

DISSATISFACTION WITH CITY LIFE: A NEW LOOK AT SOME OLD QUESTIONS

ABSTRACT

Data from the World Values Survey are used in multilevel statistical models to evaluate received theory about preferences for rural versus big-city living, as evidenced by accompanying variations in life satisfaction/happiness/utility at different levels of development and in different culture regions. For most parts of the world there is no evidence that either rural or big-city living are associated with variations in happiness or unhappiness; personal characteristics and level of development are the key driving forces. The exceptions are in rapidly-urbanizing Asia, where life dissatisfaction is lower in big cities, and in higher income countries, particularly those of Anglo-Saxon heritage, where life dissatisfaction increases with big-city residence and is significantly lower in rural areas. The Asian experience is consistent with the expectations of received urban theory for regions experiencing the upswing of the urban transition while the higher-income Anglo-Saxon experience conforms with expectations at the highest levels of urbanization and development, but the absence of urban-rural differences in happiness in the rest of the world is both unexpected and unexplained.

KEY WORDS:

Life satisfaction/Happiness
Urbanization
Rural preferences
Big-city preferences
Multi-level models
World Values Survey

A July 1, 2008 story in the *Daily Telegraph* captured our attention by proclaiming “The urge to escape the big city remains as strong as ever ... there are powerful urges ... to escape (following) well-worn migration routes ... trodden by generations before.”¹ Almost simultaneously came the announcement of the latest wave of the World Values Survey (WVS), which for the last quarter-century has been exploring the factors associated with personal feelings of happiness or life satisfaction.² Earlier value surveys had pointed to cross-national differences in preferences for place of residence: “The pattern of preference is ... the reverse of the pattern of settlement. Rural living is preferred in the most urbanized parts of the world, whereas urban living is seen as most desirable in the least urbanized parts.” (Angst 1978, quoted in Veenhoven 1994: 42). However, using the earliest waves of the WVS, Veenhoven (1994: 41) argued that what is at stake is happiness with rural life: “In developed countries rural people tend to be equally satisfied with life as city-people. In the underdeveloped countries rural dwellers are markedly less happy than city-dwellers.” What are raised are some of the grand questions of classical urban sociology. A quarter-century of WVS data can now be deployed to cast light on the relative happiness/unhappiness (= life satisfaction) of rural and big-city residents in various parts of the world, and by extension of the residential preferences that drive migration and urban growth. That is what is attempted in what follows. We begin with a brief discussion of the classical literature, follow with an overview of the WVS data and the principal findings of happiness research, present the results of new statistical analyses of these data focusing on the factors associated with variations in life *dissatisfaction*, including rural and big-city residence, and conclude by relating the findings to urban sociology’s “big ideas.”

THE ROOTS OF URBAN THEORY

Received urban social theory has its roots in the great transition to urban industrial society that took place in Europe in the nineteenth century and the succession of end-of-century thinkers who attempted to understand its nature and consequences (Berry, 1973). Among these, Ferdinand Tönnies (1887) argued that the modern state, science, cities and large-scale trade, were the prime movers in the transition from *gemeinschaft*, in which the basic unit or organization was the family or kin-group, and social relations were instinctive and habitual, to *gesellschaft*, in which social and economic relationships are based upon contractual obligations among individuals, returns to the individual are based upon competitive bidding, and the major groups that influence the individual are no longer kin, but professional peers. Émile Durkheim (1893) saw the accompanying increase in division of labor to be an irreversible process involving the grouping of little societies into larger aggregates, leading to increasing social division of labor, a product of increasing numbers of individuals within cities and to the multiplication of interactions and contacts. Georg Simmel (1902) explored the psychological correlates. Before the transition there was complete immersion of the individual in an immediate small group; afterwards, the individual assumed a specialized role in mass society. Steady rhythms of habitual behavior existing at the unconscious level were replaced by the external stimuli of big-city life, requiring continual conscious response. Max Weber (1920) argued that the increased rationalization of society was necessary to provide order, because in big cities behavior had become dependent upon the individual who, acting with self-

conscious rationality, requires the certainty of rules provided by institutions and administered by a bureaucracy.

In the first statistical assessment of the shifts, *Growth of Cities in the Nineteenth Century*, Adna Weber (1899) concluded that while city growth favored the development of a body of artisans and factory workmen who were more efficient than rural residents and were positioned to begin a slow ascent up the social and economic ladder, city life also produced extremes. The most hopeless poverty, as well as the most splendid wealth, were found in the cities, the danger of class antagonism was grave, and the complexity of city government made it the most difficult kind of government to watch. The industrial system was engendering the egoistic, self-seeking and materialistic attitude: the larger the town the feebler the bonds of moral cohesion, and the greater the concentration of unhappiness as evidenced by increases in crime, insanity and suicide.

It remained for Louis Wirth (1938) to draw together these ideas into a theory of the effects of cities on individual life satisfaction and social relationships. To Wirth big cities were points of population concentration and high population density, their growth fed by massive migration the produced marked heterogeneity of their inhabitants. He derived from size, density and heterogeneity the consequences for social life that had been outlined by the earlier philosophers: impersonality, isolation, the decline of primary group membership and the dominance of formal organizations. Increasing size produced greater volumes of human interaction and interpersonal contacts that were progressively more impersonal, superficial and transitory, viewed simply as means to individual ends.

High population density produced frequent physical contacts, high-pace living, and both class-based and ethnic segregation. For those unable to find a secure life in some specialized role or segregated sub-area, the likelihood of dysfunctional, deviant or pathological behavior was seen to increase, particularly where densities were the highest. Finally, the greater heterogeneity of the new cities made people tend to place emphasis on visual recognition and symbolism, and such things as the place of residence in a differentiated and segregated residential mosaic became status symbols. Thus size, density and heterogeneity were thought to lead sequentially to differentiation, formalization of institutions, and to anomie – to highly selective responses to the nervous stimulation and to the possibility of psychological overload (for elaboration see Fischer 1972, 1973). While there were great opportunities for social mobility, there also was unhappiness, social isolation and deviance: big-city living, in Wirth's view, led not simply to economic and social opportunity, but also to unhappiness and to social malaise.

THE WORLD VALUES SURVEY

If we correctly interpret this theory, the transition from rural to urban living should initially produce rising levels of life satisfaction and happiness, but big-city life should ultimately be accompanied by rising levels of dissatisfaction, by alienation, by social malaise, and by the attempt by some to recapture an imagined rural idyll. To probe these ideas we turn to the World and European Values Surveys. As noted at www.icpsr.umich.edu/cocoon/ICPSR/STUDY/04531.xml#bibliographic-description, which is quoted in the next three paragraphs, the

"World and European Values Surveys series were designed to enable a cross-national, cross-cultural comparison of values and norms on a wide variety of topics and to monitor changes in values and attitudes across the globe. They were carried out in 1981-1984, 1990-1993, 1995-1997, and 1999-2004 [*note: as of this writing a new round has been completed*], but now have been integrated into one dataset to facilitate time series analysis."

"The surveys provide data from representative national samples of the publics of approximately 81 societies (covering 60 countries) that contain 85 percent of the world's population and cover a full range of variation, from societies with per capita incomes below 300 dollars per year, to societies with per capita incomes of more than 35,000 dollars per year, from long-established democracies to authoritarian states, and from societies with market economies to societies that are in the process of emerging from state-run economies. The surveys cover societies that were historically shaped by a wide variety of religious and cultural traditions, from Christian to Islamic to Confucian to Hindu. The societies covered range from those whose culture emphasizes social conformity and group obligations to societies in which the main emphasis is on human emancipation and self-expression. Broad topics covered in the integrated file include perception of life, family, work, traditional values, personal finances, religion and morals, the economy, politics and society, the environment, allocation of resources, contemporary social issues, national identity, and technology and its impact on society."

"Specifically, respondents were asked whether the following acts were ever justifiable: suicide, cheating on taxes, lying, euthanasia, divorce, and abortion. Respondents were also asked about the groups and associations they belonged to, which ones they worked for voluntarily, the ethnic group(s) they would not want as neighbors, their general state of

health, and whether they felt they had free choice and control over their lives. A wide range of items was included on the meaning and purpose of life, such as respondents' views on the value of scientific advances, the demarcation of good and evil, and religious behavior and beliefs. Respondents were also queried about their attitudes toward morality, politics, sexual freedom, marriage, single parenting, child-rearing, and the importance of work, family, politics, and religion in their lives. Questions relating to work included what financial and social benefits were most important to them in a job, how much pride they took in their work, if they were happy with their current position, and their views on owner/state/employee management of business. Questions pertaining to the stability of the world economy and whether respondents were happy with their financial situation were also asked. Respondents' opinions on various forms of political action, the most important aims for their countries, confidence in various civil and governmental institutions, and whether they would fight in a war for their country were also elicited. Demographic information includes family income, number of people residing in the home, size of locality, region of residence, occupation of the head of household, and the respondent's age, sex, occupation, education, religion, religiosity, political party and union membership, and left-right political self-placement.”

We use the combined WVS data set for the period 1981-2004, which has the coverage outlined in Table 1. Of particular interest is one simple WVS question: “All things considered, how satisfied are you with your life as a whole these days?” Respondents were asked to answer this question on a scale from 1 to 10, where 10 is the most satisfied. Their responses have been used as a dependent variable in individual investigations of happiness and mean responses have typically become the dependent

variable in cross-national analyses. Psychologists in particular have probed the reasons for variations in individual happiness/unhappiness.

Their investigations have a typical form: the dependent variable is operationalized as the self-reported rating of life satisfaction, and the array of independent variables operationalized as sources of explanation has included:

1. *Biological Needs*: you cannot be happy if you are undernourished.
2. *Leisure*: once biological needs are met, leisure time increases happiness.
3. *Personal Income* (and personal income change): money does buy happiness, but only to a point.
4. *Goals vs. Needs*: goals that are congruent with needs promote happiness.
5. *Cultural Factors*: culture moderates the impact of other happiness determinants.
6. *Personality*: extroverts have a temperamental predisposition to happiness.
7. *Health*: healthy people are happy people, but not if they are poor.
8. *Religion*: helps to make sense of life and counters unhappiness.
9. *Marriage*: a form of social capital that promotes social well-being.
10. *Age*: the young are optimistic, the old are accomplished, and the middle-aged are unhappy.
11. *Gender*: women tend to be more depressed, but also have more positive affect than men.
12. *Education*: increases social status and feelings of self-worth.

Two major articles summarize this research, Myers (2000) and Diener and Seligman (2004). Myers concludes that happiness comes from three sources:

1. *Personal characteristics/activities*: traits and temperaments (e.g., extroversion) and leisure, but, disagreeing with findings reported by others, not gender, age, or personal income (assuming that one can afford the necessities).
2. *Characteristics of the collectivity*: affluent culture, political freedom/rights, per capita gross national product (GNP) up to \$8,000.
3. *The relationship between people and groups*: social capital (e.g., friendship and religion).

Diener and Seligman offer cautionary notes about causation, arguing for example that it is not a strong economy that leads to well-being, but rather the other way round: well-being leads to desirable societal outcomes such as health, longevity, and productivity. Similarly, the direction of the causal relationship between happiness and marriage is an issue. There is longitudinal evidence that happier people are more likely to get married (Diener et al., 1999). Another problem with emphasizing economic wellbeing is that the positive effect of greater income is offset by increasing wants. This is not a new idea. Durkheim puts it this way: "The more one has the more one wants, since satisfactions received only stimulate instead of filling needs" (Durkheim, 1950: 110). The notion has been extended by Easterlin (1974, 1995, 2001, 2003, 2005), who argues

that a more complete happiness function should be composed of both aspirations and achievements. People have aspirations that they try to satisfy. Once aspirations are satisfied, happiness should follow. However new achievements result in new aspirations, because through a process of hedonic adaptation people adapt to new circumstances, whether good or bad, quite rapidly; hence, their life satisfaction is impacted by increasing income in the short run only. The gains are lost as new aspirations open a gap with achievement. Because happiness is positively correlated to income but negatively to aspirations, the two influences cancel out as time passes. Thus, income may be a poor measure of wellbeing in developed nations; it matters only in poor nations. At higher levels of income it is other factors that make people happy:

1. Life in a democratic and stable society that provides material resources to meet needs.
2. Presence of supportive friends and family.
3. Rewarding and engaging work.
4. Good health, and available treatment if there are mental problems.
5. Goals related to values.
6. A philosophy or religion that provides guidance, purpose, and meaning to life.

Thus, in any complete investigation of life satisfaction both individual and contextual/societal variables must be considered.

FACTORS ASSOCIATED WITH LIFE DISSATISFACTION

In what follows we focus on the WVS life satisfaction variable described earlier, but we invert the 1 to 10 scale to 0 to 10 to create a measure of *dissatisfaction*, or *unhappiness*, which according to received theory should be higher in big cities. Controlling for the more important individual traits that affect happiness (age, income, whether married or divorced, whether unemployed – all key determinants of happiness according to previous research), as well as for gross domestic product per capita (to provide a contextual measure both of wealth and development), and including the cross-level interaction of personal income and GDP to determine whether personal income is more or less important at different levels of development, we seek to determine whether life dissatisfaction increases or decreases with residence in small rural settlements (population less than 2,000) or large cities (population greater than 500,000). The model thus regresses life dissatisfaction on a set of individual and contextual traits, but adds dummy variables for residence in either rural settlements or big cities. Place of residence >2,000 and <500,000³ is thus the base case.

The dependent variable is ordinal. It is natural then to use ordinal logistic/probit regression and it is a practice adopted by most of the economics literature (e.g., Alesina et al. 2004; Di Tella et al. 2001b; Di Tella et al. 2001a; van Praag et al. 2003). But it turns out that discrete choice modeling of life satisfaction is of little importance: most of the

psychological literature uses ordinary least squares (OLS) and hence assumes cardinality of the life satisfaction measure. Comparison of OLS and ordinal logistic regressions finds differences to be negligible (Ferrer-I-Carbonell and Frijters, 2004). The reason is that there are ten categories on the dependent variable, and hence it approaches continuity.

Consistent with the foregoing we might have started by running an OLS regression of life dissatisfaction on the independent variables listed in Table 2 using the entire sample of 63,361 observations. However, the structure of data is multilevel, and hence Maximum Likelihood Estimation of the resulting Hierarchical Linear Model (MLE/HLM) is more appropriate. The results appear in the first column of Table 3. A positive sign indicates that as an independent variable increases in value or a trait is present, life dissatisfaction increases, in Table 3 as with age, divorce and unemployment. A negative sign indicates that as the variable increases or the trait is present, life satisfaction increases, in Table 3 as with personal income, marriage and national wealth. The significant positive coefficient for the interaction of personal income and GDP shows, consistent with Easterlin, that higher incomes in richer countries increase dissatisfaction, presumably because of rising aspirations. All of the personal characteristics are significant with the expected signs, but *neither rural nor big-city residence has a statistically significant association with life dissatisfaction at the global scale.*

Received theory suggests that there may be contrasting patterns that are cancelled out at global scale, however: as countries develop there should initially be a preference

for urban living that is pushed aside by the problems of urban life and an increasing preference for rural living as development progresses. To examine this question countries were divided into two groups, those with per capita gross domestic products exceeding \$10,000⁴ at purchasing power parity and those with less – Appendix 1 contains the lists. HLM regressions were repeated for these two groups, as shown in the second and third columns of Table 3. Once again individual-level determinants of dissatisfaction/satisfaction are all significant with the expected signs, with marriage, unemployment and age more potent where per capita GDP is higher, and personal income more important where it is lower. Per capita GDP itself is a significant source of satisfaction in higher income countries, but not where it is lower, and in both cases, higher personal incomes where per capita GDP is greater bring greater life dissatisfaction, as Easterlin would have predicted. And what of place or residence? *Where per capita GDP exceeds \$10,000, residence in large cities is associated with higher levels of dissatisfaction, with the opposite true for rural living.* The latter coefficient is double the former, indicating that satisfaction with rural life is the more potent force, consistent with Berry's notion of counterurbanization (Berry 1980). Where per capita GDP is less than \$10,000 neither location nor national wealth are statistically significant, however: life dissatisfaction is driven by personal income, divorce, unemployment and age (although the age effect is greater in richer countries). The preference for rural living only appears at higher levels of development and income.

Might there be other variables at work? Choay (1965) argued that the preference for rural living was an Anglo-Saxon trait not shared by European regions of Latin

heritage. The HLM regressions were repeated for the subsets of Anglo-Saxon and of Latin nations described in the Appendix and are set down in Table 4. *Rural living is a potent source of life satisfaction in the Anglo-Saxon group, but place of residence is not statistically significant in the Latin case.* Both personal income and per capita GDP are significant individually in Latin Europe, but not in the already-affluent Anglo-Saxon group and in both regions, contrary to Easterlin's expectations, higher personal incomes when per capita GDP is greater result in *greater* life satisfaction.

What of the possibility that there are different preferences for place of residence in cultural groupings other than these just addressed, as comparative urbanists increasingly argue. Some descriptive statistics may be revealing. The countries with the lowest and the highest average levels of life dissatisfaction among residents of rural areas are:

Lowest:	Netherlands	2.25
	United States	2.33
	Malta	2.40
	Switzerland	2.61
	Denmark	2.64
	Canada	2.73
	Ireland	2.78
	Iceland	2.89
Highest	Ukraine	6.37
	Romania	6.38
	Egypt	6.39
	Macedonia	6.42
	Bulgaria	6.45
	Pakistan	6.55
	Belarus	6.60
	Morocco	6.67
	Russia	6.73
	Moldova	6.78

Similarly, the lowest and highest mean scores for dissatisfaction with living in large cities are:

Lowest:	Colombia	2.56
	Finland	2.91
	Mexico	2.94
	Great Britain	3.05
	Ireland	3.07
	Denmark	3.08
	Austria	3.21
	United States	3.30
	Sweden	3.40
Highest:	Belarus	5.72
	Egypt	5.73
	Turkey	5.74
	Pakistan	5.78
	Moldova	6.03
	Russia	6.12
	Romania	6.30
	Ukraine	6.35

Subtracting mean dissatisfaction levels with rural living from those of big-city residents yields the countries with the greatest relative unhappiness with rural life:

Dominican Republic	-2.05
India	-1.89
Vietnam	-1.73
Morocco	-1.73
Bulgaria	-1.23
Macedonia	-1.16
Bangladesh	-1.14
Belarus	-0.88
Nigeria	-0.88
Pakistan	-0.77

The same differencing yields the countries where relative dissatisfaction with big-city living is greatest. Although the spreads are not as extreme they are as follows:

Netherlands	+1.18
United States	+0.97
Kyrgyzstan	+0.85
Canada	+0.78
Spain	+0.60
Australia	+0.45
Denmark	+0.44

Major regional/cultural differences are suggested. To probe these, separate HLM regressions were run using the respondents in five other groups of countries, as listed in the Appendix: Latin America, the former Soviet bloc, Islam, Asia and Africa, with the results set down in Table 5. Place of residence is not a source of dissatisfaction in any of these groups, with one exception: *in Asia life satisfaction increases with big-city residence*. It is the individual-level cross-national differences in the source of life dissatisfaction that are noteworthy: age is not a significant factor in Asia or Africa, but is a potent source of unhappiness in the former Soviet bloc; in contrast, per capita GDP is highly significant and personal income insignificant in Asia and Africa, with the opposite true for the former Soviet bloc, etc. – all variations that should be of interest to comparative happiness researchers.

OVERVIEW

Where do these results leave us? To what extent is there support for received theory? We offer the following conclusions:

- Globally, life dissatisfaction is driven by personal characteristics, all of which are statistically significant with the correct signs. It is ameliorated by development, as indexed by per capita GDP, but higher personal incomes in richer countries elevate dissatisfaction, evidence of rapidly-rising expectations. There is no evidence that either rural or big-city residence raise or reduce unhappiness. To the extent that there are cross-national spatial variations in life dissatisfaction, other than those associated with level of development, they thus must result from cross-national differences in such things as age structure of the population, unemployment rates, etc.

This is not the end of the story, however. When the WVS data are split into higher and lower income subsets according to national levels of per capita GDP, the personal characteristics remain significant but:

- At higher levels of development place of residence *does* influence life dissatisfaction, which is significantly higher in large cities and much lower in rural areas. Rural residence deflates unhappiness at double the rate big-city residence boosts malaise.
- At lower levels of development only the personal characteristics are statistically significant: neither level of development nor place of residence are significant cross-nationally.

Probing further, and subject to the number of countries in each group, among the wealthier countries of the world:

- Those of Anglo-Saxon heritage display a strong level of satisfaction with rural living. There is also evidence that in these regions life dissatisfaction decreases as personal income rises in association with higher levels of development, which runs counter to Easterlin.
- The European countries of Latin heritage display show no preference for either rural or urban living. They experience greater mean levels of dissatisfaction at higher levels of development but also declines in dissatisfaction with rising personal income: the lowest levels of life dissatisfaction are among the wealthiest residents of the wealthiest countries, which surely highlights the contrast between rich and poor in these parts of the world.

Looking at other subgroups of countries, the only group in which location is significant is Asia, where life dissatisfaction decreases with big-city residence:

- The Latin American group mirrors that of the European Latins, except that neither divorce nor unemployment contribute to greater unhappiness.
- Life dissatisfaction among residents of the countries of the former Soviet bloc and in Islam is driven by personal characteristics and decreases with development, although in Islam there is also some evidence that dissatisfaction

increases with rising personal incomes in the more affluent nations, and age is a potent source of dissatisfaction in post-Soviet societies.

- In Asia and Africa, personal characteristics vanish as drivers of unhappiness, save for unemployment. However, life dissatisfaction rises with per capita GDP, a sure sign that development is not keeping pace with rising expectations.

So to return to the beginning, received perceptions and urban theory are, like the proverbial Curate's egg, good only in parts. The *Daily Telegraph* correctly captured the upper-income Anglo-Saxon preference for rural life, but Angst's notion that the pattern of preference is the reverse of that of settlement needs to be rethought. With the exception of rapidly-urbanizing Asia there is no evidence of any greater satisfaction with urban living at lower levels of development. Veenhoven, in particular, is off target: in developed countries life satisfaction is greatest among rural residents. Elsewhere the rural variable is not significant, and only in Asia is there evidence of decreases in life dissatisfaction with big-city residence. With respect to received social theory, rapidly-urbanizing Asia does evidence higher levels of life satisfaction in its big cities, and in the world's higher-income countries residents of big cities do display greater levels of dissatisfaction with big-city life. The pattern is not universal, however: it does not appear among residents of the world's poorer nations; it is absent from both European and South American Latin societies, from Islam, from Africa, and from the countries of the former Soviet bloc. At the extreme, in Africa, the only factors driving dissatisfaction are unemployment and the development process itself.

Appendix 1: Group Membership

Countries with PCGDP >\$10,000: Argentina, Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Great Britain, Greece, Hungary, Iceland, Iraq, Ireland, Israel, Italy, Japan, Luxembourg, Malta, Netherlands, New Zealand, Northern Ireland, Portugal, Puerto Rico, Republic of Korea, Saudi Arabia, Serbia and Montenegro, Singapore, Slovakia, Slovenia, Spain, Sweden, Switzerland, Taiwan Province of China, United States

Countries with PCGDP <\$10,000: Albania, Algeria, Armenia, Azerbaijan, Bangladesh, Belarus , Bosnia and Herzegovina, Brazil, Bulgaria, Chile, China, Colombia, Croatia, Dominican Republic, Egypt, Estonia, Georgia, India, Indonesia, Iran, Jordan, Kyrgyzstan, Latvia, Lithuania, Macedonia, Mexico, Morocco, Nigeria, Pakistan, Peru, Philippines, Poland, Moldova, Romania, Russian Federation, South Africa, Tanzania, Turkey, Uganda, Ukraine, Uruguay, Venezuela, Viet Nam , Zimbabwe

Countries in Latin Group: France, Greece, Italy, Portugal, Spain

Countries in Anglo-Saxon Group: Australia, Canada, Great Britain, United States

Latin America Group: Argentina, Brazil, Chile, Peru, Puerto Rico, Venezuela

Africa Group: Algeria, Egypt, Morocco, Nigeria, South Africa, Tanzania, Uganda, Zimbabwe

Asia Group: China, India, Indonesia, Singapore, Taiwan, Viet Nam

Islamic Group: Indonesia, Iran, Iraq, Jordan, Morocco, Pakistan, Saudi Arabia

Former Soviet Block Group: Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Czech Republic, Estonia, Georgia, Hungary, Kyrgyzstan, Latvia, Lithuania, Macedonia, Poland, Moldova, Romania, Russian Federation, Serbia and Montenegro, Slovakia, Slovenia, Ukraine

Notes

1. <http://www.telegraph.co.uk/property/main.jhtml?xml=/property/2008/07/01/pmigration101>
2. <http://www.sciencedaily.com/releases/2008/06/080630130129.htm>
3. We also experimented with different and combined categories for city sizes and the results were robust.
4. We tried a range of cutoff points between \$9,000 and \$11,000 and the results were robust.

Table 1 Sample Description

<i>Country</i>	<i>Year</i>	<i>Observations</i>	<i>Country</i>	<i>Year</i>	<i>Observations</i>
Albania	2002	1000	Jordan	2001	1223
Algeria	2002	1282	Kyrgyzstan	2003	1043
Argentina	1999	1280	Latvia	1999	1013
Armenia	1997	2000	Lithuania	1999	1018
Australia	1995	2048	Luxembourg	1999	1211
Austria	1999	1522	Macedonia	2001	1055
Azerbaijan	1997	2002	Malta	1999	1002
Bangladesh	2002	1500	Mexico	2000	1535
Belarus	2000	1000	Morocco	2001	2264
Belgium	1999	1912	Netherlands	1999	1003
Bosnia & Herzegovina	2001	1200	New Zealand	1998	1201
Brazil	1997	1149	Nigeria	2000	2022
Bulgaria	1999	1000	Pakistan	2001	2000
Canada	2000	1931	Peru	2001	1501
Chile	2000	1200	Philippines	2001	1200
China	2001	1000	Poland	1999	1095
Colombia	1998	2996	Portugal	1999	1000
Croatia	1999	1003	Puerto Rico	2001	720
Czech Republic	1999	1908	Republic of Korea	2001	1200
Denmark	1999	1023	Republic of Moldova	2002	1008
Dominican Republic	1996	417	Romania	1999	1146
Egypt	2000	3000	Russian Federation	1999	2500
Estonia	1999	1005	Saudi Arabia	2003	1502
Finland	2000	1038	Serbia & Montenegro	2001	2260
France	1999	1615	Singapore	2002	1512
Georgia	1996	2008	Slovakia	1999	1331
Germany	1999	2036	Slovenia	1999	1006
Great Britain	1999	1000	South Africa	2001	3000
Greece	1999	1142	Spain	2000	1209
Hungary	1999	1000	Sweden	1999	1015
Iceland	1999	968	Switzerland	1996	1212
India	2001	2002	Tanzania	2001	1171
Indonesia	2001	1004	Turkey	2001	4607
Iran	2000	2532	Uganda	2001	1002
Iraq	2004	2325	Ukraine	1999	1195
Ireland	1999	1012	United States	1999	1200
Israel	2001	1199	Uruguay	1996	1000
Italy	1999	2000	Venezuela	2000	1200
Japan	2000	1362	Viet Nam	2001	1000
			Zimbabwe	2001	1002

Table 2 Description of Variables

<i>Variable</i>	
Settlement <2K	Live in a place with population less than 2,000: 1; otherwise 0.
City >500K	Live in a city with population more than 500,000: 1; otherwise 0.
Age	Age of respondent
Age ²	The square of age, for nonlinearity
Income	Self-reported income on scale 1-10
Married	If married: 1; otherwise 0
Divorced	If divorced: 1; otherwise 0
Unemployed	If unemployed: 1; otherwise 0
GDP/cap in 0,000s of \$PPP	Gross domestic product per capita in \$10,000s at purchasing power parity
(GDP/cap) ²	To account for nonlinearity
Income*GDP/cap	The cross-level interaction of personal income and national GDP per capita

Table 3 Factors Associated with Life Dissatisfaction

	<i>Entire Sample</i>	<i>High Income Countries¹</i>	<i>Lower Income Countries²</i>
<i>Intercept</i>	5.76***	5.67***	5.59***
Settlement<2,000	0.01	-0.15***	0.04
City>500,000	0.04	0.07*	-0.01
Income	-0.29***	-0.21***	-0.35***
Married	-0.28***	-0.43***	-0.16***
Divorced	0.21***	0.15***	0.26***
Unemployed	0.58***	0.97***	0.47***
Age	5.48***	5.50***	4.53***
Age ²	-5.48***	-5.76***	-4.16***
GDP/cap in PPP (0,000)	-1.45***	-1.47***	0.87
GDP/cap ²	0.11	0.15*	-2.73
Inc. x GDP/cap	0.07***	0.04*	0.18*
N	68,361	27,784	40,577

*p<0.05, **p<0.01, ***p<0.001

1. GDP/cap>\$10,000 2. GDP/cap<\$10,000

TABLE 4 Test of the Choay Hypothesis

	<i>Anglo Saxon</i>	<i>Latin</i>
Intercept	4.13	3.74***
Settlement<2,000	-0.41***	-0.02
City>500,000	0.05	0.08
Income	-0.04	-0.45***
Married	-0.63***	-0.45***
Divorced	0.02	0.24***
Unemployed	0.52***	1.30***
Age	6.38***	6.96***
Age ²	-7.56***	-5.99***
GDP/cap in PPP (0,000)	-0.65	1.53*
GDP/cap ²	0.10	-0.75***
Inc. x GDP/cap	-0.63***	-0.45***
N	5,260	14,258

*p<0.05, **p<0.01, ***p<0.001

TABLE 5 Regional Variations in Determinants of Life Dissatisfaction

	<i>Latin America</i>	<i>Former Soviet Bloc</i>	<i>Islam</i>	<i>Asia</i>	<i>Africa</i>
Intercept	3.02***	4.94***	7.38***	-11.12*	4.71***
Settlement<2,000	0.00	0.02	0.10	0.09	0.59
City>500,000	0.07	0.06	-0.10	-0.39**	0.07
Income	-0.18***	-0.35***	-0.37***	-0.48	-0.23
Married	-0.15***	-0.18**	-0.20**	-0.17	-0.10
Divorced	0.08	0.31***	0.01	0.08	0.09
Unemployed	0.28	0.59***	0.45***	0.42**	0.56**
Age	3.83*	8.46***	3.47**	0.89	0.53
Age ²	-4.62**	-7.59***	-3.49**	-0.78	-0.12
GDP/cap in PPP (0,000)	1.57***	0.81	-5.16*	144.42***	6.18***
GDP/cap ²	-0.80***	-1.51*	2.00	-291.25***	-7.74***
Inc. x GDP/cap	0.05	0.12	0.14*	0.57	0.07
N	2,826	18,619	7,534	3,787	6,993

*p<0.05, **p<0.01, ***p<0.001

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