

C Data and Code Files Made Available with this Manuscript

C.1 Matlab Code

The results presented in this paper were generated using the following four Matlab m-files.

1. *BMI_Master.m*: Executes files *fitBMIdistn.m* and *fitAB.m*, see below.
2. *fitBMIdistn.m*: Performs population-level calculations, i.e. fits nonsocial model $p_{eq}^{(0)}(x)$, social model $p_{eq}(x)$, log-normal f_{log} , and skew normal f_{skew} distributions to empirical BMI distribution data.
3. *fitAB.m*: Performs individual-level calculations, i.e. computes coefficients $a(x)$ and $b(x)$ from year-over-year change in BMI data.

We note that both *fitBMIdistn.m* and *fitAB.m* make use of the m-file *save2pdf.m*³⁴ when saving figures.

C.2 NU, NHANES, and BRFSS BMI Data Files

1. NU data are stored in *NU.csv* comma separated values (CSV) format. This file contains three columns: year t , BMI in year t , BMI in year $t + 1$.
 - *Note*: When BMI in year $t + 1$ is unavailable then the entry in the third column is -1.
2. NHANES data are either self-reported (used to calculate year-over-year change in BMI) or directly measured (used to compute BMI distributions) data. We associate NHANES data from survey 1999-2000 with $t = 1999$, from survey 2001-2002 with $t = 2001$, and so on.
 - (a) Self-reported NHANES data are stored in *NHANES_SR.csv* in CSV format. This file contains three columns: year t , BMI in year $t - 1$ (i.e. year prior to the interview), and BMI in year t (i.e. at time of interview).
 - *Note*: Because self-reported NHANES data are only used for individual-level computations, *NHANES_SR.csv* only records data from respondents who reported both (a) BMI at time of NHANES interview and (b) BMI one year prior to NHANES interview.
 - (b) Directly measured NHANES data are stored in *NHANES_DM.csv* in CSV format. This file contains two columns: year t and BMI in year t .
3. BRFSS data are stored in *BRFSS_BMI.csv* in CSV format. This file contains two columns: year t , BMI in year t .

SI References

³⁴ Hoffman, G. *save2pdf.m*. Matlab File Exchange (2007).