The Perennial Dissatisfaction of Urban Upbringing

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Abstract

This study provides new evidence to the urban malaise (unhappiness) hypothesis. A new key finding is added: Urban upbringing results in lower happiness levels later in life. This effect is above and beyond the unhappiness associated with living currently in a city. Strikingly, the negative effect of urbanicity in one's youth is about as strong statistically, and practically (effect size), as the effect of urbanicity given one's current place of residence. In addition, our findings show that there may be a happiness benefit to growing up on a farm. The present study is inspired by Lederbogen et al. (2011) who showed that growing up in a city has a negative lasting effect in a person's life. We also find interactive effects: people who grew up in larger areas but live in smaller areas are much less happy than those who grew up in smaller areas and continue to live there. There is also an interactive effect with age: older people are happier if they grew up on a farm. These results aim to stimulate discussion by challenging the mainstream pro-urban view that people are happier in cities. This study is based on U.S. data and therefore, our results may not generalize to other countries or historical contexts.

KEYWORDS: SUBJECTIVE WELL-BEING, HAPPINESS, LIFE SATISFACTION, CITY, URBANISM, MIGRATION, U.S. GENERAL SOCIAL SURVEY (GSS)

The urban malaise thesis is longstanding. Early sociologists theorized, observed, and documented urban malaise (Simmel 1903, Tönnies [1887] 2002, Park 1915, Wirth 1938). The classic paper, "Urbanism as a Way of Life" (Wirth 1938) articulated this phenomenon in detail, arguing that urbanization in the United States accounted for the acuteness of its social problems. Wirth (1938) proposed the theory of urbanism as a point of departure for future sociological research. The interest in urbanism and well-being[1] was however, short-lived, and the topic was mostly abandoned by sociologists in the 1970s after a series of works by Fischer (1972, 1973, 1975, 1982).

While sociology has overlooked this line of research in recent years, other disciplines continue taking various perspectives on the topic and focusing mostly on urbanicity or the size of places. A consensus has

[1]Most studies use the term 'happiness' interchangeably with the terms 'subjective well-being'(SWB), 'life satisfaction' and 'well-being.' For a detailed review of these definitions see Easterlin (2003). It is important to note that although these concepts are used interchangeably they are different measures of SWB. However, it is only in laboratory settings using small samples with many measures that researchers can differentiate between the concepts, but it is not possible in large scale surveys as used here. We discuss this in detail on section, "the concept of happiness."

emerged confirming the early sociological studies: people have lower levels of happiness in cities[2] (Balducci and Checchi 2009, Berry and Okulicz-Kozaryn 2009, 2011, Okulicz-Kozaryn 2015a, Okulicz-Kozaryn and Mazelis 2016, **?**, Morrison 2015, Morrison and Weckroth 2017). There is also agreement that being exposed to nature, the opposite of urbanicity, is related to happiness (Pretty 2012, Frumkin 2001, Wheeler et al. 2012, White et al. 2013a,b, Tesson 2013, Maller et al. 2006, Berman et al. 2008, 2012).

Urban malaise is common in the developed world.[3] The largest city in the United States, New York City, is the least happy or one of the least happy places in the U.S. (Okulicz-Kozaryn and Mazelis 2016, Senior 2006). Likewise, London is the largest and least happy place in the UK (Office for National Statistics 2011, Chatterji 2013). Toronto, the largest metropolitan area in Canada is the second least happy (only Vancouver, the third largest metropolitan area, is less happy) (Lu et al. 2015). Bucharest is the largest and the least happy place in Romania (Lenzi and Perucca 2016). Helsinki is the largest and the least happy place in Finland (Morrison 2015). Similarly, Australia's largest city, Sydney, is the least happy (cited in Morrison and Weckroth 2017), and so forth. Arguably, this trend is not the result of self-selection—it is not that unhappy people mostly move to cities. Happier people are actually more willing to migrate in general (Bartram 2013), and if anything, people with higher abilities (Jokela 2014) move to cities (for education and jobs) and then out of cities to raise a family. Urban unhappiness is not only a result of urban problems, such as crime and poverty, but of cities themselves and their core characteristics (i.e., size, density, noise, etc.) (Wirth 1938, Okulicz-Kozaryn and Mazelis 2016, **?**, Mouratidis 2019).

There is an extensive body of research highlighting the benefits of city life. Urban areas provide many goods and services that rural areas and even small cities can never efficiently supply (**??**). An iconic city characteristic is agglomeration which increases returns for production in scale, yields more developed markets

[2]Others argue that it is the characteristics of cities that produce unhappiness: size, density, noise, lack of cleanliness, and perception of danger. See for example Mouratidis (2019), Wirth (1938), Okulicz-Kozaryn and Mazelis (2016).

[3]Some social groups, however, are not unhappy in the largest cities–U.S. Millennials is one example (Okulicz-Kozaryn 2018a). Likewise, results from Latin America indicate that the size of one's place of residence does not impact their SWB. (Valente and Berry 2016, **?**). **?** found that "the excess of urban over rural life satisfaction is typically large at low levels of development, but tends to disappear or even reverse at advanced levels. This leveling of life satisfaction differences by location is due largely to a convergence in urban and rural occupational structures, income levels and education (p. 2195)."

and larger local markets, lower transportation costs, creates knowledge spillover, and better developed infrastructure (Alonso 1971, ?, ?, ?, ?, ?, ?). Cities often facilitate greater access to a variety of goods, services, and social networks (e.g., museums, banks, arts performance, shopping malls, universities)(??Morrison 2011). As ? stated, "if material goods such as food, clothing, and shelter were all that mattered for happiness, then [...] happiness would be greater in cities" (p.2187). Yet, city life encompasses many circumstances that contribute to urban malaise—congestion, pollution and diseases, high rates of inequality, crime, crowding, feelings of anomie and alienation (Wirth 1938, ?, Baum-Snow and Pavan 2013, ?, ?).

Perhaps, one of the best examples of urban malaise is Singapore. By many standards, Singapore, is one of the best places to live in the world: it has the third highest life expectancy (after Monaco and Japan) (Central Intelligence Agency 2017), the second highest degree of economic freedom (Heritage 2017), and the third highest Gross Domestic Product (GDP) per capita[4] (after Qatar and Luxembourg)(IMF 2017). In addition, high-school students in Singapore score the highest on global education rankings (math, reading, and science) (Coughlan 2017), and in recent years, the country is making the greatest progress in achieving health-related goals set by the United Nations (UN) (Fullman et al. 2017). A distinctive feature of Singapore is that it is a nation-city: it is overwhelmingly urban and the third most dense country in the world (after Monaco and Macao)(`https://esa.un.org/unpd/wpp`). Based on Glaeser (2011)'s thesis claiming that cities makes us "richer, smarter, greener, healthier and happier," Singapore should be a triumphant place. But, despite all of its positive indicators, Singapore ranks only 34th in the World Happiness Report (??).[5] Being mostly urban, Singapore is susceptible to many city problems (e.g., income inequality, conspicuous consumption, vice, crime) that lead to unhappiness.[6]

We aim to further understand the extent and strength of the relationship between urbanism and happiness

[4]Purchasing power parity adjusted.

[5]This finding derives from the the World DataBase of Happiness by ? and the latest 2019 World Happiness Report by ?. Actual data are at `http://www.worlddatabaseofhappiness.eur.nl/hap_nat/nat_fp.php?mode=8`.

[6]We acknowledge that there are aspects of cities that are positive for well-being (e.g., amenities relating to education and culture), which might be the reason why millennials are happier in cities (Okulicz-Kozaryn 2018a). However, the overall literature indicates that in general cities are incomparable with human flourishing and well-being (Lederbogen et al. 2011, Wirth 1938, Fischer 1982).

by exploring whether growing up in urban areas can have a lasting negative effect on a person's subjective well-being (SWB). We aim to provide a statement about relative happiness across places of different size in the U.S. in general since American cities are very distinct and unique from each other, including in the size at which unhappiness develops. We start by discussing the urban migration literature, and important gap in knowledge on how urbanicity affects SWB. In what follows, we review the concept of happiness, discuss our data, the U.S. General Social Survey (GSS), present our models and methods, provide results, and draw together our main conclusion.

Urban migrants

Many urban migrants are drawn to urban areas by the belief that living in a city will provide an opportunity for social, financial and personal advancement, resulting in a higher SWB (Okulicz-Kozaryn and Valente 2017) (in reality, urbanites have lower levels of happinness and tend to be professionally unsuccessful (Okulicz-Kozaryn and Valente 2017, Okulicz-Kozaryn 2015a)).[7] The literature on rural-urban migration as reviewed in **?** is substantial—inexplicably, however, SWB is not analyzed. Most SWB-related research across urbanicity-migration studies examines rural-urban migration, and only one study (Alcock et al. 2014) examined the longitudinal effects of urban-rural migration on mental health, finding that moving to greener areas is associated with sustained mental health improvements. There are other cross-sectional SWB studies on urbanicity and migration but they are not systematic. For instance, Tesson (2013) describes his personal story—he moved from an urban area into the wilderness, and became happy. Pretty (2012) discusses similar cases, e.g., people who have suffered from illnesses and have recovered faster after moving into greener areas. Although these studies provide great insight, they lack systematic quantitative evidence.

Some studies argue that moving to a city might inflate one's happiness almost immediately after the

[7]There are many movies telling the story of a usually young, energetic and ambitious person, who was born and raised "in the middle of nowhere," in a village or small town, or perhaps in a larger town but in a "rural state," such as Wyoming or Nebraska, who moves to a big city, typically New York, Los Angeles, Chicago or one of the handful of others, looking for the American dream. Then, she faces some hardship, usually makes it, but then realizes that she's unhappy and moves back to where she came from and leads a happy life there.

move, yet the average happiness scores of recent movers are in fact lower than those of rural dwellers (at least in China)(Knight and Gunatilaka 2010). Other studies suggest that rural-urban migration positively affects SWB as long as the city is not large (Chen et al. 2015). In the U.S., however, urban migrants have been sometimes labeled as "marginal men" and have lower levels of happiness (Park 1928, Knight and Gunatilaka 2010, Bartram 2014, Baltatescu 2007, Hendriks et al. 2014, Jong et al. 2002)[8] because too much *Gesellschaft* (Tönnies [1887] 2002) can reduce happiness[9] (Park 1928). Concurrently, a study by **?** examining the persistent differences in self-reported subjective wellbeing across U.S. metropolitan areas found that newer residents appear to be as unhappy as longer-term residents in declining cities.

In general, locals tend to be happier than migrants as they spend time on more happiness-generating activities than internal migrants (Hendriks et al. 2014). Migrants often contribute to increasing a city's heterogeneity, which can lead to negative consequences (**?**Alesina and Ferrara 2000, Putnam 2007), including lowered SWB (Okulicz-Kozaryn 2010, 2011, Herbst and Lucio 2014, Vogt Yuan 2007, Postmes and Branscombe 2002). In the past, many researchers claimed that heterogeneity is accompanied by lower levels of trust which can led to anomie, and deviance, since relations tend to be anonymous, superficial, impersonal, transitory, unstable, and insecure (see Park et al. ([1925] 1984), Simmel (1903), Tönnies ([1887] 2002), Putnam (2007)). Conversely, studies on how one's upbringing might affect tolerance (Wirth 1938, Stephan and McMullin 1982, Tuch 1987), claim that diversity and the heterogeneity of urban life translate into increased tolerance among urbanites. Growing up in a diverse environment leads to multiple secondary associations with others of divergent attitudes, values, and beliefs (Tuch 1987), thus impacting one's level of tolerance.

We hypothesize that the size of the place one grew up in, may affect one's happiness later in life just as it affects one's tolerance. The logic is as follows: the size of a place is not only situational but also a socialization variable; people have lower levels of happiness in cities not only because they reside there, but because they learned certain ways of life in the city that are conducive to unhappiness. Socialization (social

[8]Per turnover/stability: in poor areas, turnover has a positive effect on happiness; in rich areas, it has the opposite effect (Ross et al. 2000). There are many studies focusing on the role of relative deprivation for migration (e.g., Stark and Taylor 1991), but they are beyond the scope of this paper.

[9]A contemporary problem in the largest U.S. cities is that most people cannot afford to live comfortably (Florida 2016).

learning) is extensive in humans—a long juvenile period in childhood and teenager years prepares and shapes individuals for their adult roles in society (Eagly and Wood 2010). As the old saying goes, "you can take the boy out of the country, but you can't take the country out of the boy" (cited in Stephan and McMullin 1982, p. 414).

Gaps in the literature

Most studies take a statistical and contemporary view on how urbanicity affects SWB (Balducci and Checchi 2009, Berry and Okulicz-Kozaryn 2009, 2011, Okulicz-Kozaryn 2015a, Morris et al. 2018, Okulicz-Kozaryn 2015b, Okulicz-Kozaryn and Mazelis 2016, Morrison 2015, Morrison and Weckroth 2017, Tesson 2013, Pretty 2012, White et al. 2013b,a). The literature on migration across places of different urbanicity either overlooks urbanicity of one's upbringing (focusing solely on migration) (e.g., Knight and Gunatilaka 2010, Chen et al. 2015), or it overlooks SWB (e.g., **?**Alcock et al. 2014).

In contrast, our study aims to understand how an urban upbringing can affect a person's SWB later in life above and beyond any effect due to the urbanicity of the place where she currently resides. We are not aware of another study that has considered jointly the effect of urbanicity in one's upbringing and the present effect of urbanicity. This study is inspired by Lederbogen et al. (2011), who showed that growing up in a city has a lasting negative effect on a person's brain later in life. Our hypothesis is that:

Growing up in a large (urban) place will diminish happiness later in life.

The Concept of Happiness

This study examines overall happiness and not a domain-specific happiness, such as neighborhood or community satisfaction. For simplicity, the terms happiness, life satisfaction, and subjective well-being (SWB) are used interchangeably. Diener and Lucas define SWB as "both cognitive judgments of one's life satisfaction in

addition to affective evaluations of mood and emotions" (**?**, p. 213). This is similar to the definition by Ruut Veenhoven (2008, p. 2), another key happiness scholar: "overall judgment of life that draws on two sources of information: cognitive comparison with standards of the good life (contentment) and affective information from how one feels most of the time (hedonic level of affect)." Some scholars use 'life satisfaction' to refer to cognition and 'happiness' to refer to affect (e.g., Dorahy et al. 1998). This dichotomy is not pursued here, because there is only one survey item[10] in this study capturing mostly the concept of life satisfaction but also happiness to a lesser degree. Therefore the SWB definition by **?** and Veenhoven (2008) seems most appropriate.

Even though self-reported and subjective, the happiness measure is reliable (precision varies), valid, and correlated with similar objective measures of well-being (**?**Myers 2000, Layard 2005, **?**), while unhappiness strongly correlates with suicide incidence and mental health problems (**?**).

Happiness, as any measure, has some limitations. Much of happiness is hereditary or due to genes (**?**). We are on the so called "hedonic treadmill"—we adapt or get used to both fortune and misfortune, even very major events such as winning millions in a lottery or loosing limbs in an accident (**?**). Happiness is affected by various comparisons (Michalos 1985)—whatever happens to other people (and whatever happened to ourselves in the past) affect our current happiness. These issues, however, are not critical. Recently, Diener (2009) has provided an authoritative discussion of why potential problems with happiness are not serious enough to make it unusable for interventions, planning, and public policy.

Data and model

We use the U.S. General Social Survey (GSS)[11] cumulative dataset containing about 60,000 observations from 1972 to 2016. The GSS is collected face-to-face and is nationally representative. Since 1994, the GSS is collected every other year (earlier, it was mostly annually). The advantage of using GSS is that it contains a

[10]This is an inherent limitation of our study, as the GSS only has one question on happiness. Still, these are the best data for our study–datasets with more precise measures of SWB have inadequate geographical and temporal coverage.

[11]The data is available here: `gssdataexplorer.norc.org`

question inquiring about a person's residence when growing up, the variable RES16: "Which of the categories on this card comes closest to the type of place you were living in when you were 16 years old?":

1. non-farm (country-side)
2. farm
3. town $<$ 50,000
4. 50,000 - 250,000
5. big-city suburb
6. city $>$ 250,000[12]

One obvious caveat is that a person could have moved during her childhood. We make the assumption that the place where a person lived when she was 16, is the place where she grew up, which sometimes is not the case. Still, the variable arguably has adequate precision: it captures urbanicity for at least a significant part, and usually for the majority of one's childhood— it is unlikely that a person lived in a place of very different size for most of her childhood than the place where she lived when she was 16. Other studies using this variable also make this assumption (Stephan and McMullin 1982, Tuch 1987).

Urbanicity is measured using a set of dummies for XNORCSIZ,[13] a variable that provides a fine classification of density and size, and is widely used to measure the size of places. Additional results using alternative measures of urbanicity are in the online appendix.[14] The dependent variable, happiness, comes from this question, "Taken all together, how would you say things are these days—would you say that you are very happy, pretty happy, or not happy?" and is measured on a scale of 1 to 3, possible responses are 1=not happy, 2=happy, and 3=very happy. Some may complain that one-item 3-step scale is not sufficient, and while surely multi-item and multiple-step scales are better (Diener et al. 2013) the GSS item is at least adequate as evidenced by hundreds of publications using it, among them by leading scholar and/or in leading journals

[12] We wish we had more detailed definitions of place, perhaps using several variables—for instance, definition of country-side v farm could be elaborated, as well as the distinction of modestly size cities to megacities—but this is the only variable in the GSS measuring the size of the place where a respondent grew up in and we do not have any other measurement. While arguably other datasets can provide more detailed measurement, there is no other survey for the U.S. that goes back to the 70s, is nationally representative, and contains both SWB and size of a place where one grew up—hence, we use the best data available for the purpose of this study.

[13] *Xnorcsiz* is one of three GSS variables that measures size of place, refer to the online appendix for the definitions.

[14] This includes the *srcbelt* variable where the top category is for the 12 largest cities in the U.S., and the *size deciles* variable where the largest category is for cities with a population greater than 618 thousand. Refer to Table 4 in the Appendix.

(google.com/scholar?q=GSS+happiness). We believe GSS data are best suited for our purpose–datasets with more precise measures of SWB have inadequate geographical or temporal coverage.

All variables are listed and defined in table 1. We control for many well-documented happiness predictors at the individual level to isolate the effect of growing up in an urban area on SWB. Since these controls are not of direct interest to this study, we discuss them briefly only. What makes people happy? Myers (2000) suggests that age, race, gender, income, education and marriage are all sources of interpersonal variations in happiness. Young and old people are happy (e.g., **?**)—large cities may attract the young and repel the old. Men have lower happiness scores than women, the difference being small (**?**). Income boosts happiness and unemployment depresses it (e.g., **???**). Being married boosts happiness (e.g., Myers 2000, **?**). Blacks are less happy than whites (e.g., Berry and Okulicz-Kozaryn 2009, 2011, **?**), and they are traditionally concentrated in cities (**?**). There are a few other important variables, such as health and social capital. They are missing for many respondents in GSS, and their discussion is postponed to the online appendix, where robustness checks are covered and the distributions of all variables are shown.

We also control for regional or cultural differences by including 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. And since we use pooled the GSS data, we include year dummies. Such a specification tests whether there are contextual effects unaccounted for due to regional and yearly differences.

We use ordinary least squares (OLS) to analyze the 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 online

appendix.

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?"
place when 16 yo	"30. Which of the categories on this card comes closest to the type of place you were living in when you were 16 years old?"
xnorcsiz	EXPANDED N.O.R.C. SIZE CODE (see online appendix for details)
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.
female	RESPONDENT'S SEX
unemployed	"Last week were you working full time, part time, going to school, keeping house, or what?" "Unemployed, laid off, looking for work"
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)."
ISCO 1 digit occupation	RESPONDENT'S OCCUPATION, 1988 CENSUS; NOTE: collapsed to 8 major sectors

Baseline Results

All results are presented in table 2. The first column is a simple regression of SWB on the size of "PLACE WHEN 16 YO." The base case is "non-farm (country-side)." Only two extreme categories are significant: "farm" which is positive and "250k-"which is negative. The addition of income in column a2 makes all categories negative, except for "farm"—growing up in any place larger than "non-farm (country-side)," or "farm," is associated with a lower SWB. Also, all coefficients became larger.

The addition of other socio-demographic controls in a3 diminishes the effect sizes only slightly. So does

controlling for region and including year dummies in a4. The last addition is XNORCSIZ in a5: now, again, as in the beginning, only the extreme categories "farm" and "250k-" remain significant. The effect of one's current place, XNORCSIZ, is as expected (Okulicz-Kozaryn 2015b): larger places have significantly lower levels of happiness. What is worth highlighting, and what is arguably unexpected, is that the statistical significance and effect size of the variable "PLACE WHEN 16 YO," is about as large as that of the current urbanicity variable, "XNORCSIZ." We have also tried reruning specification a5 without income variable (not shown), and results were similar.

It is instructive to focus on the interplay between the variables "PLACE WHEN 16 YO" and " XNORCSIZ"—so we approach the model elaboration differently–we start with "XNORCSIZ" and then analyze how it changes when adding the variable "PLACE WHEN 16 YO" in columns b1 and b2. The comparison of a1 and b1 reveals that the largest places, "gt 250k," have now an effect on SWB that is about twice as strong as the effect the largest place("250k-") had previously. Controlling for "PLACE WHEN 16 YO" in b2 somewhat attenuates our estimates on XNORCSIZ as compared to results in b1. Still, the full specification in a5, show that the effect sizes are about the same. Robustness checks and supplementary results are presented in the online appendix.

While the effect sizes are not large, they are substantial—about as big as the effect of having children, and about half of the effect of race. This is not something to be disregarded, especially when taking into account current urbanization rates and the fact that each year cities grow by hundreds of millions of people. These results support our initial hypothesis that growing up in a large (urban) place is related to increased unhappiness later in life. Furthermore, this effect is above and beyond the unhappiness associated with currently living in an urban area.

Table 2: OLS regressions of SWB. Fully standardized (beta) coefficients.

	a1	a2	a3	a4	a5	b1	b2
place when 16 yo (base: country, non-farm):							
farm	0.028***	0.032***	0.025***	0.018**	0.017**		0.027***
-50k	-0.001	-0.012+	-0.014*	-0.014*	-0.012+		0.004
50k-250k	-0.005	-0.018**	-0.013*	-0.012*	-0.008		0.006
city sub	0.006	-0.021***	-0.017**	-0.013*	-0.009		0.014*
250k-	-0.035***	-0.047***	-0.031***	-0.027***	-0.020**		-0.013*
xnorcsiz (base: country):							
lt 2.5k					0.008	0.007	0.007
2.5-10k					-0.002	-0.009+	-0.007
10-50k					0.000	-0.011*	-0.008
uninc med					-0.001	0.004	0.006
uninc lrg					-0.011*	-0.005	-0.001
med sub					-0.011+	-0.014*	-0.010+
lrg sub					-0.018*	-0.025***	-0.017*
50-250k					-0.012+	-0.038***	-0.033***
gt 250k					-0.024***	-0.078***	-0.067***
family income in $1986, millions		0.180***	0.097***	0.100***	0.102***		
female			0.031***	0.031***	0.031***		
unemployed			-0.060***	-0.058***	-0.058***		
age			-0.346***	-0.335***	-0.333***		
age squared			0.373***	0.367***	0.366***		
highest year of school completed			0.066***	0.069***	0.070***		
white			0.047***	0.046***	0.043***		
married			0.208***	0.206***	0.204***		
number of children			-0.019***	-0.020***	-0.021***		
year and region dummies	no	no	no	yes	yes	no	no
N	57,613	51,952	51,687	51,687	51,687	57,709	57,613
R sq.	0.002	0.034	0.084	0.088	0.088	0.005	0.006

*** p<0.001 ** p<0.01, * p<0.05, + p<0.1; robust std err

Interactions of urbanicity now and when growing up

We further analyzed the relationship between current place of residence and place of residence growing up to explore an intriguing question: Is there an interplay between being exposed to urbanicity now and when growing up? For instance, are people who grew up in larger areas as unhappy living in them currently as people who grew up in more rural areas?

We repeated the full models from the previous section and added the interactions of urbanicity now and when growing up. Variables' interactions are easier to understand when plotted—thus, we present the plots in Figure 1, and add the regression tables in the supplementary material (refer to the section: "Urbanicity

earlier v urbanicity now"). There is not a clear relationship when all categories of RES16 are interacted with current urbanicity, except, perhaps, that "farm," and "nonfarm" (and also midsize places, "50k-250k") are becoming less happy than the largest place "250k-" (but also smaller places of "-50k" and suburbs "city sub") along with current urbanicity. All results, including the graphs are in the supplementary material as well.

To focus on the main hypothesis of this study, that growing up in the largest places is associated with less happiness, we collapse the data to just two categories on RES16: "250k-" v "small." In Figure 1, the first panel (1b) shows that if a person grew up in a big city, then she is not becoming as unhappy as people who grew up in smaller areas as the size of current place increases. The pattern is even stronger in panel 1e, which repeats the same specification, but adds a set of dummies for occupations. But the story is not that simple. The relationship is nonlinear as seen in panel 1c (and in 1f, which also adds occupational dummies): People with the lowest relative happiness level are those who grew up in cities, and live in smaller areas; there is no difference in the largest places—people have similar levels of unhappiness regardless of where they grew up. Note that the occupational codes (both in 1e and 1f) matter and make the relationship stronger—when taking into account one's occupation, the interactive effect between urbanicity now and when growing up is stronger.

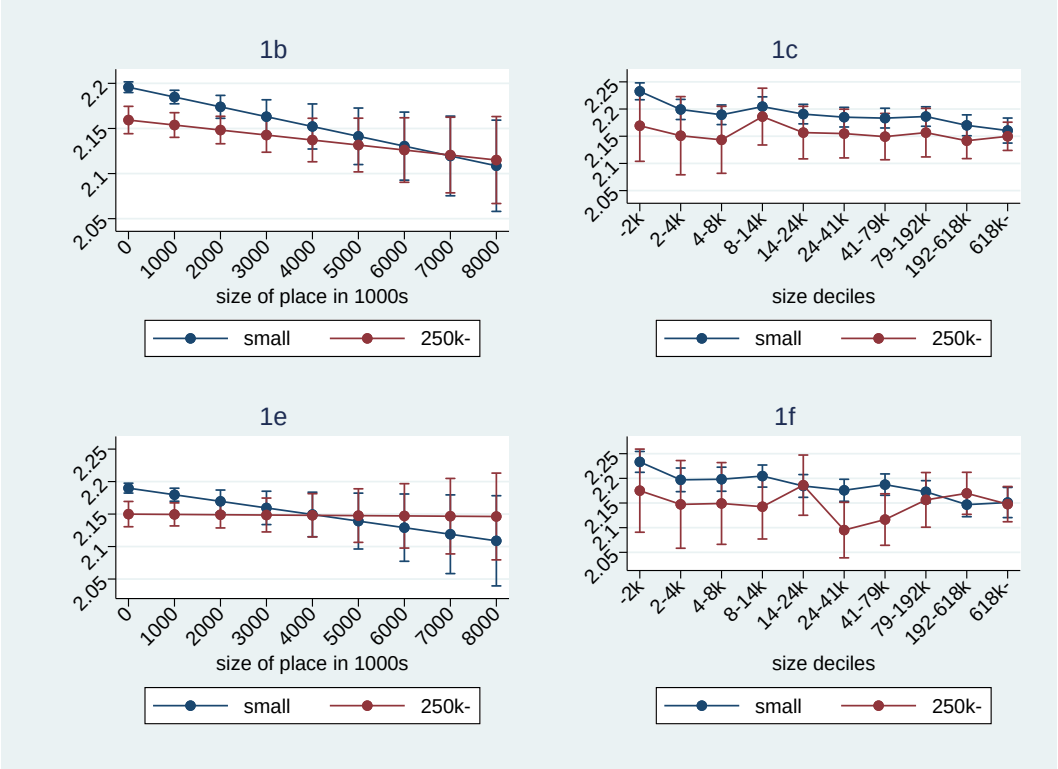

Figure 1: Predicted SWB and 95% CI by "small" v "250k-" size of the place where one grew up against two specifications of current size of place: as a continuous variable (1b and 1e) and as size deciles (1c and 1f). The bottom row (1e and 1f) adds a set of dummies for occupations. The corresponding regression models, m1b, m1c, m1e, and m1f are in the supplementary material, (refer to section "Urbanicity earlier v urbanicity now.")

Figure 2 and 3 use alternative operationalizations for "current urbanicity," and again, the smaller the current place of residence, the bigger the gap in SWB between those who grew up in smaller places and those who grew up in large cities. The second panel in each figure adds occupational dummies, and again, the results are stronger.

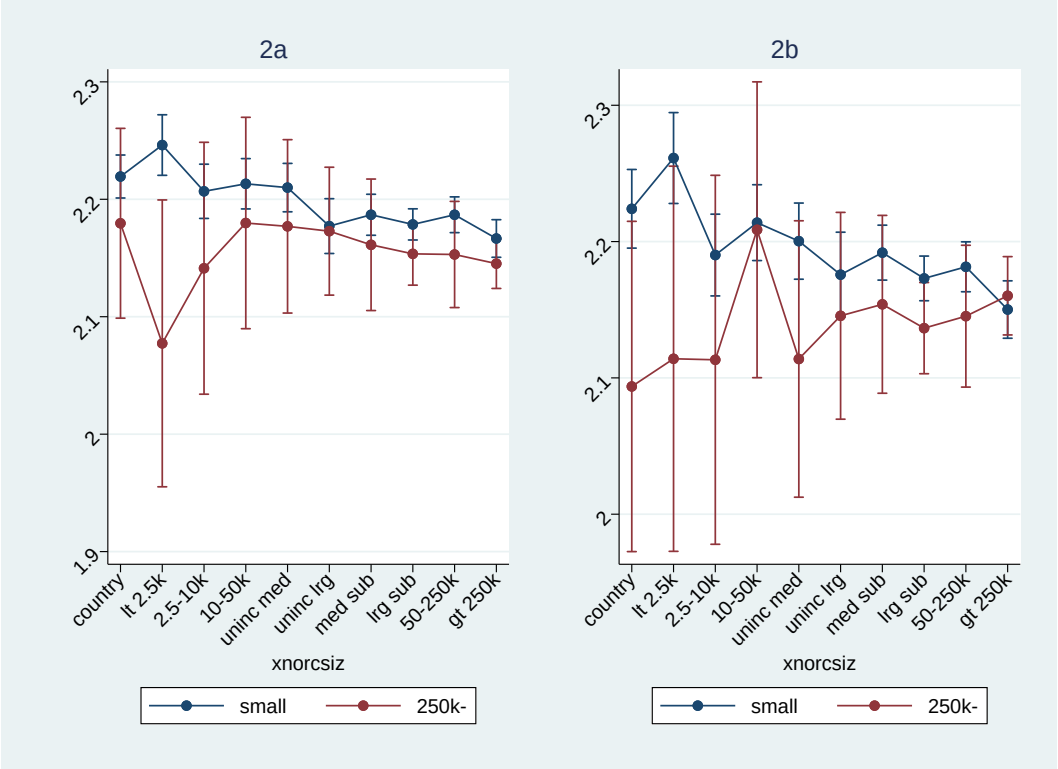

Figure 2: Predicted SWB and 95% CI by "small" v "250k-" size of the place where one grew up against `xnorcsiz`. Panel 2b adds a set of dummies for occupations. The corresponding regression models, m2a, and m2b are in the supplementary material (section "Urbanicity earlier v urbanicity now.")

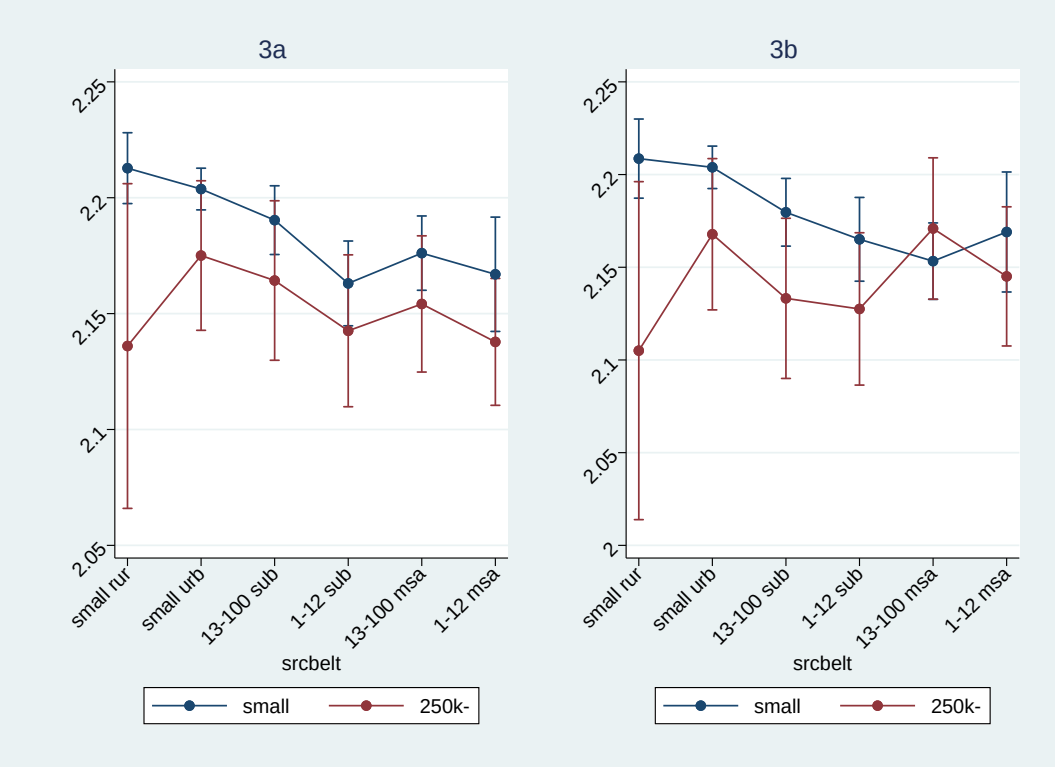

Figure 3: Predicted SWB and 95% CI by "small" v "250k-" size of the place where one grew up against `srcbelt`. Both models control for occupations. The corresponding regression models, m3a, and m3b are in the supplementary material (section "Urbanicity earlier v urbanicity now.")

Age, year, and cohort effects

We have also tried interactions with age, year, and cohort. We did not find much divergent movement in SWB over time with respect to urbanicity of the place where one grew up as opposed to what was found earlier with respect to the size of one's current place of residence (Okulicz-Kozaryn 2018a).

In addition, we did not find a consistent differential in age or cohort effects by the size of the place where one grew up with respect to largest cities v smallest areas. However, we did find a differential effect in growing up on a farm versus in the suburbs. Results for the cohorts are inconsistent when treating cohort as continuous versus discrete variable, and hence, postponed to the supplementary material. Results for age in Figure 4 indicate that among younger respondents, there is not much difference; older people who grew up

in a farm are happier than those who grew up in big-city suburbs.[15] The second panel (6b) shows predicted values against age quintiles, and a clear U-shaped pattern emerges: people in their mid-life have the lowest happiness level, and the older the person, the bigger the gap between those who grew up in a farm, and those who grew up in the suburbs. Both models control for occupational dummies.

The existing literature examining SWB across cities in the U.S. and their suburbs, suggest that those who live in suburbs might have higher SWB as a result of lower population densities, better amenities such as school or hospitals, higher property values, neighborhood safety, quietness, lack of pollution and access to green spaces (Wang and Wang 2016, Pfeiffer and Clouties 2016). These characteristics, which are typically associated with suburban living, could be the reasons why those who grew up in urban areas have lower levels of happiness compared to those from suburban areas. Concurrently, Morris (2019) also found that suburbanites have higher SWB than city dwellers. He attributes this difference to newer and higher-quality housing stock, greater possibilities of homeownership, less crowding, less noise and better aesthetics (less blight, better landscaping). Building on this literature, and on our findings, future research should investigate the specific reasons through which suburban living seems to be contributing to higher SWB.

[15]Note that the suburb is not a proxy for a city, but this illustration allows us to see the most contrasting difference between a smaller place (farm) vs. a much bigger place (big-city suburbs).

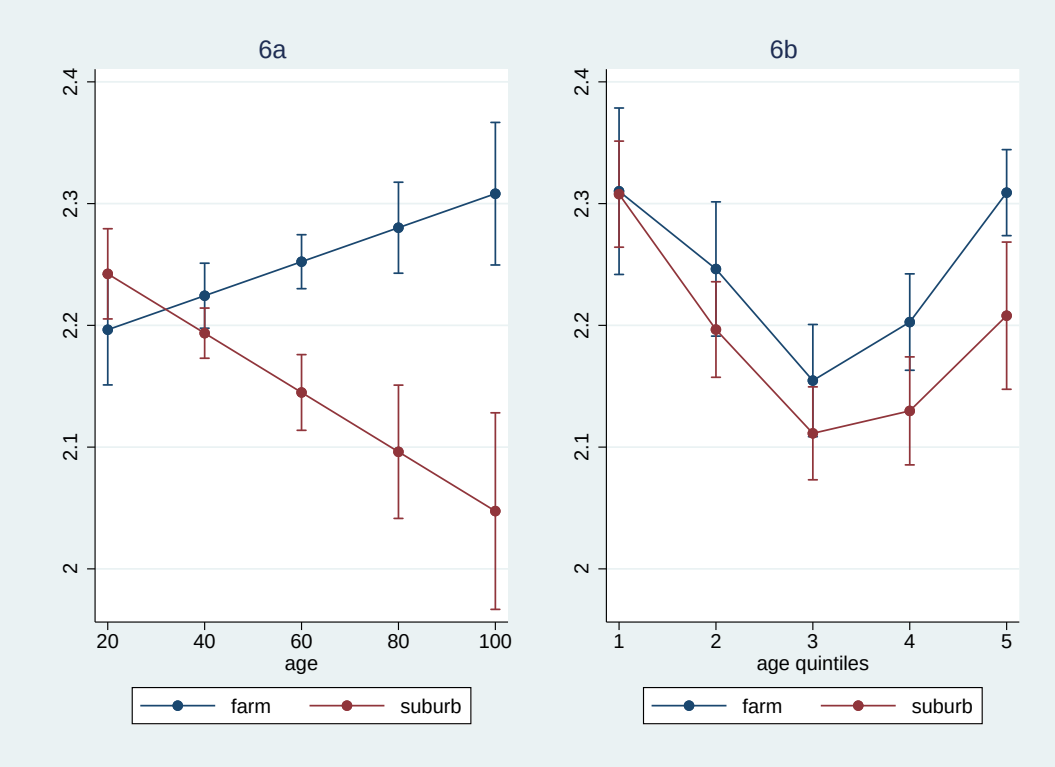

Figure 4: Predicted SWB by "farm" v "suburb" size of the place where one grew up against age (6a) and age quintiles (6b). The corresponding regression models, m6a, and m6b are in the supplementary material (section "Urbanicity when growing up against age and cohort.")

Conclusion and discussion

Urbanization is arguably one of the most significant changes in human habitat, and it is happening at an unprecedented scale: each year cities balloon by tens of millions of people (refer to `https://esa.un.org/unpd/wup`). It is a phenomenon of such massive magnitude that China, the country that has been urbanizing the most in the world recently, consumed 6,500 million tons of cement between 2011 and 2014—in one hundred years the United States has consumed 4,500 million tons only (Harvey 2016). As urbanism becomes a way of life, it is important to understand how it affects people's happiness and how public policies should be enacted to maximize happiness (Okulicz-Kozaryn 2015b, **?**, Kahneman et al. 1997, Akay et al. 2015). The objective of this study is to understand the perennial effect of urban upbringing on a person's happiness. These results

aim to stimulate discussion by challenging the mainstream pro-urban view that people are happier in cities (e.g., (Glaeser 2011)) when empirical research provides evidence to the contrary: living in a city is associated with unhappiness, and, as our findings show, those who grew up in cities have lower happiness levels than those who did not, this is indicative of a possible long-lasting effect on one's happiness.

Although our results are applicable to the United States only, research examining European and Scandinavian countries have found that geographical location is a significant determinant of happiness and people living in smaller places and rural areas had higher happiness levels than city dwellers (**?**Hayo 2004, Dale 1980, **?**).

This study contributes to the literature by showing how being exposed to urbanicity during childhood can affect a person's SWB later in life. The results are striking: the effect of an urban upbringing on SWB is as strong as the effect of one's current urban residency. The analysis also indicates that people in the largest cities have in general lower happiness levels regardless of where they grew up. There is a flipside: not only does urban upbringing affect current SWB in addition to the urbanicity in one's current place of residency, but the urbanicity in one's current place of residency affects SWB in addition to having an urban upbringing. Thus, the current size of one's place of residency affects their happiness—net of where one grew up and what one may understand as normal based on their childhood experiences. Still, there is an interaction effect: if a person grew up in a big city, then her happiness level is higher living in a big city as compared to someone who grew up in a smaller area. In other words, people who grew up in larger areas but live in smaller areas are unhappier when compared to those who grew up in smaller areas and continue to live there. There is also an interactive effect with age: older people have higher levels of happiness if they grew up on a farm.

We speculate that to some degree (but not fully) people get used to cities if they grow up in them, and hence have higher levels of happiness compared to those who grew up in smaller areas and live now in cities. This may explain why Millenials are happier in cities (Okulicz-Kozaryn 2018a) as more recent cohorts are more likely to have been growing up in cities. Changes in one's neural processing are a pathway between urban

upbringing and adult well-being (Lederbogen et al. 2011). Another pathway may simply have to do with the negative consequences of urbanism: isolation, anomie, deviance, vice, crime, conspicuous consumption, pollution, noise, crowding, and poverty[16] can take a toll on children who grow up in cities. However, it is probably largely unexpected that the urban upbringing disadvantage is felt later in adult life—it is a sobering finding especially amid current pro-urban fashion.

The size of a place can have an ecological and situational influence on SWB as shown by previous research. For example, Mouratidis (2019) showed that perceived safety, noise, and cleanliness can have a significant impact on SWB, and by addressing these problems SWB can be promoted in compact cities. Our findings are consistent with the hypothesis that the size of a place has some socialization influence on SWB, if such socialization results in lowered SWB. Our results also partially support the socialization hypothesis that urban upbringing makes people happier in today's urban world, by preparing them to better live in cities. But such adjustment is not full—urbanites still have low levels of happiness. Furthermore, growing up in the country-side does not decreases one's happiness in today's urban world. If anything, growing up on a farm may actually make people happier later in life.[17]

We should also consider a possible over-time change effect. The rural happiness may be slipping away as rural disadvantage is growing—the smaller and rural places are being forgotten and left behind (Okulicz-Kozaryn 2018b,a, Hanson 2015). It can be challenging to imagine a flourishing happy rural life given the increasing urbanization the world is experiencing. Rural jobs are being depleted and an urban way of life seem to be imposed in today's society. Strategies to improve not only urban but also rural areas are pressing and should be a high priority for policy makers and planners.

Our analysis shows a curious finding: greater happiness later in life for people who grew up in farms. This is not necessarily unexpected—farm kids learn real life skills and are "tougher" than suburban kids.[18]

[16] For a classic review of urban problems refer to Wirth (1938), Park (1915), Park et al. ([1925] 1984), Tönnies ([1887] 2002), Simmel (1903), and for a more modern view, see White and White (1977) and Okulicz-Kozaryn (2015a).

[17] The positive effect of growing up on a farm is not robust after the inclusion of additional controls in the online appendix, however. Hence, caution in interpretation is needed.

[18] For instance, see a series of simple and short but arguably to the point articles: Farmer Talk (2014c,b,a).

At the same time, farm life does not corrupt or promote deviance as cities do (Wirth 1938, Park et al. [1925] 1984). Yet, these days farming is often not a sustainable profitable business. As the New York Times cautiously warns readers, "Don't Let Your Children Grow Up to Be Farmers" (2017)—not only is urbanization rampant, but farming is struggling. Unfortunately, capitalism (and associated urbanization) often, if not usually, promote ways of life that do not lead to happiness (Kasser 2003, Marcuse 2015, Lane 2000, Scitovsky 1976, Klein 2014).[19]

It is worth mentioning that while urbanites have lower happiness levels than rural folks, they think that they are happier (Knight and Gunatilaka 2010). Part of the explanation may be due to money illusion—the tendency to think in nominal rather than relative terms (Shafir et al. 1997)–people are lured to cities because of higher earnings, but they do not realize the cost of living. In a similar way, many people want to live in California because of its life style, climate, and other amenities, but do not appreciate living expenses. Accordingly, California is one of the least happy states in the U.S. (Oswald and Wu 2009, Schkade and Kahneman 1998).

Urbanicity and SWB research is important—it elicits discussion on how to pursue a happier life and allows people to make life-changing decisions such as where to live and where to raise a family. This research can be labeled, "evidence based pursuit of happiness," as it empirically demonstrates that in order to maximize our own happiness, and the happiness of our children in the future, large cities should, if possible, be avoided as place of residence and preference should be given to smaller places.[20] Many Americans seem to be doing just that—more than fifty percent of Americans were living in suburban areas in 2010 (**??**) and recent trends indicate that suburbs continue to grow and outpace large cities in terms of population growth (**?**).

At the same time, it must be noted that for non-happiness reasons, advocating for living in smaller areas

[19]See also Kasser and Ryan (1993), Schmuck et al. (2000), Okulicz-Kozaryn and da Rocha Valente (2017), Harvey (2014, 2016), Vohs et al. (2006), Schor (2008), Engels ([1845] 1987), LaMothe (2016). Also note that in the United States' past, when there was less commodification, commerce, market economy and capitalism, farming was a much more well-regarded business pursuit (De Crevecoeur 1981, Fischer 1991). Some researchers have claimed that capitalism is consistent with human nature, and that agrarian systems placed humans into a social cage of kinship and state power, that could only be freed by capitalist industrialization. The effect of capitalism on subjective well-being however, is overlook. Refer to **?**.

[20]For suggestions on best solutions to this ever-present and ever-increasing problem of urbanization refer to Okulicz-Kozaryn (2015a), Kallis et al. (2012). The effect size of urbanicity is not large, but it is substantial.

is at least in some ways problematic. There are great environmental (and economic) advantages to cities and mass-suburbanization or mass movement to even smaller areas is not sustainable (Meyer 2013). Meyer (2013) make a very convincing case in general, and there are many other studies pointing to massive problems of suburbanization specifically–for instance see excellent Duany et al. (2001). There is more discussion of this critical problem of advocating smaller-place living for sake of happiness in Okulicz-Kozaryn (2015a), but one point is especially important to be brought out here. Developed world, and especially the US, suffers from chronic consumerism and over-consumption, and this is the key driver of our environmental problems, not living in smaller areas. It is theoretically possible (e.g., tiny house movement), if practically difficult, to have a similar ecological footprint in smaller areas as in large cities. In terms of economic advantages of cities–technology seem to be removing that advantage–interntet/working from home, self-driving cars, and other technologies can help us live in smaller areas in the future.

Caveats and Future research

The goal of this paper is to document the lasting negative effect that urban upbringing has on one's SWB, above and beyond, the current urbanicity of one's place of residence. It is important to note that this study is largely descriptive—we report SWB patterns by current and past urbanicity—and leave it for future research to explore the reasons and causal paths.[21] Being an observational study, causality cannot be claimed. Testing and in-depth discussion of the underlying causal mechanism is beyond the scope of this study. Although this is a limitation, designing a true experimental study is not possible—one cannot randomly assign people to cities or other places. And even if we could, experimental designs suffer from low external validity, and are not an absolute improvement over observational studies (see for example Pawson and Tilley (1997)).

An inherent limitation of our study is that the place of residence at age 16 is used as a proxy for growing up—a person could have moved. For most people, however, it is reasonable to assume that the place where they were living when 16 years old, was similar to the place where they spent most of their childhood. In

[21] Also refer to the online supplementary material for robustness checks and future research.

addition, the GSS does not provide any other characteristic (e.g. socioeconomic status) of respondents when they were 16, and therefore omitted variable bias could be present. Future research can be improved by using more precise information as more data becomes available.

Likewise, our dataset is restricted to a single-item measurement of happiness. As more data becomes available in the future, researchers would benefit from using multi-item scales to cover more aspects of SWB and check the robustness of our findings.

Another caveat to our analysis is the fact that the GSS conflates places of considerable different sizes in its highest category (city> 250k)—there's no distinction between megacities, such as New York and Los Angeles, and modestly sized cities. To mitigate this issue, we ran additional robustness tests using alternative measures of urbanicity in the GSS that have finer size classifications and found results to be consistent (refer to Table 4 in the Appendix). Future research that disaggregates size categories further would be of great interest.

Future research could explore patterns of migrations and interactions between current place and earlier place of residency. Likewise, it would be interesting to study for whom and when the "the perennial dissatisfaction of urban upbringing" thesis holds. Moving has arguably different effects on different people. Schoenbaum (2017), for instance, makes several convincing points in this regard—women often move due to their husband's job, but they benefit less in terms of SWB. Conversely Kettlewell (2010) argues that there is no SWB effect for men, but a positive effect for women. Thus, future studies could analyze subgroups (e.g., by gender, race, nationality, profession) to see if results are concurrent with our findings. While we have started exploring the effect of occupation in the online supplementary material, a proper analysis is left for future research. People in low-paid jobs are better off in smaller places, even economically because low-paid jobs are not much better paid in big cities, but the cost of living is significantly greater (Schoenbaum 2017, Irwin 2017).

We have focused on the urbanicity of the size of a place: metro, city, town, and rural area. Future research

could study the urbanicity of a specific region or a specific city or metropolitan area. The U.S. is extremely diverse across its regions and cities; one may even have the impression that the U.S. is a collection of different countries, just like the European Union—future studies should investigate the effect of growing up in specific urban regions and cities and how it may impact one's subjective well-being later in life.

ONLINE APPENDIX

Note: this section will be made available online and <u>will not</u> be included in the final manuscript.

Variables' definitions, coding and distributions

The following in blue comes from the GSS Documentation[22] and is reported verbatim:

Variable xnorcsiz : EXPANDED N.O.R.C. 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.

[22] For access: https://gss.norc.org/Get-Documentation

Descriptive Text - See Appendix T, GSS Methodological Report No. 4.

The following figures show the variables distributions. If a variable has more than 10 categories it is classified into bins.

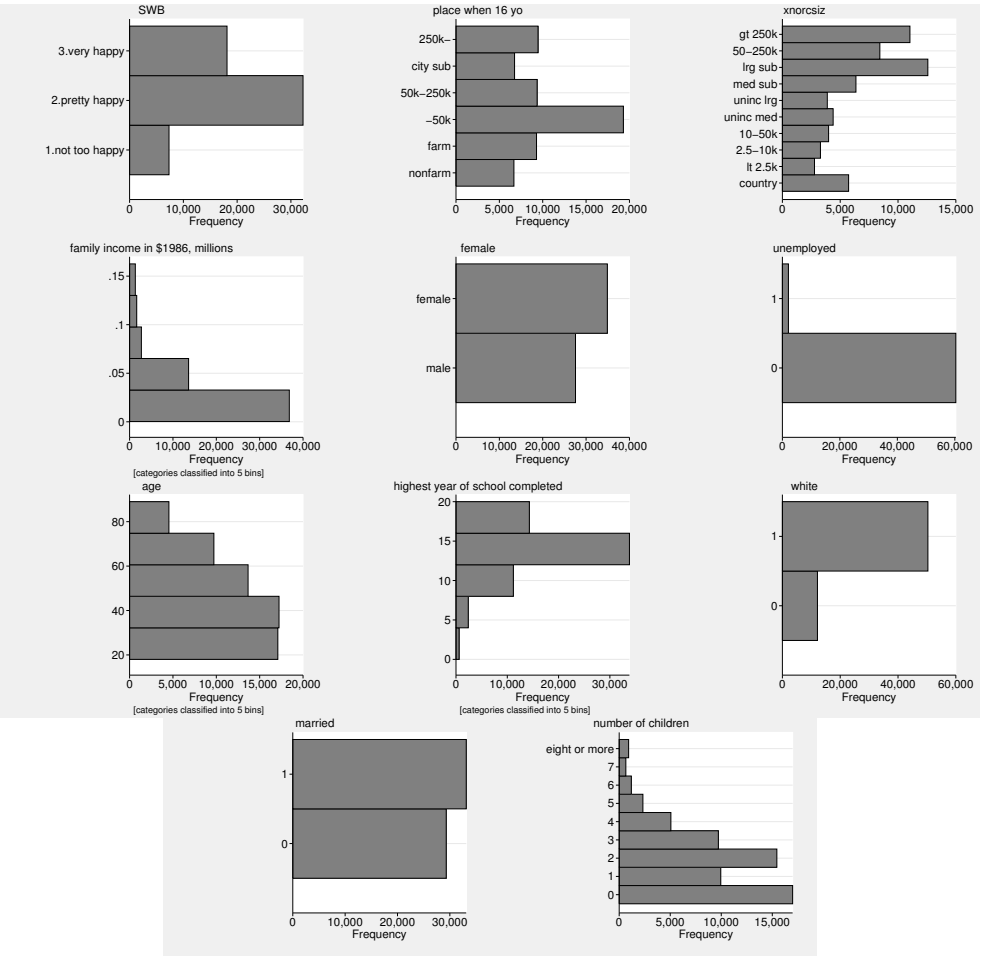

Figure 5: Variables' distribution.

Our results show that the size of a place is related to residents unhappiness. There are several alternative explanations, factors that correlate with size of a place and affect happiness, and may bias results. Regression models do not control for them, because GSS does not contain appropriate variables.

People in big cities may have higher expectations than people elsewhere–they may be the so-called "over-achievers" who never get completely satisfied.[23] On the other hand, there are many poor people either stuck (cannot afford to move) in the cities, or many poor who came to cities looking for a better life. Much of their misery, however, should be picked up by income, race, and other variables. Last, but not least, some of the arguably most unhappy urban dwellers are unaccounted for, that is, cities are in fact even less happy than argued here. These dwellers include homeless people, addicts, criminals, prostitutes, and so forth.[24]

Endogeneity, Causality, Self-Selection, Robustness

This study is relatively immune of many of the internal validity threats due to clear temporal precedence of cause before effect: no reverse causality–growing up precedes adulthood; no self-selection either. Even relatively mobile Americans, virtually never select themselves into a place of residence at age 16. There may be a possibility for self-selection with happy parents moving to rural areas and passing their SWB to their children, though very unlikely, this possibility is not a challenge to the overall findings of this study.

Unobserved heterogeneity or left out variable bias can always be a problem in data that is not an experiment or a strong quasi-experiment. No amount of statistics can completely remove this problem. However, we tried to include at least the most important variables, and we controlled for a number of happiness predictors.

The key for solving the puzzle of endogeneity is to be able to argue that variation in the main variable of interest, "PLACE WHEN 16 YO," is random (Sorensen 2012), at least random, or exogenous, with respect to other key variables in the model. We feel quite confident that it is the case here–a 16 year old person has virtually no influence over her place of settlement, and hence, place of settlement is virtually unrelated to a person's characteristics–the other variables in the model.

To further boost our inference, we conducted a few robustness checks using triangulation–using alternative measures of key concepts; and we added self reported health and occupational dummies. We postponed

[23] This idea comes from a friend of mine, who works for one of the "Big Four" business consulting firms in a big city and that's what she has observed among her colleagues.

[24] I am grateful to an anonymous reviewer for this point.

discussion of these two variables until the end because they are missing for about half of the sample and there is debate on whether health is endogenous (Diener et al. 2017, Diener 2015, Liu et al. 2016). Occupational dummies are rarely used in the literature as predictors of SWB, but we think that they can add in robustness, as occupations clearly correlate with the size of a place, and arguably people are happier in some occupations than others, and hence, omission of this variable may lead to biased results. Also, occupations differ widely across urbanicity, and perhaps even more important, people in some jobs are forced to rural areas, while others choose to live in rural areas. While, as per Goldberger, the only important thing about R squared is that it is unimportant, it is somewhat worth noting that inclusion of occupational dummies increases R squared most out of the variables considered, from .09 to .15 (cited in Gujarati 2002).

Two alternative size of a place variables are: SIZE DECILES, deciles of the population size in a place of residence; and SRCBELT, which distinguishes between medium and large suburbs and metropolitan areas. Their full definitions from the GSS documentation are as follow in blue:

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.

Variable srcbelt : 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, I 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 theCensus, 1970 Census ofPopulation, 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.

The additional variables are defined in Table 3, and their histograms are in figure 6.

Table 3: Variable definitions.

name	description
health	CONDITION OF HEALTH "Would you say your own health, in general, is excellent, good, fair, or poor?"
1 digit occupation	RESPONDENT'S OCCUPATION, 1988 CENSUS; NOTE: collapsed to 8 major sectors
srcbelt	SRC BELTCODE (see appendix for details)
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)

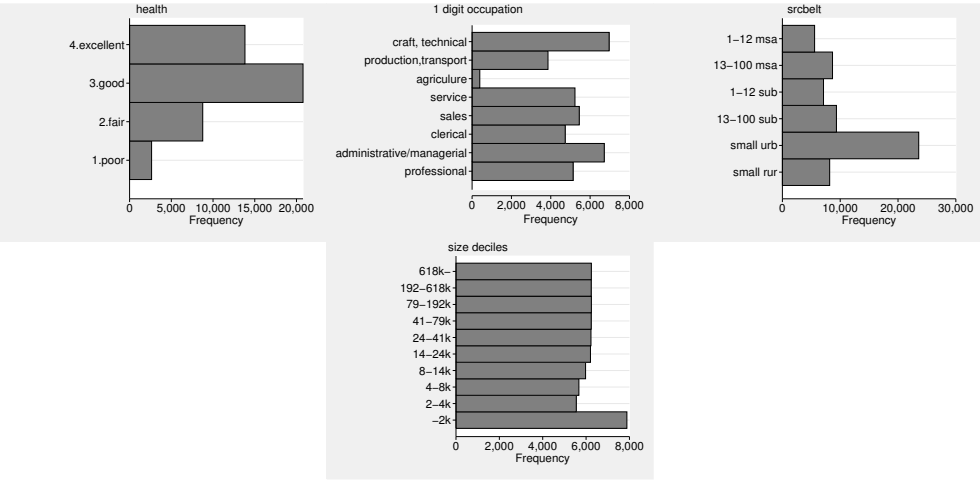

Figure 6: Variables' distribution.

Additional Regression Results

Finally, we turn to the regression results. Table 4 starts with a full model from the body of the paper and repeats the regressions for the other two alternative measures of urbanicity. Results are similar in columns c1 through e1. Column f1 is the same model, but uses a continuous measure of size and treats "PLACE WHEN 16 YO" as continuous as well. What is worth highlighting is that the effect is very strong statistically: even in the full specification we find a t-value of -6. In addition, "PLACE WHEN 16 YO" has a stronger size effect than the current size of a place, it is about twice as strong. And in f2, the effect size on "PLACE WHEN 16 YO" is three times that of the effect on "SIZE OF PLACE." Perhaps, it indicates that there is more continuity on "PLACE WHEN 16 YO," the effect is more monotonic than current size variables, and hence, it is much stronger when treating size variables as continuous.

Subsequent models #2 repeat previous models, but are over-saturated with self-reported health and occupational dummies controls. One clear difference is that for the key variable of interest, "PLACE WHEN 16 YO," "farm" is no longer significant. We still report the finding of "farm" as a happy place in the body of the

paper, but we caution the reader that the result may not be very robust. The results on the largest category "250k-", on the other hand, are larger in models #2, and so are the results on each respective largest place where a person is living currently.

Table 4: OLS regressions of SWB. Beta (fully standardized) coefficients. All models include year and region dummies.

	c1	c2	d1	d2	e1	e2	f1	f2
place when 16 yo (base: non-farm (country-side)):								
farm	0.017**	0.002	0.018**	0.003	0.017**	0.002		
-50k	-0.012+	-0.017	-0.012+	-0.017+	-0.012+	-0.016		
50k-250k	-0.008	-0.017+	-0.009	-0.018*	-0.008	-0.017+		
city sub	-0.009	-0.011	-0.009	-0.012	-0.010+	-0.013		
250k-	-0.020**	-0.027**	-0.021**	-0.028**	-0.021***	-0.029**		
place when 16 yo							-0.027***	-0.030***
xnorcsiz (base: country):								
lt 2.5k	0.008	0.010						
2.5-10k	-0.002	-0.013						
10-50k	0.000	0.001						
uninc med	-0.001	-0.005						
uninc lrg	-0.011*	-0.015+						
med sub	-0.011+	-0.011						
lrg sub	-0.018*	-0.031*						
50-250k	-0.012+	-0.016						
gt 250k	-0.024***	-0.033**						
srcbelt (base: small rur):								
small urb			-0.001	-0.006				
13-100 sub			-0.006	-0.016+				
1-12 sub			-0.018**	-0.026**				
13-100 msa			-0.013*	-0.026**				
1-12 msa			-0.016**	-0.018*				
size deciles (base: first decile):								
2-4k					-0.013*	-0.017*		
4-8k					-0.017**	-0.018*		
8-14k					-0.008	-0.016*		
14-24k					-0.015**	-0.018*		
24-41k					-0.017**	-0.028***		
41-79k					-0.018***	-0.020*		
79-192k					-0.017**	-0.027**		
192-618k					-0.024***	-0.034***		
618k-					-0.025***	-0.031***		
size of place in 1000s							-0.015**	-0.010
family income in $1986, millions	0.102***	0.071***	0.102***	0.071***	0.101***	0.069***	0.100***	0.068***
female	0.031***	0.014*	0.031***	0.014*	0.031***	0.014*	0.030***	0.014*
unemployed	-0.058***	-0.049***	-0.058***	-0.049***	-0.058***	-0.049***	-0.058***	-0.050***
age	-0.333***	-0.258***	-0.334***	-0.259***	-0.334***	-0.262***	-0.333***	-0.260***
age squared	0.366***	0.310***	0.367***	0.311***	0.367***	0.313***	0.368***	0.312***
highest year of school completed	0.070***	0.019*	0.070***	0.019*	0.070***	0.019*	0.067***	0.018*
white	0.043***	0.026***	0.042***	0.026***	0.042***	0.025***	0.044***	0.030***
married	0.204***	0.208***	0.204***	0.208***	0.204***	0.207***	0.205***	0.209***
number of children	-0.021***	-0.010	-0.021***	-0.010	-0.021***	-0.010	-0.020***	-0.009
health		0.239***		0.239***		0.239***		0.239***
occupational dummies	no	yes	no	yes	no	yes	no	yes
N	51687	21840	51687	21840	51687	21840	51687	21840

*** p<0.001 ** p<0.01, * p<0.05, + p<0.1; robust std err

Urbanicity earlier v urbanicity now

There is not a clear relationship in figure 7 when all categories of RES16 are interacted. It seems that "farm", "nonfarm" (and also mid size places "50k-250k") are becoming less happy than the largest place "250k-" (but also smaller places of "-50k" and suburbs "city sub") along with current urbanicity.

Note that models 1a, 1b, 1c, 2a, and 3a controls for year and census regions/divisions dummies, while models 1d, 1e, 1f, 2b, and 3b add a set of dummy variables for occupational categories:

Table 5: Occupational Categories

1 digit occupation	Freq.	Percent	Cum.
professional	5,136	13.34	13.34
administrative/managerial	6,720	17.46	30.81
clerical	4,734	12.30	43.11
sales	5,448	14.16	57.26
service	5,231	13.59	70.85
agriculure	392	1.02	71.87
production,transport	3,860	10.03	81.90
craft, technical	6,966	18.10	100.00
Total	38,487	100.00	

In what follows on Tables 6 to 18, we present additional robustness tests with different specifications and interactions of experiencing urbanicity earlier in life and currently.

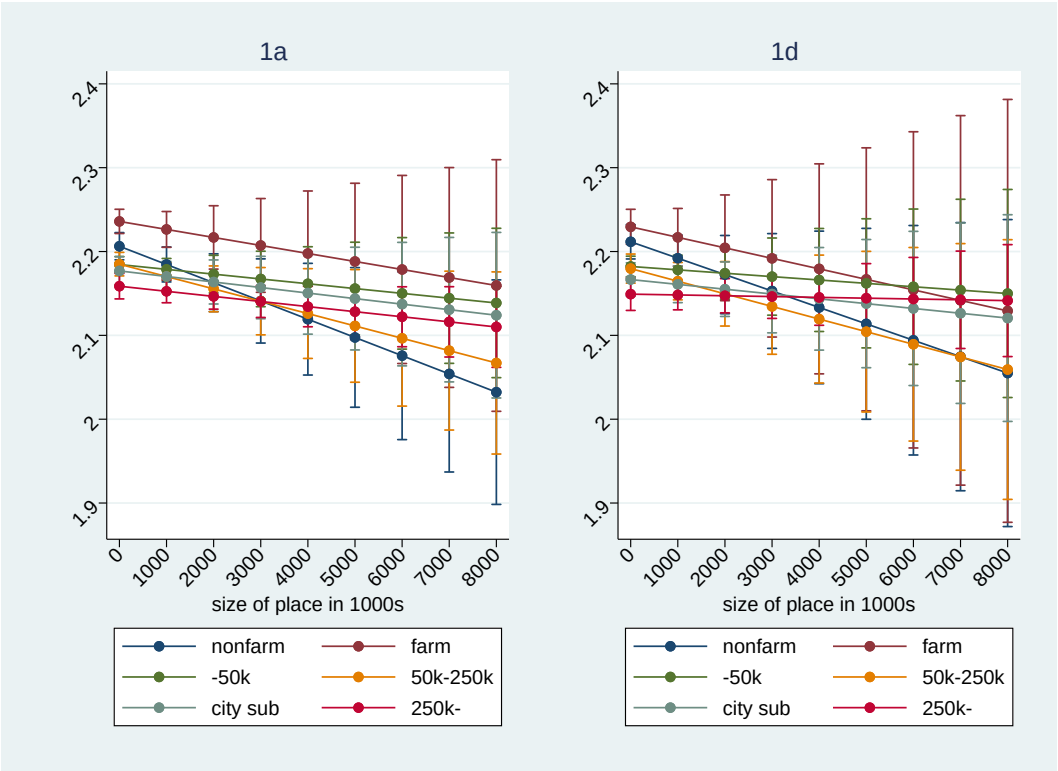

Figure 7: All categories of RES16 against size of place; based on regressions: m1a and m1d.

Table 6: OLS regressions of SWB.

	m1a	m1d
nonfarm	0.000	0.000
farm	0.030**	0.018
-50k	-0.022*	-0.029*
50k-250k	-0.021+	-0.032*
city sub	-0.029*	-0.045**
250k-	-0.048***	-0.062***
size of place in 1000s	-0.000*	-0.000+
nonfarm × size of place in 1000s	0.000	0.000
farm × size of place in 1000s	0.000	0.000
-50k × size of place in 1000s	0.000	0.000
50k-250k × size of place in 1000s	0.000	0.000
city sub × size of place in 1000s	0.000	0.000
250k- × size of place in 1000s	0.000+	0.000
family income in $1986, millions	2.200***	1.940***
female	0.039***	0.017*
unemployed	-0.205***	-0.187***
age	-0.012***	-0.014***
age squared	0.000***	0.000***
highest year of school completed	0.014***	0.012***
white	0.072***	0.044***
married	0.261***	0.269***
number of children	-0.007***	-0.004+
constant	1.940***	2.185***
N	51687	30447

*** p<0.001 ** p<0.01, * p<0.05, + p<0.1;
robust std err

Table 7: OLS regressions of SWB.

	m1b	m1e
small	0.000	0.000
250k-	-0.036***	-0.040***
size of place in 1000s	-0.000**	-0.000*
small × size of place in 1000s	0.000	0.000
250k- × size of place in 1000s	0.000	0.000
family income in $1986, millions	2.173***	1.906***
female	0.038***	0.017*
unemployed	-0.206***	-0.189***
age	-0.012***	-0.014***
age squared	0.000***	0.000***
highest year of school completed	0.013***	0.012***
white	0.072***	0.045***
married	0.262***	0.271***
number of children	-0.007***	-0.004+
constant	1.930***	2.162***
N	51687	30447

*** p<0.001 ** p<0.01, * p<0.05, + p<0.1;
robust std err

Table 8: OLS regressions of SWB.

	m1c	m1f
small	0.000	0.000
250k-	-0.063+	-0.058
-2k	0.000	0.000
2-4k	-0.033**	-0.036*
4-8k	-0.043***	-0.035*
8-14k	-0.028*	-0.029+
14-24k	-0.042***	-0.049**
24-41k	-0.048***	-0.058***
41-79k	-0.049***	-0.046**
79-192k	-0.046***	-0.061***
192-618k	-0.063***	-0.087***
618k-	-0.072***	-0.082***
small × -2k	0.000	0.000
small × 2-4k	0.000	0.000
small × 4-8k	0.000	0.000
small × 8-14k	0.000	0.000
small × 14-24k	0.000	0.000
small × 24-41k	0.000	0.000
small × 41-79k	0.000	0.000
small × 79-192k	0.000	0.000
small × 192-618k	0.000	0.000
small × 618k-	0.000	0.000
250k- × -2k	0.000	0.000
250k- × 2-4k	0.015	0.009
250k- × 4-8k	0.017	0.009
250k- × 8-14k	0.045	-0.004
250k- × 14-24k	0.029	0.060
250k- × 24-41k	0.033	-0.022
250k- × 41-79k	0.029	-0.012
250k- × 79-192k	0.034	0.042
250k- × 192-618k	0.035	0.081
250k- × 618k-	0.053	0.055
family income in $1986, millions	2.195***	1.933***
female	0.038***	0.017*
unemployed	-0.206***	-0.188***
age	-0.012***	-0.014***
age squared	0.000***	0.000***
highest year of school completed	0.013***	0.012***
white	0.068***	0.038***
married	0.260***	0.268***
number of children	-0.007***	-0.005*
constant	1.969***	2.207***
N	51687	30447

*** p<0.001 ** p<0.01, * p<0.05, + p<0.1;
robust std err

Table 9: OLS regressions of SWB.

	m2a	m2b
small	0.000	0.000
250k-	-0.040	-0.130*
country	0.000	0.000
lt 2.5k	0.027+	0.037+
2.5-10k	-0.013	-0.034
10-50k	-0.006	-0.010
uninc med	-0.009	-0.024
uninc lrg	-0.042**	-0.048*
med sub	-0.033*	-0.032+
lrg sub	-0.041***	-0.051**
50-250k	-0.033**	-0.043*
gt 250k	-0.053***	-0.074***
small × country	0.000	0.000
small × lt 2.5k	0.000	0.000
small × 2.5-10k	0.000	0.000
small × 10-50k	0.000	0.000
small × uninc med	0.000	0.000
small × uninc lrg	0.000	0.000
small × med sub	0.000	0.000
small × lrg sub	0.000	0.000
small × 50-250k	0.000	0.000
small × gt 250k	0.000	0.000
250k- × country	0.000	0.000
250k- × lt 2.5k	-0.129+	-0.017
250k- × 2.5-10k	-0.026	0.053
250k- × 10-50k	0.006	0.125
250k- × uninc med	0.007	0.044
250k- × uninc lrg	0.036	0.100
250k- × med sub	0.014	0.092
250k- × lrg sub	0.015	0.094
250k- × 50-250k	0.006	0.094
250k- × gt 250k	0.018	0.140*
family income in $1986, millions	2.229***	1.966***
female	0.038***	0.017*
unemployed	-0.206***	-0.187***
age	-0.012***	-0.014***
age squared	0.000***	0.000***
highest year of school completed	0.013***	0.012***
white	0.069***	0.042***
married	0.260***	0.269***
number of children	-0.007***	-0.005*
constant	1.951***	2.189***
N	51687	30447

*** p<0.001 ** p<0.01, * p<0.05, + p<0.1;
robust std err

Table 10: OLS regressions of SWB.

	m3a	m3b
place when 16 yo=0	0.000	0.000
place when 16 yo=1	-0.077*	-0.104*
small rur	0.000	0.000
small urb	-0.009	-0.005
13-100 sub	-0.022*	-0.029*
1-12 sub	-0.050***	-0.044**
13-100 msa	-0.037**	-0.055***
1-12 msa	-0.046**	-0.040*
place when 16 yo=0 × small rur	0.000	0.000
place when 16 yo=0 × small urb	0.000	0.000
place when 16 yo=0 × 13-100 sub	0.000	0.000
place when 16 yo=0 × 1-12 sub	0.000	0.000
place when 16 yo=0 × 13-100 msa	0.000	0.000
place when 16 yo=0 × 1-12 msa	0.000	0.000
place when 16 yo=1 × small rur	0.000	0.000
place when 16 yo=1 × small urb	0.048	0.067
place when 16 yo=1 × 13-100 sub	0.051	0.057
place when 16 yo=1 × 1-12 sub	0.056	0.066
place when 16 yo=1 × 13-100 msa	0.055	0.121*
place when 16 yo=1 × 1-12 msa	0.048	0.080
family income in $1986, millions	2.233***	1.964***
female	0.038***	0.017*
unemployed	-0.206***	-0.188***
age	-0.012***	-0.014***
age squared	0.000***	0.000***
highest year of school completed	0.013***	0.012***
white	0.069***	0.041***
married	0.261***	0.269***
number of children	-0.007***	-0.005*
constant	1.949***	2.180***
N	51687	30447

*** p<0.001 ** p<0.01, * p<0.05, + p<0.1;
robust std err

Urbanicity when growing up against age and cohort

Age quintiles in Figure 8 are a version of Figure 4 from the body of the manuscript: cohort effects are less than age effects. And note that they are significant for continuous, but insignificant for categorical variables: one reason may be recent fashion among Millennials for both cities and farms

All regressions in this section control for year, region, and occupational categories.

In figure 9 we find that across younger cohorts, there is not much difference. Older cohorts are happier in farm. But there is no clear pattern when cohorts are dummied out–all cohorts prefer farm. Note: there

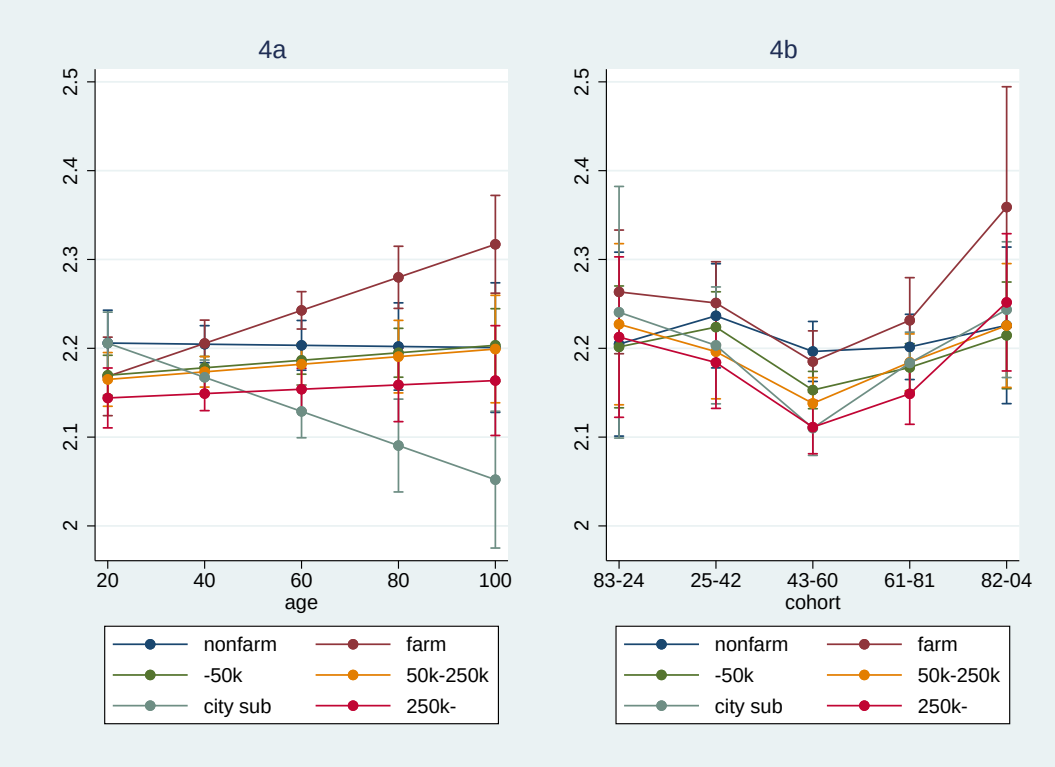

Figure 8: Predicted SWB values: all categories of RES16 against age and cohort; corresponding regressions are models m4a and m4b.

are few observations in the oldest and youngest cohorts–wide CI; but somehow the effects in 7a and 7b are almost opposite, and we do not have an explanation for it.

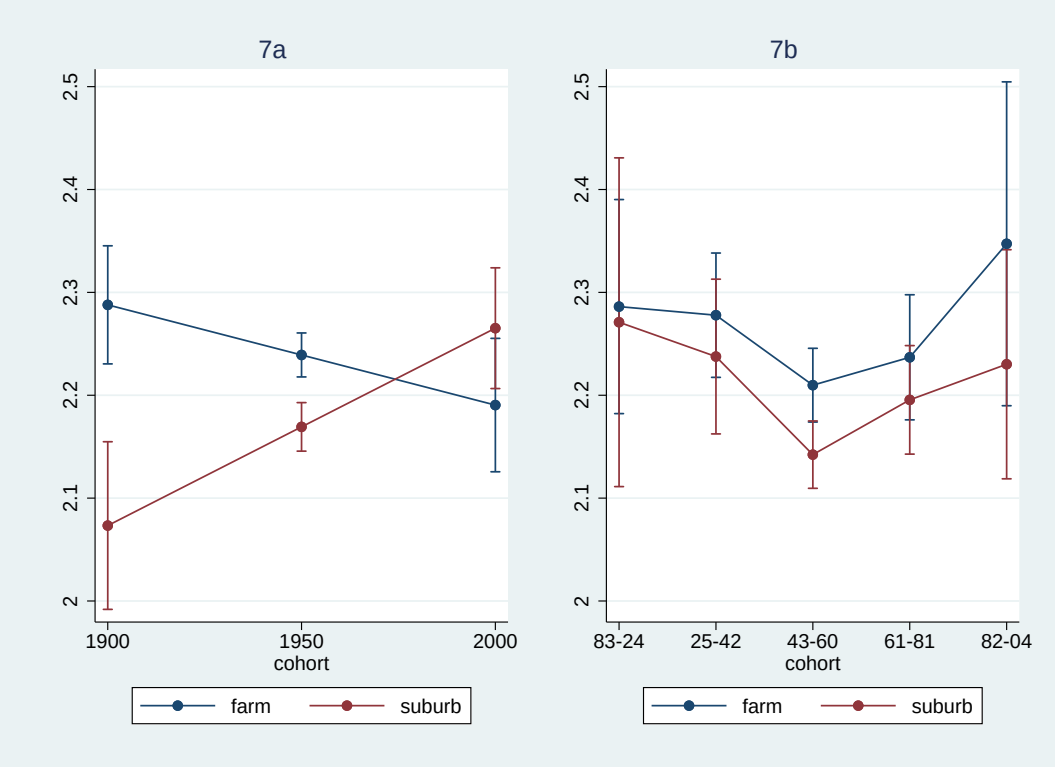

Figure 9: Predicted SWB values: Only "farm" and "suburb" categories from RES16 against age and cohort; corresponding regressions are models m4a and m4b.

Table 11: OLS regressions of SWB.

	m4a
nonfarm	0.000
farm	-0.076+
-50k	-0.046
50k-250k	-0.051
city sub	0.037
250k-	-0.068+
age	-0.000
nonfarm × age	0.000
farm × age	0.002*
-50k × age	0.000
50k-250k × age	0.000
city sub × age	-0.002*
250k- × age	0.000
size of place in 1000s	-0.000+
family income in $1986, millions	1.772***
female	0.016*
unemployed	-0.196***
highest year of school completed	0.011***
white	0.049***
married	0.259***
number of children	-0.009***
constant	1.915***
N	30447

*** p<0.001 ** p<0.01, * p<0.05, + p<0.1;
robust std err

Table 12: OLS regressions of SWB.

	m4b
nonfarm	0.000
farm	0.059
-50k	-0.003
50k-250k	0.022
city sub	0.036
250k-	0.008
83-24	0.000
25-42	0.032
43-60	-0.008
61-81	-0.003
82-04	0.021
nonfarm × 83-24	0.000
nonfarm × 25-42	0.000
nonfarm × 43-60	0.000
nonfarm × 61-81	0.000
nonfarm × 82-04	0.000
farm × 83-24	0.000
farm × 25-42	-0.044
farm × 43-60	-0.070
farm × 61-81	-0.029
farm × 82-04	0.074
-50k × 83-24	0.000
-50k × 25-42	-0.010
-50k × 43-60	-0.040
-50k × 61-81	-0.020
-50k × 82-04	-0.008
50k-250k × 83-24	0.000
50k-250k × 25-42	-0.063
50k-250k × 43-60	-0.081
50k-250k × 61-81	-0.040
50k-250k × 82-04	-0.023
city sub × 83-24	0.000
city sub × 25-42	-0.069
city sub × 43-60	-0.122
city sub × 61-81	-0.054
city sub × 82-04	-0.018
250k- × 83-24	0.000
250k- × 25-42	-0.061
250k- × 43-60	-0.093
250k- × 61-81	-0.061
250k- × 82-04	0.018
age	-0.009***
age squared	0.000***
size of place in 1000s	-0.000+
family income in $1986, millions	1.962***
female	0.019*
unemployed	-0.186***
highest year of school completed	0.013***
white	0.046***
married	0.270***
number of children	-0.006*
constant	2.065***
N	30446

*** p<0.001 ** p<0.01, * p<0.05, + p<0.1;
robust std err

Table 13: OLS regressions of SWB.

	m5a
nonfarm	0.000
farm	2.490
-50k	0.509
50k-250k	-0.653
city sub	-3.449*
250k-	-0.204
cohort	-0.000
nonfarm × cohort	0.000
farm × cohort	-0.001
-50k × cohort	-0.000
50k-250k × cohort	0.000
city sub × cohort	0.002*
250k- × cohort	0.000
size of place in 1000s	-0.000+
family income in $1986, millions	1.763***
female	0.016*
unemployed	-0.197***
highest year of school completed	0.011***
white	0.049***
married	0.258***
number of children	-0.009***
constant	2.430*
N	30447

*** p<0.001 ** p<0.01, * p<0.05, + p<0.1;
robust std err

Table 14: OLS regressions of SWB.

	m5b
nonfarm	0.000
farm	0.048
-50k	0.002
50k-250k	-0.005
city sub	0.041
250k-	-0.025
age quintiles=1	0.000
age quintiles=2	-0.015
age quintiles=3	-0.056+
age quintiles=4	-0.037
age quintiles=5	0.012
nonfarm × age quintiles=1	0.000
nonfarm × age quintiles=2	0.000
nonfarm × age quintiles=3	0.000
nonfarm × age quintiles=4	0.000
nonfarm × age quintiles=5	0.000
farm × age quintiles=1	0.000
farm × age quintiles=2	-0.032
farm × age quintiles=3	-0.084
farm × age quintiles=4	-0.045
farm × age quintiles=5	0.016
-50k × age quintiles=1	0.000
-50k × age quintiles=2	-0.040
-50k × age quintiles=3	-0.049
-50k × age quintiles=4	-0.043
-50k × age quintiles=5	0.001
50k-250k × age quintiles=1	0.000
50k-250k × age quintiles=2	-0.047
50k-250k × age quintiles=3	-0.038
50k-250k × age quintiles=4	-0.044
50k-250k × age quintiles=5	0.012
city sub × age quintiles=1	0.000
city sub × age quintiles=2	-0.086*
city sub × age quintiles=3	-0.125**
city sub × age quintiles=4	-0.123**
city sub × age quintiles=5	-0.083
250k- × age quintiles=1	0.000
250k- × age quintiles=2	-0.048
250k- × age quintiles=3	-0.039
250k- × age quintiles=4	-0.052
250k- × age quintiles=5	-0.002
size of place in 1000s	-0.000+
family income in $1986, millions	2.005***
female	0.018*
unemployed	-0.184***
highest year of school completed	0.012***
white	0.045***
married	0.267***
number of children	-0.005*
constant	1.901***
N	30447

*** p<0.001 ** p<0.01, * p<0.05, + p<0.1;
robust std err

Table 15: OLS regressions of SWB.

	m6a
farm	0.000
suburb	0.123**
age	0.001*
farm × age	0.000
suburb × age	-0.004***
size of place in 1000s	-0.000
family income in $1986, millions	1.792***
female	0.007
unemployed	-0.205***
highest year of school completed	0.008**
white	0.073***
married	0.267***
number of children	0.000
constant	1.896***
N	7533

*** p<0.001 ** p<0.01, * p<0.05, + p<0.1;
robust std err

Table 16: OLS regressions of SWB.

	m6b
farm	0.000
suburb	-0.002
age quintiles=1	0.000
age quintiles=2	-0.064
age quintiles=3	-0.156***
age quintiles=4	-0.107**
age quintiles=5	-0.001
farm × age quintiles=1	0.000
farm × age quintiles=2	0.000
farm × age quintiles=3	0.000
farm × age quintiles=4	0.000
farm × age quintiles=5	0.000
suburb × age quintiles=1	0.000
suburb × age quintiles=2	-0.047
suburb × age quintiles=3	-0.041
suburb × age quintiles=4	-0.071
suburb × age quintiles=5	-0.099+
size of place in 1000s	-0.000
family income in $1986, millions	2.071***
female	0.008
unemployed	-0.190***
highest year of school completed	0.009**
white	0.068**
married	0.280***
number of children	0.004
constant	1.997***
N	7533

*** p<0.001 ** p<0.01, * p<0.05, + p<0.1;
robust std err

Table 17: OLS regressions of SWB.

	m7a
farm	0.000
suburb	-5.711***
cohort	-0.001+
farm × cohort	0.000
suburb × cohort	0.003***
size of place in 1000s	-0.000
family income in $1986, millions	1.757***
female	0.006
unemployed	-0.209***
highest year of school completed	0.008**
white	0.073***
married	0.265***
number of children	-0.000
constant	3.874***
N	7534

*** p<0.001 ** p<0.01, * p<0.05, + p<0.1;
robust std err

Table 18: OLS regressions of SWB.

	m7b
farm	0.000
suburb	-0.015
83-24	0.000
25-42	-0.008
43-60	-0.076
61-81	-0.049
82-04	0.061
farm × 83-24	0.000
farm × 25-42	0.000
farm × 43-60	0.000
farm × 61-81	0.000
farm × 82-04	0.000
suburb × 83-24	0.000
suburb × 25-42	-0.025
suburb × 43-60	-0.052
suburb × 61-81	-0.026
suburb × 82-04	-0.102
age	-0.014***
age squared	0.000***
size of place in 1000s	-0.000
family income in $1986, millions	2.000***
female	0.008
unemployed	-0.189***
highest year of school completed	0.009**
white	0.069**
married	0.282***
number of children	0.003
constant	2.303***
N	7533

*** p<0.001 ** p<0.01, * p<0.05, + p<0.1;
robust std err

Results without income variable

Table 19 repeats table 2 but substracts income variable (except leaving it as it was in a2; and adds it in columns b1 and b2 as income was absent there in original table).

Big city people make more money (even when taking cost of living into account), so controlling for income controls away an important positive characteristic of urban life. Still, ultimately the models are stronger with income control left in–and they were presented in the body of the paper–but this additional set of specifications serves as a robustness test.

What is worth noting is that, as expected, results without income are somewhat weaker; still, the top category, "250k-" (and "farm"), holds up strong. This indicates that even if we allow income to conflate with urbanicity, largest cities are less happy (and farm is more happy). This brings additional confidence to our results.

Table 19: OLS regressions of SWB. Fully standardized (beta) coefficients.

	a1	a2	a3	a4	a5	b1	b2
place when 16 yo (base: country, non-farm):							
farm	0.028***	0.032***	0.026***	0.021***	0.020***		0.029***
-50k	-0.001	-0.012+	-0.009	-0.008	-0.006		-0.007
50k-250k	-0.005	-0.018**	-0.008	-0.007	-0.003		-0.005
city sub	0.006	-0.021***	-0.006	-0.003	0.000		-0.009
250k-	-0.035***	-0.047***	-0.025***	-0.021***	-0.015*		-0.026***
xnorcsiz (base: country):							
lt 2.5k					0.004	0.012*	0.012*
2.5-10k					-0.005	-0.008	-0.005
10-50k					-0.004	-0.006	-0.002
uninc med					0.000	-0.007	-0.002
uninc lrg					-0.005	-0.026***	-0.019***
med sub					-0.009	-0.028***	-0.020***
lrg sub					-0.013+	-0.051***	-0.036***
50-250k					-0.012*	-0.042***	-0.032***
gt 250k					-0.024***	-0.081***	-0.062***
family income in $1986, millions		0.180***				0.178***	0.181***
female			0.026***	0.025***	0.025***		
unemployed			-0.064***	-0.062***	-0.062***		
age			-0.262***	-0.255***	-0.254***		
age squared			0.292***	0.288***	0.288***		
highest year of school completed			0.095***	0.098***	0.099***		
white			0.052***	0.052***	0.048***		
married			0.234***	0.234***	0.232***		
number of children			-0.020***	-0.020***	-0.021***		
year and region dummies	no	no	no	yes	yes	no	no
N	57613	51952	57155	57155	57155	52020	51952

*** p<0.001 ** p<0.01, * p<0.05, + p<0.1; robust std err

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