

1-Visualize Data

```
# packages
library(readr)
library(lubridate)
library(tidyverse)
library(knitr)
library(readxl)

# path
opts_knit$set(root.dir = normalizePath('../'))

opts_chunk$set(echo=FALSE, warning=FALSE, message=FALSE)
theme_set(theme_bw())

options(tibble.print_max = 80, tibble.print_min = 80)

"%ni%" <- Negate("%in%")

set_NA <- `is.na<-` #Function to add NAs columns

plot_factor <- function(data, column, tab_columns, order_factor_freq = TRUE ){
  # column = enquo(column)
  name = quo_name(column)
  if(order_factor_freq){
    data_tmp <- data %>%
      mutate(! name := !!column %>% fct_infreq() %>% fct_rev()) %>%
      count(! column) %>%
      mutate(prop = n/sum(n))
  } else
  {
    data_tmp <- data %>%
      mutate(! name := !!column) %>%
      count(! column) %>%
      mutate(prop = n/sum(n))
  }
  data_tmp %>%
    ggplot(aes(! column, prop)) +
    geom_col(color = "black", fill = "white") +
    scale_y_continuous(labels = scales::percent,breaks = seq(0,1,by = 0.1)) +
    labs(
      x = NULL,
      y = "Percent of responses"
    ) +
    coord_flip() +
    labs(title = tab_columns %>% filter(id == column) %>% pull(question))%>%
    return()
}

plot_logical <- function(data, column, data_options, tab_columns){
```

```

id_question <- data_options %>% filter(options == column) %>% pull(id)
title <- tab_columns %>% filter(id == id_question) %>% pull(question)
data_work %>%
  count(!column) %>%
  mutate(prop = n/sum(n)) %>%
  ggplot(aes(x="", y=prop, fill=! column)) +
  geom_bar(width = 1, stat = "identity") +
  coord_polar("y", start=0) +
  scale_y_continuous(labels = scales::percent, breaks = seq(0,1,by = 0.1)) +
  ggtitle(label = title) %>%
  return()
}

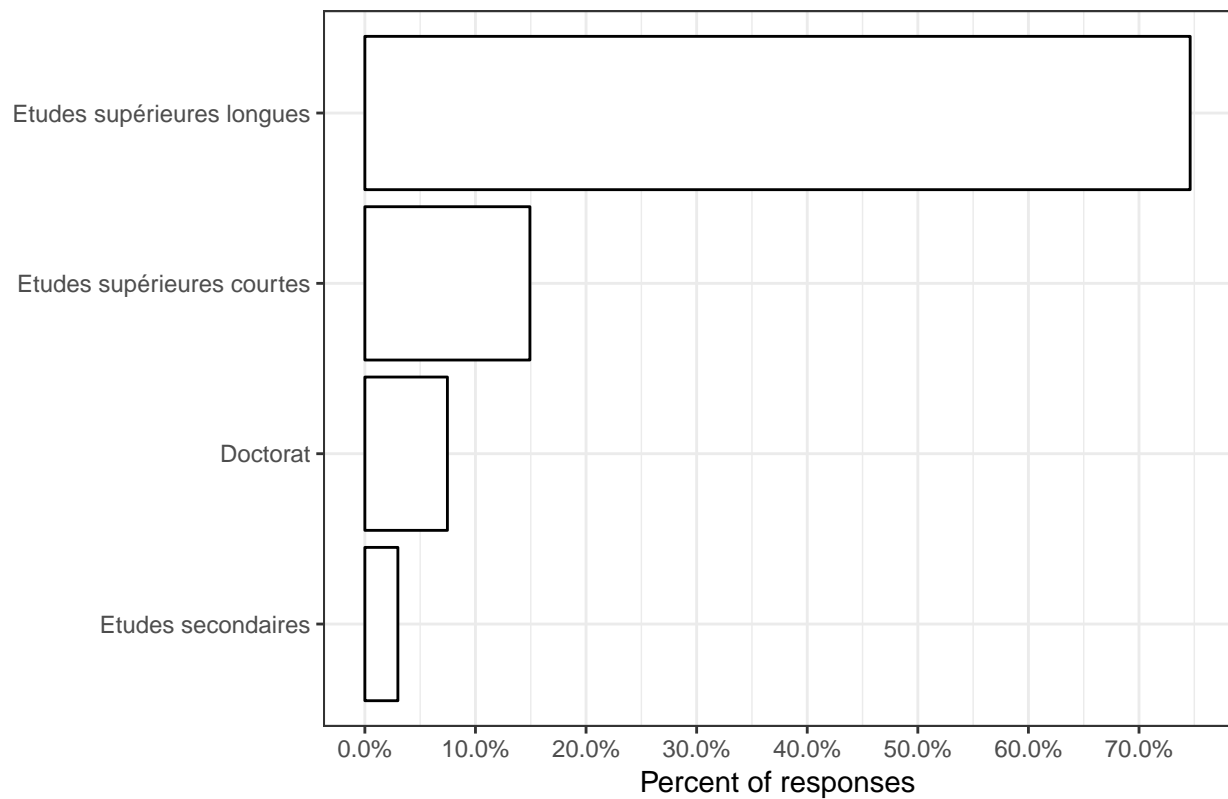
plot_logical_age <- function(data, column, data_options, tab_columns){
  id_question <- data_options %>% filter(options == column) %>% pull(id)

  if(identical(id_question, character(0)))
  {title <- tab_columns %>% filter(id == column) %>% pull(question)}
  else{title <- tab_columns %>% filter(id == id_question) %>% pull(question)}

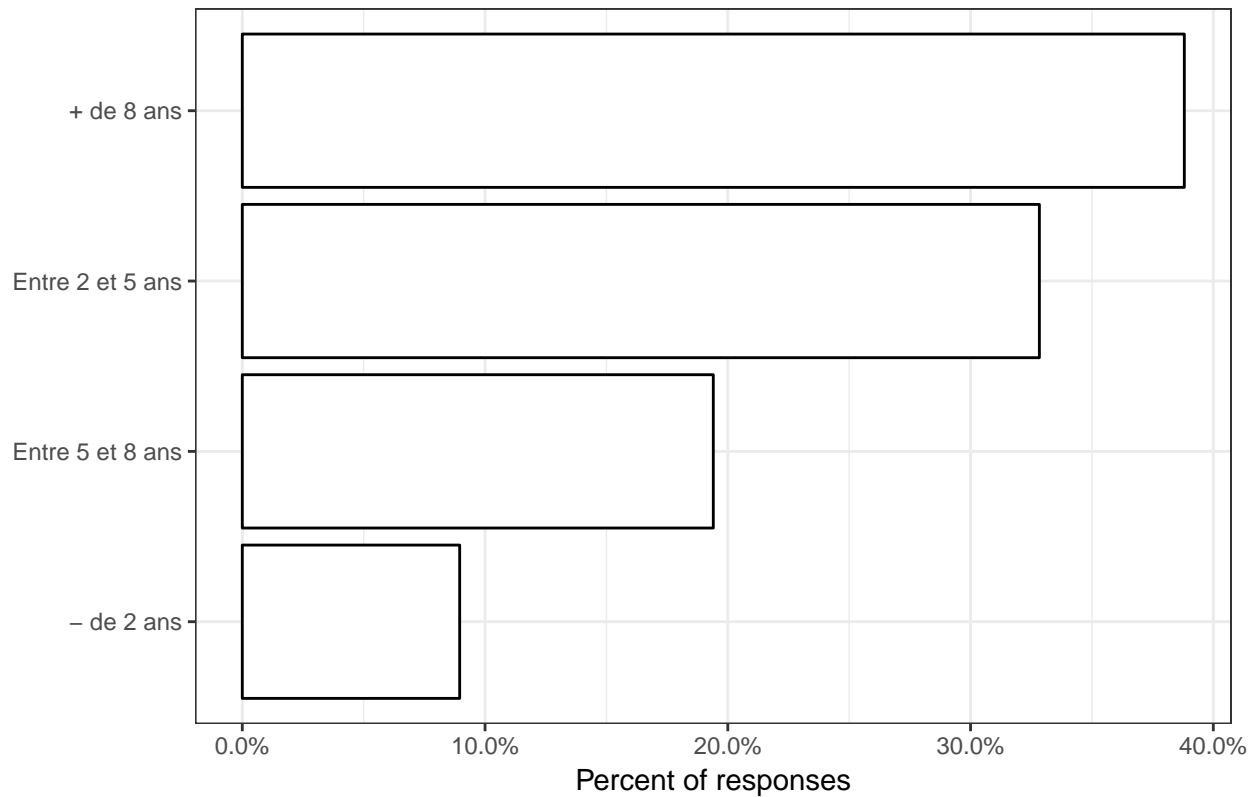
  data_work %>%
    ggplot(aes(x=! column, y= Q20)) +
    geom_boxplot() +
    ggtitle(label = title) %>%
    return()
}

```

Quel est ton niveau d'études ?

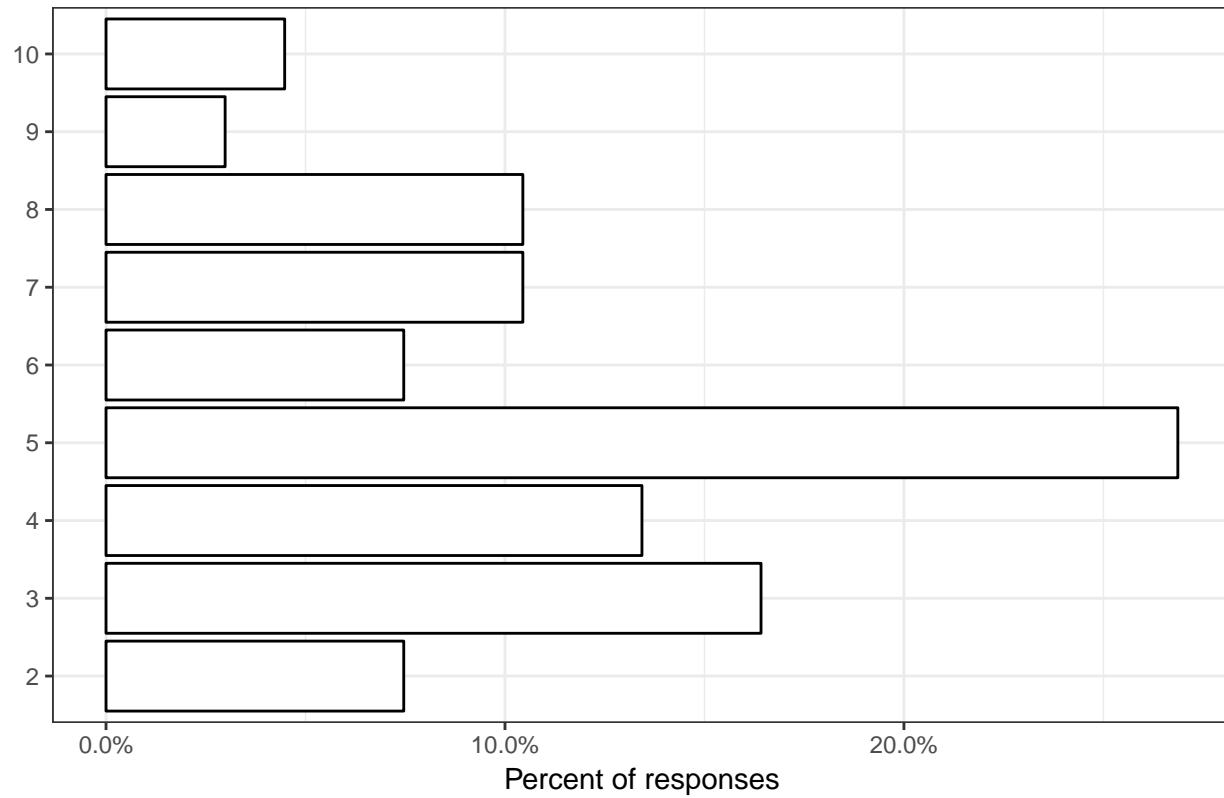


Depuis quand t'intéresses-tu à l'écologie ?



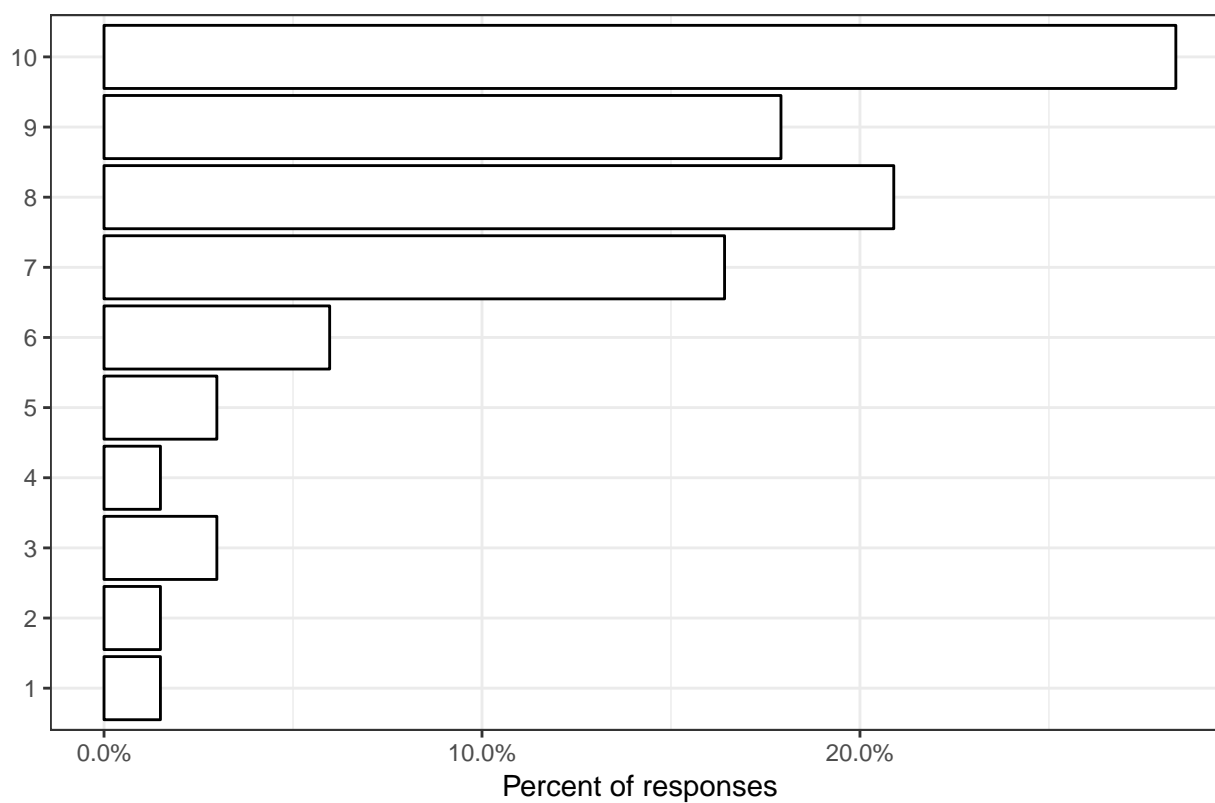
.	Freq
+ de 8 ans	38.81
Entre 2 et 5 ans	32.84
Entre 5 et 8 ans	19.40
- de 2 ans	8.96

Quelle est ta position sur le nucléaire ?



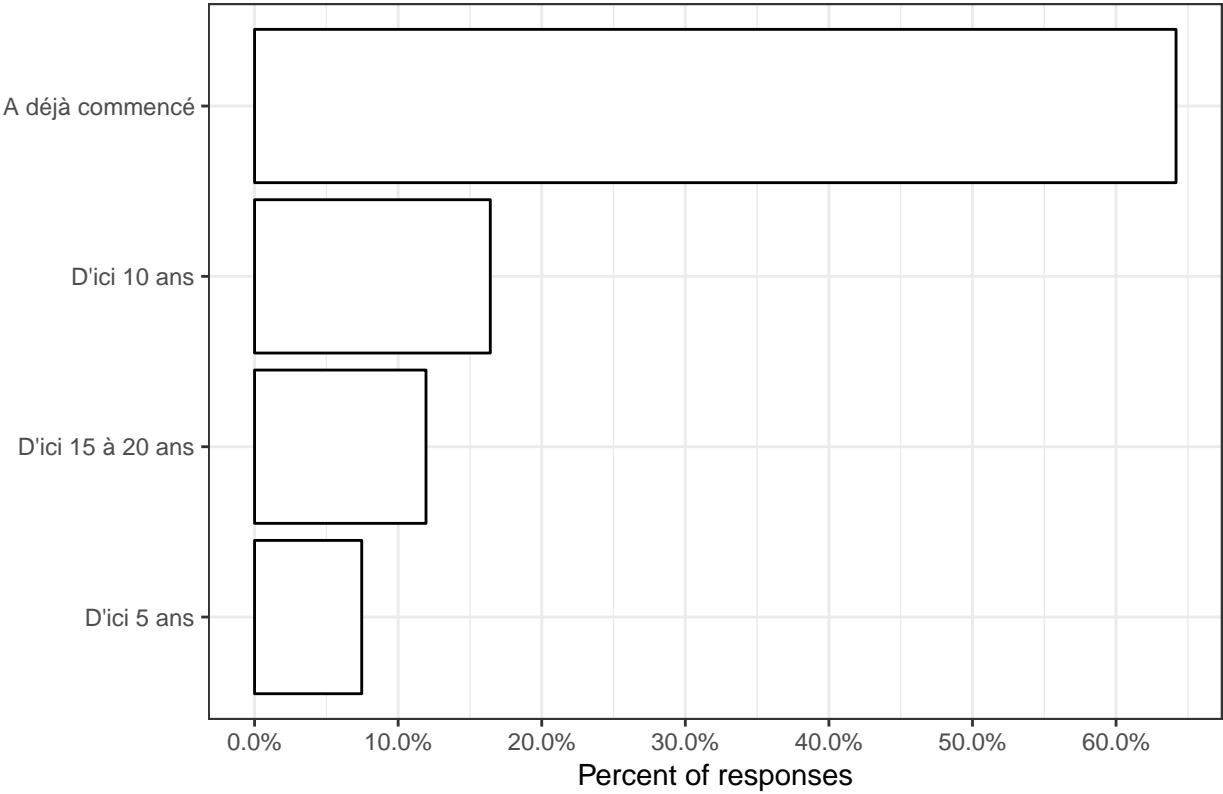
.	Freq
1	0.00
2	7.46
3	16.42
4	13.43
5	26.87
6	7.46
7	10.45
8	10.45
9	2.99
10	4.48

Selon toi, l'effondrement c'est ?



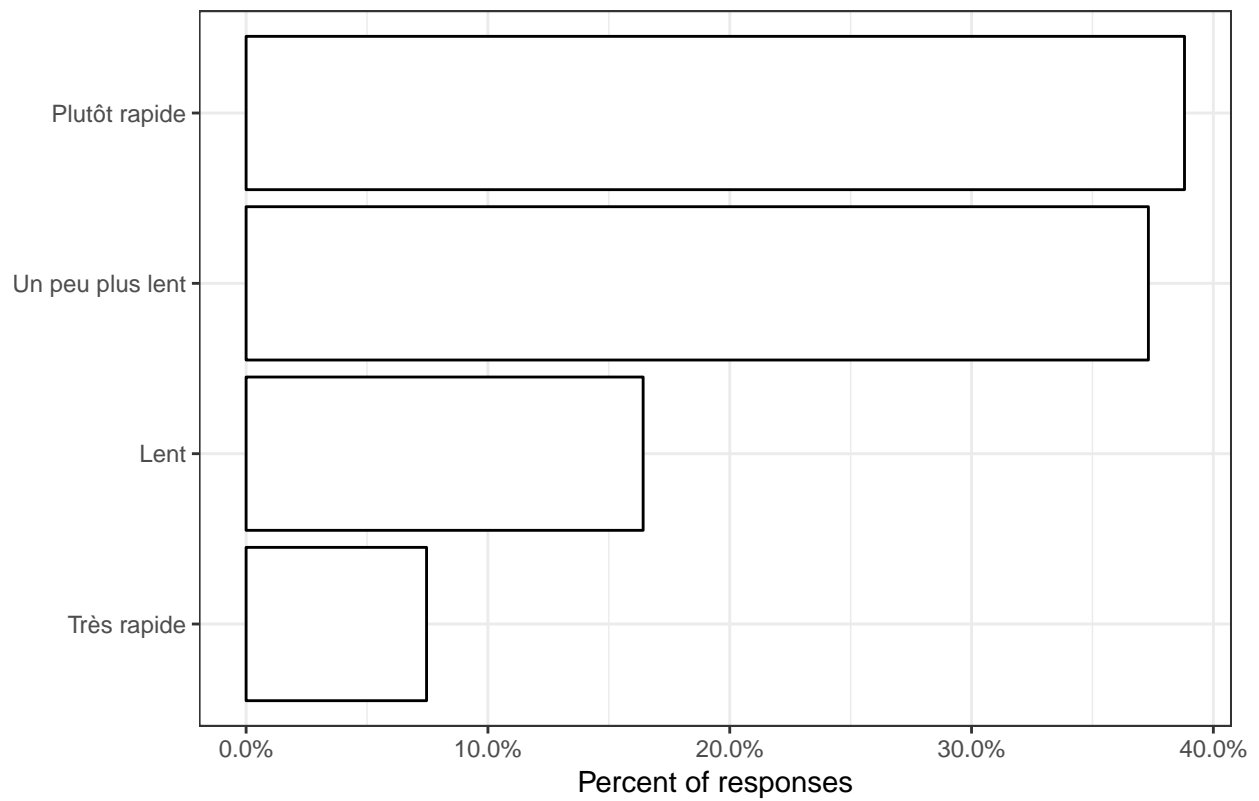
.	Freq
1	1.49
2	1.49
3	2.99
4	1.49
5	2.99
6	5.97
7	16.42
8	20.90
9	17.91
10	28.36

Selon toi, l'effondrement :



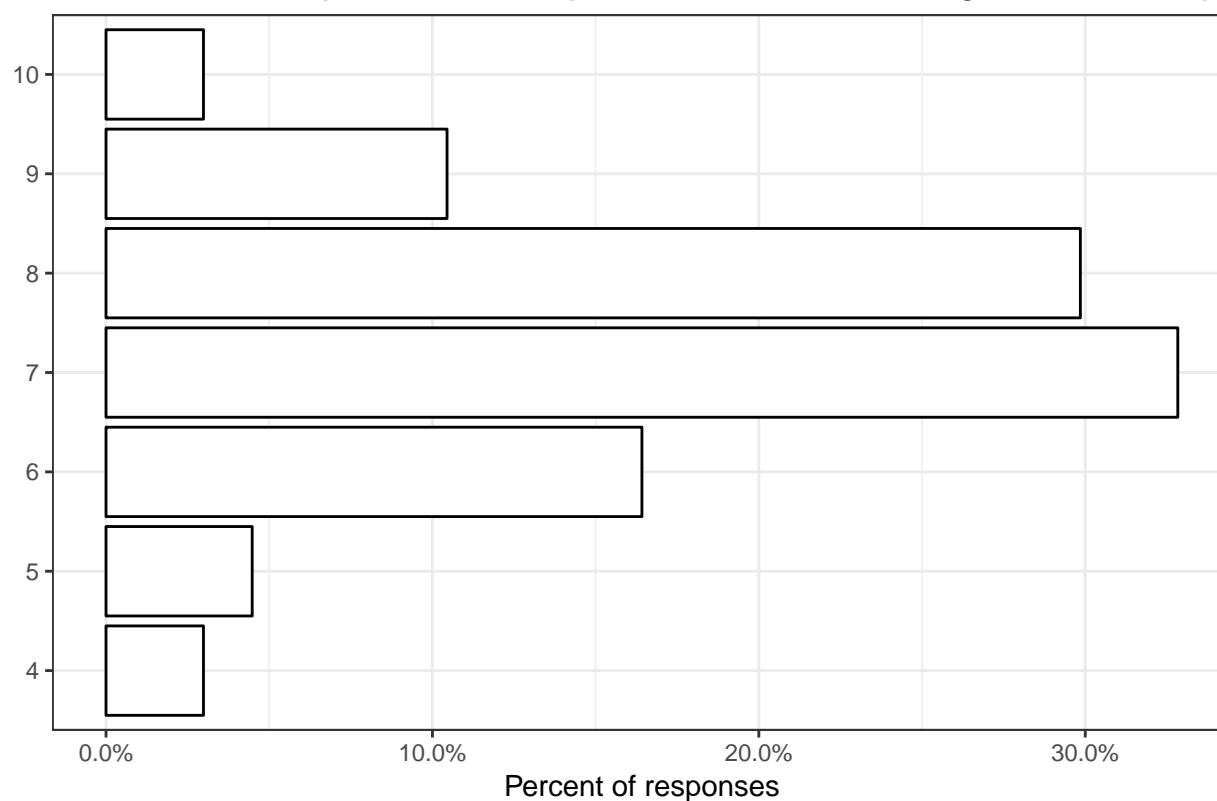
.	Freq
A déjà commencé	64.18
D'ici 10 ans	16.42
D'ici 15 à 20 ans	11.94
D'ici 5 ans	7.46

Selon toi, l'effondrement sera un processus:



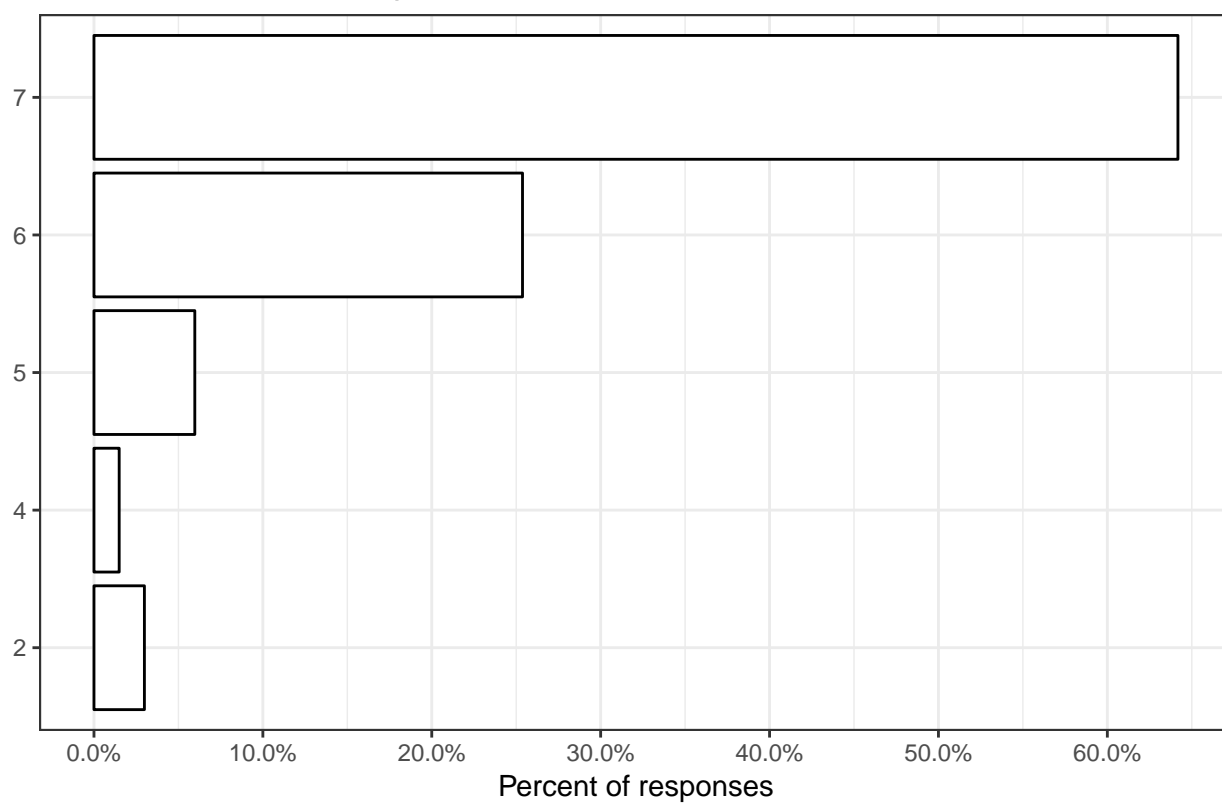
.	Freq
Plutôt rapide	38.81
Un peu plus lent	37.31
Lent	16.42
Très rapide	7.46

Quelle est ta compréhension des phénomènes liés au dérèglement climatique



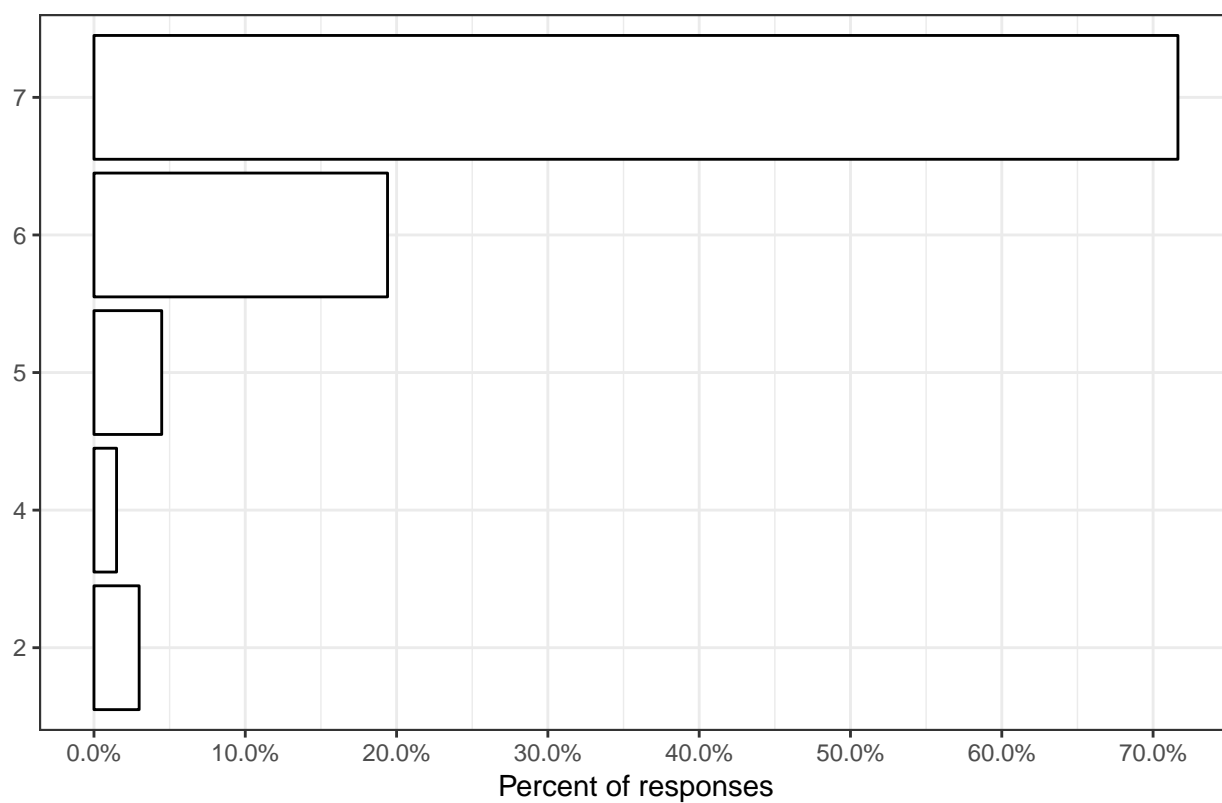
.	Freq
1	0.00
2	0.00
3	0.00
4	2.99
5	4.48
6	16.42
7	32.84
8	29.85
9	10.45
10	2.99
11	0.00

Réchauffement climatique



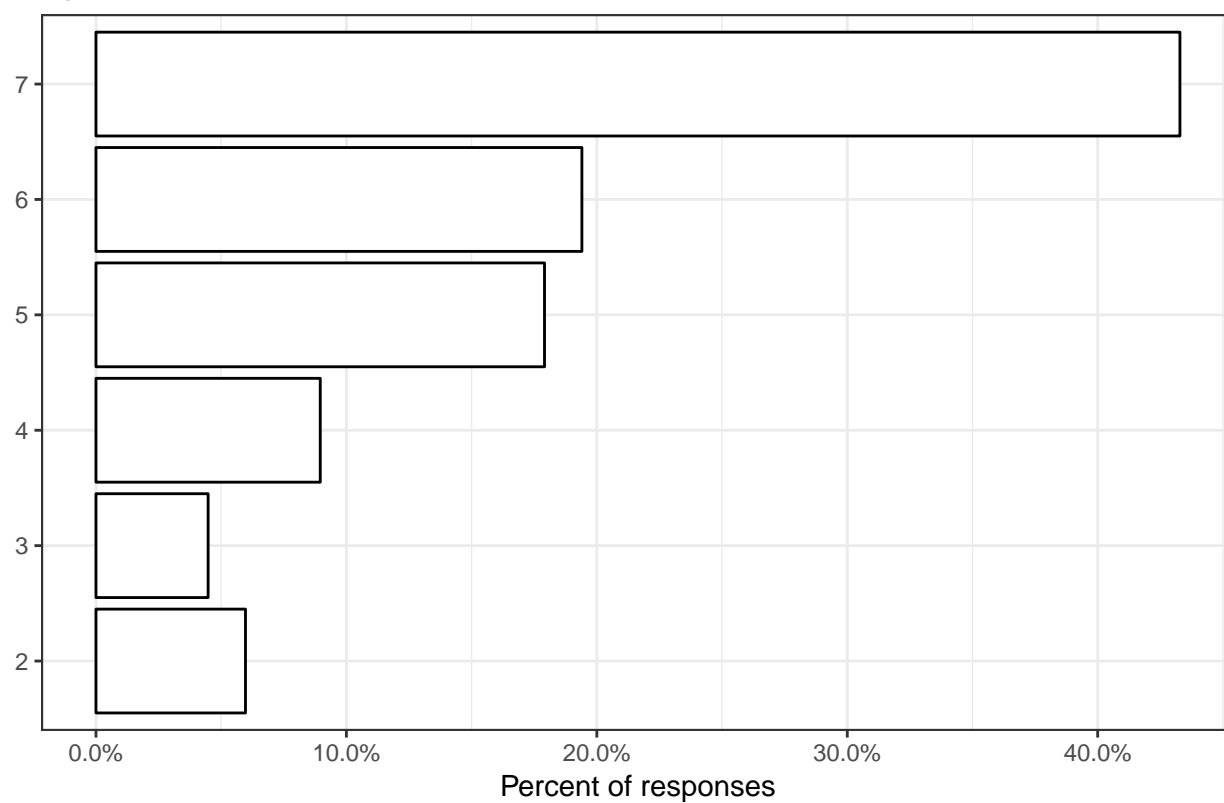
.	Freq
1	0.00
2	2.99
3	0.00
4	1.49
5	5.97
6	25.37
7	64.18

Perte de la biodiversité



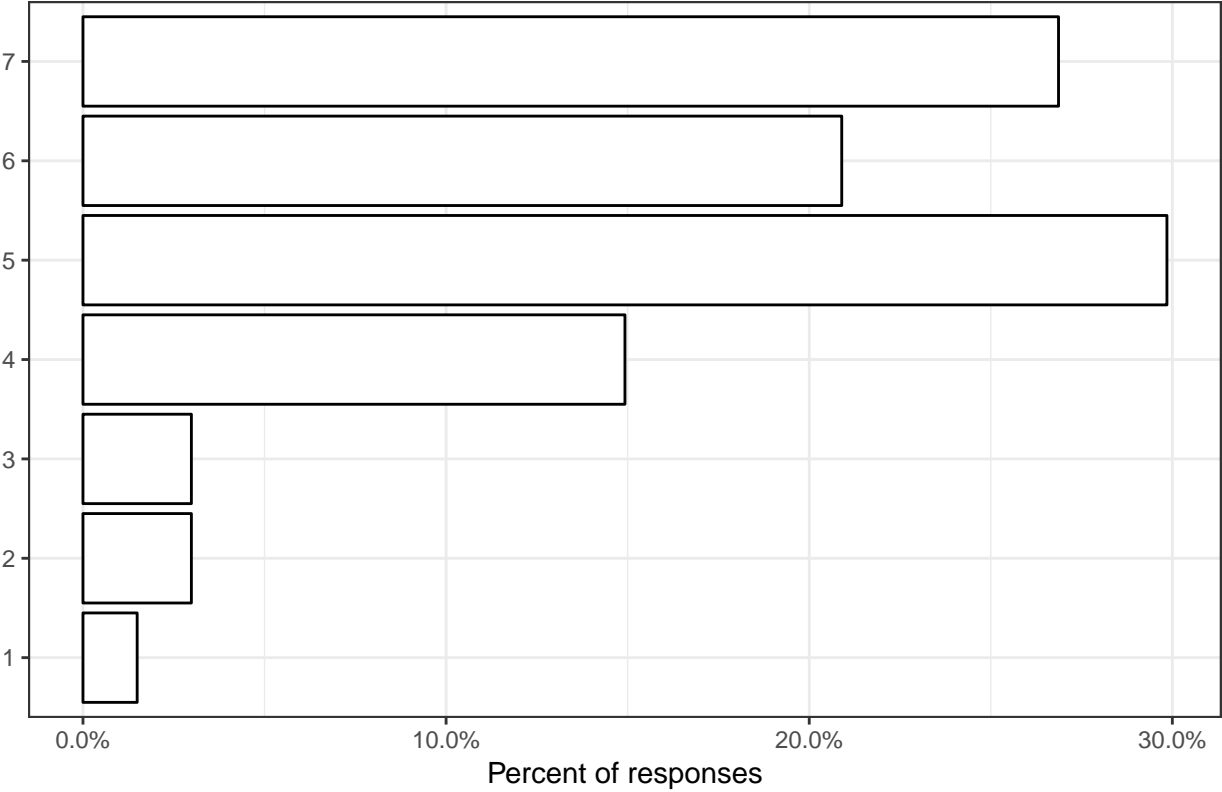
.	Freq
1	0.00
2	2.99
3	0.00
4	1.49
5	4.48
6	19.40
7	71.64

Epuisement des ressources non-renouvelables



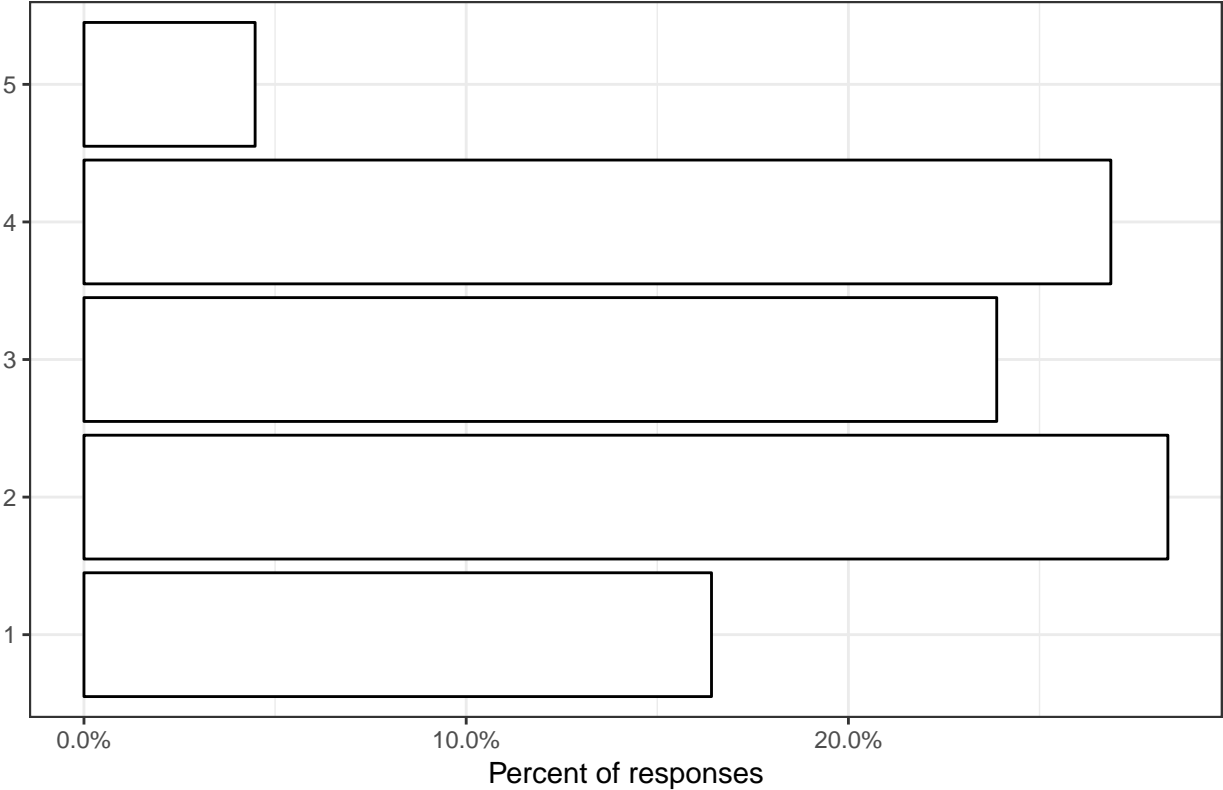
.	Freq
1	0.00
2	5.97
3	4.48
4	8.96
5	17.91
6	19.40
7	43.28

Sous-développement de la majorité des pays du monde



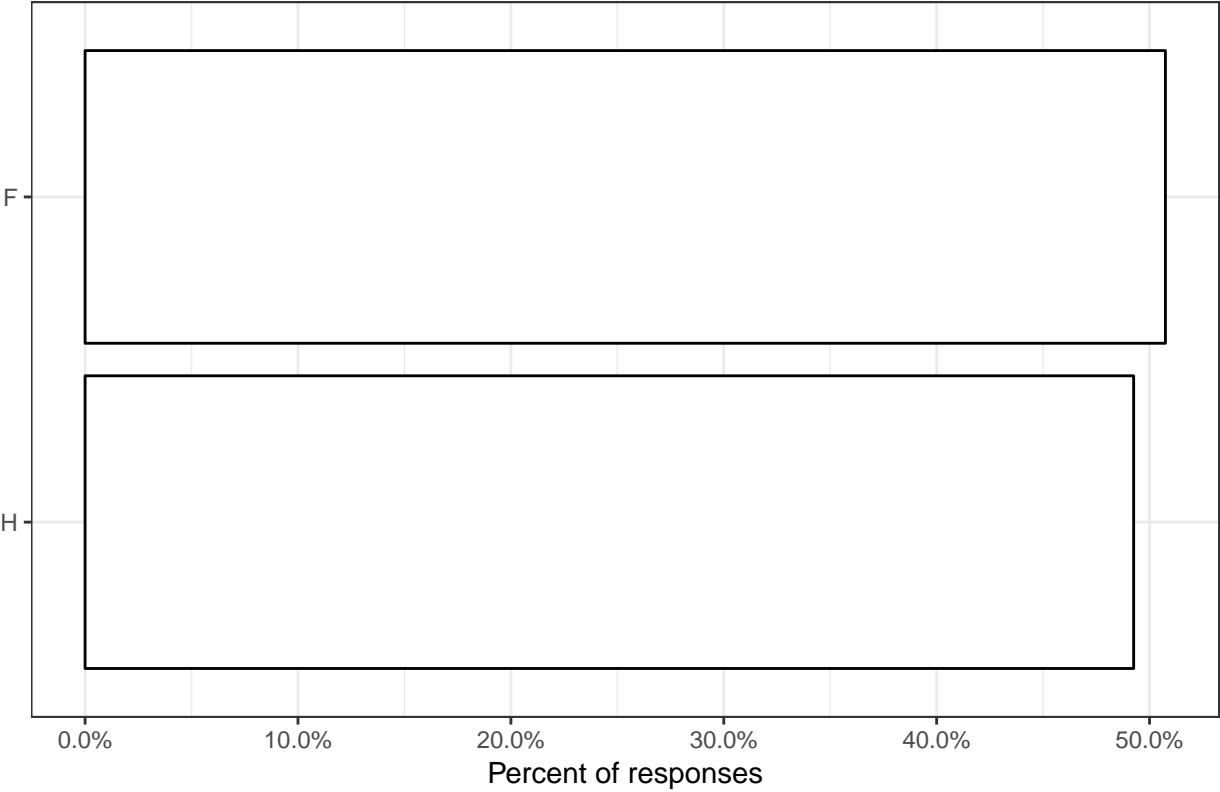
.	Freq
1	1.49
2	2.99
3	2.99
4	14.93
5	29.85
6	20.90
7	26.87

Que penses-tu de cette affirmation: Le militantisme écologiste se rapproche d'



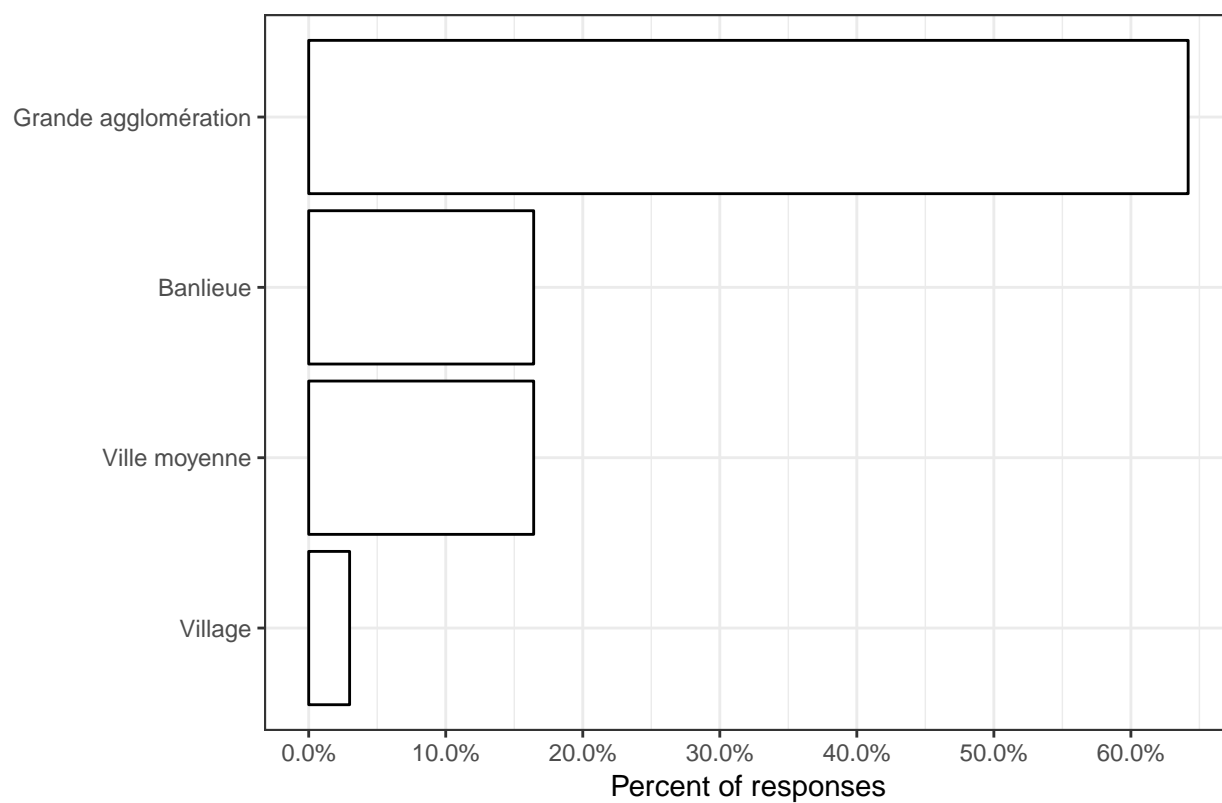
.	Freq
1	16.42
2	28.36
3	23.88
4	26.87
5	4.48

Tu es ?

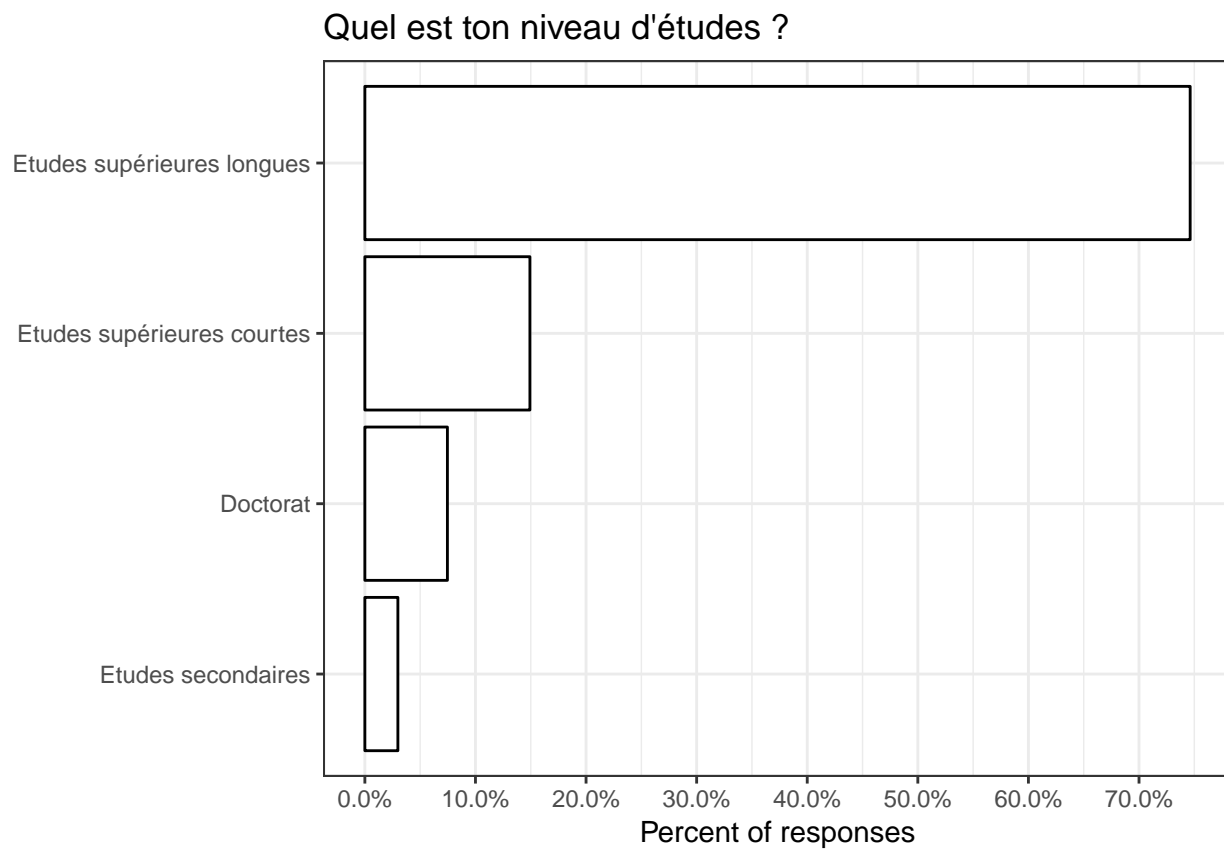


.	Freq
F	50.75
H	49.25

Tu vis

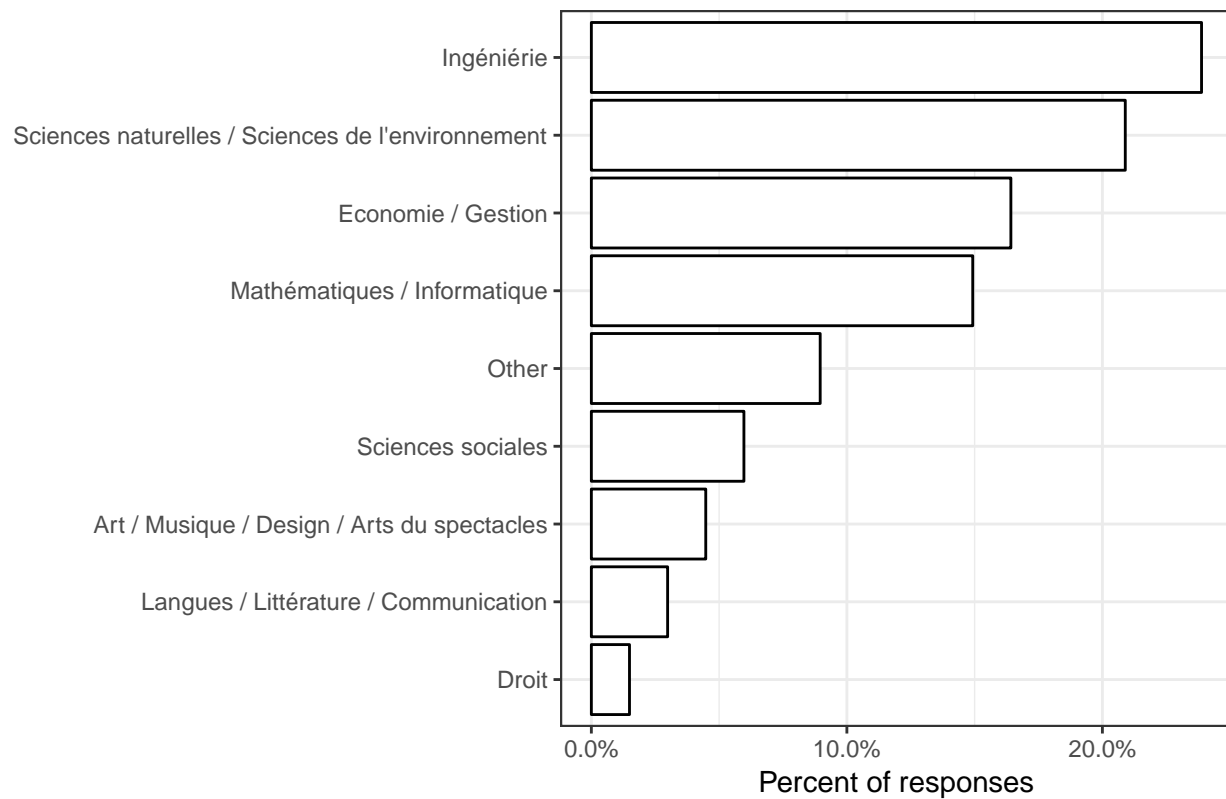


	Freq
.	
Grande agglomération	64.18
Banlieue	16.42
Ville moyenne	16.42
Village	2.99



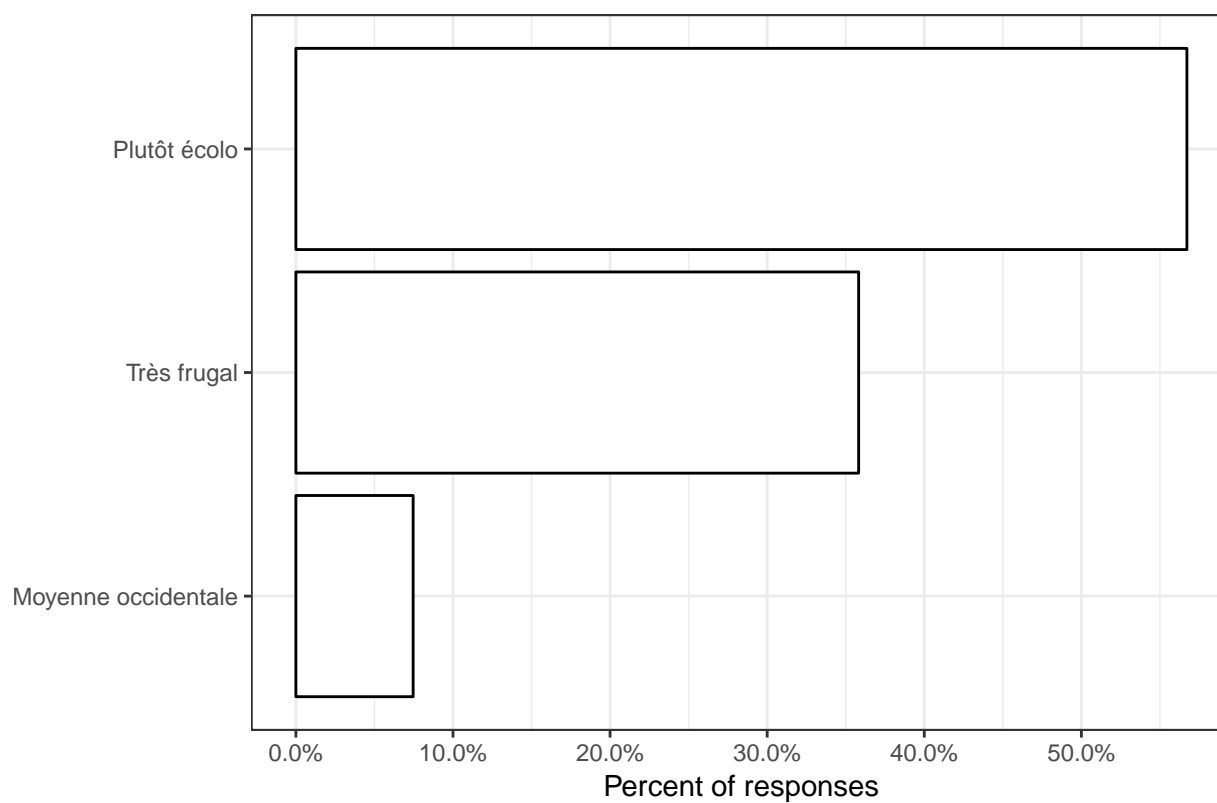
.	Freq
Etudes supérieures longues	74.63
Etudes supérieures courtes	14.93
Doctorat	7.46
Etudes secondaires	2.99

Quel est ton domaine de formation/études ?



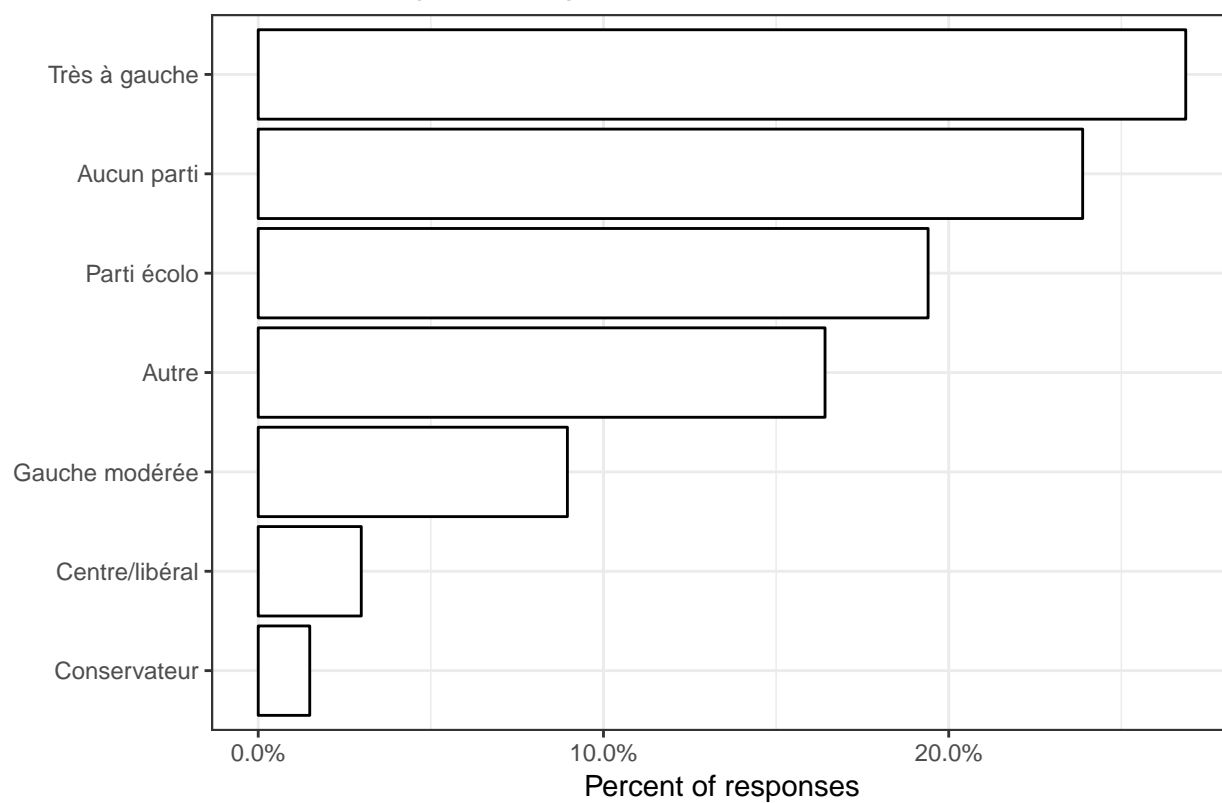
.	Freq
Ingénierie	23.88
Sciences naturelles / Sciences de l'environnement	20.90
Economie / Gestion	16.42
Mathématiques / Informatique	14.93
Other	8.96
Sciences sociales	5.97
Art / Musique / Design / Arts du spectacles	4.48
Langues / Littérature / Communication	2.99
Droit	1.49

Ton mode de vie est ?

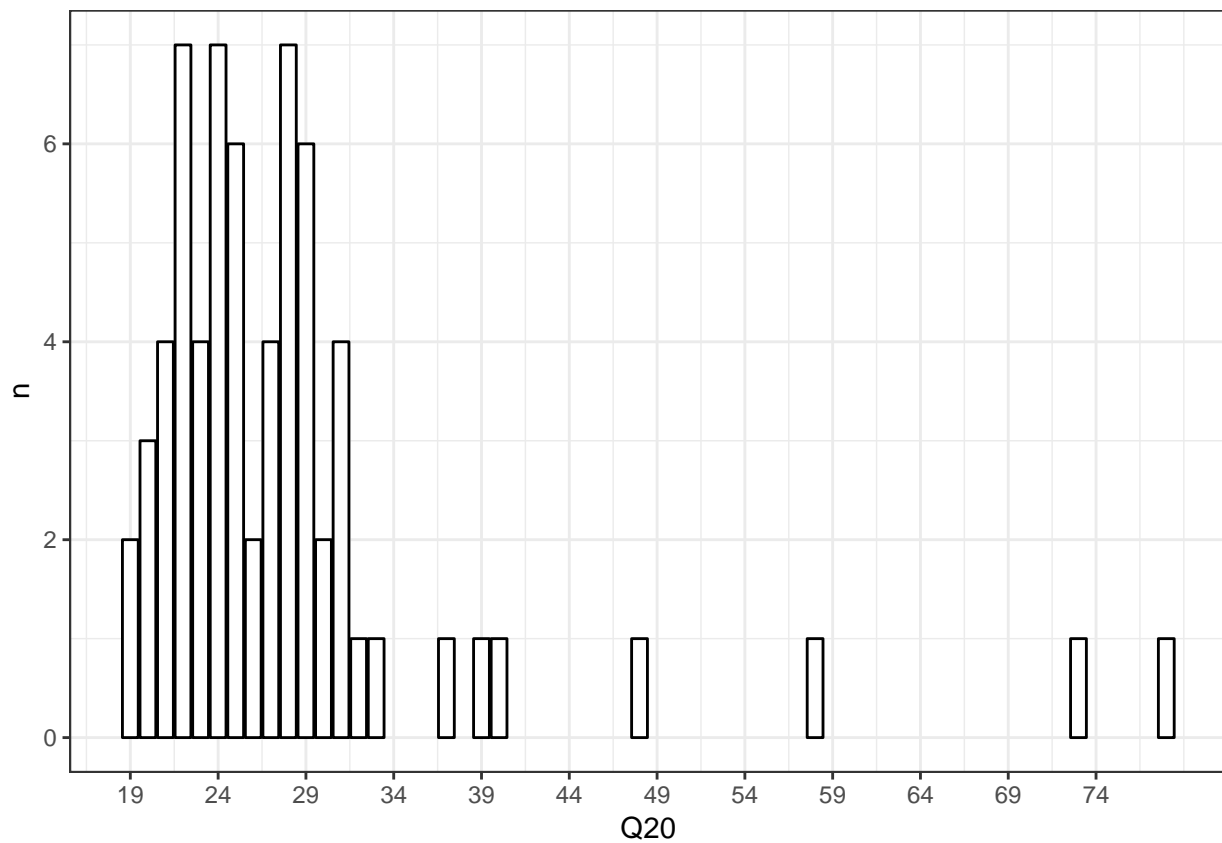


	Freq
.	
Plutôt écolo	56.72
Très frugal	35.82
Moyenne occidentale	7.46

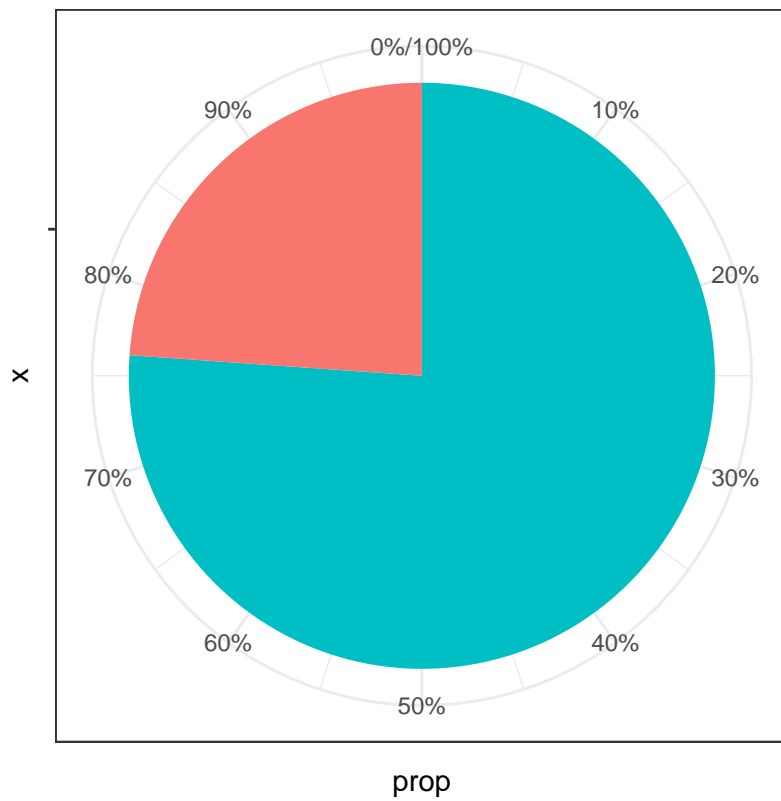
Quelle est ta proximité partisane ?



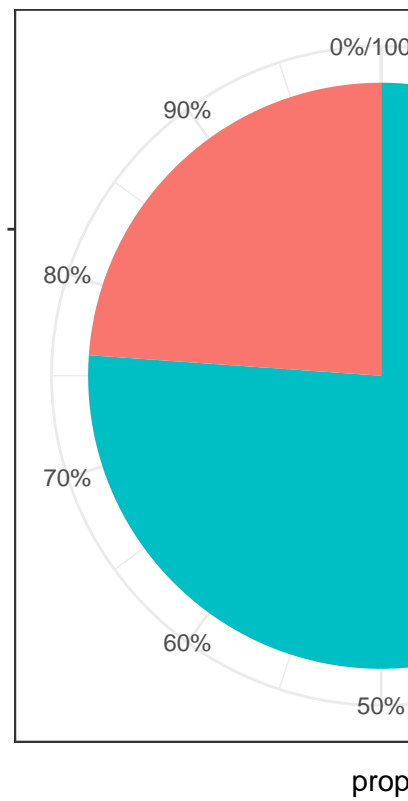
.	Freq
Très à gauche	26.87
Aucun parti	23.88
Parti écolo	19.40
Autre	16.42
Gauche modérée	8.96
Centre/libéral	2.99
Conservateur	1.49



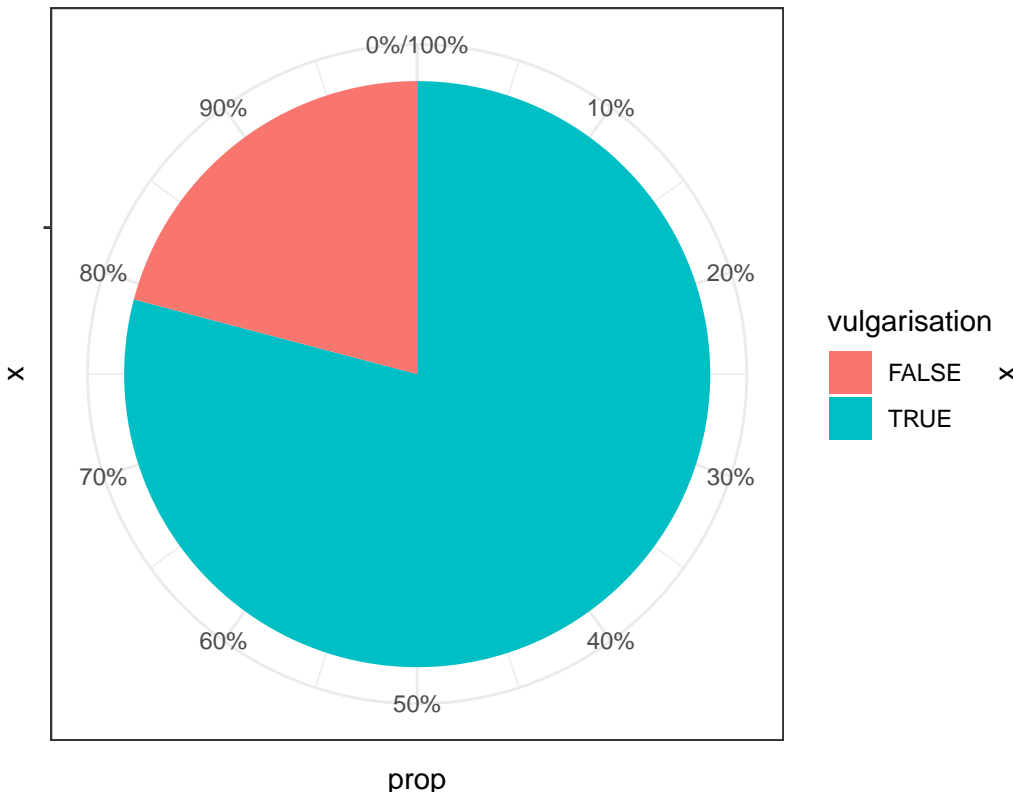
Quelles sont tes sources principales en matière d'écologie ?



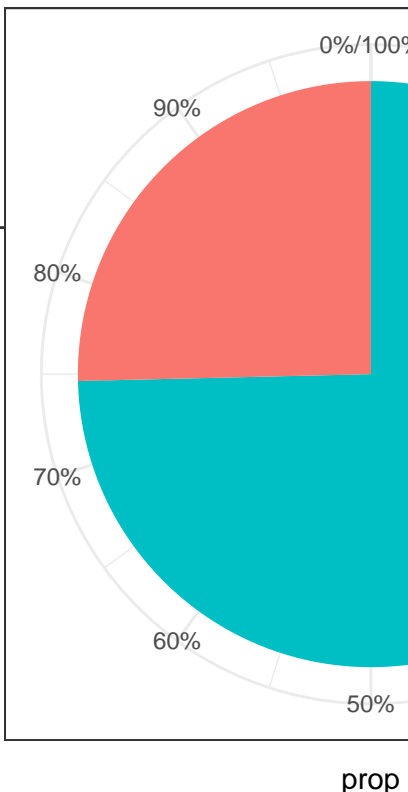
Quelles sont tes sources principales en matière d'écologie ?



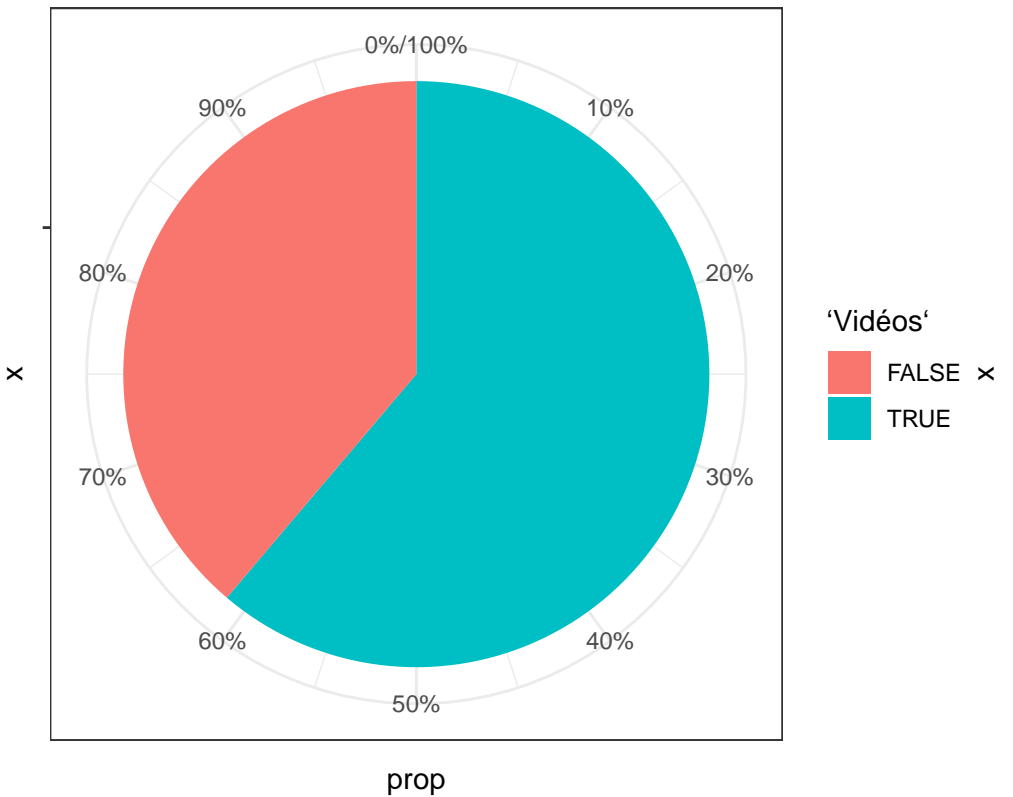
Quelles sont tes sources principales en matière d'écologie ?



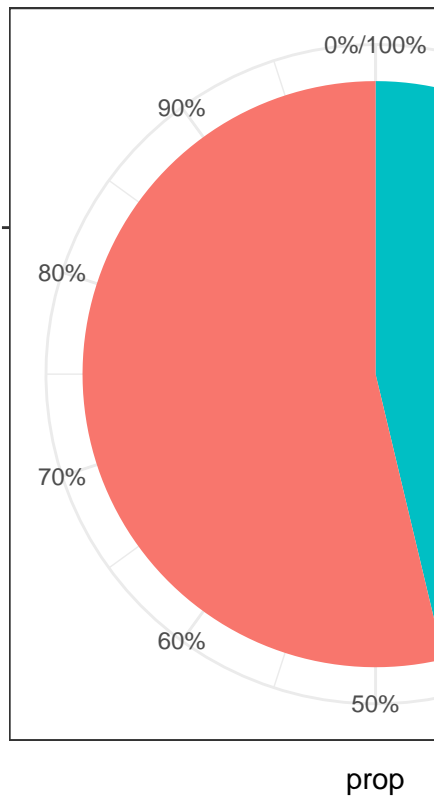
Quelles sont tes sources p



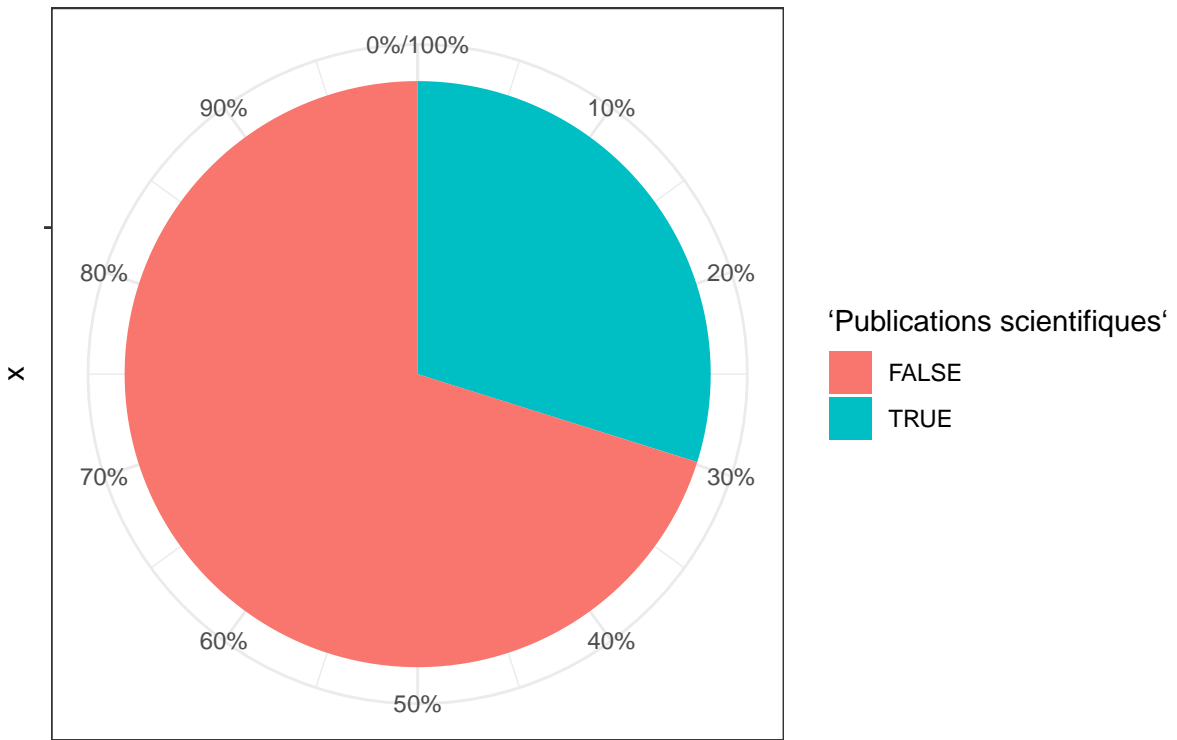
Quelles sont tes sources principales en matière d'écologie ?



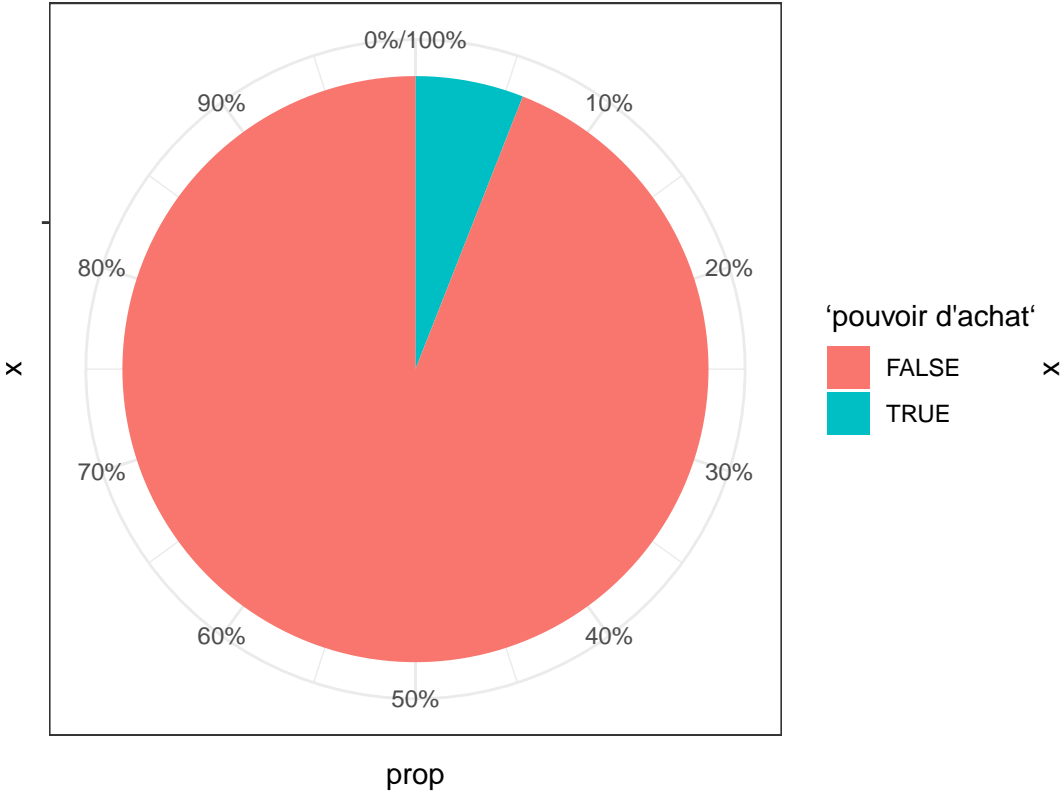
Quelles sont tes sources pri



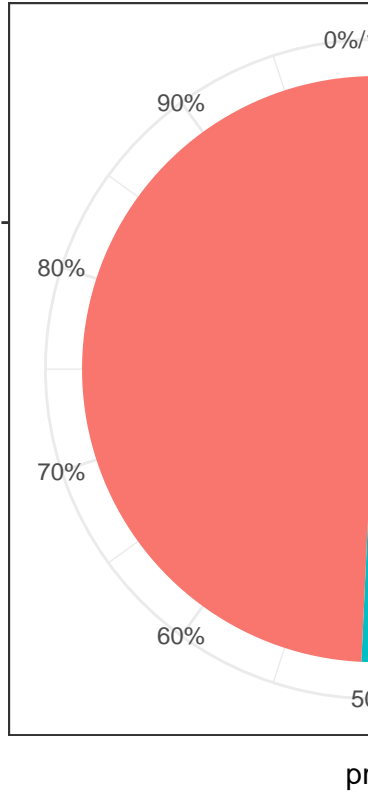
Quelles sont tes sources principales en matière d'écologie ?



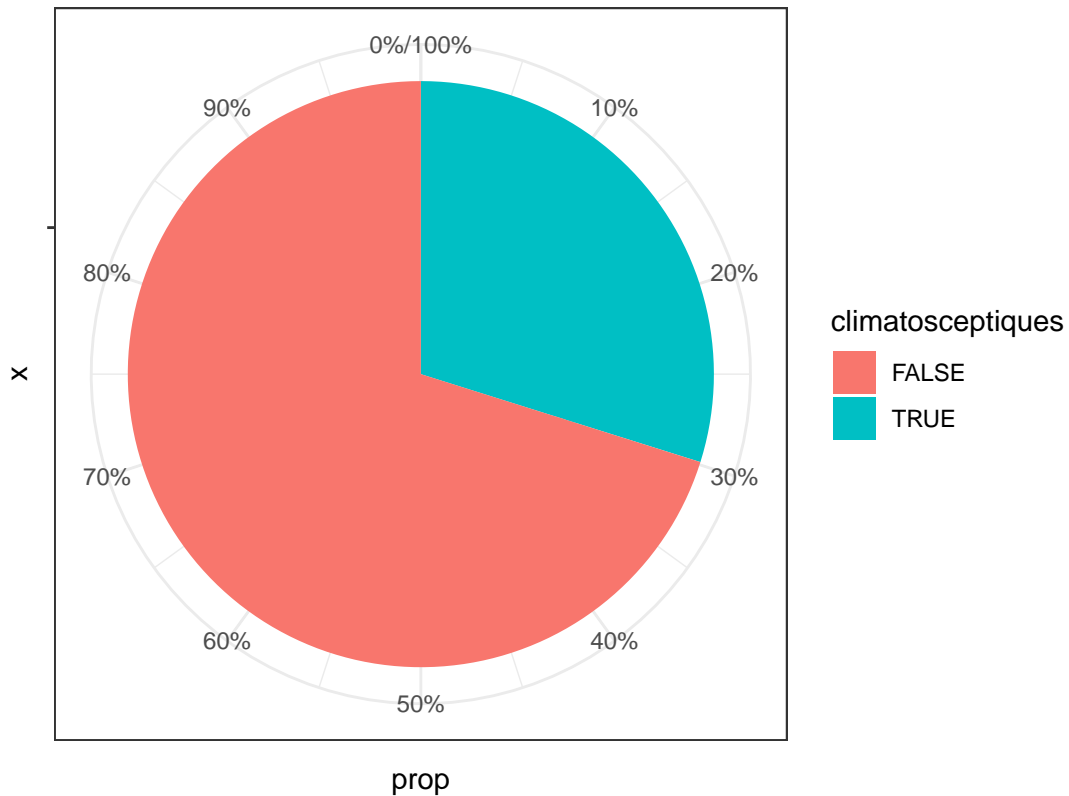
Coche les affirmations avec lesquelles tu es d'accord.



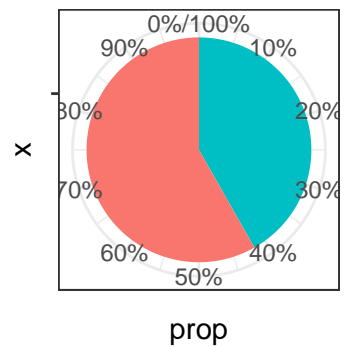
Coche les affirmations a



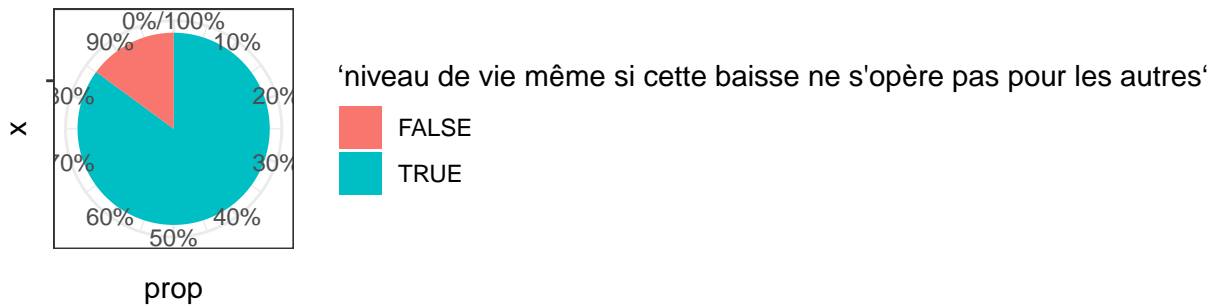
Coche les affirmations avec lesquelles tu es d'accord.



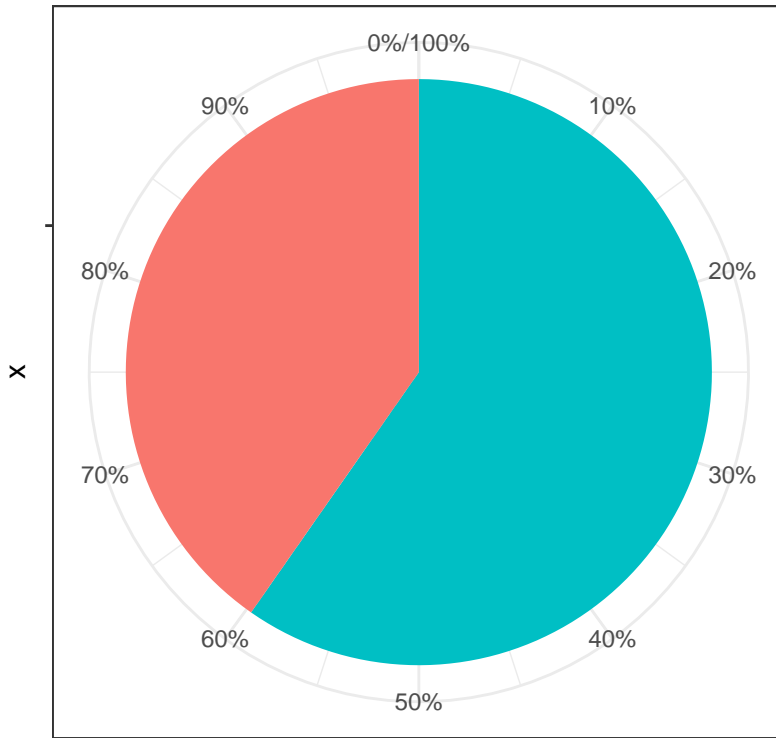
Coche les affirmations



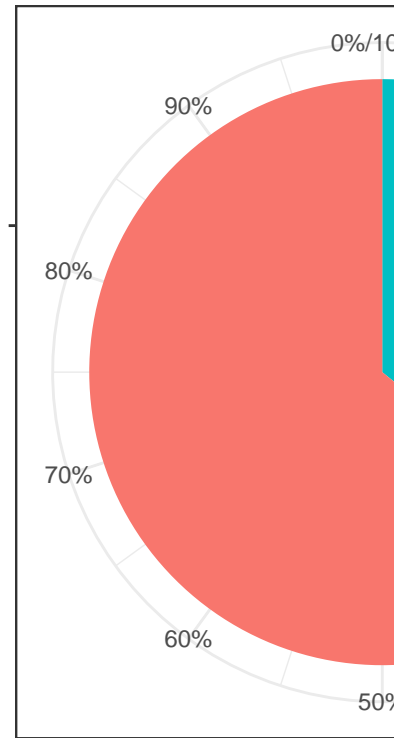
Coche les affirmations avec lesquelles tu es d'accord.



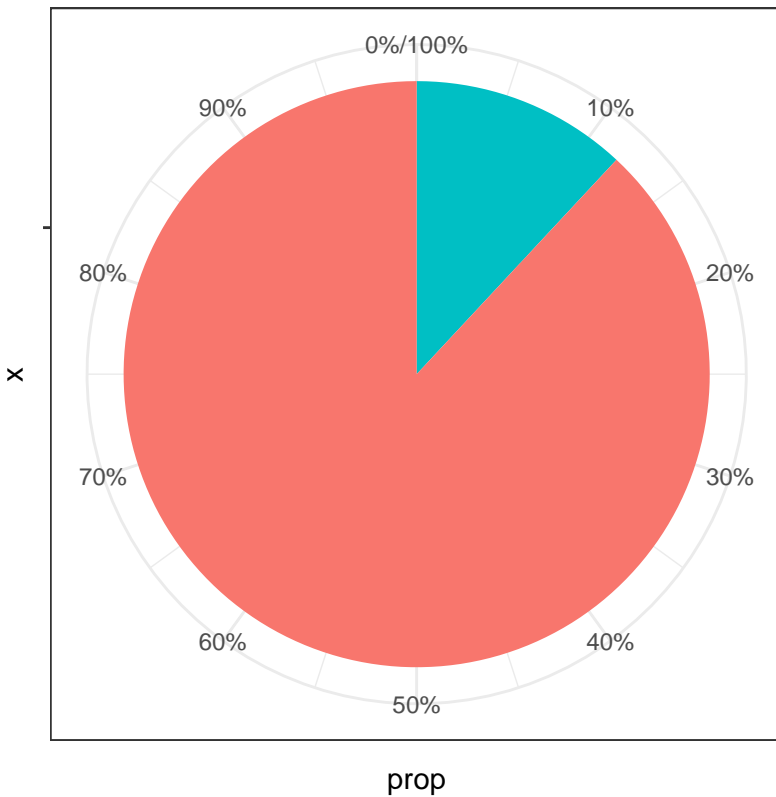
Coche les affirmations avec lesquelles tu es d'accord.



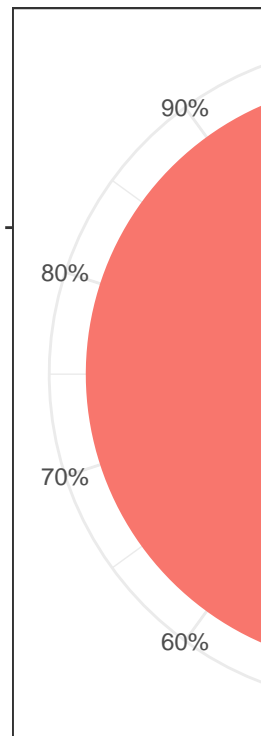
Coche les affirmations avec lesquelles tu es d'accord.



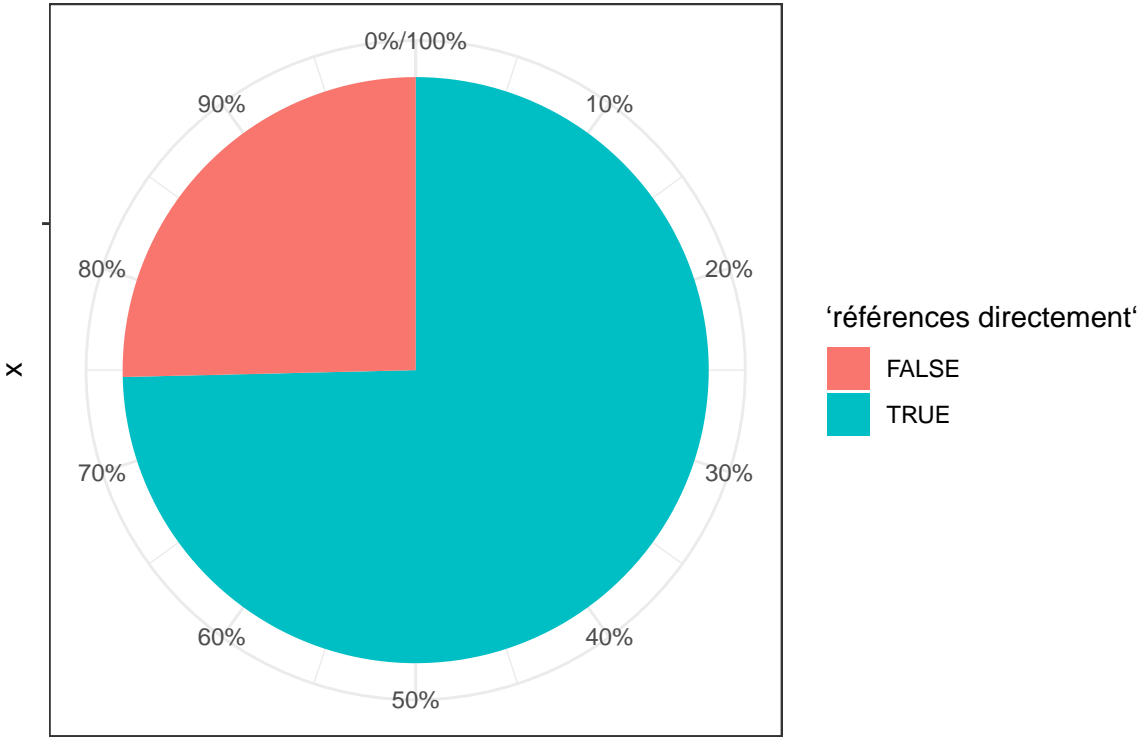
Coche les affirmations avec lesquelles tu es d'accord.



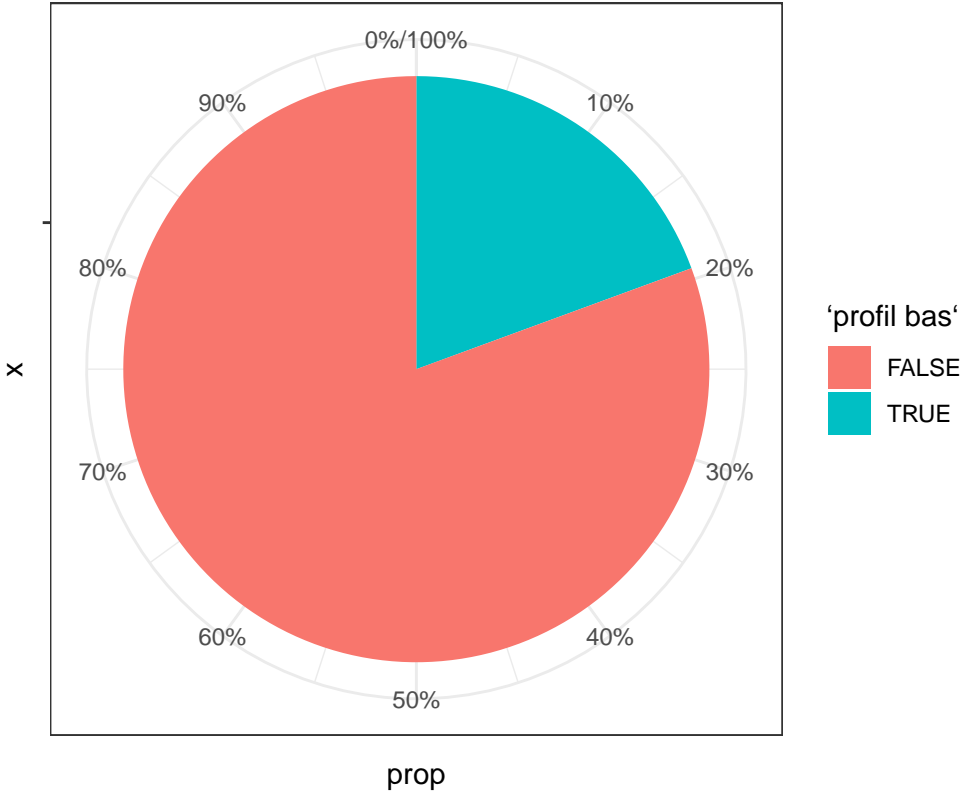
Quelles stratégies de communication utilisent-ils ?



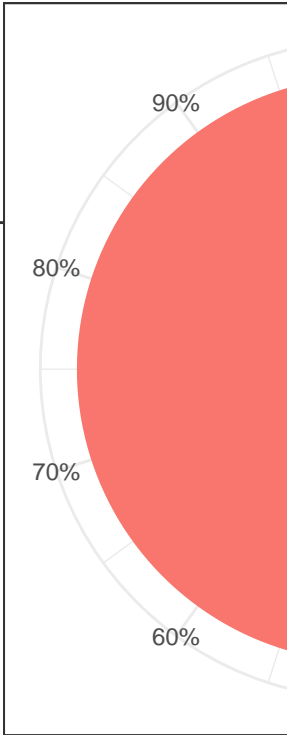
Quelles stratégies utilises-tu pour parler d'environnement à ton entourage 'références directement'



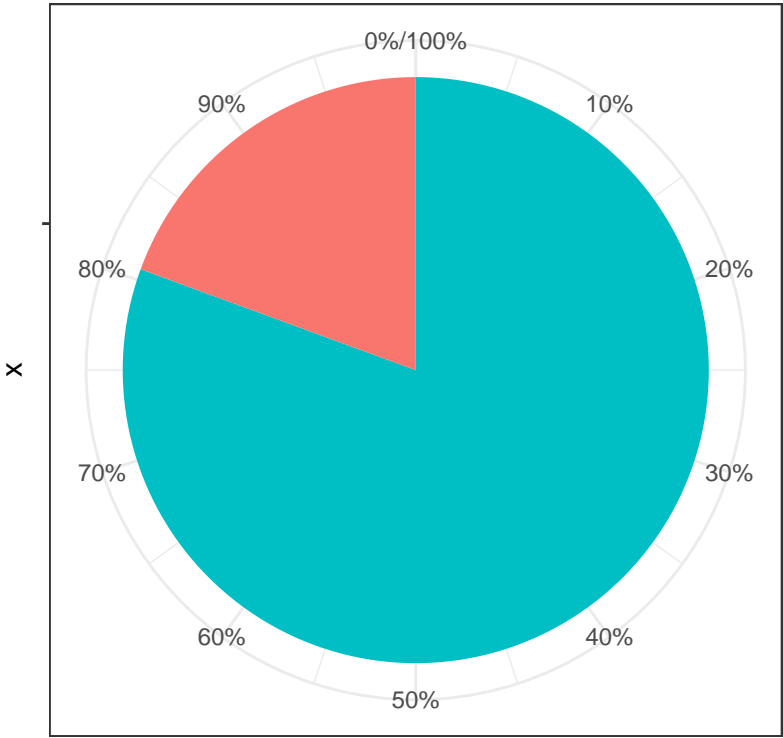
Quelles stratégies utilises-tu pour parler d'environnement à ton entou



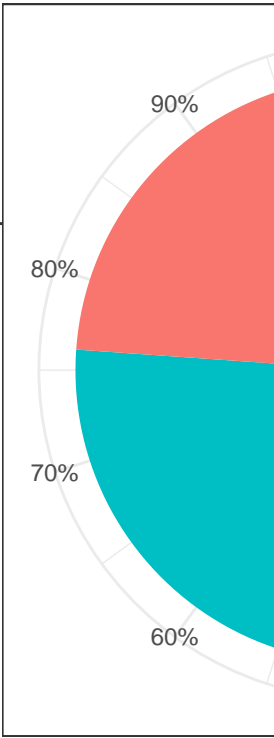
Quelles stratégies



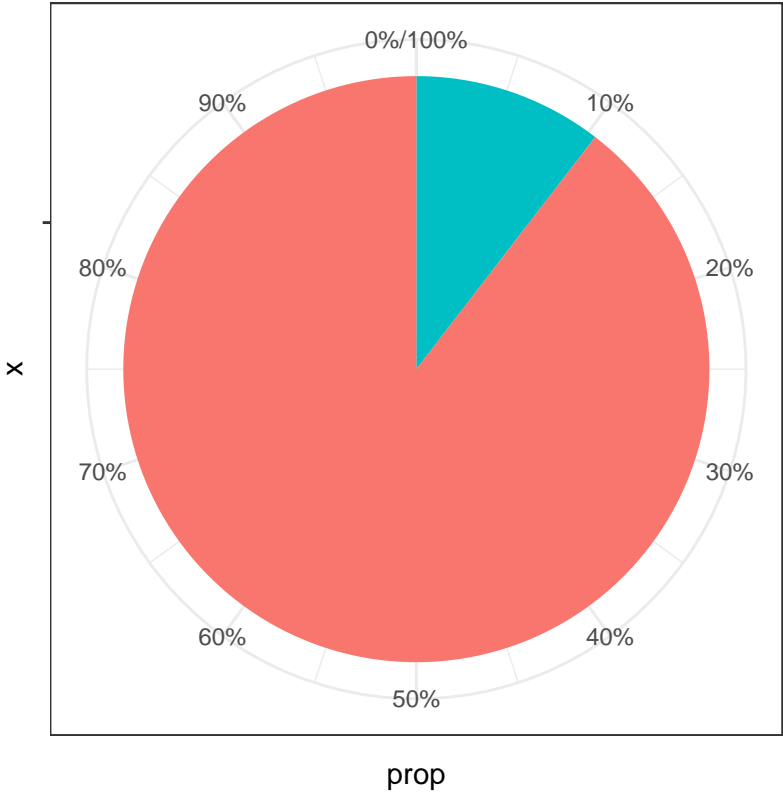
Quelles stratégies utilises-tu pour parler d'environnement à ton entour



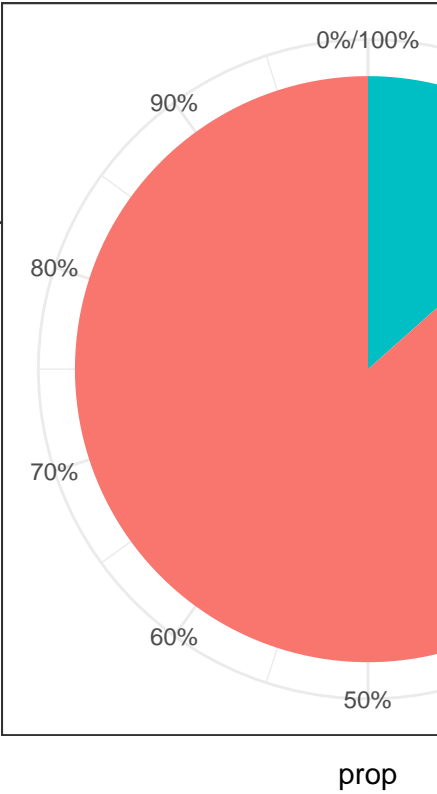
Dans Avenir Climatique



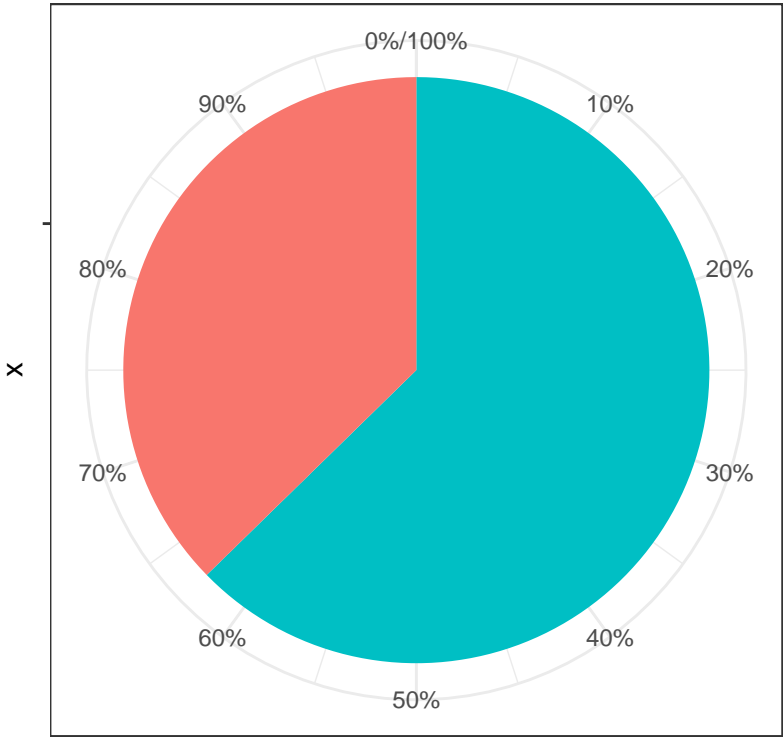
Dans Avenir Climatique, tu es ?



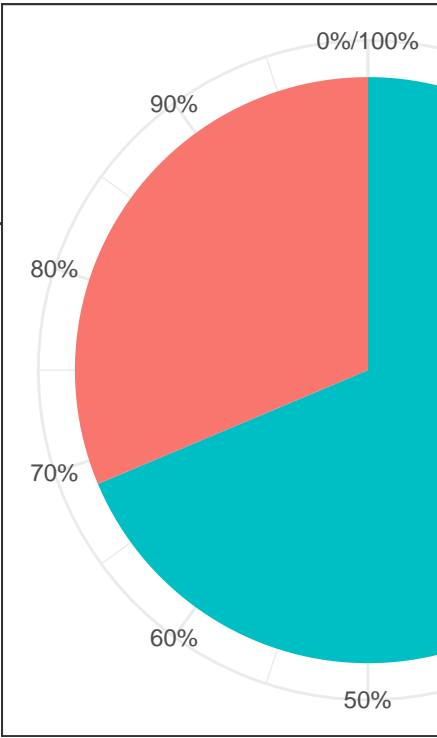
Dans Avenir Climatique, tu es ?



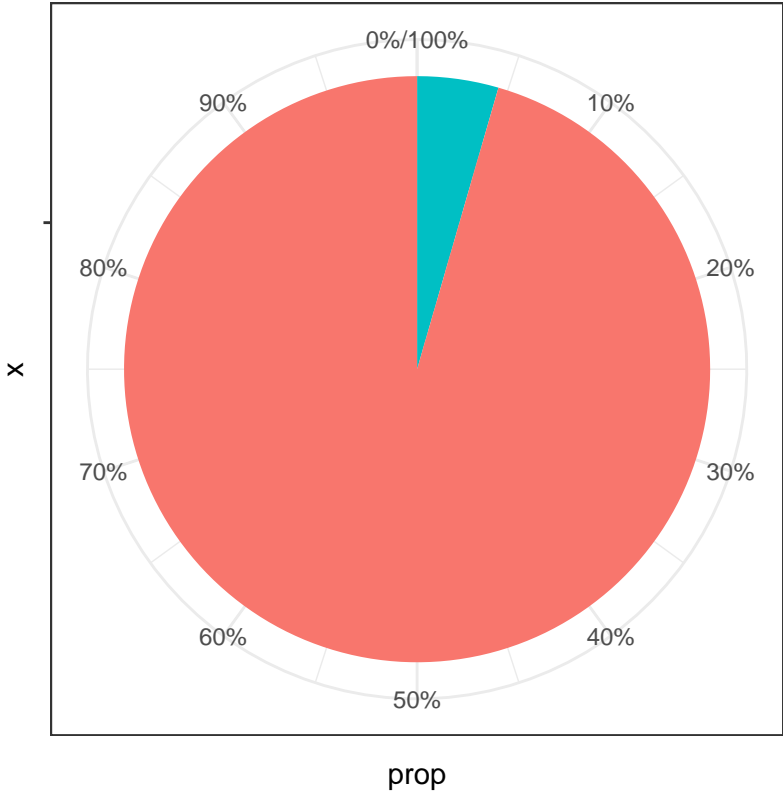
Niveau bouffe, tu es comment ?



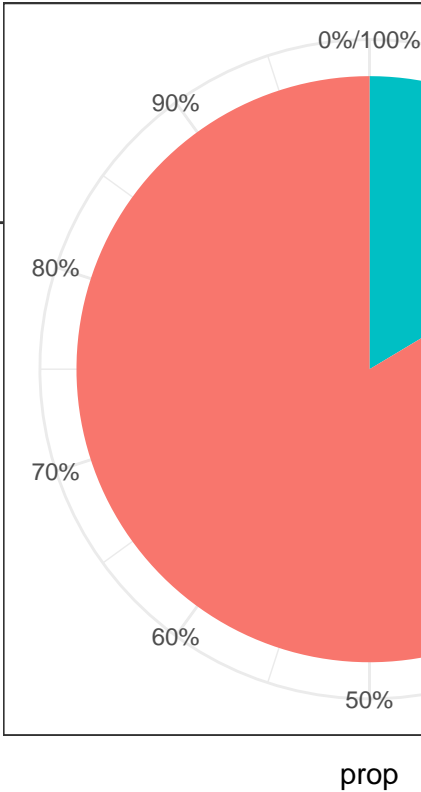
Niveau bouffe, tu es comment ?



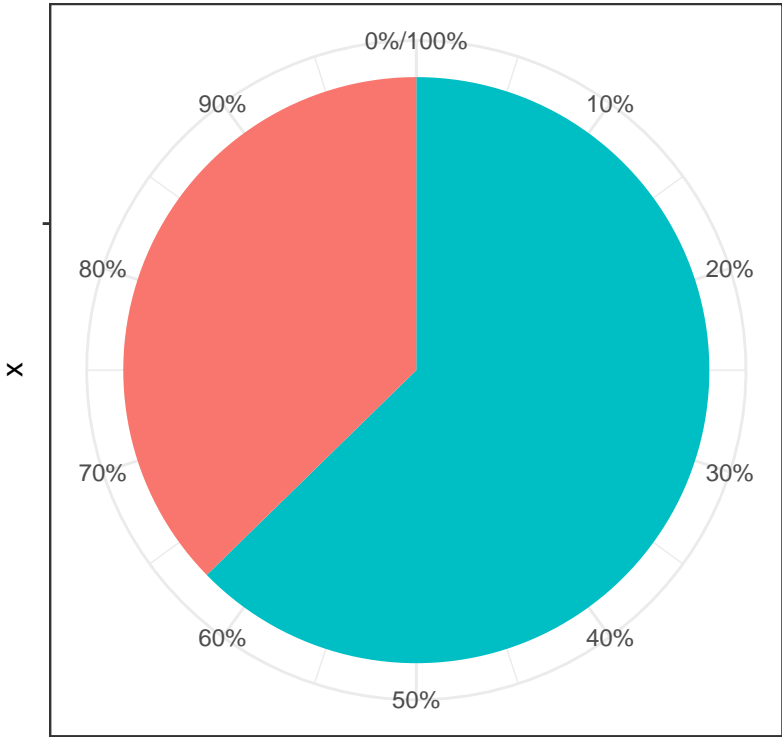
Niveau bouffe, tu es comment ?



Niveau bouffe, tu es comment ?

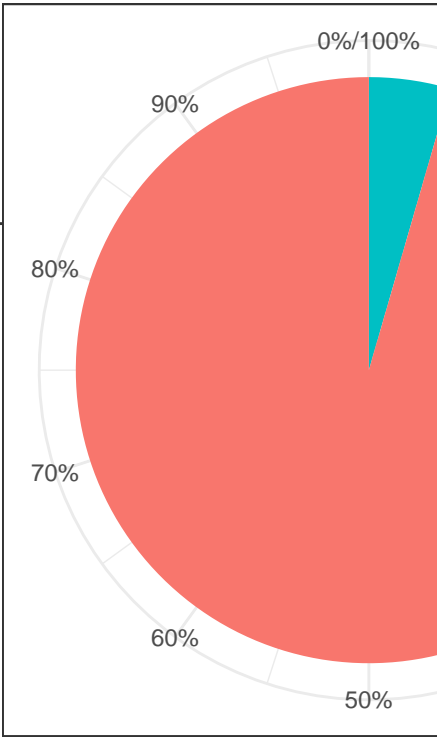


Niveau bouffe, tu es comment ?



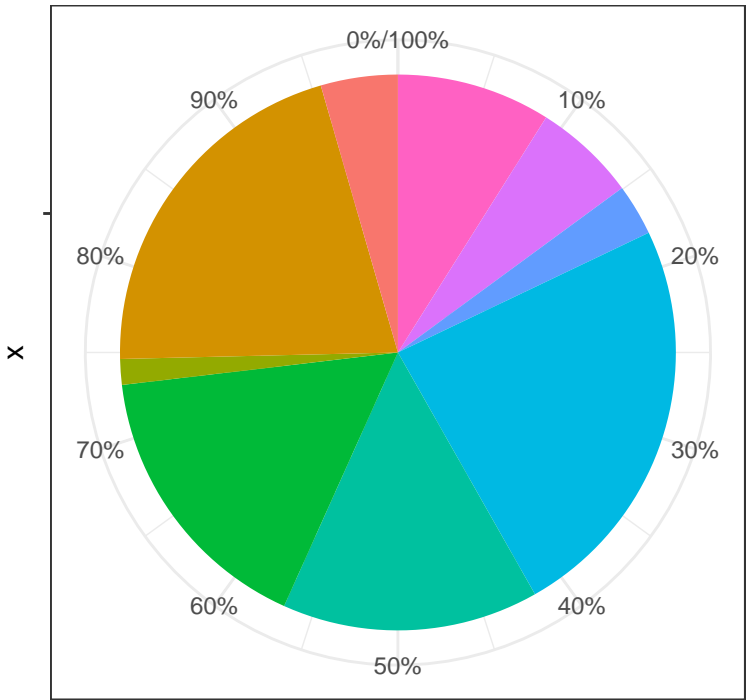
prop

Niveau bouffe, tu es comment ?



prop

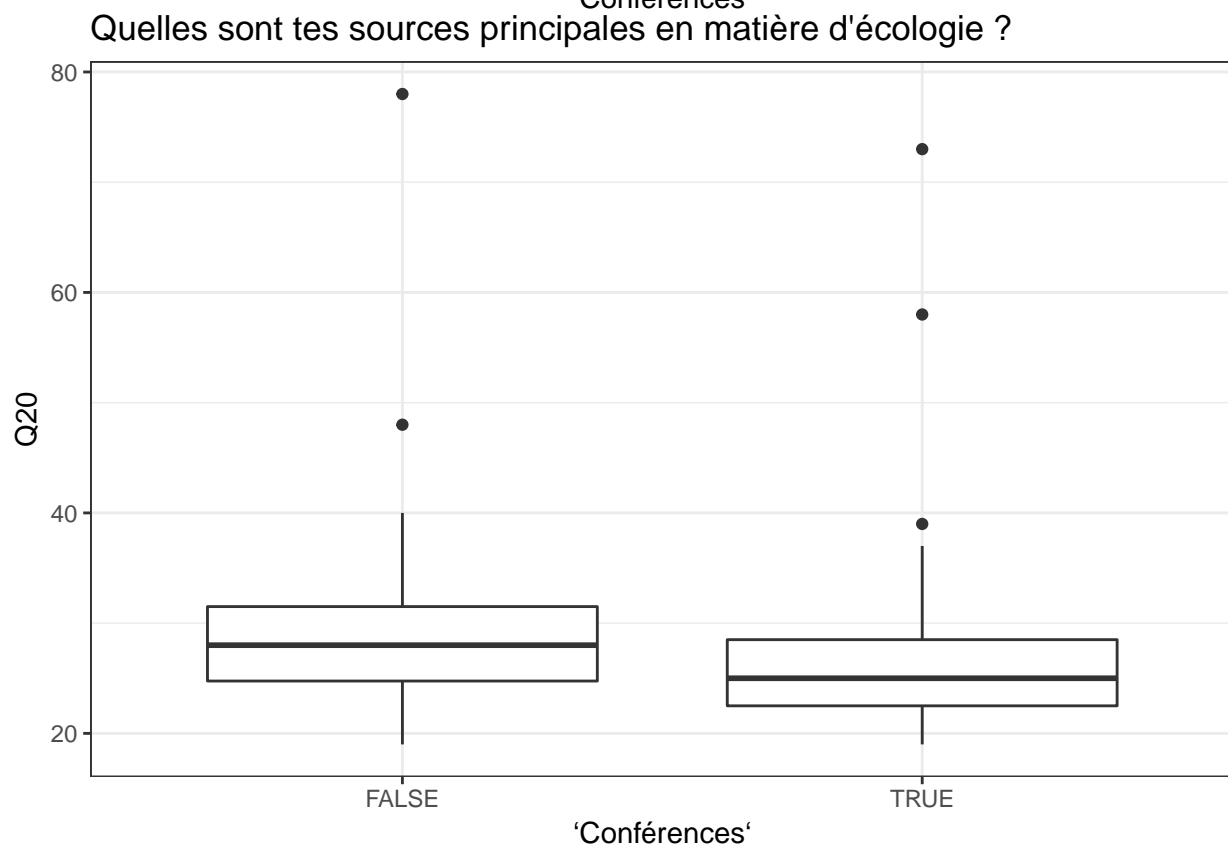
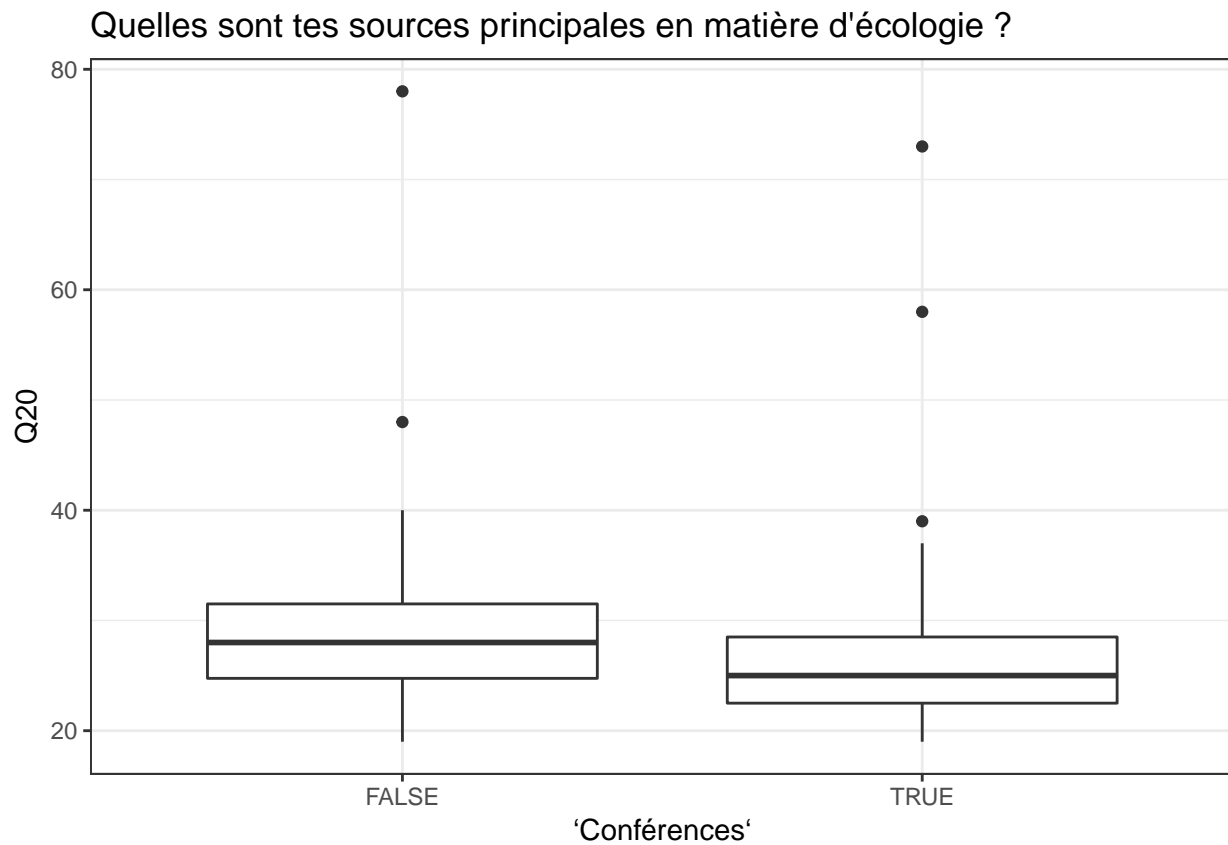
Répartition des différentes formations



prop

Domaine

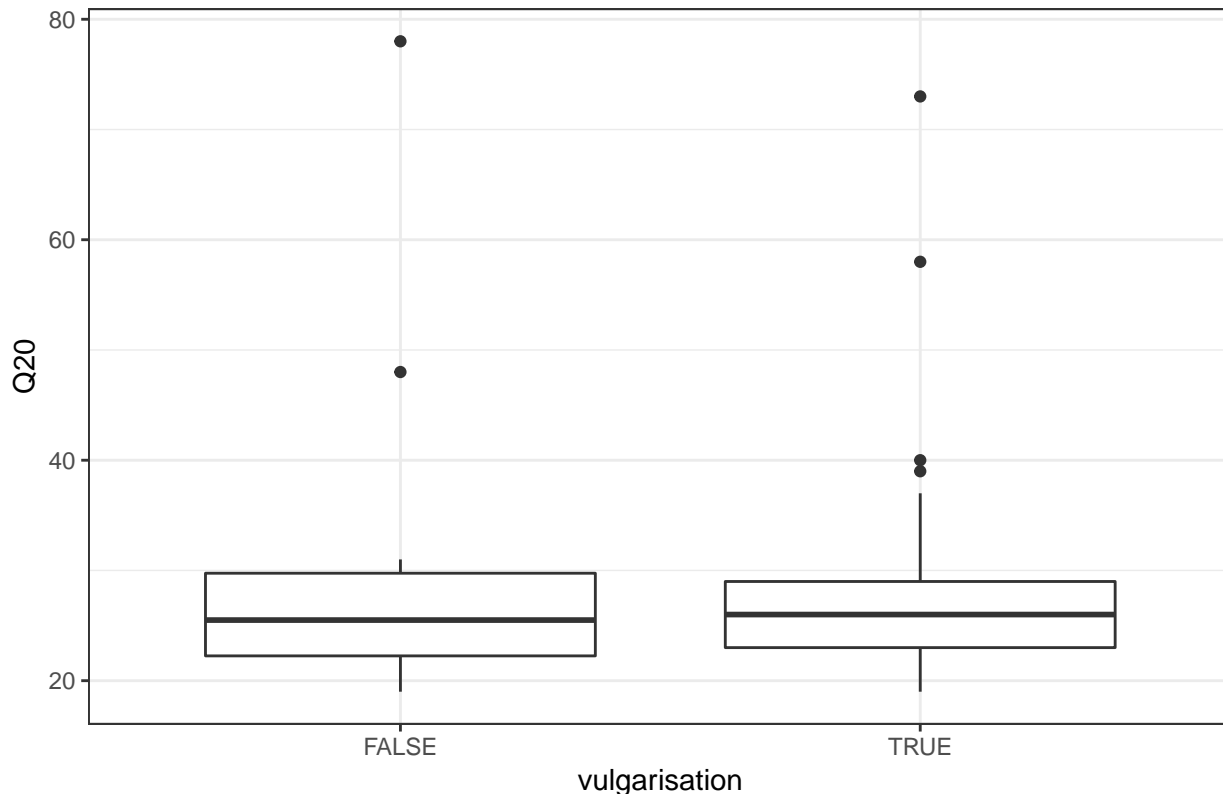
- Art / Musique / Design / Arts du spectacles
- Sciences naturelles / Sciences de l'environnement
- Droit
- Economie / Gestion
- Mathématiques / Informatique
- Ingénierie
- Langues / Littérature / Communication
- Sciences sociales
- Other



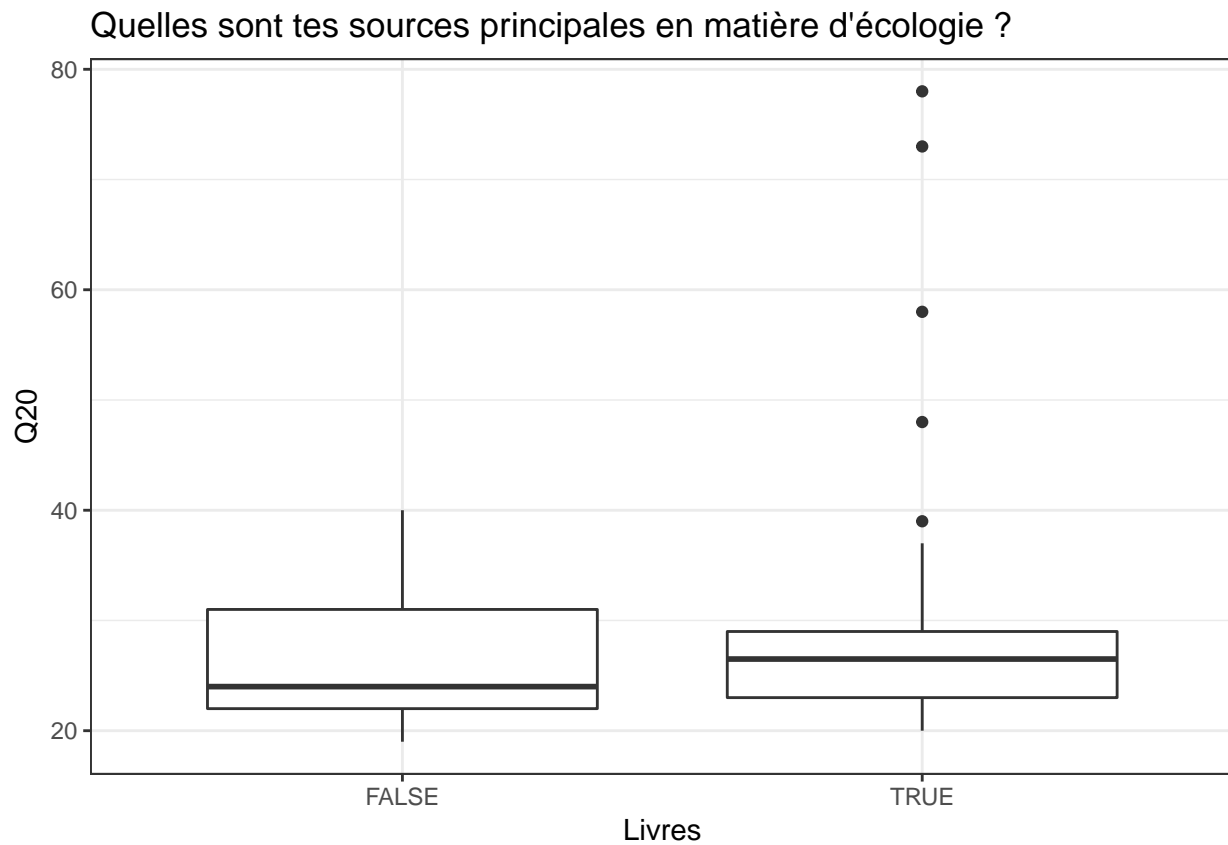
```
## [1] "Conférences"
```

```
##
## Welch Two Sample t-test
##
## data: data_work %>% filter(!sym(i) == TRUE) %>% pull(Q20) and data_work %>% filter(!sym(i) == FALSE) %>% pull(Q20)
## t = -1.2309, df = 18.839, p-value = 0.2335
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -12.586855  3.268228
## sample estimates:
## mean of x mean of y
## 27.21569 31.87500
```

Quelles sont tes sources principales en matière d'écologie ?

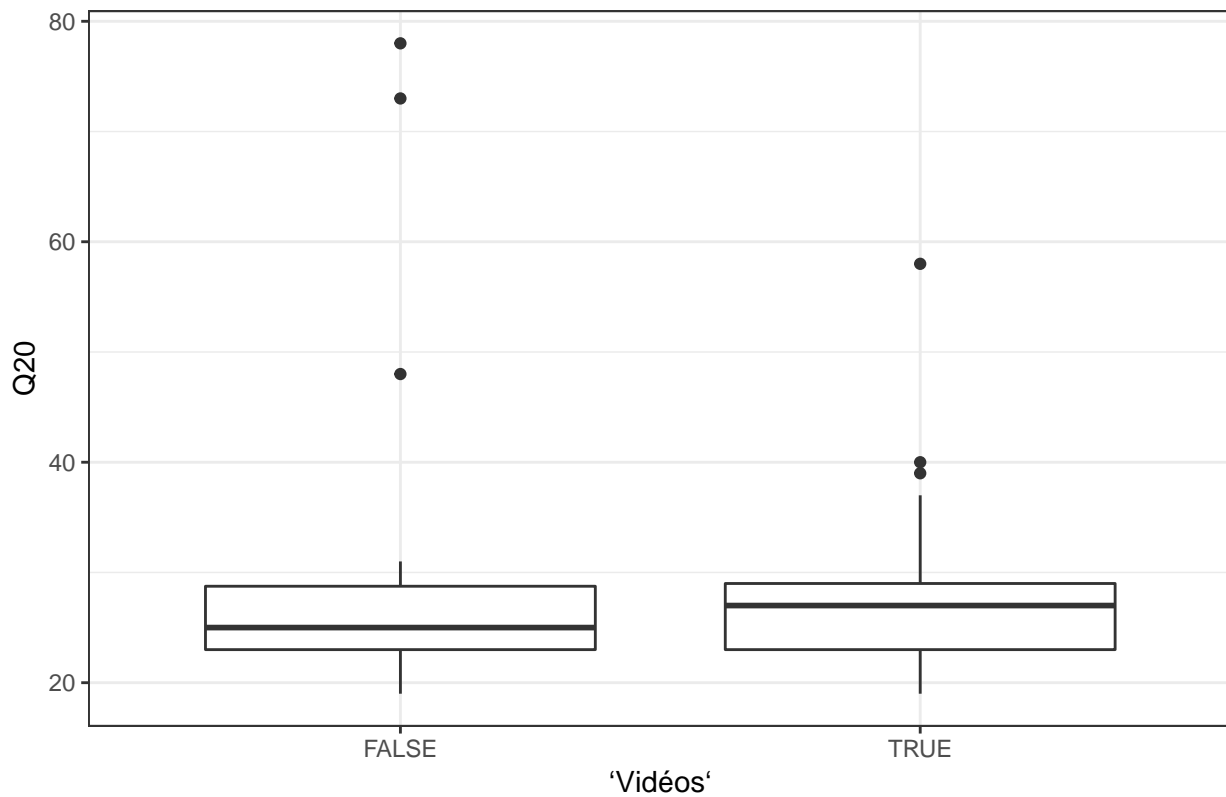


```
## [1] "vulgarisation"
##
## Welch Two Sample t-test
##
## data: data_work %>% filter(!sym(i) == TRUE) %>% pull(Q20) and data_work %>% filter(!sym(i) == FALSE) %>% pull(Q20)
## t = -0.64083, df = 15.422, p-value = 0.531
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -11.854540  6.363974
## sample estimates:
## mean of x mean of y
## 27.75472 30.50000
```

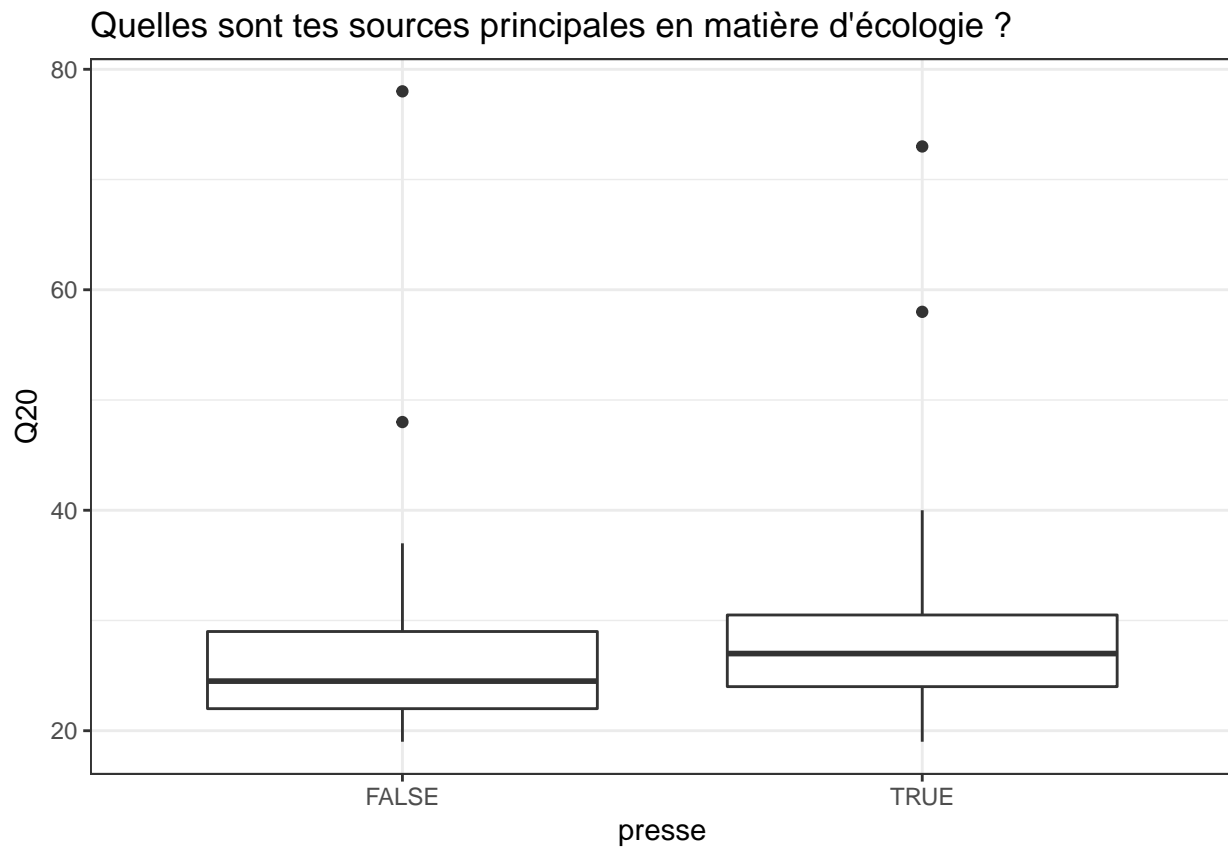


```
## [1] "Livres"
##
## Welch Two Sample t-test
##
## data: data_work %>% filter(!sym(i) == TRUE) %>% pull(Q20) and data_work %>% filter(!sym(i) == FALSE)
## t = 1.2601, df = 56.391, p-value = 0.2128
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -1.606866 7.058631
## sample estimates:
## mean of x mean of y
## 29.02000 26.29412
```

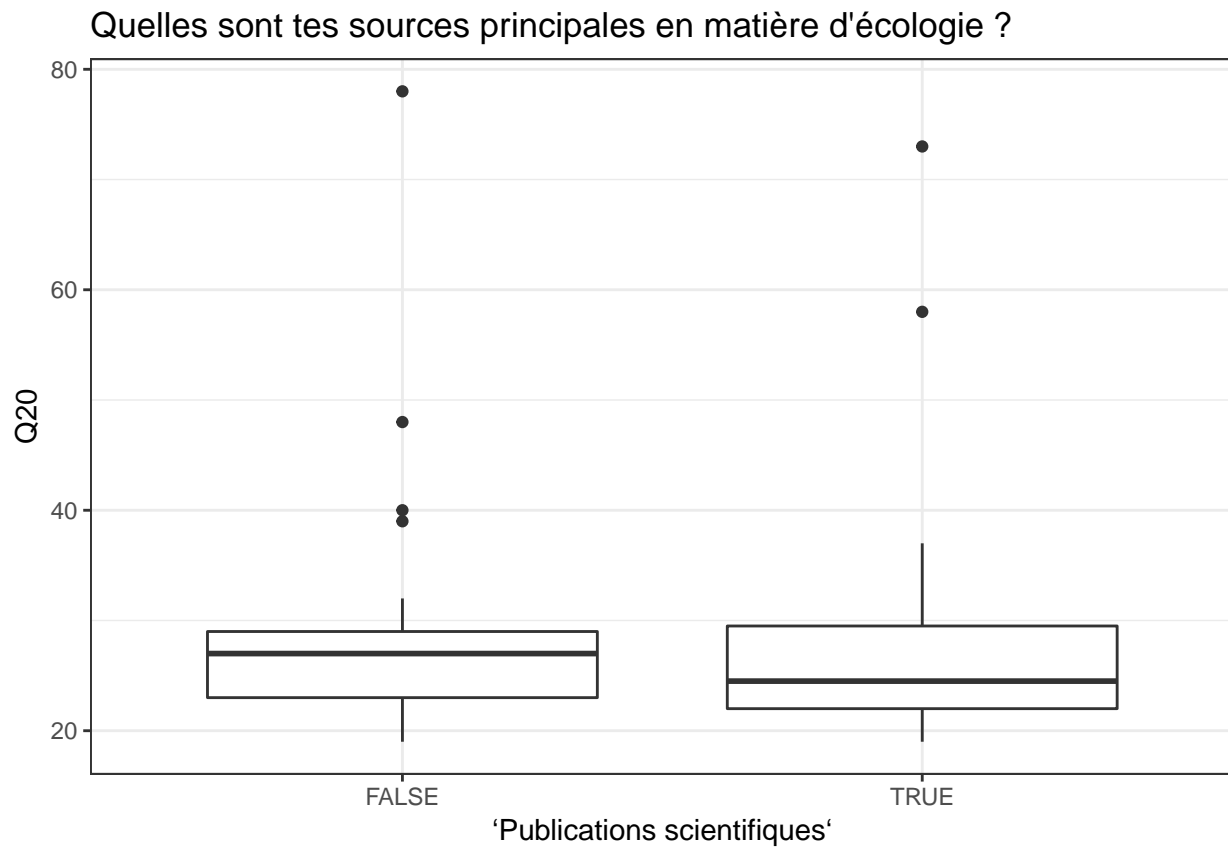
Quelles sont tes sources principales en matière d'écologie ?



```
## [1] "Vidéos"
##
## Welch Two Sample t-test
##
## data: data_work %>% filter(!sym(i) == TRUE) %>% pull(Q20) and data_work %>% filter(!sym(i) == FALSE) %>% pull(Q20)
## t = -0.81239, df = 32.418, p-value = 0.4225
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -8.696077 3.735477
## sample estimates:
## mean of x mean of y
## 27.36585 29.84615
```

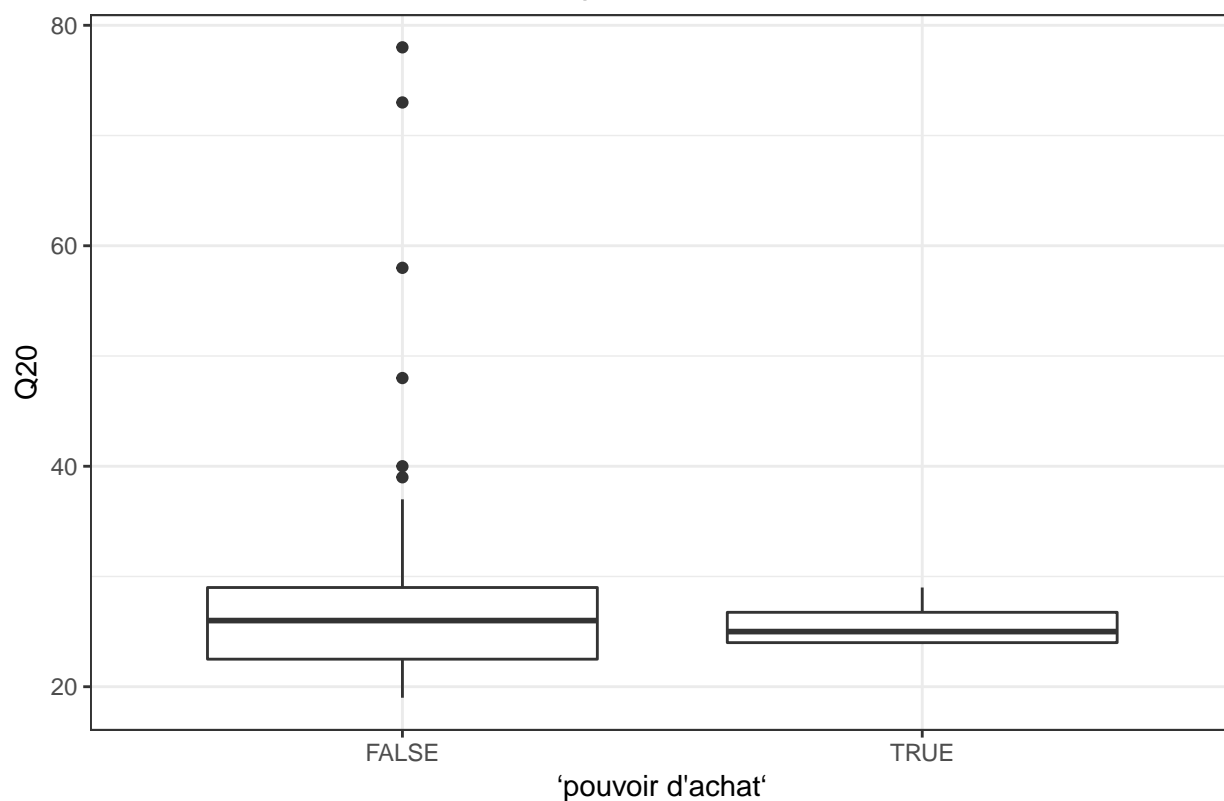



```
## [1] "presse"
##
## Welch Two Sample t-test
##
## data: data_work %>% filter(!sym(i) == TRUE) %>% pull(Q20) and data_work %>% filter(!sym(i) == FALSE)
## t = 0.87378, df = 62.304, p-value = 0.3856
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -2.923423 7.464642
## sample estimates:
## mean of x mean of y
## 29.54839 27.27778
```



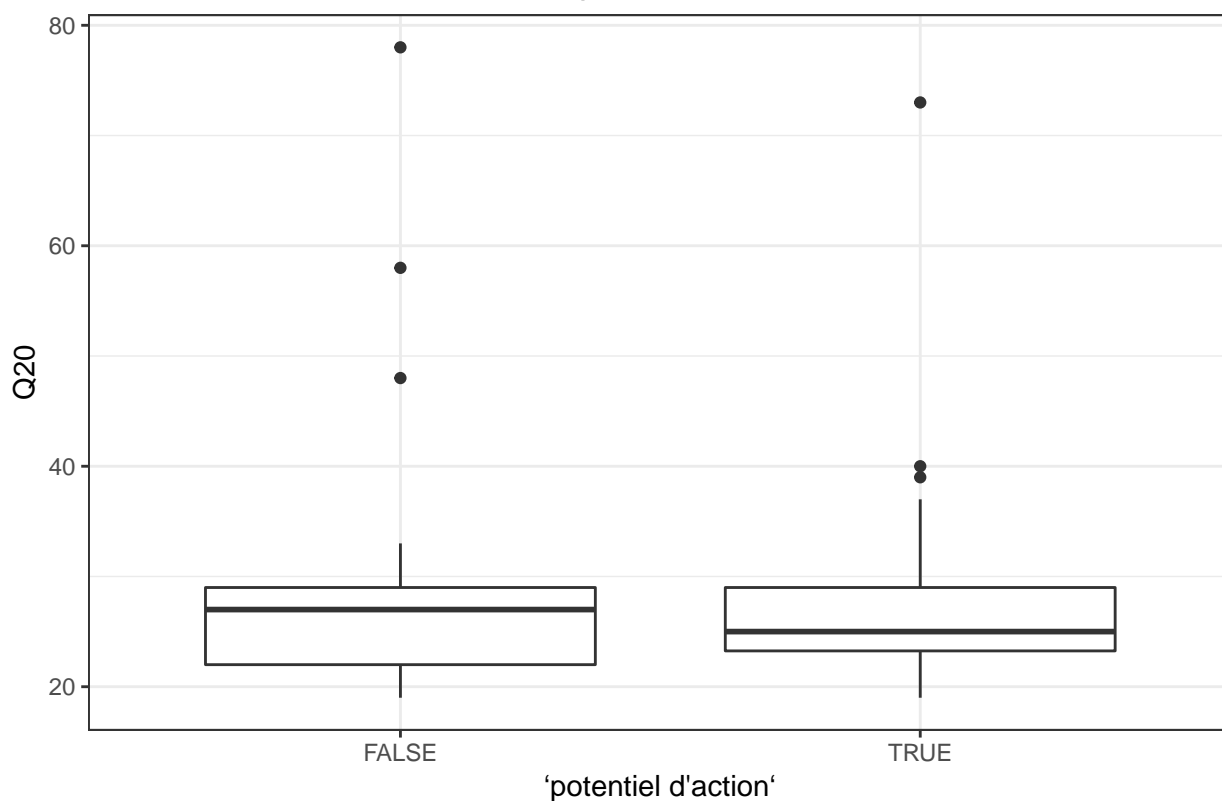
```
## [1] "Publications scientifiques"
##
## Welch Two Sample t-test
##
## data: data_work %>% filter(!sym(i) == TRUE) %>% pull(Q20) and data_work %>% filter(!sym(i) == FALSE)
## t = 0.42108, df = 26.862, p-value = 0.677
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -5.365879 8.136092
## sample estimates:
## mean of x mean of y
## 29.30000 27.91489
```

Coche les affirmations avec lesquelles tu es d'accord.



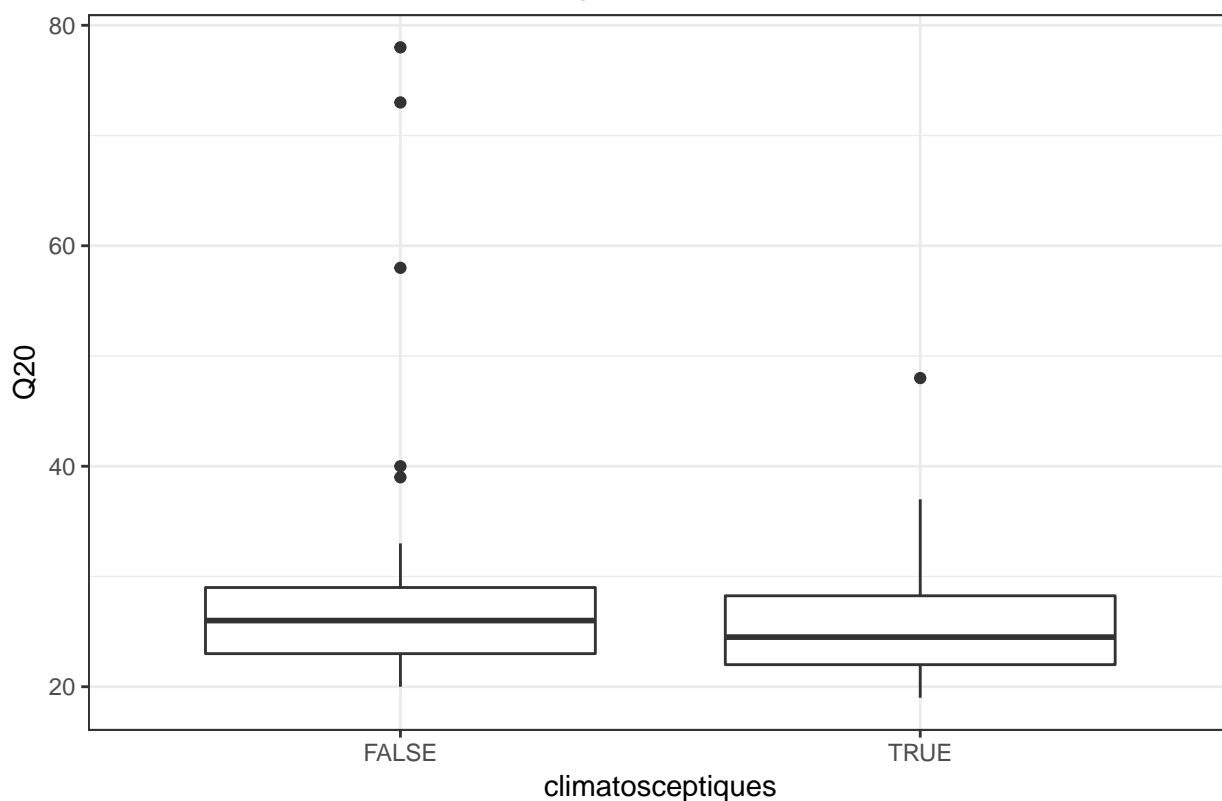
```
## [1] "pouvoir d'achat"
##
## Welch Two Sample t-test
##
## data: data_work %>% filter(!sym(i) == TRUE) %>% pull(Q20) and data_work %>% filter(!sym(i) == FALSE)
## t = -1.5182, df = 15.081, p-value = 0.1496
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -6.589955 1.105828
## sample estimates:
## mean of x mean of y
## 25.75000 28.49206
```

Coche les affirmations avec lesquelles tu es d'accord.



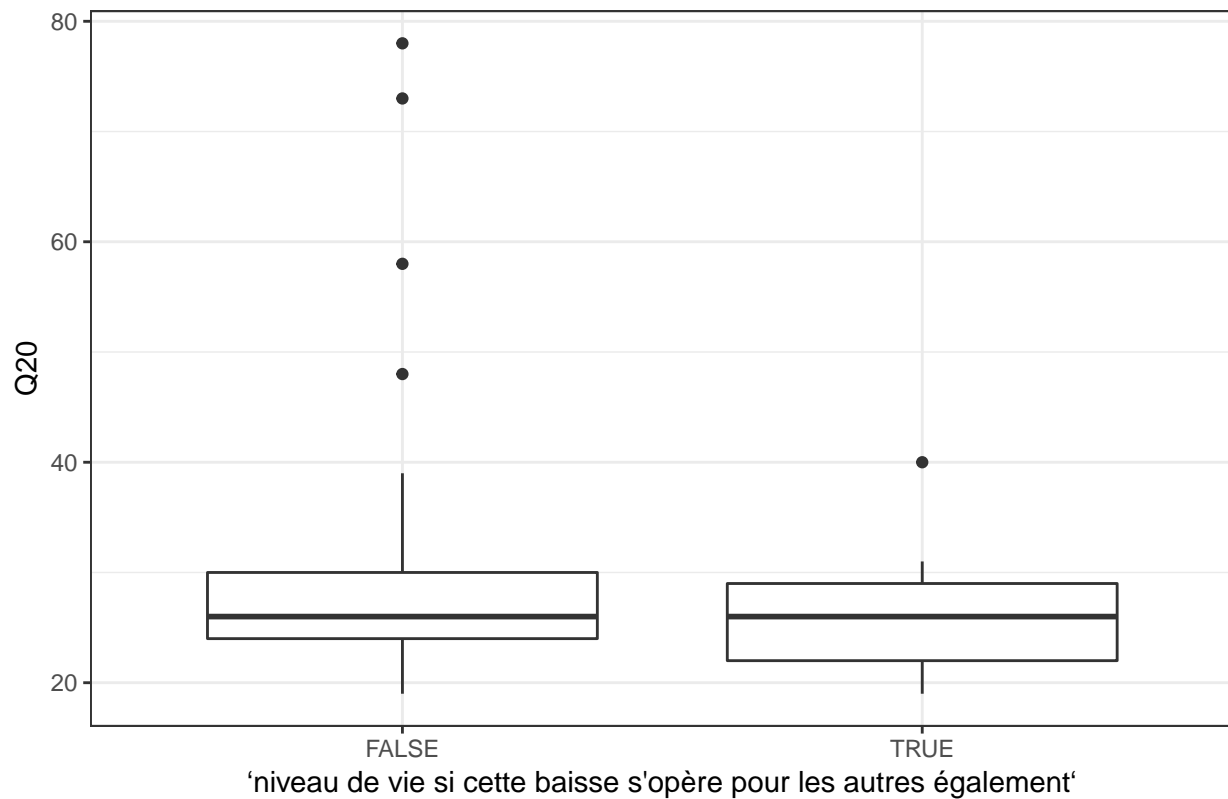
```
## [1] "potentiel d'action"
##
## Welch Two Sample t-test
##
## data: data_work %>% filter(!sym(i) == TRUE) %>% pull(Q20) and data_work %>% filter(!sym(i) == FALSE)
## t = -0.41708, df = 61.456, p-value = 0.6781
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -6.284179 4.114838
## sample estimates:
## mean of x mean of y
## 27.79412 28.87879
```

Coche les affirmations avec lesquelles tu es d'accord.



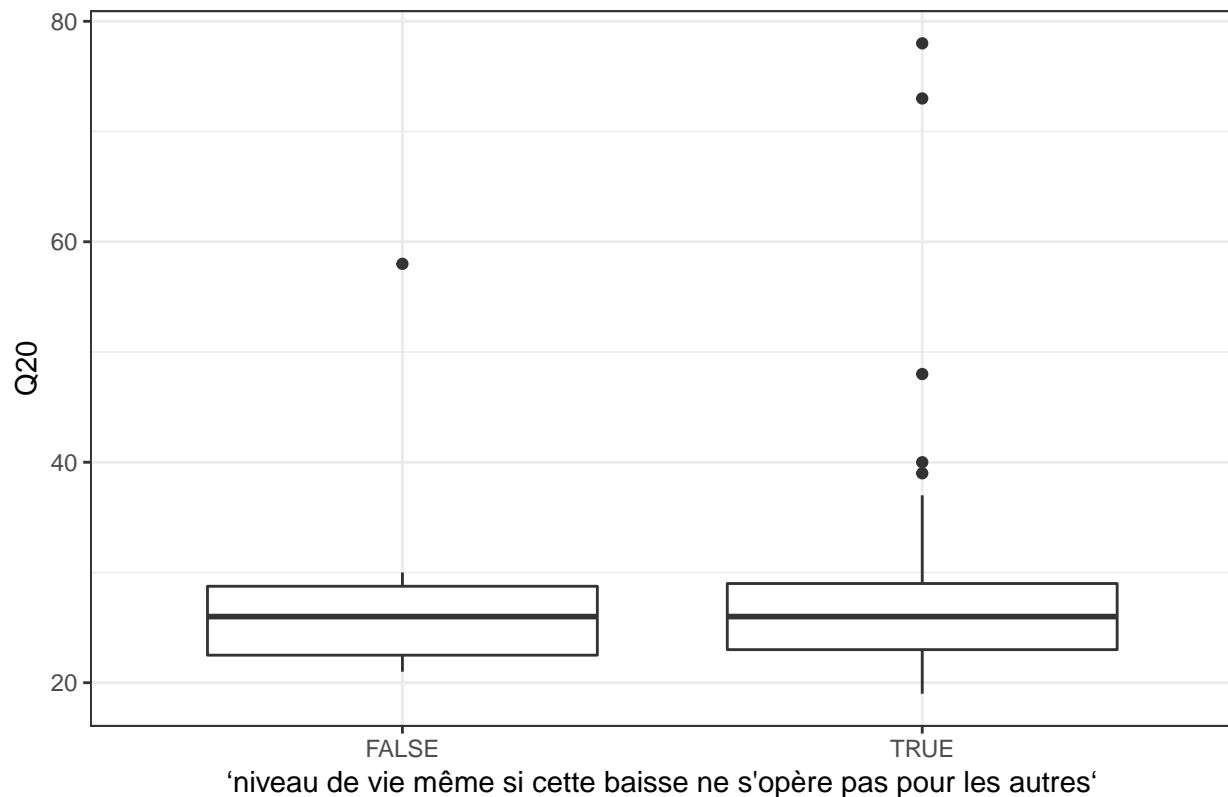
```
## [1] "climatosceptiques"
##
## Welch Two Sample t-test
##
## data: data_work %>% filter(!sym(i) == TRUE) %>% pull(Q20) and data_work %>% filter(!sym(i) == FALSE)
## t = -1.1318, df = 58.25, p-value = 0.2623
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -7.215484 2.002718
## sample estimates:
## mean of x mean of y
## 26.50000 29.10638
```

Coche les affirmations avec lesquelles tu es d'accord.



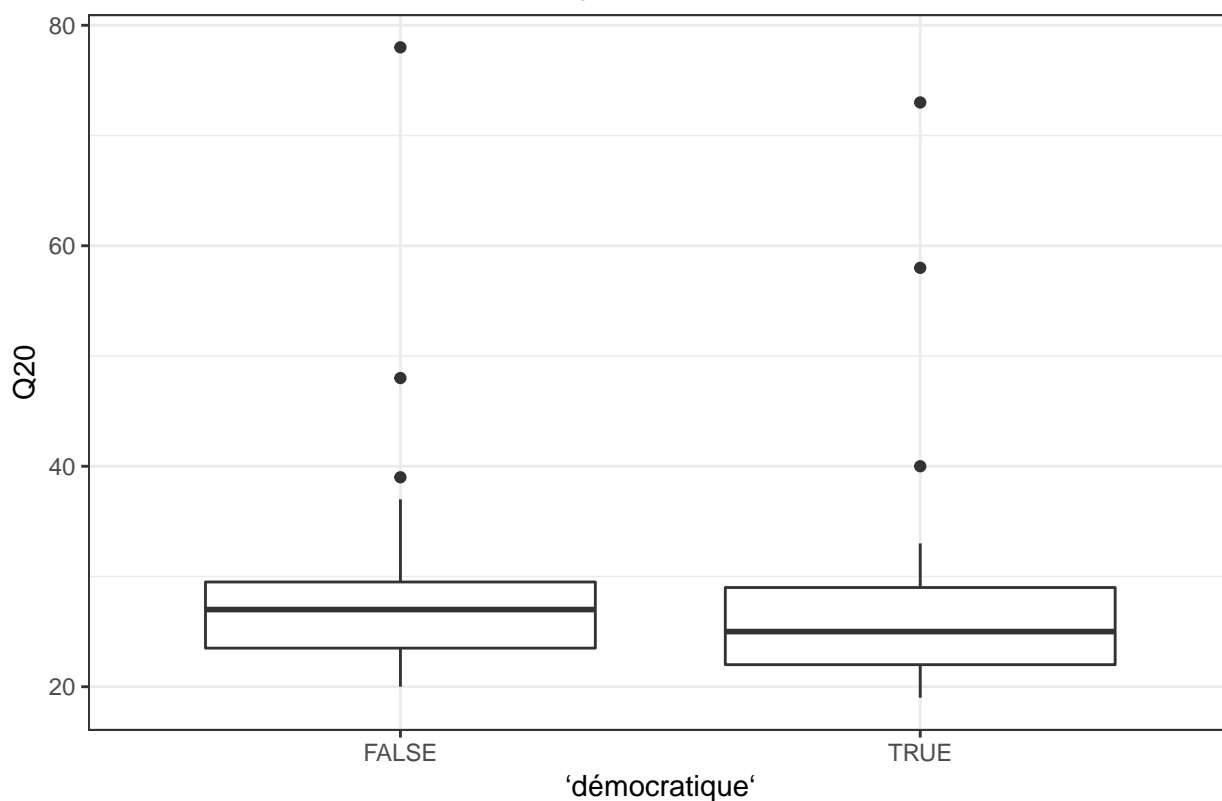
```
## [1] "niveau de vie si cette baisse s'opère pour les autres également"
##
## Welch Two Sample t-test
##
## data: data_work %>% filter(!sym(i) == TRUE) %>% pull(Q20) and data_work %>% filter(!sym(i) == FALSE)
## t = -1.8188, df = 50.325, p-value = 0.0749
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -8.6748397 0.4294185
## sample estimates:
## mean of x mean of y
## 25.92857 30.05128
```

Coche les affirmations avec lesquelles tu es d'accord.



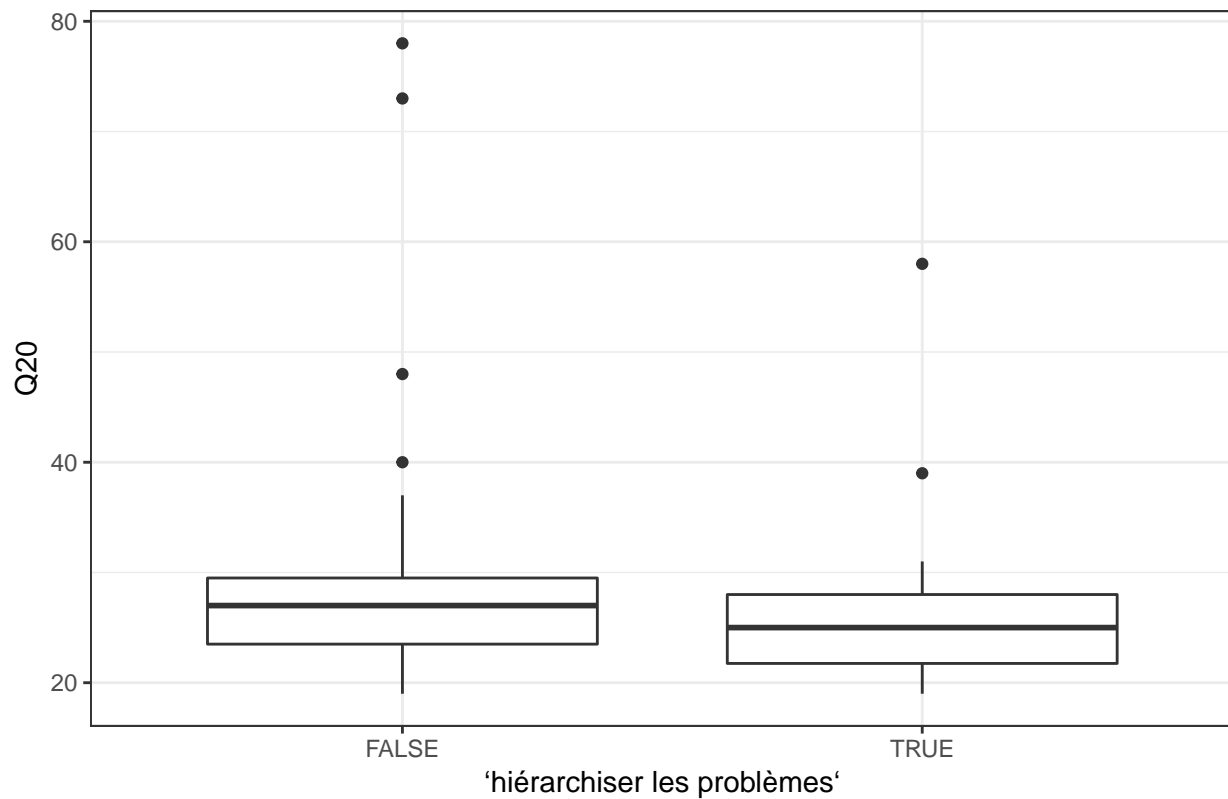
```
## [1] "niveau de vie même si cette baisse ne s'opère pas pour les autres"
##
## Welch Two Sample t-test
##
## data: data_work %>% filter(!sym(i) == TRUE) %>% pull(Q20) and data_work %>% filter(!sym(i) == FALSE)
## t = -0.086525, df = 12.244, p-value = 0.9324
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -8.341975 7.703379
## sample estimates:
## mean of x mean of y
## 28.2807 28.6000
```

Coche les affirmations avec lesquelles tu es d'accord.



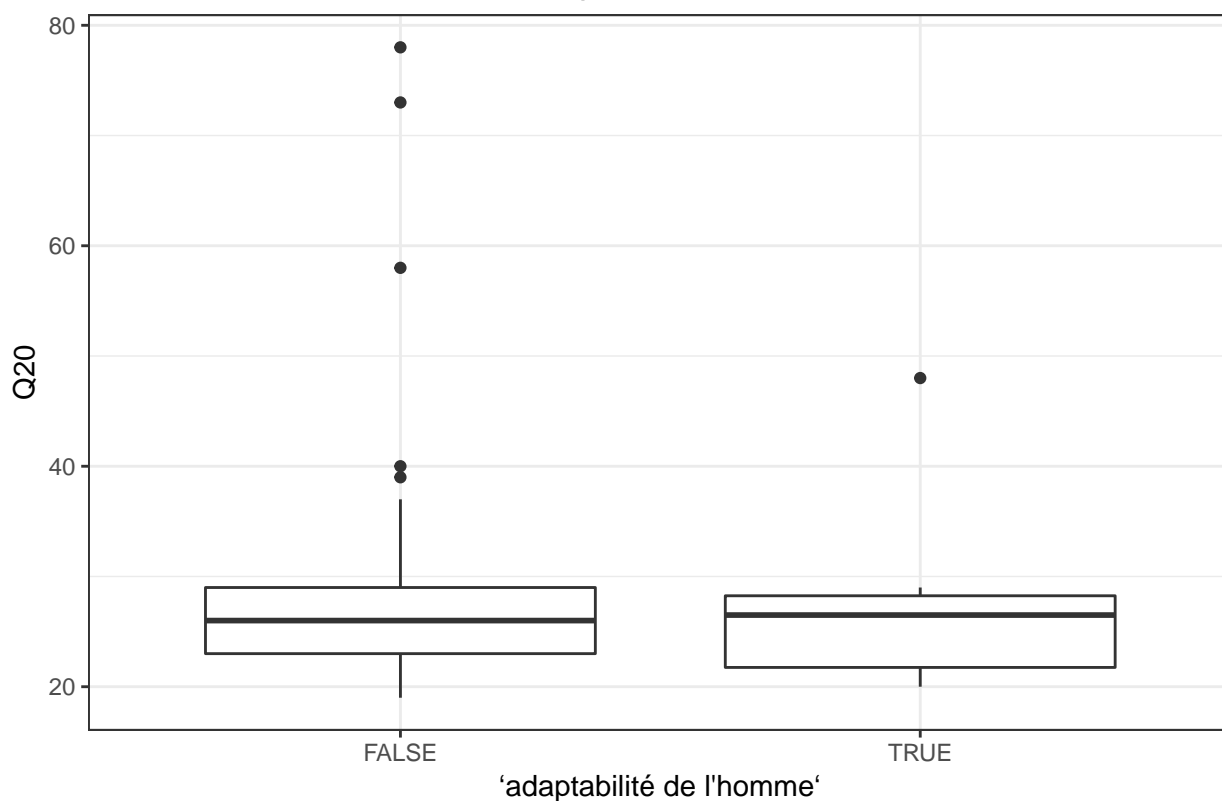
```
## [1] "démocratique"
##
## Welch Two Sample t-test
##
## data: data_work %>% filter(!sym(i) == TRUE) %>% pull(Q20) and data_work %>% filter(!sym(i) == FALSE)
## t = -0.57389, df = 50.17, p-value = 0.5686
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -7.016076 3.897557
## sample estimates:
## mean of x mean of y
## 27.70000 29.25926
```


Coche les affirmations avec lesquelles tu es d'accord.



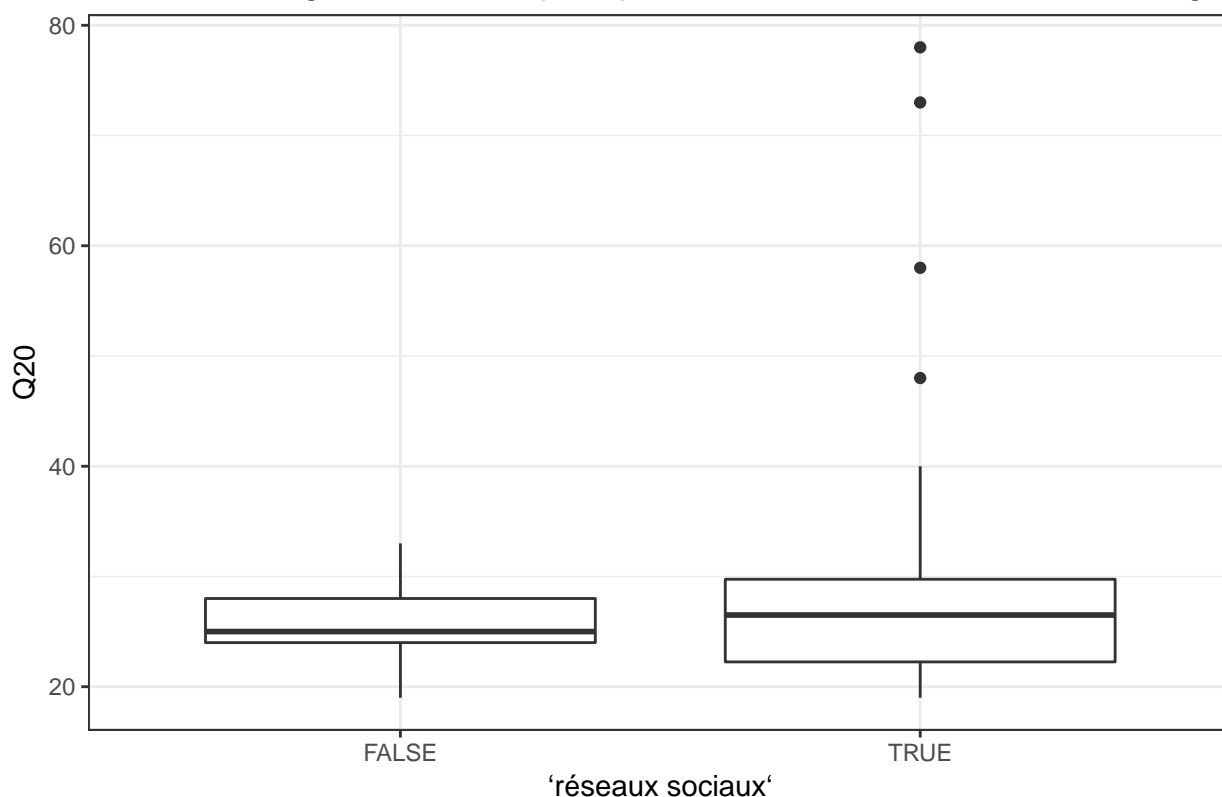
```
## [1] "hiérarchiser les problèmes"
##
## Welch Two Sample t-test
##
## data: data_work %>% filter(!sym(i) == TRUE) %>% pull(Q20) and data_work %>% filter(!sym(i) == FALSE)
## t = -1.255, df = 61.667, p-value = 0.2142
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -7.891895 1.804685
## sample estimates:
## mean of x mean of y
## 26.3750 29.4186
```

Coche les affirmations avec lesquelles tu es d'accord.



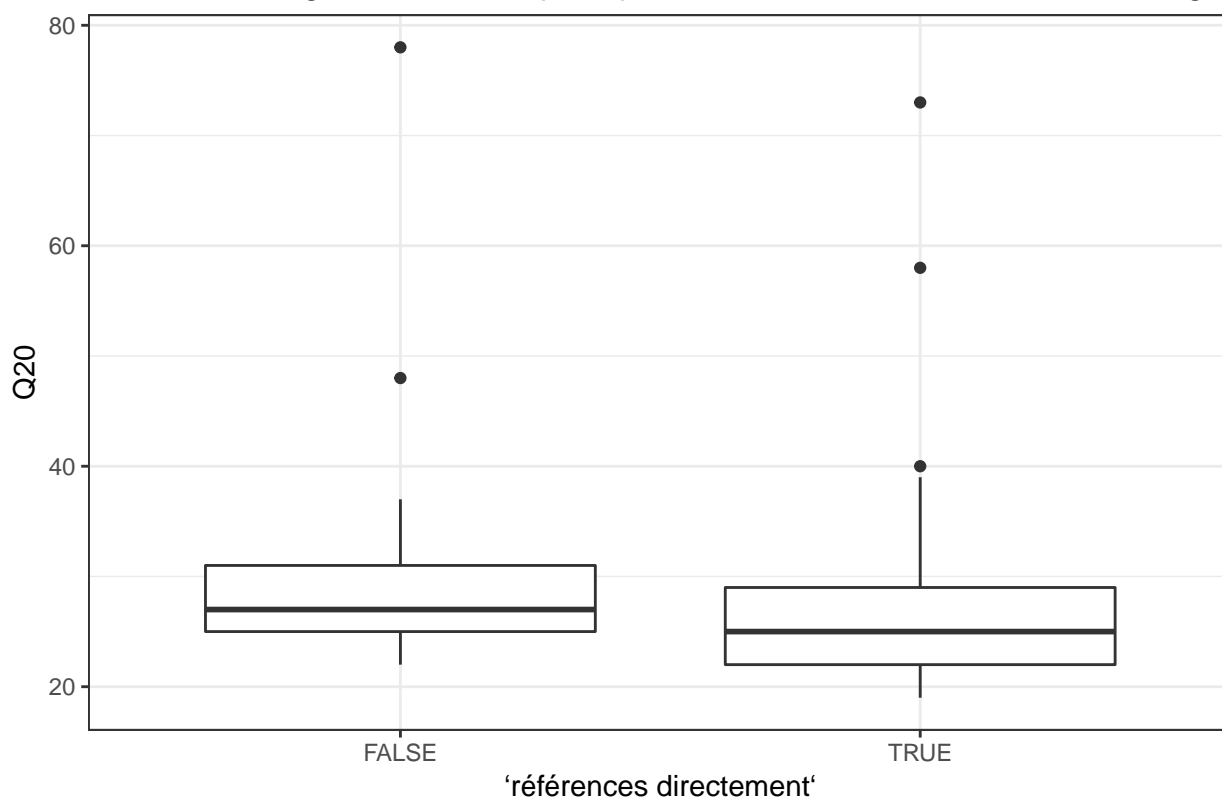
```
## [1] "adaptabilité de l'homme"
##
## Welch Two Sample t-test
##
## data: data_work %>% filter(!sym(i) == TRUE) %>% pull(Q20) and data_work %>% filter(!sym(i) == FALSE)
## t = -0.23114, df = 10.01, p-value = 0.8219
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -8.497246 6.899788
## sample estimates:
## mean of x mean of y
## 27.62500 28.42373
```

Quelles stratégies utilises-tu pour parler d'environnement à ton entourage ?



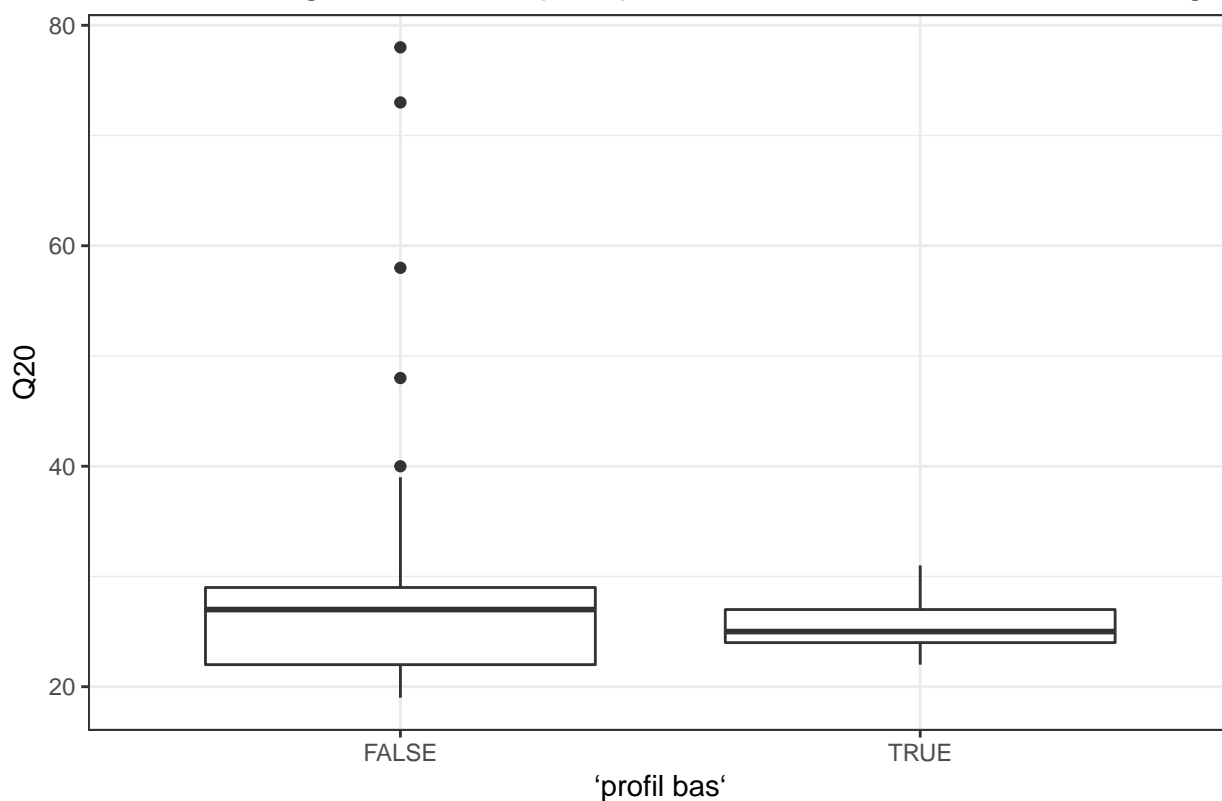
```
## [1] "réseaux sociaux"
##
## Welch Two Sample t-test
##
## data: data_work %>% filter(!sym(i) == TRUE) %>% pull(Q20) and data_work %>% filter(!sym(i) == FALSE)
## t = 1.8358, df = 37.462, p-value = 0.07433
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -0.4736878 9.6501584
## sample estimates:
## mean of x mean of y
## 30.58824 26.00000
```

Quelles stratégies utilises-tu pour parler d'environnement à ton entourage ?



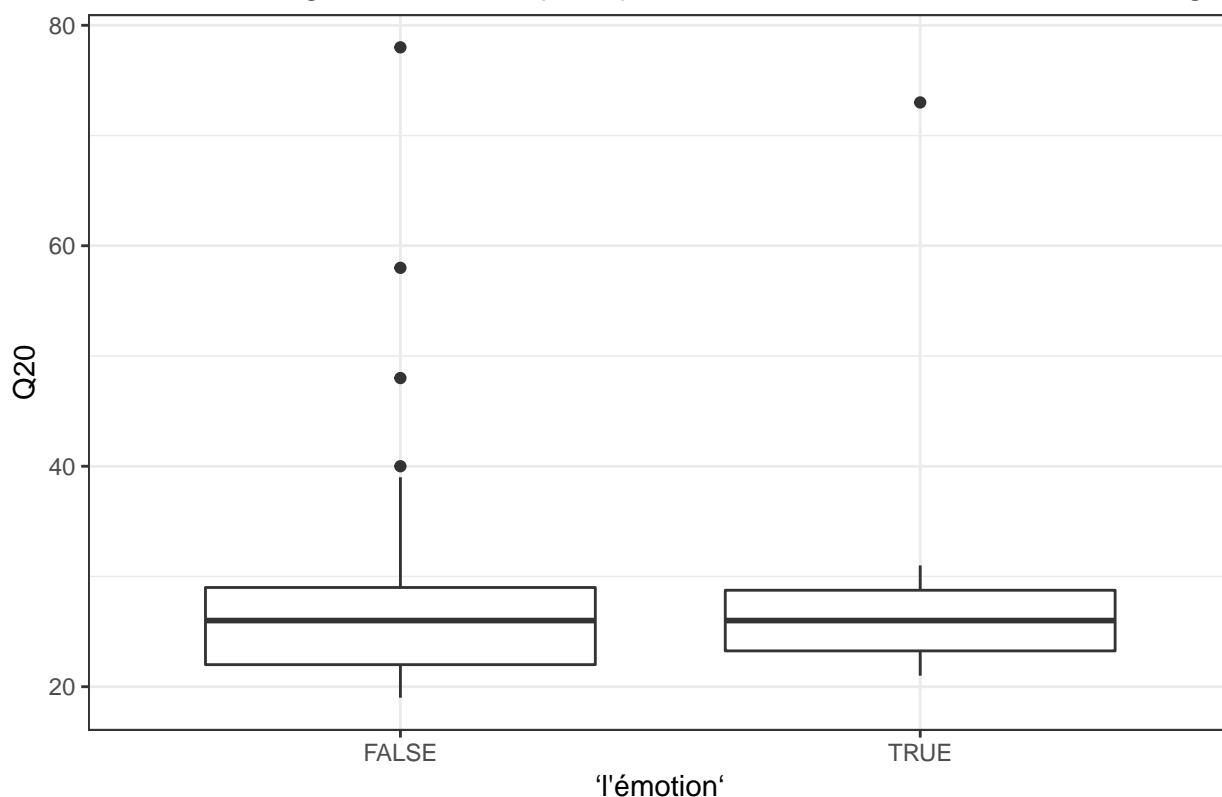
```
## [1] "références directement"
##
## Welch Two Sample t-test
##
## data: data_work %>% filter(!sym(i) == TRUE) %>% pull(Q20) and data_work %>% filter(!sym(i) == FALSE)
## t = -1.1689, df = 21.293, p-value = 0.2554
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -11.476683 3.213154
## sample estimates:
## mean of x mean of y
## 27.28000 31.41176
```

Quelles stratégies utilises-tu pour parler d'environnement à ton entourage ?



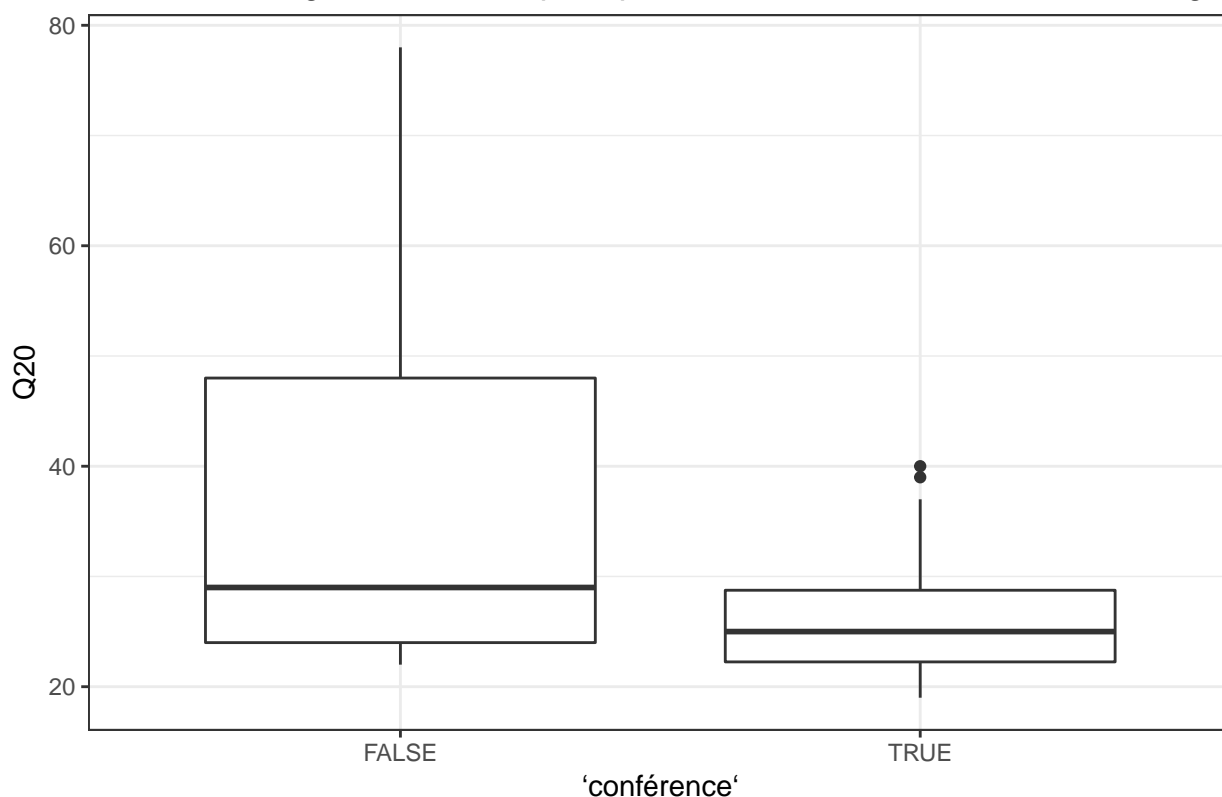
```
## [1] "profil bas"
##
## Welch Two Sample t-test
##
## data: data_work %>% filter(!sym(i) == TRUE) %>% pull(Q20) and data_work %>% filter(!sym(i) == FALSE)
## t = -1.851, df = 64.858, p-value = 0.06873
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -6.7997387 0.2584282
## sample estimates:
## mean of x mean of y
## 25.69231 28.96296
```

Quelles stratégies utilises-tu pour parler d'environnement à ton entourage ?

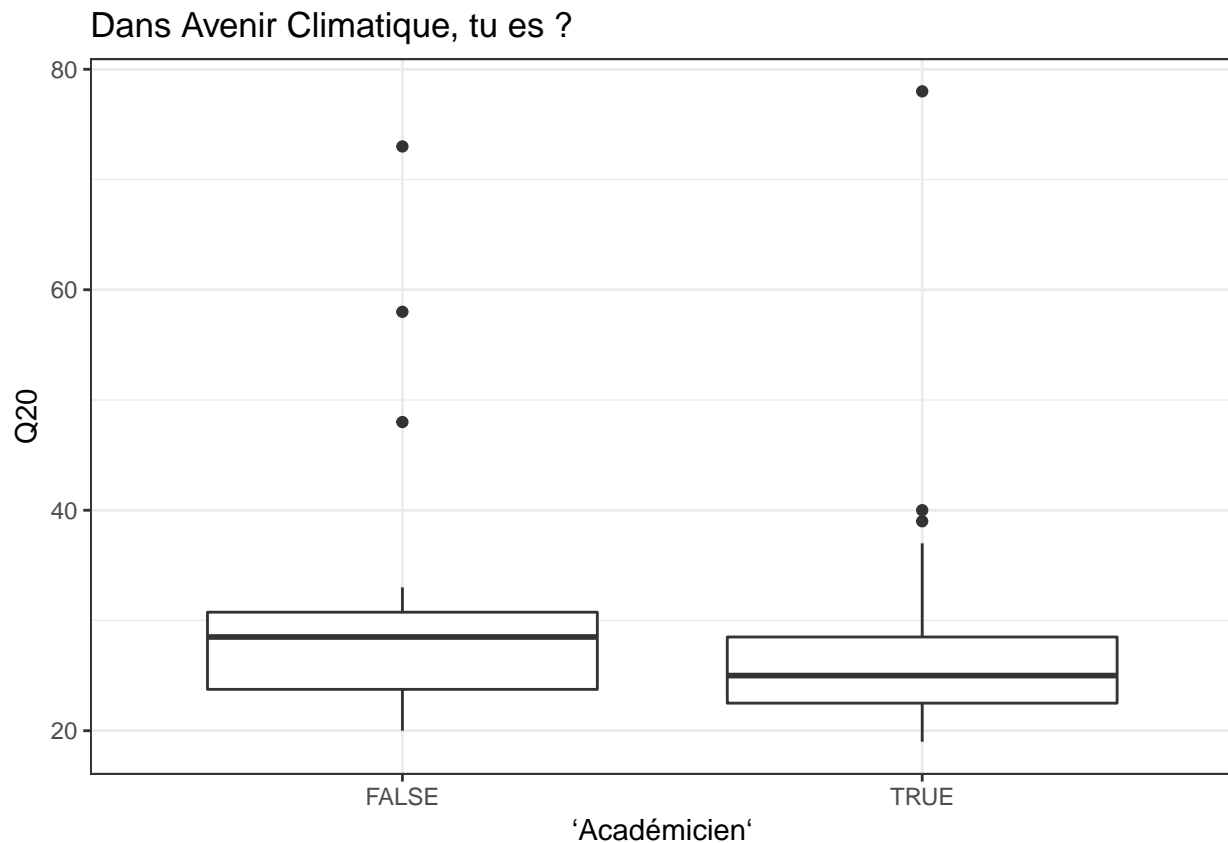


```
## [1] "l'émotion"
##
## Welch Two Sample t-test
##
## data: data_work %>% filter(!sym(i) == TRUE) %>% pull(Q20) and data_work %>% filter(!sym(i) == FALSE) %>% pull(Q20)
## t = 0.32463, df = 17.226, p-value = 0.7494
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -6.647358 9.067843
## sample estimates:
## mean of x mean of y
## 29.28571 28.07547
```

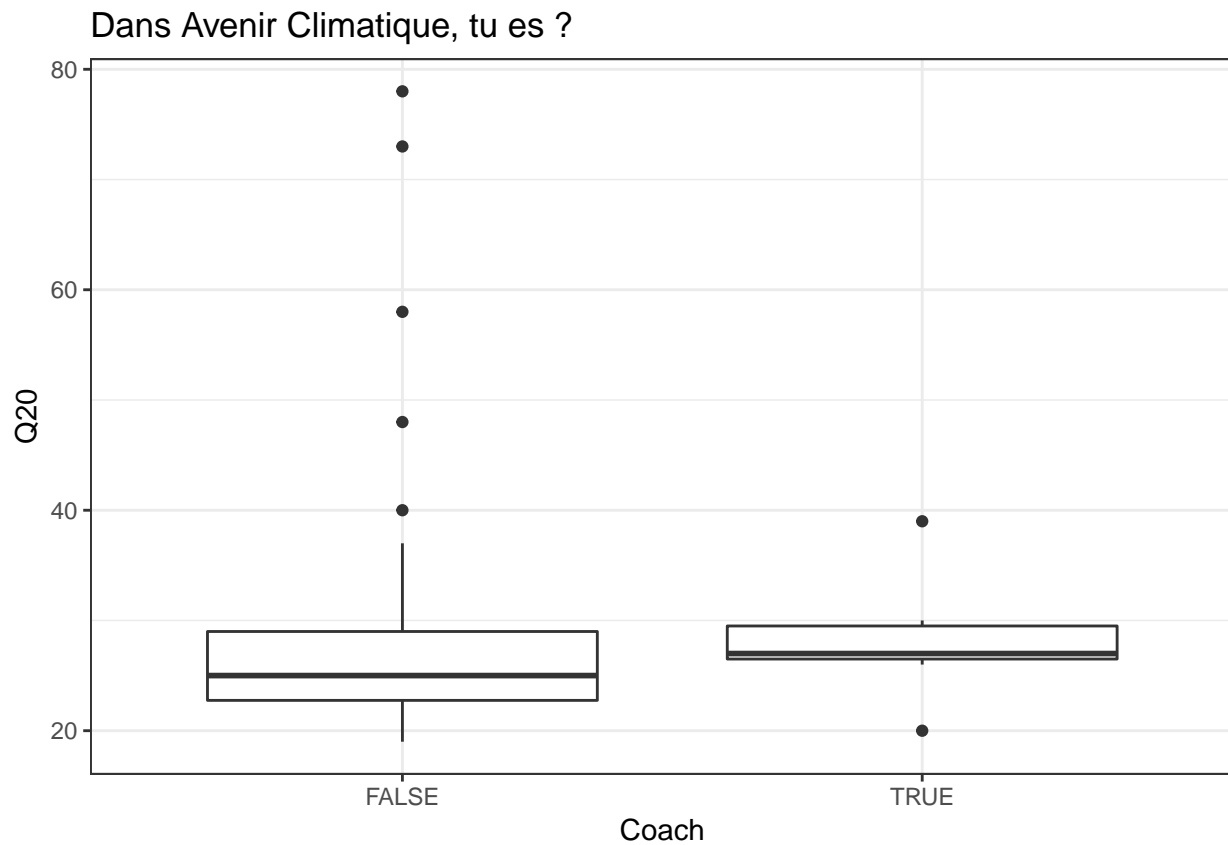
Quelles stratégies utilises-tu pour parler d'environnement à ton entourage ?



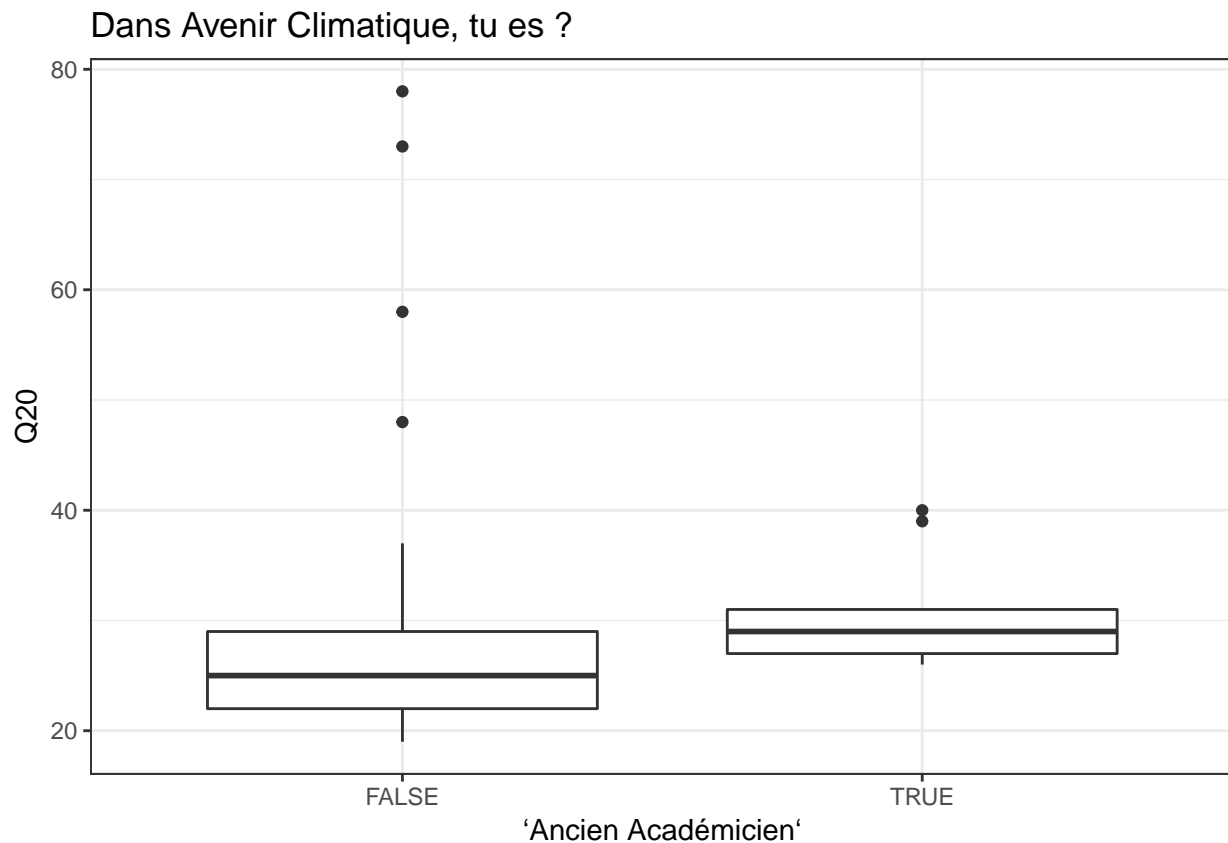
```
## [1] "conférence"
##
## Welch Two Sample t-test
##
## data: data_work %>% filter(!sym(i) == TRUE) %>% pull(Q20) and data_work %>% filter(!sym(i) == FALSE)
## t = -2.1595, df = 12.33, p-value = 0.05118
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -23.88021400 0.07109719
## sample estimates:
## mean of x mean of y
## 26.01852 37.92308
```



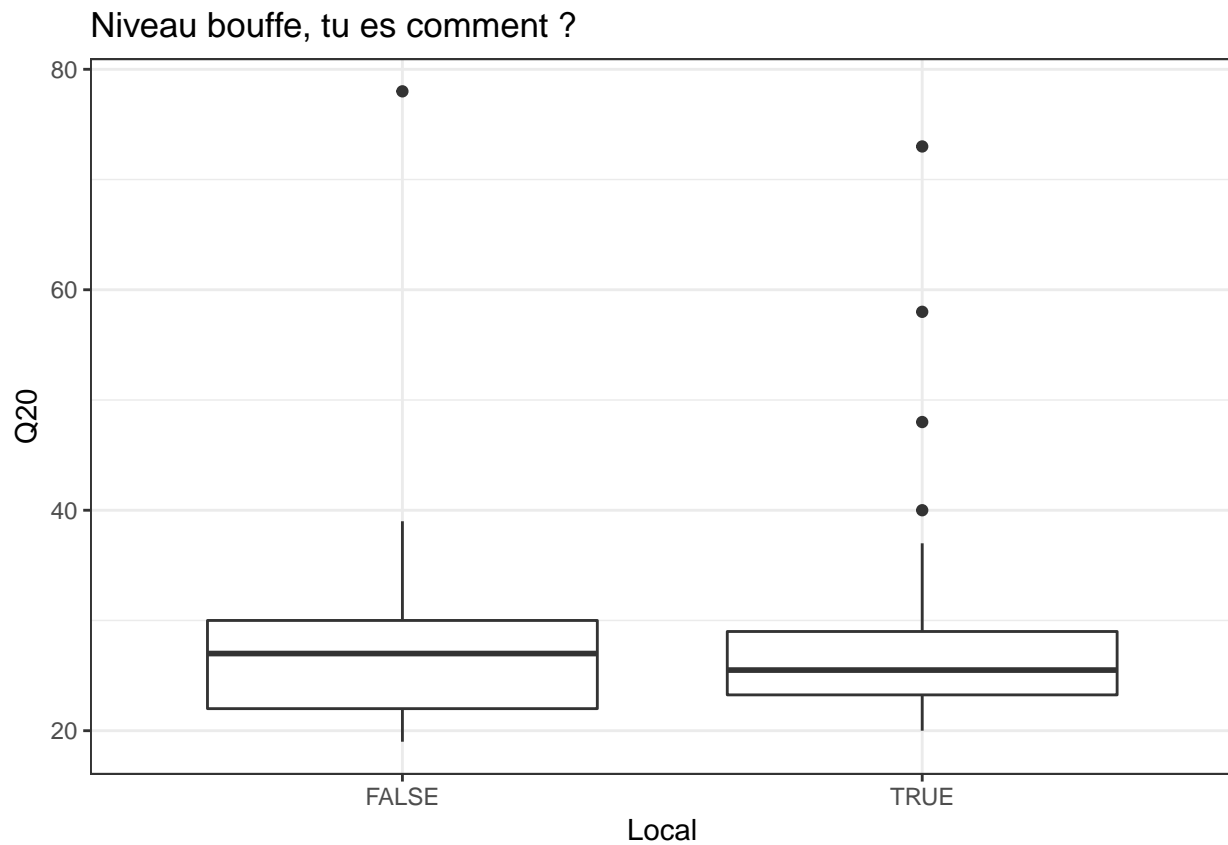
```
## [1] "Académicien"
##
## Welch Two Sample t-test
##
## data: data_work %>% filter(!sym(i) == TRUE) %>% pull(Q20) and data_work %>% filter(!sym(i) == FALSE)
## t = -1.4175, df = 18.369, p-value = 0.1731
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -13.591227 2.630443
## sample estimates:
## mean of x mean of y
## 27.01961 32.50000
```

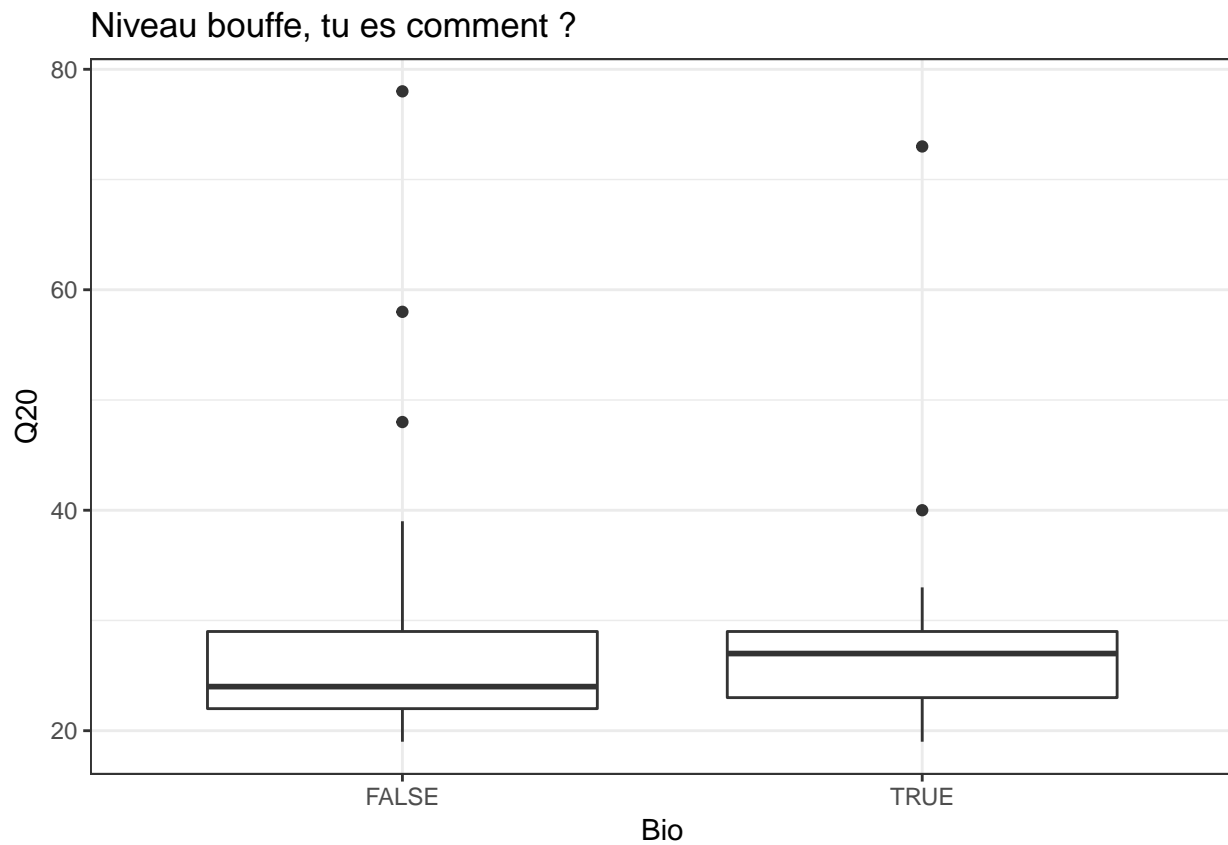
```
## [1] "Coach"
##
## Welch Two Sample t-test
##
## data: data_work %>% filter(!sym(i) == TRUE) %>% pull(Q20) and data_work %>% filter(!sym(i) == FALSE) %>% pull(Q20)
## t = -0.018438, df = 12.097, p-value = 0.9856
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -5.669612 5.574374
## sample estimates:
## mean of x mean of y
## 28.28571 28.33333
```



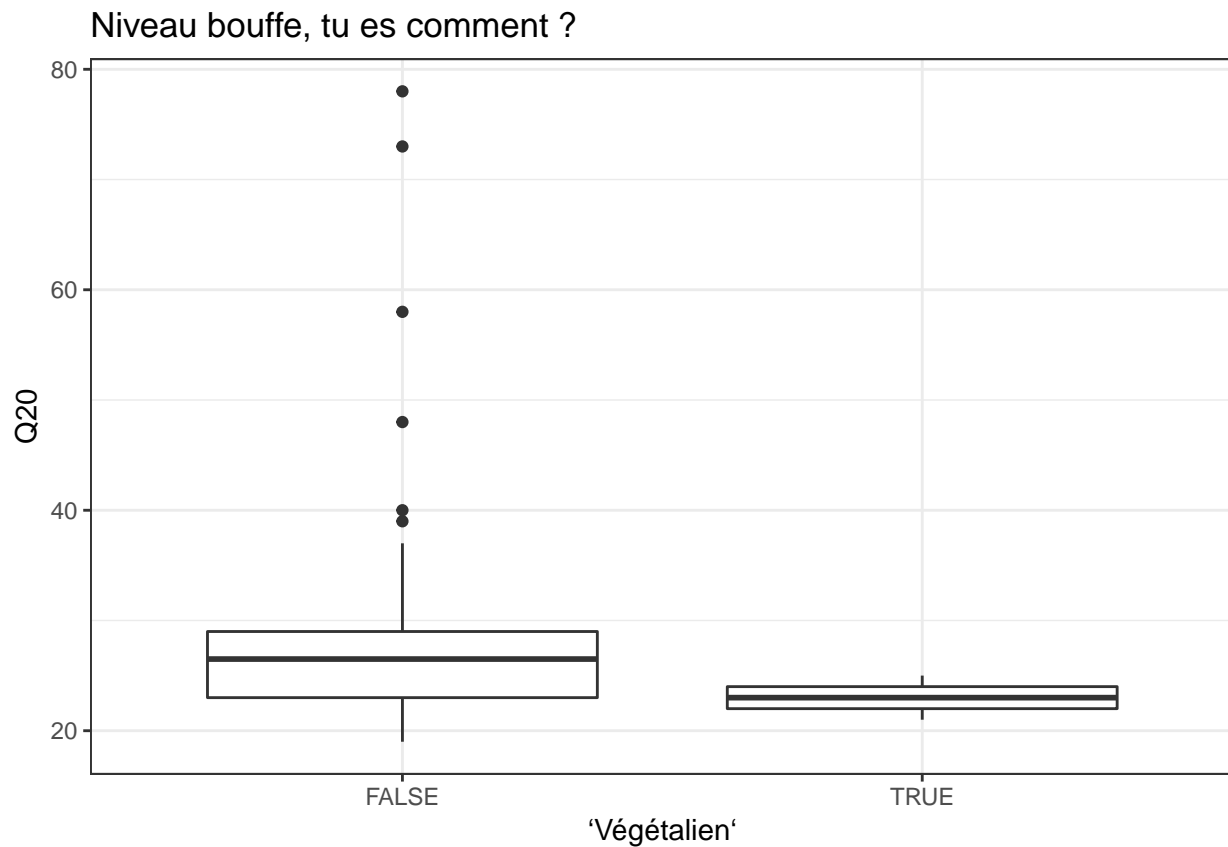
```
## [1] "Ancien Académicien"
##
## Welch Two Sample t-test
##
## data: data_work %>% filter(!sym(i) == TRUE) %>% pull(Q20) and data_work %>% filter(!sym(i) == FALSE)
## t = 1.2396, df = 21.484, p-value = 0.2285
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -1.910759 7.569763
## sample estimates:
## mean of x mean of y
## 30.77778 27.94828
```



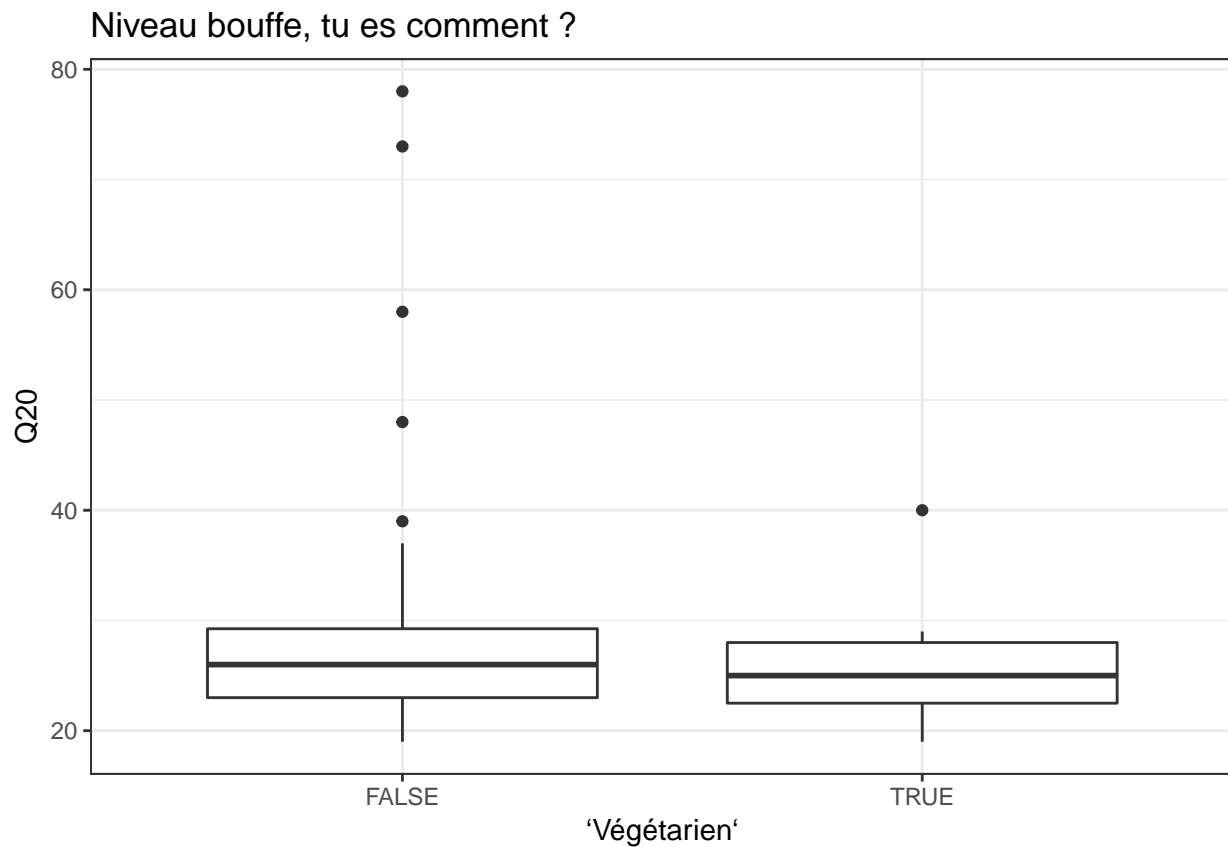
```
## [1] "Local"
##
## Welch Two Sample t-test
##
## data: data_work %>% filter(!sym(i) == TRUE) %>% pull(Q20) and data_work %>% filter(!sym(i) == FALSE) %>% pull(Q20)
## t = 0.073878, df = 45.613, p-value = 0.9414
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -5.375531 5.785055
## sample estimates:
## mean of x mean of y
## 28.40476 28.20000
```



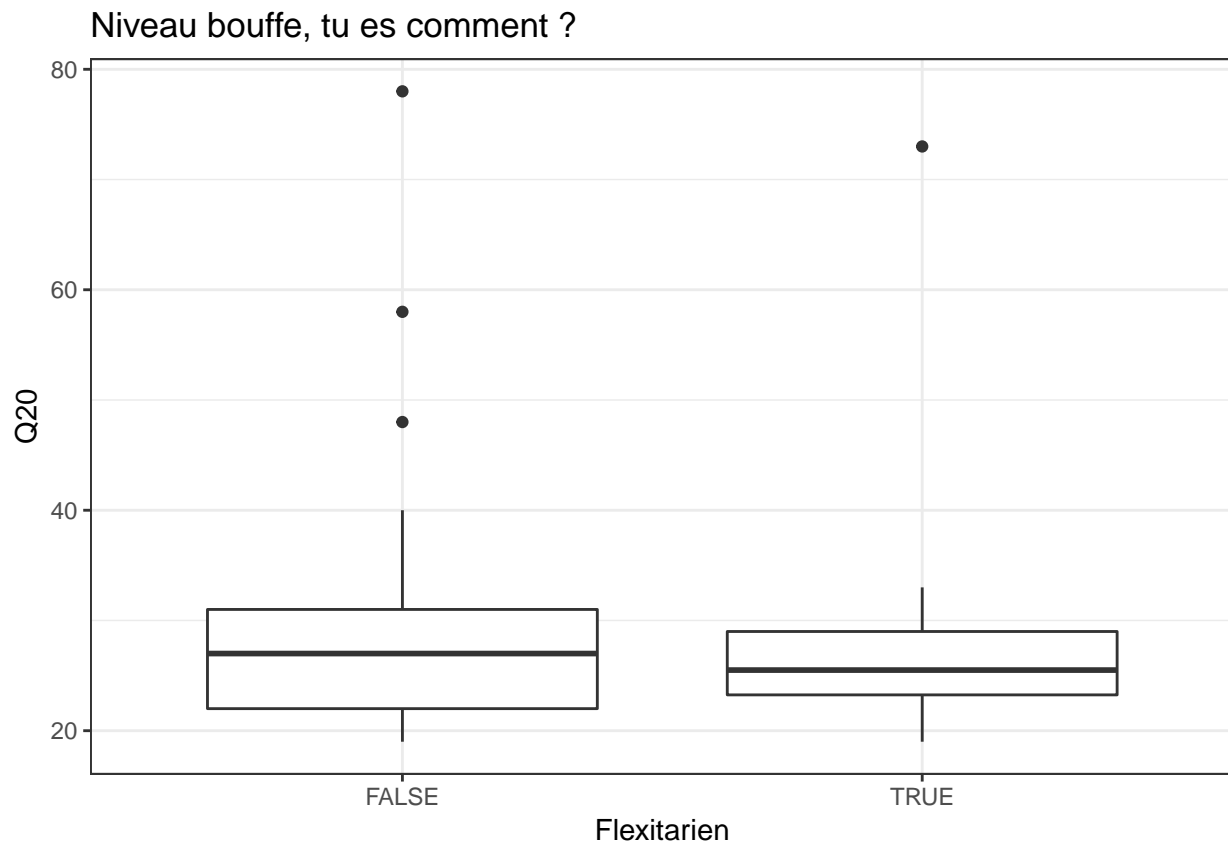
```
## [1] "Bio"
##
## Welch Two Sample t-test
##
## data: data_work %>% filter(!sym(i) == TRUE) %>% pull(Q20) and data_work %>% filter(!sym(i) == FALSE)
## t = -0.89744, df = 25.671, p-value = 0.3778
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -10.06981 3.95180
## sample estimates:
## mean of x mean of y
## 27.36957 30.42857
```



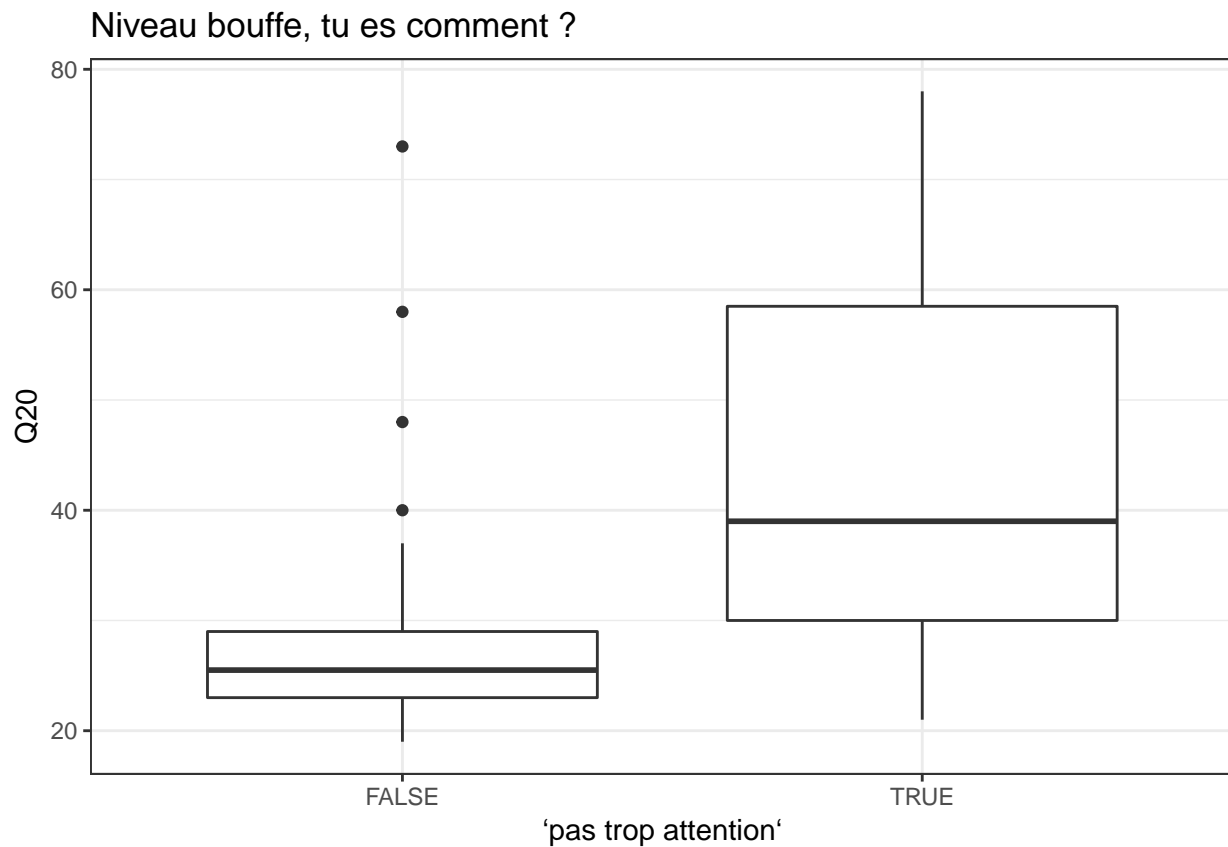
```
## [1] "Végétalien"
##
## Welch Two Sample t-test
##
## data: data_work %>% filter(!sym(i) == TRUE) %>% pull(Q20) and data_work %>% filter(!sym(i) == FALSE)
## t = -3.1538, df = 10.411, p-value = 0.009789
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -9.498093 -1.658157
## sample estimates:
## mean of x mean of y
## 23.00000 28.57812
```



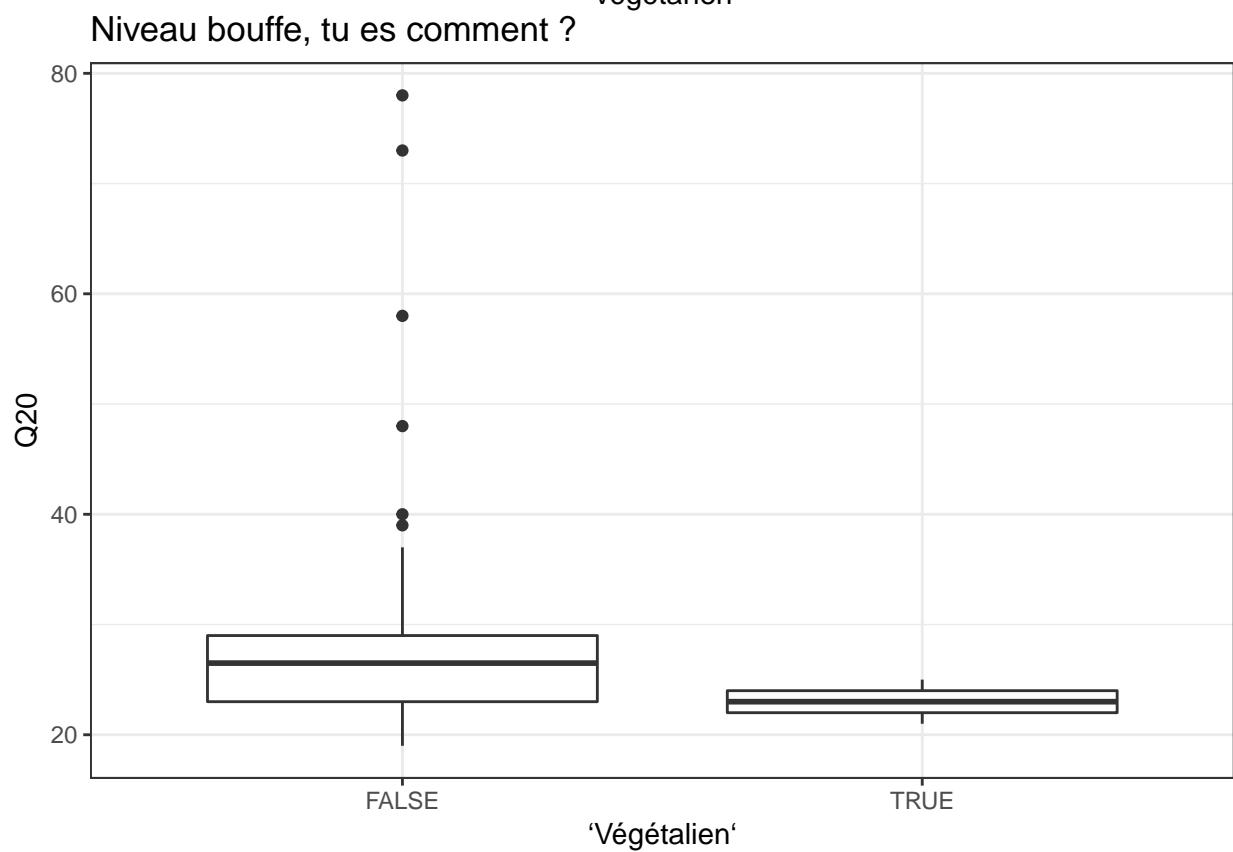
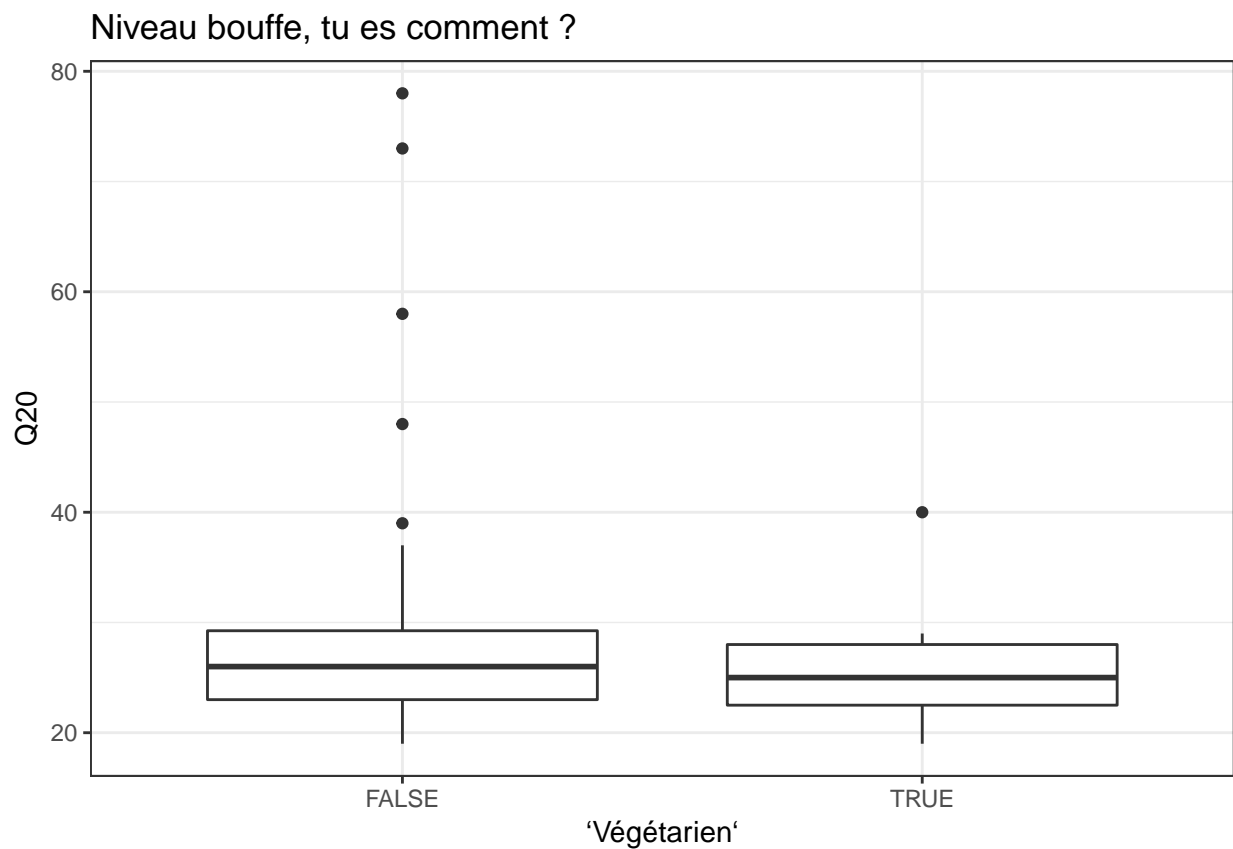
```
## [1] "Végétarien"
##
## Welch Two Sample t-test
##
## data: data_work %>% filter(!sym(i) == TRUE) %>% pull(Q20) and data_work %>% filter(!sym(i) == FALSE)
## t = -1.183, df = 28.743, p-value = 0.2465
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -7.306845 1.952949
## sample estimates:
## mean of x mean of y
## 26.09091 28.76786
```



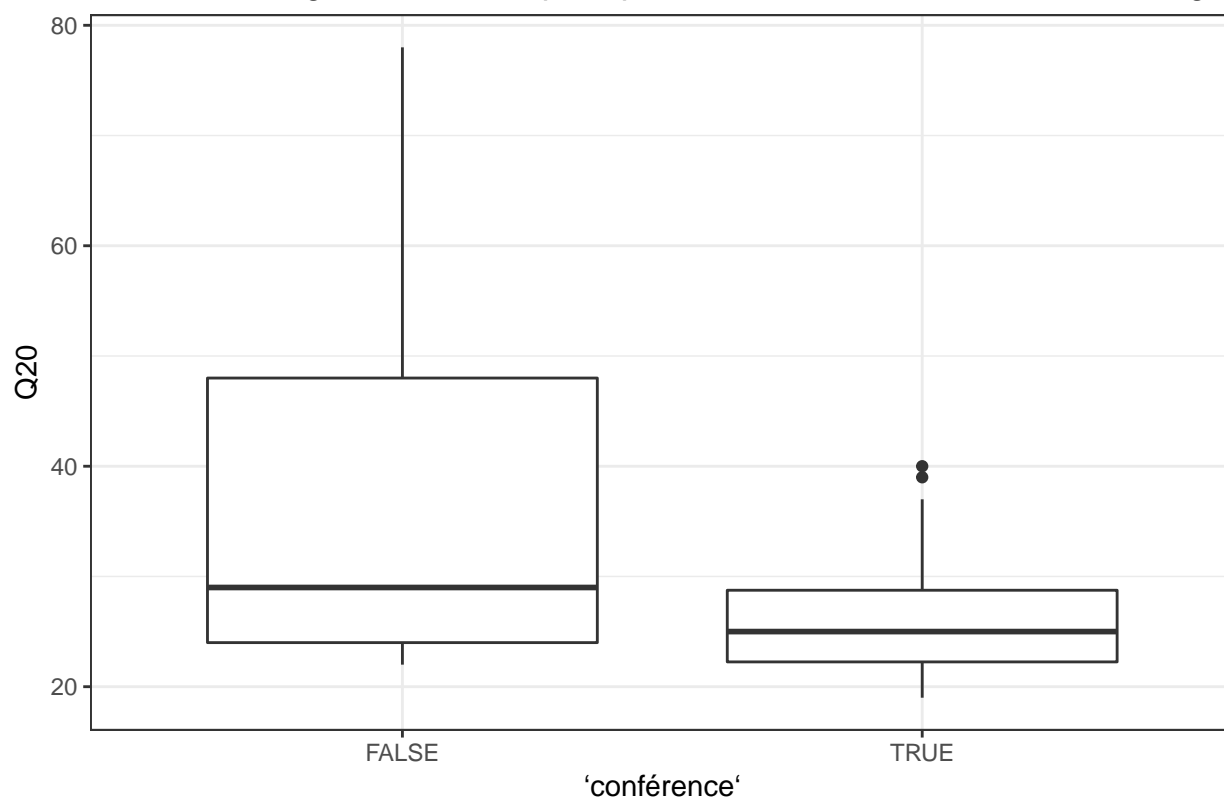
```
## [1] "Flexitarien"
##
## Welch Two Sample t-test
##
## data: data_work %>% filter(!sym(i) == TRUE) %>% pull(Q20) and data_work %>% filter(!sym(i) == FALSE)
## t = -1.2553, df = 34.373, p-value = 0.2178
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -9.822200 2.319343
## sample estimates:
## mean of x mean of y
## 26.92857 30.68000
```



```
## [1] "pas trop attention"
##
## Welch Two Sample t-test
##
## data: data_work %>% filter(!sym(i) == TRUE) %>% pull(Q20) and data_work %>% filter(!sym(i) == FALSE)
## t = 1.0975, df = 2.0164, p-value = 0.3861
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -53.46853 90.46853
## sample estimates:
## mean of x mean of y
## 46.0 27.5
```

Quelles stratégies utilises-tu pour parler d'environnement à ton entourage ?



Que penses-tu de cette affirmation: Le militantisme écologiste se rapproche

