country"). Only people younger than 35.

	norc35_0	norc35_1	norc35_2	norc35_3	norc35_4	norc35_4alt	norc35_4alt	norc35_4alt3
Millennial	-0.109*	-0.087	-0.065	-0.041	-0.040	-0.097	-0.026	-0.030
lt 2.5k	0.004	0.010	0.011	0.013	0.013	0.022	0.027	0.065
2.5-10k	-0.009	0.004	0.010	0.013	0.012	-0.021	-0.001	-0.000
10-50k	-0.055*	-0.043+	-0.047+	-0.026	-0.029	-0.056*	-0.032	-0.039
uninc med	-0.011	-0.021	-0.034	-0.027	-0.030	-0.021	-0.041	0.017
uninc lrg	-0.027	-0.050+	-0.057*	-0.043	-0.047+	-0.060*	-0.071	-0.040
med sub	-0.048*	-0.047*	-0.051*	-0.036	-0.038	-0.082**	-0.050	-0.055
lrg sub	-0.051*	-0.068**	-0.070***	-0.043*	-0.046*	-0.065**	-0.053	-0.036
50-250k	-0.094***	-0.072**	-0.063**	-0.032	-0.035	-0.058*	-0.050	-0.045
gt 250k	-0.151***	-0.142***	-0.120***	-0.073***	-0.078***	-0.106***	-0.100**	-0.105*
Millennial × lt 2.5k	-0.022	0.042	0.027	0.009	0.006	0.178	0.045	0.073
Millennial × 2.5-10k	-0.048	-0.032	-0.015	-0.026	-0.023	0.031	-0.019	-0.041
Millennial × 10-50k	0.039	0.060	0.056	0.038	0.040	0.083	0.023	0.022
Millennial × uninc med	0.010	-0.009	-0.012	-0.019	-0.017	-0.065	-0.033	-0.139
Millennial × uninc lrg	-0.053	-0.028	-0.009	-0.016	-0.014	0.018	-0.011	-0.061
Millennial × med sub	0.040	0.053	0.048	0.035	0.038	0.125	0.040	0.072
Millennial × lrg sub	0.027	0.034	0.049	0.024	0.026	0.049	-0.007	-0.039
Millennial × 50-250k	0.119*	0.139*	0.125*	0.099+	0.100+	0.125+	0.091	0.053
Millennial × gt 250k	0.155**	0.171**	0.161**	0.128*	0.130*	0.165*	0.115+	0.099
family income in $1986, millions		4.193***	3.269***	2.524***	2.461***	2.098***	2.204***	1.901***
female			0.059***	0.044***	0.050***	0.072***	0.024+	0.034*
unemployed			-0.214***	-0.181***	-0.182***	-0.157***	-0.153***	-0.113**
age			0.012	-0.029*	-0.026*	-0.027+	-0.027	-0.027
age squared			-0.000	0.000+	0.000+	0.000+	0.000	0.000
highest year of school completed			0.021***	0.025***	0.022***	0.011***	0.019***	0.011**
white			0.155***	0.133***	0.125***	0.124***	0.088***	0.088***
married				0.230***	0.242***	0.228***	0.262***	0.248***
number of children					-0.021***	-0.020***	-0.017**	-0.016*
health						0.190***		0.175***
year and region dummies	yes	yes	yes	yes	yes	yes	yes	yes
occupation dummies	no	no	no	no	no	no	yes	yes
constant	2.276***	2.128***	1.535***	2.006***	2.008***	1.523***	2.221***	1.727***
N	18,434	17,000	16,986	16,984	16,942	12,608	8,862	6,348
AIC	34463	31250	30739	30241	30149	21884	15482	10861
R squared	0.01	0.04	0.07	0.09	0.09	0.15	0.10	0.15

+p<0.10 *p<0.05 **p<0.01 ***p<0.001, robust std err

Table 11: OLS of SWB on SRC BELTCODE (base case: "small rural"). Only people younger than 35.

	src35_0	src35_1	src35_2	src35_3	src35_4	src35_4alt1	src35_4alt2	src35_4alt3
Millennial	-0.187***	-0.146**	-0.116*	-0.095+	-0.091+	-0.102+	-0.060	-0.086
small urb	-0.034*	-0.029+	-0.031+	-0.013	-0.015	-0.038*	0.001	-0.029
13-100 sub	-0.026	-0.041*	-0.047*	-0.018	-0.019	-0.035	-0.024	-0.025
1-12 sub	-0.017	-0.053*	-0.050*	-0.017	-0.022	-0.047+	-0.010	-0.021
13-100 msa	-0.130***	-0.116***	-0.101***	-0.057**	-0.060**	-0.089***	-0.064*	-0.095**
1-12 msa	-0.134***	-0.141***	-0.106***	-0.050*	-0.055*	-0.088***	-0.054	-0.090*
Millennial × small urb	0.154**	0.136**	0.123*	0.110*	0.110*	0.093	0.076	0.079
Millennial × 13-100 sub	0.119*	0.124*	0.111*	0.087	0.085	0.061	0.071	0.051
Millennial × 1-12 sub	0.048	0.046	0.072	0.052	0.053	0.033	0.005	-0.020
Millennial × 13-100 msa	0.183**	0.195***	0.179**	0.153**	0.151**	0.155*	0.115+	0.142+
Millennial × 1-12 msa	0.261***	0.253***	0.227***	0.191**	0.191**	0.147*	0.154*	0.116
family income in $1986, millions		4.156***	3.224***	2.452***	2.393***	2.058***	2.118***	1.862***
female			0.060***	0.044***	0.050***	0.072***	0.025+	0.036*
unemployed			-0.214***	-0.181***	-0.182***	-0.158***	-0.155***	-0.115**
age			0.013	-0.029*	-0.026+	-0.026+	-0.025	-0.025
age squared			-0.000	0.000+	0.000+	0.000+	0.000	0.000
highest year of school completed			0.021***	0.025***	0.022***	0.011***	0.019***	0.011**
white			0.155***	0.133***	0.125***	0.123***	0.087***	0.087***
married				0.232***	0.243***	0.230***	0.263***	0.249***
number of children					-0.020***	-0.020***	-0.017**	-0.016*
health						0.190***		0.176***
year and region dummies	yes	yes	yes	yes	yes	yes	yes	yes
occupation dummies	no	no	no	no	no	no	yes	yes
constant	2.265***	2.126***	1.524***	1.991***	1.993***	1.504***	2.165***	1.709***
N	18,434	17,000	16,986	16,984	16,942	12,608	8,862	6,348
AIC	34454	31247	30743	30239	30147	21891	15478	10861
R squared	0.01	0.04	0.06	0.09	0.09	0.15	0.10	0.14

+p<0.10 *p<0.05 **p<0.01 ***p<0.001, robust std err

Results using Multinomial Logistic Regression

The final set of tables repeats the main OLS regressions, but using multinomial logistic regression. Results are shown in tables 12, 13, and 14. As argued in the main text, SWB can be treated as cardinal and modeled with OLS. However, we perform this robustness check to find out whether dropping the assumption of cardinality and modeling it as multinomial variable would yield the same results. As expected, the results are similar.

What is reassuring in table 12 is that the odds ratios for the 3rd category "very happy" on "Millennial x 618k-" are high at about 2 and relatively consistent until model 4. In the alternative specifications of model 4, they are insignificant, but remain > 1, as expected, indicating a positive effect. Only in the very last model, odds ratios drop to below 1—this is not necessarily a contradictory. The coefficient in the last model is insignificant, and the sample size dropped by more than two fold as compared to model 4. This is largely a result of the relatively small subsample of Millennials. Hence, we are not concerned with this result.

Table 12: Multinomial logistic regression of SWB on SIZE DECILES (base case: "-2k"). Odds ratios reported. The omitted category is lowest level on SWB: "not too happy".

	mSize0	mSize1	mSize2	mSize3	mSize4	mSize4alt1	mSize4alt2	mSize4alt3
1_not_too_happy								
2_pretty_happy								
Millennial	1.171	1.229	1.041	1.122	1.116	1.576	1.570	2.535+
2-4k	0.957	0.859*	0.849*	0.855*	0.851*	0.834*	0.889	0.864
4-8k	0.847**	0.771***	0.761***	0.779***	0.773***	0.749***	0.849+	0.841
8-14k	0.998	0.876*	0.844*	0.870*	0.860*	0.824*	0.878	0.903
14-24k	0.976	0.842**	0.828**	0.860*	0.850*	0.810**	0.904	0.912
24-41k	0.998	0.888+	0.857*	0.899	0.891+	0.898	0.851+	0.860
41-79k	0.826**	0.728***	0.713***	0.759***	0.750***	0.746***	0.795**	0.818*
79-192k	0.780***	0.731***	0.731***	0.781***	0.771***	0.760***	0.789**	0.786*
192-618k	0.692***	0.678***	0.693***	0.753***	0.742***	0.718***	0.676***	0.651***
618k-	0.642***	0.600***	0.648***	0.713***	0.703***	0.681***	0.728***	0.748**
Millennial × 2-4k	1.252	1.233	1.312	1.280	1.279	1.069	0.893	0.623
Millennial × 4-8k	0.846	0.960	0.977	0.925	0.930	0.617	0.509	0.265*
Millennial × 8-14k	0.575+	0.580	0.609	0.583	0.585	0.383*	0.370*	0.196**
Millennial × 14-24k	0.806	0.932	0.934	0.897	0.900	0.837	0.521	0.442
Millennial × 24-41k	0.850	0.922	0.950	0.913	0.914	0.682	0.601	0.373+
Millennial × 41-79k	1.180	1.686	1.697	1.603	1.612	1.254	1.123	0.685
Millennial × 79-192k	1.016	1.224	1.283	1.221	1.229	1.015	0.784	0.549
Millennial × 192-618k	0.863	1.048	1.044	0.967	0.971	0.832	0.718	0.498
Millennial × 618k-	1.679	1.774+	1.707	1.540	1.548	1.220	0.970	0.658
family income in $1986, millions		2.59e+09**	3.05e+07**	1.41e+05**	1.39e+05**	3413.418**,	1.52e+05**	2313.007***
female			1.028	1.070*	1.086**	1.095**	1.045	1.055
unemployed			0.464***	0.489***	0.487***	0.494***	0.513***	0.526***
age			0.974***	0.964***	0.968***	0.982**	0.958***	0.972***
age squared			1.000***	1.000***	1.000***	1.000***	1.000***	1.000***
highest year of school completed			1.062***	1.073***	1.069***	1.043***	1.060***	1.036***
white			1.358***	1.325***	1.303***	1.329***	1.280***	1.340***
married				1.765***	1.807***	1.905***	1.851***	2.062***
number of children					0.968***	0.966***	0.977+	0.971*
health						1.614***		1.647***
year and region dummies	yes	yes	yes	yes	yes	yes	yes	yes
occupation dummies	no	no	no	no	no	no	yes	yes
constant	4.633***	2.773***	2.346***	2.061***	2.058***	0.459***	6.093***	1.336
3_very_happy								
Millennial	0.838	0.972	1.028	1.225	1.217	1.353	1.506	2.082
2-4k	0.907	0.809**	0.806**	0.812**	0.807**	0.782**	0.808*	0.773*
4-8k	0.787***	0.711***	0.719***	0.752***	0.745***	0.686***	0.815*	0.774*
8-14k	0.952	0.816**	0.796**	0.847*	0.838*	0.758***	0.833+	0.808+
14-24k	0.902	0.732***	0.728***	0.788***	0.777***	0.717***	0.799*	0.787*
24-41k	0.857*	0.722***	0.707***	0.781***	0.773***	0.765**	0.705***	0.696**
41-79k	0.742***	0.618***	0.615***	0.702***	0.691***	0.668***	0.700***	0.708**
79-192k	0.660***	0.600***	0.625***	0.725***	0.715***	0.673***	0.683***	0.656***
192-618k	0.518***	0.511***	0.548***	0.665***	0.654***	0.600***	0.598***	0.558***
618k-	0.479***	0.438***	0.508***	0.635***	0.623***	0.575***	0.609***	0.586***
Millennial × 2-4k	1.254	1.238	1.300	1.292	1.294	1.466	0.999	0.802
Millennial × 4-8k	0.929	0.984	0.977	0.893	0.899	0.771	0.485	0.305+
Millennial × 8-14k	0.754	0.787	0.823	0.772	0.774	0.699	0.532	0.368+
Millennial × 14-24k	0.882	1.060	1.053	1.007	1.012	1.015	0.654	0.536
Millennial × 24-41k	0.961	1.101	1.119	1.063	1.064	0.968	0.747	0.533
Millennial × 41-79k	1.352	2.235*	2.256*	2.109+	2.125+	2.175	1.508	1.110
Millennial × 79-192k	1.517	1.850+	1.907+	1.786	1.794	1.628	1.231	0.874
Millennial × 192-618k	1.326	1.676	1.633	1.442	1.446	1.718	1.089	0.927
Millennial × 618k-	2.313*	2.558*	2.368*	2.005+	2.018+	1.674	1.251	0.838
family income in $1986, millions		6.50e+12**	8.69e+10**	2.16e+07**	2.12e+07**	1.99e+05**	9.43e+06**	65954.405***
female			1.129***	1.216***	1.235***	1.272***	1.116*	1.128*
unemployed			0.309***	0.362***	0.361***	0.352***	0.386***	0.398***
age			0.972***	0.939***	0.944***	0.967***	0.932***	0.953***
age squared			1.000***	1.001***	1.001***	1.001***	1.001***	1.001***
highest year of school completed			1.070***	1.089***	1.083***	1.030***	1.075***	1.029**
white			1.596***	1.477***	1.445***	1.446***	1.283***	1.327***
married				3.679***	3.782***	3.987***	4.071***	4.442***
number of children					0.960***	0.962***	0.974+	0.975
health						2.767***		2.840***
year and region dummies	yes	yes	yes	yes	yes	yes	yes	yes
occupation dummies	no	no	no	no	no	no	yes	yes
constant	2.997***	1.354*	0.733+	0.619*	0.623*	0.026***	2.683***	0.112***
N	57,522	51,933	51,860	51,854	51,753	38,556	30,476	21,860
AIC	108796	95929	94915	93190	92997	67567	54079	37872
R squared								

+p<0.10 *p<0.05 **p<0.01 ***p<0.001, robust std err

In table 13, the odds ratios on "Millennial∗ gt 250k" are high at about 2 and relatively consistent

until model 4, and even now in model mNorc4al1 (although only marginally significant). The last two columns are again insignificant, but now both, as expected, are above 1.

Table 13: Multinomial logistic regression of SWB on EXPANDED NORC SIZE CODE (base case: "country"). Odds ratios reported. The omitted category is lowest level on SWB: "not too happy".

	mNorc0	mNorc1	mNorc2	mNorc3	mNorc4	mNorc4alt1	mNorc4alt2	mNorc4alt3
1_not_too_happy								
2_pretty_happy								
Millennial	1.049	1.067	0.904	0.964	0.954	1.338	1.058	1.938
lt 2.5k	1.021	1.100	1.084	1.099	1.101	1.104	1.173	1.201
2.5-10k	0.991	1.011	1.007	1.038	1.026	0.978	0.959	0.900
10-50k	1.010	1.055	1.015	1.060	1.052	1.006	1.154	1.097
uninc med	1.133+	1.015	0.968	0.977	0.969	0.941	1.085	1.117
uninc lrg	1.124	0.927	0.883	0.906	0.897	0.922	0.949	0.994
med sub	1.025	0.948	0.908	0.946	0.940	0.907	0.986	0.998
lrg sub	0.940	0.814***	0.785***	0.835**	0.825**	0.810**	0.853+	0.871
50-250k	0.847**	0.837**	0.830**	0.888+	0.879*	0.883+	0.913	0.947
gt 250k	0.717***	0.712***	0.743***	0.817***	0.805***	0.782***	0.805*	0.804+
Millennial × lt 2.5k	0.541	0.578	0.544	0.526	0.521	4.21e+05**	0.653	2.14e+07
Millennial × 2.5-10k	0.753	0.788	0.840	0.819	0.833	0.637	0.887	0.447
Millennial × 10-50k	1.462	1.755	1.782	1.716	1.734	1.740	1.362	1.166
Millennial × uninc med	0.904	0.943	0.912	0.918	0.923	0.650	0.665	0.365+
Millennial × uninc lrg	0.915	1.302	1.418	1.396	1.406	0.908	1.093	0.495
Millennial × med sub	0.745	0.874	0.883	0.853	0.862	0.660	0.746	0.420+
Millennial × lrg sub	1.054	1.214	1.295	1.254	1.263	0.902	0.905	0.471+
Millennial × 50-250k	1.205	1.513	1.491	1.402	1.414	1.166	1.274	0.716
Millennial × gt 250k	1.448	1.682+	1.663+	1.532	1.548	1.322	1.326	0.829
family income in $1986, millions		3.56e+09**	4.19e+07**	1.88e+05**	1.86e+05**	4462.388**	2.04e+05**	3052.444***
female			1.028	1.069*	1.086**	1.095**	1.044	1.053
unemployed			0.463***	0.488***	0.486***	0.491***	0.513***	0.523***
age			0.974***	0.964***	0.968***	0.982**	0.959***	0.972***
age squared			1.000***	1.000***	1.000***	1.000***	1.000***	1.000***
highest year of school completed			1.063***	1.073***	1.069***	1.043***	1.060***	1.035***
white			1.372***	1.336***	1.314***	1.338***	1.286***	1.342***
married				1.767***	1.809***	1.906***	1.852***	2.062***
number of children					0.968***	0.966***	0.978+	0.972*
health						1.615***		1.648***
year and region dummies	yes	yes	yes	yes	yes	yes	yes	yes
occupation dummies	no	no	no	no	no	no	yes	yes
constant	4.259***	2.422***	2.032***	1.788***	1.783***	0.398***	5.252***	1.149
3_very_happy								
Millennial	0.803	0.920	0.961	1.124	1.110	1.167	1.151	1.666
lt 2.5k	1.047	1.162	1.122	1.148	1.148	1.106	1.260+	1.242
2.5-10k	0.895	0.933	0.925	0.981	0.968	0.859	0.871	0.819
10-50k	0.889	0.953	0.924	1.012	1.001	0.963	1.061	1.050
uninc med	1.142+	0.992	0.944	0.964	0.954	0.911	0.963	1.010
uninc lrg	1.106	0.802**	0.776**	0.817*	0.805*	0.782*	0.811	0.820
med sub	0.925	0.820**	0.788**	0.851*	0.845*	0.774**	0.875	0.882
lrg sub	0.872*	0.696***	0.677***	0.770***	0.759***	0.696***	0.749**	0.728*
50-250k	0.710***	0.696***	0.703***	0.814**	0.803**	0.773**	0.795*	0.822
gt 250k	0.537***	0.523***	0.572***	0.715***	0.701***	0.637***	0.680***	0.650***
Millennial × lt 2.5k	0.732	0.901	0.850	0.789	0.784	7.05e+05**	0.934	3.13e+07***
Millennial × 2.5-10k	0.818	0.893	0.973	0.914	0.932	1.092	0.950	0.680
Millennial × 10-50k	1.187	1.390	1.389	1.344	1.360	1.581	1.087	0.975
Millennial × uninc med	0.944	0.917	0.887	0.932	0.938	0.764	0.736	0.454
Millennial × uninc lrg	0.682	0.983	1.067	1.082	1.093	1.078	0.900	0.574
Millennial × med sub	1.024	1.234	1.240	1.211	1.225	1.435	1.039	0.837
Millennial × lrg sub	1.089	1.279	1.375	1.310	1.321	1.307	0.961	0.681
Millennial × 50-250k	1.613	2.119*	2.083*	1.900*	1.917*	1.908	1.659	1.048
Millennial × gt 250k	2.026*	2.382**	2.316**	2.039*	2.063*	2.214+	1.655	1.220
family income in $1986, millions		9.49e+12**	1.25e+11**	3.03e+07**	3.00e+07**	2.84e+05**	1.38e+07**	97638.920***
female			1.128***	1.215***	1.234***	1.271***	1.114*	1.126*
unemployed			0.310***	0.362***	0.362***	0.352***	0.387***	0.397***
age			0.972***	0.939***	0.944***	0.968***	0.932***	0.954***
age squared			1.000***	1.001***	1.001***	1.001***	1.001***	1.001***
highest year of school completed			1.070***	1.089***	1.084***	1.031***	1.075***	1.029**
white			1.614***	1.487***	1.455***	1.455***	1.294***	1.334***
married				3.679***	3.782***	3.981***	4.075***	4.437***
number of children					0.960***	0.962***	0.974+	0.975
health						2.772***		2.845***
year and region dummies	yes	yes	yes	yes	yes	yes	yes	yes
occupation dummies	no	no	no	no	no	no	yes	yes
constant	2.728***	1.161	0.633*	0.538**	0.541**	0.022***	2.317**	0.093***
N	57,522	51,933	51,860	51,854	51,753	38,556	30,476	21,860
AIC	108812	95939	94914	93192	92999	67566	54086	37876
R squared								

+p<0.10 *p<0.05 **p<0.01 ***p<0.001, robust std err

Finally in table 14, the results are encouraging: The odds rations on "Millennial∗ 1-12 msa" are as high as 4, highly significant in all models, except for the very last one. Also on the second highest category, the results for the interaction "Millennial∗ 13-100 msa" are as expected—Millennials not only enjoy the very largest metropolitan areas (1-12), but also the large ones, the top 100. This is very reassuring. Again, the SRC beltcode is perhaps the best measurement to use in our analyses.

Table 14: Multinomial logistic regression of SWB on SRC BELTCODE (base case: "small rural"). Odds ratios reported. The omitted category is lowest level on SWB: "not too happy".

	mSrc0	mSrc1	mSrc2	mSrc3	mSrc4	mSrc4alt1	mSrc4alt2	mSrc4alt3
1_not_too_happy								
Millennial × 13-100 sub	1.379	1.675*	1.666*	1.647+	1.653+	1.165	1.357	1.005
Millennial × 1-12 sub	1.232	1.404	1.496	1.505	1.510	1.191	1.055	0.866
Millennial × 13-100 msa	1.419	1.740*	1.687*	1.617+	1.617+	1.392	1.354	1.306
Millennial × 1-12 msa	2.580***	2.524**	2.375**	2.245**	2.265**	1.935+	1.945*	1.563
family income in $1986, millions		4.19e+09**	5.02e+07**	2.12e+05**	2.11e+05**	4979.342**,	2.47e+05**	3835.095***
female			1.030	1.072*	1.088**	1.097**	1.045	1.053
unemployed			0.465***	0.489***	0.488***	0.492***	0.514***	0.525***
age			0.974***	0.964***	0.968***	0.982**	0.959***	0.972***
age squared			1.000***	1.000***	1.000***	1.000***	1.000***	1.000***
highest year of school completed			1.063***	1.074***	1.069***	1.043***	1.060***	1.036***
white			1.362***	1.326***	1.304***	1.329***	1.278***	1.336***
married				1.767***	1.810***	1.910***	1.853***	2.063***
number of children					0.968***	0.966***	0.977+	0.971*
health						1.616***		1.650***
year and region dummies	yes	yes	yes	yes	yes	yes	yes	yes
occupation dummies	no	no	no	no	no	no	yes	yes
constant	4.391***	2.545***	2.144***	1.904***	1.896***	0.422***	5.666***	1.270
3_very_happy								
Millennial	0.535**	0.677+	0.738	0.825	0.822	1.040	0.841	0.972
small urb	0.966	0.904*	0.884*	0.924	0.918+	0.869*	0.958	0.903
13-100 sub	0.975	0.770***	0.749***	0.830**	0.823**	0.787**	0.784**	0.755**
1-12 sub	0.906+	0.619***	0.620***	0.695***	0.685***	0.637***	0.708***	0.642***
13-100 msa	0.624***	0.613***	0.645***	0.763***	0.756***	0.699***	0.720***	0.658***
1-12 msa	0.525***	0.473***	0.548***	0.691***	0.677***	0.633***	0.705***	0.661***
Millennial × small urb	1.951**	1.947**	1.870*	1.904*	1.911*	1.666	1.604	1.486
Millennial × 13-100 sub	1.714*	2.088*	2.032*	1.998*	1.999*	1.574	1.748+	1.481
Millennial × 1-12 sub	1.340	1.563	1.684+	1.746+	1.751+	1.478	1.294	1.127
Millennial × 13-100 msa	2.076**	2.462**	2.361**	2.216**	2.212**	2.052+	1.773+	1.832
Millennial × 1-12 msa	4.084***	4.075***	3.675***	3.373***	3.402***	2.537*	2.734**	1.894
family income in $1986, millions		1.11e+13**	1.50e+11**	3.22e+07**	3.21e+07**	2.97e+05**	1.50e+07**	1.11e+05***
female			1.130***	1.218***	1.237***	1.273***	1.117*	1.126*
unemployed			0.311***	0.363***	0.363***	0.352***	0.386***	0.397***
age			0.972***	0.939***	0.944***	0.968***	0.932***	0.954***
age squared			1.000***	1.001***	1.001***	1.001***	1.001***	1.001***
highest year of school completed			1.070***	1.089***	1.084***	1.031***	1.074***	1.028**
white			1.606***	1.479***	1.447***	1.447***	1.289***	1.326***
married				3.689***	3.792***	3.998***	4.084***	4.441***
number of children					0.960***	0.962***	0.974+	0.974
health						2.769***		2.847***
year and region dummies	yes	yes	yes	yes	yes	yes	yes	yes
occupation dummies	no	no	no	no	no	no	yes	yes
constant	2.659***	1.184	0.639*	0.549**	0.551**	0.023***	2.339**	0.099***
N	57,522	51,933	51,860	51,854	51,753	38,556	30,476	21,860
AIC	108834	95937	94919	93184	92992	67566	54077	37869
R squared								

+p<0.10 *p<0.05 **p<0.01 ***p<0.001, robust std err

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