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Legacies of Wartime Order: Punishment Attacks and Social Control in Northern Ireland

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Main Themes/Questions

The study speaks to broader debates about governance, the rule of law, and state-society relations. Informal institutions that have emerged in wartime have a legacy that continues past wartime agreements and treaties. The social control from these institutions grips communities because both armed actors and civilians hold a certain reliance on them. Many post-conflict societies have the emergence of non-state armed groups that can minimize the credibility of a state. The determining factors of why the hold is so great on the communities vary from fear to not being able to trust or rely on the formal institutions.

The informal justice systems created during the Troubles in Northern Ireland by both Catholic and Protestant sides have held a grip on their communities past the signing of the Good Friday Agreement in 1998. A main function of these groups is an informal justice system that would serve to punish those who acted out in the community.

Hypothesis

- Assessing whether paramilitary groups' social control during the Troubles is associated with the location of paramilitary-style attacks today while also accounting for other variables that can account for the occurrence of such attacks today, not least deprivation.
- Civilians rely on informal justice institutions persist into the post conflict period due to mistrust of police.

Data

With the use of a dataset of geolocated paramilitary-style attacks (PSAs) from the Police Service of Northern Ireland (PSNI) and interviews, statistical analysis was performed to examine the following with the PSNI data:

- Logit Model – examine whether in-group killings from the Troubles are associated with paramilitary-style attacks (post-conflict)
- Negative Binomial – examine whether in-group killings are associated with the intensity of post-conflict paramilitary-style attacks.

Dependent Variables: Republican PSAs, Loyalist PSAs

Independent Variables: Catholic in-group killings (1969-1998), Protestant in-group killings (1969-1998), Total population, Urban, Catholic stronghold, Protestant stronghold, Income deprivation rate, Violent crime rate, Anti-social behavior rate

With the following from the surveys, three logistic regression models were run:

- Whether respondents rate the police as effective
- Whether respondents rate the informal authorities effective
- Whether respondents rate the effectiveness of the informal authorities as higher than the police.

Dependent Variables: Catholic respondents, Protestant respondents

Independent Variables: Republican PSA, Loyalist PSA, Age, Male, General Trust, Trust in neighborhood, Discriminated, Victim of state violence (1969-1998), Community Stronghold, Income deprivation, Urban.

```
1 df <- read.csv(file = "soa_data.tab", sep = "\t")
]
1 df_survey <- read_delim(file = "survey_data.tab") %>%
2   mutate_at(c("inf_better", "police_good", "informal_good", "discrim", "vict_
state_violence_trou", "communal_stronghold", "urban_soa"), as.factor)
]
```

Table 1

```

1 # Table 1:
2 # Logistic regression models for PSAs (2016–2018).
3 m1 <- glm(as.factor(ifelse(republican_PSA>0, T, F)) ~ catholic_trouble_deaths
  + scale(total_population) + urban +
4     catholic_stronghold + income_deprivation + violent_crime_rate +
  asb_rate, data = df, family = "binomial")
5 summary(m1)
6
7 m2 <- glm(as.factor(ifelse(loyalist_PSA>0, T, F)) ~ protestant_trouble_deaths
  + scale(total_population) + urban +
8     protestant_stronghold + income_deprivation + violent_crime_rate +
  asb_rate, data = df, family = "binomial")
9 summary(m2)
10
11 screenreg(list(m1, m2),
12     omit.coef='Intercept',
13     custom.coef.map = list(
14         "catholic_trouble_deaths" = "Catholic in-group killings
  (1969–1998)",
15         "protestant_trouble_deaths" = "Protestant in-group killings
  (1969–1998)",
16         "scale(total_population)" = "Total population",
17         "urbanTRUE" = "Urban",
18         "catholic_strongholdTRUE" = "Catholic stronghold",
19         "protestant_strongholdTRUE" = "Protestant stronghold",
20         "income_deprivation" = "Income deprivation rate",
21         "violent_crime_rate" = "Violent crime rate",
22         "asb_rate" = "Anti-social behavior rate"),
23     caption = "Table 1: Logistical regression models for PSAs
  (2016–2018).",
24     caption.above = T,
25     custom.note = "Notes: *** p < 0.001, ** p < 0.01, * p < 0.05.
  Analysis conducted in R.",
26     custom.model.names = c("Republican PSAs", "Loyalist PSAs"),
27     column.spacing = 1)
  ]

```

Table 1: Logistic Regression Models for Paramilitary-style Assaults (2016-2018)

	Republican PSAs	Loyalist PSAs
Catholic in-group killings (1969-1998)	0.27*** (0.07)	
Protestant in-group killings (1969-1998)		0.45*** (0.13)
Total population	0.23 (0.17)	0.16 (0.13)
Urban	1.99** (0.63)	1.10*** (0.33)
Catholic stronghold	1.78*** (0.36)	
Protestant stronghold		1.61*** (0.26)
Income deprivation rate	12.54** (4.54)	10.76** (3.55)
Violent crime rate	0.02 (0.02)	-0.04* (0.02)
Anti-social behavior rate	-0.01 (0.01)	0.03** (0.01)
AIC	289.42	529.60
BIC	327.75	567.93
Log Likelihood	-136.71	-256.80
Deviance	273.42	513.60
Num. obs.	890	890

Notes: *** $p \leq 0.001$, ** $p \leq 0.01$, * $p \leq 0.05$. Analysis conducted in R.

Table 2

```

1 # Table 2:
2 # Negative binomial models for PSAs (2016–2018).
3 m3 <- MASS::glm.nb(republican_PSA ~ catholic_trouble_deaths + scale(total_
  population) + urban +
4     catholic_stronghold + income_deprivation + violent_crime_
  rate + asb_rate, data = df)
5 summary(m3)
6
7 m4 <- MASS::glm.nb(loyalist_PSA ~ protestant_trouble_deaths + scale(total_
  population) + urban +
8     protestant_stronghold + income_deprivation + violent_
  crime_rate + asb_rate, data = df)
9 summary(m4)
10 screenreg(list(m3, m4),
11     omit.coef='Intercept',
12     custom.coef.map = list(
13         "catholic_trouble_deaths" = "Catholic in-group killings
  (1969–1998)",
14         "protestant_trouble_deaths" = "Protestant in-group killings
  (1969–1998)",
15         "scale(total_population)" = "Total population",
16         "urbanTRUE" = "Urban",
17         "catholic_strongholdTRUE" = "Catholic stronghold",
18         "protestant_strongholdTRUE" = "Protestant stronghold",
19         "income_deprivation" = "Income deprivation rate",
20         "violent_crime_rate" = "Violent crime rate",
21         "asb_rate" = "Anti-social behavior rate"),
22     caption = "Table 1: Logistical regression models for PSAs
  (2016–2018).",
23     caption.above = T,
24     custom.note = "Notes: *** p < 0.001, ** p < 0.01, * p < 0.05.
  Analysis conducted in R.",
25     custom.model.names = c("Republican PSAs", "Loyalist PSAs"),
26     column.spacing = 1)

```

]

Table 2: Negative Binomial Models for PSAs (2016-2018)

	Republican PSAs	Loyalist PSAs
Catholic in-group killings (1969-1998)	0.15** (0.05)	
Protestant in-group killings (1969-1998)		0.18* (0.08)
Total population	0.18 (0.16)	0.17 (0.12)
Urban	1.57** (0.51)	0.97** (0.31)
Catholic stronghold	2.18*** (0.33)	
Protestant stronghold		1.41*** (0.24)
Income deprivation rate	7.72* (3.88)	8.80** (3.18)
Violent crime rate	0.04** (0.02)	-0.03 (0.01)
Anti-social behavior rate	-0.02* (0.01)	0.03*** (0.01)
AIC	423.56	741.21
BIC	466.68	784.33
Log Likelihood	-202.78	-361.60
Deviance	192.83	337.53
Num. obs.	890	890

Notes: *** $p \leq 0.001$, ** $p \leq 0.01$, * $p \leq 0.05$. Analysis conducted in R.

Table 3

```

1 # Table 3
2 # Respondents' view of the effectiveness of contacting "the police".
3
4 ## Column 1
5 round(100 * prop.table(table(df_survey$effectiveness_police, useNA = "always")
6 ))
7 ## Column 2
8 round(100 * prop.table(table(df_survey[which(df_survey$religion=="Catholic"),
9 ]$effectiveness_police, useNA = "always"))))
10 ## Column 3
11 round(100 * prop.table(table(df_survey[which(df_survey$religion=="Protestant")
12 , ]$effectiveness_police, useNA = "always"))))
13 ]

```

Table 3: Respondents' view of the effectiveness of contacting "the police"

	All respondents	Catholic respondents	Protestant respondents
This would make no difference (%)	17	20	15
This might help a little (%)	46	47	46
This would help a lot (%)	34	30	38
"Don't know" or refused to answer (%)	2	3	1

Table 4

```

1 # Table 4:
2 # Respondents' view of the effectiveness of contacting "a member of the
   community who has influence".
3
4 ## Column 1
5 round(100 * prop.table(table(df_survey$effectiveness_informal, useNA = "always
   ")))
6 ## Column 2
7 round(100 * prop.table(table(df_survey[which(df_survey$religion=="Catholic"),
   ]$effectiveness_informal, useNA = "always")))
8 ## Column 3
9 round(100 * prop.table(table(df_survey[which(df_survey$religion=="Protestant")
   , ]$effectiveness_informal, useNA = "always")))
]

```

Table 4: Respondents' view of the effectiveness of contacting "a member of the community who has influence"

	All respondents	Catholic respondents	Protestant respondents
This would make no difference (%)	19	19	18
This might help a little (%)	48	48	47
This would help a lot (%)	28	26	32
"Don't know" or refused to answer (%)	6	7	4

Table 5

```

1 # Table 5:
2 # Respondents' rating of police as effective when faced with an anti-social
  behavior scenario.
3 m1_s <- glm(police_good ~ republican_PSAs +
4             age + gender + general_trust + trust_in_neighbourhood + discrim +
5             vict_state_violence_trou + communal_stronghold + soa_deprivation +
             urban_soa,
6             data = df_survey %>% filter(religion=="Catholic"), family = "
             binomial")
7 summary(m1_s)
8 m2_s <- glm(police_good ~ loyalist_PSAs +
9             age + gender + general_trust + trust_in_neighbourhood + discrim +
10            vict_state_violence_trou + communal_stronghold + soa_deprivation +
             urban_soa,
11            data = df_survey %>% filter(religion=="Protestant"), family = "
             binomial")
12 summary(m2_s)
13 texreg::screenreg(list(m1_s,m2_s),
14                      custom.coef.map = list("republican_PSAs" = "Republican PSAs"
15                                             ,
16                                             "loyalist_PSAs" = "Loyalist PSAs" ,
17                                             "age" = "Age" ,
18                                             "genderMale" = "Male" ,
19                                             "general_trust" = "General trust" ,
20                                             "trust_in_neighbourhood" = "Trust in
21                                             neighbourhood" ,
22                                             "discrimTRUE" = "Discriminated" ,
23                                             "vict_state_violence_trouTRUE" = "
24                                             Victim of state violence (1969–1998)" ,
25                                             "communal_strongholdTRUE" = "
26                                             Community stronghold (SOA)" ,
27                                             "soa_deprivation" = "Income
28                                             deprivation (SOA)" ,
29                                             "urban_soaTRUE" = "Urban (SOA)" ) ,
30                      omit.coef = "intercept"
31                      )
32 ]

```

Table 5: Respondents' rating of police as effective when faced with an anti-social behavior scenario

	Catholic respondents'	Protestant respondents'
Republican PSAs	-0.19** (0.07)	
Loyalist PSAs		-0.04 (0.09)
Age	-0.00 (0.01)	0.00 (0.01)
Male	-1.04*** (0.30)	0.27 (0.30)
General trust	-0.39 (0.32)	-0.78* (0.33)
Trust in neighbourhood	0.39 (0.23)	0.39 (0.25)
Income deprivation (SOA)	-0.02 (4.22)	-9.18* (4.36)
AIC	320.45	332.86
BIC	362.34	376.74
Log Likelihood	-149.23	-155.43
Deviance	298.45	310.86
Num. obs.	333	399

Notes: *** p \leq 0.001, ** p \leq 0.01, * p \leq 0.05.

Table 6

```

1 # Table 6:
2 ## Respondents' rating of informal authorities as effective when faced with an
   anti-social behavior scenario.
3 m3_s <- glm(informal_good ~ republican_PSAs +
4             age + gender + general_trust + trust_in_neighbourhood + discrim +
5             vict_state_violence_trou + communal_stronghold + soa_deprivation +
             urban_soa,
6             data = df_survey %>% filter(religion=="Catholic"), family = "
             binomial")
7 summary(m3_s)
8 m4_s <- glm(informal_good ~ loyalist_PSAs +
9             age + gender + general_trust + trust_in_neighbourhood + discrim +
10            vict_state_violence_trou + communal_stronghold + soa_deprivation +
             urban_soa,
11            data = df_survey %>% filter(religion=="Protestant"), family = "
             binomial")
12 summary(m4_s)
13 texreg::screenreg(list(m3_s,m4_s),
14                     custom.coef.map = list("republican_PSAs" = "Republican PSAs"
15                                           ,
16                                           "loyalist_PSAs" = "Loyalist PSAs" ,
17                                           "age" = "Age" ,
18                                           "genderMale" = "Male" ,
19                                           "general_trust" = "General trust" ,
20                                           "trust_in_neighbourhood" = "Trust in
21                                           neighbourhood" ,
22                                           "discrimTRUE" = "Discriminated" ,
23                                           "vict_state_violence_trouTRUE" = "
24                                           Victim of state violence (1969-1998)" ,
25                                           "communal_strongholdTRUE" = "
26                                           Community stronghold (SOA)" ,
27                                           "soa_deprivation" = "Income
28                                           deprivation (SOA)" ,
29                                           "urban_soaTRUE" = "Urban (SOA)" ) ,
30                     omit.coef = "intercept"
31                    )
32 ]

```

Table 6: Respondents' rating of informal authorities as effective when faced with an anti-social behavior scenario

	Catholic respondents'	Protestant respondents'
Republican PSAs	-0.05 (0.07)	
Loyalist PSAs		0.30* (0.13)
Age	-0.01 (0.01)	0.01 (0.01)
Male	0.11 (0.30)	-0.16 (0.28)
General trust	0.95** (0.33)	-0.02 (0.29)
Trust in neighbourhood	0.92*** (0.25)	0.22 (0.24)
Income deprivation (SOA)	-0.16 (4.23)	-14.40*** (4.16)
AIC	312.79	366.68
BIC	354.25	410.20
Log Likelihood	-145.40	-172.34
Deviance	290.79	344.68
Num. obs.	320	386

Notes: *** $p \leq 0.001$, ** $p \leq 0.01$, * $p \leq 0.05$.

Table 7

```

1 # Table 7:
2 ## Respondents' rating of informal authorities as more effective than the
   police when faced with an anti-social behavior scenario.
3 m5_s <- glm(inf_better ~ republican_PSAs +
4             age + gender + general_trust + trust_in_neighbourhood + discrim +
5             vict_state_violence_trou + communal_stronghold + soa_deprivation +
             urban_soa,
6             data = df_survey %>% filter(religion=="Catholic"), family = "
             binomial")
7 summary(m5_s)
8 m6_s <- glm(inf_better ~ loyalist_PSAs +
9             age + gender + general_trust + trust_in_neighbourhood + discrim +
10            vict_state_violence_trou + communal_stronghold + soa_deprivation +
             urban_soa,
11            data = df_survey %>% filter(religion=="Protestant"), family = "
             binomial")
12 summary(m6_s)
13 texreg::screenreg(list(m5_s,m6_s),
14                      custom.coef.map = list("republican_PSAs" = "Republican PSAs"
15                                             ,
16                                             "loyalist_PSAs" = "Loyalist PSAs" ,
17                                             "age" = "Age" ,
18                                             "genderMale" = "Male" ,
19                                             "general_trust" = "General trust" ,
20                                             "trust_in_neighbourhood" = "Trust in
21                                             neighbourhood" ,
22                                             "discrimTRUE" = "Discriminated" ,
23                                             "vict_state_violence_trouTRUE" = "
24                                             Victim of state violence (1969-1998)" ,
25                                             "communal_strongholdTRUE" = "
26                                             Community stronghold (SOA)" ,
27                                             "soa_deprivation" = "Income
28                                             deprivation (SOA)" ,
29                                             "urban_soaTRUE" = "Urban (SOA)" ) ,
30                      omit.coef = "intercept"
31 )
32 ]

```

Table 7: Respondents' rating of informal authorities as more effective than the police when faced with an anti-social behavior scenario

	Catholic respondents'	Protestant respondents'
Republican PSAs	0.03 (0.06)	
Loyalist PSAs		0.25** (0.08)
Age	-0.00 (0.01)	0.01 (0.01)
Male	0.18 (0.27)	-0.06 (0.25)
General trust	1.00*** (0.30)	0.47 (0.26)
Trust in neighbourhood	-0.19 (0.21)	-0.25 (0.22)
Income deprivation (SOA)	-1.13 (3.79)	-10.01** (3.86)
AIC	366.60	429.79
BIC	407.99	473.31
Log Likelihood	-172.30	-203.90
Deviance	344.60	407.79
Num. obs.	318	386

Notes: *** $p \leq 0.001$, ** $p \leq 0.01$, * $p \leq 0.05$.

Figure1

```

1  ## Predicted probabilities for the statistically significant results from the
   models reported in tables 5, 6 and 7. All variables are set at their mean
   or mode.
2
3  p1 <- ggplot(ggpredict(m1_s, terms = c("republican_PSAs")), aes(x, predicted))
   +
4    geom_line(lwd = 2) +
5    geom_ribbon(aes(ymin = conf.low, ymax = conf.high), alpha = .3) +
6    ylim(0,1) +
7    xlim(0,15) +
8    theme(plot.title = element_text(hjust = 0.5)) +
9    labs(x="Number of Republican PSAs in respondent's SOA", y="Predicted
   probability") +
10   ggtitle("Catholic respondent\n rating the police as effective (table 5 above
   ).") +
11   theme(text = element_text(size = 12))
12 p1
13
14 p2 <- ggplot(ggpredict(m4_s, terms = c("loyalist_PSAs")), aes(x, predicted))
   +
15   geom_line(lwd = 2) +
16   geom_ribbon(aes(ymin = conf.low, ymax = conf.high), alpha = .3) +
17   ylim(0,1) +
18   xlim(0,15) +
19   theme(plot.title = element_text(hjust = 0.5)) +
20   labs(x="Number of Loyalist PSAs in respondent's SOA", y="Predicted
   probability") +
21   ggtitle("Protestant respondent\n rating informal authority as effective (
   table 6 above).") +
22   theme(text = element_text(size = 12))
23 p2
24
25 p3 <- ggplot(ggpredict(m6_s, terms = c("loyalist_PSAs")), aes(x, predicted))
   +
26   geom_line(lwd = 2) +
27   geom_ribbon(aes(ymin = conf.low, ymax = conf.high), alpha = .3) +
28   ylim(0,1) +
29   xlim(0,15) +
30   theme(plot.title = element_text(hjust = 0.5)) +
31   labs(x="Number of Loyalist PSAs in respondent's SOA", y="Predicted
   probability") +
32   ggtitle("Protestant respondent\n rating informal > the police (table 7 above
   ).") +
33   theme(text = element_text(size = 12))
34 p3
35
36 gridExtra::grid.arrange(p1, p2, p3, ncol = 1, nrow = 3)
]

```

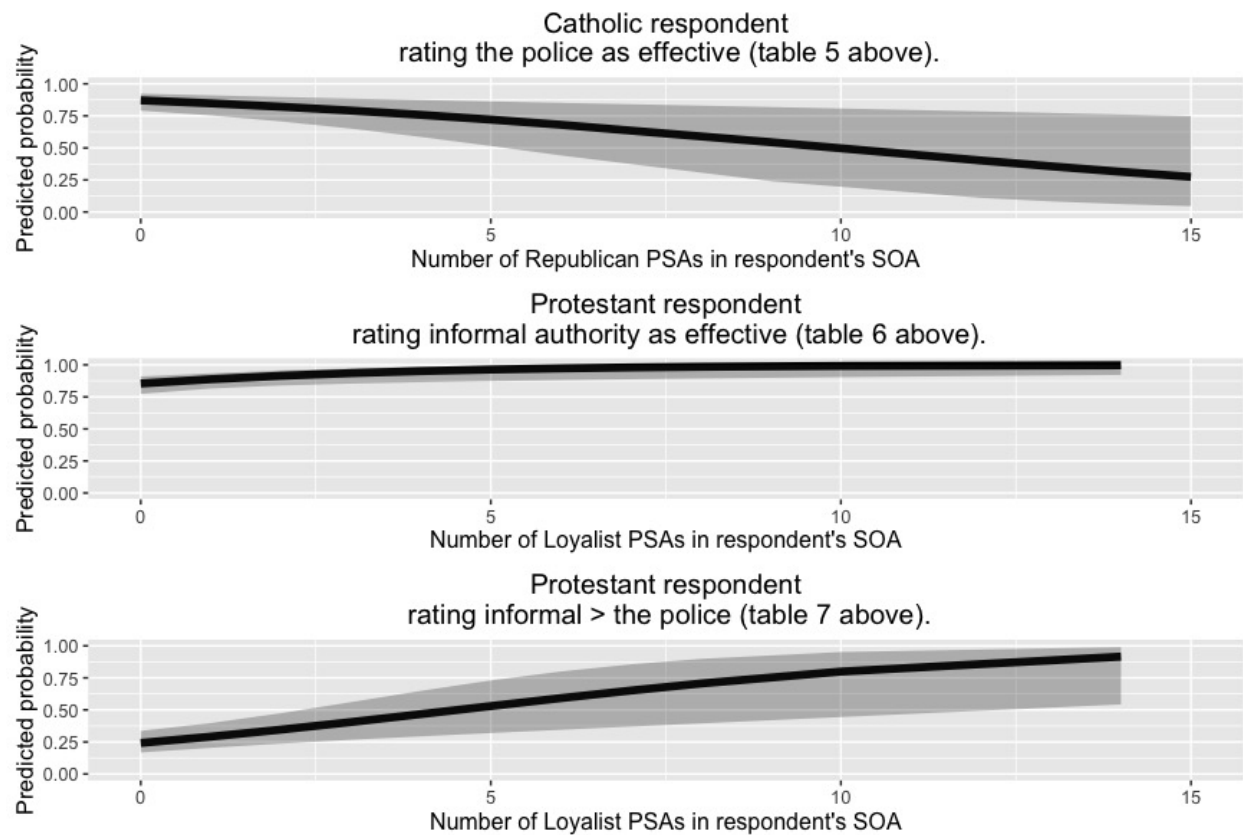


Figure 1: Predicted probabilities for the statistically significant results from the models reported in tables 5, 6, and 7. All variables are set at their mean or mode.