Voter ID Reproduction Document

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3/5/2021

This is the reproduction file for the paper entitled: "Signaling Minorities: A Novel Theoretical Proposition for Voter Identification Laws and Minority Suppression" by Thomas Altmann.

The document contains the R code used to produce each model and figure along with the output of the code.

The following packages are used: dplyr, ggplot2, haven, MASS, stargazer, effects, ordinal, ggeffects, fastDummies.

Describing the Data

Summary Statisitics Table

```
t1 <- data.frame(spae_2014$Q33, spae_2014$Q35, spae_2014$asked_ID,
  spae_2014$state_ID_law, spae_2014$pid3_1, spae_2014$race)
```

% Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu
% Date and time: Fri, Mar 05, 2021 - 14:58:04

Table 1:

Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Median	Pctl(75)	Max
spae_2014.Q33	8,149	1.302	0.580	1.000	1.000	1.000	2.000	4.000
spae_2014.Q35	9,459	1.693	0.782	1.000	1.000	2.000	2.000	4.000
spae_2014.asked_ID	6,532	0.708	0.455	0.000	0.000	1.000	1.000	1.000
spae_2014.state_ID_law	9,462	2.094	1.493	1	1	1	3	5
spae_2014.pid3_1	9,462	0.344	0.475	0	0	0	1	1
spae_2014.race	9,462	1.430	1.186	1	1	1	1	8

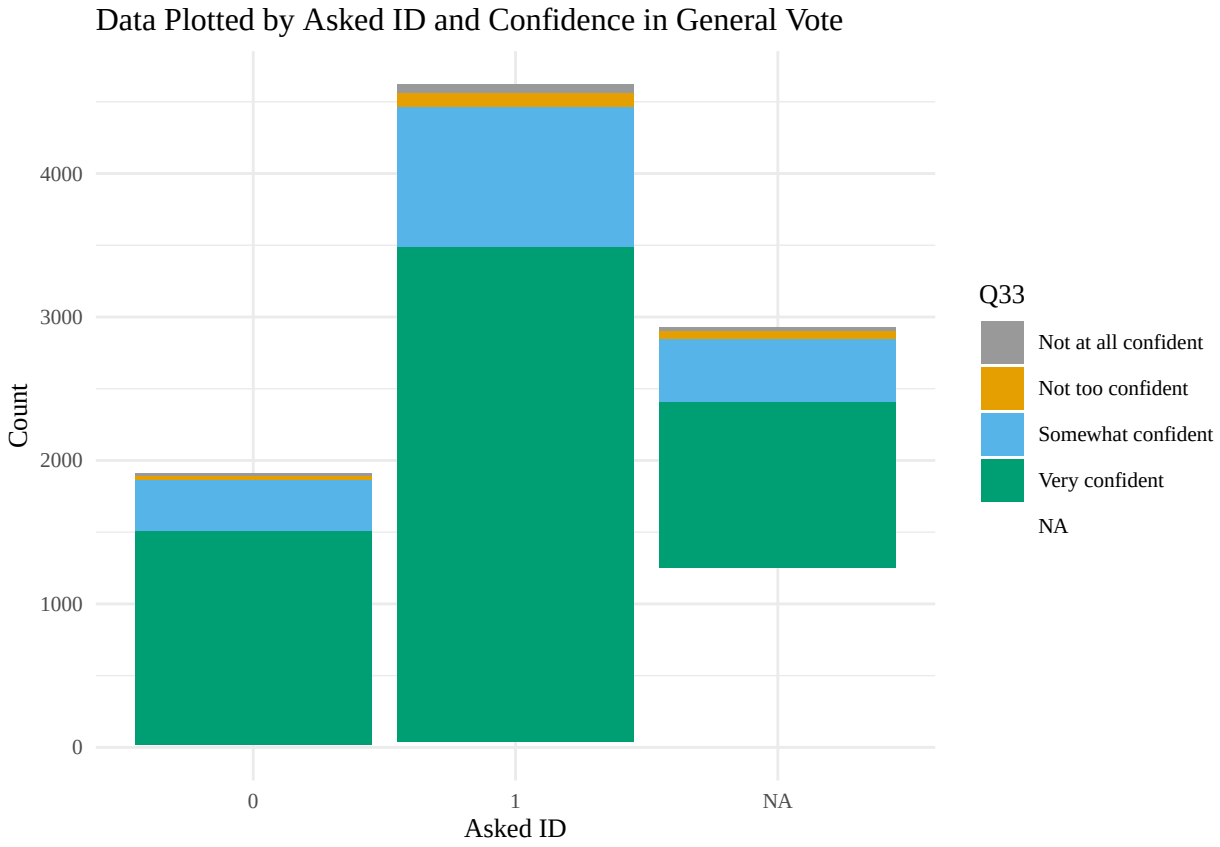
```
spae_2014$Q33 <- ordered(spae_2014$Q33, levels = 1:4,
  labels = c("Very confident","Somewhat confident",
    "Not too confident","Not at all confident"))
spae_2014$Q35 <- ordered(spae_2014$Q35, levels = 1:4,
  labels = c("Very confident","Somewhat confident",
    "Not too confident","Not at all confident"))
```

Plotting the Data (first dependent variable)

```
spae_2014 %>% mutate(Q33 = ordered(Q33, levels=rev(levels(Q33))),
  asked_ID = as.factor(asked_ID)) %>% ggplot(aes(x=asked_ID, fill=Q33)) +
  geom_bar(asked_ID = "fill") + scale_fill_manual(values=cbPalette) +
  theme_minimal() + theme(text=element_text(size=10, family = "Times")) +
```

```
  labs(title="Data Plotted by Asked ID and Confidence in General Vote") +
  ylab("Count") + xlab("Asked ID")
```

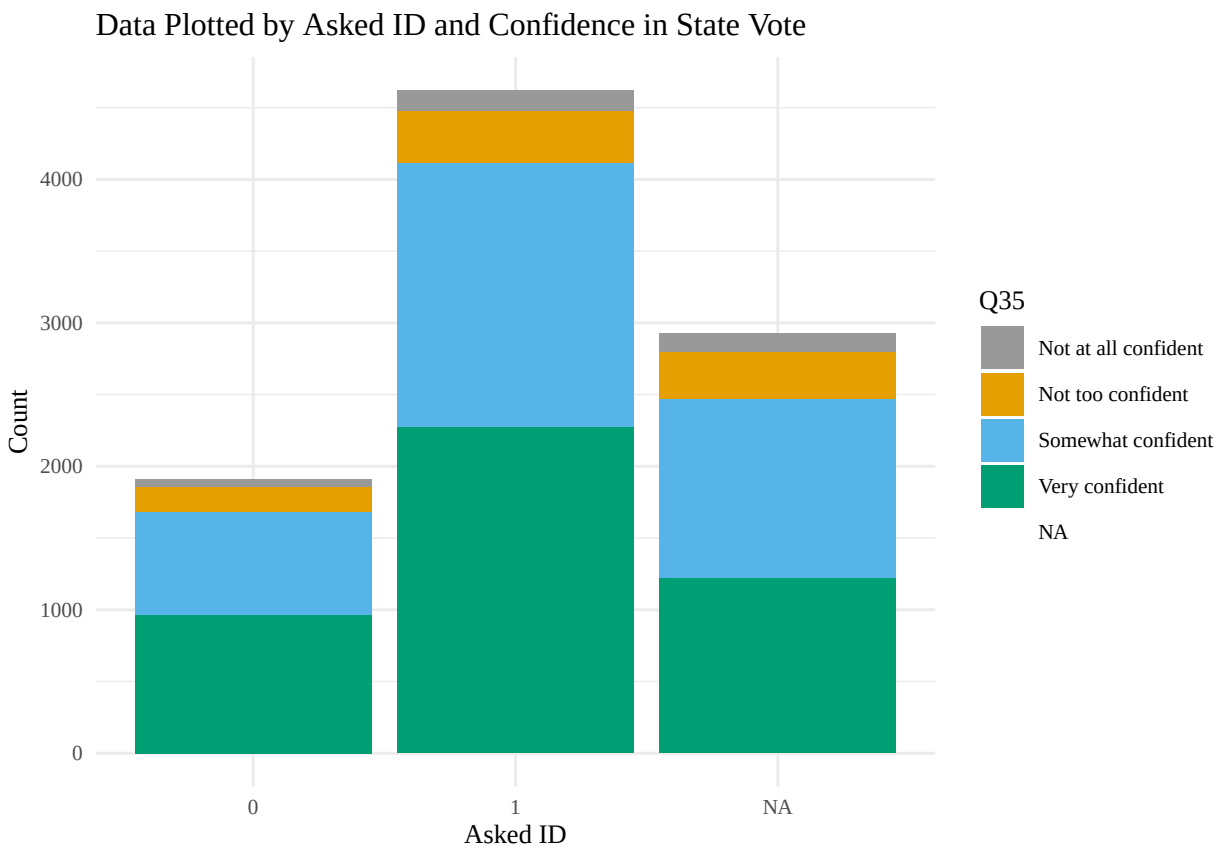
```
## Warning: Ignoring unknown parameters: asked_ID
```



Plotting the Data (second dependent variable)

```
spae_2014 %>% mutate(Q35 = ordered(Q35, levels=rev(levels(Q35))),
  asked_ID = as.factor(asked_ID)) %>%
  ggplot(aes(x=asked_ID, fill=Q35)) + geom_bar(asked_ID = "fill") +
  scale_fill_manual(values=cbPalette) + theme_minimal() +
  theme(text=element_text(size=10, family = "Times")) +
  labs(title="Data Plotted by Asked ID and Confidence in State Vote") +
  ylab("Count") + xlab("Asked ID")
```

```
## Warning: Ignoring unknown parameters: asked_ID
```



First Main Independent Variable

Model 1

Confidence in general election vote interacted on being asked for ID. Ordered logistic regression weighted by national representation.

```
fit1 <- clm(Q33 ~ asked_ID, data=spae_2014,  weights = weight, link="logit")

newdat <- data.frame(asked_ID = c(0,1))
fit1predict <- cbind(newdat, predict(fit1, newdat, type="prob")$fit)

ggpredictions_fit1 <- ggpredict(fit1, terms=c("asked_ID"))
ggpredictions_fit1$x <- factor(ggpredictions_fit1$x)
levels(ggpredictions_fit1$x) = c("Not Asked ID","Asked ID")
colnames(ggpredictions_fit1)[c(1,5)]=c("Asked_ID", "Q33")
```

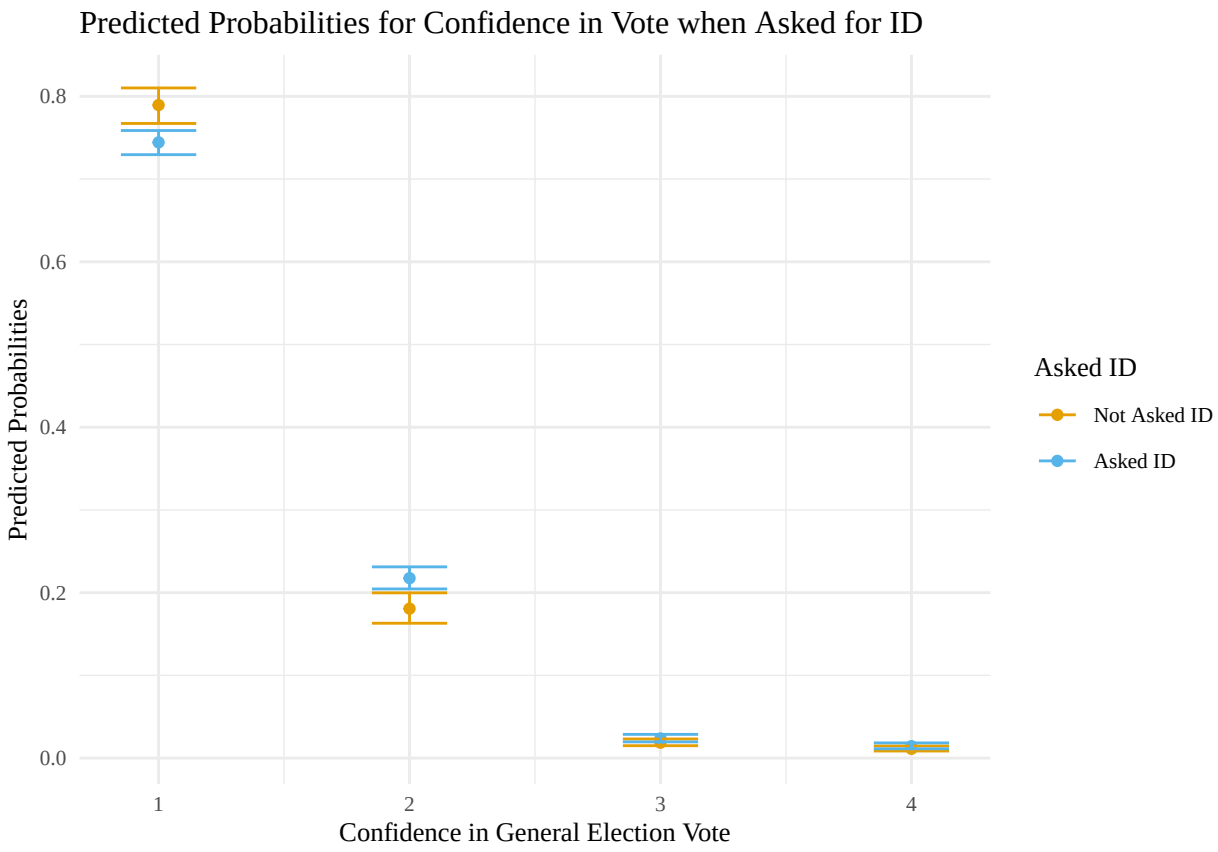
Plotting predictions from Model 1

```
colnames(ggpredictions_fit1) <- make.unique(names(ggpredictions_fit1))
ggplot(ggpredictions_fit1, aes(x=Q33, y=predicted)) +
  geom_point(aes(color=Asked_ID), asked_ID=position_dodge(width = 0.5)) +
  geom_errorbar(aes(ymin=conf.low, ymax=conf.high, color = Asked_ID),
  asked_ID=position_dodge(width = 0.5), width=0.3) +
  theme_minimal() + scale_color_manual(values=cbPalette[2:3]) +
  labs(title="Predicted Probabilities for Confidence in Vote when Asked for ID",
```

```
  color="Asked ID") + ylab("Predicted Probabilities") +
  xlab("Confidence in General Election Vote") +
  theme(text=element_text(size=10, family = "Times"))
```

```
## Warning: Ignoring unknown parameters: asked_ID
```

```
## Warning: Ignoring unknown parameters: asked_ID
```



Model 2

Confidence in general election vote interacted on being asked for ID and Democrat dummy variable. Ordered logistic regression weighted by national representation.

```
fit2 <- clm(Q33~asked_ID + pid3_1, weights=weight, data=spae_2014, link="logit")

ggpredictions_fit2 <- data.frame(ggpredict(fit2, terms=c("asked_ID","pid3_1")))
ggpredictions_fit2$x <- factor(ggpredictions_fit2$x)
levels(ggpredictions_fit2$x) = c("Not Asked ID","Asked ID")
colnames(ggpredictions_fit2)[c(1,5,6)]=c("Asked_ID", "Q33","pid3_1")
```

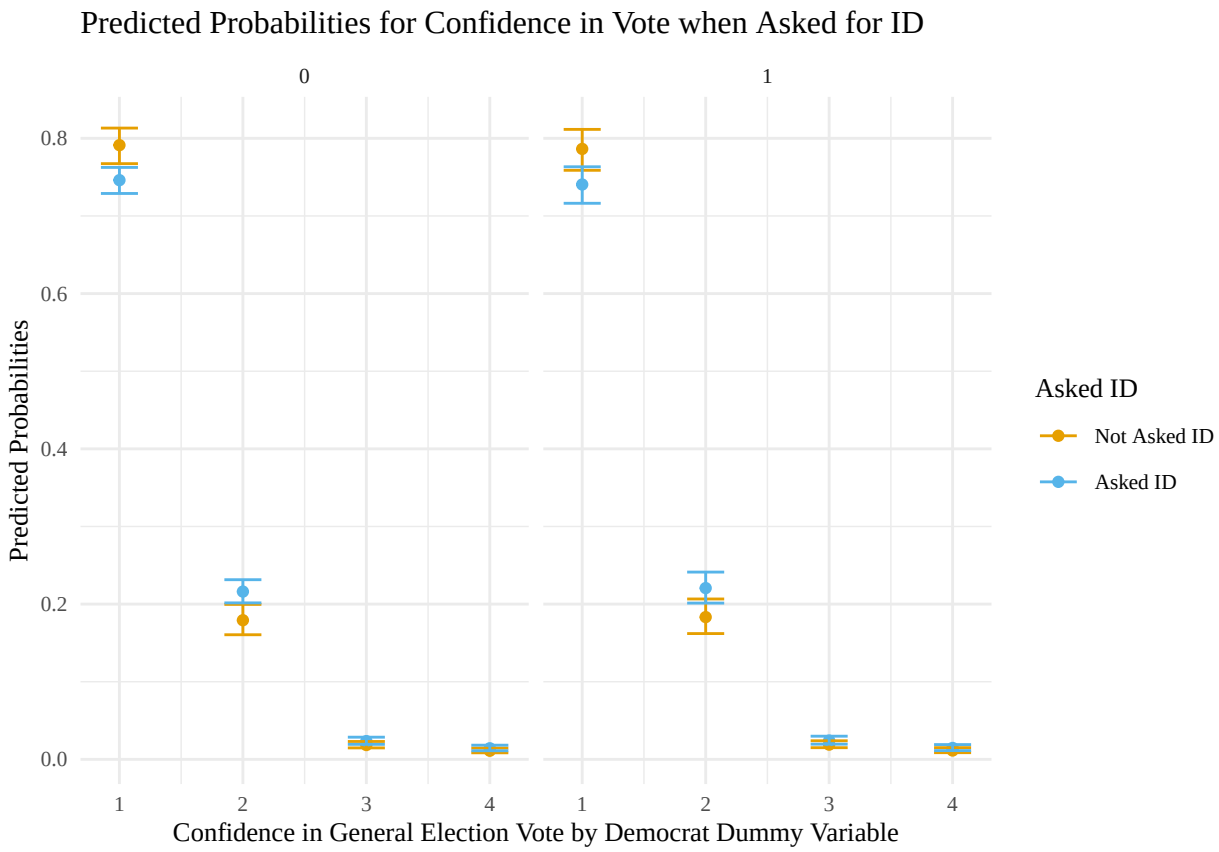
Plotting predictions from Model 2

```
ggplot(ggpredictions_fit2, aes(x=Q33, y=predicted)) +
  geom_point(aes(color=Asked_ID), asked_ID=position_dodge(width = 0.5)) +
  geom_errorbar(aes(ymin=conf.low, ymax=conf.high, color = Asked_ID),
  asked_ID=position_dodge(width = 0.5), width=0.3) + theme_minimal() +
  facet_wrap(~pid3_1) + scale_color_manual(values=cbPalette[2:3]) +
```

```
  labs(title="Predicted Probabilities for Confidence in Vote when Asked for ID",
  color="Asked ID") + ylab("Predicted Probabilities") +
  xlab("Confidence in General Election Vote by Democrat Dummy Variable") +
  theme(text=element_text(size=10, family = "Times"))
```

```
## Warning: Ignoring unknown parameters: asked_ID
```

```
## Warning: Ignoring unknown parameters: asked_ID
```



Model 3

Confidence in general election vote interacted on being asked for ID and interaction term of race. Ordered logistic regression weighted by national representation.

```
fit3 <- clm(Q33 ~ asked_ID * race, weights=weight, data = spae_2014, link="logit")

ggpredictions_fit3 <- data.frame(ggpredict(fit3, terms=c("asked_ID","race")))
ggpredictions_fit3$x <- factor(ggpredictions_fit3$x)
levels(ggpredictions_fit3$x) = c("Not Asked ID","Asked ID")
colnames(ggpredictions_fit3)[c(1,5,6)]=c("Asked_ID", "Q33","race")
```

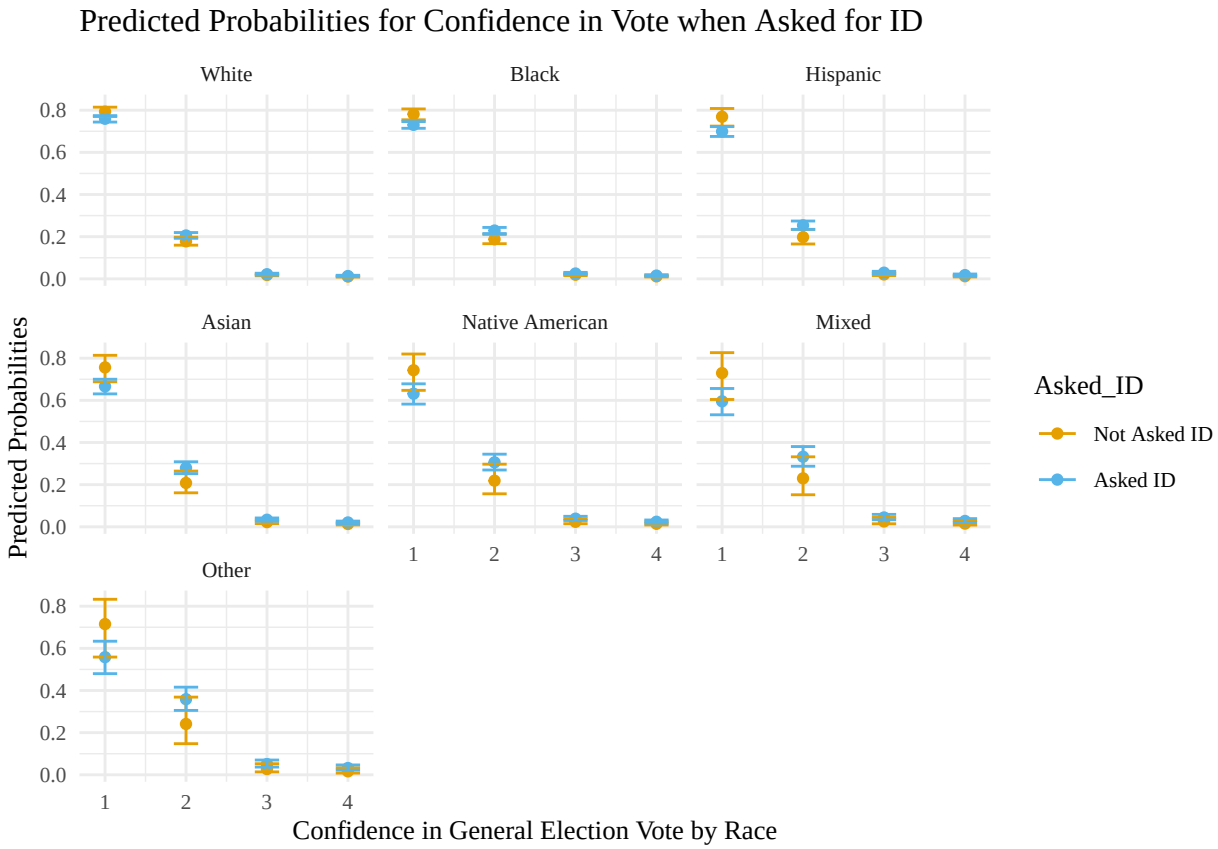
Plotting predictions from Model 3

```
ggplot(ggpredictions_fit3, aes(x=Q33, y=predicted)) +
  geom_point(aes(color=Asked_ID), asked_ID=position_dodge(width = 0.5)) +
  geom_errorbar(aes(ymin=conf.low, ymax=conf.high, color = Asked_ID),
  asked_ID=position_dodge(width = 0.5), width=0.3) +
```

```
  theme_minimal() + facet_wrap(~race) +
  scale_color_manual(values=cbPalette[2:3]) +
  labs(title="Predicted Probabilities for Confidence in Vote when Asked for ID") +
  ylab("Predicted Probabilities") +
  xlab("Confidence in General Election Vote by Race") +
  theme(text=element_text(size=10, family = "Times"))
```

```
## Warning: Ignoring unknown parameters: asked_ID
```

```
## Warning: Ignoring unknown parameters: asked_ID
```



Second Main Independent Variable

Model 4

Confidence in state election vote interacted on state ID law. Ordered logistic regression weighted by national representation.

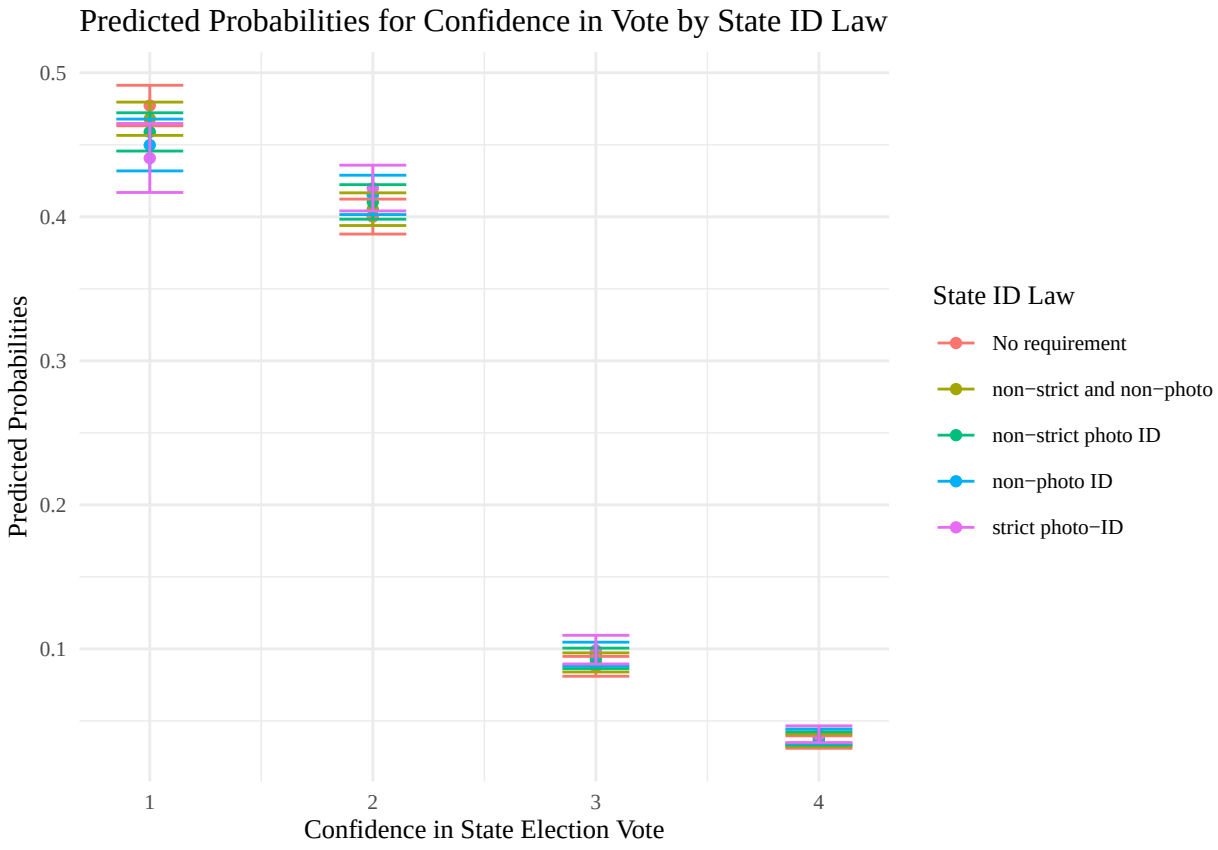
```
fit4 <- clm(Q35 ~ state_ID_law, weights=weight,
  data = spae_2014, link="logit")

ggpredictions_fit4 <- data.frame(ggpredict(fit4, terms=c("state_ID_law")))
ggpredictions_fit4$x <- factor(ggpredictions_fit4$x)
levels(ggpredictions_fit4$x) = c("No requirement","non-strict and non-photo",
  "non-strict photo ID","non-photo ID","strict photo-ID")
colnames(ggpredictions_fit4)[c(1,5)]=c("state_ID_law", "Q35")
```

Ploting predictions from Model 4

```
ggplot(ggpredictions_fit4, aes(x=Q35, y=predicted)) +
  geom_point(aes(color=state_ID_law), state_ID_law=position_dodge(width = 0.5)) +
  geom_errorbar(aes(ymin=conf.low, ymax=conf.high, color = state_ID_law),
  state_ID_law=position_dodge(width = 0.5), width=0.3) + theme_minimal() +
  scale_fill_manual(values=cbPalette) +
  labs(title="Predicted Probabilities for Confidence in Vote by State ID Law",
  color="State ID Law") + ylab("Predicted Probabilities") +
  xlab("Confidence in State Election Vote") +
  theme(text=element_text(size=10, family = "Times"))
```

```
## Warning: Ignoring unknown parameters: state_ID_law
```

```
## Warning: Ignoring unknown parameters: state_ID_law
```



Model 5

Confidence in state election vote interacted on state ID laws and Democrat dummy variable. Ordered logistic regression weighted by national representation.

```
fit5 <- clm(Q35 ~ state_ID_law + pid3_1,
  weights=weight, data=spae_2014, link="logit")

ggpredictions_fit5 <- data.frame(ggpredict(fit5,
  terms=c("state_ID_law","pid3_1")))
ggpredictions_fit5$x <- factor(ggpredictions_fit5$x)
levels(ggpredictions_fit5$x) = c("No Requirement","Non-strict and Non-photo",
```

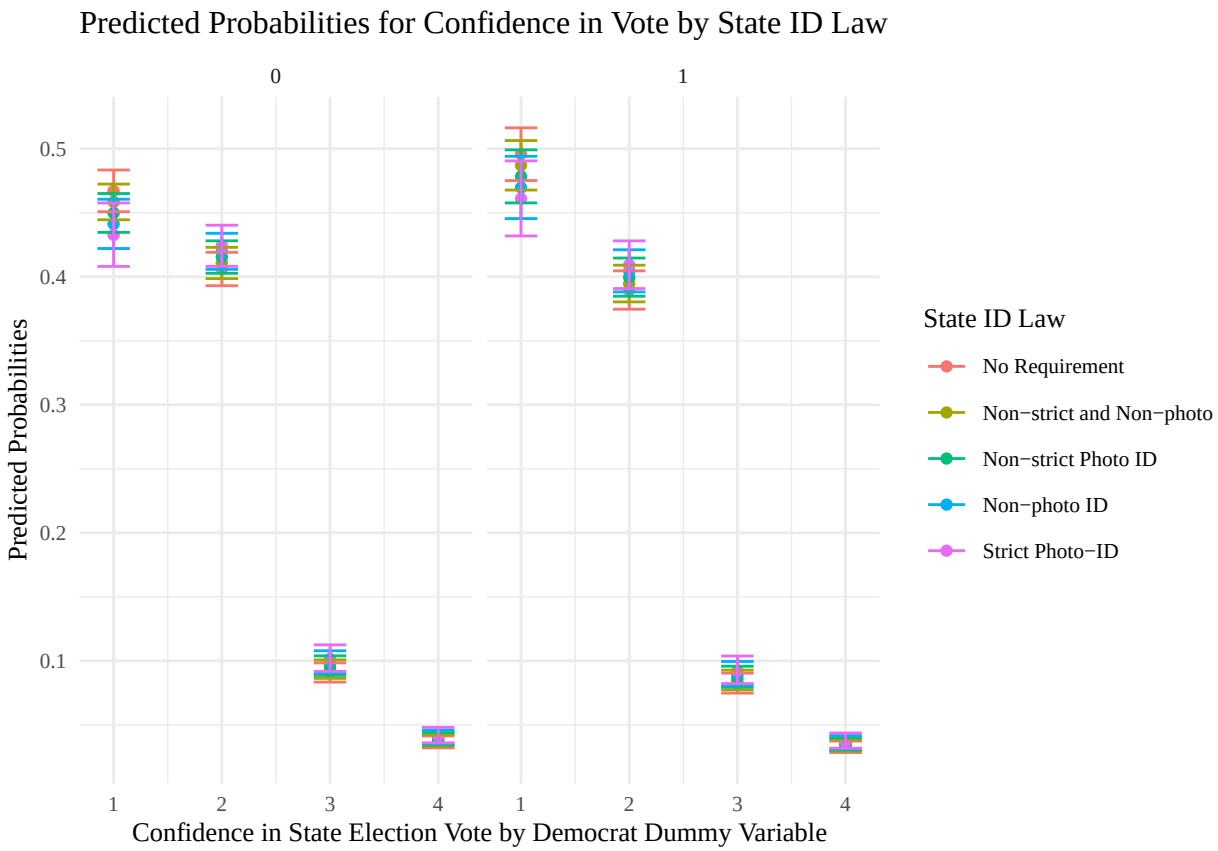
```
  "Non-strict Photo ID","Non-photo ID","Strict Photo-ID")
colnames(ggpredictions_fit5)[c(1,5,6)]=c("state_ID_law", "Q35","pid3_1")
```

Plotting predictions from Model 5

```
ggplot(ggpredictions_fit5, aes(x=Q35, y=predicted)) +
  geom_point(aes(color=state_ID_law), state_ID_law=position_dodge(width = 0.5)) +
  geom_errorbar(aes(ymin=conf.low, ymax=conf.high, color = state_ID_law),
  state_ID_law=position_dodge(width = 0.5), width=0.3) + theme_minimal() +
  facet_wrap(~pid3_1) + scale_fill_manual(values=cbPalette) +
  labs(title="Predicted Probabilities for Confidence in Vote by State ID Law",
  color="State ID Law") + ylab("Predicted Probabilities") +
  xlab("Confidence in State Election Vote by Democrat Dummy Variable") +
  theme(text=element_text(size=10, family = "Times"))
```

```
## Warning: Ignoring unknown parameters: state_ID_law
```

```
## Warning: Ignoring unknown parameters: state_ID_law
```



Model 6

Confidence in state election vote interacted on state ID laws and interaction term of race. Ordered logistic regression weighted by national representation.

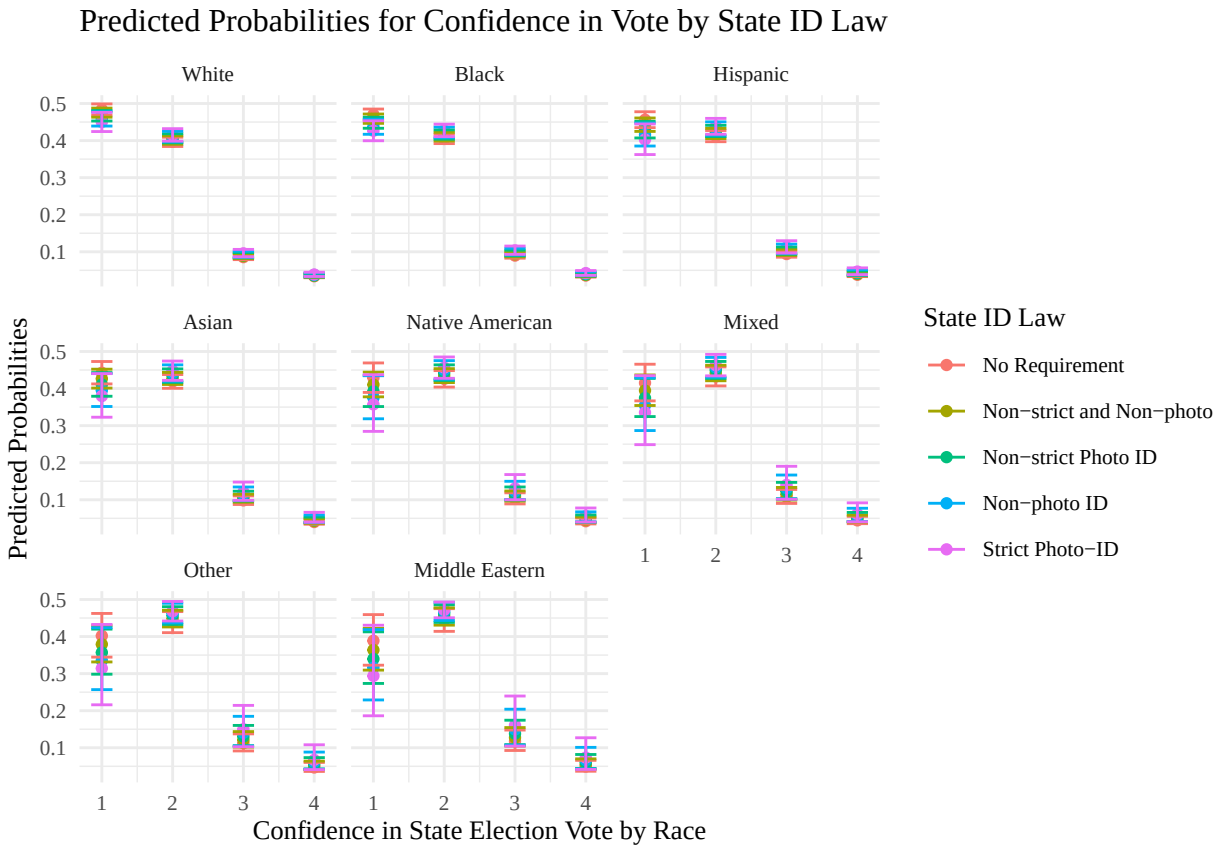
```
fit6 <- clm(Q35 ~ state_ID_law * race, weights=weight,
  data = spae_2014, link="logit")
```

```
ggpredictions_fit6 <- data.frame(ggpredict(fit6, terms=c("state_ID_law","race")))
ggpredictions_fit6$x <- factor(ggpredictions_fit6$x)
levels(ggpredictions_fit6$x) = c("No Requirement","Non-strict and Non-photo",
  "Non-strict Photo ID","Non-photo ID","Strict Photo-ID")
colnames(ggpredictions_fit6)[c(1,5,6)]=c("state_ID_law", "Q35","race")
```

Plotting predictions from Model 6

```
ggplot(ggpredictions_fit6, aes(x=Q35, y=predicted)) +
  geom_point(aes(color=state_ID_law), state_ID_law=position_dodge(width = 0.5)) +
  geom_errorbar(aes(ymin=conf.low, ymax=conf.high, color = state_ID_law),
  state_ID_law=position_dodge(width = 0.5), width=0.3) + theme_minimal() +
  facet_wrap(~race) + scale_fill_manual(values=cbPalette) +
  labs(title="Predicted Probabilities for Confidence in Vote by State ID Law",
  color="State ID Law") + ylab("Predicted Probabilities") +
  xlab("Confidence in State Election Vote by Race") +
  theme(text=element_text(size=10, family = "Times"))
```

```
## Warning: Ignoring unknown parameters: state_ID_law

## Warning: Ignoring unknown parameters: state_ID_law
```



Regression Results Table

Table 2:

	Dependent variable:					
	General Election Vote			State Election Vote		
	(1)	(2)	(3)	(4)	(5)	(6)
Asked ID	0.253***	0.254***	0.113			
	(0.067)	(0.067)	(0.105)			
Democrat = 1		0.029			−0.115***	
		(0.062)			(0.042)	
Race			0.071			0.045
			(0.053)			(0.028)
Asked ID X Race			0.082			
			(0.059)			
State ID Law X Race						0.010
						(0.012)
State ID Law				0.037***	0.035***	0.024
				(0.013)	(0.013)	(0.022)
Observations	6,287	6,287	6,287	9,396	9,396	9,396
Log Likelihood	−4,263.030	−4,262.920	−4,244.707	−9,956.189	−9,952.390	−9,947.969

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