# Urban Misanthropy: Do Cities Promote a Dislike of Humankind?

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#### **Abstract**

We use pooled US General Social Survey (GSS, 1972-2016) to study the relationship between urbanism and misanthropy (a dislike of humankind). We use three operationalizations of urbanicity and an extensive set of control variables. Human evolutionary history (small group living), psychological theory (homophily or ingroup preference) and classical sociological urban theory suggest that misanthropy should be observed in the most dense and heterogeneous places like large cities. Our results mostly agree: overall, over the past four decades, misanthropy is lowest in smallest settlements (but not in the countryside), and the effect size of urbanicity is about half of that of income. Yet, the rural advantage has now disappeared–since the early 1990s till late 2000s, misanthropy has increased fastest in smallest places (< 10k). We interpret this finding as an indication that smallest places have been left behind–most resources and amenities are increasingly urban. It is only the very largest cities that are robustly more misanthropic than smaller places. The analysis is solely for the US, and the results should not be generalized, especially in developing countries results may differ.

KEYWORDS: CITY, URBANISM, TRUST, MISANTHROPY

"The more I learn about people, the more I like my dog." Mark Twain<sup>1</sup>

"To look at the cross-section of any plan of a big city is to look at something like the section of a fibrous tumor." Frank Lloyd Wright

This study tests a simple hypothesis: the more people, the more dislike for them. Such idea might have struck many as not very relevant or non-existent, especially amid current pro-urbanism. But the current covid19 pandemic requires us to reasses past thinking.

Urbanization has significantly affected many aspects of social, political, and economic life (Kleniewski and Thomas 2010). Before industrialization took off, in the early 1800s, only several percent of the world population lived in cities; by 1900, however, the proportion more than doubled to 13 percent as people moved to be near factories and industrial sites (Davis 1955). In 1950, a third of the world population inhabited in cities, and by 2050 it is estimated that it will increase to about two thirds (https://esa.un.org/unpd/wup). In terms of absolute population increase, urbanization is even more dramatic: In 1890, only .2 billion of the world population lived in cities, by 1950 .7 billion, in 2000 almost 3 billion, and by 2050 it is estimated that over 6 billion people will be living in cities (https://esa.un.org/unpd/wup). And what is often overlooked—city living is a very recent development in hundreds of thousands years history of human species—city living is not natural for human species.<sup>2</sup>

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For a long time social scientists have tried to understand how urbanization affects human beings. Yet the most sharp and critical observations were published decades ago—it is our contribution to connect with the illuminating classical studies amid current prourbanism. We start building our argument by laying out classic theoretical background, supplementing it with more current literature where possible.<sup>3</sup> The most current empirical studies about misanthropy are several decades ago, and so mostly are related empirical studies about negative side of urbanism—this is another contribution of this study—we not only connect with classic tehory, but also

<sup>&</sup>lt;sup>1</sup>Interestingly, Cooper (2018) claims that misanthtropy is indeed justified in the light of how humans compare with other animals.

<sup>&</sup>lt;sup>2</sup>By not natural we mean that humans have not evolved to live in cities, especially not at such large population size, density, and heterogeneity. We elaborate later.

<sup>&</sup>lt;sup>3</sup>Notably recent Thrift (2005).

with older empirical studies that have been largely forgotten and disontinued and we update them with new data (up to 2016 and going back to 1972).

Early sociologists proposed that urbanization created malaise due to the core characteristics of cities: increased population size created anonymity and impersonality, density created sensory overload and withdrawal from social life, and heterogeneity led to anomie and deviance (see Park et al. ([1925] 1984), Simmel (1903), Tönnies ([1887] 2002) and Wirth (1938)), and also led to lower trust and wellbeing Putnam (2007), Okulicz-Kozaryn (2015a), Herbst and Lucio (2014), Postmes and Branscombe (2002), Vogt Yuan (2007), Smelser and Alexander (1999). American intellectuals almost universally expressed ambivalence or animosity toward city life, some even describing the city as "a cancer on the body of the state" (White and White 1977, p. 235). White and White (1977) is a wonderful summary of this intellectual history. Interestingly, many of the urban critics lived and wrote in cities, e.g., Socrates in Athens, Franklin in Boston and Philadelphia, Wright in Chicago<sup>4</sup>, and authors of this paper live in Philadelphia and New York City.

It must be noted that anti-urbanism ended several decades ago, and now urbannes is desirable. The classical sociological urban theory gave way park84, simmel03, tonnies57 and Wirth (1938), Milgram (1970), Park (1915), Park et al. ([1925] 1984) gave way to subcultural theory ,fischer75,fischer95,wilson85, palisi83, and debate about optimal size of city richardson72 singell74 alonso60,alonso71 elgin75 capello00 gave way to the-bigger-the-better thinking and glorification of urbanization GLAESERbook and as exemplified by Millenials rediscovey of city CITEmynoUrbanMalaise<sup>5</sup>

some promote cities as the best places to live. A good recent example is the bestselling, "Triumph of the City: How Our Greatest Invention Makes Us Richer, Smarter, Greener, Healthier, and Happier" (Glaeser 2011). there are obviously many bright sides to city life, freedom toennies, increased productivity, innovation, economic growth, and multiple efficiencies related to density in transportation, public goods provision, lower per capita pollution etc (glaeser stiupid book o sullivan meyer mit book etc) heterogenity can have a highly positive impact on both economic performance (e.g. see recent work by Viola von Berlepsch and Andres Rodriguez-Pose CITE). There is no doubt that cities are economic engines of todays economy glaeser city book

Yet even recently, there is an indication of current urban disconted as summarized by Amin (2006): "for the vast majority of people, cities are polluted, unhealthy, tiring, overwhelming, confusing, alienating." Thrift (2005) proposes that misanthropy is a common characteristic of urbanism: "misanthropy is a natural condition of cities, one which cannot be avoided and will not go away."

The question we are asking is about the overall effect of urbanicity on human condition. In this paper, we explore a novel area: can urbanization lead to misanthropy, a dislike for humankind?

# Urbanism and Misanthropy

"Here is the great city: here have you nothing to seek and everything to lose"-Nietzsche

Misanthropy stems from the Greek words *misos*, "dislike or hate," and *anthropos*, "humans." Misanthropy refers to the lack of faith in others and the dislike of people in general. Misanthropy is a critical judgement on human life caused by failings that are "ubiquitous, pronounced, and entrenched" (Cooper 2018, p. 7). A misanthrope could consider his fellow men "wicked and evil," "devilish," "obscene," "putrescent," "packages of rotten tripe" (Cooper 2018, p. 7).

Socrates defines misanthropy in such terms: misanthropy develops when one puts complete trust in somebody, thinking the person to be absolutely true, sound, and reliable, only to later discover that the person is deceitful, untrustworthy, and fake. And when this happens to someone often... they end up... hating everyone. (cited in Melgar et al. 2013).

<sup>&</sup>lt;sup>4</sup>We thank anonymous reviewer for this point. Arguably some of our anti-urbanism is due to cities we live in. Franklin was not anti-urban like Thoreau or Jefferson, but he did note problems assiociated with urbanness (White and White 1977, e.g., p32).

<sup>&</sup>lt;sup>5</sup>We may only speculate why the anti-urbanism of 19th and first half of 20th century was replaced by current pro-urbanism-perhaps move away from industrial economy that polluted cities to knowledge economy that puts premium on density of human capital and recent urban renewal push. More discussion is beyond the scopf of this study and we refer the reader to the cited literature especially white white glaeser and my book

<sup>&</sup>lt;sup>6</sup>For a critique of this recent pro-urbanism see Okulicz-Kozaryn (2015b), Peck (2016).

Misanthropy reduces people's desire to invest and to be involved in their communities and may remove social bonds that deter people from harming others (Weaver 2006, Hirschi and Gottfredson 1993, Fafchamps and Minten 2006, Walters and DeLisi 2013). As a result, misanthropy is correlated with dysfunctional and animus behaviors such as homophobia, sexism, racism, and ageism (Cattacin et al. 2006). Thus, the literature suggest that misanthropy is predicted by negative experiences and worldview, which can have a harmful effect on human relationships. For an elaboration on misanthropy see Rosenberg (1956, 1957), Smith (1997) and Wilson (1985)—the last two also discuss urbanicity in conjunction with misanthropy.

The underlying question driving our research is, how can cities produce misanthropy? There are at least several pathways or mechanisms. these are dated but classic theories still best most illuminating research in the field—These are important in building urbanicity-misanthropy association because it is a novel area of research and we know very little so far.

According to classical urban sociological literature, there are three defining characteristics of urbanicity: size, density, and heterogeneity (Wirth 1938). Throughout virtually all of our evolutionary history, humans have lived in small low density homogenous groups. As hunters gatherers humans lived in small bands of 50 to 80 people, later in simple horticultural society in groups of 100 to 150 people, and in more advanced society these groups reached five to six thousand people (Maryanski and Turner 1992). Hence, unlike other species like ants and bees, living in heterogenous, dense, and large settlements (city living) is simply unnatural to human beings. Human nature is unlike that of bees: by one estimate we're 90% chimp and only 10% bee (Haidt 2012).

Some research indicates that density and crowding have negative consequences such as increased stress, depression, and aggresion. Evidence, however is mixed, and discussion is postponed to the appendix. One point worth noting here is that while in principle cities do not have to always have higher crime, crime does increase with population size and the relationship is strong and consistent (Bettencourt et al. 2010, Bettencourt and West 2010, Bettencourt et al. 2007). Other negative consequences of city living include traffic congestion and incidence of infectious diseases; there are, of course, benefits of city living: wages, GDP, education, research and innovation (Bettencourt et al. 2010, Bettencourt and West 2010, Bettencourt et al. 2007).

The problem is onsidedness, prourbanism, particularly in the urban studies literature where some argue that always the more people, the better in terms of just about any metric (e.g., Glaeser 2011).

In terms of heterogeneity, humans have ingroup preference or homophily, and accordingly, lack preference or dislike heterogeneity (Smith et al. 2014, McPherson et al. 2001, Bleidorn et al. 2016, Putnam 2007), which is a key defining feature of cities (Wirth 1938).

How else can cities cause misanthropy? It is well-known that city life causes cognitive overload, stress, and coping (Simmel 1903, Milgram 1970, Lederbogen et al. 2011). An overloaded system can suppress stimuli resulting in blase attitude (Simmel 1903)—city life can cause withdrawal, impersonality, alienation, superficiality, transitiveness, and shallowness (Wirth 1938). Similarly, city life intensifies cunning and calculated behavior (Tönnies [1887] 2002), estrangement, antagonism, disorder, vice, and crime (Milgram 1970, Park 1915, Park et al. [1925] 1984, Bettencourt and West 2010), which can lead to aggressive responses when interacting with others. Urbanism negatively influences the quality of nearly all social relationships Wilson (1985).

All of the above suggests that an urbanite becomes more distant from or hostile toward other human beings. Urban life is being "lonely in the midst of a million" (Twain), "lonesome together" (Thoreau), alienated (Wirth 1938, Nettler 1957), "awash in a sea of strangers" (Merry cited in Wilson 1985, p. 99) in a "mosaic of little worlds which touch, but do not interpenetrate" (Park et al. [1925] 1984, p. 40). Urbanites also in some ways tend to be ill-mannered and unreliable (e.g., Okulicz-Kozaryn 2015b, Okulicz-Kozaryn and Valente 2017). As a result, urban misanthropy may emerge.

Thus, we hypothesize that urbanicity increases misanthropy.

There have been only two studies that have related in any quantitative way urbanism and misanthropy. Importantly, the first study doesn't concern itself with the relationship. Smith (1997) only lists a simple bivariate correlation among dozens of other bivariate correlations in a General Social Survey technical report. The report is published in a journal, but it is an exact carbon copy of a "GSS Topical Report No. 29" that is mostly a listing of correlations with annotations. Hence, the only one study focusing on urbanicity-

misanthropy relationship is Wilson (1985). Wilson (1985) is 35 years old and cited only six times as of 2020.<sup>7</sup> This is a major reason for and contribution of our study–ours is the second study focusing on this topic. Such gap in the literature is remarkably rare.

Wilson (1985) uses now dated 1972-1980 GSS dataset, controls for only a handful of variables, and does not show trends over time. One technical problem with Wilson (1985) is that he assumed that the urbanicity measures were continuous, but they are not. We use the same measures from the General Social Survey (GSS): SRCBELT, which is at best ordinal, and XNORCSIZ which is clearly not even at the ordinal level of measurement.<sup>8</sup> Arguably, like other contemporary social scientists,<sup>9</sup> Wilson has at least a slight urban bias—he seems to under-emphasize and discount urban problems. Likewise, Wilson (1985) takes a different perspective—narrow sociological—than ours, which is broader and interdisciplinary.

While the literature on urbanicity-misanthropy is almost non-existent, there is somewhat related literature that can be useful in building up the association between the two. We will now delive briefly into these other literatures that may help to shed some more light. Steve Pile in his colorful writings about cities often inovkes notions of "vampires" and "werewolves" Pile (2005a,b), Pile et al. (1999). Clearly, both folklore characters indicate (at least in some ways) a dislike of humankind, a misanthropy. Steve Pile observes that cities are haunted by their past, full of its ghosts. In that sense misanthropy may arise not just due to current density, crowding, and overload, but also due to its past. Old cities carry melancholia (Pile 2005b), and densest and largest cities tend to be old, and melancholy can arguably translate into misanthropy.

Nietzsche, one of the greatest observers of human condition, was a misanthrope himself, at least in some ways (e.g., Avramenko 2004). Arguably his disappointments with Wagner and Salome have contributed, but it is also reasonable to argue that city life contributed as well. And importantly he does make a clear argument against the city, and especially its most crowded area, a marketplace, and makes a clear overall impression of dislike of a humankind in his vivid description (e.g., "The Flies in the Market-Place" Nietzsche and Parkes 2005).

Last but not least, while there seem to be a clear misanthropic side to cities, many try to avoid it and discount it and point in the other direction. This may explain why there is virtually no research on urbanicity-misanthropy link. It is well put by Nigel Thrift, there is "a more deep-seated sense of misanthropy which urban commentators have been loath to acknowledge, a sense of misanthropy which is too often treated as though it were a dirty secret" (Thrift 2005, p. 134):

#### The misanthropic city

Cities bring people and things together in manifold combinations. Indeed, that is probably the most basic definition of a city that is possible. But it is not the case that these combinations sit comfortably with one another. Indeed, they often sit very uncomfortably together. Many key urban experiences are the result of juxtapositions which are, in some sense, dysfunctional, which jar and scrape and rend. What do surveys show contemporary urban dwellers are most concerned by in cities? Why crime, noisy neighbours, a whole raft of intrusions by unwelcome others. There is, in other words, a **misanthropic** thread that runs through the modern city, a distrust and avoidance of precisely the others that many writers feel we ought to be welcoming in a world increasingly premised on the mixing which the city first brought into existence. (Thrift 2005, p. 140 ("misanthropy" bolded by us)

<sup>&</sup>lt;sup>7</sup>It is actually unavilable online, neither as hardcopy at Rutgers libraries, and I was only able to read it through an interlibrary loan.

<sup>&</sup>lt;sup>8</sup>Wilson (1985) explicitly states that xnorcsiz is an ordinal variable. We disagree: one cannot really say whether a suburb is larger than an unincorporated large area and smaller than an area of 50 thousand people.

<sup>&</sup>lt;sup>9</sup>For instance, Veenhoven (1994), Meyer (2013), Fischer (1982).

## Method

#### Data

All variables come from the US General Social Survey (GSS; http://gss.norc.org). The GSS is a cross-sectional, nationally representative survey, administered annually since 1972 until 1994 when it became biennial. The unit of analysis is an individual and data are collected in face-to-face, in-person interviews (Davis et al. 2007). The full dataset contains about 60 thousand observations pooled over 1972-2016, but the sample size will vary depending on the variables used and missing data (as evident in Tables 1, 2 and 3). All variables were recoded in such a way that a higher value means more. **TODO** srch for missing data abd maybe insert the whole explanatuion here or drop from here!

As explained in the next subsetion, the dependent variable, misanthropy, is continuous. Hence, we simply use ordinary least squares (OLS) to analyze the relationship between misanthropy and urbanicity. <sup>10</sup>

#### Misanthropy

We measure misanthropy, the dislike of humankind, by a three item Rosenberg's misanthropy index (Rosenberg 1956), based on respondents' answers to three questions (Smith 1997):

TRUST. "Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?" 1 = "cannot trust," 2 = "depends," 3 = "can trust."

FAIR. "Do you think most people would try to take advantage of you if they got a chance, or would they try to be fair?" 1 = "take advantage," 2 = "depends," 3 = "fair."

HELPFUL. "Would you say that most of the time people try to be helpful, or that they are mostly just looking out for themselves?" 1 = "lookout for self," 2 = "depends," 3 = "helpful."

Rosenberg defines misanthropy as general uneasiness nd apprehensivness toward or dislike of personally unknown others Rosenberg (1956).

Using these questions, we utilized factor analysis with varimax rotation to produce an index, and we reversed it so that it measures misanthropy. Cronbach's alpha is .67. Note that the distributions of these, as well as the descriptive statistics for all other variables, are in supplementary material.

This measurement encompasses "faith in people," "attitudes towards human nature," and an "individual's view of humanity." Although, much controversy about the assessment of misanthropy exists in the literature, the Rosenberg scale has become the standard measure for self-reported misanthropy and was designed to assess one's degree of confidence in the trustworthiness, goodness, honesty, generosity and brotherliness of people in general (Rosenberg 1956). The Rosenberg Misanthropy Scale has been a cornerstone on the GSS since 1972, and studies have shown that the measurement is not contaminated by social desirability bias (Ray 1981). The Rosenberg Misanthropy scale is not only mainstream, but also the most popular and widely cited measurement. Some authors, e.g., Wuensch et al. (2002) have used other scales, but their approaches are disjoint from the mainstream literature, and there is not much discussion of the concept or measurement that they used in their research.

As per the survey questions, strictly speaking, it is not the dislike of "all people," but of "most people" that we are measuring. Wilson (1985) suggests it is dislike of strangers, specifically. Likewise, recently Delhey et al. (2011) have argued that "most people" predominantly connotes out-groups. Also, note that this relates to homophily/ingroup theory—dislike of outgroup typically means

<sup>&</sup>lt;sup>10</sup>We do not see any need to use categorical or limited dependent variable modeling techniques. We do not have panel data. Multilevel techniques are not useful either as GSS is only representative of large census regions, and we do not have the restricted GSS data with finer geographical information.

relative preference of ingroup.

#### Urbanism

The main explanatory variable is *urbanism* or size of a place. The size of a place is defined in three ways to show that the results are robust to the definition. First, it is measured using deciles of population size (SIZE). Deciles are used to investigate if there are any nonlinear effects on misanthropy.

Then, two other variables are used to measure urbanism under their original GSS names: XNORCSIZ and SRCBELT. Both variables categorize places into metropolitan areas, big cities, suburbs, and unincorporated areas. The advantage of SIZE is that it allows us to calculate a misanthropy gradient by exact size of settlement. XNORCSIZ and SRCBELT take into account the fact that populations cluster at different densities (e.g., suburbs are less dense than cities). The GSS does not provide a density variable.

The SRC BELTCODE measurement is arguably the best fitting to illustrate the urban vs. rural divide: the divide is between metropolitan areas vs. smaller areas (Hanson 2015), and SRC BELTCODE identifies the MSAs (metropolitan statistical areas). The GSS codebook descriptions follow:

SIZE. 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.

XNORCSIZ. Expanded N.O.R.C. size code. 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.

SRCBELT. SRC beltcode. 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.

#### Controls

In the choice of the control variables we follow Welch et al. (2007) and especially Smith (1997). The higher the social standing, the more favorable view of others, thus we control for income, education, and race. Social class literature suggests that individuals' social class should be assessed by using both objective (e.g., income and education) and subjective indicators (e.g., Kraus et al. 2009).<sup>11</sup>

<sup>&</sup>lt;sup>11</sup>We thank an anonymous reviewer for this important point. Subjective class correlates with education and income moderately at about .4 (either continuous or polychoric). On one hand, subjective class and urbanicity are likely to be confounded. On the other hand, it turns out that correlations of urbanicity measures and subjective class are very small, below .1 (either continuous or polychoric). The social class item in the GSS reads: "If you were asked to use one of four names for your social class, which would you say you belong in: the lower class, the working class, the middle class, or the upper class?" and is

Thus, a control for people's perceived social class will be included as well.

Negative experiences are likely to increase misanthropy, therefore we control for fear of crime (there is no good measure for actual victimization in the GSS). Crime is important because the larger the place, the more crime (Bettencourt and West 2010), and the more crime, the more misanthropy (Wilson 1985). We also control for unemployment, self-reported health and age. Since divorce is a predictor of misanthropy, we control for it and other marital statuses as well. Misanthropy should be higher among cultural groups and minorities that have been discriminated against, so we also control for race, being born in the United States, and religious denomination. Religious belief should reduce misanthropy. Misanthropy should be lower among older people, though some studies find a curvilinear relationship, therefore we control for age and age<sup>2</sup>. Studies also show that men tend to be more misanthropic, so we control for gender. Recent movers should be more misanthropic. We do not have a good control for recent moving, but we use a proxy for international moving by controlling for being born in the US. Also, misanthropy should be higher in the South, therefore we included a region "South" dummy variable.

In addition, we control for subjective wellbeing and health—the goal is to alleviate possible problem of spuriousness. It may be not the size of a place that causes higher misanthropy but it may be lack of success, unhappiness, or poor health that makes a person both move to a city and dislike other people. Concurrently, liberals and immigrants are more likely to live in cities and both groups are less satisfied with their lives (Berry and Okulicz-Kozaryn 2011, Okulicz-Kozaryn et al. 2014) and potentially more misanthropic. Thus, we control for political ideology and immigration status.

We would like to highlight that there is a strong need to properly control for quality of life in cities and rural areas. A key measure is income, which is controlled for. We even control directly for Subjective Wellbeing (SWB). And we include fear of crime, one of the most important confounders—crime increases misanthopy and tends to be higher in cities.

Data were pooled over many years, and hence we include year dummies.

### Results

Table 1 shows the regression results. We use three measures of urbanicity, and each urbanicity measure is entered as a set of dummy variables to explore nonlinearities and the base case is the smallest place in the case of SIZE and SRCBELT and the second smallest category on XNORCSIZ: "<2.5k, but not countryside." Coefficients of interest are those on the largest places such as the second largest category "192-618k", and especially the largest ones "618k-" in table 1, and corresponding the very largest and second largest places in tables 2 and 3.

The first three columns in each table (a1, b1, c1) report basic results without any control variables. For all three urbanicity measures, the largest increase in misanthropy occurs in the largest place. In the case of SIZE and SRCBELT, the second largest effects tend to be on the second largest place. XNORCSIZ is more uneven and the second largest place does not have the second largest effect. Interestingly, in the case of XNORCSIZ, in addition to largest cities, the countryside (variable "country") is quite misanthropic, perhaps countrymen are not used to swarms of people or perhaps they are countrymen because they dislike people.

The second columns (a2, b2, c2) in the tables add controls following Welch et al. (2007) and Smith (1997)—notably we control for objective and subjective social class. An interesting result on the XNORCSIZ variable is misanthropic suburbs, "places of nowhere," thus confirming Kunstler (2012)'s critique of suburbs. What is worth noting is that, in general, in more elaborate specifications, we find that the larger the place, the more misanthropy.

The addition of marital status in model 3 attenuates the effect slightly. Political ideology, subjective wellbeing (SWB) and health controls were postponed till model 4 because there are many missing observations.<sup>12</sup> The addition of these controls in model 4

coded from 1 (lower) to 4 (upper). We will just treat it as a control variable and enter it as a continuous variable without using a set of dummies.

<sup>&</sup>lt;sup>12</sup>these are some of he les simportant cortols missing from smith and wilson (check!) and more of a robustness check—these controls are not essential, if anything they oversaturate the model, but they are a useful robustness check; in addition there are many observations missing on them—another reason to add them as last, because they cut the available sample size

attenuates the slopes considerably by about a third or half. The "192-618k" size decile is similar in magnitude to smaller places—they are all more misanthropic than the base case, which in this case is places smaller than 2k. And "618k-" is markedly larger, about twice as large as "192-618k"—as is the case with SWB—it is the very largest places that differ from smaller places (Okulicz-Kozaryn 2015b).

The final most elaborate specifications also show no significant misanthropy difference for the 2nd largest places—these results contradict earlier results where the second largest places were the second most misanthropic. Therefore results for the second largest places should be interpreted with care, and while the fullest specifications are the least biased in terms of omitted variables, the sample size is less than half of the more basic models due to missing observations on additional variables. Furthermore, the most elaborate specifications are rather over-saturated models with too many controls and the collinearity. Hence, lower statistical significance and smaller effect sizes are somewhat expected.

According to the well laid out argument in Wilson (1985), the most complete quantitative treatment of the urbanicity-misanthropy nexus to date, there are two key variables of interest: crime and race. Like Wilson, for lack of a better variable, we are using fear of crime as a proxy in our analysis (AFRAID TO WALK AT NIGHT IN NEIGHBORHOOD), which is thought to increase misanthropy and correlate with urbanicity. Therefore, the inclusion of this variable should attenuate heavily the urbanicity-misanthropy relationship, and it does in model a4a. Wilson (1985) also argues that urban misanthropy is more common among whites than minorities. Inclusion of WHITE HOUSEHOLD dummy (without AFRAID TO WALK AT NIGHT IN NEIGHBORHOOD) in a4b has a similar effect to AFRAID TO WALK AT NIGHT IN NEIGHBORHOOD. Finally in model a4c both variables are entered together, and the urbanicity effect is heavily attenuated and barely significant. Results for the other two measures of urbanicity shown in tables 2 and 3 are similar. One difference is that in table 2, the smallest areas ("countryside") are slightly more misanthropic than the base case, "smaller than 2.5k but not countryside."

In the most elaborate models, a4c and b4c (but not c4c), the largest places remain misanthropic, yet the magnitude is not greater than that for mid-sized places, suburbs, and even the countryside. Hence, the smallest places, housing hundreds or a couple of thousand people, but not more than about 10 thousand people or the countryside, are the most liking of humankind. As observed in model c4c, it is still the very largest places that are markedly different from other places. Importantly, as argued here, SRCBELT is the variable that measures best the urban-rural divide.

Political ideology, marital status, health, SWB, and notably race and fear of crime explain away much of the city disadvantage, but not all of it. Hence, the conclusion is that similar to studies examining SWB in urban areas (Okulicz-Kozaryn and Mazelis 2016), it is cities, themselves, their core characteristics, and not city problems that are related to misanthropy.

Indeed, even if the results were insignificant, they would be still worth reporting—many would think that there is less misanthropy in cities—clearly we are in the midst of a pro-urbanism period, where it is fashionable to argue about city benefits (e.g., Glaeser 2011). However, the results show that there is no such benefit with respect to misanthropy—cities are at least slightly more misanthropic than other places.

Why did several midsize categories score relatively high on misanthropy? We do not have an explanation for this phenomenon. Perhaps, following Okulicz-Kozaryn (2016)'s rationale, such places strip people of the naturalness found in the smallest places, and yet do not provide amenities and the benefits found in the largest places.

Note that the effect sizes are considerable—all tables report beta coefficients and the effect size of the largest place is about as large as half of the effect of income. It is important to note again that city living has an enormous effect size due to the urbanization scale—each year cities grow by tens of millions of people. To summarize, we find support for our initial hypothesis that urbanicity is related to increased misanthropy.

**Table 1:** OLS regressions of misanthropy. Beta (fully standardized) coefficients reported. All models include year dummies. Size deciles (base: <2k).

	a1	a2	a3	a4	a4a	a4b	a4c
2-4k	0.01	0.02**	0.01**	0.01*	0.02	0.01*	0.01
4-8k	0.02***	0.03***	0.03***	0.03***	0.02**	0.02***	0.02
8-14k	0.01**	0.04***	0.03***	0.03***	0.03***	0.02***	0.02**
14-24k	0.00	0.03***	0.03***	0.02***	0.02*	0.02**	0.01
24-41k	0.01	0.04***	0.03***	0.02***	0.02**	0.02**	0.02*
41-79k	0.01*	0.04***	0.04***	0.03***	0.02*	0.02**	0.01
79-192k	0.03***	0.04***	0.04***	0.03***	0.01	0.02**	-0.00
192-618k	0.04***	0.05***	0.05***	0.04***	0.02**	0.02***	0.01
618k-	0.09***	0.09***	0.09***	0.07***	0.05***	0.05***	0.02**
South	0.12***	0.10***	0.09***	0.10***	0.09***	0.09***	0.07***
subjective class identification		-0.10***	-0.10***	-0.09***	-0.09***	-0.08***	-0.08***
family income in \$1986, millions		-0.08***	-0.07***	-0.05***	-0.04***	-0.05***	-0.04***
protestant		-0.01	-0.01	0.00	0.00	-0.01	-0.01
catholic		-0.02***	-0.02***	-0.01	-0.02*	-0.01	-0.02
unemployed		0.01**	0.01**	0.00	0.00	0.00	0.00
age		-0.32***	-0.34***	-0.39***	-0.47***	-0.41***	-0.50***
age squared		0.13***	0.14***	0.18***	0.25***	0.20***	0.28***
highest year of school completed		-0.24***	-0.24***	-0.22***	-0.21***	-0.22***	-0.20***
male		0.03***	0.03***	0.02***	0.04***	0.03***	0.05***
married			0.00	0.00	0.00	0.00	0.00
widowed			0.02***	0.01	-0.01	0.00	-0.01
divorced			0.04***	0.02***	0.02*	0.02***	0.02*
separated			0.04***	0.03***	0.02***	0.02***	0.02**
never married			0.01	-0.01	-0.02**	-0.02**	-0.03***
conservative				0.00	0.01	0.01	0.01
liberal				-0.03***	-0.02**	-0.03***	-0.02***
born in the U.S.				-0.02***	-0.02**	-0.00	-0.00
SWB				-0.13***	-0.14***	-0.12***	-0.13***
afraid to walk at night in neighborhood					0.09***		0.09***
white household						-0.12***	-0.12***
N	38236	33549	33545	27522	14034	27082	13799

<sup>\*\*\*</sup> p<0.01, \*\* p<0.05, \* p<0.1; robust

std err

**Table 2:** OLS regressions of misanthropy. Beta (fully standardized) coefficients reported. All models include year dummies. Xnorcsiz (base: <2.5k, but not country).

	b1	b2	b3	b4	b4a	b4b	b4c
countryside	0.03***	0.03***	0.03***	0.04***	0.05***	0.04***	0.04***
2.5-10k	0.02***	0.02***	0.02***	0.02***	0.02**	0.02**	0.02
10-50k	0.03***	0.03***	0.03***	0.03***	0.03***	0.03***	0.02**
uninc med	0.00	0.02***	0.02***	0.03***	0.03**	0.03***	0.03**
uninc Irg	0.00	0.03***	0.03***	0.03***	0.03**	0.02***	0.02*
med sub	0.02**	0.04***	0.04***	0.05***	0.05***	0.04***	0.04***
Irg sub	0.03***	0.08***	0.08***	0.08***	0.07***	0.06***	0.05***
50-250k	0.04***	0.05***	0.05***	0.05***	0.03**	0.03***	0.01
gt 250k	0.10***	0.10***	0.10***	0.09***	0.07***	0.07***	0.04***
South	0.12***	0.10***	0.09***	0.10***	0.09***	0.09***	0.07***
subjective class identification		-0.10***	-0.10***	-0.09***	-0.09***	-0.08***	-0.08***
family income in \$1986, millions		-0.08***	-0.07***	-0.06***	-0.05***	-0.05***	-0.04***
protestant		-0.01	-0.01	0.00	0.00	-0.01	-0.01
catholic		-0.02***	-0.02***	-0.01	-0.02*	-0.01	-0.02
unemployed		0.01**	0.01**	0.00	0.00	0.00	0.00
age		-0.32***	-0.34***	-0.39***	-0.47***	-0.41***	-0.50***
age squared		0.12***	0.13***	0.17***	0.25***	0.20***	0.28***
highest year of school completed		-0.24***	-0.24***	-0.22***	-0.21***	-0.22***	-0.20***
male		0.03***	0.03***	0.02***	0.04***	0.03***	0.05***
married			0.00	0.00	0.00	0.00	0.00
widowed			0.02***	0.01	-0.01	0.00	-0.01
divorced			0.04***	0.02***	0.02*	0.02***	0.02*
separated			0.04***	0.03***	0.02***	0.02***	0.02**
never married			0.01	-0.01	-0.02**	-0.02**	-0.03***
conservative				0.00	0.01	0.01	0.01
liberal				-0.03***	-0.02**	-0.03***	-0.03***
born in the U.S.				-0.02***	-0.02**	-0.00	-0.00
SWB				-0.13***	-0.14***	-0.12***	-0.13***
afraid to walk at night in neighborhood					0.09***		0.09***
white household						-0.12***	-0.12***
N	38236	33549	33545	27522	14034	27082	13799

<sup>\*\*\*</sup> p<0.01, \*\* p<0.05, \* p<0.1; robust

std err

**Table 3:** OLS regressions of misanthropy. Beta (fully standardized) coefficients reported. All models include year dummies. Srcbelt (base: small rur).

	c1	c2	c3	c4	c4a	c4b	c4c
small urb	-0.01	0.02**	0.02*	0.01*	0.02*	0.01	0.02
13-100 sub	-0.01	0.04***	0.04***	0.03***	0.02*	0.02***	0.02
1-12 sub	-0.00	0.06***	0.05***	0.04***	0.04***	0.03***	0.03***
13-100 msa	0.03***	0.04***	0.04***	0.04***	0.02	0.02***	-0.00
1-12 msa	0.08***	0.09***	0.08***	0.07***	0.05***	0.05***	0.03***
South	0.12***	0.10***	0.10***	0.10***	0.09***	0.09***	0.08***
subjective class identification		-0.10***	-0.10***	-0.09***	-0.09***	-0.08***	-0.08***
family income in \$1986, millions		-0.08***	-0.07***	-0.06***	-0.05***	-0.05***	-0.04***
protestant		-0.01	-0.00	0.00	0.01	-0.01	-0.01
catholic		-0.02***	-0.02***	-0.01*	-0.02*	-0.01	-0.02
unemployed		0.01**	0.01**	0.00	0.00	0.00	0.00
age		-0.33***	-0.35***	-0.39***	-0.47***	-0.41***	-0.50***
age squared		0.13***	0.14***	0.18***	0.25***	0.21***	0.29***
highest year of school completed		-0.24***	-0.24***	-0.22***	-0.21***	-0.22***	-0.20***
male		0.03***	0.03***	0.02***	0.04***	0.03***	0.05***
married			0.00	0.00	0.00	0.00	0.00
widowed			0.02***	0.01	-0.01	0.00	-0.01
divorced			0.04***	0.02***	0.02*	0.02***	0.02*
separated			0.04***	0.03***	0.02***	0.02***	0.02*
never married			0.01	-0.01	-0.02**	-0.02***	-0.03***
conservative				0.00	0.01	0.01	0.01
liberal				-0.03***	-0.02**	-0.03***	-0.03***
born in the U.S.				-0.02***	-0.01*	-0.00	0.00
SWB				-0.13***	-0.14***	-0.12***	-0.13***
afraid to walk at night in neighborhood					0.09***		0.09***
white household						-0.12***	-0.12***
N	38236	33549	33545	27522	14034	27082	13799

<sup>\*\*\*</sup> p<0.01, \*\* p<0.05, \* p<0.1; robust

std err

#### A look over time

Next, we complement our analysis by exploring the relationship between misanthropy and urbanicity over time. The advantage of the GSS is that it allows us to compare a span of over four decades. Figure 1 shows misanthropy by size of place over time. Overall, misanthropy remained highest in large cities until recently. Yet, around 2000, the trends have changed–misanthropy for largest cities (>250k) started to decline, and it started to increase steeply for the smallest places (<10k). Over the four decades, misanthropy has been increasing steadily for medium sized places. Hence, the overall urban misanthropy we observed is due to earlier time periods. These patterns are similar when controlling for predictors of misanthropy. Predicted values are plotted in figure 2, based on the regression from column a3a from table 5 in the appendix. There is a convergence in misanthropy across urbanicity over time, with smallest places increasing their level of misanthropy most.

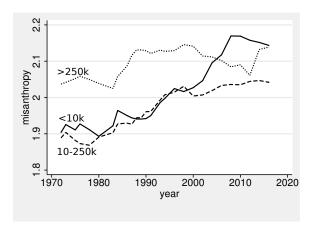


Figure 1: Misanthropy by size of population over time. Smoothened with moving average filter using 3 lagged, current, and 3 forward terms.

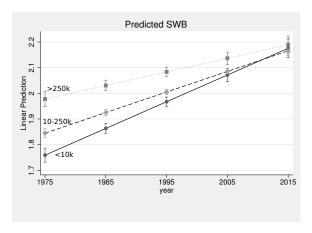


Figure 2: Misanthropy by size of population over time. Predicted values from regression from column a3a from table 5 in appendix. 95% CI shown

### Conclusion and Discussion

"Real misanthropes are not found in solitude, but in the world; since it is experience of life, and not philosophy, which produces real hatred of mankind." Giacomo Leopardi

"Whenever I tell people I'm a misanthrope they react as though that's a bad thing, the idiots. I live in London, for God's sake. Have you walked down Oxford Street recently? Misanthropy's the only thing that gets you through it. It's not a personality flaw, it's a skill." Charlie Brooker<sup>13</sup>

we hope that this novel approach and analysis to the study of cities will spark more interest and perhaps start a new line of research into the dark side of urbanism. we aimed to be thought-provoking but also balanced.

For a long time social scientists have tried to understand how urbanization affects human beings. Yet the most sharp and critical observations were published decades ago—it is our contribution to connect with the illuminating classical studies amid current prourbanism. We built our argument by laying out classic theoretical background The most current empirical studies about misanthropy are several decades ago, and so mostly are related empirical studies about negative side of urbanism—this is another contribution of this

<sup>&</sup>lt;sup>13</sup>This echoes Simmel's blase attitude-in order to survive in a city, one must withdraw; see also Milgram (1970) and Lederbogen et al. (2011).

study—we not only connect with classic tehory, but also with older empirical studies that have been largely forgotten and disontinued and we update them with new data (up to 2016 and going back to 1972).

City living has an enormous effect on humanity—the world is urbanizing at astonishing pace—each year cities add hundreds of millions of people. Arguably the biggest divide is urban-rural, and it is important to investigate its multiple dimensions. In this article, we have focused on a novel area, urbanicity-misanthropy nexus.

Our evolutionary history (small group living), psychological theory (homophily or ingroup preference), and classical urban sociological theory, all suggest that human dislike for other humans should be observed in most dense and heterogeneous places like cities. Our results mostly agree: misanthropy is lowest in smallest settlements (but not in the countryside), and the effect size of urbanicity is about half of that of income. Overall, our results contradict recent pro-urbanism arguments on the advantages of city living, although recently, smaller areas have become much more misanthropic than in the past. It is important to note that our results are very similar to research examining subjective wellbeing (SWB) in cities—rural folks have also always been at an advantage when it came to SWB (at least since the GSS started collecting data), but very recently this advantage has disappeared (Okulicz-Kozaryn 2018). We interpret this as evidence of a rural-urban divide and the fact that rural areas have been left behind (e.g., Fuller 2017, Hanson 2015).

As compared to the most complete study to date on the relationship between misanthropy and urbanicity, Wilson (1985), we use more data, more variables, and notably levels of size variables without forcing untenable assumption of interval/ratio scale and linear effects; our results do not necessarily contradict, but rather extend Wilson (1985): there is misanthropy in the largest places for everyone (we find more robust evidence than Wilson (1985); and concurrently confirm the finding by Fischer (1981) of a relatively strong relationship between community size and distrust). In addition, we also find that there is especially misanthropy for whites, and that rural misanthropy is on the rise.

As in any correlational study, we cannot claim causality. There are, however, reasons to believe that urbanism causes misanthropy. Size, density, and heterogeneity are theoretically linked to many negative emotions (Wirth 1938), and make general dislike for humankind, misanthropy, likely. Furthermore, there is neurological evidence that city living is unhealthy to the human brain (Lederbogen et al. 2011) and experimental evidence that city living causes lower trust (Milgram 1970).

Reverse causality would not make sense: misanthropy or hatred of people, should not lead someone to live in places, like cities, unless one perhaps wants to harm them in some way, clearly these cases are rare.<sup>14</sup> This rationale should also exclude self-selection—if anything the opposite of misanthrope, people who love to be among many people, would choose to move to cities. This can also perhaps explain the result that while misanthropy is high in largest cities, it is also high in the smallest places of all: the countryside.<sup>15</sup>

Can the relationship between urbanicity and misanthropy be spurious? Cities have many problems: notably urban poverty and urban crime—these problems could intensify misanthropy. In other words, if it were not for urban problems, then urbanicity would not cause misanthropy. There are many urban problems, and we cannot control for all of them, but we controlled for the key urban problem leading to misanthropy: fear of crime. We also controlled for personal income.

If there is a city with very low crime and very low levels of inequality and lots of parks, public spaces etc—is this still likely to have high levels of misanthropy and why? probably! Because its city itself its core characteristics, size, density and heterogeneity—all large cities have high population by deinition, moderate-high or high density (as compared to smaller places), and are also relatively heterogenous as compared to smaller places, and these chore characteristics are the likely drivers of misanthropy as explained throuht. Also note that the argument is not for all cities but the largest ones only

But yes, for the future research (we don't have such data) it would be useful to contol for all these things-parks, public spaces, etc, AND ideally to look at specific places (GSS doesn't specify actual places)

The magnitude of the effect of urbanicity is important to consider. There is evidence of a large magnitude effect on trusting

<sup>&</sup>lt;sup>14</sup>Another potential reason for a misanthrope, or any non-conformist type, to live in a city is anonymity.

<sup>&</sup>lt;sup>15</sup>Arguably many people tired of urban crowds move to the countryside—the authors know personally such people, and there are even news reports of generally city-loving Millennials who are moving to the countryside (e.g., Dewey 2017).

behavior. In one experiment, trust differed several-fold between city and town, strikingly a larger difference than across gender—the trust benefit of being female over male is smaller than the benefit of town over city (Milgram 1970). While we do not find a very strong effect of urbanicity on misanthropy, we do find a substantial effect—about half of the income effect in our analysis. <sup>16</sup> Thus, we contradict Wilson (1985), who argued that there's only a small effect. <sup>17</sup>

Why are cities becoming less misanthropic and smaller places more misanthropic? One possible explanation is that rural folks are being discriminated by the urban elite. It is usually overlooked that arguably one of the biggest current social divides is urban-rural divide (Hanson 2015, 2017). There is clearly a rural resentment<sup>18</sup> as rural folks feel that they are being governed by an urbanized elite. More research is needed to better understand this phenomenon.

Smith (1997) argued that the more subordinate a group is, and the more isolated the members of the group are, the greater the misanthropy; and that urbanicity has no direct impact on negativism. We disagree: while cities have never been subordinate, but always dominating (e.g., Okulicz-Kozaryn and Valente 2017),<sup>19</sup> there are multiple theoretical reasons to believe that cities in fact do increase negativism–for a recent review see Okulicz-Kozaryn (2015b).

Hence, our conclusions are congruent to those of Schilke et al. (2015) with respect to trust—misanthropy can be higher in dominating places. Yet, at the same time, rural America has clearly increasingly become subordinated, and this is perhaps another reason why misanthropy is growing there.<sup>20</sup>

# 1 Takeaway for Practice

TODO see other recent papers in cities for this section

Cities are misanthropic, urbanites dislike humans, but urban misanthropy is on decline. TODO: say it earlier in interpretation and in abs We don't intrepret it as cities are improving their condition—misanthropy level is not declining in cities, but the convergence is due to increasing misanthropy in smaller areas—hence we intrepret it as smaller places left behind. Then takeaway from practice is to start paying attention to the smaller areas left behind as lamented by many (but stiill overlooked) NYT article abot california and hanson. Another takeaway for practice is to recognize that density beyond some point, as results indicate here for the very largest cities, has negative consequences. Smaller cities, 2nd and lower tier, are great places to live, our results indicate. It's not all anti urban, just the very largest places.

It's impossible to overlook current covid19 pandemic–again, the largest places were the worst ones, e.g., the worst hit US city was NYC, the largest and densest city. In general disease spread is the worst in the cities BETTENCOURT (check) and may cite from my book.<sup>21</sup> Humans clearly often dislike other humans, especially those that are different, eg foreigners, and heterogeneity is exemplified in cities WIRTH,my book.<sup>22</sup>.

The conclusion is not to try to get rid of cities, or even the largest cities, US and world populations are projected to grow for same time and perhaps level off, and dramatic decline is unlikely. Low-density non-urban living for most humans is simply impossible. And aside from lower SWB and higher misanthropy in largest cities (CITE), largest cities has many great benefits such as increased

<sup>&</sup>lt;sup>16</sup>One explanation is that people's trust is low in cities mostly because there are simply too many people, not necessarily because they dislike people.

<sup>&</sup>lt;sup>17</sup>As previously discussed, one problem with Wilson (1985) is that, unlike our study, he assumed that the urbanicity measures were continuous when in fact they are not, especially the xnorcsiz measure which is not continuous nor ordinal.

<sup>&</sup>lt;sup>18</sup>And clearly this resentment could lead to increasing rural misanthropy, which we observe in this study. Although, the rural resentment may be more against cities or urbanites, rather than people in general. We thank an anonymous reviewer for these points.

<sup>&</sup>lt;sup>19</sup>In some specific cases this is not true–there are always exceptions to any social scientific rule. For instance, after the urban white flight and before the recent urban Renaissance, at least in some ways, suburbs were dominating (e.g., Adams 2014).

<sup>&</sup>lt;sup>20</sup>We speculate that the main reason is that rural areas have been left behind (Hanson 2015, 2017, Fuller 2017)-being left behind is not necessarily the same as being subordinated.

<sup>&</sup>lt;sup>21</sup>Some prourbanists make the case that density is unrelated to disease spread, e.g., by pointing out that some dense cites such as Hong Kong, Seoul, Singapore fought the pandemic sussecfully and some small places, e.g., small towns in Georgia and Louisiana were hit hard too. https://www.citylab.com/perspective/2020/04/coronavirus-cases-urban-density-suburbs-health-parks-cities/610210/ It's easy to find outiers and containing pandemic can even happen in dense areas, but it is beyond the dispute that density promotes disease spread eg BETTENCOURT again check again and srch in my book for virus/disease

<sup>&</sup>lt;sup>22</sup>While most foreigners (and heterogenous/different poeple in general) are in cities. Cities are in many ways most welcoming and tolerant TOENNIES

productivity, innovation, economic growth, and multiple efficiencies related to density in transportation, public goods provision, lower per capita pollution etc (glaeser stiupid book o sullivan meyer mit book etc)

To summarize, we should pay attention to smaller places, don't redirect all resources away from them to the largest cities, one reason being, as this study shows, that largest places were more misanthropic, and would be likely to remain so if we didn't leave the small places behind. CITE THAT ONE FROM SHOURJYA OR ADITI THAT there is direct policy to leave small places behind! an older cite

This study is about the US only and the recults and take aways for practice may not generalize to other countries. We think, however, that they would generalize to other developed (and especially western) countries, similarly to SWB results (cite SWB cross natl research)—people are less happy in largest cities, and similarly they are likely to be more misanthropic.

# 2 Limitations and Future Research

maybe drop if not enough to move here from results and discussion

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# 3 SOM-R (Supplementary Online Material-for Review)

Below we show basic descriptive statistics and then additional regression results.

Table 4: Variable definitions.

name	description
misanthropy	(misanthropy scale)
trust	"Generally speaking, would you say that most people can be trusted or that you can't be too
	careful in dealing with people?"
people fair or try to take ad-	"Do you think most people would try to take advantage of you if they got a chance, or would
vantage	they try to be fair?"
people are helpful	"Would you say that most of the time people try to be helpful, or that they are mostly just
	looking out for themselves? (HELPFUL)"
srcbelt	SRC BELTCODE (see appendix for details)
xnorcsiz	EXPANDED N.O.R.C. SIZE CODE (see appendix for details)
size of place in 1000s	SIZE "Size of Place in thousands-A 4-digit number which provides actual size of place of interview."
family income in \$1986, mil-	Income variables ( INCOME72 , INCOME , INCOME77 , INCOME82 , INCOME86 , IN-
lions	COME91 , INCOME98 , INCOME06 ) are recoded in six-digit numbers and converted to
110113	, <del>-</del>
	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.
protestant	"What is your religious preference? Is it Protestant, Catholic, Jewish, some other religion,
	or no religion?"
catholic	"What is your religious preference? Is it Protestant, Catholic, Jewish, some other religion, or no religion?"
conservative	"We hear a lot of talk these days about liberals and conservatives. I'm going to show
	you a seven-point scale on which the political views that people might hold are arranged
	from extremely liberal-point 1-to extremely conservative- point 7. Where would you place
	yourself on this scale?" "SLGHTLY CONSERVATIVE" or "CONSERVATIVE" or "EXTRMLY
	CONSERVATIVE"
liberal	
inderal	"We hear a lot of talk these days about liberals and conservatives. I'm going to show you
	a seven-point scale on which the political views that people might hold are arranged from
	extremely liberal-point 1-to extremely conservative- point 7. Where would you place yourself
	on this scale?" "SLGHTLY LIBERAL" or "LIBERAL" or "EXTRMLY LIBERAL"
marital status	"What is your religious preference? Is it Protestant, Catholic, Jewish, some other religion,
	or no religion?"
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 com-	HIGHEST YEAR OF SCHOOL COMPLETED A. "What is the highest grade in elementary
pleted	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?"
male	male
born in the U.S.	"Were you born in this country?"
white household	"Race of household"
afraid to walk at night in neigh-	"Is there any area right around here-that is, within a mile-where you would be afraid to walk
borhood	alone at night?"
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?"
health	CONDITION OF HEALTH "Would you say your own health, in general, is excellent, good,
	fair, or poor?"
subjective class identification	"If you were asked to use one of four names for your social class, which would you say you
Subjective class identification	
	belong in: the lower class, the working class, the middle class, or the upper class? "

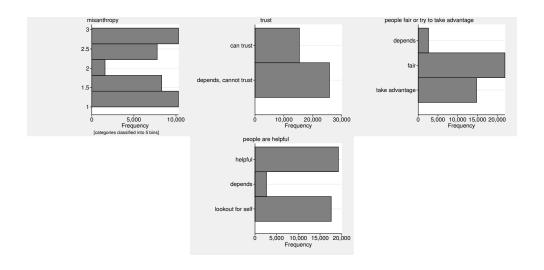


Figure 3: Variables' distribution.

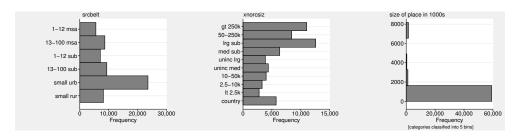


Figure 4: Variables' distribution.

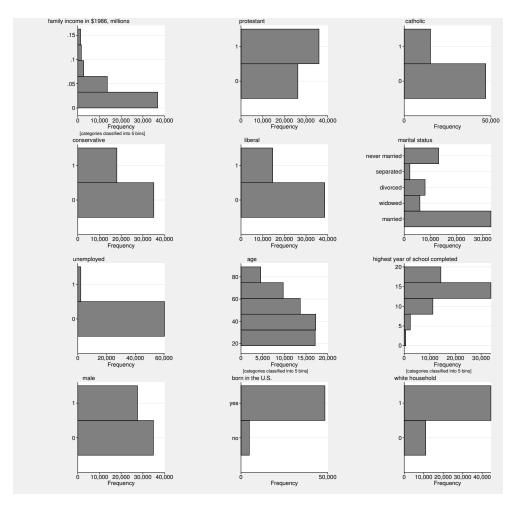


Figure 5: Variables' distribution.

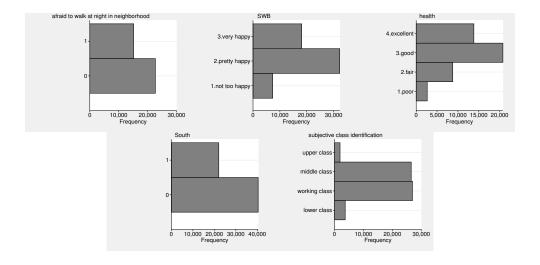


Figure 6: Variables' distribution.

In the body of the paper we have plotted results from simple specification a3a from table 5, but note that more elaborate specifications with more variables and dummied out time are similar.

Table 5: OLS regressions of misanthropy. Beta (fully standardized) coefficients reported. All models include year dummies.

			14.2	
-2k	a4c2 0.00	a3a	b4c2	c4c2
2-4k	10.92**			
4-8k	1.52			
8-14k	8.44*			
14-24k	12.92***			
24-41k	5.52			
41-79k 79-192k	14.73*** 4.02			
192-618k	15.40***			
618k-	13.37***			
year	0.01***	0.01***	0.01***	0.01***
-2k × year	0.00			
2-4k × year	-0.01**			
4-8k × year	-0.00 -0.00*			
$8-14k \times year$ $14-24k \times year$	-0.00*			
24-41k × year	-0.00			
41-79k $ imes$ year	-0.01***			
$79\text{-}192 ext{k} imes ext{year}$	-0.00			
192-618k × year	-0.01***			
618k- × year	-0.01*** -0.10***	0 11***	0 10***	0 10***
subjective class identifica- tion	-0.10	-0.11***	-0.10***	-0.10***
family income in \$1986, mil-	-1.12***	-1.73***	-1.12***	-1.18***
lions				
protestant	0.01	-0.01	0.01	0.01
catholic	-0.03	-0.03***	-0.03*	-0.03*
unemployed	0.01 -0.02***	0.04* -0.01***	0.01 -0.02***	0.01 -0.02***
age age squared	0.00***	0.00***	0.00***	0.00***
highest year of school com-	-0.05***	-0.06***	-0.05***	-0.05***
pleted				
male	0.07***	0.05***	0.07***	0.07***
married _	0.00	0.00	0.00	0.00
widowed	-0.01	0.06***	-0.01	-0.02
divorced	0.04* 0.10***	0.09*** 0.17***	0.03* 0.10***	0.03* 0.10***
separated never married	-0.03*	0.02**	-0.03*	-0.04**
afraid to walk at night in	0.15***	0.02	0.15***	0.14***
neighborhood				
conservative	0.01		0.01	0.01
liberal	-0.03**		-0.03**	-0.04**
born in the U.S.	-0.05** -0.17***		-0.05** -0.17***	-0.04* -0.17***
SWB South	0.14***	0.15***	0.14***	0.14***
small	J.17	0.00	0.17	J.17
med		4.56***		
big _		9.42***		
small × year		0.00		
med × year		-0.00*** -0.00***		
big × year country		-0.00****	0.00	
lt 2.5k			-5.13	
2.5-10k			-3.52	
10-50k			3.05	
uninc med			0.76 11.72**	
uninc Irg med sub			10.94**	
Irg sub			10.78***	
50-250k			7.95*	
gt 250k			13.20***	
country × year			0.00	
It 2.5k × year			0.00	
2.5-10k × year 10-50k × year			0.00 -0.00	
uninc med × year			-0.00	
uninc lrg × year			-0.01**	
$med\ sub\  imes\ year$			-0.01**	
lrg sub  imes year			-0.01***	
50-250k × year			-0.00*	
gt 250k × year small rur			-0.01***	0.00
small urb				14.15***
13-100 sub				15.26***
1-12 sub				16.36***
13-100 msa				19.40***
1-12 msa				20.60***
small rur × year				0.00 -0.01***
small urb $\times$ year 13-100 sub $\times$ year				-0.01***
1-12 sub × year				-0.01***
13-100 msa × year				-0.01***
1-12 msa × year				-0.01***
N	14034	33545	14034	14034
*** p<0.01, ** p<0.05, *				
p<0.1; robust std err				

From table 6 we see that while whites are in general less misanthropic than minorities, they are more misanthropic in larger places, thus confirming Wilson (1985). Note, the column names correspond with earlier tables. In a4c1 we interact urbanicity with white hh dummy-indeed we find confirmation for Wilson (1985)-clearly whites experience more misanthropy in urban areas. Wilson (1985) explains this pattern using Fischer's subcultural theory.

**Table 6:** OLS regressions of misanthropy. All models include year dummies. Size deciles (base: <2k). Srcbelt (base: small rur). Xnorcsiz (base: <2.5k, but not country).

	a4c1	b4c1	c4c1
-2k	0.00	Dici	CICI
2-4k	-0.12		
4-8k	-0.14**		
8-14k 14-24k	-0.13** -0.20***		
24-41k	-0.20		
41-79k	-0.11*		
79-192k	-0.18***		
192-618k	-0.14***		
618k-	-0.11*	0 00444	0 0 4 4 4 4
white household -2k × white household	-0.40*** 0.00	-0.23***	-0.34***
2-4k × white household	0.17**		
4-8k × white household	0.19***		
8-14k × white household	0.21***		
14-24k × white household	0.26***		
24-41k × white household	0.16**		
41-79k × white household	0.13*		
79-192k × white household 192-618k × white house-	0.19*** 0.17***		
$192\text{-}618 ext{k}  imes  ext{white house-} $	0.17		
618k- × white household	0.18***		
subjective class identifica-	-0.10***	-0.10***	-0.10***
tion			
family income in \$1986, mil-	-0.97***	-1.01***	-1.04***
lions	0.02	0.02	0.01
protestant	-0.02 -0.03	-0.02 -0.03	-0.01 -0.03
catholic unemployed	0.01	0.01	0.01
age	-0.02***	-0.02***	-0.02***
age squared	0.00***	0.00***	0.00***
highest year of school com-	-0.05***	-0.05***	-0.05***
pleted			
male	0.07***	0.07***	0.07***
married widowed	0.00 -0.02	0.00 -0.02	0.00 -0.02
divorced	0.04*	0.04*	0.04*
separated	0.07**	0.07**	0.07*
never married	-0.06***	-0.05***	-0.06***
afraid to walk at night in	0.14***	0.15***	0.14***
neighborhood	0.00	0.00	0.00
conservative	0.02 -0.04***	0.02 -0.04***	0.02 -0.04***
liberal			0.00
	0.01		
born in the U.S. SWB	-0.01 -0.16***	-0.00 -0.16***	-0.16***
SWB	-0.01 -0.16*** 0.12***	-0.16***	-0.16***
SWB South country	-0.16***	-0.16*** 0.12*** 0.00	-0.16*** 0.12***
SWB South country It 2.5k	-0.16***	-0.16*** 0.12*** 0.00 0.08	-0.16***
SWB South country It 2.5k 2.5-10k	-0.16***	-0.16*** 0.12*** 0.00 0.08 -0.01	-0.16***
SWB South country It 2.5k 2.5-10k 10-50k	-0.16***	-0.16*** 0.12*** 0.00 0.08 -0.01 -0.03	-0.16***
SWB South country It 2.5k 2.5-10k 10-50k uninc med	-0.16***	-0.16*** 0.12*** 0.00 0.08 -0.01	-0.16***
SWB South country It 2.5k 2.5-10k 10-50k	-0.16***	-0.16*** 0.12*** 0.00 0.08 -0.01 -0.03 -0.10 -0.09	-0.16***
SWB South country It 2.5k 2.5-10k 10-50k uninc med uninc lrg med sub lrg sub	-0.16***	-0.16*** 0.12*** 0.00 0.08 -0.01 -0.03 -0.10 -0.09 -0.10 -0.01	-0.16***
SWB South country It 2.5k 2.5-10k 10-50k uninc med uninc lrg med sub lrg sub 50-250k	-0.16***	-0.16*** 0.12*** 0.00 0.08 -0.01 -0.03 -0.10 -0.09 -0.10 -0.01 -0.07	-0.16***
SWB South country It 2.5k 2.5-10k 10-50k uninc med uninc lrg med sub lrg sub 50-250k gt 250k	-0.16***	-0.16*** 0.12*** 0.00 0.08 -0.01 -0.03 -0.10 -0.09 -0.10 -0.01 -0.01 -0.07 -0.04	-0.16***
SWB South country It 2.5k 2.5-10k 10-50k uninc med uninc lrg med sub lrg sub 50-250k gt 250k country × white household	-0.16***	-0.16*** 0.12*** 0.00 0.08 -0.01 -0.03 -0.10 -0.09 -0.10 -0.01 -0.07 -0.07	-0.16***
SWB South country It 2.5k 2.5-10k 10-50k uninc med uninc lrg med sub lrg sub 50-250k gt 250k	-0.16***	-0.16*** 0.12*** 0.00 0.00 0.08 -0.01 -0.03 -0.10 -0.09 -0.10 -0.01 -0.07 -0.04 0.00 -0.21**	-0.16***
SWB South country It 2.5k 2.5-10k 10-50k uninc med uninc lrg med sub lrg sub 50-250k gt 250k country × white household It 2.5k × white household 2.5-10k × white household	-0.16***	-0.16*** 0.12*** 0.00 0.08 -0.01 -0.03 -0.10 -0.09 -0.10 -0.01 -0.07 -0.04 0.00 -0.21** -0.06 -0.02	-0.16***
SWB South country It 2.5k 2.5-10k 10-50k uninc med uninc Irg med sub Irg sub 50-250k gt 250k country × white household It 2.5k × white household 2.5-10k × white household uninc med × white household uninc med × white household	-0.16***	-0.16*** 0.12*** 0.00 0.00 0.08 -0.01 -0.03 -0.10 -0.09 -0.10 -0.01 -0.07 -0.04 0.00 -0.21**	-0.16***
SWB South country It 2.5k 2.5-10k 10-50k uninc med uninc lrg med sub lrg sub 50-250k gt 250k country × white household It 2.5k × white household 10-50k × white household uninc med × white household uninc med × white house	-0.16***	-0.16*** 0.12*** 0.00 0.00 0.08 -0.01 -0.03 -0.10 -0.09 -0.10 -0.01 -0.07 -0.04 0.00 -0.21** -0.06 -0.02 0.06	-0.16***
SWB South country It 2.5k 2.5-10k 10-50k uninc med uninc lrg med sub lrg sub 50-250k gt 250k country × white household It 2.5k × white household 2.5-10k × white household uninc med × white household uninc med × white household uninc lrg × white household	-0.16***	-0.16*** 0.12*** 0.00 0.08 -0.01 -0.03 -0.10 -0.09 -0.10 -0.01 -0.07 -0.04 0.00 -0.21** -0.06 -0.02 0.06	-0.16***
SWB South country It 2.5k 2.5-10k 10-50k uninc med uninc lrg med sub lrg sub 50-250k gt 250k country × white household It 2.5k × white household 10-50k × white household uninc med × white household uninc med × white house	-0.16***	-0.16*** 0.12*** 0.00 0.00 0.08 -0.01 -0.03 -0.10 -0.09 -0.10 -0.01 -0.07 -0.04 0.00 -0.21** -0.06 -0.02 0.06	-0.16***
SWB South country It 2.5k 2.5-10k 10-50k uninc med uninc Irg med sub Irg sub 50-250k gt 250k country × white household tt 2.5k × white household 10-50k × white household uninc med × white household uninc med × white household uninc Irg × white household minc Irg × white household gs ub × white household Irg sub × white household Irg sub × white household Irg sub × white household	-0.16***	-0.16*** 0.12*** 0.00 0.08 -0.01 -0.03 -0.10 -0.09 -0.10 -0.07 -0.04 0.00 -0.21** -0.06 0.04 0.09 -0.01 -0.09 -0.01 -0.09	-0.16***
SWB South country It 2.5k 2.5-10k 10-50k uninc med uninc Irg med sub Irg sub 50-250k gt 250k country × white household 12.5k × white household 10-50k × white household uninc med × white household uninc red × white household uninc Irg × white household gr ywhite household white household white household white household red sub × white household red sub × white household white household	-0.16***	-0.16*** 0.12*** 0.00 0.08 -0.01 -0.03 -0.10 -0.09 -0.10 -0.07 -0.04 0.00 -0.21** -0.06 -0.02 0.04 0.09 -0.01	-0.16*** 0.12***
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# 4 Density, crowding and negative consequences: stress, depression, and aggresion

A significant problem in cities is crowding which forces a large number of people to live in close proximity (household crowding) and in a small amount of space (residential crowding). Experiments with rats have shown that when crowded, rats become more stressed, aggressive, and end up killing each other (Calhoun 1962), which is often what happens when you cram animals together in confined spaces. Similar to other species, humans are also harming and killing each other at an increased rate in places with a high population density—crime increases with population size (Bettencourt and West 2010), and crowding is associated with higher levels of stress, depression, and aggression (Regoeczi 2008).

We realize that this comparison may seem striking at first to some. These experiments are a classic, cited over 1,000 times, including in social science and urban studies specifically https://scholar.google.com/scholar?hl=en&as\_sdt=5%2C31&sciodt=0%2C31& cites=147447258112130829&scipsc=1&q=cities&btnG= and elucidate the biological mechanism between population density and social pathology. There are striking examples of crowding in largest cities. New York offers some 250 sq feet apartments-given that a couple lives there with one child-it is less than 100 sq feet per person. Even more stunningly, some New Yorkers already live in 100 sq feet apartments. See http://7online.com/realestate/couple-squeezes-into-one-of-manhattans-tiniest-apartments/ 371661/,http://inhabitat.com/nyc/womans-impossibly-tiny-90-sq-ft-manhattan-apartment-is-one-of-the-smallest-in-90-square-foot-apartment/,http://www.nydailynews.com/new-york/uptown/smallest-apartment-nyc-article-1.1459066. Some apartments or "cubbyholes" are even smaller at striking 40 square feet, see for instance: http://www.nytimes.com/2016/ 09/18/realestate/so-you-think-your-place-is-small.html. In other dense cities crowding is similar, e.g.,https://www. nytimes.com/interactive/2019/07/22/world/asia/hong-kong-housing-inequality.html. To be sure, majority of urban population does not live in such extreme crowding, the trend however is in that direction as cities are becoming larger and less affordable. And, again, even eithout extreme crowding, usual population density is related to crime (Bettencourt and West 2010). There is also evidence that density relates to negative consequences: interestingly there is evidence that density impacts pathology more than crowding (Levy and Herzog 1974). Yet, it is not only density and crowding, other factors such as social support matter as well (Cassel 2017). Some studies didn't find negative effects of density or crowding and results were mixed (Collette and Webb 1976). While it seems to be reasonable to assume that density and crowding are positivelty related, some studies do not find this to be the case (Webb 1975, Rodgers 1982). For a nice discussion and overview of density, crowding and human behavior see Boots (1979), Choldin (1978).

For some more recent discussion see Ramsden (2009).

Although it seems evident that crowding can be harmful to almost all animals and species, this is often overlooked with respect to humans, particularly in the urban studies literature where some argue that the more people, the better (e.g., Glaeser 2011). While high density is not the same as crowding, the two concepts are correlated. And indeed in densest cities, what many overlook, crowding is arguably common.