

New_Trump_Analysis.R

bparker1

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```
primary.data <- read.csv("states.republican.csv")

primary.data <- primary.data[primary.data$state!="Iowa" & primary.data$state!="New Hampshire" &
                             primary.data$state!= "South Carolina" & primary.data$state!= "Nevada",]
super.tuesday <- data.frame(primary.data[1:12,])

trump.virginia.polling <- c(41, 39)
trump.texas.polling <- c(23, 28, 25, 32, 26)
trump.georgia.polling <- c(45, 34, 32)
trump.mass.polling <- c(40, 50)
trump.oklahoma.polling <- c(29)
trump.alabama.polling <- c(36)
trump.minnesota.polling <- c(31, 36, 36, 26, 35, 35)
trump.arkansas.polling <- c(31, 36, 36, 26, 35, 35)
trump.tennessee.polling <- c(31, 36, 36, 26, 35, 35)
trump.colorado.polling <- c(31, 36, 36, 26, 35, 35)
trump.alaska.polling <- c(31, 36, 36, 26, 35, 35)
trump.vermont.polling <- c(31, 36, 36, 26, 35, 35)
trump.north.dakata <- c(31, 36, 36, 26, 35, 35)

trump.polling.st <-c(mean(trump.alabama.polling), mean(trump.alaska.polling), mean(trump.arkansas.polling),
                    mean(trump.mass.polling), mean(trump.minnesota.polling), mean(trump.north.dakata),
                    mean(trump.tennessee.polling), mean(trump.texas.polling), mean(trump.vermont.polling))

trump.sd.st <- c(3.970726, sd(trump.alaska.polling), sd(trump.arkansas.polling), sd(trump.georgia.polling),
                sd(trump.mass.polling), sd(trump.minnesota.polling), sd(trump.north.dakata), 3.970726,
                sd(trump.tennessee.polling), sd(trump.texas.polling), sd(trump.vermont.polling), sd(trump.north.dakata))

trump.average.delegates.st <- vector(length=1000)
for (s in 1:1000) {
  empty.vector <- vector(length=12)
  for (i in 1:12) {
    trump.distribution.2 <- rnorm(10000, mean = trump.polling.st[i], sd = trump.sd.st[i])
    sample.state <- sample(trump.distribution.2, 1, replace=T)
    delegates <- (sample.state * super.tuesday[i, 2])/100
    empty.vector[i] <-delegates
  }
  sum.empty <- sum(empty.vector)
  trump.average.delegates.st[s]<- sum.empty
}

trump.st<- sum(trump.average.delegates.st)/1000

primary.data <- data.frame(primary.data[13:52,])

trump.national <- trump.north.dakata
```

```

additive.vector <- c(2 , 2, 9/2, 14/4, 2.5, 2.5)

trump.national.plus <- trump.national + additive.vector

cruz.national <- c(20, 17, 19, 28, 18, 29)

cruz.national.plus <- cruz.national+additive.vector

rubio.national <- c(18, 21, 15, 17, 12, 17)

rubio.national.plus <- rubio.national+additive.vector
rubio.national.plus.kasich <- rubio.national.plus+ c(7, 12, 8, 11, 11, 7)
sd(rubio.national.plus.kasich)

```

```
## [1] 3.656045
```

```
mean(rubio.national.plus.kasich)
```

```
## [1] 28.83333
```

```
empty.vector<- vector(length = 20)
empty.vector.2<- vector(length = 20)
```

```
territories <- primary.data$state[primary.data$Proportional==1]
```

```
trump.take.all.vector<- vector(length = 20)
cruz.take.all.vector<- vector(length = 20)
rubio.take.all.vector<- vector(length = 20)
trump.distribution<- rnorm(10000, mean = .36, sd = .04)
cruz.distribtion <- rnorm(10000, mean = .246667, sd = .05501515)
rubio.distribtion <- rnorm(10000, mean = .195, sd =.02774887)
rubio.distribtion.2 <- rnorm(10000, mean = .2883333, sd =.03656045)
trump.distribution.3 <- rnorm(10000, mean = .33, sd = .04)
```

```
winner.territories <- primary.data$delegates[primary.data$Proportional==0]
```

```
trump.outcomes <- vector(length = 10000)
trump.outcomes.2 <- vector(length = 10000)
trump.outcomes.3 <- vector(length = 10000)
```

```
for (i in 1:10000) {
  for (s in territories) {
    empty.vector[s]<- sample(trump.distribution, 1, replace = T)*primary.data$delegates[primary.data$st
  }
}
```

```
for (h in 1:20) {
  trump.winner.vector<- sample(trump.distribution, 20, replace = T)
  cruz.winner.vector<- sample(cruz.distribtion, 20, replace = T)
  establishment.winner.vector <- sample(rubio.distribtion, 20, replace = T)
  trump.take.all.vector[h] <-ifelse(((trump.winner.vector[h] > cruz.winner.vector[h]) & (trump.winner
```

```

}
trump.outcomes[i]<- sum(sum(empty.vector) + sum(trump.take.all.vector)+trump.st+81)
}

sum(ifelse(trump.outcomes > 1236, 1, 0))

```

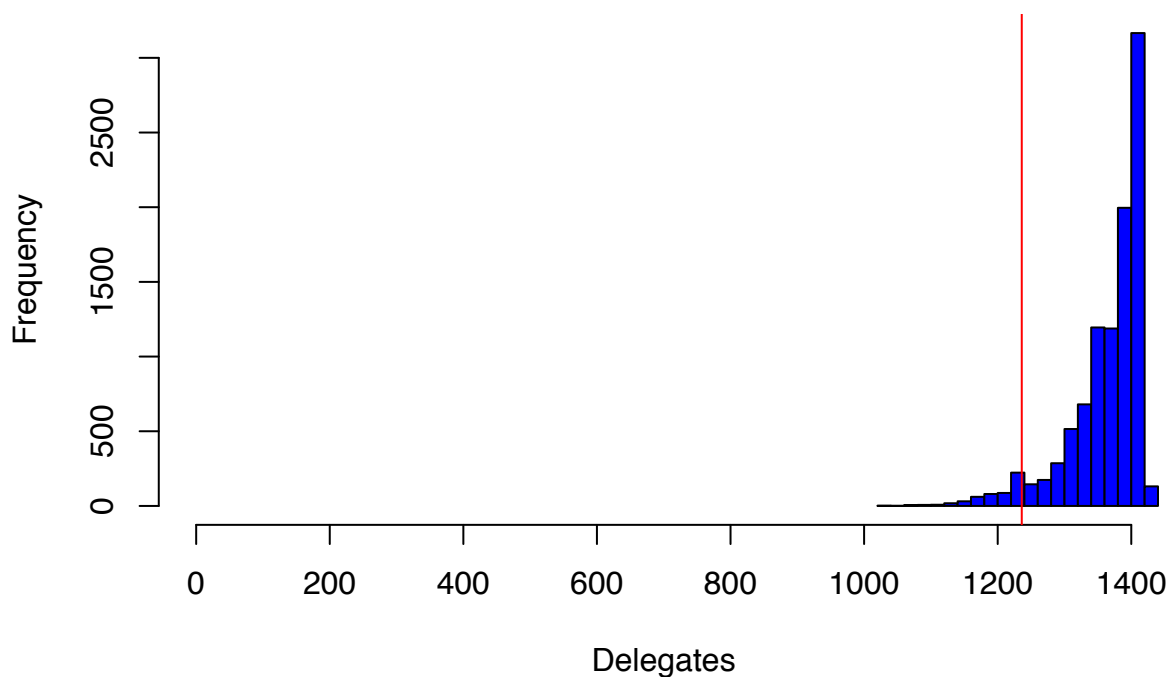
```
## [1] 9528
```

```

hist(trump.outcomes, xlim = c(0,1400), col = "blue", xlab = "Delegates", main = "Trump Delegate Counts With Kasich")
abline(v=1236, col = "red")

```

Trump Delegate Counts With Kasich



```
min(trump.outcomes)
```

```
## [1] 1023.788
```

```

for (i in 1:10000) {
  for (s in territories) {
    empty.vector.2[s]<- sample(trump.distribution, 1, replace = T)*primary.data$delegates[primary.data$territories==s]
  }

  for (h in 1:20) {
    trump.winner.vector<- sample(trump.distribution, 20, replace = T)
    cruz.winner.vector<- sample(cruz.distrubtion, 20, replace = T)
    establishment.winner.vector <- sample(rubio.distrubtion.2, 20, replace = T)
    trump.take.all.vector[h] <-ifelse(((trump.winner.vector[h] > cruz.winner.vector[h]) & (trump.winner
  }

```

```

trump.outcomes.2[i]<- sum(sum(empty.vector.2) + sum(trump.take.all.vector)+trump.st+81)
}

sum(ifelse(trump.outcomes.2 > 1236, 1, 0))

```

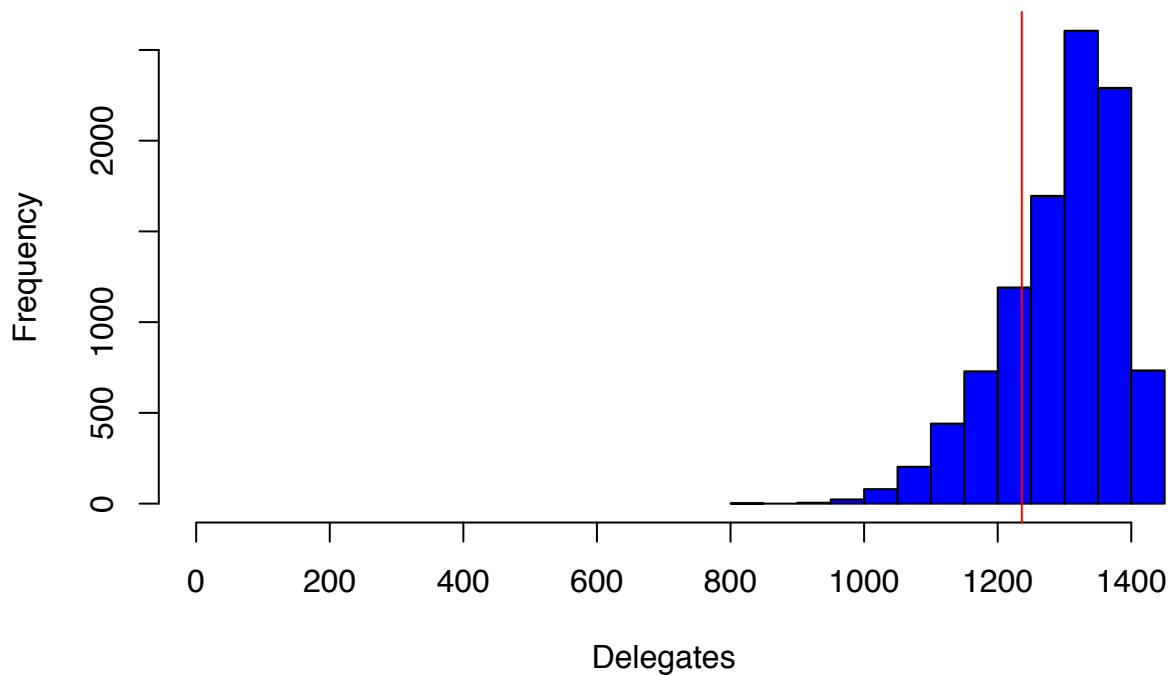
```
## [1] 7676
```

```

hist(trump.outcomes.2, xlim = c(0,1400), col = "blue", xlab = "Delegates", main = "Trump Delegate Counts Without Kasich",
abline(v=1236, col = "red")

```

Trump Delegate Counts Without Kasich



```

for (i in 1:10000) {
  for (s in territories) {
    empty.vector[s]<- sample(trump.distribution.3, 1, replace = T)*primary.data$delegates[primary.data$s]
  }

  for (h in 1:20) {
    trump.winner.vector<- sample(trump.distribution.3, 20, replace = T)
    cruz.winner.vector<- sample(cruz.distribution, 20, replace = T)
    establishment.winner.vector <- sample(rubio.distribution.2, 20, replace = T)
    trump.take.all.vector[h] <-ifelse(((trump.winner.vector[h] > cruz.winner.vector[h]) & (trump.winner
  }
  trump.outcomes.3[i]<- sum(sum(empty.vector) + sum(trump.take.all.vector)+trump.st+81)
}

sum(ifelse(trump.outcomes.3 > 1236, 1, 0))

```

```
## [1] 2417
```

```
hist(trump.outcomes.3, xlim = c(0,1400), col = "blue", xlab = "Delegates", main = "Trump Delegate Counts",  
abline(v=1236, col = "red"))
```

Trump Delegate Counts Without Kasich and with Reduced Trump Vote S

