Readme file for the analysis and data used in the article “**Positive feedbacks in deep-time transitions of human populations**”

Rscriptfigure1.R = R script of the figure 1, using the data from excel files; WESTASIA30.xls, EUR30.xls, EASTASIA30.xls, SOUTHAM30.xls, SOUTHAFR30.xls, WESTAFR30.xls, MNAM30.xls, AUST30.xls

Rscript-figure2.R = Logarithmic reproductive rates time series and the sequences of population expansions using the data from the excel file RREV1.xls

Figure3revpaperR = R script for the figure 3; using the following data; WASIAMOD1.xls, EURMOD.xls, MODSAM.xls and AUSTMOD.xls

Script-figure4REV.R = Figure 4 frequency histogram of the periods (yrs) of waves of expansion/stagnation/collapse using the excel file period.xls

strucchangesREVPAPER.R = SPD data with breakpoints: Innovations and Agriculture

# Use the package strucchange using the excel files; WESTASIA30.xls, EUR30.xls, EASTASIA30.xls, SOUTHAM30.xls, SOUTHAFR30.xls, WESTAFR30.xls, MNAM30.xls, AUST30.xls

Rscript-FigureS2.R = Phase portraits plots of the logarithmic growth rates and log (SPD) (R-X plane phase plots) using the excel file RREV1.xls

FigureS3.R = Models of cooperation in pre-historic demographic transitions (Near East-Middle East-Levante) using equation 4 and the excel file WASIAMOD1.xls

FigureS4.R = Models of cooperation in pre-historic demographic transitions (Europa)using equation 4 and the excel file EURMOD.xls

FigureS4.R = Models of cooperation in pre-historic demographic transitions (East Asia) using equation 4 and the excel file EASIAMOD.xls

FigureS5.R = Models of cooperation in pre-historic demographic transitions (East Asia) using equation 4 and the excel file EASIAMOD.xls

FigureS6.R = Models of cooperation in pre-historic demographic transitions (South America) using equation 4 and the excel file MODSAM.xls

FigureS7.R = Models of cooperation in pre-historic demographic transitions (South Africa) using equation 4 and the excel file MODSAFR.xls

FigureS8.R = Models of cooperation in pre-historic demographic transitions (West Africa Asia) using equation 4 and the excel file MODWAFR.xls

FigureS9.R = Models of cooperation in pre-historic demographic transitions (North America) using equation 4 and the excel file MODNAM.xls

FigureS10.R = Models of cooperation in pre-historic demographic transitions (Australia) using equation 4 and the excel file AUSTMOD.xls