# README

Manuscript title: When Fairness is Unfair: Norm Abandonment in Bargaining and Its Implications for Peace Negotiations

## 1. Overview

*The package includes the following:*
*(1) an xlsx file that includes the data (Tab 1), explanation of each data column in Tab 1 (Tab 2) and the demographic answers (Tab 3) (norm-abandon data with explanations.xlsx)*
*(2) a csv file to use for data analysis, identical to Tab 1 of the xlsx file (norm-abandon.csv)*
*(3) an Rmd file that includes all R codes necessary to run the analyses (Norm abandon R codes.rmd)*
*(4) a log file from running the R code file on the original data (norm-abandon rcodes log.txt)*
*(5) a sample HTML file that was produced by the R codes with all figures, tables and test results (norm-abandon results.html)*
*(6) 3 zTree files for the three treatments*

## 2. Data availability and provenance

This paper relies on data, and all data necessary to reproduce the results of the paper are included. Below is a detailed description of how the data was obtained, allowing to reproduce the dataset.

Data provenance description: data was collected from laboratory experiments from 138 subjects (university students). Eight experimental sessions, each lasting around 90 minutes, were conducted between November 2023 and February 2024.

## 3. Variable dictionaries

- *SubjectID: Subject's unique ID in the overall experiment; 120 means subject 20 in session 1*
- *SID: Unique ID for the subject at a certain period of a certain session; 3120 means subject 20 in session 1, period 3*
- *OpponentID: Opponent's unique ID in the overall experiment; 120 means opponent 20 in session 1*
- *OppID: Unique ID for the opponent at a certain period of a certain session; 3120 means opponent 20 in session 1, period 3*
- *Session: Session of the experiment; 1 to 8*
- *SessionID: Identifier for the session including time and date; 231107_1220 means November 17 2023, starting at 12:20*
- *Period: Round of the experiment; 1 to 10; 1 is for rule selection; 2 is for real-effort task, 3 to 10 are bargaining rounds*
- *Player: Subject/computer number within the same session*

- *Group: Pair number (changing every round)*
- *v1: Randomly assigned disagreement payoff 1 (lower)*
- *v2: Randomly assigned disagreement payoff 2 (higher)*
- *alpha: Randomly created multiplier to generate total pie*
- *M: Total pie size*
- *OthersPlayer: Matched player in the period*
- *Rulecode: Selected rule of the subject; 1 = ED, 2 = EG, 3= PD*
- *OthersRulecode: Selected rule of the opponent; 1 = ED, 2 = EG, 3= PD*
- *Rulename: Name (abbreviation) of the subject's chosen rule: ED, EG, PD*
- *Rule: Name (abbreviation) of the subject's chosen rule: ED, EG, PD*
- *OthersRulename: Name (abbreviation) of the opponent's chosen rule: ED, EG, PD*
- *Effort: Performance in real-effort task of the subject*
- *OthersEffort: Performance in real-effort task of the opponent*
- *Disagree: Disagreement payoff of the subject; Assigned based on task performance*
- *OthersDisagree: Disagreement payoff of the opponent; Assigned based on task performance*
- *ProfitNoBargaining: Payoff for the subject when the rule is followed*
- *ProfitBargaining: Final payoff in bargaining; For subjects that did not proceed to bargaining, the value is 0*
- *Decision: Subject's decision whether to follow the rule or proceed to bargaining; Decision*
- *OthersDecision: Opponent's decision whether to follow the rule or proceed to bargaining; OthersDecision*
- *Type: The type of the pair; 1 = proceed to bargaining, 0 = follow rule*
- *Demand: Subject's proposal for self in the NDG; outcome in UB; Choice*
- *OthersDemand: Opponent's proposal for self in the NDG; outcome in UB; OthersChoice*
- *SumDemand: Sum of Demand and OthersDemand; Sum*
- *Deal: Whether SumDemand is smaller than M; for UB: whether a deal was reached*
- *Fail: Whether bargaining was a failure*
- *Failexp: Number of failures before the current round*
- *Failpct: Percentage of failures before the current round*
- *ChatTreatment: Whether the treatment includes a chat function*
- *NDG: Whether the treatment is a NDG*
- *Treatment: Type of treatment*
- *SameNorm: Whether the pair chose the same norm*
- *Gender: Gender of the subject*
- *Risk: Self-reported risk attitude*
- *Age: Age of the subject*
- *TimeEffortMin: Length (in mins) of the real effort task, either 3 or 5*

4. **Computational requirements**

*The code was run on R with the following packages: kableExtra, car, knitr, broom.mixed, officer,*

*readxl, haven, tidyverse, e1071, xtable, tinytex, gridExtra, stargazer, lme4, modelsummary, plm, lmtest, patchwork, ggplot2, dplyr, ggrepel.*

5. **Programs/Code**

*The code should be run in the order listed of the Rmd file. Which codes correspond to which figures and tables in the manuscripts are indicated in each chunk of the code.*

- *Figure 2: lines 34-56*
- *Data setup (required for all following figures and tables): lines 57-129*
- *Figure 4: lines 130-172*
- *Binomial tests for the difference between the selection rates: lines 173-179*
- *Chi-square test for the difference from a uniform distribution (1/3,1/3,1/3): lines 180-186*
- *Fisher, correlation tests for gender effect in rule selection: lines 188-202*
- *Simple logistic regression for gender effect in rule selection: lines 203-214*
- *Jonckheere test for correlation between selection and treatments: lines 215-240*
- *Fisher's exact test for correlation between selection and treatments: lines 241-253*
- *Tests for relationship between norm selection and task score, Figure C.1: lines 255-278*
- *Data setup for norm abandonment (required for Figures 5, 6): lines 280-315*
- *Figure 5: lines 317-355*
- *Figure C.2: lines 356-389*
- *Data setup for regression analyses (required for Tables 1, 2): lines 391-410*
- *Table 1, table B.2: lines 412-434*
- *Change base treatment to NC in Model 4, table B.2: lines 436-448*
- *Table B.3: lines 449-477*
- *Table 2, table B.2: lines 480-499*
- *Change base norm to EG (Table B.2): lines 500-516*
- *Change base norm to PD (Table B.2): lines 517-533*
- *Table 3: lines 534-539*
- *Table B.1: lines 540-545*
- *Data setup for efficiency (required for Figure 6): lines 548-574*
- *Figure 6: lines 575-610*
- *Calculations for payoff efficiency of bargaining pairs only: lines 612-628*
- *Figure C.3: lines 630-644*
- *Figure C.4: lines 646-673*
- *Jonckheere test for difference in deal rate of 3 samples: lines 676-690*
- *Jonckheere test for difference in efficiency (final payoffs as proportion of pie): lines 694-709*
- *Data setup for analyses of outcome alignment (required for Figure 7): lines 711-769*
- *Figure 7: lines 771-814*
- *Chi-squared, binomial tests for outcomes of NDG demands: lines 816-824*
- *Chi-squared, binomial tests for outcome of UB agreements: lines 825-833*
- *Figure C.5: lines 835-931*