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SUPPLEMENTARY INFORMATION

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Happiness, income satiation and turning points around the world

Andrew T. Jebb[1]*, Louis Tay[1], Ed Diener[2] and Shigehiro Oishi[2]

[1]Department of Psychological Sciences, Purdue University, West Lafayette, IN, USA. [2]Department of Psychology, University of Virginia, Charlottesville, VA, USA. *e-mail: ajebb@purdue.edu

Supplementary Methods

Data Collection

Sampling of the Gallup World Poll. Data were collected by Gallup Inc. as part of the Gallup World Poll[1]. The sampling frame (i.e., individuals available to be selected) was the entire civilian, non-institutionalized, population 15 years of age or older. Surveys within a country were conducted either face-to-face or using a telephone design. Exclusions to representative sampling were largely due to safety concerns or prohibitions in reaching that location. These can be found at: http://www.gallup.com/file/services/177797/World_Poll_Dataset_Details_122316.pdf. This document also contains additional sampling information of relevance (e.g., mode of interviewing, languages). Face-to-face interviewing covered about three-fourths of countries and used a stratified sampling plan. The sampling frame was stratified by geography and/or population size. Primary Sampling Units (PSUs) were assigned probabilities proportional to population size, or, if this information was unknown, PSUs were sampled using simple random sampling. A total of 100-135 clusters were selected within each country. Samples were independent of prior years of data collection. Interviewers were instructed to conduct random route procedures for interviews. Interviewers then attempted to contact the sampled household up to three times to increase probability of survey completion. Respondents within a household were randomly selected by a Kish grid. If a sampled household did not complete the survey, the interviewer used a simple substitution method wherein the household nearest to the right was contacted (and if this failed, the household to the left). For countries using telephone interviewing, either a nationally-representative list of phone numbers or random-digit-dialing were used. In countries with a large proportion of cell phones, a dual sampling frame was used.

Like face-to-face interviewing, three attempts were made across different times and days to contact the household.

Income Variables. Participants were asked to report monthly household income rather than yearly income to facilitate responding. Respondents were asked the question, "What is your total monthly household income in [local currency], before taxes? Please include income from wages and salaries, remittances from family members living elsewhere, farming, and all other sources." Households were defined as a person's home that had its own cooking facilities, which could have been anything ranging from a one-room flat to a single house.

To create comparability across nations, local income was converted to International Dollars using the World Bank's private purchasing power parity ratios (see http://data.worldbank.org/indicator/PA.NUS.PPP). These ratios represent the number of units of local currency that are equal to the buying power of one U.S. dollar in the United States (the reference country). Thus, the International Dollars figures reported here are interpretable as U.S. dollars. However, raw household income would lead to spurious results given differing numbers of people within households (<10% of households in our sample had just one adult, where adults were defined as individuals over 15). We therefore converted the raw International Dollars into a measure of equivalized household income, which controlled for the number of individuals within the household. We used the square root equivalency scale[2,3], which divides income by the square root of the household size. All models were fit using the natural logarithm of equivalized income, and observations under $1 were removed because they resulted in negative values.

In our income variable, there were N = 884,230 values that came from exact reports of income by respondents. However, during the survey process, if the respondent hesitated or had difficulty answering, they were given a set of income ranges in local currency to choose from.

Income estimates were then imputed using hot deck imputation but restricted to the reported range. There were N = 211,641 such observations. Respondents who did not answer either income question had their incomes imputed using hot deck imputation with no restriction of range (N = 180,842). These amounted to 1,276,713 total income values provided by Gallup Inc. Because we wanted to ensure that our results were robust to every kind of income data, we ran three different sets of analyses. The first analyzed incomes that were reported exactly, the second included the category-imputed incomes, and the third included all income values provided by Gallup. A comparison of satiation estimates is presented in Supplementary Table 4. There were a number of occasions where these satiation estimates, when rounding to the nearest $5,000 increment, differed. We deemed these deviations tolerable because they were usually no greater than $5,000-$10,000.

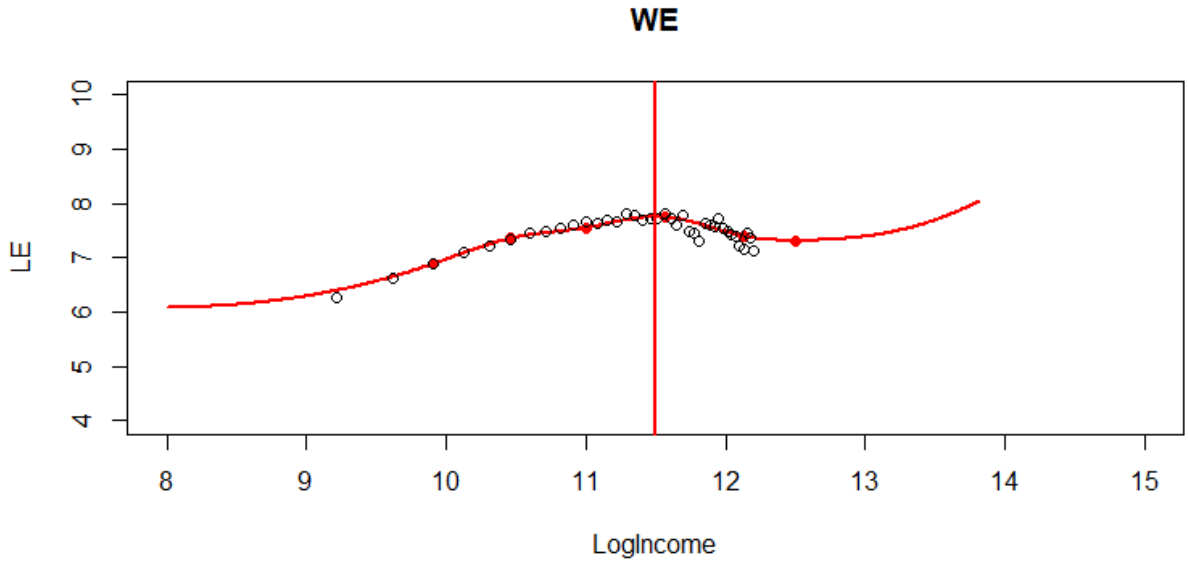
Aside from these income data, there were still N = 433,022 missing values in the overall dataset. Because this was still a nontrivial number, we personally imputed the rest by regressing on demographics in a way similar to prior satiation studies[4]. We again conducted a supplementary analysis that included these imputed data and then compared the results as a robustness check (Supplementary Table 4). Many of the results were replicated here as well. However, there were cases where satiation estimates were strikingly different, and examination of model plots showed that these data sometimes differed systematically from the other data sources. These imputed values were therefore omitted in the main analyses. The results reported in the manuscript are thus from when all three Gallup data sources were used.

Model Fitting and Selection

Although some modeling details were given in the manuscript, there were additional considerations beyond which we were able to discuss. Selecting a statistical model to test for

satiation effects is no straightforward task, especially when the data are unevenly distributed along the range of the predictor (as was the case here, where lower incomes were more commonly observed than the highest incomes). To make matters more complicated, the underlying function was different across world regions and the other subgroups. To accommodate this complexity, we used regression splines and an iterative process of model fitting until an optimal model that was parsimonious but still sufficiently complex to model our data was found (a strategy recommended by numerous sources[5,6]).

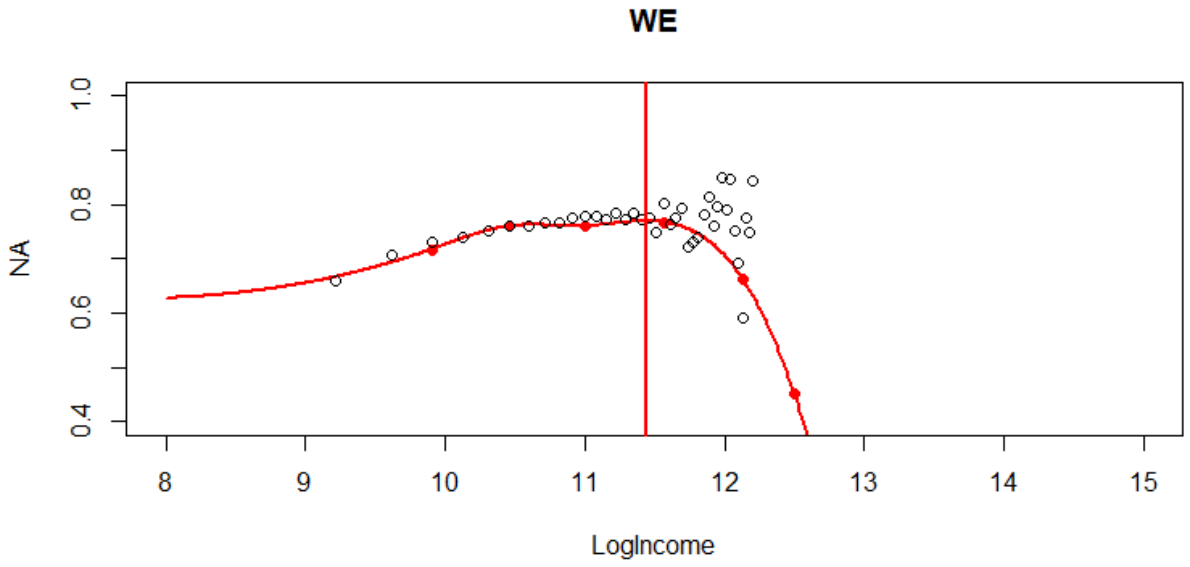
For each subgroup, the first model we fit was a complex model of 6 knots. Using 8 knots usually overfitted the data. These knots were distributed evenly along the value of the predictor where satiation was hypothesized to occur. If there was no severe overfitting, then this model was chosen. An example of this was life evaluation in Western Europe/Scandinavia, a region for which we had many high-income observations. The initial 6-knot model fit the data very well. A model plot is shown below. The analysis identified satiation (vertical line) at $100,000:



Supplementary Figure 1. Knot locations are shown by red dots, and the data points are the means of every $5,000 bin. (Plotting the raw data obscured the plot due to the large number of observations.) LE = life evaluation. WE = Western Europe/Scandinavia

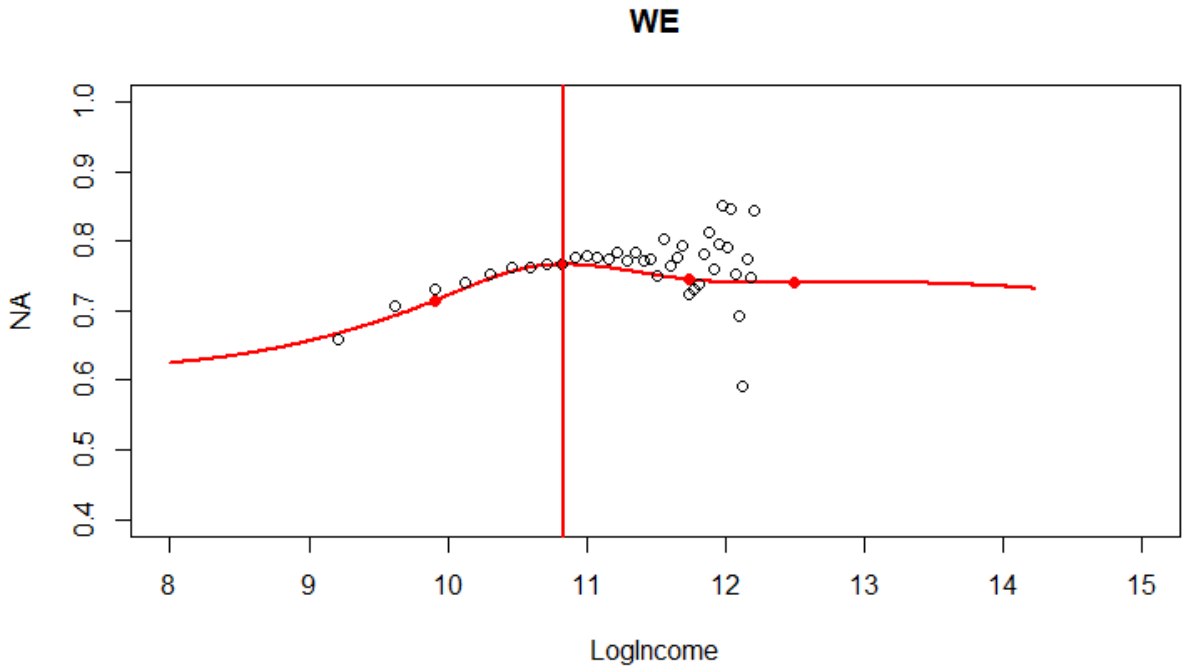
Slight overfitting seemed to occur after a log income of 12 due to growing scarcity of observations, but model predictions at these ranges could simply by ignored because satiation had already been found.

In other cases, there was overfitting when the initial 6-knot model was used. This was the case for Western Europe/Scandinavia for the negative affect outcome. As seen below, the model is too flexible and gets pulled heavily just before a log income of 12. The satiation estimate is also inflated to $95,000 due to the overfitting that occurs before this value:



Supplementary Figure 2. Knot locations are shown by red dots, and the data points are means of every $5,000 bin. NA = positive affect. WE = Western Europe/Scandinavia.

In these cases, we reduced the model complexity and respecified the model with fewer knots. For this example, we used a model with 4 knots instead. This model provided a smoother fit and identified satiation at $50,000:



Supplementary Figure 3. Knot locations are shown by red dots, and the data points are means of every $5,000 bin. NA = negative affect. WE = Western Europe/Scandinavia.

This general modeling strategy was then taken for all other subgroups; we fit 6-knot models, examined model plots, and then iteratively fit simpler models until a successful model was identified. This approach was successful for all groups. All subgroups required between 4-6 knots.

Measurement Error Assessment

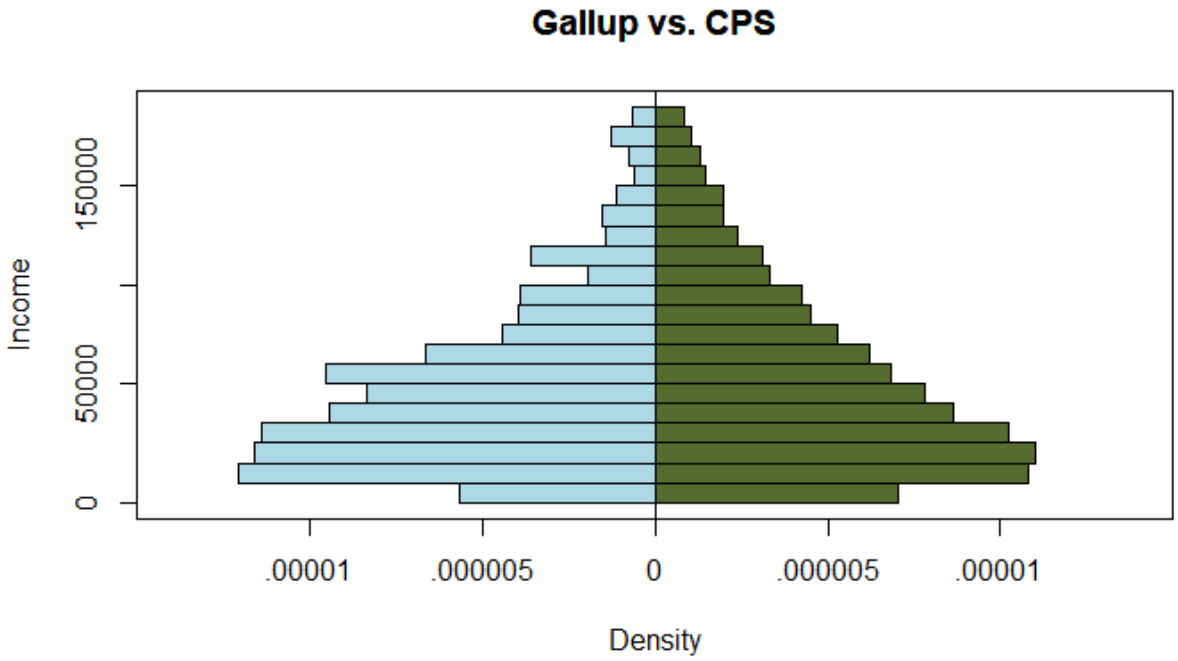
Another concern in our study was the possible influence of measurement error on our income variable. Measurement error would presumably not affect all income ranges equally. High income data are more susceptible to error due to factors like (a) greater difficulty in

reporting one's full assets and (b) the social desirability of reporting fictitiously high incomes. If lower-income respondents were inflating their incomes, this might lead to satiation being shown prematurely or where it did not actually exist. Significant error in this regard would be indicated by wider tails in the Gallup data and a larger corresponding variance when compared to the true distribution.

In order to better examine the possibility of measurement error in our data, we took several Gallup World Poll national samples and compared these to income distributions reported by official national statistics bureaus. The main difficulty in doing this was acquiring the raw data from these agencies. Many countries only offered descriptive statistics (e.g., median household income) which could not be used to reconstruct entire distributions. Others offered statistics that were limited to certain subpopulations (e.g., household income for employed residents). There were also concerns about the credibility of the data reported from certain governments (e.g., Argentina, Russia). Ultimately, we were able to locate data from three nations in different geographic regions: the U.S., Australia, and Hong Kong. We imported these data, recreated distributions, and compared them to the Gallup Poll samples using histogram plots and descriptive statistics. These three examples and a summary are provided below.

Example #1: US. We used data from the Current Population Survey (CPS) collected annually by the US Census Bureau. The data used here were from the 2016 report (N = 118,117; methodology at https://www.census.gov/programs-surveys/cps/technical-documentation/methodology.html). Income is reported categorically in increments of $5,000 up to $200,000, which can be used to create a comparison distribution. In the Gallup data, we used international dollars rather than local currency for this comparison because this metric was still interpretable as U.S. dollars and controlled for inflation after 2008. Observations in the Gallup

data over $200,000 were omitted for comparability with the CPS. (Satiation occurred well before this value, so this did not affect our ability to assess measurement error.) We ran two sets of analyses, the first examining only the Gallup incomes that were reported exactly (N = 6,737) and the other combining the imputations provided by Gallup (N = 9,143). There were no differences in the results, so the latter is presented because (a) the sample is larger and (b) it corresponds to what we used in our manuscript analyses. A bihistogram between the two distributions showed that there was notable similarity:

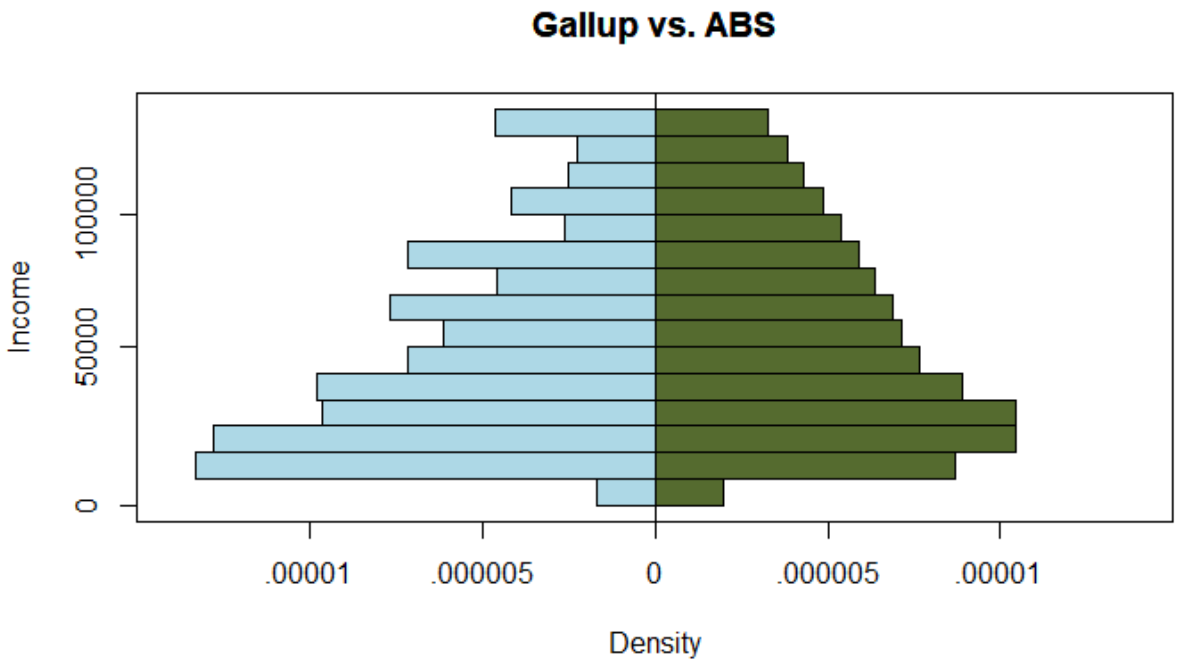


Supplementary Figure 4. Bihistogram of the Gallup U.S. sample against U.S. income data reported by the Current Population Survey (CPS).

The standard deviation was slightly higher in the CPS ($46,486 vs. Gallup: $42,604). The following table shows the percentages of each distribution within $10,000 bins under $200,000.

Across these bins, there were some stretches where differences occurred. Gallup had slightly larger shares in the bins between 10-50k. Moreover, after 70k, the CPS typically had slightly larger shares. However, all of these differences were rarely larger than 1% within each bin.

Example #2: Australia. We then tested the Gallup Australian national sample against the income data reported by the Australian Bureau of Statistics (ABS; http://www.abs.gov.au/AUSSTATS/subscriber.nsf/log?openagent&6523DO00001_201314.xls&6523.0&Data%20Cubes&4F00682720AFA825CA257EB5001B77B9&0&2013-14&16.12.2015&Latest). Categorical income data were available from 1994-2014, but we used only the years that were present in our Gallup dataset (2005-2014; N = 6,701). Yearly household income categories were reported in Australian dollars in $5,200 increments until $104,000, after which the bin size doubled to $10,400. After $150,000, the bin size became $26,000. Rather than widen the histogram bins to accommodate cases above $150k (which distorted the histograms), we omitted these observations, looking only at incomes below $150k in bins of $10,400 (a point still well after satiation). Similar to the US example, we took Australia income values from the Gallup Poll (N = 6,921) and compared them using a bihistogram.



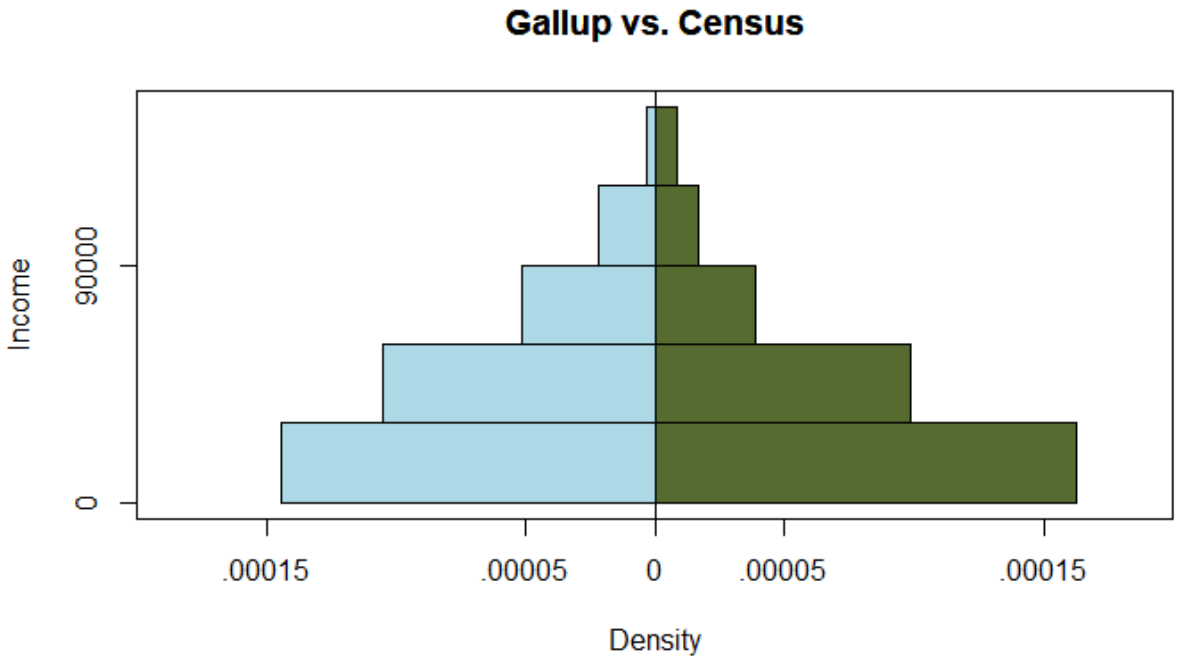
Supplementary Figure 5. Bihistogram of the Gallup Australian sample against Australian income data reported by the Australian Bureau of Statistics (ABS).

This comparison is rougher than the U.S. The decrease in frequencies is certainly less smooth and is exacerbated by the fact that the second and third Gallup bins are noticeably higher. Similar to the U.S., the standard deviation was slightly higher in the officially reported dataset ($41,029 vs. Gallup: $39,911). The following table gives percentages within $10,400 bins.

As indicated by the histograms, these differences are more pronounced than in the U.S. sample. Gallup has a slightly larger proportion of its early values between $10,400-31,200, and the ABS had a consistently larger share of its values in the $83k-145k range. However, these differences were fairly modest; after $31,200, they do not exceed more than 3 percentage points.

Example 3: Hong Kong. To have a final, non-Western example, we used the 2011 study on Household Income Distribution in Hong Kong (*N* = 2,257,368; from http://itable.censtatd.gov.hk/UI/Report/Report.aspx?lang=en-US). The original income data were

in Hong Kong dollars which we converted to U.S. dollars for simplicity (1 HK dollar = .13 US dollars). The categorical data in the Hong Kong census were reported up to $150,000 with bins that began at $3,000 increments and increased quickly to increments of $30,000 at $60,000. We compared these data with the Gallup sample from Hong Kong (*N* = 3,305 after observations >$150,000 were omitted). To plot the histograms, we used $30,000 bins so that the distributions would not contain any gaps. This resulted only in five bins, but reliable data from non-Western nations were difficult to locate.



Supplementary Figure 6. Bihistogram of the Gallup Hong Kong sample against Hong Kong income data reported by the census on Household Income Distribution in Hong Kong.

There is a rough correspondence between the two datasets. The highest bin ($120-150k) contains a higher proportion of the census data, and the $90-120k bin is larger for Gallup. Similar to the previous two comparisons, the standard deviation was higher in the officially-reported data: *SD* =

36,426 (Census) vs. 31,323 (Gallup). Rather than create a table giving percentages for five bins, we instead give percentile values rounded to the nearest hundred dollars. Most of these percentiles were highly similar with the exception of two significant differences at 60% and 80%.

Summary. Taking these three comparisons into account, we do not believe that our satiation estimates were artifactually low due to measurement error. The standard deviations of all three countries are larger in the official dataset, and in many bins, there was a slightly larger share of its distribution's values. We think there is sufficient evidence to remain confident that these Gallup data can provide an accurate test of satiation. The overlap between distributions is imperfect (more significantly in Australia than the other two) but is reasonably good considering the scale of these surveys.

Supplementary Table 1. Descriptive statistics of study variables.

Subgroup	LE	PA	NA	Age	Gender	Education	Income	*N*
Global	5.49 (2.28)	0.71 (0.38)	0.29 (0.35)	40.87 (17.40)	0.47 (0.50)	1.84 (0.68)	11,120 (11,851)	1,709,734
Western Europe/ Scandinavia	6.93 (1.83)	0.79 (0.34)	0.28 (0.33)	49.73 (17.48)	0.45 (0.50)	2.17 (0.62)	37,535 (27,536)	231,531
Eastern Europe/ the Balkans	5.40 (2.10)	0.62 (0.41)	0.30 (0.35)	45.92 (18.08)	0.43 (0.49)	2.00 (0.63)	14,513 (10,571)	243,179
Australia/ New Zealand	7.38 (1.69)	0.83 (0.32)	0.27 (0.34)	50.59 (18.50)	0.43 (0.50)	2.25 (0.57)	43,755 (35,874)	21,030
Southeast Asia	5.41 (1.95)	0.78 (0.34)	0.27 (0.35)	40.21 (15.75)	0.43 (0.49)	1.71 (0.66)	7,095 (6,899)	94,227
East Asia	5.45 (2.02)	0.76 (0.35)	0.23 (0.31)	44.86 (17.43)	0.47 (0.50)	1.84 (0.73)	18,343 (19,693)	107,299
Latin America/ the Caribbean	6.03 (2.46)	0.80 (0.32)	0.34 (0.36)	40.58 (17.84)	0.43 (0.50)	1.71 (0.64)	7,507 (5,874)	213,432
Northern America	7.37 (1.82)	0.85 (0.30)	0.32 (0.36)	50.62 (17.99)	0.47 (0.50)	2.38 (0.56)	48,524 (41,114)	26,921
Middle East/ North Africa	5.48 (2.33)	0.63 (0.40)	0.37 (0.37)	36.09 (14.46)	0.52 (0.50)	1.91 (0.69)	17,058 (16,531)	246,998
Sub-Saharan Africa	4.34 (2.05)	0.69 (0.38)	0.26 (0.34)	33.83 (14.65)	0.51 (0.50)	1.53 (0.58)	3,294 (3,196)	328,799
Women	5.54 (2.29)	0.71 (0.38)	0.31 (0.36)	41.14 (17.48)	N/A	1.80 (0.68)	10,724 (11,299)	912,634
Men	5.43 (2.26)	0.70 (0.38)	0.27 (0.34)	40.57 (17.31)	N/A	1.87 (0.67)	11,703 (12,658)	797,078
Low Education	4.65 (2.32)	0.66 (0.39)	0.32 (0.37)	43.46 (18.63)	0.43 (0.50)	N/A	5,080 (4,866)	525,693
Moderate Education	5.68 (2.16)	0.72 (0.37)	0.28 (0.34)	38.72 (16.90)	0.48 (0.50)	N/A	13,263 (12,949)	834,816

High Education	6.44 (1.97)	0.75 (0.36)	0.27 (0.33)	42.51 (15.40)	0.50 (0.50)	N/A	29,312 (27,467)	259,551

Table Notes. Values are means, and values in parentheses are standard deviations. Income values are medians and median absolute deviations. LE = life evaluation. PA = positive affect. NA = negative affect.

Supplementary Table 2. Regression results and tests of satiation.

Region	Satiation Point (*df*)	BF (*t*)	SWB at Satiation	SWB After Satiation	Coefficients
Life Evaluation					
Global	$95,000 (1,218,306)	7.81×10^{-28} (-11.61) $p < .001$	7.58	7.40 (1.79) N = 12,800 % = 1.05	Income = -0.44*** (0.03) Income^2 = 0.02*** (0.005) Income^3 = 0.004*** (0.0002) Income^{3,1} = -0.46*** (0.02) (knot 1 = $20,000) Income^{3,2} = 0.72*** (0.11) (knot 2 = $35,000) Income^{3,3} = -0.59* (0.26) (knot 3 = $60,000) Income^{3,4} = 1.10** (0.41) (knot 4 = $105,000) Income^{3,5} = -1.17* (0.50) (knot 5 = $185,000) Income^{3,6} = 0.38 (0.26) (knot 6 = $270,000)
Western Europe/ Scandinavia	$100,000 (179,593)	9.75×10^{-11} (-7.07) $p < .001$	7.75	7.59 (1.58) N = 4,465 % = 2.49	Income = 1.15** (0.38) Income^2 = -0.31*** (0.05) Income^3 = 0.02*** (0.002) Income^{3,1} = -0.71*** (0.04) (knot 1 = $20,000) Income^{3,2} = 1.63*** (0.16) (knot 2 = $35,000) Income^{3,3} = -2.37*** (0.36) (knot 3 = $60,000) Income^{3,4} = 3.16*** (0.75) (knot 4 = $105,000) Income^{3,5} = -2.58 (1.55) (knot 5 = $185,000) Income^{3,6} = 0.99 (1.53) (knot 6 = $270,000)
Eastern Europe/ the Balkans	$45,000 (173,761)	0.21 (-3.22) p = .001	6.91	6.77 (1.89) N = 1,754 % = 1.01	Income = -3.70*** (0.34) Income^2 = 0.44*** (0.04) Income^3 = -0.01*** (0.002) Income^{3,1} = -0.60*** (0.06) (knot 1 = $20,000) Income^{3,2} = 1.43*** (0.25) (knot 2 = $50,000) Income^{3,3} = -8.04 (13.19) (knot 3 = $125,000) Income^{3,4} = N/A (knot 4 = $270,000)

Australia/ New Zealand	$125,000 (13,891)	8.13 (-1.09) $p = .28$	8.10	8.01 (1.36) $N = 267$ % = 1.92	Income = -0.52 (2.20) $Income^2$ = -0.08 (0.27) $Income^3$ = 0.009 (0.01) $Income^{3,1}$ = -0.40* (0.18) (knot 1 = $20,000) $Income^{3,2}$ = 0.95 (0.58) (knot 2 = $35,000) $Income^{3,3}$ = -1.25 (1.28) (knot 3 = $60,000) $Income^{3,4}$ = 0.20 (3.76) (knot 4 = $105,000) $Income^{3,5}$ = 36.51 (69.37) (knot 5 = $185,000) $Income^{3,6}$ = N/A (knot 6 = $270,000)
Southeast Asia	$70,000 (65,456)	21.11 (0.26) $p = .80$	6.84	6.86 (1.59) $N = 602$ % = 0.92	Income = -3.27 (0.47) $Income^2$ = 0.50 (0.06) $Income^3$ = -0.02 (0.003) $Income^{3,1}$ = 0.42 (0.14) (knot 1 = $20,000) $Income^{3,2}$ = -1.33 (0.69) (knot 2 = $35,000) $Income^{3,3}$ = 2.70 (2.02) (knot 3 = $60,000) $Income^{3,4}$ = -7.40 (8.78) (knot 4 = $105,000) $Income^{3,5}$ = N/A (knot 5 = $185,000) $Income^{3,6}$ = N/A (knot 6 = $270,000)
East Asia	$110,000 (74,343)	1.68×10^{-12} (-7.15) $p < .001$	7.04	6.61 (1.87) $N = 964$ % = 1.30	Income = -1.31 (0.75) $Income^2$ = 0.18* (0.09) $Income^3$ = -0.005 (0.004) $Income^{3,1}$ = -0.04 (0.04) (knot 1 = $20,000) $Income^{3,2}$ = -0.16 (0.11) (knot 2 = $50,000) $Income^{3,3}$ = 1.11* (0.41) (knot 3 = $125,000) $Income^{3,4}$ = -2.30 (1.76) (knot 4 = $270,000)
Latin America/ the Caribbean	$35,000 (139,824)	0.07 (-3.52) $p < .001$	7.57	7.41 (1.80) $N = 1,486$ % = 1.06	Income = -1.41*** (0.23) $Income^2$ = 0.17*** (0.03) $Income^3$ = -0.005** (0.001) $Income^{3,1}$ = -0.91*** (0.14) (knot 1 = $20,000) $Income^{3,2}$ = 3.53*** (1.04) (knot 2 = $50,000) $Income^{3,3}$ = -20981.36 (67948.19) (knot 3 = $125,000) $Income^{3,4}$ = N/A (knot 4 = $270,000)

Northern America	$105,000 (18,325)	2.99×10^{-4} (-4.87) $p < .001$	7.98	7.79 (1.67) N = 1,828 % = 9.96	Income = 2.29 (0.34) Income^2 = -0.44 (0.05) Income^3 = 0.02 (0.002) Income^{3,1} = -0.26 (0.07) (knot 1 = $20,000) Income^{3,2} = 0.12 (0.24) (knot 2 = $40,000) Income^{3,3} = 0.26 (0.51) (knot 3 = $80,000) Income^{3,4} = 0.08 (0.99) (knot 4 = $160,000) Income^{3,5} = -0.37 (1.05) (knot 5 = $270,000)
Middle East/ North Africa	$115,000 (195,570)	33.90 (-0.65) p = .51	7.23	7.21 (1.98) N = 2,236 % = 1.14	Income = -2.59*** (0.17) Income^2 = 0.38*** (0.02) Income^3 = -0.01*** (0.001) Income^{3,1} = -0.16** (0.06) (knot 1 = $20,000) Income^{3,2} = 0.76** (0.26) (knot 2 = $35,000) Income^{3,3} = -1.68** (0.58) (knot 3 = $60,000) Income^{3,4} = 2.40* (1.14) (knot 4 = $105,000) Income^{3,5} = -3.65 (2.72) (knot 5 = $185,000) Income^{3,6} = 3.85 (3.36) (knot 6 = $270,000)
Sub-Saharan Africa	$40,000 (210,747)	22.73 (0.22) p = .83	6.04	6.06 (2.15) N = 686 % = 0.33	Income = -0.97*** (0.05) Income^2 = 0.14*** (0.008) Income^3 = -0.004*** (0.0004) Income^{3,1} = -0.43*** (0.10) (knot 1 = $20,000) Income^{3,2} = 1.35*** (0.40) (knot 2 = $50,000) Income^{3,3} = -18.62* (7.92) (knot 3 = $125,000) Income^{3,4} = N/A (knot 4 = $270,000)
Women	$100,000 (649,272)	2.44×10^{-18} (-9.50) $p < .001$	7.67	7.44 (1.76) N = 5,225 % = 0.80	Income = -0.41*** (0.05) Income^2 = 0.02* (0.007) Income^3 = 0.004*** (0.0003) Income^{3,1} = -0.57*** (0.03) (knot 1 = $20,000) Income^{3,2} = 1.13*** (0.16) (knot 2 = $35,000) Income^{3,3} = -1.24** (0.39) (knot 3 = $60,000) Income^{3,4} = 1.81** (0.66) (knot 4 = $105,000) Income^{3,5} = -1.88* (0.86) (knot 5 = $185,000) Income^{3,6} = 0.74 (0.47) (knot 6 = $270,000)

Men	\$90,000 (568,872)	1.04×10^{-7} (-6.41) $p < .001$	7.50	7.37 (1.80) N = 8,374 % = 1.47	Income = -0.46*** (0.05) Income^2 = 0.02* (0.007) Income^3 = 0.004*** (0.0003) Income^{3,1} = -0.34*** (0.03) (knot 1 = \$20,000) Income^{3,2} = 0.32*** (0.15) (knot 2 = \$35,000) Income^{3,3} = -0.01** (0.34) (knot 3 = \$60,000) Income^{3,4} = 0.53** (0.54) (knot 4 = \$105,000) Income^{3,5} = 0.66* (0.64) (knot 5 = \$185,000) Income^{3,6} = 0.14 (0.33) (knot 6 = \$270,000)
Low Education	\$70,000 (383,732)	0.35 (-3.04) p = .002	6.92	6.75 (2.15) N = 1,570 % = 0.41	Income = -0.30*** (0.06) Income^2 = 0.02** (0.009) Income^3 = 0.003*** (0.0004) Income^{3,1} = -0.47*** (0.08) (knot 1 = \$20,000) Income^{3,2} = 0.73 (0.42) (knot 2 = \$35,000) Income^{3,3} = -0.61 (1.05) (knot 3 = \$60,000) Income^{3,4} = 1.41 (1.81) (knot 4 = \$105,000) Income^{3,5} = -1.67 (2.34) (knot 5 = \$185,000) Income^{3,6} = 0.58 (1.27) (knot 6 = \$270,000)
Moderate Education	\$85,000 (620,020)	1.51×10^{-9} (-7.03) $p < .001$	7.42	7.26 (1.86) N = 6,573 % = 1.06	Income = -0.30*** (0.05) Income^2 = -0.03*** (0.007) Income^3 = 0.007*** (0.0004) Income^{3,1} = -0.60*** (0.03) (knot 1 = \$20,000) Income^{3,2} = 1.04*** (0.16) (knot 2 = \$35,000) Income^{3,3} = -0.92* (0.38) (knot 3 = \$60,000) Income^{3,4} = 1.64* (0.65) (knot 4 = \$105,000) Income^{3,5} = -2.23** (0.84) (knot 5 = \$185,000) Income^{3,6} = 1.06* (0.46) (knot 6 = \$270,000)
High Education	\$115,000 (204,200)	7.60×10^{-13} (-8.03) $p < .001$	7.81	7.62 (1.63) N = 4,480 % = 2.19	Income = -0.50*** (0.07) Income^2 = 0.03* (0.01) Income^3 = 0.007*** (0.0006) Income^{3,1} = -0.55*** (0.04) (knot 1 = \$20,000) Income^{3,2} = 1.21*** (0.16) (knot 2 = \$35,000) Income^{3,3} = -1.43*** (0.33) (knot 3 = \$60,000)

					$Income^{3,4}$ = 1.46** (0.52) (knot 4 = $105,000) $Income^{3,5}$ = -0.77 (0.64) (knot 5 = $185,000) $Income^{3,6}$ = 0.05 (0.35) (knot 6 = $270,000)
Positive Affect					
Global	$60,000 (1,186,434)	2.87 × 10^{-6} (-5.98) $p < .001$	0.83	0.82 (0.32) N = 34,376 % = 2.90	Income = -0.02** (0.006) $Income^2$ = -0.003** (0.009) $Income^3$ = 0.0005*** (0.00004) $Income^{3,1}$ = -0.03*** (0.005) (knot 1 = $20,000) $Income^{3,2}$ = -0.004 (0.02) (knot 2 = $35,000) $Income^{3,3}$ = 0.14* (0.05) (knot 3 = $60,000) $Income^{3,4}$ = -0.18 (0.08) (knot 4 = $105,000) $Income^{3,5}$ = 0.11 (0.11) (knot 5 = $185,000) $Income^{3,6}$ = -0.05 (0.06) (knot 6 = $270,000)
Western Europe/ Scandinavia	$50,000 (161,535)	41.63 (1.52) p = .13	0.83	0.83 (0.30) N = 22,195 % = 13.74	Income = -0.23** (0.07) $Income^2$ = 0.02* (0.009) $Income^3$ = -0.0003 (0.0004) $Income^{3,1}$ = -0.03*** (0.005) (knot 1 = $20,000) $Income^{3,2}$ = 0.06*** (0.01) (knot 2 = $50,000) $Income^{3,3}$ = -0.05 (0.04) (knot 3 = $125,000) $Income^{3,4}$ = 0.003 (0.09) (knot 4 = $270,000)
Eastern Europe/ the Balkans	$35,000 (173,610)	0.25 (-3.26) p = .001	0.76	0.74 (0.36) N = 3,143 % = 1.81	Income = -0.48*** (0.07) $Income^2$ = 0.06*** (0.009) $Income^3$ = -0.002*** (0.0004) $Income^{3,1}$ = -0.10*** (0.01) (knot 1 = $20,000) $Income^{3,2}$ = 0.26*** (0.05) (knot 2 = $50,000) $Income^{3,3}$ = 0.31 (2.66) (knot 3 = $125,000) $Income^{3,4}$ = N/A (knot 4 = $270,000)
Australia/ New Zealand	$50,000 (11,972)	11.11 (-1.67) p = .09	0.85	0.84 (0.31) N = 2,569 % = 21.42	Income = -0.25 (0.43) $Income^2$ = 0.02 (0.05) $Income^3$ = -0.0006 (0.002) $Income^{3,1}$ = -0.02 (0.04) (knot 1 = $20,000) $Income^{3,2}$ = 0.01 (0.12) (knot 2 = $40,000)

					$Income^{3,3}$ = 0.14 (0.27) (knot 3 = $60,000) $Income^{3,4}$ = -0.48 (0.78) (knot 4 = $100,000) $Income^{3,5}$ = 1.33 (14.36) (knot 5 = $180,000) $Income^{3,6}$ = N/A (knot 6 = $270,000)
Southeast Asia	N/A	N/A	N/A	N/A	N/A
East Asia	$60,000 (70,187)	25.49 (-1.11) *p* = 0.27	0.82	0.81 (0.33) *N* = 2,847 % = 4.05	Income = 0.09 (0.16) $Income^2$ = -0.008 (0.02) $Income^3$ = 0.0004 (0.008) $Income^{3,1}$ = -0.005 (0.02) (knot 1 = $20,000) $Income^{3,2}$ = -0.06 (0.07) (knot 2 = $40,000) $Income^{3,3}$ = 0.26 (0.15) (knot 3 = $60,000) $Income^{3,4}$ = -0.56 (0.31) (knot 4 = $100,000) $Income^{3,5}$ = 0.95 (0.76) (knot 5 = $180,000) $Income^{3,6}$ = -0.90 (1.07) (knot 6 = $270,000)
Latin America/ the Caribbean	$30,000 (141,358)	14.67 (-1.39) *p* = .16	0.89	0.88 (0.26) *N* = 1,883 % = 1.33	Income = -0.16*** (0.03) $Income^2$ = 0.02*** (0.004) $Income^3$ = -0.0007*** (0.0002) $Income^{3,1}$ = -0.08*** (0.02) (knot 1 = $20,000) $Income^{3,2}$ = 0.37*** (0.09) (knot 2 = $50,000) $Income^{3,3}$ = -12139.23 (9227.22) (knot 3 = $125,000) $Income^{3,4}$ = N/A (knot 4 = $270,000)
Northern America	$65,000 (14,298)	45.81 (-0.34) *p* = .74	0.88	0.88 (0.27) *N* = 2,987 % = 20.86	Income = 0.07 (0.06) $Income^2$ = -0.02 (0.01) $Income^3$ = 0.001** (0.0005) $Income^{3,1}$ = -0.04 (0.02) (knot 1 = $20,000) $Income^{3,2}$ = 0.03 (0.08) (knot 2 = $35,000) $Income^{3,3}$ = 0.04 (0.16) (knot 3 = $60,000) $Income^{3,4}$ = -0.09 (0.24) (knot 4 = $105,000) $Income^{3,5}$ = 0.20 (0.35) (knot 5 = $185,000) $Income^{3,6}$ = -0.23 (0.25) (knot 6 = $270,000)
Middle East/ North Africa	$110,000 (186,637)	24.51 (0.78)	0.79	0.79 (0.34)	Income = -0.31 (0.04) $Income^2$ = 0.05* (0.005)

		p = .44		N = 1,397 % = 1.09	Income^{3} = -0.002* (0.0002) Income^{3,1} = -0.03 (0.01) (knot 1 = $20,000) Income^{3,2} = 0.12* (0.06) (knot 2 = $35,000) Income^{3,3} = -0.024* (0.15) (knot 3 = $60,000) Income^{3,4} = 0.39 (0.31) (knot 4 = $105,000) Income^{3,5} = -1.09 (0.91) (knot 5 = $185,000) Income^{3,6} = 1.72 (1.64) (knot 6 = $270,000)
Sub-Saharan Africa	$35,000 (213,883)	14.06 (-1.16) p = .25	0.81	0.79 (0.33) N = 950 % = 0.44	Income = -0.11*** (0.009) Income^{2} = 0.02*** (0.001) Income^{3} = -0.0007*** (0.00008) Income^{3,1} = -0.03 (0.02) (knot 1 = $20,000) Income^{3,2} = 0.04 (0.07) (knot 2 = $50,000) Income^{3,3} = 2.34 (1.45) (knot 3 = $125,000) Income^{3,4} = N/A (knot 4 = $270,000)
Women	$55,000 (634,774)	0.00002 (-5.59) p < .001	0.83	0.82 (0.32) N = 18,757 % = 2.95	Income = -0.02 (0.009) Income^{2} = -0.004** (0.001) Income^{3} = 0.0006*** (0.00006) Income^{3,1} = -0.05*** (0.007) (knot 1 = $20,000) Income^{3,2} = 0.02 (0.03) (knot 2 = $35,000) Income^{3,3} = 0.19* (0.07) (knot 3 = $60,000) Income^{3,4} = -0.34** (0.13) (knot 4 = $105,000) Income^{3,5} = 0.30 (0.17) (knot 5 = $185,000) Income^{3,6} = -0.12 (0.09) (knot 6 = $270,000)
Men	$65,000 (551,498)	0.63 (-3.23) p = .001	0.83	0.82 (0.31) N = 16,846 % = 3.05	Income = -0.02** (0.009) Income^{2} = -0.001 (0.001) Income^{3} = 0.0005*** (0.00006) Income^{3,1} = -0.02* (0.007) (knot 1 = $20,000) Income^{3,2} = -0.05 (0.03) (knot 2 = $35,000) Income^{3,3} = 0.15* (0.07) (knot 3 = $60,000) Income^{3,4} = -0.09 (0.11) (knot 4 = $105,000) Income^{3,5} = -0.005 (0.14) (knot 5 = $185,000) Income^{3,6} = 0.004 (0.07) (knot 6 = $270,000)

Low Education	$50,000 (384,670)	33.26 (0.93) $p = .35$	0.78	0.79 (0.33) $N = 3{,}337$ % = 0.87	Income = -0.04*** (0.01) $Income^2$ = 0.003 (0.002) $Income^3$ = 0.0002* (0.00008) $Income^{3,1}$ = -0.03* (0.02) (knot 1 = $20,000) $Income^{3,2}$ = -0.02 (0.08) (knot 2 = $35,000) $Income^{3,3}$ = 0.25 (0.20) (knot 3 = $60,000) $Income^{3,4}$ = -0.38 (0.37) (knot 4 = $105,000) $Income^{3,5}$ = 0.27 (0.60) (knot 5 = $185,000) $Income^{3,6}$ = -0.05 (0.42) (knot 6 = $270,000)
Moderate Education	$60,000 (600,575)	0.09 (-3.77) $p < .001$	0.83	0.82 (0.31) $N = 14{,}651$ % = 2.44	Income = -0.001 (0.01) $Income^2$ = -0.008*** (0.001) $Income^3$ = 0.009*** (0.00007) $Income^{3,1}$ = -0.04*** (0.007) (knot 1 = $20,000) $Income^{3,2}$ = 0.008 (0.03) (knot 2 = $35,000) $Income^{3,3}$ = 0.12 (0.08) (knot 3 = $60,000) $Income^{3,4}$ = -0.09 (0.13) (knot 4 = $105,000) $Income^{3,5}$ = -0.04 (0.17) (knot 5 = $185,000) $Income^{3,6}$ = 0.04 (0.09) (knot 6 = $270,000)
High Education	$70,000 (190,943)	4.26 (-2.49) $p = .01$	0.83	0.82 (0.32) $N = 11{,}419$ % = 5.98	Income = -0.08*** (0.01) $Income^2$ = 0.004 (0.002) $Income^3$ = 0.0003** (0.0001) $Income^{3,1}$ = -0.04*** (0.003) (knot 1 = $20,000) $Income^{3,2}$ = 0.06*** (0.008) (knot 2 = $50,000) $Income^{3,3}$ = -0.04 (0.01) (knot 3 = $125,000) $Income^{3,4}$ = 0.02 (0.01) (knot 4 = $270,000)
Negative Affect					
Global	$75,000 (1,170,300)	49.69 (1.33) $p = .18$	0.76	0.76 (0.31) $N = 18{,}669$ % = 1.60	Income = -0.09*** (0.006) $Income^2$ = 0.02*** (0.0009) $Income^3$ = -0.0007*** (0.00004) $Income^{3,1}$ = 0.007 (0.004) (knot 1 = $20,000) $Income^{3,2}$ = -0.02 (0.02) (knot 2 = $40,000) $Income^{3,3}$ = 0.009 (0.05) (knot 3 = $60,000)

Western Europe/ Scandinavia	$50,000 (161,507)	0.04 (4.07) $p < .001$	0.77	0.77 (0.29) $N = 24{,}236$ % = 15.00	$Income^{3,4}$ = 0.04 (0.08) (knot 4 = $100,000) $Income^{3,5}$ = -0.05 (0.10) (knot 5 = $180,000) $Income^{3,6}$ = 0.02 (0.05) (knot 6 = $270,000) Income = -0.06 (0.07) $Income^{2}$ = -0.005 (0.009) $Income^{3}$ = 0.0008** (0.0004) $Income^{3,1}$ = -0.05*** (0.005) (knot 1 = $20,000) $Income^{3,2}$ = 0.09*** (0.01) (knot 2 = $50,000) $Income^{3,3}$ = -0.08*** (0.04) (knot 3 = $125,000) $Income^{3,4}$ = 0.13 (0.09) (knot 4 = $270,000)
Eastern Europe/ the Balkans	$35,000 (173,826)	7.30×10^{-7} (-6.04) $p < .001$	0.79	0.76 (0.30) $N = 4{,}073$ % = 2.34	Income = -0.62*** (0.06) $Income^{2}$ = 0.08*** (0.007) $Income^{3}$ = -0.003*** (0.0003) $Income^{3,1}$ = -0.07*** (0.01) (knot 1 = $20,000) $Income^{3,2}$ = 0.27*** (0.05) (knot 2 = $40,000) $Income^{3,3}$ = -1.62 (2.30) (knot 3 = $90,000) $Income^{3,4}$ = N/A (knot 4 = $270,000)
Australia/ New Zealand	$50,000 (11,974)	14.89 (-1.50) $p = .13$	0.77	0.76 (0.32) $N = 2{,}704$ % = 22.55	Income = -0.86 (0.44) $Income^{2}$ = 0.09 (0.05) $Income^{3}$ = -0.003 (0.002) $Income^{3,1}$ = -0.04 (0.02) (knot 1 = $20,000) $Income^{3,2}$ = 0.11 (0.08) (knot 2 = $40,000) $Income^{3,3}$ = -0.28 (0.26) (knot 3 = $80,000) $Income^{3,4}$ = 4.40 (3.65) (knot 4 = $160,000) $Income^{3,5}$ = N/A (knot 5 = $270,000)
Southeast Asia	N/A	N/A	N/A	N/A	N/A
East Asia	$50,000 (70,219)	6.45×10^{-10} (-7.13) $p < .001$	0.82	0.78	Income = 0.34 (0.13) $Income^{2}$ = -0.04 (0.02) $Income^{3}$ = 0.002 (0.0006) $Income^{3,1}$ = -0.03 (0.009) (knot 1 = $20,000) $Income^{3,2}$ = 0.07 (0.03) (knot 2 = $40,000) $Income^{3,3}$ = -0.03 (0.09) (knot 3 = $80,000)

Latin America/ the Caribbean	$30,000 (141,324)	21.18 (-1.17) p = .24	0.73	0.72 (0.33) N = 2,255 % = 1.60	$Income^{3,4}$ = -0.08 (0.28) (knot 4 = $160,000) $Income^{3,5}$ = 0.18 (0.56) (knot 5 = $270,000) Income = -0.28*** (0.04) $Income^{2}$ = 0.04*** (0.005) $Income^{3}$ = -0.001*** (0.0002) $Income^{3,1}$ = -0.07*** (0.02) (knot 1 = $20,000) $Income^{3,2}$ = 0.33** (0.10) (knot 2 = $50,000) $Income^{3,3}$ = -4551.55 (10516.02) (knot 3 = $125,000) $Income^{3,4}$ = N/A (knot 4 = $270,000)
Northern America	$95,000 (14,300)	0.71 (-2.81) p = .005	0.73	0.70 (0.34) N = 1,679 % = 11.72	Income = 0.29*** (0.07) $Income^{2}$ = -0.05*** (0.01) $Income^{3}$ = 0.003* (0.0005) $Income^{3,1}$ = -0.03 (0.02) (knot 1 = $20,000) $Income^{3,2}$ = 0.02 (0.05) (knot 2 = $40,000) $Income^{3,3}$ = 0.004 (0.11) (knot 3 = $80,000) $Income^{3,4}$ = 0.13 (0.18) (knot 4 = $160,000) $Income^{3,5}$ = -0.22 (0.16) (knot 5 = $270,000)
Middle East/ North Africa	$125,000 (173,481)	36.65 (-0.11) p = .91	0.74	0.74 (0.33) N = 1,728 % = 1.00	Income = -0.27*** (0.03) $Income^{2}$ = 0.04*** (0.004) $Income^{3}$ = -0.001*** (0.0002) $Income^{3,1}$ = 0.01 (0.01) (knot 1 = $20,000) $Income^{3,2}$ = -0.03 (0.05) (knot 2 = $35,000) $Income^{3,3}$ = -0.02 (0.11) (knot 3 = $60,000) $Income^{3,4}$ = 0.07 (0.23) (knot 4 = $105,000) $Income^{3,5}$ = -0.25 (0.68) (knot 5 = $185,000) $Income^{3,6}$ = 0.71 (1.28) (knot 6 = $270,000)
Sub-Saharan Africa	$50,000 (210,978)	1.30 (-2.28) p = .02	0.82	0.79 (0.30) N = 347 % = 0.16	Income = -0.10*** (0.008) $Income^{2}$ = 0.02*** (0.001) $Income^{3}$ = -0.0007*** (0.00007) $Income^{3,1}$ = 0.01 (0.02) (knot 1 = $20,000) $Income^{3,2}$ = -0.12 (0.07) (knot 2 = $50,000) $Income^{3,3}$ = 2.13 (1.30) (knot 3 = $125,000) $Income^{3,4}$ = N/A (knot 4 = $270,000)

Women	\$60,000 (626,850)	0.41 (3.34) $p < .001$	0.73	0.74 (0.32) N = 15,372 % = 2.45	Income = -0.08*** (0.008) Income^2 = 0.02*** (0.001) Income^3 = -0.0008*** (0.00006) Income^{3,1} = 0.003 (0.003) (knot 1 = \$20,000) Income^{3,2} = -0.009 (0.007) (knot 2 = \$50,000) Income^{3,3} = 0.02 (0.02) (knot 3 = \$125,000) Income^{3,4} = -0.02 (0.01) (knot 4 = \$270,000)
Men	\$60,000 (543,288)	108.09 (0.41) p = .68	0.78	0.78 (0.30) N = 17,628 % = 3.24	Income = -0.09*** (0.008) Income^2 = 0.02*** (0.001) Income^3 = -0.0008*** (0.00006) Income^{3,1} = 0.02** (0.006) (knot 1 = \$20,000) Income^{3,2} = -0.08** (0.03) (knot 2 = \$35,000) Income^{3,3} = 0.12 (0.06) (knot 3 = \$60,000) Income^{3,4} = -0.08 (0.10) (knot 4 = \$105,000) Income^{3,5} = 0.02 (0.13) (knot 5 = \$185,000) Income^{3,6} = 0.0006 (0.07) (knot 6 = \$270,000)
Low Education	\$35,000 (378,694)	64.44 (-0.35) p = .73	0.75	0.75 (0.32) N = 5,963 % = 1.57	Income = -0.07*** (0.01) Income^2 = 0.01*** (0.002) Income^3 = -0.0004*** (0.00008) Income^{3,1} = -0.04** (0.01) (knot 1 = \$20,000) Income^{3,2} = 0.07 (0.07) (knot 2 = \$35,000) Income^{3,3} = -0.004 (0.19) (knot 3 = \$60,000) Income^{3,4} = -0.12 (0.36) (knot 4 = \$105,000) Income^{3,5} = 0.36 (0.57) (knot 5 = \$185,000) Income^{3,6} = -0.32 (0.40) (knot 6 = \$270,000)
Moderate Education	\$65,000 (592,754)	0.36 (3.35) $p < .001$	0.76	0.77 (0.31) N = 12,485 % = 2.11	Income = -0.05*** (0.009) Income^2 = 0.008*** (0.001) Income^3 = -0.0003*** (0.00006) Income^{3,1} = 0.007 (0.006) (knot 1 = \$20,000) Income^{3,2} = -0.05 (0.03) (knot 2 = \$35,000) Income^{3,3} = 0.08 (0.07) (knot 3 = \$60,000) Income^{3,4} = -0.06 (0.12) (knot 4 = \$105,000) Income^{3,5} = 0.04 (0.16) (knot 5 = \$185,000)

					$Income^{3,6}$ = -0.03 (0.09) (knot 6 = $270,000)
High Education	$80,000 (188,661)	48.82 (-1.03) p = .31	0.76	0.76 (0.31) N = 8,680 % = 4.60	Income = -0.14*** (0.01) $Income^2$ = 0.02*** (0.002) $Income^3$ = -0.001*** (0.0001) $Income^{3,1}$ = 0.02*** (0.003) (knot 1 = $20,000) $Income^{3,2}$ = -0.05*** (0.008) (knot 2 = $50,000) $Income^{3,3}$ = 0.06*** (0.01) (knot 3 = $125,000) $Income^{3,4}$ = -0.03** (0.01) (knot 4 = $270,000)

Table Notes. These models included controls for age, gender, marital status, country, and survey year. *df* = degrees of freedom in the spline regression model. BF = Bayes factor. BF values > 3.00 are taken to support the null hypothesis, whereas values < 1/3 favor the alternative hypothesis of a mean difference. *N*s in the SWB After Satiation column refer to the number of observations that were located after satiation and used to test for significant differences. A few tests were significant due to large samples but had insignificant effect sizes (e.g., Moderate Education positive affect). %s are the percentages of the group sample beyond satiation. Parentheses in that column are standard deviations. No standard deviations are given for the SWB at Satiation column because these values were simply taken from the model predictions. In the Coefficients column, the values in parentheses are standard errors. Beside these are the coefficients for the various model terms: Income = linear term; $Income^2$ = quadratic term; $Income^3$ = cubic term; $Income^{3,1}$ = first knot term; $Income^{3,2}$ = second knot term; $Income^{3,3}$ = third knot term, etc. *** is significant at $p < .001$, ** is significant at $p < .01$, and * is significant at $p < .05$. N/As refer to cases where there was no significant positive relationship between income and SWB, and thus no models were fitted. (N/As were also used to show cases when a model was fitted but a particular knot exceeded all available incomes.)

Supplementary Table 3. Summary of sampling within countries.

Country	*N*	Years Collected										
		2005-06	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Western Europe/ Scandinavia	231,531											
Austria	11,010	X		X	X	X	X	X	X	*X2	X	X
Belgium	11,080	X	X	X		X	X	X	X	*X2	X	X
Denmark	11,780	X	X	X	X	X	X	X	X	*X2	X	X
Finland	9,766	X		X		X	X	X	X	*X2	X	X
France	12,989	X	X	X	X	X	X	*X2	X	*X2	X	X
Germany	37,394	X	X	*X4	X	X	*X4	*X4	X	*X2	X	*X2
Iceland	3,131			X				X	X		X	X
Ireland	10,502	X		X	X	X	X	X	X	*X2	X	X
Italy	13,039	X	X	X	X	X	X	*X2	X	*X2	X	X
Luxembourg	8,003			X		X	X	X	X	*X2	X	X
Malta	8,050			X		X	X	X	X	*X2	X	X
Netherlands	10,757	X	X	X		X	X	X	X	*X2	X	X
Norway	8,010	X		X				X		*X2	X	*X2
Spain	13,031	X	X	X	X	X	X	*X2	X	*X2	X	X
Portugal	7,013	X		X	X	X	X	X	X	*X2	X	X
Switzerland	6,514	X			X			X		*X2	X	X
Sweden	11,762	X	X	X	X	X	X	X	X	*X2	X	X
United Kingdom	33,651	X	X	X	X	X	*X4	*X4	X	*X2	X	X
Eastern Europe/ the Balkans	243,179											
Albania	10,069	X		X	X	X	X	X	X	X	X	X
Bosnia and Herzegovina	11,038	X		X	X	X	X	X	X	X	X	X
Bulgaria	9,009	X			X	X	X	X	X	X	X	X
Croatia	10,068	X		X	X	X	X	X	X	X	X	X
Czech Republic	10,169	X	X		X	X	X	X	X	X	X	X
Estonia	9,234	X	X	X	X		X	X	X	X	X	X

Greece	10,005	X	X		X	X	X	X	X	X	X	X
Hungary	10,091	X	X	X		X	X	X	X	X	X	X
Kosovo	10,181	X		X	X	X	X	X	X	X	X	X
Latvia	9,074	X	X	X	X		X	X	X	X	X	X
Lithuania	10,029	X	X	X	X	X	X	X	X	X	X	X
Macedonia	10,177	X		X	X	X	X	X	X	X	X	X
Montenegro	9,837	X		X	X	X	X	X	X	X	X	X
North Cyprus	5,006							X	X	*X2	X	X
Poland	11,029	X	X	X	X	X	X	X	X	X	X	X
Romania	10,030	X	X		X	X	X	X	X	X	X	X
Serbia	10,618	X		X	X	X	X	X	X	X	X	X
Slovakia	8,048	X				X	X	X	X	X	X	X
Slovenia	9,513	X			X	X	X	X	X	*X2	X	X
Belarus	11,587	X	X	X	X	X	X	X	X	X	X	X
Moldova	11,000	X	X	X	X	X	X	X	X	X	X	X
Russia	26,021	X	X	X	X	*X2	X	*X2	X	X	X	X
Ukraine	11,323	X	X	X	X	X	X	X	X	X	X	X
Australia/ New Zealand	21,030											
Australia	11,232	X	X	X		X	X	X	X	*X2	X	X
New Zealand	9,798	X	X	X		X	X	X	X	*X2	X	X
Southeast Asia	94,227											
Indonesia	13,390	X	X	X	X	X	X	*X3	X		X	X
Singapore	11,652	X	X	*X2	X	X	X	X		X	X	X
Philippines	9,200	X	X	X	X	X	X	*X2	X	X	X	X
Vietnam	12,121	X	X	X	X	X	X	*X2	X	X	X	X
Thailand	12,473	X	X	X	X	X	X	*X2	X	X	X	X
Cambodia	11,024	X	X	X	X	X	X	X	X	X	X	X
Laos	5,001	X	X	X			X	X				
Myanmar	5,100	X						X	X	X	X	X
Malaysia	11,266	X	X	X	X	X	X	X	X	*X2	X	
East Asia	107,299											
Hong Kong	8,118	X		X	X	X	X	X		*X2		X

Japan	15,163	X	X	*X4	X	X	X	*X2	X	*X2	X	X
China	51,914	X	X	X	X	X	X	*X3	X	X	X	X
South Korea	13,101	X	X	X	X	X	X	*X2	X	*X2	X	X
Taiwan	10,003	X		X		X	X	X	X	*X2	X	X
Mongolia	9,000		X	X		X	X	X	X	X	X	X
Latin America/ the Caribbean	213,432											
Venezuela	11,000	X	X	X	X	X	X	X	X	X	X	X
Brazil	12,235	X	X	X	X	X	X	*X2	X	X	X	X
Mexico	12,054	X	X	X	X	X	X	*X2	X	X	X	X
Costa Rica	11,010	X	X	X	X	X	X	X	X	X	X	X
Argentina	11,000	X	X	X	X	X	X	X	X	X	X	X
Belize	1,006		X							X		
Bolivia	11,003	X	X	X	X	X	X	X	X	X	X	X
Chile	11,247	X	X	X	X	X	X	X	X	X	X	X
Colombia	11,000	X	X	X	X	X	X	X	X	X	X	X
Cuba	1,000	X										
Dominican Republic	11,000	X	X	X	X	X	X	X	X	X	X	X
Ecuador	11,135	X	X	X	X	X	X	X	X	X	X	X
El Salvador	11,008	X	X	X	X	X	X	X	X	X	X	X
Guatemala	11,050	X	X	X	X	X	X	X	X	X	X	X
Guyana	501		X									
Haiti	4,533	X		X		X	X	X	X	X	X	X
Honduras	11,004	X	X	X	X	X	X	X	X	X	X	X
Jamaica	2,057	X					X		X	X		
Nicaragua	11,016	X	X	X	X	X	X	X	X	X	X	X
Panama	11,028	X	X	X	X	X	X	X	X	X	X	X
Paraguay	11,001	X	X	X	X	X	X	X	X	X	X	X
Peru	11,000	X	X	X	X	X	X	X	X	X	X	X
Puerto Rico	1,000	X								X		
Suriname	504							X				
Trinidad &	2,018	X		X			X		X			

Tobago												
Uruguay	11,022	X	X	X	X	X	X	X	X	X	X	X
Northern America	26,921											
United States	13,444	X	X	X	X	X	X	*X2	X	*X2	X	X
Canada	13,477	X	X	X	X	X	X	*X2	X	*X2	X	X
Middle East/ North Africa	246,998											
Egypt	20,924	X	X	X	*X2	*X2	*X5	*X4	X	X	X	X
Cyprus	8,547	X			X	X	X	X	X	*X2	X	X
Morocco	9,072	X	X		*X2	*X2	*X2	*X2	X	X	X	X
Lebanon	15,053	X	X	X	*X2	*X2	*X2	*X2	X	X	X	X
Saudi Arabia	16,432	X	X	X	*X2	*X2	*X2	*X2	X	*X2	X	X
Jordan	15,039	X	X	X	*X2	*X2	*X2	*X2	X	X		X
Syria	11,452			X	*X2	*X2	*X2	*X2	X		X	
Turkey	13,006	X	X	X	X	X	X	*X2	X	*X2	X	X
Iran	12,864	X	X	X			X	*X2	X	*X2	X	X
Israel	11,004	X	X	X	X	X	X	X	X	X	X	X
Palestinian Territories	15,014	X	X	X	*X2	*X2	*X2	*X2	X	X	X	X
Algeria	7,031			X	*X2	*X2	*X2	*X2		X		X
Bahrain	8,172				*X2	*X2	*X2	X	X	*X2	X	X
Iraq	14,024			X	*X2	*X2	*X2	*X2	X	*X2	X	X
Kuwait	13,027	X			*X2	*X2	*X2	X	X	*X2	X	X
Libya	3,009				X	*X2		X			X	X
Oman	2,016						*X2					
Qatar	7,060			X	X	X	*X2	X		X		
Tunisia	11,288			X	*X2	*X2	*X2	*X2	X	X	X	X
United Arab Emirates	15,945	X			*X2	*X2	*X2	*X2	X	*X2	X	X
Yemen	13,000	X			*X2	*X2	*X2	*X2	X	X	X	X
Sub-Saharan Africa	328,799											

Nigeria	12,002	X	X	X	X	X	X	*X2	X	X	X	X
Kenya	12,200	X	X	X	X	X	X	X	X	X	X	X
Tanzania	11,016	X	X	X	X	X	X	X	X	X	X	X
Ghana	11,008	X	X	X	X	X	X	X	X	X	X	X
Uganda	11,000	X	X	X	X	X	X	X	X	X	X	X
Benin	8,000	X		X			X	X	X	X	X	X
Madagascar	8,016	X		X			X	X	X	X	X	X
Malawi	9,000	X	X		X		X	X	X	X	X	X
South Africa	12,001	X	X	X	X	X	X	*X2	X	X	X	X
Angola	4,000	X	X	X			X	X	X	X		
Botswana	9,000	X		X		X	X	X	X	X	X	X
Ethiopia	6,004							*X2	X	X	X	X
Mali	10,000	X		X	X	X	X	X	X	X	X	X
Mauritania	12,992		X	X	*X2	*X2	*X2	X	X	X	X	X
Mozambique	5,000	X	X	X			X				X	
Niger	11,016	X	X	X	X	X	X	X	X	X	X	X
Rwanda	9,504	X		X	X		X	X	X	X	X	X
Senegal	11,000	X	X	X	X	X	X	X	X	X	X	X
Zambia	11,001	X	X	X	X		X	X	X	X	X	X
Burkina Faso	10,008	X	X	X		X	X	X	X	X	X	X
Cameroon	11,200	X	X	X	X	X	X	X	X	X	X	X
Sierra Leone	9,016	X	X	X		X	X		X	X	X	X
Zimbabwe	11,000	X	X	X	X	X	X	X	X	X	X	X
Burundi	4,000			X	X		X			X		
Central African Republic	4,000		X			X	X					X
Chad	11,000	X	X	X	X	X	X	X	X	X	X	X
Comoros	7,000				*X2	*X2	*X2	X				
Congo Kinshasa	7,000				X		X	X	X	X	X	X
Congo Brazzaville	7,000			X			X	X	X	X	X	X
Djibouti	5,000			X	*X2	X	X					
Gabon	6,016						X	X	X	X	X	X

Guinea	6,008		X				X	X	X	X	X	X
Ivory Coast	5,008				X				X	X	X	X
Lesotho	2,000						X					X
Liberia	8,000		X	X		X	X		X	X	X	X
Mauritius	3,000						X			X		
Namibia	2,000		X							X		
Sudan	7,592				*X2	*X2	*X2	X		X		
South Sudan	3,000									X	X	X
Swaziland	1,000						X					
Togo	6,000	X		X			X			X	X	X
Somalia	3,191									X	X	X
Somaliland region	7,000				*X2	*X2	*X2	X				
South Asia	112,238											
Pakistan	17,151	X	X	*X3	*X3	X	X	*X3	X	X	X	X
Bangladesh	13,248	X	X	X	X	X	X	*X3	X	X	X	X
India	44,434	X	X	X	X	X	X	*X4	X	X	X	X
Sri Lanka	11,248	X	X	X	X	X	X	*X2	X	X	X	
Afghanistan	11,010	X		X	*X2	X	X	*X2	X	X	X	X
Bhutan	3,040								X	X		
Nepal	12,107	X	X	X	X	X	X	*X2	X	X	X	X
Central Asia	84,080											
Georgia	11,080	X	X	X	X	X	X	X	X	X	X	X
Kazakhstan	11,000	X	X	X	X	X	X	X	X	X	X	X
Kyrgyzstan	11,000	X	X	X	X	X	X	X	X	X	X	X
Armenia	11,000	X	X	X	X	X	X	X	X	X	X	X
Azerbaijan	11,000	X	X	X	X	X	X	X	X	X	X	X
Tajikistan	11,000	X	X	X	X	X	X	X	X	X	X	X
Turkmenistan	7,000				X		X	X	X	X	X	X
Uzbekistan	10,000	X		X	X	X	X	X	X	X	X	X
Nagorno-Karabakh Republic	1,000								X			

Table Notes. X = sampling for that given year. *X = more than one sample for that year (number of samples is indicated beside the X). For more information on sampling (e.g., exclusions to representativeness, interviewing mode, design effects), see http://www.gallup.com/file/services/177797/World_Poll_Dataset_Details_122316.pdf.

Supplementary Table 4. Robustness check for income imputations.

Subgroup	Exact Income Only	Exact and Category-Imputed	Exact, Category-Imputed, and non-Category-Imputed	Exact and All Imputed (Category, non-Category, and Regression)
Life Evaluation				
Global	$95,000 (847,826)	$100,000 (1,050,324)	$95,000 (1,218,306)	$95,000 (1,420,673)
Western Europe/ Scandinavia	$100,000 (118,430)	$100,000 (139,379)	$100,000 (179,593)	$95,000 (217,118)
Eastern Europe/ the Balkans	$55,000 (110,794)	$50,000 (140,455)	$45,000 (173,761)	$40,000 (203,265)
Australia/ New Zealand	$125,000 (8,127)	$120,000 (11,827)	$125,000 (13,891)	$65,000 (19,624)
Southeast Asia	$60,000 (50,316)	$65,000 (60,110)	$70,000 (65,456)	$70,000 (84,915)
East Asia	$125,000 (55,114)	$125,000 (65,258)	$110,000 (74,343)	$110,000 (90,052)
Latin America/ the Caribbean	$30,000 (104,209)	$30,000 (121,215)	$35,000 (139,824)	$35,000 (172,848)
Northern America	$115,000 (13,743)	$110,000 (15,525)	$105,000 (18,325)	$120,000 (24,184)
Middle East/ North Africa	$135,000 (134,803)	$125,000 (176,454)	$115,000 (195,570)	$120,000 (213,674)
Sub-Saharan Africa	$45,000 (143,674)	$40,000 (186,200)	$40,000 (205,455)	$35,000 (210,747)
Women	$100,000 (441,504)	$105,000 (553,730)	$100,000 (649,272)	$95,000 (768,960)
Men	$90,000 (406,160)	$90,000 (496,432)	$90,000 (568,872)	$35,000 (641,291)
Low Education	$60,000 (272,876)	$60,000 (339,693)	$70,000 (383,732)	$30,000 (430,218)
Moderate Education	$90,000 (426,796)	$90,000 (530,153)	$85,000 (620,020)	$85,000 (726,805)
High Education	$115,000 (141,773)	$115,000 (172,953)	$115,000 (204,200)	$110,000 (230,297)
Positive Affect				
Global	$60,000 (823,782)	$60,000 (1,022,097)	$60,000 (1,186,434)	$60,000 (1,420,673)
Western Europe/ Scandinavia	$50,000 (105,180)	$45,000 (123,900)	$50,000 (161,535)	$60,000 (196,830)

Eastern Europe/ the Balkans	$40,000 (110,331)	$40,000 (139,971)	$35,000 (173,610)	$35,000 (202,769)
Australia/ New Zealand	$55,000 (7,045)	$50,000 (10,162)	$50,000 (11,972)	$55,000 (17,691)
Southeast Asia	N/A	N/A	N/A	N/A
East Asia	$65,000 (52,565)	$60,000 (62,019)	$60,000 (70,187)	$60,000 (85,771)
Latin America/ the Caribbean	$30,000 (105,095)	$30,000 (122,301)	$30,000 (141,358)	$35,000 (174,321)
Northern America	$60,000 (10,737)	$60,000 (12,109)	$65,000 (14,298)	$100,000 (20,020)
Middle East/ North Africa	$110,000 (128,523)	$110,000 (168,740)	$110,000 (186,637)	$110,000 (204,548)
Sub-Saharan Africa	$30,000 (145,311)	$35,000 (188,566)	$35,000 (213,883)	$35,000 (278,348)
Women	$55,000 (430,905)	$55,000 (540,930)	$55,000 (634,774)	$55,000 (752,666)
Men	$65,000 (392,715)	$65,000 (481,005)	$65,000 (551,498)	$40,000 (623,145)
Low Education	$45,000 (272,707)	$40,000 (339,899)	$50,000 (384,670)	$30,000 (430,810)
Moderate Education	$60,000 (412,546)	$60,000 (513,174)	$60,000 (600,575)	$60,000 (705,118)
High Education	$80,000 (132,223)	$80,000 (161,595)	$80,000 (190,943)	$130,000 (216,491)
Negative Affect				
Global	$60,000 (811,917)	$70,000 (1,006,639)	$75,000 (1,170,300)	$80,000 (1,421,721)
Western Europe/ Scandinavia	$50,000 (105,189)	$45,000 (123,905)	$50,000 (161,507)	$55,000 (196,801)
Eastern Europe/ the Balkans	$35,000 (110,459)	$35,000 (140,190)	$35,000 (173,826)	$35,000 (202,962)
Australia/ New Zealand	$45,000 (7,045)	$45,000 (10,163)	$50,000 (11,974)	$50,000 (17,694)
Southeast Asia	N/A	N/A	N/A	N/A
East Asia	$55,000 (52,563)	$45,000 (62,028)	$50,000 (70,219)	$80,000 (85,064)
Latin America/ the Caribbean	$30,000 (105,062)	$30,000 (122,262)	$30,000 (141,324)	$30,000 (174,270)
Northern America	$95,000 (10,741)	$95,000 (12,113)	$95,000 (14,300)	$100,000 (20,023)

Middle East/ North Africa	$120,000 (119,120)	$130,000 (156,193)	$125,000 (173,481)	$100,000 (191,326)
Sub-Saharan Africa	$55,000 (142,911)	$55,000 (185,661)	$50,000 (210,978)	$60,000 (274,037)
Women	$60,000 (425,151)	$60,000 (533,354)	$60,000 (626,848)	$80,000 (743,626)
Men	$60,000 (386,604)	$60,000 (473,123)	$60,000 (543,288)	$50,000 (613,774)
Low Education	$45,000 (268,396)	$35,000 (334,104)	$35,000 (378,694)	$30,000 (423,807)
Moderate Education	$60,000 (406,739)	$60,000 (505,720)	$65,000 (592,754)	$60,000 (696,324)
High Education	$70,000 (130,517)	$70,000 (159,436)	$70,000 (188,661)	$105,000 (213,854)

Table Notes. The first column contains satiation estimates from analyses using only incomes that were reported exactly. The second column shows results when data imputed by Gallup Inc. from categorical responses were added (see Supplementary Method). The third column displays results when Gallup imputations without categorical responses were added. Finally, the last column contains results from when our own regression imputations were added. The results reported in the manuscript are from the third column, as our own regression imputations led to some marked deviations.

Supplementary Table 5. Percentages of the Gallup and CPS data within $10,000 bins.

	< 10k	10-20k	20-30k	30-40k	40-50k	50-60k	60-70k	70-80k
Gallup %	6.92	12.90	11.28	11.13	9.58	7.43	9.30	6.10
CPS %	7.03	10.83	10.99	10.24	8.64	7.80	6.85	6.21

	80k-90k	90-100k	100-110k	110-120k	120-130k	130-140k	140-150k	150-160k
Gallup %	4.31	3.85	3.78	1.41	3.40	1.36	1.66	1.09
CPS %	5.29	4.49	4.25	3.31	3.10	2.42	1.97	1.97

	160-170k	170-180k	180-190k	190-200k
Gallup %	0.60	0.55	1.19	0.65
CPS %	1.48	1.29	1.03	0.84

Supplementary Table 6. Percentages of the Gallup and ABS data within $10,400 bins.

	<$10,400	$10,400-20,800	$20,800-31,200	$31,200-41,600	$41,600-52,000	$52,000-62,400	$62,400-72,800	$72,800-83,200
Gallup %	1.75	13.53	13.13	10.05	9.55	7.46	6.38	7.96
ABS %	2.03	9.04	10.89	10.84	9.27	7.99	7.44	7.15

	$83,200-93,600	$93,600-104,000	$104,000-114,400	$114,400-124,800	$124,800-135,200	$135,200-145,600	$145,600-156,000
Gallup %	4.79	7.41	2.71	4.33	2.63	2.35	4.82
ABS %	6.65	6.16	5.61	5.07	4.50	3.98	3.39

Supplementary Table 7. Percentages of the Gallup and Hong Kong census data within $30,000 bins.

	10%	20%	30%	40%	50%	60%	70%	80%	90%
Gallup $	12,300	18,400	24,600	30,700	39,900	46,100	61,400	76,800	92,200
Census $	9,100	15,200	23,900	30,600	38,200	38,200	61,300	61,300	92,000

Supplementary References

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