Supplementary Materials for

Cooperation without punishment

Balaraju Battu[*] & Talal Rahwan[*]

[*]Joint corresponding authors. E-mail: bb3404@nyu.edu; talal.rahwan@nyu.edu

The code for running the simulations and producing the plots is provided in two folders:

- Folder 1 is titled '**pggstd**'. It contains three Matlab files for implementing the model of the standard evolutionary public goods game (i.e., in the absence of altruists). Below is the description of each file:

    o PGG_STD.m is the main function that produces evolutionary public goods games.

    o PGG_STD_RUN.m generates data and writes it to the folder '**pggstd**'.

    o PGG_STD_plotting.m produces Fig. 1a.

    Note that the above three files should be in the same folder. Also note that the folder '**pggstd**' also contains the corresponding data.

- Folder 2 is titled '**pgg_alt1**' contains three Matlab files for implementing the model of the evolutionary public goods game when a certain percentage of altruists are present in the population. The description of these files is provided below:

    o Goodness_PGG.m is the main function, which produces the evolutionary public goods game dynamics.

    o Goodness_PGG_RUN.m generates data and writes it to the folder '**pgg_alt1**'.

    o Goodness_PGG_plotting.m produces Fig. 1b, as well as Fig. 2 and Fig. 3.

    Again, the above three files should be placed in the same folder. Also note that the folder '**pgg_alt1**' also contains the corresponding data.