3. Analysis Plan

true

2021-08-08

```
library(data.table)
library(magrittr)
library(kableExtra)
library(downloadthis)
library(ggplot2)
library(patchwork)
library(stargazer)
```

```
layout <- theme(panel.background = element_rect(fill = "white"),
                panel.grid = element_blank(),
                panel.grid.major.y = element_line(colour="gray", size=0.25),
                legend.key = element_rect(fill = "white"),
                axis.line.x.bottom = element_line(size = 0.25),
                axis.line.y.left = element_line(size = 0.25),
                axis.title.y = element_text(size = rel(0.75)),
                plot.margin = unit(c(0.25,0.25,0.25,0.25), "cm"),
                legend.title = element_blank()
                )
colors <- c("#F3B05C", "#1E4A75", "#65B5C0", "#AD5E21")
```

Background

In an attempt to incorporate uncertainty to Gächter et al. (2017)'s dynamic public goods game (DPGG), I plan to run a series of remote online experiments using oTree (Chen, Schonger, and Wickens 2016). The first experiment will replicate Gächter et al.'s NOPUNISH 10-period version as close as possible (given the remote circumstances). The current demo version of the experiment can be found here. Click here to visit the corresponding Github repository.

This report is the third in a series of reports covering this project. It reads the data prepared in the previous reports and analyzes them. The whole replication project is registered in the AEA RCT Registry and the unique identifying number is: AEARCTR-0007902 (Berlemann, Roggenkamp, and Traub 2021).

```
base::load(file="../../../data/processed/rda/GMTV2017.rda")              # read GMTV
base::load(file="../../../data/processed/rda/GMTV2017_R1.rda")           # read GMTVFirstRound
base::load(file="../../../data/processed/rda/GMTV2017_COVS.rda")         # read GMTVCovariates
base::load(file="../../../data/processed/rda/replication2021.rda")       # read replication
base::load(file="../../../data/processed/rda/replication2021_R1.rda")    # read replicationFirstRound
base::load(file="../../../data/processed/rda/replication2021_COVS.rda")  # read replicationCovariates
base::load(file="../../../data/processed/rda/replication2021_meta.rda")  # read meta data
```

```
main <- rbindlist(list(replication, GMTV),
                  use.names = TRUE)
```

```
R1   <- rbindlist(list(replicationFirstRound, GMTVFirstRound),
                  use.names = TRUE)

covs <- rbindlist(list(replicationCovariates, GMTVCovariates),
                  use.names = TRUE,
                  fill = TRUE)

rm(list = c("replication", "GMTV", "replicationFirstRound", "GMTVFirstRound", "GMTVCovariates", "replica
```

General Information

We conducted a series a 4 sessions in between Thursday, July 01 to Friday, July 23 and collected 29 observations (from 116 participants) in total. 35 additional participants could not be matched with other group members or failed to answer the comprehension questions. These participants are labeled as dropouts. None of them dropped out during the session such that attrition is no problem here.

```
meta %>% kable()
```

session.code

date

time

showups

dropouts

participants

observations

jyf8xd0s

2021-07-01

15:00

35

7

28

7

vggk2gh1

2021-07-03

13:00

20

8

12

3

8gi7c8xg

2021-07-09

13:00

21

9

12

3

d6jrsxnr

2021-07-23

14:00

75

11

64

16

Two of these sessions were special: The first (jyf8xd0s) as well as the last one (d6jrsxnr). The first session suffered technical problems such that the risk elicitation task was omitted. The last session (almost exclusively) relied on a student sample as our non-student sample was exhausted after the first three sessions. As a consequence, the last session was conducted with 59 students while all others were conducted without any students. I'll therefore create a boolean `student` variable.

```
main[, student := FALSE]
main[session.code == "d6jrsxnr" | treatment == "noPunish10",
     student := TRUE]

R1[, student := FALSE]
R1[session.code == "d6jrsxnr" | treatment == "noPunish10",
   student := TRUE]
```

All participants were recruited in by the University of Hamburg's WISO Research Lab using HROOT (Bock, Baetge, and Nicklisch 2014).

Results

First Round

```
ggplot(R1, aes(y=ownContribution, x=othersContribution/3)) +
  layout +
  geom_abline(intercept = 0, slope = 1, linetype="dashed", alpha = 0.66) +
  geom_point(color = colors) +
  scale_y_continuous(expand = c(0, 0), limits = c(-1, 25)) +
  scale_x_continuous(expand = c(0, 0), limits = c(-1, 25))
```

Provision of the public good and wealth creation

```
SUM <- main[,
            lapply(.SD, mean, na.rm = TRUE),
            by = c("round", "treatment"),
            .SDcols = "contribution"]

SUM[,
    sum := round(contribution/4)]
```

```r
upperLimit <- SUM$contribution %>% max() %>% round() + 10

p1 <- ggplot(data = SUM,
             aes(x = round, y = contribution, fill = treatment, color = treatment, lty = treatment)) +
  layout +
  theme(legend.position="bottom") +
  geom_line(show.legend=FALSE) +
  geom_point() +
  scale_x_continuous(name="",  breaks = 1:15) +
  scale_y_continuous(limits = c(0, upperLimit), expand = c(0, 0)) +
  labs(y = "Average Amount of Tokens contributed") +
  scale_color_manual(values = colors) +
  theme(plot.margin = margin(0.25,1,0.25,0.25, "cm"))

rm(list = c("SUM"))
```

```r
SHARE <- main[,
            lapply(.SD, mean, na.rm = TRUE),
            by = c("round", "treatment"),
            .SDcols = "share"]

upperLimit <- 1

p2 <- ggplot(data = SHARE,
             aes(x = round, y = share, fill = treatment, color = treatment, lty = treatment)) +
  layout +
  theme(legend.position="bottom") +
  geom_line(show.legend=FALSE) +
  geom_point() +
  scale_x_continuous(name="",  breaks = 1:15) +
  scale_y_continuous(limits = c(0, upperLimit), expand = c(0, 0)) +
  labs(y = "Share of Current Endowment contributed") +
  scale_color_manual(values = colors)

p1 + p2 + plot_layout(guides = "collect") & theme(legend.position = "bottom")
```

```r
rm(list = c("SHARE", "p1", "p2"))
```

The plot above puzzles me a little as the lines in the right panel are quite similar, while they differ a lot in the left panel. This is because the right panel visualizes the mean `share==contribution/endowment` by treatment and round. This yields a different result than the mean of the sum of contributions divided by the sum of endowments per treatment and round as the following table illustrates.

```r
main[round == 10,
     .(round = unique(round),
       contribution = mean(contribution),
       endowment = mean(endowment),
       # share = mean(share), # same thing as the following line
       share = mean(contribution/endowment),
       sumContBySumEndo = mean(sum(contribution)/sum(endowment))),
     by = c("treatment")] %>%
  kable()
```

treatment

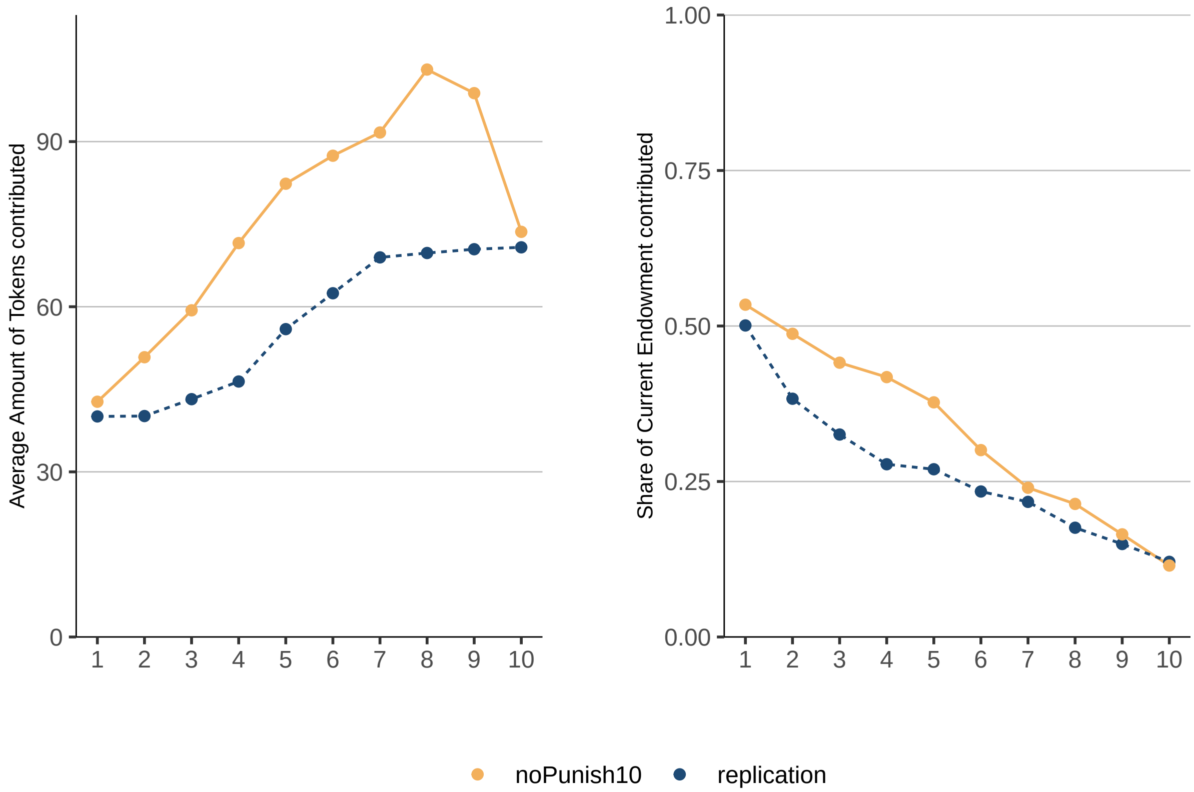

Figure 1: The average amount of tokens contributed over time in treatments.

round

contribution

endowment

share

sumContBySumEndo

replication

10

70.7931

342.7586

0.1208084

0.2065392

noPunish10

10

73.6087

439.6957

0.1148712

0.1674083

```r
SUM <- main[treatment == "replication",
            lapply(.SD, mean, na.rm = TRUE),
            by = c("round", "student"),
            .SDcols = "contribution"]

SUM[,
    sum := round(contribution/4)]

upperLimit <- SUM$contribution %>% max() %>% round() + 10

p1 <- ggplot(data = SUM,
             aes(x = round, y = contribution, fill = student, color = student, lty = student)) +
  layout +
  theme(legend.position="bottom") +
  geom_line(show.legend=FALSE) +
  geom_point() +
  scale_x_continuous(name="",  breaks = 1:15) +
  scale_y_continuous(limits = c(0, upperLimit), expand = c(0, 0)) +
  labs(y = "Average Amount of Tokens contributed") +
  scale_color_manual(values = colors) +
  theme(plot.margin = margin(0.25,1,0.25,0.25, "cm"))

rm(list = c("SUM"))
```

```r
SHARE <- main[treatment == "replication",
            lapply(.SD, mean, na.rm = TRUE),
            by = c("round", "student"),
            .SDcols = "share"]

upperLimit <- 1

p2 <- ggplot(data = SHARE,
             aes(x = round, y = share, fill = student, color = student, lty = student)) +
  layout +
  theme(legend.position="bottom") +
  geom_line(show.legend=FALSE) +
  geom_point() +
  scale_x_continuous(name="",  breaks = 1:15) +
  scale_y_continuous(limits = c(0, upperLimit), expand = c(0, 0)) +
  labs(y = "Share of Current Endowment contributed") +
  scale_color_manual(values = colors)

p1 + p2 + plot_layout(guides = "collect") & theme(legend.position = "bottom")
```

```r
rm(list = c("SHARE", "p1", "p2"))
```

```r
if(knitr::is_html_output()){
  type <- "html"
} else {
  type = "latex"
}

replication <- main[treatment == "replication" & round == 10, stock]
GMTV    <- main[treatment == "noPunish10" & round == 10, stock]
```

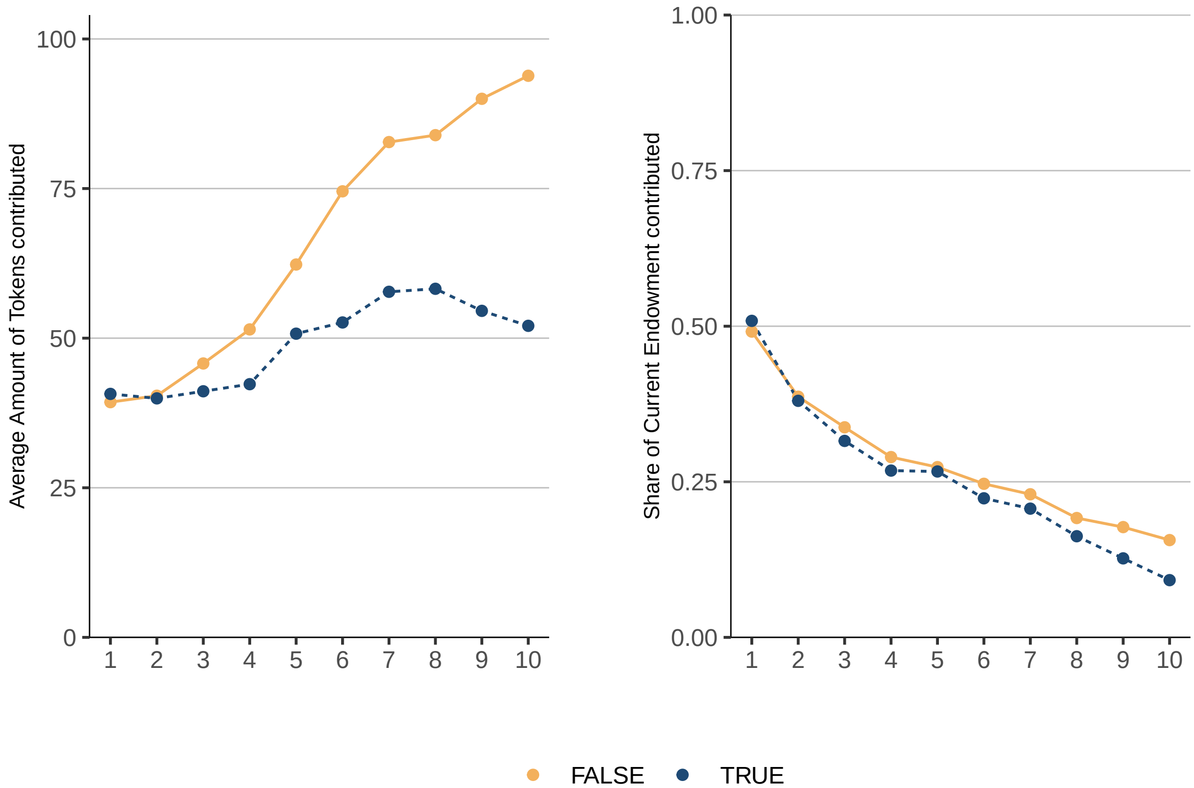

Figure 2: The average amount of tokens contributed over time in student status.

```
rows <- sapply(X = list(replication, GMTV), FUN = NROW) %>% max()
temp <- data.frame(replication = c(replication, rep(NA, rows - NROW(replication))),
                   GMTV = c(GMTV, rep(NA, rows - NROW(GMTV))))

stargazer(temp,
          summary.stat = c("mean", "median","sd", "max", "min", "n"),
          type = type,
          flip = TRUE,
          header=FALSE)
```

Table 1:

Statistic	replication	GMTV
Mean	379.828	478.087
Median	262	304.000
St. Dev.	336.059	393.575
Max	1,425	1,792.000
Min	92	161.000
N	29	23

```
rs1 <- wilcox.test(replication,
                   GMTV,
                   exact = FALSE)$p.value %>%
```

```
  round(digits = 4) %>%
  formatC(format = "f",
          digits = 4)
```

The table above displays summary statistics for the 10th period's `stock` a.k.a *Wealth*. The rank sum test yields a p-Value of 0.1356 for the mean wealth during the last period of the game.

The following table shows a simple regression to illustrate differences in the 10th period's wealth between the replication's data and GMTV's data.

```
# create subsets
main_all  <- main[round == 10]
main_poor <- main[round == 10 & rich == FALSE]
main_rich <- main[round == 10 & rich == TRUE]

# create table
if(knitr::is_html_output()){
  type <- "html"
} else {
  type = "latex"
}

stargazer(lm(formula = stock ~ treatment, data = main_all),
          lm(formula = stock ~ treatment, data = main_poor),
          lm(formula = stock ~ treatment, data = main_rich),

          column.labels = c("All", "Below median", "Above median"),
          model.numbers = FALSE,
          dep.var.labels = "Wealth",
          header=FALSE,
          covariate.labels = c("Replication"),

          type = type, digits = 2, omit.stat = c("adj.rsq", "f"), df = FALSE
          )
```

Table 2:

	Dependent variable:		
	Wealth		
	All	Below median	Above median
Replication	−98.26	−59.41***	−138.21
	(101.21)	(18.32)	(166.67)
Constant	478.09***	234.70***	731.00***
	(75.58)	(13.99)	(124.73)
Observations	52	24	25
R^2	0.02	0.32	0.03
Residual Std. Error	362.49	44.24	413.67
Note:			*p<0.1; **p<0.05; ***p<0.01

These information are also plotted over all periods in the following figure.

```r
STOCK <- main[,
              lapply(.SD, mean, na.rm = TRUE),
              by = c("round", "treatment"),
              .SDcols = "stock"]

STOCKr <- main[rich == TRUE,
               lapply(.SD, mean, na.rm = TRUE),
               by = c("round", "treatment"),
               .SDcols = "stock"]

STOCKp <- main[rich == FALSE,
               lapply(.SD, mean, na.rm = TRUE),
               by = c("round", "treatment"),
               .SDcols = "stock"]

upperLimit <- STOCKr$stock %>% max() %>% round() + 20

p1 <- ggplot(data = STOCK,
       aes(x = round, y = stock, fill = treatment, color = treatment, lty = treatment)) +
          layout +
          theme(legend.position="bottom") +
          # geom_vline(xintercept = 10, alpha = 0.66) +
          geom_line(show.legend=FALSE) +
          geom_point() +
          scale_x_continuous(name="",  breaks = 1:10) +
          scale_y_continuous(limits = c(0, upperLimit), expand = c(0, 0)) +
          labs(y = "Wealth") +
          scale_color_manual(values = colors) +
          theme(plot.margin = margin(0.25,1,0.25,0.25, "cm"))

p2 <- ggplot(data = STOCKr,
       aes(x = round, y = stock, fill = treatment, color = treatment, lty = treatment)) +
          layout +
          theme(legend.position="bottom") +
          # geom_vline(xintercept = 10, alpha = 0.66) +
          geom_line(show.legend=FALSE) +
          geom_point() +
          scale_x_continuous(name="",  breaks = 1:10) +
          scale_y_continuous(limits = c(0, upperLimit), expand = c(0, 0)) +
          labs(y = "Wealth (Rich)") +
          scale_color_manual(values = colors)

p3 <- ggplot(data = STOCKp,
       aes(x = round, y = stock, fill = treatment, color = treatment, lty = treatment)) +
          layout +
          theme(legend.position="bottom") +
          # geom_vline(xintercept = 10, alpha = 0.66) +
          geom_line(show.legend=FALSE) +
          geom_point() +
          scale_x_continuous(name="",  breaks = 1:10) +
          scale_y_continuous(limits = c(0, upperLimit), expand = c(0, 0)) +
          labs(y = "Wealth (Poor)") +
          scale_color_manual(values = colors)
```

```r
(p1 | (p2 / p3)) + plot_layout(guides = "collect") & theme(legend.position = "bottom")
```

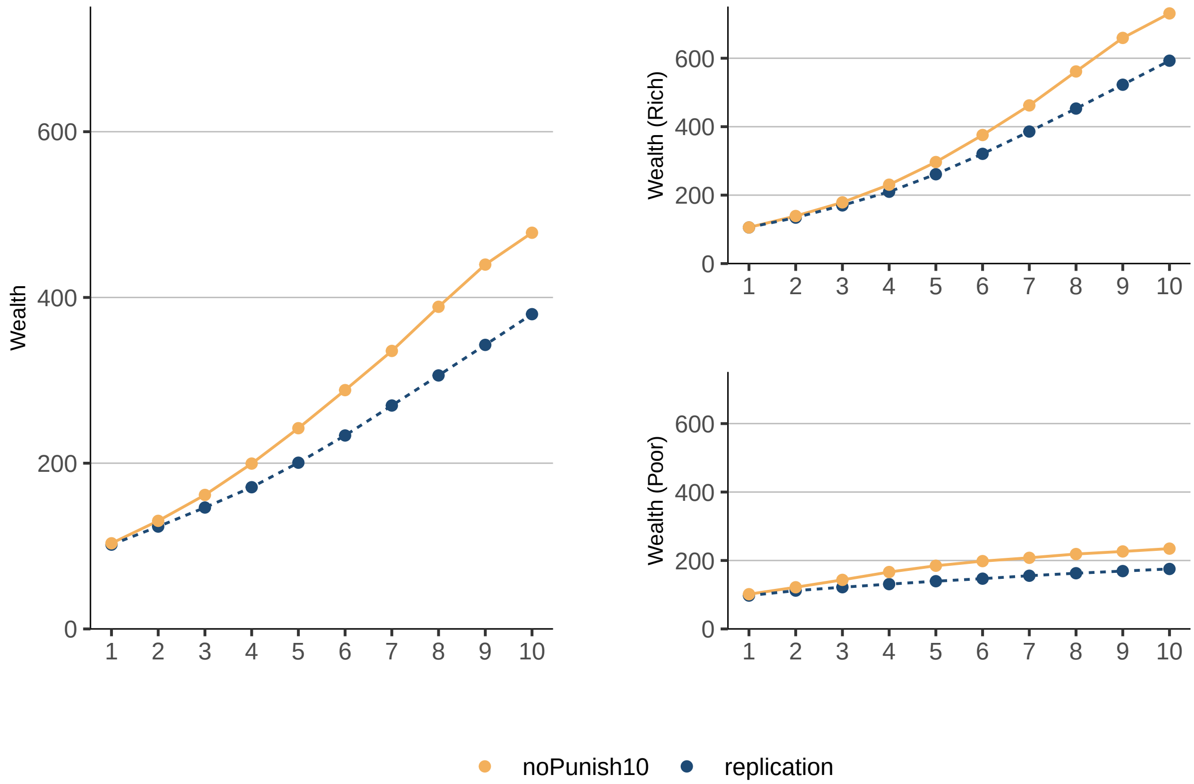

Figure 3: Average wealth over time across treatments.

```r
rm(list = c("STOCK", "STOCKr", "STOCKp", "p1", "p2", "p3"))
```

Inequality

The following figure plots the Gini-coefficient These over all periods.

```r
GINI <- main[,
             lapply(.SD, mean, na.rm = TRUE),
             by = c("round", "treatment"),
             .SDcols = "gini"]

GINIr <- main[rich == TRUE,
              lapply(.SD, mean, na.rm = TRUE),
              by = c("round", "treatment"),
              .SDcols = "gini"]

GINIp <- main[rich == FALSE,
              lapply(.SD, mean, na.rm = TRUE),
              by = c("round", "treatment"),
              .SDcols = "gini"]

upperLimit <- GINI$gini %>% max() %>% round(digits = 1) + 0.15

p1 <- ggplot(data = GINI,
```

```r
       aes(x = round, y = gini, fill = treatment, color = treatment, lty = treatment)) +
          layout +
          theme(legend.position="bottom") +
          # geom_vline(xintercept = 10, alpha = 0.66) +
          geom_line(show.legend=FALSE) +
          geom_point() +
          scale_x_continuous(name="",  breaks = 1:10) +
          scale_y_continuous(limits = c(0, upperLimit), expand = c(0, 0)) +
          labs(y = "Gini Coefficient") +
          scale_color_manual(values = colors) +
          theme(plot.margin = margin(0.25,1,0.25,0.25, "cm"))

p2 <- ggplot(data = GINIr,
       aes(x = round, y = gini, fill = treatment, color = treatment, lty = treatment)) +
          layout +
          theme(legend.position="bottom") +
          # geom_vline(xintercept = 10, alpha = 0.66) +
          geom_line(show.legend=FALSE) +
          geom_point() +
          scale_x_continuous(name="",  breaks = 1:10) +
          scale_y_continuous(limits = c(0, upperLimit), expand = c(0, 0)) +
          labs(y = "Gini (Rich)") +
          scale_color_manual(values = colors)

p3 <- ggplot(data = GINIp,
       aes(x = round, y = gini, fill = treatment, color = treatment, lty = treatment)) +
          layout +
          theme(legend.position="bottom") +
          # geom_vline(xintercept = 10, alpha = 0.66) +
          geom_line(show.legend=FALSE) +
          geom_point() +
          scale_x_continuous(name="",  breaks = 1:10) +
          scale_y_continuous(limits = c(0, upperLimit), expand = c(0, 0)) +
          labs(y = "Gini (Poor)") +
          scale_color_manual(values = colors)

(p1 | (p2 / p3)) + plot_layout(guides = "collect") & theme(legend.position = "bottom")
```

```r
rm(list = c("GINI", "GINIp", "GINIr", "p1", "p2", "p3"))
```

The following table shows a simple regression to illustrate differences in the 10th period's Gini coefficient between the replication's data and GMTV's data.

```r
# create subsets
main_all  <- main[round == 10]
main_poor <- main[round == 10 & rich == FALSE]
main_rich <- main[round == 10 & rich == TRUE]

# create table
if(knitr::is_html_output()){
  type <- "html"
} else {
  type = "latex"
}
```

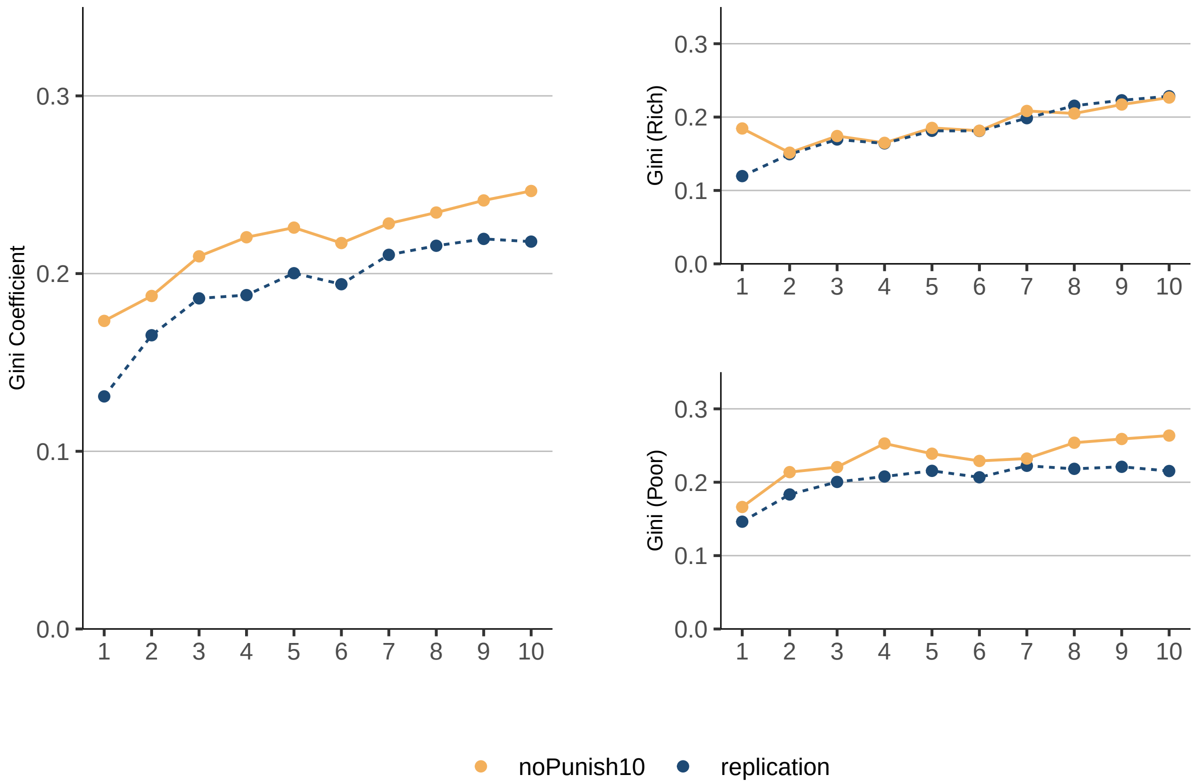

Figure 4: Average Gini coefficient over time across treatments.

```
stargazer(lm(formula = gini ~ treatment, data = main_all),
          lm(formula = gini ~ treatment, data = main_poor),
          lm(formula = gini ~ treatment, data = main_rich),

          column.labels = c("All", "Below median", "Above median"),
          model.numbers = FALSE,
          dep.var.labels = "Gini",
          header=FALSE,
          covariate.labels = c("Replication"),

          type = type, digits = 2, omit.stat = c("adj.rsq", "f"), df = FALSE
          )
```

```
if(knitr::is_html_output()){
  type <- "html"
} else {
  type = "latex"
}

replication <- main[treatment == "replication" & round == 10, gini]
GMTV    <- main[treatment == "noPunish10" & round == 10, gini]


rows <- sapply(X = list(replication, GMTV), FUN = NROW) %>% max()
temp <- data.frame(replication = c(replication, rep(NA, rows - NROW(replication))),
```

Table 3:

	Dependent variable:		
	Gini		
	All	Below median	Above median
Replication	−0.03	−0.05	0.002
	(0.04)	(0.06)	(0.05)
Constant	0.25***	0.26***	0.23***
	(0.03)	(0.04)	(0.04)
Observations	52	24	25
R^2	0.01	0.03	0.0001
Residual Std. Error	0.13	0.13	0.13
Note:			*p<0.1; **p<0.05; ***p<0.01

```
                   GMTV = c(GMTV, rep(NA, rows - NROW(GMTV))))

stargazer(temp,
          summary.stat = c("mean", "median","sd", "max", "min", "n"),
          type = type,
          flip = TRUE,
          header=FALSE)
```

Table 4:

Statistic	replication	GMTV
Mean	0.218	0.246
Median	0.218	0.245
St. Dev.	0.123	0.131
Max	0.520	0.479
Min	0.035	0.044
N	29	23

```
rs2 <- wilcox.test(replication,
                   GMTV,
                   exact = FALSE)$p.value %>%
  round(digits = 4) %>%
  formatC(format = "f",
          digits = 4)
```

The table above displays summary statistics for the 10th period's `gini` . The rank sum test yields a p-Value of 0.4176 for the mean `gini` during the last period of the game.

Sample Properties

```
covariates <- data.table::merge.data.table(x  = covs,
                                           y  = main[round == 10, .(groupID, stock, gini)],
                                           by = c("groupID"),
```

```r
                                                   allow.cartesian = TRUE)

covariates[,
           gender := gender %>% as.numeric()]
```

In addition to the summary statistics a regression table for each covariate as a dependent variable is needed. The independent variable will then be the data source (i.e. GMTV vs replication).

```r
# create table
if(knitr::is_html_output()){
  type <- "html"
} else {
  type = "latex"
}

temp <- covariates[treatment == "replication",
                   .(gender, age, switching_row, education, donation, pq01, pq02, pq03, pq04,
                     pq05, pq06, pq07, pq08, pq09, pq10, pq11, pq12, pq13, pq14)]
stargazer(temp, type = type, flip = FALSE)
```

% Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu
% Date and time: Sun, Aug 08, 2021 - 10:30:27

Table 5:

Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Pctl(75)	Max
gender	116	0.526	0.501	0	0	1	1
age	116	35.767	15.663	9	24	49.2	73
switching_row	78	6.154	2.151	1.000	6.000	7.000	12.000
education	116	6.241	0.966	3	6	7	8
donation	116	0.931	1.672	0.000	0.000	1.000	11.050
pq01	116	4.302	1.144	1	3.8	5	6
pq02	116	2.681	1.702	0	1	4	6
pq03	116	3.759	1.184	1	3	5	6
pq04	116	1.853	1.551	0	1	2	6
pq05	116	4.284	1.207	1	4	5	6
pq06	116	3.672	1.525	0	3	5	6
pq07	116	4.879	1.463	0	4	6	6
pq08	116	4.647	1.385	1	4	6	6
pq09	116	1.560	2.006	0	0	3	6
pq10	116	3.009	1.639	0	2	4	6
pq11	116	3.586	1.358	0	3	5	6
pq12	116	3.914	1.564	0	3	5	6
pq13	116	3.836	1.480	0	3	5	6
pq14	116	4.241	1.618	0	3	6	6

```r
# create table
if(knitr::is_html_output()){
  type <- "html"
} else {
  type = "latex"
}

stargazer(lm(formula = gender ~ treatment, data = covs),
```

```
          lm(formula = age ~ treatment, data = covs),
          lm(formula = switching_row ~ treatment, data = covs),
          lm(formula = donation ~ treatment, data = covs),

          column.labels = c("female", "age", "risk", "donations"),
          model.numbers = FALSE,
          dep.var.labels.include = FALSE,
          header=FALSE,
          covariate.labels = c("Replication"),

          type = type, digits = 2, omit.stat = c("adj.rsq", "f"), df = FALSE
          )
```

Table 6:

	Dependent variable:			
	female	age	risk	donations
Replication	0.15**	5.04***	−0.28	0.25
	(0.07)	(1.65)	(0.27)	(0.23)
Constant	0.38***	30.73***	6.44***	0.68***
	(0.05)	(1.23)	(0.19)	(0.17)
Observations	208	208	165	208
R^2	0.02	0.04	0.01	0.01
Residual Std. Error	0.50	11.83	1.76	1.66
Note:				*p<0.1; **p<0.05; ***p<0.01

```
# create table
if(knitr::is_html_output()){
  type <- "html"
} else {
  type = "latex"
}

stargazer(lm(formula = pq01 ~ treatment, data = covs),
          lm(formula = pq02 ~ treatment, data = covs),
          lm(formula = pq03 ~ treatment, data = covs),
          lm(formula = pq04 ~ treatment, data = covs),
          lm(formula = pq05 ~ treatment, data = covs),

          column.labels = c("quick thinker", "easily offended", "very satisfied", "very dependent", "ge
          model.numbers = FALSE,
          dep.var.labels.include = FALSE,
          header=FALSE,
          covariate.labels = c("Replication"),

          type = type, digits = 2, omit.stat = c("adj.rsq", "f"), df = FALSE
          )
```

```
# create table
if(knitr::is_html_output()){
```

Table 7:

	Dependent variable:				
	quick thinker	easily offended	very satisfied	very dependent	generally happy
Replication	−0.77***	−1.03***	−1.23***	−0.94***	−1.36***
	(0.17)	(0.23)	(0.17)	(0.20)	(0.16)
Constant	5.08***	3.71***	4.99***	2.79***	5.64***
	(0.13)	(0.17)	(0.13)	(0.15)	(0.12)
Observations	208	208	208	208	208
R^2	0.09	0.09	0.21	0.09	0.26
Residual Std. Error	1.20	1.66	1.21	1.46	1.15

Note: *p<0.1; **p<0.05; ***p<0.01

```
  type <- "html"
} else {
  type = "latex"
}

stargazer(lm(formula = pq06 ~ treatment, data = covs),
          lm(formula = pq07 ~ treatment, data = covs),
          lm(formula = pq08 ~ treatment, data = covs),
          lm(formula = pq09 ~ treatment, data = covs),
          lm(formula = pq10 ~ treatment, data = covs),

          column.labels = c("work important", "family important", "friends important", "religion importa
          model.numbers = FALSE,
          dep.var.labels.include = FALSE,
          header=FALSE,
          covariate.labels = c("Replication"),

          type = type, digits = 2, omit.stat = c("adj.rsq", "f"), df = FALSE
          )
```

Table 8:

	Dependent variable:				
	work important	family important	friends important	religion important	politics importan
Replication	−1.04***	−0.61***	−1.30***	−0.87***	−0.69***
	(0.20)	(0.21)	(0.18)	(0.26)	(0.22)
Constant	4.72***	5.49***	5.95***	2.43***	3.70***
	(0.15)	(0.16)	(0.13)	(0.20)	(0.16)
Observations	208	208	208	208	208
R^2	0.11	0.04	0.20	0.05	0.05
Residual Std. Error	1.46	1.51	1.28	1.88	1.58

Note: *p<0.1; **p<0.05; ***p<0.0

```r
# create table
if(knitr::is_html_output()){
  type <- "html"
} else {
  type = "latex"
}

stargazer(lm(formula = pq11 ~ treatment, data = covs),
          lm(formula = pq12 ~ treatment, data = covs),
          lm(formula = pq13 ~ treatment, data = covs),
          lm(formula = pq14 ~ treatment, data = covs),

          column.labels = c("most people trusted", "hard work better", "government responsible", "income
          model.numbers = FALSE,
          dep.var.labels.include = FALSE,
          header=FALSE,
          covariate.labels = c("Replication"),

          type = type, digits = 2, omit.stat = c("adj.rsq", "f"), df = FALSE
          )
```

Table 9:

	Dependent variable:			
	most people trusted	hard work better	government responsible	incomes equal
Replication	-0.28	-1.52^{***}	-0.48^{**}	0.42^{*}
	(0.19)	(0.21)	(0.20)	(0.23)
Constant	3.87^{***}	5.43^{***}	4.32^{***}	3.83^{***}
	(0.14)	(0.16)	(0.15)	(0.17)
Observations	208	208	208	208
R^2	0.01	0.20	0.03	0.02
Residual Std. Error	1.36	1.52	1.42	1.63
Note:				*p<0.1; **p<0.05; ***p<0.01

```r
# create table
if(knitr::is_html_output()){
  type <- "html"
} else {
  type = "latex"
}

olsStock1 <- lm(formula = stock ~ gender + age +
                  switching_row +
                  pq01 + pq02 + pq03 + pq04 +
                  pq05 + pq06 + pq07 +pq08 + pq09 + pq10 + pq11 + pq12 + pq13 + pq14,
                data = covariates[treatment == "replication"])
olsStock2  <- lm(formula = stock ~ gender + age + switching_row,
                data = covariates[treatment == "replication"])
olsGINI1  <- lm(formula = gini ~ gender + age +
                  switching_row +
```

```r
                  pq01 + pq02 + pq03 + pq04 +
                  pq05 + pq06 + pq07 + pq08 + pq09 + pq10 + pq11 + pq12 + pq13 + pq14,
                data = covariates[treatment == "replication"])
olsGINI2  <- lm(formula = gini ~ gender + age + switching_row,
                data = covariates[treatment == "replication"])

stargazer(olsStock1, olsStock2,
          olsGINI1, olsGINI2,

          se = list(coef(summary(olsStock1, cluster = c("groupID")))[, 2],
                    coef(summary(olsStock2, cluster = c("groupID")))[, 2],
                    coef(summary(olsGINI1,  cluster = c("groupID")))[, 2],
                    coef(summary(olsGINI2,  cluster = c("groupID")))[, 2]),

          column.labels   = c("Wealth", "Gini"),
          dep.var.labels.include = FALSE,
          column.separate = c(2, 2),
          model.numbers = FALSE,
          header=FALSE,
          covariate.labels = c("female", "age",
                               "risk",
                               "quick thinker",
                               "easily offended",
                               "very satisfied",
                               "very dependent",
                               "generally happy",
                               "work important",
                               "family important",
                               "friends important",
                               "religion important",
                               "politics important",
                               "most people trusted",
                               "hard work better",
                               "government responsible",
                               "incomes equal"),
          notes = "Robust standard errors in parentheses, clustered by group ID.",

          type = type, digits = 2, omit.stat = c("adj.rsq", "f"), df = FALSE
          )
```


Berlemann, Michael, Hauke Roggenkamp, and Stefan Traub. 2021. "Replication: Growth and Inequality in Public Good Provision (No-Punish-10) by gächter Et Al. (2017)." *AEA RCT Registry*. https://doi.org/https://doi.org/10.1257/rct.7902-2.0.

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Chen, Daniel L., Martin Schonger, and Chris Wickens. 2016. "oTree-an Open-Source Platform for Laboratory, Online, and Field Experiments." *Journal of Behavioral and Experimental Finance* 9: 88–97. https://doi.org/10.1016/j.jbef.2015.12.001.

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Table 10:

	Dependent variable:			
	Wealth		Gini	
female	−30.63	−65.02	0.02	0.02
	(88.07)	(83.80)	(0.03)	(0.03)
age	7.05*	9.00**	−0.001	−0.001
	(3.82)	(3.60)	(0.001)	(0.001)
risk	27.21	10.98	−0.01	−0.01
	(22.65)	(19.45)	(0.01)	(0.01)
quick thinker	−55.19		0.02	
	(45.52)		(0.02)	
easily offended	−26.52		0.01	
	(31.48)		(0.01)	
very satisfied	−2.62		0.001	
	(42.60)		(0.02)	
very dependent	−22.41		0.0003	
	(30.47)		(0.01)	
generally happy	70.06		0.004	
	(42.99)		(0.02)	
work important	−64.01		−0.01	
	(39.13)		(0.02)	
family important	11.99		−0.01	
	(38.05)		(0.01)	
friends important	−24.05		−0.004	
	(37.94)		(0.01)	
religion important	−20.48		0.02*	
	(26.15)		(0.01)	
politics important	86.94***		−0.01	
	(30.79)		(0.01)	
most people trusted	−0.49		−0.001	
	(31.94)		(0.01)	
hard work better	35.38		−0.03*	
	(34.46)		(0.01)	
government responsible	−47.38		−0.03*	
	(39.54)		(0.02)	
incomes equal	−9.13		0.01	
	(33.79)		(0.01)	
Constant	278.16	100.12	0.39***	0.28***
	(377.35)	(180.67)	(0.14)	(0.07)
Observations	78	78	78	78