Policy or Partisanship: Replicating Results From An Analysis of Quasi-Experimental Evidence From Brexit

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Let's begin by cleaning the data:

```
# Recode EU integration values:

BES8 <- BES8 %>%
  dplyr::mutate(EUIntegrationCon = case_when(EUIntegrationCon == "Unite fully with the European Union" ~
                                        EUIntegrationCon == "1" ~ 1, EUIntegrationCon == "2" ~ 2,
                                        EUIntegrationCon == "3" ~ 3, EUIntegrationCon == "4" ~ 4,
                                        EUIntegrationCon == "5" ~ 5, EUIntegrationCon == "6" ~ 6,
                                        EUIntegrationCon == "7" ~ 7, EUIntegrationCon == "8" ~ 8,
                                        EUIntegrationCon == "9" ~ 9, EUIntegrationCon == "Protect our ind
BES8 <- BES8 %>%
  dplyr::mutate(EUIntegrationLab = case_when(EUIntegrationLab == "Unite fully with the European Union" ~
                                        EUIntegrationLab == "1" ~ 1,
                                        EUIntegrationLab == "2" ~ 2,
                                        EUIntegrationLab == "3" ~ 3,
                                        EUIntegrationLab == "4" ~ 4,
                                        EUIntegrationLab == "5" ~ 5,
                                        EUIntegrationLab == "6" ~ 6,
                                        EUIntegrationLab == "7" ~ 7,
                                        EUIntegrationLab == "8" ~ 8,
                                        EUIntegrationLab == "9" ~ 9,
                                        EUIntegrationLab == "Protect our independence" ~ 10))

BES8 <- BES8 %>%
  dplyr::mutate(EUIntegrationSelf = case_when(EUIntegrationSelf == "Unite fully with the European Union
                                         EUIntegrationSelf == "1" ~ 1,
                                         EUIntegrationSelf == "2" ~ 2,
                                         EUIntegrationSelf == "3" ~ 3,
                                         EUIntegrationSelf == "4" ~ 4,
                                         EUIntegrationSelf == "5" ~ 5,
                                         EUIntegrationSelf == "6" ~ 6,
                                         EUIntegrationSelf == "7" ~ 7,
                                         EUIntegrationSelf == "8" ~ 8,
                                         EUIntegrationSelf == "9" ~ 9,
                                         EUIntegrationSelf == "Protect our independence" ~ 10))

BES9 <- BES9 %>%
  mutate(EUIntegrationCon = case_when(EUIntegrationCon == "Unite fully with the European Union" ~ 0,
```

```
                                    EUIntegrationCon == "1" ~ 1, EUIntegrationCon == "2" ~ 2,
                                    EUIntegrationCon == "3" ~ 3, EUIntegrationCon == "4" ~ 4,
                                    EUIntegrationCon == "5" ~ 5, EUIntegrationCon == "6" ~ 6,
                                    EUIntegrationCon == "7" ~ 7, EUIntegrationCon == "8" ~ 8,
                                    EUIntegrationCon == "9" ~ 9, EUIntegrationCon == "Protect our ind

BES9 <- BES9 %>%
  mutate(EUIntegrationLab = case_when(EUIntegrationLab == "Unite fully with the European Union" ~ 0,
                                    EUIntegrationLab == "1" ~ 1, EUIntegrationLab == "2" ~ 2,
                                    EUIntegrationLab == "3" ~ 3, EUIntegrationLab == "4" ~ 4,
                                    EUIntegrationLab == "5" ~ 5, EUIntegrationLab == "6" ~ 6,
                                    EUIntegrationLab == "7" ~ 7, EUIntegrationLab == "8" ~ 8,
                                    EUIntegrationLab == "9" ~ 9, EUIntegrationLab == "Protect our ind


BES9 <- BES9 %>%
  mutate(EUIntegrationSelf = case_when(EUIntegrationSelf == "Unite fully with the European Union" ~ 0,
                                     EUIntegrationSelf == "1" ~ 1, EUIntegrationSelf == "2" ~ 2,
                                     EUIntegrationSelf == "3" ~ 3, EUIntegrationSelf == "4" ~ 4,
                                     EUIntegrationSelf == "5" ~ 5, EUIntegrationSelf == "6" ~ 6,
                                     EUIntegrationSelf == "7" ~ 7, EUIntegrationSelf == "8" ~ 8,
                                     EUIntegrationSelf == "9" ~ 9, EUIntegrationSelf == "Protect our
```

Let's now do some analyses and replication of figures:

```
# Let's analyze the strength of our assumption that there was a sudden change
# in Conservative party positioning, unaffected by other important omitted
# variables (e.g. a similar change in Labor party positioning).

# Examine perceived Euroskepticism of Conservatives and Labour in Waves 8 and 9
# We're looking at a 0 - 10 scale, with 10 being most Euroskeptic
# Note that Wave 8 is immediately leading up to the referendum; Wave 9 is
# immediately after

con_before <- mean(BES8$EUIntegrationCon, na.rm=TRUE)
con_after <- mean(BES9$EUIntegrationCon, na.rm=TRUE)
lab_before <- mean(BES8$EUIntegrationLab, na.rm=TRUE)
lab_after <-mean(BES9$EUIntegrationLab, na.rm=TRUE)

#  Percentage change in Conservative party positioning:

(con_after - con_before)/con_before
```

```
## [1] 0.08127789
```

```
# From the paper: "Only the conservatives exhibited a sudden change in
# positioning on Brexit"; here, we see the average perceived Euroskepticism
# of the Conservatives increase by 8%.
```

Let's create Table 1:

```
# And now, for some other relevant cleaning:

# Create race variable:

BES8$white <- ifelse(BES8$profile_ethnicity == "White British" | BES8$profile_ethnicity == "Any other wh

BES8$EUIntegrationCon8 <- BES8$EUIntegrationCon
BES8$partyId8 <- BES8$partyId
BES8$EUIntegrationSelf8 <- BES8$EUIntegrationSelf

# Create Conservative partyID, for both Waves 8 and 9:

BES8$Con <- ifelse(BES8$partyId =="Conservative", 1, 0)
BES8$Con8 <- BES8$Con

BES9$Con <- ifelse(BES9$partyId=="Conservative", 1, 0)
BES9$Con9 <- BES9$Con

BES9$EUIntegrationCon9 <- BES9$EUIntegrationCon
BES9$EUIntegrationSelf9 <- BES9$EUIntegrationSelf
BES9$partyId9 <- BES9$partyId

# Let's now answer the main question of the paper: do voters switch their party identification as a
# function of their Euroskepticism?

# Let's subset Wave 8 to Conservatives:

BES8subcons <- BES8[BES8$partyId == "Conservative",]

# Let's merge the Conservatives in Wave 8 to the BE9 (post-referendum) data,
# so we can look at switching:

merged <- merge(BES8subcons, BES9, by= "id")

# And here we go! Table 1:

# Let's create a variable that indicates switching:

merged$partyswitcher <- ifelse(merged$partyId8 != merged$partyId9, 1, 0)

# Table 1:
# Note that the independent variable here is the respondent's self-reported level
# of Euroskepticism, on a 0 - 10 scale:

table1reg <- lm(partyswitcher ~ EUIntegrationSelf8, data = merged)
summary(table1reg)
```

```
##
## Call:
## lm(formula = partyswitcher ~ EUIntegrationSelf8, data = merged)
##
```

```
## Residuals:
##      Min       1Q   Median       3Q      Max
## -0.10124 -0.08324 -0.07553 -0.07553  0.92447
##
## Coefficients:
##                     Estimate Std. Error t value Pr(>|t|)
## (Intercept)         0.101237   0.010894   9.293   <2e-16 ***
## EUIntegrationSelf8 -0.002570   0.001299  -1.978    0.048 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.2722 on 7328 degrees of freedom
##   (197 observations deleted due to missingness)
## Multiple R-squared:  0.0005336,  Adjusted R-squared:  0.0003972
## F-statistic: 3.912 on 1 and 7328 DF,  p-value: 0.04797
```

```
# Let's create a variable that represents the change (post-referendum) in
# perceived Euroskepticism of Conservatives:

merged$Conchange <- merged$EUIntegrationCon9 - merged$EUIntegrationCon8

# And include it in our regression as an interaction:

intreg1 <- lm(partyswitcher ~ EUIntegrationSelf8 * Conchange,
              data = merged)
summary(intreg1)
```

```
##
## Call:
## lm(formula = partyswitcher ~ EUIntegrationSelf8 * Conchange,
##     data = merged)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -0.19388 -0.07588 -0.07255 -0.06801  0.94735
##
## Coefficients:
##                               Estimate Std. Error t value Pr(>|t|)
## (Intercept)                  0.0838146  0.0114044   7.349 2.24e-13 ***
## EUIntegrationSelf8          -0.0012157  0.0013567  -0.896   0.3702
## Conchange                    0.0110061  0.0044148   2.493   0.0127 *
## EUIntegrationSelf8:Conchange -0.0013118  0.0005171  -2.537   0.0112 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.2611 on 6472 degrees of freedom
##   (1051 observations deleted due to missingness)
## Multiple R-squared:  0.001254,   Adjusted R-squared:  0.000791
## F-statistic: 2.709 on 3 and 6472 DF,  p-value: 0.04357
```

```
# From the paper (Page 11): the interaction is negative and significant: less
# Euroskeptic Conservatives who perceive that the party has become increasingly
# Euroskeptic are especially likely to reject it.
```

```r
# And now, let's throw everything in:

merged$country.x <- as.factor(merged$country.x)

intreg1a <- lm(partyswitcher ~ EUIntegrationSelf8 * Conchange + age.x + gender.x
               + white + country.x, data = merged)
summary(intreg1a)
```

```
##
## Call:
## lm(formula = partyswitcher ~ EUIntegrationSelf8 * Conchange +
##     age.x + gender.x + white + country.x, data = merged)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -0.21030 -0.07924 -0.06616 -0.05662  0.96608
##
## Coefficients:
##                                Estimate Std. Error t value Pr(>|t|)
## (Intercept)                   0.1806646  0.0233013   7.753 1.04e-14 ***
## EUIntegrationSelf8            0.0001252  0.0013901   0.090 0.928225
## Conchange                     0.0093961  0.0044643   2.105 0.035355 *
## age.x                        -0.0008836  0.0002357  -3.749 0.000179 ***
## gender.xFemale               -0.0069737  0.0066110  -1.055 0.291525
## white                        -0.0582121  0.0185071  -3.145 0.001667 **
## country.xScotland             0.0022983  0.0117389   0.196 0.844783
## country.xWales                0.0205728  0.0137128   1.500 0.133597
## EUIntegrationSelf8:Conchange -0.0011463  0.0005226  -2.193 0.028311 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.2575 on 6207 degrees of freedom
##   (1311 observations deleted due to missingness)
## Multiple R-squared:  0.005835,   Adjusted R-squared:  0.004553
## F-statistic: 4.554 on 8 and 6207 DF,  p-value: 1.522e-05
```

```r
# And now, let's create our table:

stargazer(table1reg, intreg1, intreg1a,
          title = "Euroskepticism and Defection from the Conservatives",
          covariate.labels = c("Pre-Referendum Euroskepticism",
                               "Perceived Change in Conservative Euroskepticism",
                               "Age",
                               "Female",
                               "White",
                               "Scotland",
                               "Wales",
                               "Pre-Referendum Euroskepticism:Perceived Change in Conservative Euroskep
                               "Constant"),
          dep.var.labels   = "Defect from Conservatives",
          no.space = TRUE, star.cutoffs = c(0.05, 0.01, 0.001),
          font.size = "tiny",
          header = FALSE)
```

Table 1: Euroskepticism and Defection from the Conservatives

	Dependent variable:		
	Defect from Conservatives		
	(1)	(2)	(3)
Pre-Referendum Euroskepticism	-0.003^{*}	-0.001	0.0001
	(0.001)	(0.001)	(0.001)
Perceived Change in Conservative Euroskepticism		0.011^{*}	0.009^{*}
		(0.004)	(0.004)
Age			-0.001^{***}
			(0.0002)
Female			-0.007
			(0.007)
White			-0.058^{**}
			(0.019)
Scotland			0.002
			(0.012)
Wales			0.021
			(0.014)
Pre-Referendum Euroskepticism:Perceived Change in Conservative Euroskepticism		-0.001^{*}	-0.001^{*}
		(0.001)	(0.001)
Constant	0.101^{***}	0.084^{***}	0.181^{***}
	(0.011)	(0.011)	(0.023)
Observations	7,330	6,476	6,216
R^2	0.001	0.001	0.006
Adjusted R^2	0.0004	0.001	0.005
Residual Std. Error	0.272 (df = 7328)	0.261 (df = 6472)	0.258 (df = 6207)
F Statistic	3.912^{*} (df = 1; 7328)	2.709^{*} (df = 3; 6472)	4.554^{***} (df = 8; 6207)
Note:			*p<0.05; **p<0.01; ***p<0.001

```
# From the paper (Page 11): "of those who identified as Conservative before the
# referendum, 9.0 percent of respondents with pre-referendum Euroskepticism
# scores of 4-5 (on a ten-point scale), 9.8 percent of those with scores of 2-3,
# and 9.9 percent of those with scores of 0-1 turned their backs on the party.
# The less Eurosceptic a voter was before the referendum, the more likely they
# were to disaffiliate from the party in the aftermath of its embrace of
# Brexit."

merge45 <- merged[merged$EUIntegrationSelf8=="5" | merged$EUIntegrationSelf8=="4",]
merge23 <- merged[merged$EUIntegrationSelf8=="3" | merged$EUIntegrationSelf8=="2",]
merge01 <- merged[merged$EUIntegrationSelf8=="1" | merged$EUIntegrationSelf8=="0",]

mean(merge45$partyswitcher,na.rm=TRUE)
```

```
## [1] 0.09011264
```

```
mean(merge23$partyswitcher,na.rm=TRUE)
```

```
## [1] 0.09815951
```

```
mean(merge01$partyswitcher,na.rm=TRUE)
```

```
## [1] 0.09933775
```

Let's create Table 2:

```
# Let's now subset to pre-referendum non-Conservatives:

BES8notcons<- BES8[BES8$partyId != "Conservative",]

# And now, let's merge that info. with our post-referendum data:
```

```r
merged2 <- merge(BES8notcons, BES9, by = "id")

# Who switches to Conservative post-referendum?

merged2$switchtocons <- ifelse(merged2$partyId9 == "Conservative", 1, 0)

# What's the average?

mean(merged2$switchtocons)
```

```
## [1] 0.04054324
```

```r
# Let's regress folks' self-reported pre-referendum level of Euroskepticism, on
# a scale from 0 - 10, on those who switch to Conservative post-referendum.

table2reg <- lm(merged2$switchtocons ~ merged2$EUIntegrationSelf8)
summary(table2reg)
```

```
##
## Call:
## lm(formula = merged2$switchtocons ~ merged2$EUIntegrationSelf8)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -0.06553 -0.06553 -0.03881 -0.01876  1.00128
##
## Coefficients:
##                              Estimate Std. Error t value Pr(>|t|)
## (Intercept)                -0.0012841  0.0032449  -0.396    0.692
## merged2$EUIntegrationSelf8  0.0066818  0.0004537  14.726   <2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.1981 on 18515 degrees of freedom
##   (1511 observations deleted due to missingness)
## Multiple R-squared:  0.01158,    Adjusted R-squared:  0.01152
## F-statistic: 216.9 on 1 and 18515 DF,  p-value: < 2.2e-16
```

```r
# Let's create a variable that represents the change (post-referendum) in
# perceived Euroskepticism of Conservatives:

merged2$Conchange <- merged2$EUIntegrationCon9 - merged2$EUIntegrationCon8

# And include that variable as an interaction:

intreg2 <- lm(merged2$switchtocons ~ merged2$EUIntegrationSelf8 * merged2$Conchange)
summary(intreg2)
```

```
##
## Call:
## lm(formula = merged2$switchtocons ~ merged2$EUIntegrationSelf8 *
```

```
##     merged2$Conchange)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -0.12259 -0.06511 -0.03965 -0.02090  1.02673
##
## Coefficients:
##                                             Estimate Std. Error t value
## (Intercept)                                4.171e-05  3.713e-03   0.011
## merged2$EUIntegrationSelf8                 6.725e-03  5.208e-04  12.914
## merged2$Conchange                         -3.346e-03  1.351e-03  -2.477
## merged2$EUIntegrationSelf8:merged2$Conchange  8.875e-04  1.869e-04   4.748
##                                            Pr(>|t|)
## (Intercept)                                  0.9910
## merged2$EUIntegrationSelf8                  < 2e-16 ***
## merged2$Conchange                            0.0132 *
## merged2$EUIntegrationSelf8:merged2$Conchange 2.07e-06 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.204 on 15135 degrees of freedom
##   (4889 observations deleted due to missingness)
## Multiple R-squared:  0.01531,    Adjusted R-squared:  0.01511
## F-statistic: 78.43 on 3 and 15135 DF,  p-value: < 2.2e-16
```

```r
# And now, let's throw everything in again:

intreg2a <- lm(merged2$switchtocons ~ merged2$EUIntegrationSelf8 * merged2$Conchange
               + merged2$age.x + merged2$gender.x + merged2$white +
                 as.factor(merged2$country.x))
summary(intreg2a)
```

```
##
## Call:
## lm(formula = merged2$switchtocons ~ merged2$EUIntegrationSelf8 *
##     merged2$Conchange + merged2$age.x + merged2$gender.x + merged2$white +
##     as.factor(merged2$country.x))
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -0.13735 -0.06229 -0.03944 -0.02026  1.03115
##
## Coefficients:
##                                             Estimate Std. Error t value
## (Intercept)                                -0.0065529  0.0091707  -0.715
## merged2$EUIntegrationSelf8                  0.0061302  0.0005416  11.318
## merged2$Conchange                          -0.0036355  0.0013692  -2.655
## merged2$age.x                               0.0004114  0.0001135   3.625
## merged2$gender.xFemale                     -0.0021995  0.0033712  -0.652
## merged2$white                              -0.0081049  0.0074323  -1.090
## as.factor(merged2$country.x)Scotland       -0.0166129  0.0046983  -3.536
## as.factor(merged2$country.x)Wales          -0.0116276  0.0060403  -1.925
## merged2$EUIntegrationSelf8:merged2$Conchange  0.0009098  0.0001896   4.798
##                                            Pr(>|t|)
```

```
## (Intercept)                                    0.474898
## merged2$EUIntegrationSelf8                      < 2e-16 ***
## merged2$Conchange                              0.007937 **
## merged2$age.x                                  0.000290 ***
## merged2$gender.xFemale                         0.514129
## merged2$white                                  0.275513
## as.factor(merged2$country.x)Scotland           0.000408 ***
## as.factor(merged2$country.x)Wales              0.054248 .
## merged2$EUIntegrationSelf8:merged2$Conchange 1.62e-06 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.2023 on 14545 degrees of freedom
##   (5474 observations deleted due to missingness)
## Multiple R-squared:  0.01722,    Adjusted R-squared:  0.01668
## F-statistic: 31.85 on 8 and 14545 DF,  p-value: < 2.2e-16
```

```
# From the paper: "A one-point increase in pre-referendum Euroskepticism
# generates a .7 percent increase in the probability of switching loyalties to
# the Conservatives. And the interaction term is positive and significant,
# indicating that Euroskeptic non-Conservatives who perceived an increase in
# Conservative Euroskepticism following the referendum were especially likely to
#join the Conservatives."
```

```
# And finally, let's create Table 2, with everything:

stargazer(table2reg, intreg2, intreg2a,
          title = "Euroskepticism and Joining the Conservatives",
          covariate.labels = c("Pre-Referendum Euroskepticism",
                               "Perceived Change in Conservative Euroskepticism",
                               "Age",
                               "Female",
                               "White",
                               "Scotland",
                               "Wales",
                               "Pre-Referendum Euroskepticism:Perceived Change in Conservative Euroskep
                               "Constant"),

          dep.var.labels   = "Joined Conservatives",
          no.space = TRUE, star.cutoffs = c(0.05, 0.01,0.001),
          font.size = "tiny",
          header = FALSE)
```

```
# Let's look at the percent switched for various groups of Euroskepticism
# scores:

merge256 <- merged2[merged2$EUIntegrationSelf8 =="5" | merged2$EUIntegrationSelf8 =="6",]
merge278 <- merged2[merged2$EUIntegrationSelf8 =="7" | merged2$EUIntegrationSelf8 =="8",]
merge2910 <- merged2[merged2$EUIntegrationSelf8 =="9" | merged2$EUIntegrationSelf8 =="10",]

mean(merge256$switchtocons,na.rm=TRUE)
```

```
## [1] 0.02841561
```

Table 2: Euroskepticism and Joining the Conservatives

	Dependent variable:		
	Joined Conservatives		
	(1)	(2)	(3)
Pre-Referendum Euroskepticism	0.007^{***}	0.007^{***}	0.006^{***}
	(0.0005)	(0.001)	(0.001)
Perceived Change in Conservative Euroskepticism		-0.003^{*}	-0.004^{**}
		(0.001)	(0.001)
Age			0.0004^{***}
			(0.0001)
Female			-0.002
			(0.003)
White			-0.008
			(0.007)
Scotland			-0.017^{***}
			(0.005)
Wales			-0.012
			(0.006)
Pre-Referendum Euroskepticism:Perceived Change in Conservative Euroskepticism		0.001^{***}	0.001^{***}
		(0.0002)	(0.0002)
Constant	-0.001	0.00004	-0.007
	(0.003)	(0.004)	(0.009)
Observations	18,517	15,139	14,554
R^2	0.012	0.015	0.017
Adjusted R^2	0.012	0.015	0.017
Residual Std. Error	0.198 (df = 18515)	0.204 (df = 15135)	0.202 (df = 14545)
F Statistic	216.857^{***} (df = 1; 18515)	78.431^{***} (df = 3; 15135)	31.854^{***} (df = 8; 14545)
Note:			*p<0.05; **p<0.01; ***p<0.001

```
mean(merge278$switchtocons,na.rm=TRUE)
```

```
## [1] 0.05036765
```

```
mean(merge2910$switchtocons,na.rm=TRUE)
```

```
## [1] 0.06689666
```

```
# From the paper: "Of those respondents who did not identify as Conservative
# before the referendum, 2.8 percent with Euroskepticism scores of 5 or 6, 5.0
# percent with scores of 7 or 8, and 6.7 percent with scores of 9 or 10 joined
# the Conservatives. The more Euroskeptic the respondent, the more likely they
# were to swing behind the Conservatives following the party's shift in policy
# position.
```

But do strong partisans (e.g. very committed to Conservative) change their policy preferences?

```
# From the paper: "In Figure 1, we look at whether stronger Conservative
# partisans were more likely to become Euroskeptic following the sudden, as-if
# random change in Conservative positioning on Brexit than less staunch
# supporters of the party."

# A respondent's change in Euroskepticism between Waves 8 and 9:

merged$Euroskepticismchange <- merged$EUIntegrationSelf9 - merged$EUIntegrationSelf8

# Let's subset voters; we can run the same regression on each group:

mergestrong <- merged[merged$partyIdStrength.x=="Very strong",]
mergenotstrong <- merged[merged$partyIdStrength.x!="Very strong",]
```

```r
# Let's create Table 3 (independent variable -- perceived increase in
# Conservative Euroskepticism):

intreg3B <- lm(Euroskepticismchange ~ Conchange + gender.x + age.x + white
               + country.x, data = mergestrong)
summary(intreg3B)
```

```
##
## Call:
## lm(formula = Euroskepticismchange ~ Conchange + gender.x + age.x +
##     white + country.x, data = mergestrong)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -9.5686 -0.6377  0.2833  0.7787 10.4630
##
## Coefficients:
##                    Estimate Std. Error t value Pr(>|t|)
## (Intercept)       -0.573438   0.340336  -1.685   0.0923 .
## Conchange          0.219563   0.019680  11.157   <2e-16 ***
## gender.xFemale    -0.108799   0.112904  -0.964   0.3354
## age.x              0.003866   0.003788   1.020   0.3077
## white             -0.185917   0.300076  -0.620   0.5357
## country.xScotland  0.098575   0.192116   0.513   0.6080
## country.xWales    -0.323777   0.244659  -1.323   0.1860
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 1.883 on 1173 degrees of freedom
##   (162 observations deleted due to missingness)
## Multiple R-squared:  0.1013, Adjusted R-squared:  0.09666
## F-statistic: 22.03 on 6 and 1173 DF,  p-value: < 2.2e-16
```

```r
intreg3A <- lm(Euroskepticismchange ~ Conchange + gender.x + age.x + white
               + country.x, data = mergenotstrong)
summary(intreg3A)
```

```
##
## Call:
## lm(formula = Euroskepticismchange ~ Conchange + gender.x + age.x +
##     white + country.x, data = mergenotstrong)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -10.6145  -0.8948   0.3628   0.8390  10.8420
##
## Coefficients:
##                    Estimate Std. Error t value Pr(>|t|)
## (Intercept)       -1.161408   0.177937  -6.527 7.37e-11 ***
## Conchange          0.138610   0.010554  13.134  < 2e-16 ***
## gender.xFemale    -0.055165   0.053711  -1.027 0.304433
## age.x              0.006500   0.001914   3.396 0.000688 ***
```

```
## white              0.093999   0.153902   0.611 0.541378
## country.xScotland  0.131062   0.096305   1.361 0.173606
## country.xWales     0.017320   0.110594   0.157 0.875561
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 1.882 on 4993 degrees of freedom
##   (1185 observations deleted due to missingness)
## Multiple R-squared:  0.03765,    Adjusted R-squared:  0.0365
## F-statistic: 32.56 on 6 and 4993 DF,  p-value: < 2.2e-16
```

```
# And finally, our table:

stargazer(intreg3A, intreg3B,
          title = "Individual Shifts in Euroskepticism",
          no.space = TRUE,
          covariate.labels = c("Perceived Change in Conservative Euroskepticism",
                               "Female",
                               "Age",
                               "White",
                               "Scotland",
                               "Wales",
                               "Constant"),
          dep.var.labels   = "Change in Personal Euroskepticism:",
          column.labels   = c("Moderate Conservatives",
                              "Very Strong Conservatives"),
          model.numbers = FALSE,
          star.cutoffs = c(0.05, 0.01,0.001))
```

% Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu
% Date and time: Sun, Apr 04, 2021 - 22:56:19

```
# From the paper: There is a clear, statistically significant, positive
# relationship between Conservative partisans' perception of their party's
# increasing Euroskepticism and their own Euroskepticism. But the size of the
# effect is limited: even for very strong Conservatives, a one-unit increase in
# perceived Conservative Euroskepticism on a ten-point scale yields only a 0.22
# - unit increase in personal Euroskepticism. Unsurprisingly, as the relative
# sizes of the two coefficients in the top row indicate, the effect is stronger
# among Conservatives who described their partisan identity as very strong
# before the referendum.
```

Let's create Figure 1 (which corresponds with Table 3):

```
# First, let's merge Waves 8 and 9:

bigmerge <- merge(BES8, BES9, by = "id")

# And create relevant values:

bigmerge$Euroskepticismchange <- bigmerge$EUIntegrationSelf9 - bigmerge$EUIntegrationSelf8
```

Table 3: Individual Shifts in Euroskepticism

	Dependent variable:	
	Change in Personal Euroskepticism:	
	Moderate Conservatives	Very Strong Conservatives
Perceived Change in Conservative Euroskepticism	0.139^{***}	0.220^{***}
	(0.011)	(0.020)
Female	-0.055	-0.109
	(0.054)	(0.113)
Age	0.006^{***}	0.004
	(0.002)	(0.004)
White	0.094	-0.186
	(0.154)	(0.300)
Scotland	0.131	0.099
	(0.096)	(0.192)
Wales	0.017	-0.324
	(0.111)	(0.245)
Constant	-1.161^{***}	-0.573
	(0.178)	(0.340)
Observations	5,000	1,180
R^2	0.038	0.101
Adjusted R^2	0.036	0.097
Residual Std. Error	1.882 (df = 4993)	1.883 (df = 1173)
F Statistic	32.559^{***} (df = 6; 4993)	22.025^{***} (df = 6; 1173)
Note:		*p<0.05; **p<0.01; ***p<0.001

```r
bigmerge$Conchange <- bigmerge$EUIntegrationCon9 - bigmerge$EUIntegrationCon8

# And now, let's subset to 3 groups:

bigmerge$Partisan[bigmerge$partyId8 != "Conservative"] <- "Non-Conservative"
bigmerge$Partisan[bigmerge$partyId8 == "Conservative" & bigmerge$partyIdStrength.x != "Very strong"] <-
bigmerge$Partisan[bigmerge$partyId8 == "Conservative" & bigmerge$partyIdStrength.x == "Very strong"] <-

# And create relevant variables representing the 3 groups:

bigmergenon <- bigmerge[bigmerge$Partisan == "Non-Conservative",]
bigmergemod<- bigmerge[bigmerge$Partisan == "Moderate Conservative",]
bigmergever <- bigmerge[bigmerge$Partisan == "Very Strong Conservative",]

# What percentage of each group switched?

mean(bigmergenon$Conchange, na.rm = TRUE)
```

```
## [1] 0.3833084
```

```r
mean(bigmergemod$Conchange, na.rm = TRUE)
```

```
## [1] 0.2486752
```

```r
mean(bigmergever$Conchange, na.rm = TRUE)
```

```
## [1] 0.3314607
```

```r
mean(bigmergenon$Euroskepticismchang, na.rm = TRUE)
```

```
## [1] -0.6839049
```

```r
mean(bigmergemod$Euroskepticismchang, na.rm = TRUE)
```

```
## [1] -0.683277
```

```r
mean(bigmergever$Euroskepticismchang, na.rm = TRUE)
```

```
## [1] -0.5168712
```

```r
bigmerge$Partisan <- factor(bigmerge$Partisan, levels = c("Non-Conservative",
                                                          "Moderate Conservative",
                                                          "Very Strong Conservative"))

# Let's make our ggplot:

# How to remove warnings here?
```

```r
g <- ggplot(bigmerge, aes(y = Euroskepticismchange, x = Conchange, color = Partisan)) +
  geom_point(size = 0.1) +
  stat_smooth(method = "lm",se = TRUE) +
  theme_bw() +
  xlab("Perceived Change in Conservative Euroskepticism") +
  ylab("Change in Personal Euroskepticism")

# From the paper: "The intensity of Conservative partisanship determined the
# extent to which voters followed the party's evolving position on the EU - or,
# more precisely, their perception of the party's evolving position."
```

As previously non-Conservative Euroskeptics flocked to the party, what happened to their views on other issues?

```r
# From the paper: "We find that joining the Conservatives led voters to update
# their views on economic issues to bring them into line with the positions of
# their new party; party affiliation, we contend, influenced the subsequent
# evolution of voters' policy preferences.

# In particular, the authors examine attitudes around redistribution.

# Let's make Table 4 and the associated Figure 2 (which supports a key
# assumption for us to draw inferences from Table 4):

# Let's start with some cleaning:

BES7 <- BES7 %>%
  mutate(redistSelf = case_when(redistSelf == "Government should try to make incomes equal" ~ 0,
                                redistSelf == "1" ~ 1, redistSelf== "2" ~ 2,
                                redistSelf == "3" ~ 3, redistSelf == "4" ~ 4,
                                redistSelf == "5" ~ 5, redistSelf == "6" ~ 6,
                                redistSelf == "7" ~ 7, redistSelf == "8" ~ 8,
                                redistSelf == "9" ~ 9,
                                redistSelf == "Government should be less concerned about equal incomes"

BES7$redistSelf7 <- BES7$redistSelf
merged2 <- merge(merged2, BES7, by = "id")

BES11 <- BES11 %>%
  mutate(redistSelf = case_when(redistSelf== "Government should try to make incomes equal" ~ 0,
                                redistSelf == "1" ~ 1, redistSelf== "2" ~ 2,
                                redistSelf == "3" ~ 3, redistSelf == "4" ~ 4,
                                redistSelf == "5" ~ 5, redistSelf == "6" ~ 6,
                                redistSelf == "7" ~ 7, redistSelf == "8" ~ 8,
                                redistSelf == "9" ~ 9,
                                redistSelf == "Government should be less concerned about equal incomes"

BES11$redistSelf11 <- BES11$redistSelf
merged2 <- merge(merged2, BES11, by = "id")
```

```
## Warning in merge.data.frame(merged2, BES11, by = "id"): column
```

```
## names 'wave11.x', 'wave12.x', 'wave13.x', 'wave14.x', 'country.x',
## 'countryOfBirth.x', 'turnoutUKGeneral.x', 'generalElectionVote.x',
## 'partyIdStrength.x', 'partyId.x', 'partyIdSqueeze.x', 'starttime.x',
## 'endtime.x', 'mii.x', 'bestOnMII.x', 'euRefVote.x', 'britishness.x',
## 'scottishness.x', 'welshness.x', 'englishness.x', 'europeanness.x',
## 'likeCorbyn.x', 'likeFarron.x', 'likeSturgeon.x', 'likeWood.x',
## 'likeFarage.x', 'goodTimePurchase.x', 'riskPoverty.x', 'riskUnemployment.x',
## 'likeCon.x', 'likeLab.x', 'likeLD.x', 'likeSNP.x', 'likePC.x', 'likeUKIP.x',
## 'likeGrn.x', 'changeEconomy.x', 'EUIntegrationSelf.x', 'EUIntegrationCon.x',
## 'EUIntegrationLab.x', 'EUIntegrationLD.x', 'EUIntegrationSNP.x',
## 'EUIntegrationPC.x', 'EUIntegrationUKIP.x', 'EUIntegrationGreen.x',
## 'antiIntellectual.x', 'efficacyUnderstand.x', 'efficacyTooMuchEffort.x',
## 'efficacyNotUnderstand.x', 'efficacyPolCare.x', 'efficacyNoMatter.x',
## 'leftRight.x', 'lrCon.x', 'lrLab.x', 'lrLD.x', 'lrUKIP.x', 'lrSNP.x', 'lrPC.x',
## 'lrgreens.x', 'satDemUK.x', 'satDemScot.x', 'satDemWales.x', 'satDemEng.x',
## 'immigSelf.x', 'immigCon.x', 'immigLab.x', 'immigLD.x', 'immigSNP.x',
## 'immigPC.x', 'immigUKIP.x', 'immigGreen.x', 'ptvCon.x', 'ptvLab.x',
## 'ptvLD.x', 'ptvSNP.x', 'ptvPC.x', 'ptvUKIP.x', 'ptvGrn.x', 'conUnited.x',
## 'labUnited.x', 'ldUnited.x', 'snpUnited.x', 'pcUnited.x', 'ukipUnited.x',
## 'grnUnited.x', 'euID.x', 'euID1.x', 'euID2.x', 'euID3.x', 'euID4.x',
## 'euID6.x', 'euID7.x', 'age.x', 'w10full.x', 'w11full.x', 'disability.x',
## 'edlevel.x', 'ageGroup.x', 'euRefLA.x', 'onscode.x', 'headHouseholdPast.x',
## 'fatherNumEmployees.x', 'motherNumEmployees.x', 'gender.x', 'marital.x',
## 'housing.x', 'gor.x', 'profile_education_age.x', 'profile_lea.x',
## 'profile_oslaua.x', 'profile_gross_personal.x', 'profile_household_children.x',
## 'profile_newspaper.x', 'profile_past_vote_2005.x', 'profile_past_vote_2010.x',
## 'profile_religion.x', 'profile_religion_denom.x', 'profile_pcon.x',
## 'profile_past_vote_2017.x', 'profile_turnout_2017.x',
## 'profile_past_vote_2015.x', 'profile_turnout_2015.x', 'profile_eurefvote.x',
## 'personality_agreeableness.x', 'personality_conscientiousness.x',
## 'personality_extraversion.x', 'personality_neuroticism.x',
## 'personality_openness.x', 'mii_cat.x', 'LRAL_mii_cat.x', 'small_mii_cat.x',
## 'wave11.y', 'wave12.y', 'wave13.y', 'wave14.y', 'country.y', 'countryOfBirth.y',
## 'turnoutUKGeneral.y', 'generalElectionVote.y', 'partyIdStrength.y', 'partyId.y',
## 'partyIdSqueeze.y', 'w10full.y', 'starttime.y', 'endtime.y', 'mii.y',
## 'bestOnMII.y', 'euRefVote.y', 'britishness.y', 'scottishness.y', 'welshness.y',
## 'englishness.y', 'europeanness.y', 'likeCorbyn.y', 'likeFarron.y',
## 'likeSturgeon.y', 'likeWood.y', 'likeFarage.y', 'likeCon.y', 'likeLab.y',
## 'likeLD.y', 'likeSNP.y', 'likePC.y', 'likeUKIP.y', 'likeGrn.y', 'conUnited.y',
## 'labUnited.y', 'ldUnited.y', 'snpUnited.y', 'pcUnited.y', 'ukipUnited.y',
## 'grnUnited.y', 'goodTimePurchase.y', 'riskPoverty.y', 'riskUnemployment.y',
## 'antiIntellectual.y', 'efficacyUnderstand.y', 'efficacyTooMuchEffort.y',
## 'efficacyNotUnderstand.y', 'efficacyPolCare.y', 'efficacyNoMatter.y',
## 'EUIntegrationSelf.y', 'EUIntegrationCon.y', 'EUIntegrationLab.y',
## 'EUIntegrationLD.y', 'EUIntegrationSNP.y', 'EUIntegrationPC.y',
## 'EUIntegrationUKIP.y', 'EUIntegrationGreen.y', 'satDemUK.y', 'satDemScot.y',
## 'satDemWales.y', 'satDemEng.y', 'euID.y', 'euID1.y', 'euID2.y', 'euID3.y',
## 'euID4.y', 'euID6.y', 'euID7.y', 'immigSelf.y', 'immigCon.y', 'immigLab.y',
## 'immigLD.y', 'immigSNP.y', 'immigPC.y', 'immigUKIP.y', 'immigGreen.y',
## 'ptvCon.y', 'ptvLab.y', 'ptvLD.y', 'ptvSNP.y', 'ptvPC.y', 'ptvUKIP.y',
## 'ptvGrn.y', 'changeEconomy.y', 'gor.y', 'leftRight.y', 'lrCon.y', 'lrLab.y',
## 'lrLD.y', 'lrUKIP.y', 'lrSNP.y', 'lrPC.y', 'lrgreens.y', 'age.y', 'w11full.y',
## 'disability.y', 'edlevel.y', 'ageGroup.y', 'euRefLA.y', 'onscode.y',
## 'headHouseholdPast.y', 'fatherNumEmployees.y', 'motherNumEmployees.y',
```

```
## 'gender.y', 'marital.y', 'housing.y', 'profile_newspaper.y',
## 'profile_religion.y', 'profile_education_age.y', 'profile_lea.y',
## 'profile_oslaua.y', 'profile_gross_personal.y', 'profile_household_children.y',
## 'profile_past_vote_2005.y', 'profile_past_vote_2010.y',
## 'profile_religion_denom.y', 'profile_pcon.y', 'profile_past_vote_2017.y',
## 'profile_turnout_2017.y', 'profile_past_vote_2015.y',
## 'profile_turnout_2015.y', 'profile_eurefvote.y', 'personality_agreeableness.y',
## 'personality_conscientiousness.y', 'personality_extraversion.y',
## 'personality_neuroticism.y', 'personality_openness.y', 'mii_cat.y',
## 'LRAL_mii_cat.y', 'small_mii_cat.y' are duplicated in the result
```

```
# From the paper: "We now estimate the effect of joining the Conservatives on changes in
# attitudes towards redistribution. Our dependent variable, "Increase in
# Opposition to Redistribution," is the level of opposition to redistribution in
# Wave 11, conducted between April 2017 and May 2017, minus the level of
# opposition to redistribution in Wave 7 (conducted between April 2016 and May
# 2016), the most recent post- and pre-referendum survey waves respectively that
# ask about redistribution preferences." (A higher value suggests more
# opposition to redistribution.)

merged2$redistchange <- merged2$redistSelf11 - merged2$redistSelf7

# From the paper: "We find a positive association between joining the
# Conservatives and increased opposition to redistribution: as column 1 shows,
# affiliating with the Conservative Party is associated with more than a
# half-point increase in opposition to redistribution on a ten-point scale.

table4reg <- lm(redistchange ~ switchtocons + white + age.x + gender.x +
                  country.x, data = merged2)
summary(table4reg)
```

```
##
## Call:
## lm(formula = redistchange ~ switchtocons + white + age.x + gender.x +
##     country.x, data = merged2)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -10.4905  -0.9681   0.0602   1.0833  10.2411
##
## Coefficients:
##                    Estimate Std. Error t value Pr(>|t|)
## (Intercept)       -0.160978   0.143832  -1.119   0.2631
## switchtocons       0.542210   0.133255   4.069 4.76e-05 ***
## white              0.179234   0.119019   1.506   0.1321
## age.x             -0.001427   0.001798  -0.794   0.4274
## gender.xFemale    -0.008770   0.052214  -0.168   0.8666
## country.xScotland -0.162438   0.070767  -2.295   0.0217 *
## country.xWales    -0.050792   0.090754  -0.560   0.5757
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 2.477 on 9058 degrees of freedom
##   (1889 observations deleted due to missingness)
```

```
## Multiple R-squared:  0.002745,   Adjusted R-squared:  0.002084
## F-statistic: 4.155 on 6 and 9058 DF,  p-value: 0.0003558
```

```
# People who were part of UKIP (should see negligible change, as discussed in
# the paper, as UKIP was already very opposed to redistribution):

regUKIP <- lm(redistchange ~ switchtocons + white + age.x +gender.x
              + country.x, data = merged2,
              partyId8 == "United Kingdom Independence Party (UKIP)")
summary(regUKIP)
```

```
##
## Call:
## lm(formula = redistchange ~ switchtocons + white + age.x + gender.x +
##     country.x, data = merged2, subset = partyId8 == "United Kingdom Independence Party (UKIP)")
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -10.7234  -1.3785  -0.2627   1.6292   9.8274
##
## Coefficients:
##                    Estimate Std. Error t value Pr(>|t|)
## (Intercept)       -0.517873   0.630651  -0.821   0.4118
## switchtocons       0.041980   0.285066   0.147   0.8830
## white              0.359912   0.527694   0.682   0.4954
## age.x              0.008190   0.007284   1.124   0.2611
## gender.xFemale     0.002993   0.191379   0.016   0.9875
## country.xScotland -0.472307   0.467920  -1.009   0.3130
## country.xWales     0.536402   0.312302   1.718   0.0862 .
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 2.906 on 972 degrees of freedom
##   (190 observations deleted due to missingness)
## Multiple R-squared:  0.006683,   Adjusted R-squared:  0.0005519
## F-statistic:  1.09 on 6 and 972 DF,  p-value: 0.3663
```

```
# People who were not part of UKIP -- from the paper: "the effect of joining the
# Conservatives on redistributive attitudes should be stronger among respondents
# who were not previously members of UKIP."

regnonUKIP <- lm(redistchange ~ switchtocons + white + age.x +gender.x
                 + country.x, data = merged2,
                 partyId8 != "United Kingdom Independence Party (UKIP)")
summary(regnonUKIP)
```

```
##
## Call:
## lm(formula = redistchange ~ switchtocons + white + age.x + gender.x +
##     country.x, data = merged2, subset = partyId8 != "United Kingdom Independence Party (UKIP)")
##
## Residuals:
##     Min      1Q  Median      3Q     Max
```

```
## -9.9364 -0.9726  0.1030  1.1456 10.2577
##
## Coefficients:
##                      Estimate Std. Error t value Pr(>|t|)
## (Intercept)       -0.0936553  0.1458419  -0.642 0.520781
## switchtocons       0.6053573  0.1580787   3.829 0.000129 ***
## white              0.1548143  0.1203701   1.286 0.198427
## age.x             -0.0032839  0.0018430  -1.782 0.074816 .
## gender.xFemale     0.0001106  0.0538628   0.002 0.998362
## country.xScotland -0.1094347  0.0707148  -1.548 0.121769
## country.xWales    -0.1124235  0.0942015  -1.193 0.232734
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 2.415 on 8079 degrees of freedom
##   (1699 observations deleted due to missingness)
## Multiple R-squared:  0.002817,   Adjusted R-squared:  0.002077
## F-statistic: 3.804 on 6 and 8079 DF,  p-value: 0.0008671
```

```r
# Let's create Table 4:

stargazer(table4reg, regnonUKIP, regUKIP, title = "Joining the Conservatives and
          Opposition to Redistribution", no.space = TRUE,
           covariate.labels = c("Joined Conservatives",
                                "White",
                                "Age",
                                "Female",
                                "Scotland",
                                "Wales",
                                "Constant"),
          dep.var.labels   = "Change in Opposition to Redistribution",
          column.labels   = c("Overall",
                              "Non-UKIP",
                              "UKIP"),
          model.numbers = FALSE,
          star.cutoffs = c(0.05, 0.01,0.001))
```

% Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu
% Date and time: Sun, Apr 04, 2021 - 22:56:21

```r
# Let's make the corresponding Figure 2:

BES7 <- BES7 %>%
  mutate(redistCon = case_when(redistCon== "Government should try to make incomes equal" ~ 0,
                               redistCon == "1" ~ 1, redistCon== "2" ~ 2,
                               redistCon == "3" ~ 3, redistCon == "4" ~ 4,
                               redistCon == "5" ~ 5, redistCon == "6" ~ 6,
                               redistCon == "7" ~ 7, redistCon == "8" ~ 8,
                               redistCon == "9" ~ 9,
                               redistCon == "Government should be less concerned about equal incomes" ~

BES7 <- BES7 %>%
  mutate(redistGreen = case_when(redistGreen== "Government should try to make incomes equal" ~ 0,
                                 redistGreen == "1" ~ 1, redistGreen== "2" ~ 2,
```

Table 4: Joining the Conservatives and Opposition to Redistribution

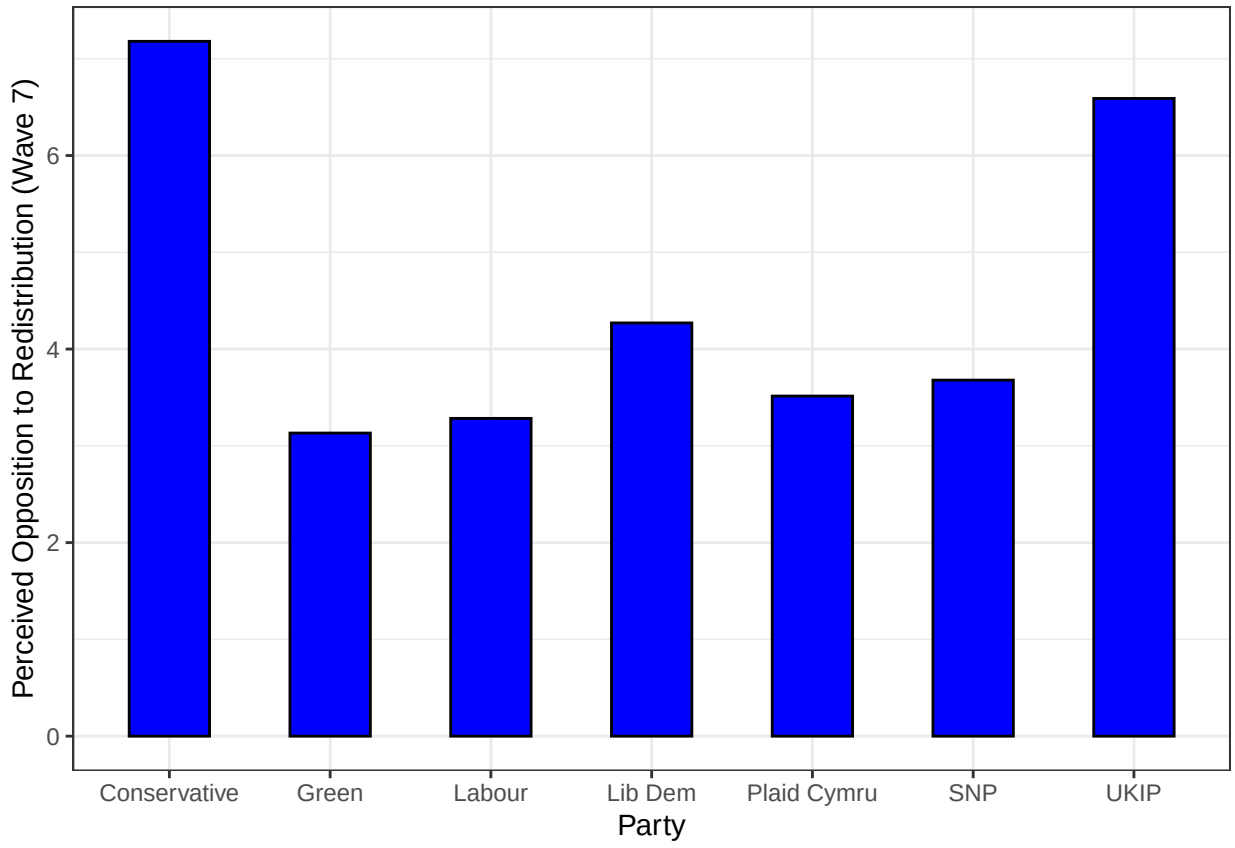
	Dependent variable:		
	Change in Opposition to Redistribution		
	Overall	Non-UKIP	UKIP
Joined Conservatives	0.542^{***}	0.605^{***}	0.042
	(0.133)	(0.158)	(0.285)
White	0.179	0.155	0.360
	(0.119)	(0.120)	(0.528)
Age	−0.001	−0.003	0.008
	(0.002)	(0.002)	(0.007)
Female	−0.009	0.0001	0.003
	(0.052)	(0.054)	(0.191)
Scotland	-0.162^{*}	−0.109	−0.472
	(0.071)	(0.071)	(0.468)
Wales	−0.051	−0.112	0.536
	(0.091)	(0.094)	(0.312)
Constant	−0.161	−0.094	−0.518
	(0.144)	(0.146)	(0.631)
Observations	9,065	8,086	979
R^2	0.003	0.003	0.007
Adjusted R^2	0.002	0.002	0.001
Residual Std. Error	2.477 (df = 9058)	2.415 (df = 8079)	2.906 (df = 972)
F Statistic	4.155^{***} (df = 6; 9058)	3.804^{***} (df = 6; 8079)	1.090 (df = 6; 972)
Note:			*p<0.05; **p<0.01; ***p<0.001

```
                                redistGreen == "3" ~ 3, redistGreen == "4" ~ 4,
                                redistGreen == "5" ~ 5, redistGreen == "6" ~ 6,
                                redistGreen == "7" ~ 7, redistGreen == "8" ~ 8,
                                redistGreen == "9" ~ 9,
                                redistGreen == "Government should be less concerned about equal incomes

BES7 <- BES7 %>%
  mutate(redistLab = case_when(redistLab== "Government should try to make incomes equal" ~ 0,
                               redistLab == "1" ~ 1, redistLab== "2" ~ 2,
                               redistLab == "3" ~ 3, redistLab == "4" ~ 4,
                               redistLab == "5" ~ 5, redistLab == "6" ~ 6,
                               redistLab == "7" ~ 7, redistLab == "8" ~ 8,
                               redistLab == "9" ~ 9,
                               redistLab == "Government should be less concerned about equal incomes" ~

BES7 <- BES7 %>%
  mutate(redistLD = case_when(redistLD== "Government should try to make incomes equal" ~ 0,
                              redistLD == "1" ~ 1, redistLD== "2" ~ 2,
                              redistLD == "3" ~ 3, redistLD == "4" ~ 4,
                              redistLD == "5" ~ 5, redistLD == "6" ~ 6,
                              redistLD == "7" ~ 7,redistLD == "8" ~ 8,
                              redistLD == "9" ~ 9,
                              redistLD == "Government should be less concerned about equal incomes" ~ 1

BES7 <- BES7 %>%
  mutate(redistPC = case_when(redistPC== "Government should try to make incomes equal" ~ 0,
                              redistPC == "1" ~ 1, redistPC== "2" ~ 2,
                              redistPC == "3" ~ 3, redistPC == "4" ~ 4,
                              redistPC == "5" ~ 5, redistPC == "6" ~ 6,
                              redistPC == "7" ~ 7, redistPC == "8" ~ 8,
                              redistPC == "9" ~ 9,
                              redistPC == "Government should be less concerned about equal incomes" ~ 1

BES7 <- BES7 %>%
  mutate(redistSNP = case_when(redistSNP== "Government should try to make incomes equal" ~ 0,
                               redistSNP == "1" ~ 1, redistSNP== "2" ~ 2,
                               redistSNP == "3" ~ 3, redistSNP == "4" ~ 4,
                               redistSNP == "5" ~ 5, redistSNP == "6" ~ 6,
                               redistSNP == "7" ~ 7, redistSNP == "8" ~ 8,
                               redistSNP == "9" ~ 9,
                               redistSNP == "Government should be less concerned about equal incomes" ~

BES7 <- BES7 %>%
  mutate(redistUKIP = case_when(redistUKIP== "Government should try to make incomes equal" ~ 0,
                                redistUKIP == "1" ~ 1, redistUKIP== "2" ~ 2,
                                redistUKIP == "3" ~ 3, redistUKIP == "4" ~ 4,
                                redistUKIP == "5" ~ 5, redistUKIP == "6" ~ 6,
                                redistUKIP == "7" ~ 7, redistUKIP == "8" ~ 8,
                                redistUKIP == "9" ~ 9, redistUKIP == "Government should be less concern

# Find average perceived opposition to redistribution by party for Wave 7:

con7 <- mean(BES7$redistCon, na.rm=TRUE)
```

```r
green7 <- mean(BES7$redistGreen, na.rm=TRUE)
lab7 <- mean(BES7$redistLab, na.rm=TRUE)
ld7 <- mean(BES7$redistLD, na.rm=TRUE)
pc7 <- mean(BES7$redistPC, na.rm=TRUE)
snp7 <- mean(BES7$redistSNP, na.rm=TRUE)
ukip7 <- mean(BES7$redistUKIP, na.rm=TRUE)

# And now the same for Wave 11:

BES11 <- BES11 %>%
  mutate(redistCon = case_when(redistCon == "Government should try to make incomes equal" ~ 0,
                               redistCon == "1" ~ 1, redistCon== "2" ~ 2,
                               redistCon == "3" ~ 3, redistCon == "4" ~ 4,
                               redistCon == "5" ~ 5, redistCon == "6" ~ 6,
                               redistCon == "7" ~ 7, redistCon == "8" ~ 8,
                               redistCon == "9" ~ 9,
                               redistCon == "Government should be less concerned about equal incomes" ~

BES11 <- BES11 %>%
  mutate(redistGreen = case_when(redistGreen == "Government should try to make incomes equal" ~ 0,
                                 redistGreen == "1" ~ 1, redistGreen== "2" ~ 2,
                                 redistGreen == "3" ~ 3, redistGreen == "4" ~ 4,
                                 redistGreen == "5" ~ 5, redistGreen == "6" ~ 6,
                                 redistGreen == "7" ~ 7, redistGreen == "8" ~ 8,
                                 redistGreen == "9" ~ 9,
                                 redistGreen == "Government should be less concerned about equal income

BES11 <- BES11 %>%
  mutate(redistLab = case_when(redistLab== "Government should try to make incomes equal" ~ 0,
                               redistLab == "1" ~ 1, redistLab== "2" ~ 2,
                               redistLab == "3" ~ 3, redistLab == "4" ~ 4,
                               redistLab == "5" ~ 5, redistLab == "6" ~ 6,
                               redistLab == "7" ~ 7, redistLab == "8" ~ 8,
                               redistLab == "9" ~ 9,
                               redistLab == "Government should be less concerned about equal incomes" ~

BES11 <- BES11 %>%
  mutate(redistLD = case_when(redistLD== "Government should try to make incomes equal" ~ 0,
                              redistLD == "1" ~ 1, redistLD== "2" ~ 2,
                              redistLD == "3" ~ 3, redistLD == "4" ~ 4,
                              redistLD == "5" ~ 5,redistLD == "6" ~ 6,
                              redistLD == "7" ~ 7,redistLD == "8" ~ 8,
                              redistLD == "9" ~ 9,
                              redistLD == "Government should be less concerned about equal incomes" ~ 1

BES11 <- BES11 %>%
  mutate(redistPC = case_when(redistPC== "Government should try to make incomes equal" ~ 0,
                              redistPC == "1" ~ 1, redistPC== "2" ~ 2,
                              redistPC == "3" ~ 3, redistPC == "4" ~ 4,
                              redistPC == "5" ~ 5, redistPC == "6" ~ 6,
                              redistPC == "7" ~ 7, redistPC == "8" ~ 8,
                              redistPC == "9" ~ 9,
                              redistPC == "Government should be less concerned about equal incomes" ~ 1
```

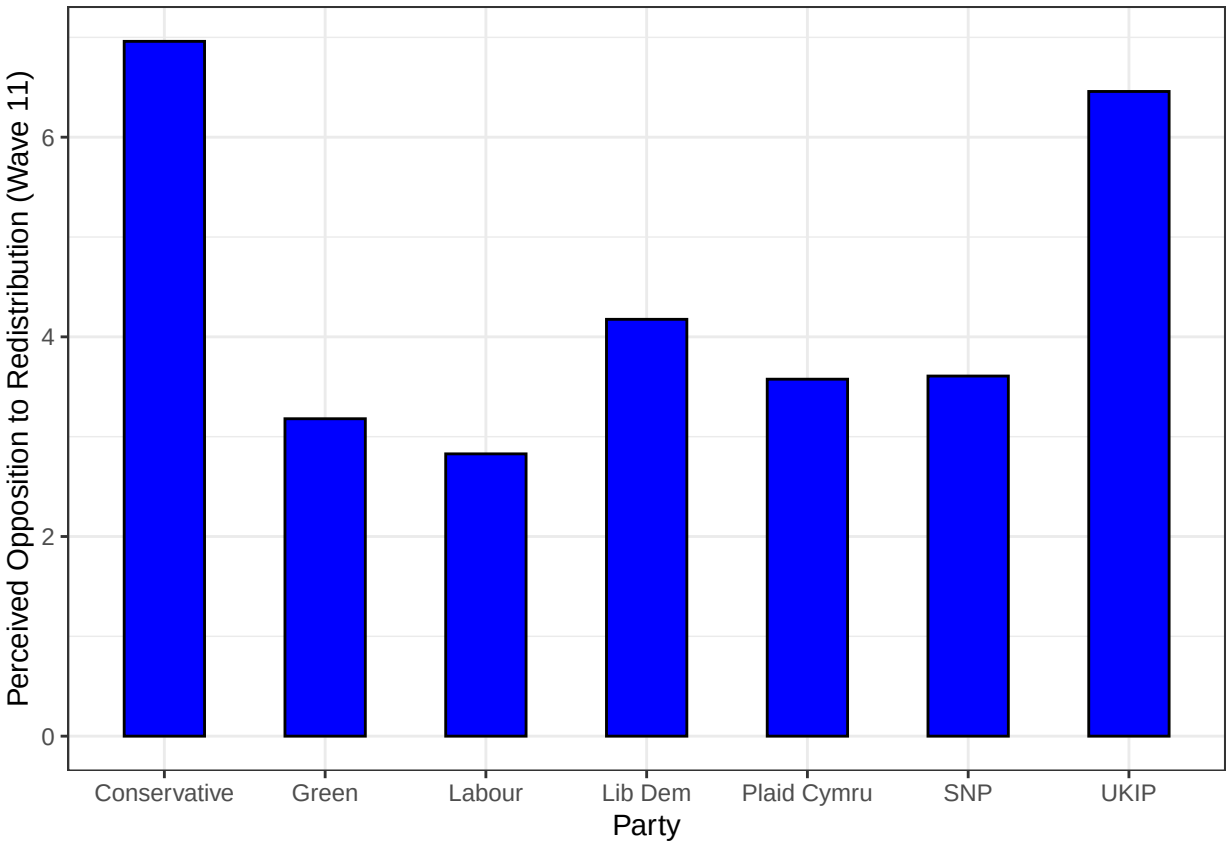
```r
BES11 <- BES11 %>%
  mutate(redistSNP = case_when(redistSNP== "Government should try to make incomes equal" ~ 0,
                               redistSNP == "1" ~ 1, redistSNP== "2" ~ 2,
                               redistSNP == "3" ~ 3, redistSNP == "4" ~ 4,
                               redistSNP == "5" ~ 5, redistSNP == "6" ~ 6,
                               redistSNP == "7" ~ 7, redistSNP == "8" ~ 8,
                               redistSNP == "9" ~ 9,
                               redistSNP == "Government should be less concerned about equal incomes" ~

BES11 <- BES11 %>%
  mutate(redistUKIP = case_when(redistUKIP== "Government should try to make incomes equal" ~ 0,
                                redistUKIP == "1" ~ 1, redistUKIP== "2" ~ 2,
                                redistUKIP == "3" ~ 3, redistUKIP == "4" ~ 4,
                                redistUKIP == "5" ~ 5, redistUKIP == "6" ~ 6,
                                redistUKIP == "7" ~ 7, redistUKIP == "8" ~ 8,
                                redistUKIP == "9" ~ 9,
                                redistUKIP == "Government should be less concerned about equal incomes"

# Find average perceived opposition to redistribution by party for Wave 11:

con11 <- mean(BES11$redistCon, na.rm = TRUE)
green11 <- mean(BES11$redistGreen, na.rm = TRUE)
lab11 <- mean(BES11$redistLab, na.rm = TRUE)
ld11 <- mean(BES11$redistLD, na.rm = TRUE)
pc11 <- mean(BES11$redistPC, na.rm = TRUE)
snp11 <- mean(BES11$redistSNP, na.rm = TRUE)
ukip11 <- mean(BES11$redistUKIP, na.rm = TRUE)

## Create self-constructed dataframe of perception scores based on above code):

party7 <- c("Conservative", "Green", "Labour", "Lib Dem", "Plaid Cymru", "SNP",
            "UKIP")
perceived_opp7 <- c(con7, green7, lab7, ld7, pc7, snp7, ukip7)
redistribution7 <- data.frame(party7, perceived_opp7)

# And finally, let's make Figure 2:

# Plot Wave 7 values of opposition to redistribution by party:
g7 <- ggplot(redistribution7, aes(y = perceived_opp7,
                          x = party7)) +
  geom_bar(stat = "identity", width = 0.5, color = "black", fill = "blue") +
  stat_smooth(method ="lm", se = FALSE) +
  theme_bw() +
  xlab("Party") +
  ylab("Perceived Opposition to Redistribution (Wave 7)")

g7
```

```
## `geom_smooth()` using formula 'y ~ x'
```




```
# And now, the same thing for Wave 11:

party11 <- c("Conservative", "Green", "Labour", "Lib Dem", "Plaid Cymru", "SNP",
             "UKIP")
perceived_opp11 <- c(con11, green11, lab11, ld11, pc11, snp11, ukip11)
redistribution11 <- data.frame(party11, perceived_opp11)

# Plot Wave 11 values of opposition to redistribution by party:

g11 <- ggplot(redistribution11,
              aes(y = perceived_opp11, x = party11)) +
  geom_bar(stat ="identity", width=0.5, color="black", fill="blue") +
  stat_smooth(method = "lm",se = FALSE) +
  theme_bw() +
  xlab("Party") +
  ylab("Perceived Opposition to Redistribution (Wave 11)")

g11
```

```
## `geom_smooth()` using formula 'y ~ x'
```


Perceived Opposition to Redistribution (Wave 11)
0
2
4
6
Conservative
Green
Labour
Lib Dem
Plaid Cymru
SNP
UKIP
Party