stmHurricanes

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```
set.seed(1000)
sI = sessionInfo()
sI
```

```
## R version 4.3.0 (2023-04-21 ucrt)
## Platform: x86_64-w64-mingw32/x64 (64-bit)
## Running under: Windows 10 x64 (build 19045)
##
## Matrix products: default
##
##
## locale:
## [1] LC_COLLATE=English_United States.utf8
## [2] LC_CTYPE=English_United States.utf8
## [3] LC_MONETARY=English_United States.utf8
## [4] LC_NUMERIC=C
## [5] LC_TIME=English_United States.utf8
##
## time zone: America/New_York
## tzcode source: internal
##
## attached base packages:
## [1] stats     graphics  grDevices utils     datasets  methods   base
##
## loaded via a namespace (and not attached):
##  [1] compiler_4.3.0  fastmap_1.1.1   cli_3.6.1       tools_4.3.0
##  [5] htmltools_0.5.5 yaml_2.3.7      rmarkdown_2.22  knitr_1.43
##  [9] xfun_0.39       digest_0.6.31   rlang_1.1.1     evaluate_0.21
```

```
library("stm")
```

```
## stm v1.3.6 successfully loaded. See ?stm for help.
##  Papers, resources, and other materials at structuraltopicmodel.com
```

```
data <- read.csv("D:\\Princeton\\BSPL\\df_combined.csv")
processed <- textProcessor(data$text_field, metadata = data)
```

```
## Building corpus...
## Converting to Lower Case...
## Removing punctuation...
```

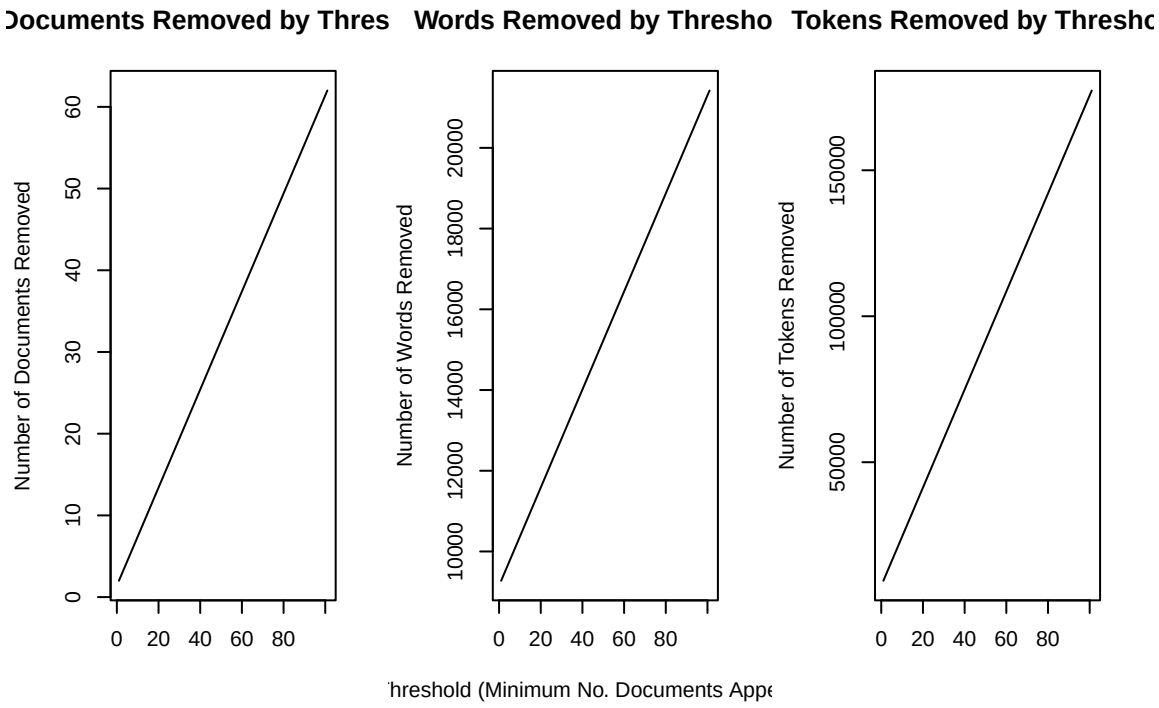
```
## Removing stopwords...
## Removing numbers...
## Stemming...
## Creating Output...
```

```
out <- prepDocuments(processed$documents, processed$vocab, processed$meta)
```

```
## Removing 9275 of 23158 terms (9275 of 1549861 tokens) due to frequency
## Removing 2 Documents with No Words
## Your corpus now has 47298 documents, 13883 terms and 1540586 tokens.
```

```
docs <- out$documents
vocab <- out$vocab
meta <- out$meta
```

```
plotRemoved(processed$documents, lower.thresh = seq(1, 200, by = 100))
```




```
out <- prepDocuments(processed$documents, processed$vocab, processed$meta,
                     lower.thresh = 30)
```

```
## Removing 19872 of 23158 terms (80766 of 1549861 tokens) due to frequency
## Removing 36 Documents with No Words
## Your corpus now has 47264 documents, 3286 terms and 1469095 tokens.
```

```r
hurricaneModel <- stm(documents = out$documents, vocab = out$vocab, K = 30,
                      prevalence =~ FOX + MSNBC + ARTHUR + BARRY + DELTA +
                      DORIAN + ETA + FLORENCE + HANNA + HARVEY + HERMINE +
                      IRMA + LAURA + MICHAEL + SALLY, content =~ Y.N.Score,
                      seed = 1000,
                      max.em.its = 75, data = out$meta, init.type = "Spectral")
```

```
## Beginning Spectral Initialization
##   Calculating the gram matrix...
##   Finding anchor words...
##      .............................
##   Recovering initialization...
##      ............................
## Initialization complete.
## ..................................................................................................
## Completed E-Step (27 seconds).
## ..................................................................................................
## Completed M-Step (47 seconds).
## Completing Iteration 1 (approx. per word bound = -6.809)
## ..................................................................................................
## Completed E-Step (29 seconds).
## ..................................................................................................
## Completed M-Step (20 seconds).
## Completing Iteration 2 (approx. per word bound = -6.698, relative change = 1.640e-02)
## ..................................................................................................
## Completed E-Step (27 seconds).
## ..................................................................................................
## Completed M-Step (19 seconds).
## Completing Iteration 3 (approx. per word bound = -6.636, relative change = 9.157e-03)
## ..................................................................................................
## Completed E-Step (24 seconds).
## ..................................................................................................
## Completed M-Step (19 seconds).
## Completing Iteration 4 (approx. per word bound = -6.609, relative change = 4.214e-03)
## ..................................................................................................
## Completed E-Step (24 seconds).
## ..................................................................................................
## Completed M-Step (19 seconds).
## Completing Iteration 5 (approx. per word bound = -6.592, relative change = 2.496e-03)
## Topic 1: harri, keat, outnumb, duke, began
##  Topic 2: medicar, columnist, badda, alleg, kavanaugh
##  Topic 3: dana, jess, alert, fox, reichmuth
##  Topic 4: chemic, crosbi, beaumont, corpus, galveston
##  Topic 5: debt, ceil, fund, default, packag
##  Topic 6: chinchar, drift, sater, inlet, outward
##  Topic 7: rico, puerto, rican, wright, kelli
##  Topic 8: impass, waiv, road, cap, moder
##  Topic 9: healthier, brain, terrorist, prevagen, short-term
##  Topic 10: voluntari, light, sun, shine, pole
##  Topic 11: sea, canal, level, exercis, geico
##  Topic 12: cod, lumberton, scotia, nova, virginia
##  Topic 13: newest, nasa, pictur, aerial, drone
##  Topic 14: kilomet, oppmann, patrick, freeport, forev
```

```
##  Topic 15: shall, titl, strategist, constitut, tourism
##  Topic 16: climat, acr, burn, suburb, scienc
##  Topic 17: iowa, impeach, hampshir, bahama, paula
##  Topic 18: limb, bryan, llena, plywood, lauderdal
##  Topic 19: mount, nuclear, launch, plant, missil
##  Topic 20: baldwin, mika, appreci, ingraham, ruhl
##  Topic 21: dominican, republ, caico, turk, caribbean
##  Topic 22: delta, teddi, season, tenth, zeta
##  Topic 23: birmingham, ross, alter, contradict, fals
##  Topic 24: storm-forc, southward, pink, narrow, hurricane-forc
##  Topic 25: cavuto, judg, world, auto, neil
##  Topic 26: brush, chew, prevent, deep, gum
##  Topic 27: nois, afterward, spike, didnt, explain
##  Topic 28: croix, forgotten, thoma, andrew, curfew
##  Topic 29: harlow, brigg, roman, witt, jans
##  Topic 30: cool, get, right, back, hour
## Aspect 1: find, busi, live, took, access
##  Aspect 2: weather, sunris, qualiti, gather, -year
## ..........................................................................................
## Completed E-Step (21 seconds).
## ..........................................................................................
## Completed M-Step (18 seconds).
## Completing Iteration 6 (approx. per word bound = -6.580, relative change = 1.883e-03)
## ..........................................................................................
## Completed E-Step (21 seconds).
## ..........................................................................................
## Completed M-Step (18 seconds).
## Completing Iteration 7 (approx. per word bound = -6.570, relative change = 1.470e-03)
## ..........................................................................................
## Completed E-Step (20 seconds).
## ..........................................................................................
## Completed M-Step (18 seconds).
## Completing Iteration 8 (approx. per word bound = -6.562, relative change = 1.178e-03)
## ..........................................................................................
## Completed E-Step (20 seconds).
## ..........................................................................................
## Completed M-Step (18 seconds).
## Completing Iteration 9 (approx. per word bound = -6.556, relative change = 9.074e-04)
## ..........................................................................................
## Completed E-Step (19 seconds).
## ..........................................................................................
## Completed M-Step (18 seconds).
## Completing Iteration 10 (approx. per word bound = -6.552, relative change = 7.026e-04)
## Topic 1: jon, phil, keat, sandra, monro
##  Topic 2: apalachicola, badda, death, choicehotelscom, toll
##  Topic 3: reichmuth, bream, channel, harrigan, alert
##  Topic 4: chemic, crosbi, beaumont, galveston, corpus
##  Topic 5: ceil, debt, fund, program, budget
##  Topic 6: outward, sater, javaheri, chinchar, graham
##  Topic 7: wright, juan, rico, puerto, app
##  Topic 8: pile, impass, lavandera, subsid, traffic
##  Topic 9: healthier, social, narrat, better, brain
##  Topic 10: voluntari, sun, light, evacu, mandatori
##  Topic 11: level, sea, concret, gorda, canal
```

```
##  Topic 12: lumberton, virginia, cod, florenc, arthur
##  Topic 13: space, nasa, high-ris, snap, pictur
##  Topic 14: cocoa, freeport, northwestern, dorian, bahama
##  Topic 15: shall, titl, biden, op-, writer
##  Topic 16: climat, chang, scienc, drought, midwest
##  Topic 17: iowa, offens, impeach, struggl, paula
##  Topic 18: lauderdal, plywood, shutter, withstand, bullet
##  Topic 19: plant, mount, nuclear, site, launch
##  Topic 20: grossman, michell, baldwin, karin, mika
##  Topic 21: dominican, republ, turk, katia, caico
##  Topic 22: mississippi, laura, delta, unsurviv, biloxi
##  Topic 23: birmingham, ross, contradict, alter, noaa
##  Topic 24: hurricane-forc, gust, pelt, cedar, southward
##  Topic 25: cavuto, judg, neil, amaz, auto
##  Topic 26: brush, chew, prevent, deep, diseas
##  Topic 27: nois, afterward, knew, didnt, ive
##  Topic 28: croix, shelv, antigua, paradis, thoma
##  Topic 29: harlow, brigg, roman, jans, hermin
##  Topic 30: cool, day, get, right, back
## Aspect 1: busi, circumst, thrown, mode, mouth
##  Aspect 2: sunris, record-break, pocket, surfac, youd
## ..........................................................................................
## Completed E-Step (19 seconds).
## ..........................................................................................
## Completed M-Step (17 seconds).
## Completing Iteration 11 (approx. per word bound = -6.548, relative change = 5.388e-04)
## ..........................................................................................
## Completed E-Step (19 seconds).
## ..........................................................................................
## Completed M-Step (17 seconds).
## Completing Iteration 12 (approx. per word bound = -6.545, relative change = 3.996e-04)
## ..........................................................................................
## Completed E-Step (18 seconds).
## ..........................................................................................
## Completed M-Step (17 seconds).
## Completing Iteration 13 (approx. per word bound = -6.544, relative change = 2.953e-04)
## ..........................................................................................
## Completed E-Step (18 seconds).
## ..........................................................................................
## Completed M-Step (17 seconds).
## Completing Iteration 14 (approx. per word bound = -6.542, relative change = 2.230e-04)
## ..........................................................................................
## Completed E-Step (18 seconds).
## ..........................................................................................
## Completed M-Step (17 seconds).
## Completing Iteration 15 (approx. per word bound = -6.541, relative change = 1.549e-04)
## Topic 1: sandra, molli, adam, phil, jon
##  Topic 2: apalachicola, badda, death, fee, panhandl
##  Topic 3: reichmuth, bream, dean, janic, harrigan
##  Topic 4: chemic, crosbi, beaumont, galveston, corpus
##  Topic 5: ceil, debt, tie, program, spend
##  Topic 6: sater, javaheri, chinchar, advisori, west-northwest
##  Topic 7: maria, puerto, rico, juan, wright
##  Topic 8: impass, roadway, lavandera, car, subsid
```

```
##  Topic 9: healthier, narrat, food, social, better
##  Topic 10: voluntari, evacu, brevard, light, luci
##  Topic 11: level, sea, gorda, punta, canal
##  Topic 12: lumberton, cod, virginia, scotia, arthur
##  Topic 13: space, radar, nasa, intern, satellit
##  Topic 14: cocoa, northwestern, freeport, melbourn, patrick
##  Topic 15: berni, op-, biden, titl, shall
##  Topic 16: climat, scienc, chang, wildfir, midwest
##  Topic 17: iowa, struggl, offens, impeach, among
##  Topic 18: plywood, lauderdal, shutter, bullet, high-ris
##  Topic 19: plant, site, mount, shut, nuclear
##  Topic 20: karin, grossman, michell, atencio, baldwin
##  Topic 21: dominican, jose, republ, leeward, katia
##  Topic 22: mississippi, salli, laura, delta, unsurviv
##  Topic 23: contradict, ross, birmingham, alabama, alter
##  Topic 24: hurricane-forc, cedar, yellow, gust, shade
##  Topic 25: cavuto, neil, judg, two-hour, amaz
##  Topic 26: chew, deep, blood, brush, diseas
##  Topic 27: nois, afterward, ive, knew, never
##  Topic 28: croix, wilma, prepar, shelv, groceri
##  Topic 29: harlow, hermin, roman, brigg, erica
##  Topic 30: cool, day, back, will, now
## Aspect 1: circumst, thrown, mouth, lock, own
##  Aspect 2: record-break, sunris, pocket, youd, surfac
## ..................................................................................................
## Completed E-Step (18 seconds).
## ..................................................................................................
## Completed M-Step (17 seconds).
## Completing Iteration 16 (approx. per word bound = -6.540, relative change = 1.081e-04)
## ..................................................................................................
## Completed E-Step (19 seconds).
## ..................................................................................................
## Completed M-Step (17 seconds).
## Completing Iteration 17 (approx. per word bound = -6.540, relative change = 7.873e-05)
## ..................................................................................................
## Completed E-Step (19 seconds).
## ..................................................................................................
## Completed M-Step (17 seconds).
## Completing Iteration 18 (approx. per word bound = -6.539, relative change = 6.879e-05)
## ..................................................................................................
## Completed E-Step (19 seconds).
## ..................................................................................................
## Completed M-Step (17 seconds).
## Completing Iteration 19 (approx. per word bound = -6.539, relative change = 5.856e-05)
## ..................................................................................................
## Completed E-Step (19 seconds).
## ..................................................................................................
## Completed M-Step (17 seconds).
## Completing Iteration 20 (approx. per word bound = -6.539, relative change = 4.227e-05)
## Topic 1: klotz, adam, molli, sandra, phil
##  Topic 2: apalachicola, badda, death, panhandl, fee
##  Topic 3: reichmuth, bream, janic, dean, harrigan
##  Topic 4: chemic, crosbi, beaumont, galveston, corpus
##  Topic 5: tie, ceil, debt, spend, fund
```

```
##  Topic 6: javaheri, chinchar, sater, advisori, west-northwest
##  Topic 7: wright, maria, rico, puerto, juan
##  Topic 8: impass, roadway, reced, lavandera, car
##  Topic 9: healthier, cloth, social, narrat, food
##  Topic 10: voluntari, evacu, mandatori, brevard, light
##  Topic 11: level, sea, drain, gorda, stream
##  Topic 12: lumberton, cod, virginia, arthur, scotia
##  Topic 13: space, radar, eye, nasa, imageri
##  Topic 14: cocoa, northwestern, dorian, melbourn, daytona
##  Topic 15: berni, op-, warren, biden, evid
##  Topic 16: climat, scienc, chang, wildfir, midwest
##  Topic 17: iowa, mani, among, impeach, struggl
##  Topic 18: buse, plywood, lauderdal, shutter, bullet
##  Topic 19: plant, site, nuclear, mount, shut
##  Topic 20: karin, grossman, michell, baldwin, velshi
##  Topic 21: dominican, jose, republ, katia, key
##  Topic 22: salli, mississippi, shreveport, delta, laura
##  Topic 23: contradict, ross, birmingham, alabama, alter
##  Topic 24: hurricane-forc, inlet, cedar, storm-forc, gust
##  Topic 25: cavuto, neil, judg, two-hour, justic
##  Topic 26: chew, blood, diseas, prevent, walk
##  Topic 27: ive, afterward, differ, mental, never
##  Topic 28: croix, prepar, generat, wilma, stock
##  Topic 29: harlow, hermin, brigg, roman, witt
##  Topic 30: cool, day, will, now, hurrican
## Aspect 1: circumst, thrown, mouth, lock, own
##  Aspect 2: record-break, sunris, pocket, youd, surfac
## ..........................................................................................
## Completed E-Step (20 seconds).
## ..........................................................................................
## Completed M-Step (17 seconds).
## Completing Iteration 21 (approx. per word bound = -6.539, relative change = 2.836e-05)
## ..........................................................................................
## Completed E-Step (20 seconds).
## ..........................................................................................
## Completed M-Step (16 seconds).
## Completing Iteration 22 (approx. per word bound = -6.538, relative change = 1.133e-05)
## ..........................................................................................
## Completed E-Step (20 seconds).
## ..........................................................................................
## Completed M-Step (16 seconds).
## Model Converged
```

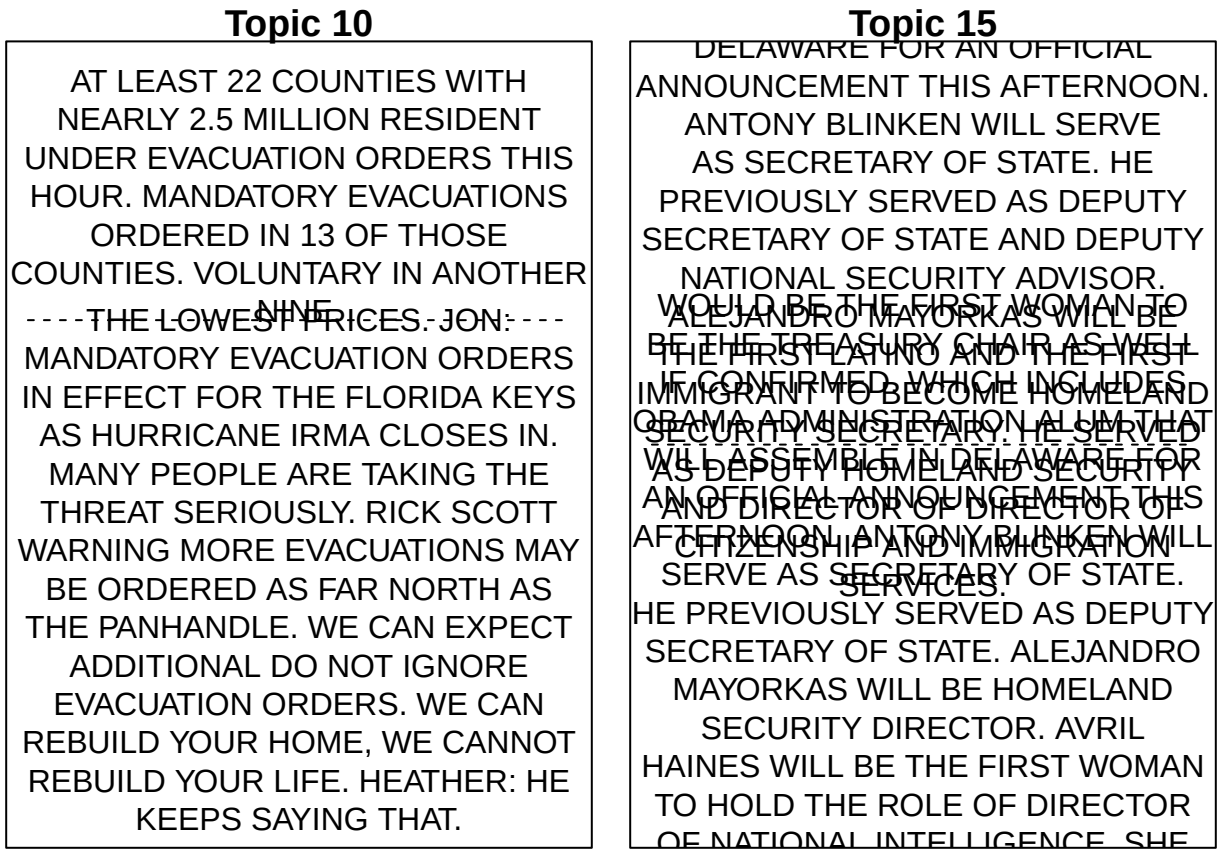
```
labelTopics(hurricaneModel, c(10, 15, 16, 27))
```

```
## Topic Words:
##  Topic 10: voluntari, evacu, mandatori, brevard, light, order, zone
##  Topic 15: berni, op-, biden, warren, evid, plea, segment
##  Topic 16: climat, scienc, chang, wildfir, midwest, acr, denial
##  Topic 27: differ, ive, afterward, necessarili, mental, youv, seen
##
##  Covariate Words:
##  Group 0: circumst, thrown, mouth, lock, own, weight, roll
##  Group 1: record-break, sunris, pocket, youd, grade, surfac, -year
```

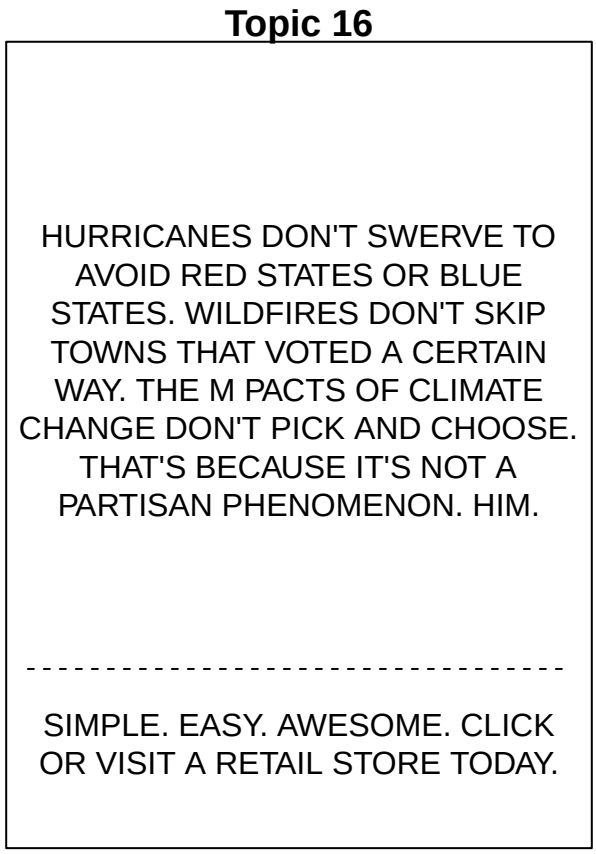
```
##
##  Topic-Covariate Interactions:
##  Topic 10, Group 0: weapon, tension, stake, invit, threat, reaction, plus
##  Topic 10, Group 1: outag, duke, custom, power, downgrad, knock, lost
##
##  Topic 15, Group 0: sam, shrimp, roker, constitu, admir, ken, nelson
##  Topic 15, Group 1: click, antill, visit, jillian, magic, loss, review
##
##  Topic 16, Group 0: cuomo, burnett, lemon, tapper, bolduan, melvin, fredricka
##  Topic 16, Group 1: safelit, attach, fire, virus, illeg, client, russian
##
##  Topic 27, Group 0: back, will, get, last, coast, right, cool
##  Topic 27, Group 1: suck, right-hand, harbor, westward, everglad, calm, pizza
##
```

```
thoughts10 <- findThoughts(hurricaneModel, texts = out$meta$text_field, n = 2,
                           topics = 10)$docs[[1]]
thoughts15 <- findThoughts(hurricaneModel, texts = out$meta$text_field, n = 2,
                           topics = 15)$docs[[1]]
thoughts16 <- findThoughts(hurricaneModel, texts = out$meta$text_field, n = 2,
                           topics = 16)$docs[[1]]
```

```
par(mfrow = c(1, 2),mar = c(.5, .5, 1, .5))
plotQuote(thoughts10, width = 30, main = "Topic 10")
plotQuote(thoughts15, width = 30, main = "Topic 15")
```



```
plotQuote(thoughts16, width = 30, main = "Topic 16")
```




```
prep <- estimateEffect(1:30 ~ FOX + MSNBC + ARTHUR + BARRY + DELTA +
                       DORIAN + ETA + FLORENCE + HANNA + HARVEY + HERMINE +
                       IRMA + LAURA + MICHAEL + SALLY,
                       hurricaneModel, meta = out$meta, uncertainty = "Global")
summary(prep, topics=1:30)
```

```
##
## Call:
## estimateEffect(formula = 1:30 ~ FOX + MSNBC + ARTHUR + BARRY +
##     DELTA + DORIAN + ETA + FLORENCE + HANNA + HARVEY + HERMINE +
##     IRMA + LAURA + MICHAEL + SALLY, stmobj = hurricaneModel,
##     metadata = out$meta, uncertainty = "Global")
##
##
## Topic 1:
##
## Coefficients:
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)  7.689e-03  4.352e-03   1.767   0.0773 .
## FOX          2.033e-02  5.792e-04  35.102   <2e-16 ***
## MSNBC        5.695e-04  4.993e-04   1.141   0.2540
## ARTHUR       9.238e-05  4.662e-03   0.020   0.9842
## BARRY        5.582e-03  5.266e-03   1.060   0.2891
```

```
## DELTA        1.827e-03  4.748e-03   0.385   0.7004
## DORIAN       1.050e-03  4.286e-03   0.245   0.8065
## ETA         -1.935e-03  5.786e-03  -0.334   0.7381
## FLORENCE     4.292e-04  4.431e-03   0.097   0.9228
## HANNA        1.054e-02  4.743e-03   2.223   0.0262 *
## HARVEY       1.901e-03  4.385e-03   0.434   0.6646
## HERMINE      8.971e-03  5.043e-03   1.779   0.0752 .
## IRMA         4.276e-03  4.382e-03   0.976   0.3292
## LAURA        1.908e-03  4.355e-03   0.438   0.6613
## MICHAEL      7.397e-03  4.494e-03   1.646   0.0998 .
## SALLY       -8.657e-04  4.705e-03  -0.184   0.8540
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## Topic 2:
##
## Coefficients:
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)  0.0207941  0.0063049   3.298 0.000974 ***
## FOX         -0.0043153  0.0009812  -4.398 1.09e-05 ***
## MSNBC       -0.0042113  0.0009639  -4.369 1.25e-05 ***
## ARTHUR      -0.0068723  0.0067811  -1.013 0.310851
## BARRY       -0.0086623  0.0071742  -1.207 0.227277
## DELTA        0.0016023  0.0067181   0.239 0.811491
## DORIAN       0.0040276  0.0064175   0.628 0.530273
## ETA          0.0081474  0.0091710   0.888 0.374341
## FLORENCE     0.0091212  0.0064543   1.413 0.157609
## HANNA       -0.0065253  0.0070117  -0.931 0.352049
## HARVEY      -0.0057722  0.0064289  -0.898 0.369266
## HERMINE      0.0071520  0.0072866   0.982 0.326340
## IRMA        -0.0044472  0.0064045  -0.694 0.487443
## LAURA        0.0033605  0.0065308   0.515 0.606861
## MICHAEL      0.1306795  0.0069159  18.895  < 2e-16 ***
## SALLY        0.0074350  0.0067855   1.096 0.273206
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## Topic 3:
##
## Coefficients:
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept) -0.0031473  0.0059563  -0.528   0.5972
## FOX          0.0590767  0.0008522  69.319   <2e-16 ***
## MSNBC        0.0015336  0.0007118   2.155   0.0312 *
## ARTHUR       0.0086890  0.0066891   1.299   0.1940
## BARRY        0.0115095  0.0071463   1.611   0.1073
## DELTA        0.0098558  0.0065789   1.498   0.1341
## DORIAN       0.0089229  0.0060414   1.477   0.1397
## ETA         -0.0074990  0.0078213  -0.959   0.3377
## FLORENCE     0.0093509  0.0060092   1.556   0.1197
## HANNA        0.0069846  0.0066861   1.045   0.2962
## HARVEY       0.0062072  0.0060214   1.031   0.3026
```

```
## HERMINE      0.0107355  0.0070833   1.516   0.1296
## IRMA         0.0051510  0.0059414   0.867   0.3860
## LAURA        0.0028944  0.0061068   0.474   0.6355
## MICHAEL      0.0062685  0.0060556   1.035   0.3006
## SALLY        0.0058727  0.0063728   0.922   0.3568
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## Topic 4:
##
## Coefficients:
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)  0.0127111  0.0062589   2.031 0.042271 *
## FOX          0.0026581  0.0009824   2.706 0.006822 **
## MSNBC       -0.0063340  0.0009955  -6.363    2e-10 ***
## ARTHUR      -0.0074258  0.0065720  -1.130 0.258522
## BARRY        0.0048974  0.0073878   0.663 0.507397
## DELTA        0.0058208  0.0069846   0.833 0.404638
## DORIAN      -0.0066268  0.0062994  -1.052 0.292817
## ETA         -0.0084150  0.0082567  -1.019 0.308130
## FLORENCE    -0.0045192  0.0063143  -0.716 0.474177
## HANNA        0.0644964  0.0076343   8.448  < 2e-16 ***
## HARVEY       0.0902550  0.0063620  14.187  < 2e-16 ***
## HERMINE     -0.0081878  0.0070561  -1.160 0.245898
## IRMA         0.0079231  0.0062861   1.260 0.207522
## LAURA        0.0227306  0.0064866   3.504 0.000458 ***
## MICHAEL     -0.0072726  0.0063660  -1.142 0.253291
## SALLY       -0.0017377  0.0066135  -0.263 0.792739
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## Topic 5:
##
## Coefficients:
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)  1.195e-02  8.094e-03   1.477  0.13976
## FOX          8.581e-03  1.093e-03   7.851 4.22e-15 ***
## MSNBC        1.203e-02  1.148e-03  10.474  < 2e-16 ***
## ARTHUR      -8.880e-03  8.458e-03  -1.050  0.29376
## BARRY       -4.827e-03  9.252e-03  -0.522  0.60190
## DELTA        3.304e-03  8.960e-03   0.369  0.71229
## DORIAN       4.275e-05  8.146e-03   0.005  0.99581
## ETA          2.359e-02  1.178e-02   2.002  0.04527 *
## FLORENCE    -3.275e-04  8.113e-03  -0.040  0.96780
## HANNA       -3.288e-03  8.914e-03  -0.369  0.71220
## HARVEY       4.909e-02  8.207e-03   5.981 2.23e-09 ***
## HERMINE     -5.598e-03  9.068e-03  -0.617  0.53698
## IRMA         2.347e-02  8.133e-03   2.885  0.00391 **
## LAURA       -3.540e-03  8.258e-03  -0.429  0.66819
## MICHAEL      1.428e-03  8.243e-03   0.173  0.86247
## SALLY       -2.643e-03  8.537e-03  -0.310  0.75689
## ---
```

```
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## Topic 6:
##
## Coefficients:
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)  0.0720208  0.0115842   6.217 5.10e-10 ***
## FOX         -0.0102321  0.0015740  -6.501 8.06e-11 ***
## MSNBC       -0.0007493  0.0015620  -0.480 0.631438
## ARTHUR       0.0441505  0.0123409   3.578 0.000347 ***
## BARRY        0.0055793  0.0132060   0.422 0.672673
## DELTA        0.0106347  0.0125476   0.848 0.396696
## DORIAN       0.0418749  0.0114293   3.664 0.000249 ***
## ETA          0.0051407  0.0154498   0.333 0.739334
## FLORENCE     0.0085988  0.0116849   0.736 0.461798
## HANNA        0.0264718  0.0131120   2.019 0.043504 *
## HARVEY      -0.0005207  0.0116859  -0.045 0.964461
## HERMINE      0.0344171  0.0128668   2.675 0.007478 **
## IRMA         0.0145004  0.0113795   1.274 0.202579
## LAURA        0.0097191  0.0119223   0.815 0.414963
## MICHAEL      0.0185524  0.0115727   1.603 0.108916
## SALLY        0.0186676  0.0123015   1.518 0.129147
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## Topic 7:
##
## Coefficients:
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)  1.047e-02  6.098e-03   1.716   0.0861 .
## FOX         -6.188e-03  9.025e-04  -6.856 7.17e-12 ***
## MSNBC       -2.287e-03  1.011e-03  -2.262   0.0237 *
## ARTHUR       9.096e-05  6.430e-03   0.014   0.9887
## BARRY        2.746e-03  7.268e-03   0.378   0.7056
## DELTA       -1.153e-03  6.578e-03  -0.175   0.8608
## DORIAN       1.337e-02  6.111e-03   2.187   0.0287 *
## ETA         -1.150e-03  7.884e-03  -0.146   0.8840
## FLORENCE     4.225e-02  6.233e-03   6.779 1.22e-11 ***
## HANNA        6.115e-03  6.924e-03   0.883   0.3772
## HARVEY       1.163e-02  6.163e-03   1.887   0.0591 .
## HERMINE     -1.096e-03  6.839e-03  -0.160   0.8727
## IRMA         2.804e-02  6.144e-03   4.564 5.02e-06 ***
## LAURA        3.530e-03  6.247e-03   0.565   0.5720
## MICHAEL      5.606e-03  6.192e-03   0.905   0.3652
## SALLY        6.557e-03  6.504e-03   1.008   0.3134
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## Topic 8:
##
## Coefficients:
```

```
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)  0.0281475  0.0051332   5.483 4.19e-08 ***
## FOX         -0.0044185  0.0005506  -8.025 1.04e-15 ***
## MSNBC       -0.0041590  0.0006627  -6.276 3.51e-10 ***
## ARTHUR       0.0035392  0.0053320   0.664    0.507
## BARRY        0.0008531  0.0062240   0.137    0.891
## DELTA        0.0027026  0.0056283   0.480    0.631
## DORIAN      -0.0051387  0.0052001  -0.988    0.323
## ETA         -0.0054495  0.0063870  -0.853    0.394
## FLORENCE     0.0015271  0.0051637   0.296    0.767
## HANNA       -0.0086030  0.0054110  -1.590    0.112
## HARVEY      -0.0027743  0.0052108  -0.532    0.594
## HERMINE      0.0011931  0.0055013   0.217    0.828
## IRMA         0.0019654  0.0051855   0.379    0.705
## LAURA        0.0006725  0.0053973   0.125    0.901
## MICHAEL      0.0073758  0.0051446   1.434    0.152
## SALLY        0.0079080  0.0053590   1.476    0.140
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## Topic 9:
##
## Coefficients:
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)  0.0184857  0.0042401   4.360  1.3e-05 ***
## FOX          0.0058238  0.0006029   9.660  < 2e-16 ***
## MSNBC        0.0008622  0.0005840   1.476  0.13987
## ARTHUR       0.0060530  0.0044490   1.361  0.17367
## BARRY       -0.0022251  0.0049977  -0.445  0.65615
## DELTA       -0.0007137  0.0046060  -0.155  0.87686
## DORIAN      -0.0001651  0.0042227  -0.039  0.96880
## ETA          0.0164664  0.0057710   2.853  0.00433 **
## FLORENCE     0.0024619  0.0042740   0.576  0.56460
## HANNA       -0.0048967  0.0046647  -1.050  0.29384
## HARVEY       0.0043315  0.0042446   1.020  0.30750
## HERMINE      0.0007599  0.0047450   0.160  0.87276
## IRMA         0.0024121  0.0041817   0.577  0.56406
## LAURA        0.0020985  0.0043853   0.479  0.63227
## MICHAEL      0.0044611  0.0042119   1.059  0.28954
## SALLY       -0.0025222  0.0045875  -0.550  0.58246
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## Topic 10:
##
## Coefficients:
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)  0.0397675  0.0056100   7.089 1.37e-12 ***
## FOX         -0.0005301  0.0005177  -1.024 0.305817
## MSNBC       -0.0017430  0.0005807  -3.001 0.002688 **
## ARTHUR      -0.0143359  0.0060136  -2.384 0.017134 *
## BARRY       -0.0157969  0.0062437  -2.530 0.011407 *
```

```
## DELTA       -0.0080629  0.0060257  -1.338 0.180869
## DORIAN      -0.0206430  0.0056120  -3.678 0.000235 ***
## ETA         -0.0204131  0.0065238  -3.129 0.001755 **
## FLORENCE    -0.0169985  0.0057046  -2.980 0.002886 **
## HANNA       -0.0282403  0.0058930  -4.792 1.65e-06 ***
## HARVEY      -0.0192033  0.0057004  -3.369 0.000756 ***
## HERMINE     -0.0069011  0.0060640  -1.138 0.255114
## IRMA        -0.0132426  0.0056291  -2.353 0.018652 *
## LAURA       -0.0116328  0.0057998  -2.006 0.044892 *
## MICHAEL     -0.0159924  0.0056178  -2.847 0.004419 **
## SALLY       -0.0225759  0.0058757  -3.842 0.000122 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## Topic 11:
##
## Coefficients:
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)  0.0157919  0.0042919   3.679 0.000234 ***
## FOX         -0.0016458  0.0005625  -2.926 0.003439 **
## MSNBC       -0.0027592  0.0006091  -4.530 5.92e-06 ***
## ARTHUR       0.0044933  0.0045064   0.997 0.318728
## BARRY        0.0098018  0.0049372   1.985 0.047120 *
## DELTA       -0.0006951  0.0047313  -0.147 0.883208
## DORIAN       0.0067088  0.0043032   1.559 0.118996
## ETA          0.0001896  0.0055193   0.034 0.972591
## FLORENCE     0.0113181  0.0043949   2.575 0.010019 *
## HANNA       -0.0061295  0.0046704  -1.312 0.189389
## HARVEY       0.0113821  0.0043112   2.640 0.008290 **
## HERMINE     -0.0050147  0.0047925  -1.046 0.295400
## IRMA         0.0108540  0.0043371   2.503 0.012332 *
## LAURA        0.0052140  0.0044729   1.166 0.243740
## MICHAEL      0.0036240  0.0043376   0.835 0.403451
## SALLY        0.0021791  0.0044855   0.486 0.627099
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## Topic 12:
##
## Coefficients:
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)  0.0070303  0.0060512   1.162    0.245
## FOX          0.0049768  0.0009461   5.261 1.44e-07 ***
## MSNBC        0.0054523  0.0009587   5.687 1.30e-08 ***
## ARTHUR       0.2088242  0.0081271  25.695  < 2e-16 ***
## BARRY       -0.0002731  0.0070463  -0.039    0.969
## DELTA       -0.0044466  0.0065541  -0.678    0.497
## DORIAN       0.0292170  0.0060890   4.798 1.61e-06 ***
## ETA         -0.0044626  0.0079342  -0.562    0.574
## FLORENCE     0.1222650  0.0062276  19.633  < 2e-16 ***
## HANNA        0.0105102  0.0068478   1.535    0.125
## HARVEY      -0.0046738  0.0060816  -0.769    0.442
```

```
## HERMINE      0.0537259  0.0075059   7.158 8.32e-13 ***
## IRMA        -0.0015572  0.0060754  -0.256    0.798
## LAURA       -0.0068769  0.0062322  -1.103    0.270
## MICHAEL      0.0055289  0.0061785   0.895    0.371
## SALLY        0.0029123  0.0064067   0.455    0.649
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## Topic 13:
##
## Coefficients:
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)  0.0333706  0.0052567   6.348 2.20e-10 ***
## FOX         -0.0050665  0.0007358  -6.885 5.83e-12 ***
## MSNBC        0.0008786  0.0007177   1.224   0.2209
## ARTHUR       0.0229504  0.0055380   4.144 3.42e-05 ***
## BARRY       -0.0040602  0.0061574  -0.659   0.5096
## DELTA        0.0028838  0.0056037   0.515   0.6068
## DORIAN       0.0075901  0.0053080   1.430   0.1527
## ETA          0.0014330  0.0074685   0.192   0.8478
## FLORENCE     0.0069257  0.0053877   1.285   0.1986
## HANNA        0.0062789  0.0060012   1.046   0.2954
## HARVEY       0.0043594  0.0053011   0.822   0.4109
## HERMINE      0.0056240  0.0059759   0.941   0.3467
## IRMA         0.0100704  0.0052507   1.918   0.0551 .
## LAURA        0.0021718  0.0054876   0.396   0.6923
## MICHAEL      0.0121124  0.0053180   2.278   0.0228 *
## SALLY       -0.0022426  0.0056108  -0.400   0.6894
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## Topic 14:
##
## Coefficients:
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)  7.201e-03  4.246e-03   1.696   0.0899 .
## FOX         -6.700e-03  6.755e-04  -9.919  < 2e-16 ***
## MSNBC       -5.560e-03  7.453e-04  -7.460 8.82e-14 ***
## ARTHUR      -1.244e-03  4.487e-03  -0.277   0.7816
## BARRY        6.865e-05  4.879e-03   0.014   0.9888
## DELTA       -8.961e-04  4.601e-03  -0.195   0.8456
## DORIAN       8.780e-02  4.291e-03  20.463  < 2e-16 ***
## ETA          1.731e-03  5.647e-03   0.306   0.7592
## FLORENCE    -1.146e-03  4.282e-03  -0.268   0.7890
## HANNA        6.923e-03  4.749e-03   1.458   0.1449
## HARVEY       4.148e-04  4.255e-03   0.097   0.9224
## HERMINE      1.333e-03  4.793e-03   0.278   0.7809
## IRMA         1.842e-03  4.247e-03   0.434   0.6645
## LAURA       -9.338e-04  4.350e-03  -0.215   0.8300
## MICHAEL     -1.416e-03  4.310e-03  -0.329   0.7425
## SALLY       -9.992e-04  4.474e-03  -0.223   0.8233
## ---
```

```
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## Topic 15:
##
## Coefficients:
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)  0.0495960  0.0087613   5.661 1.52e-08 ***
## FOX          0.0059372  0.0009045   6.564 5.30e-11 ***
## MSNBC        0.0147094  0.0009404  15.642  < 2e-16 ***
## ARTHUR      -0.0353470  0.0092517  -3.821 0.000133 ***
## BARRY       -0.0298743  0.0096844  -3.085 0.002038 **
## DELTA       -0.0139496  0.0095808  -1.456 0.145401
## DORIAN      -0.0304510  0.0087294  -3.488 0.000486 ***
## ETA          0.1629402  0.0133711  12.186  < 2e-16 ***
## FLORENCE    -0.0210903  0.0088105  -2.394 0.016680 *
## HANNA       -0.0365728  0.0089032  -4.108 4.00e-05 ***
## HARVEY      -0.0234618  0.0087292  -2.688 0.007196 **
## HERMINE     -0.0229885  0.0097444  -2.359 0.018321 *
## IRMA        -0.0255493  0.0087681  -2.914 0.003571 **
## LAURA       -0.0099483  0.0088170  -1.128 0.259194
## MICHAEL     -0.0121761  0.0088677  -1.373 0.169735
## SALLY       -0.0157088  0.0094049  -1.670 0.094871 .
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## Topic 16:
##
## Coefficients:
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)  0.0191191  0.0043977   4.348 1.38e-05 ***
## FOX         -0.0049637  0.0005513  -9.003  < 2e-16 ***
## MSNBC       -0.0007773  0.0006346  -1.225    0.221
## ARTHUR      -0.0058539  0.0046566  -1.257    0.209
## BARRY        0.0039646  0.0050104   0.791    0.429
## DELTA       -0.0022038  0.0048332  -0.456    0.648
## DORIAN       0.0032634  0.0044841   0.728    0.467
## ETA          0.0052377  0.0062663   0.836    0.403
## FLORENCE    -0.0025044  0.0044882  -0.558    0.577
## HANNA       -0.0052477  0.0047377  -1.108    0.268
## HARVEY      -0.0024574  0.0043979  -0.559    0.576
## HERMINE     -0.0051097  0.0048623  -1.051    0.293
## IRMA        -0.0022359  0.0044040  -0.508    0.612
## LAURA        0.0041237  0.0045487   0.907    0.365
## MICHAEL     -0.0001368  0.0045140  -0.030    0.976
## SALLY        0.0262793  0.0052278   5.027 5.00e-07 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## Topic 17:
##
## Coefficients:
```

```
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)  0.0148324  0.0047800   3.103 0.001917 **
## FOX         -0.0012816  0.0006056  -2.116 0.034324 *
## MSNBC       -0.0021785  0.0005842  -3.729 0.000192 ***
## ARTHUR       0.0019199  0.0050841   0.378 0.705703
## BARRY       -0.0037478  0.0052748  -0.711 0.477384
## DELTA       -0.0010641  0.0050146  -0.212 0.831944
## DORIAN       0.0042064  0.0048089   0.875 0.381738
## ETA          0.0044435  0.0065120   0.682 0.495015
## FLORENCE     0.0008779  0.0048912   0.179 0.857550
## HANNA        0.0052809  0.0058397   0.904 0.365830
## HARVEY       0.0011822  0.0048085   0.246 0.805797
## HERMINE     -0.0039748  0.0054143  -0.734 0.462867
## IRMA         0.0009552  0.0048479   0.197 0.843803
## LAURA        0.0015854  0.0048863   0.324 0.745583
## MICHAEL      0.0016863  0.0047931   0.352 0.724984
## SALLY        0.0009217  0.0049393   0.187 0.851967
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## Topic 18:
##
## Coefficients:
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)  0.0397861  0.0066681   5.967 2.44e-09 ***
## FOX         -0.0055951  0.0008169  -6.850 7.49e-12 ***
## MSNBC       -0.0035699  0.0009614  -3.713 0.000205 ***
## ARTHUR       0.0042847  0.0068914   0.622 0.534111
## BARRY        0.0059689  0.0077128   0.774 0.438991
## DELTA        0.0007534  0.0074073   0.102 0.918987
## DORIAN       0.0088608  0.0066895   1.325 0.185315
## ETA         -0.0140425  0.0084418  -1.663 0.096230 .
## FLORENCE     0.0067176  0.0066002   1.018 0.308791
## HANNA       -0.0014800  0.0073932  -0.200 0.841338
## HARVEY       0.0070573  0.0065902   1.071 0.284231
## HERMINE     -0.0042377  0.0072545  -0.584 0.559124
## IRMA         0.0163807  0.0065712   2.493 0.012677 *
## LAURA        0.0088554  0.0066788   1.326 0.184881
## MICHAEL      0.0003657  0.0067007   0.055 0.956480
## SALLY       -0.0009543  0.0070845  -0.135 0.892846
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## Topic 19:
##
## Coefficients:
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)  0.0147152  0.0039781   3.699 0.000217 ***
## FOX         -0.0005429  0.0004601  -1.180 0.237976
## MSNBC       -0.0010729  0.0004638  -2.313 0.020710 *
## ARTHUR      -0.0083400  0.0041881  -1.991 0.046451 *
## BARRY       -0.0054400  0.0042209  -1.289 0.197459
```

```
## DELTA       -0.0059300  0.0042772  -1.386 0.165631
## DORIAN      -0.0055225  0.0039559  -1.396 0.162723
## ETA          0.0010293  0.0055322   0.186 0.852407
## FLORENCE    -0.0041807  0.0040173  -1.041 0.298039
## HANNA        0.0023309  0.0044025   0.529 0.596497
## HARVEY      -0.0002167  0.0039991  -0.054 0.956791
## HERMINE     -0.0024456  0.0047822  -0.511 0.609078
## IRMA        -0.0006041  0.0039020  -0.155 0.876967
## LAURA       -0.0052885  0.0038886  -1.360 0.173832
## MICHAEL     -0.0067467  0.0039497  -1.708 0.087616 .
## SALLY       -0.0080290  0.0039929  -2.011 0.044349 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## Topic 20:
##
## Coefficients:
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)  0.0608778  0.0077366   7.869 3.65e-15 ***
## FOX         -0.0128425  0.0008488 -15.129  < 2e-16 ***
## MSNBC        0.0053166  0.0009518   5.586 2.34e-08 ***
## ARTHUR      -0.0083426  0.0078917  -1.057   0.2905
## BARRY        0.0053376  0.0092749   0.575   0.5650
## DELTA        0.0050058  0.0090100   0.556   0.5785
## DORIAN      -0.0034219  0.0077989  -0.439   0.6608
## ETA         -0.0211429  0.0091732  -2.305   0.0212 *
## FLORENCE    -0.0025554  0.0078377  -0.326   0.7444
## HANNA       -0.0077478  0.0081960  -0.945   0.3445
## HARVEY      -0.0069467  0.0077479  -0.897   0.3699
## HERMINE     -0.0054770  0.0086286  -0.635   0.5256
## IRMA        -0.0083131  0.0077206  -1.077   0.2816
## LAURA       -0.0015142  0.0079070  -0.192   0.8481
## MICHAEL     -0.0096488  0.0078416  -1.230   0.2185
## SALLY       -0.0041403  0.0080203  -0.516   0.6057
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## Topic 21:
##
## Coefficients:
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)  0.0160214  0.0061829   2.591  0.00957 **
## FOX         -0.0039094  0.0009710  -4.026 5.68e-05 ***
## MSNBC       -0.0024628  0.0009864  -2.497  0.01254 *
## ARTHUR      -0.0107952  0.0064975  -1.661  0.09663 .
## BARRY       -0.0111939  0.0070727  -1.583  0.11350
## DELTA       -0.0073588  0.0067010  -1.098  0.27214
## DORIAN       0.0087870  0.0062442   1.407  0.15937
## ETA         -0.0033095  0.0082796  -0.400  0.68936
## FLORENCE    -0.0077815  0.0062284  -1.249  0.21154
## HANNA       -0.0021839  0.0068356  -0.319  0.74936
## HARVEY       0.0334759  0.0062581   5.349 8.87e-08 ***
```

```
## HERMINE      0.0280778  0.0071106   3.949 7.87e-05 ***
## IRMA         0.0868226  0.0063214  13.735  < 2e-16 ***
## LAURA       -0.0048426  0.0063798  -0.759  0.44782
## MICHAEL      0.0068081  0.0062946   1.082  0.27945
## SALLY       -0.0048930  0.0065228  -0.750  0.45317
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## Topic 22:
##
## Coefficients:
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)  2.384e-01  1.846e-02  12.919  < 2e-16 ***
## FOX          3.813e-03  8.472e-04   4.500 6.81e-06 ***
## MSNBC        9.578e-05  9.377e-04   0.102 0.918641
## ARTHUR      -2.212e-01  1.879e-02 -11.774  < 2e-16 ***
## BARRY       -7.176e-02  2.230e-02  -3.218 0.001293 **
## DELTA       -1.522e-02  1.984e-02  -0.767 0.443025
## DORIAN      -2.322e-01  1.853e-02 -12.534  < 2e-16 ***
## ETA         -1.760e-01  1.786e-02  -9.854  < 2e-16 ***
## FLORENCE    -2.301e-01  1.859e-02 -12.381  < 2e-16 ***
## HANNA       -7.707e-02  2.005e-02  -3.844 0.000121 ***
## HARVEY      -2.209e-01  1.851e-02 -11.936  < 2e-16 ***
## HERMINE     -1.974e-01  1.846e-02 -10.689  < 2e-16 ***
## IRMA        -2.292e-01  1.848e-02 -12.404  < 2e-16 ***
## LAURA       -7.481e-02  1.901e-02  -3.936 8.28e-05 ***
## MICHAEL     -2.178e-01  1.856e-02 -11.734  < 2e-16 ***
## SALLY       -7.343e-02  2.020e-02  -3.635 0.000278 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## Topic 23:
##
## Coefficients:
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)  2.822e-02  7.548e-03   3.738 0.000186 ***
## FOX         -8.186e-06  1.003e-03  -0.008 0.993486
## MSNBC        8.433e-03  1.129e-03   7.469 8.19e-14 ***
## ARTHUR      -1.574e-02  7.829e-03  -2.010 0.044447 *
## BARRY       -1.086e-02  8.691e-03  -1.249 0.211639
## DELTA        7.338e-04  8.457e-03   0.087 0.930854
## DORIAN       1.938e-02  7.577e-03   2.558 0.010521 *
## ETA          3.041e-02  1.174e-02   2.590 0.009588 **
## FLORENCE     6.443e-03  7.632e-03   0.844 0.398553
## HANNA       -1.661e-02  8.318e-03  -1.997 0.045813 *
## HARVEY       1.117e-02  7.557e-03   1.478 0.139373
## HERMINE     -9.164e-03  8.609e-03  -1.065 0.287081
## IRMA        -4.914e-03  7.557e-03  -0.650 0.515586
## LAURA        8.519e-03  7.921e-03   1.076 0.282154
## MICHAEL      6.791e-03  7.794e-03   0.871 0.383547
## SALLY        1.180e-03  7.981e-03   0.148 0.882460
## ---
```

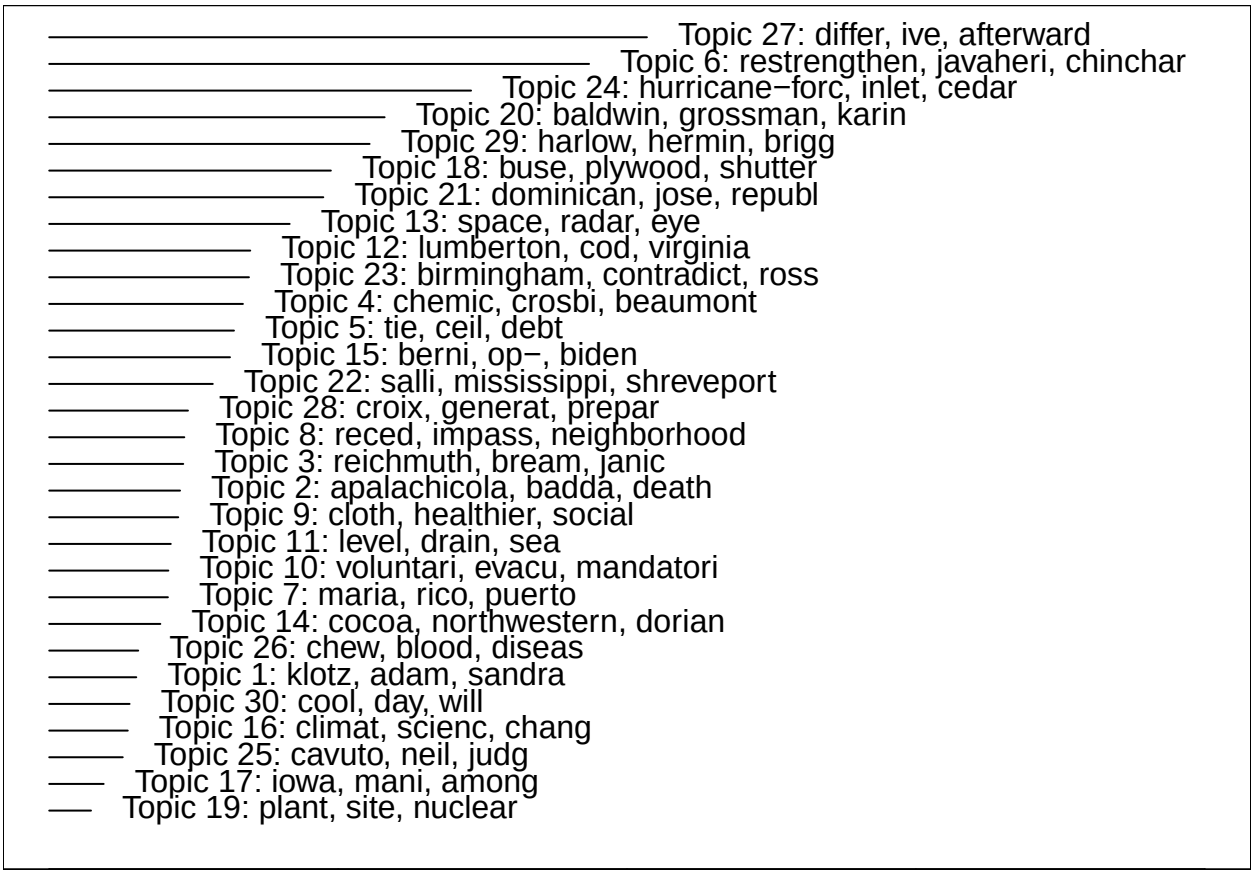
```
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## Topic 24:
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)  0.057881   0.011004   5.260 1.45e-07 ***
## FOX         -0.001022   0.001365  -0.749   0.4537
## MSNBC        0.002198   0.001454   1.512   0.1306
## ARTHUR       0.002599   0.011669   0.223   0.8238
## BARRY        0.056012   0.013586   4.123 3.75e-05 ***
## DELTA        0.005910   0.012111   0.488   0.6255
## DORIAN       0.007839   0.011000   0.713   0.4761
## ETA         -0.034175   0.013661  -2.502   0.0124 *
## FLORENCE     0.014069   0.011107   1.267   0.2053
## HANNA        0.021953   0.012059   1.820   0.0687 .
## HARVEY       0.001721   0.011147   0.154   0.8773
## HERMINE      0.055229   0.012545   4.403 1.07e-05 ***
## IRMA         0.018010   0.011018   1.635   0.1021
## LAURA        0.004757   0.011127   0.428   0.6690
## MICHAEL      0.008524   0.011098   0.768   0.4424
## SALLY        0.024297   0.011538   2.106   0.0352 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## Topic 25:
##
## Coefficients:
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)  1.419e-02  3.123e-03   4.543 5.56e-06 ***
## FOX          3.864e-03  3.944e-04   9.796  < 2e-16 ***
## MSNBC       -3.028e-03  4.038e-04  -7.499 6.56e-14 ***
## ARTHUR      -5.151e-03  3.270e-03  -1.575    0.115
## BARRY       -4.323e-04  3.605e-03  -0.120    0.905
## DELTA       -3.751e-03  3.379e-03  -1.110    0.267
## DORIAN       7.949e-05  3.164e-03   0.025    0.980
## ETA          2.044e-02  5.174e-03   3.950 7.83e-05 ***
## FLORENCE    -1.727e-03  3.157e-03  -0.547    0.584
## HANNA        5.693e-03  3.494e-03   1.629    0.103
## HARVEY      -2.320e-04  3.123e-03  -0.074    0.941
## HERMINE     -7.898e-04  3.534e-03  -0.223    0.823
## IRMA         5.434e-04  3.134e-03   0.173    0.862
## LAURA       -5.101e-04  3.152e-03  -0.162    0.871
## MICHAEL      2.174e-04  3.186e-03   0.068    0.946
## SALLY        1.789e-03  3.203e-03   0.558    0.577
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## Topic 26:
##
## Coefficients:
```

```
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)  1.174e-02  3.807e-03   3.083  0.00205 **
## FOX          2.666e-04  5.546e-04   0.481  0.63077
## MSNBC       -1.403e-03  5.399e-04  -2.598  0.00937 **
## ARTHUR       4.123e-03  3.983e-03   1.035  0.30066
## BARRY        8.925e-03  4.764e-03   1.873  0.06102 .
## DELTA        1.383e-03  4.177e-03   0.331  0.74058
## DORIAN       6.704e-03  3.776e-03   1.775  0.07585 .
## ETA          2.717e-03  4.837e-03   0.562  0.57427
## FLORENCE     6.537e-03  3.831e-03   1.707  0.08792 .
## HANNA        1.634e-03  4.395e-03   0.372  0.71001
## HARVEY       1.023e-02  3.837e-03   2.665  0.00770 **
## HERMINE      9.767e-05  4.186e-03   0.023  0.98139
## IRMA         7.490e-03  3.769e-03   1.987  0.04689 *
## LAURA        5.747e-03  3.941e-03   1.458  0.14472
## MICHAEL      3.622e-03  3.818e-03   0.949  0.34273
## SALLY        4.545e-03  3.820e-03   1.190  0.23420
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## Topic 27:
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)  0.041239   0.008092   5.096 3.47e-07 ***
## FOX         -0.010636   0.001100  -9.665  < 2e-16 ***
## MSNBC        0.009941   0.001122   8.859  < 2e-16 ***
## ARTHUR       0.029492   0.008625   3.420 0.000628 ***
## BARRY        0.046111   0.009761   4.724 2.32e-06 ***
## DELTA        0.026975   0.008619   3.130 0.001751 **
## DORIAN       0.045145   0.008144   5.543 2.98e-08 ***
## ETA          0.039145   0.011056   3.541 0.000400 ***
## FLORENCE     0.049377   0.008233   5.998 2.02e-09 ***
## HANNA        0.021807   0.009209   2.368 0.017889 *
## HARVEY       0.047084   0.008125   5.795 6.87e-09 ***
## HERMINE      0.016683   0.009060   1.841 0.065579 .
## IRMA         0.049175   0.008190   6.004 1.94e-09 ***
## LAURA        0.035756   0.008616   4.150 3.33e-05 ***
## MICHAEL      0.050607   0.008225   6.153 7.68e-10 ***
## SALLY        0.037109   0.008805   4.214 2.51e-05 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## Topic 28:
##
## Coefficients:
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)  0.0102626  0.0043091   2.382 0.017241 *
## FOX          0.0004087  0.0006172   0.662 0.507825
## MSNBC       -0.0008142  0.0006262  -1.300 0.193529
## ARTHUR       0.0060042  0.0045219   1.328 0.184251
## BARRY        0.0111690  0.0053060   2.105 0.035298 *
```

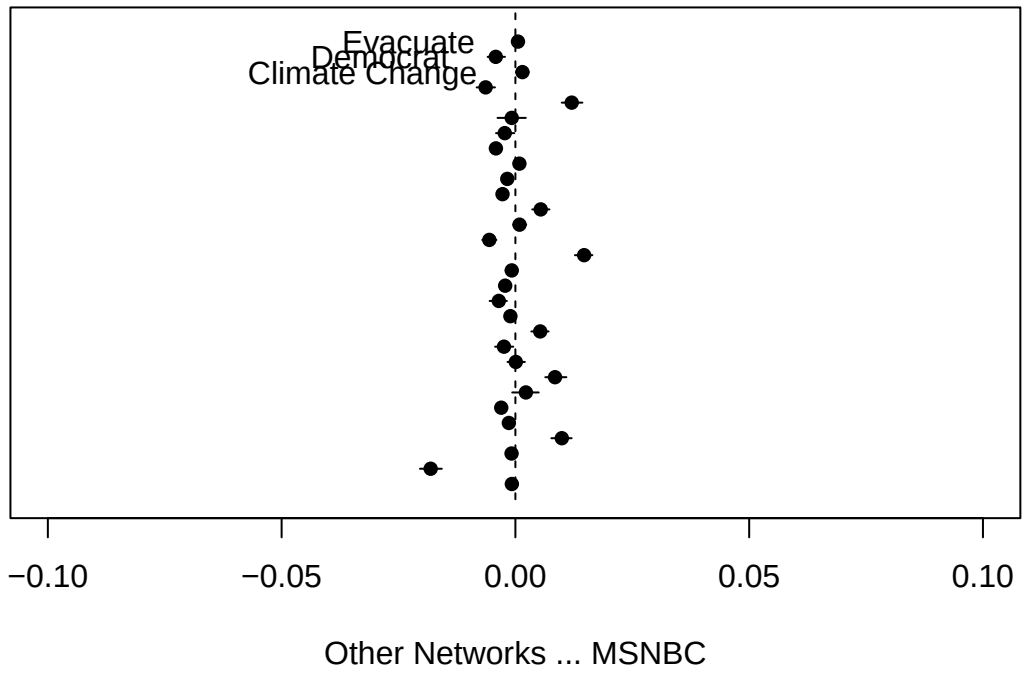
```
## DELTA       -0.0001669  0.0046272  -0.036 0.971232
## DORIAN       0.0162740  0.0043074   3.778 0.000158 ***
## ETA         -0.0032761  0.0056645  -0.578 0.563024
## FLORENCE     0.0099911  0.0044074   2.267 0.023402 *
## HANNA        0.0282541  0.0049289   5.732 9.97e-09 ***
## HARVEY       0.0153751  0.0043171   3.561 0.000369 ***
## HERMINE      0.0065815  0.0049421   1.332 0.182962
## IRMA         0.0239259  0.0043193   5.539 3.05e-08 ***
## LAURA        0.0058692  0.0043851   1.338 0.180763
## MICHAEL      0.0059486  0.0043802   1.358 0.174449
## SALLY        0.0039061  0.0046234   0.845 0.398195
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## Topic 29:
##
## Coefficients:
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)  0.0899834  0.0090238   9.972  < 2e-16 ***
## FOX         -0.0371951  0.0012345 -30.129  < 2e-16 ***
## MSNBC       -0.0181198  0.0011747 -15.424  < 2e-16 ***
## ARTHUR       0.0002269  0.0087682   0.026   0.9794
## BARRY       -0.0074871  0.0101032  -0.741   0.4587
## DELTA       -0.0145891  0.0095343  -1.530   0.1260
## DORIAN      -0.0184061  0.0089913  -2.047   0.0407 *
## ETA         -0.0190622  0.0121437  -1.570   0.1165
## FLORENCE    -0.0176566  0.0090836  -1.944   0.0519 .
## HANNA       -0.0239233  0.0095784  -2.498   0.0125 *
## HARVEY      -0.0227052  0.0090913  -2.497   0.0125 *
## HERMINE      0.0463175  0.0108948   4.251 2.13e-05 ***
## IRMA        -0.0268958  0.0089654  -3.000   0.0027 **
## LAURA       -0.0089765  0.0095849  -0.937   0.3490
## MICHAEL     -0.0193557  0.0089379  -2.166   0.0303 *
## SALLY       -0.0089456  0.0093894  -0.953   0.3407
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## Topic 30:
##
## Coefficients:
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)  0.0107317  0.0016830   6.377 1.83e-10 ***
## FOX          0.0013477  0.0002166   6.221 4.97e-10 ***
## MSNBC       -0.0007593  0.0002392  -3.175   0.0015 **
## ARTHUR       0.0021235  0.0017734   1.197   0.2312
## BARRY       -0.0016934  0.0018850  -0.898   0.3690
## DELTA        0.0009761  0.0019087   0.511   0.6091
## DORIAN       0.0015967  0.0016835   0.948   0.3429
## ETA         -0.0024004  0.0020498  -1.171   0.2416
## FLORENCE     0.0024279  0.0017361   1.399   0.1620
## HANNA        0.0033337  0.0017996   1.852   0.0640 .
## HARVEY       0.0031330  0.0016830   1.862   0.0627 .
```

```
## HERMINE      0.0017483  0.0019329   0.905   0.3657
## IRMA         0.0033002  0.0016893   1.954   0.0507 .
## LAURA       -0.0003726  0.0017158  -0.217   0.8281
## MICHAEL      0.0031445  0.0017166   1.832   0.0670 .
## SALLY       -0.0016505  0.0018025  -0.916   0.3599
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

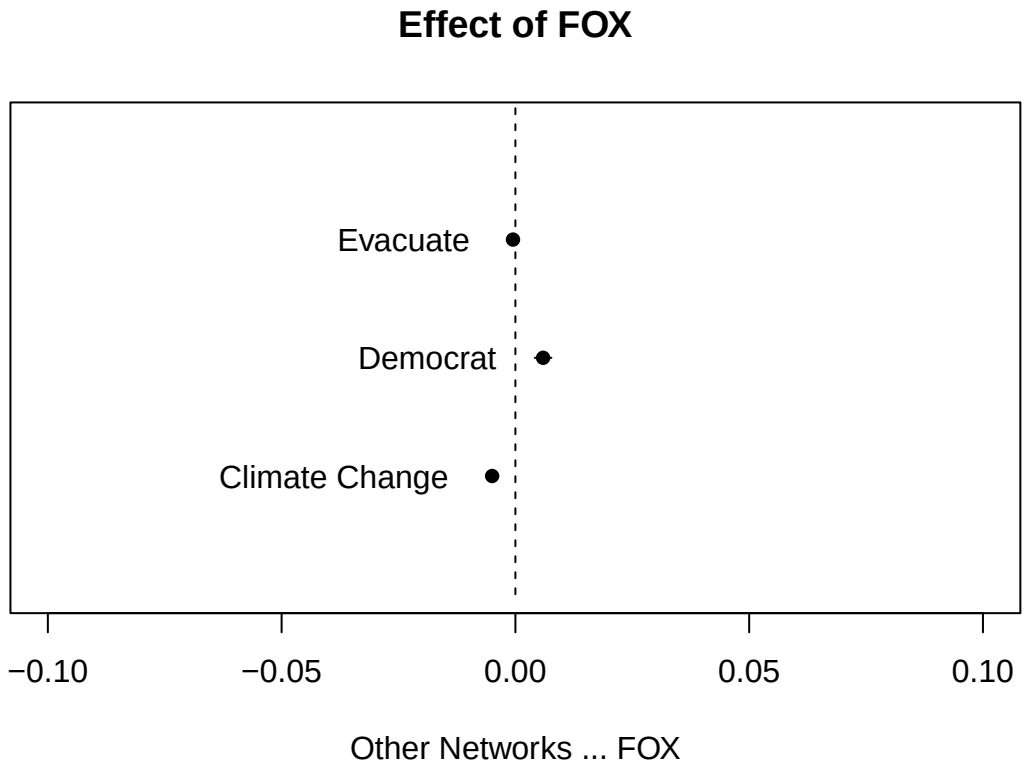
```
par(fig = c(0, 1, 0, 1))  # Set the figure region (left, right, bottom, top)
par(plt = c(0, 1, 0, 1))  # Set the plot region (left, right, bottom, top)
plot(hurricaneModel, type = "summary", xlim = c(0, .2))
```



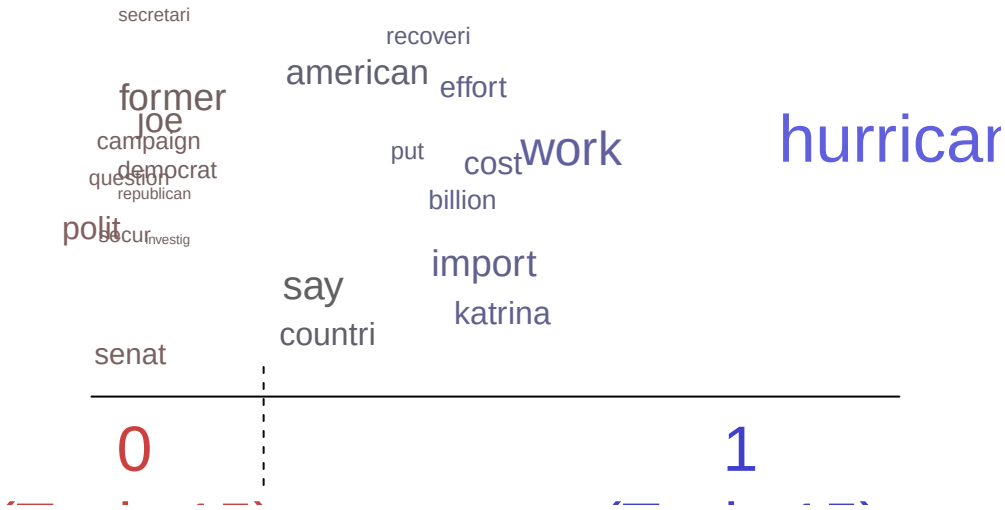

```
plot(prep, covariate = "MSNBC", topics = c(1:30),
model = hurricaneModel, method = "difference",
cov.value1 = 1, cov.value2 = 0,
xlab = "Other Networks ... MSNBC",
main = "Effect of MSNBC",
xlim = c(-.1, .1), labeltype = "custom",
custom.labels = c('Evacuate', 'Democrat','Climate Change'))
```




```
plot(prep, covariate = "FOX", topics = c(10, 15, 16),
model = hurricaneModel, method = "difference",
cov.value1 = 1, cov.value2 = 0,
xlab = "Other Networks ... FOX",
main = "Effect of FOX",
xlim = c(-.1, .1), labeltype = "custom",
custom.labels = c('Evacuate', 'Democrat','Climate Change'))
```




```
plot(hurricaneModel, type = "perspectives", topics = 15)
```


secretari
recoveri
american
effort
former
joe
campaign
democrat
question
republican
put
cost
work
hurricar
billion
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investig
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1