

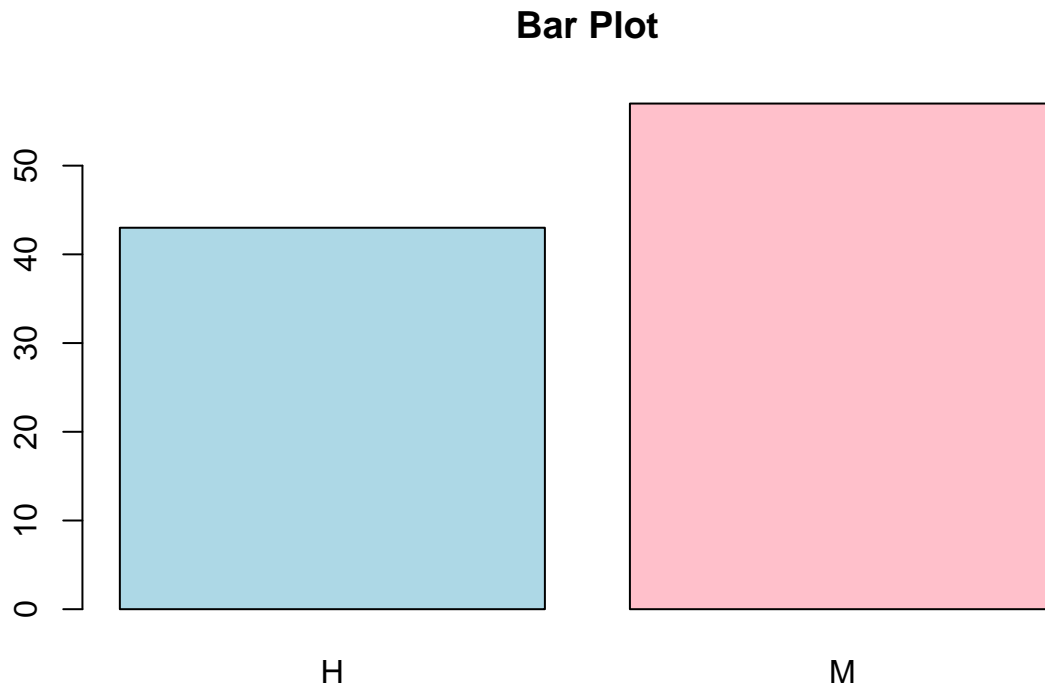
Graficos con Datos Cualitativos

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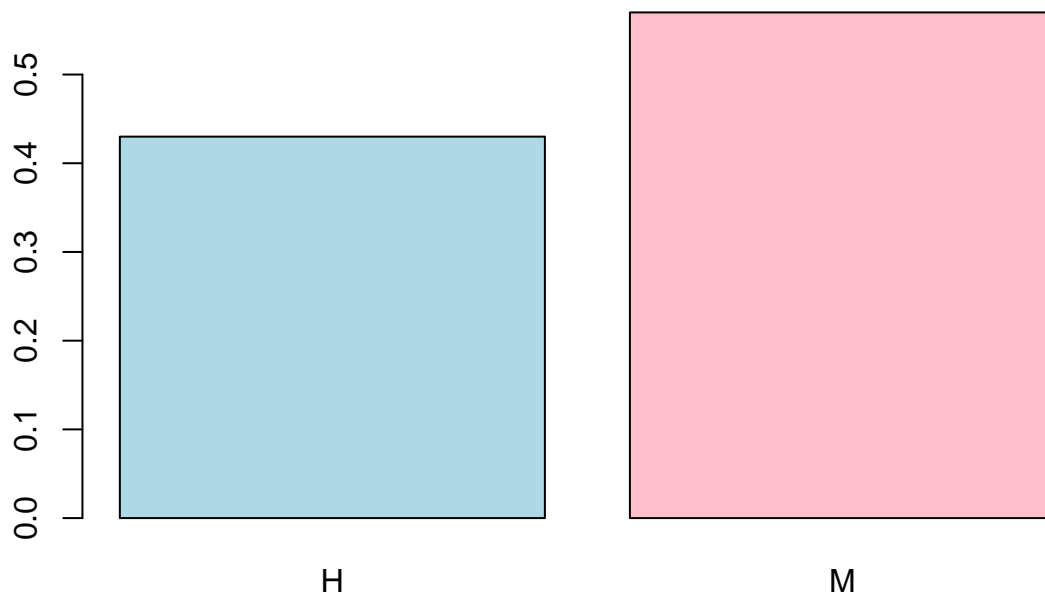
Diagrama de barras

```
sexo = factor(sample(c("M", "H"), size = 100, replace = TRUE))  
res = factor(sample(c("si", "no"), size = 100, replace = TRUE))  
  
barplot(table(sexo), col = c("lightblue", "pink"), main = "Bar Plot") # Es necesario pasarle como # par
```



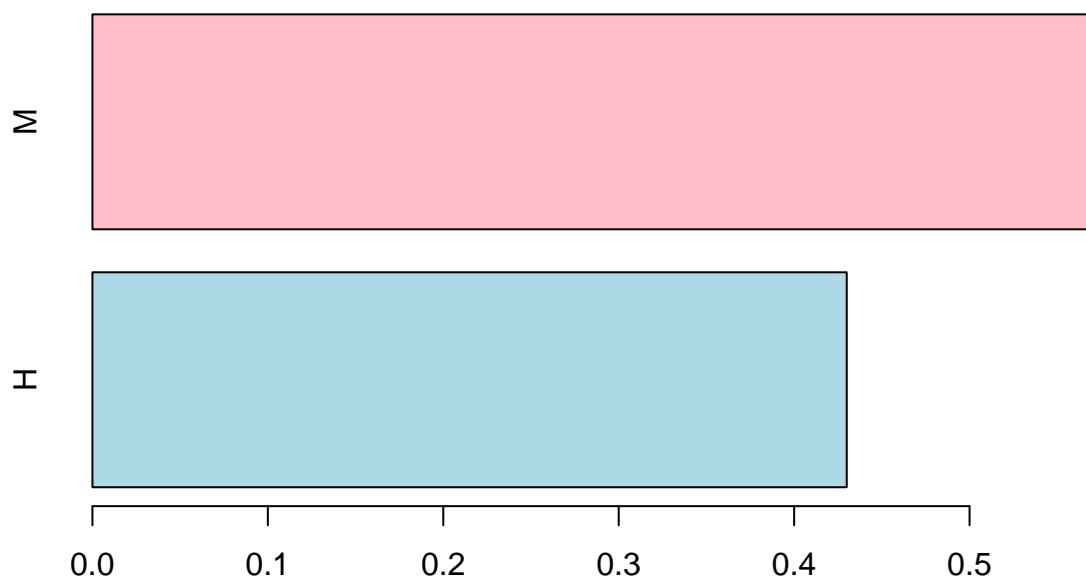
```
# Al igual con las relativas  
barplot(prop.table(table(sexo)), col = c("lightblue", "pink"), main = "Bar Plot")
```

Bar Plot

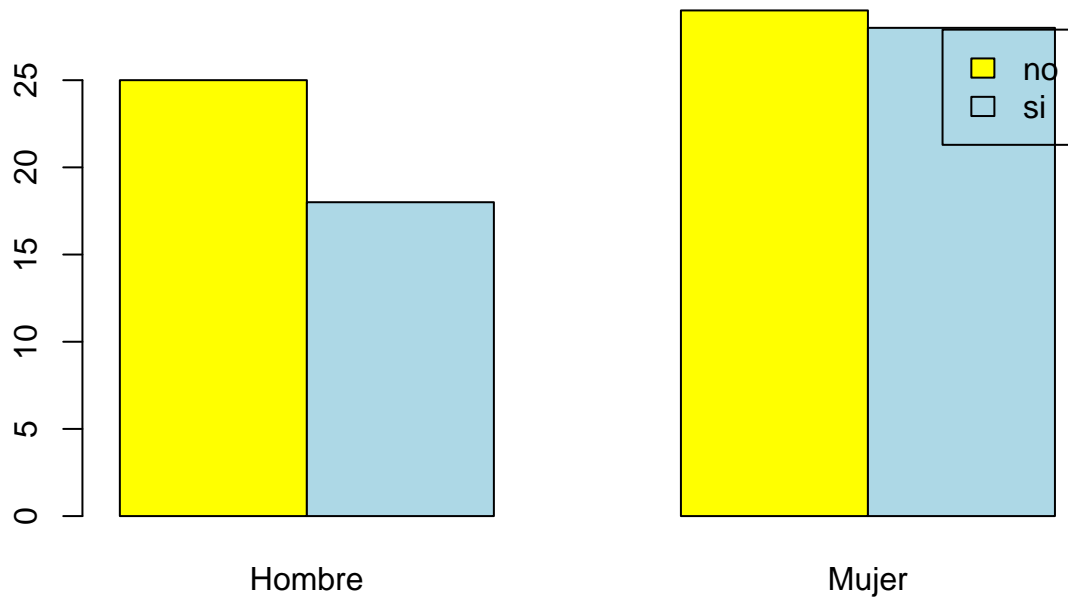


```
# Horizontales  
barplot(prop.table(table(sexo)), col = c("lightblue", "pink"), main = "Bar Plot",  
        horiz = TRUE)
```

Bar Plot



```
# Diagrama de barras con tabla bidimensional
barplot(table(res, sexo), beside = TRUE, legend.text = TRUE,
        names = c("Hombre", "Mujer"),
        col = c("yellow", "lightblue"))
```



El segundo parametro del table indicara quien ira en las categorias y la primera, la division
Sin el beside por defecto se apilan

Diagrama por sectores

```
res = factor(sample(c("si", "no"), size = 100, replace = TRUE))
pie(table(res))
```

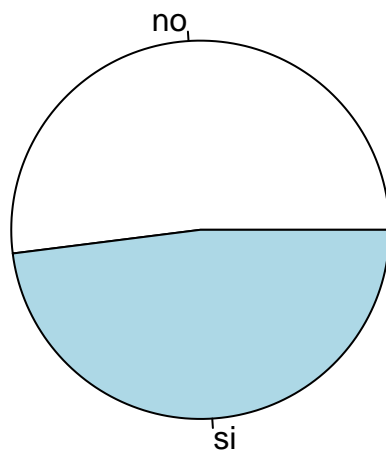
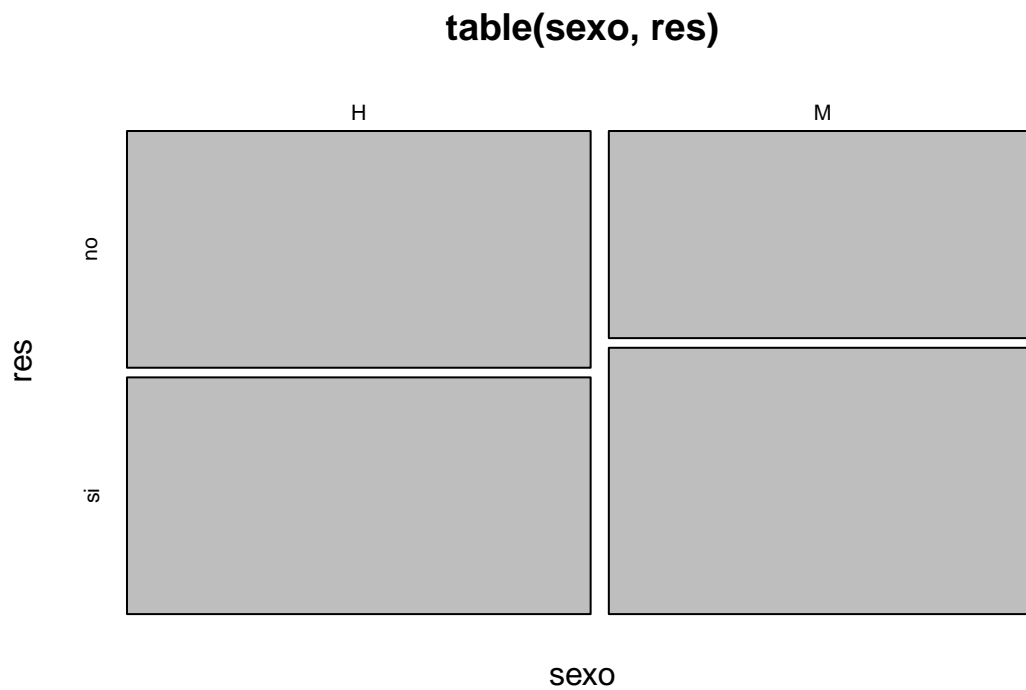


Diagrama de mosaico

```
# Con tablas bidimensionales  
sexo = factor(sample(c("M", "H"), size = 100, replace = TRUE))  
res = factor(sample(c("si", "no"), size = 100, replace = TRUE))  
plot(table(sexo, res)) # Para saber leerlo, hay que tomar en cuenta la longitud, ya sea de lo largo o l
```



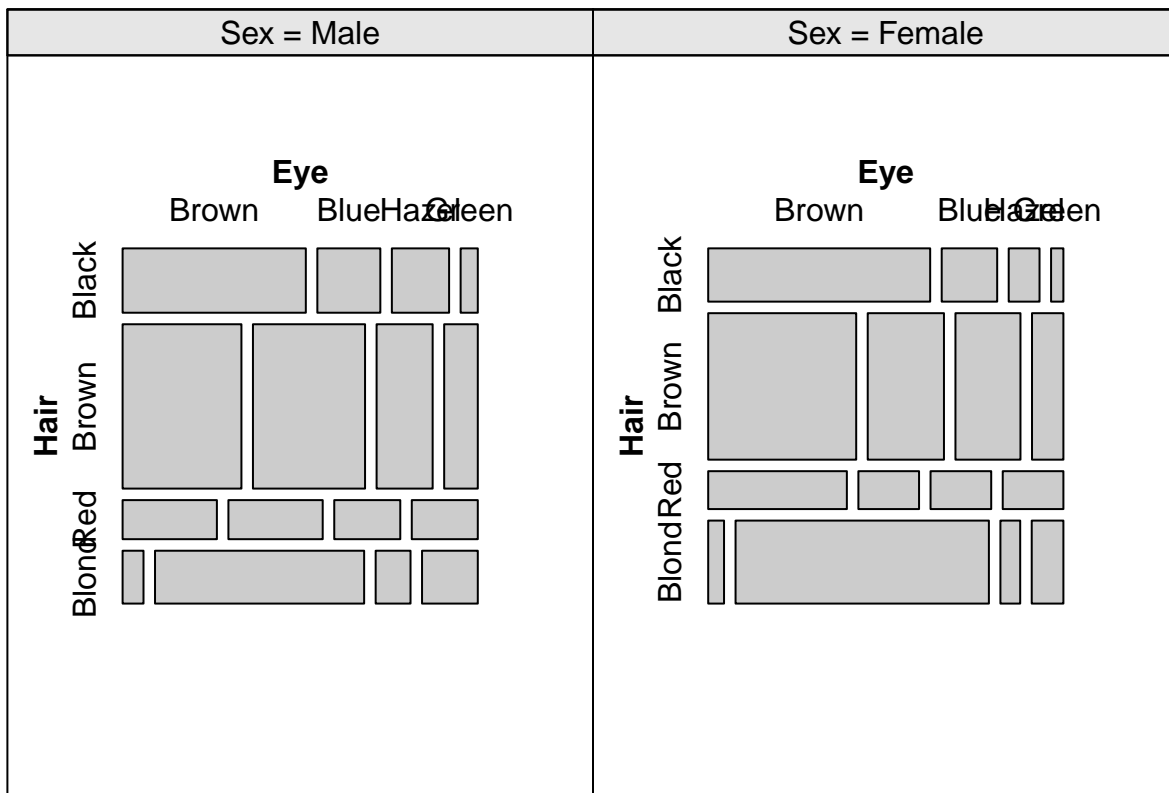
```
# Con tablas tridimensionales
HEC <- HairEyeColor # table(Hair, Eye, Sex)
plot(HEC, main = "Grafico de mosaico tridimensional", col = c("pink", "lightblue"))
# Aqui lo que pasara es que el tercer parametro del table, pasara a dividir cada una de las columnas en
library(vcd)
```

```
## Loading required package: grid
```

Grafico de mosaico tridimensional



```
cotabplot(HairEyeColor) # Dibuja un diagrama de mosaico para cada nivel de la tercera variable
```



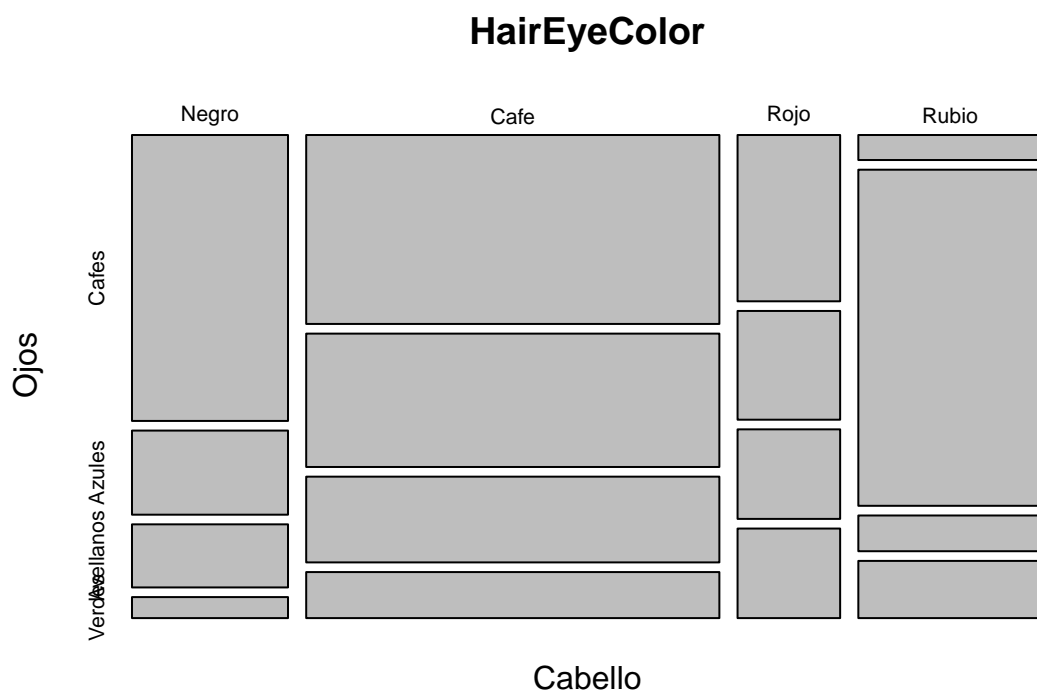
Ejercicio Completo

```
HEC <- HairEyeColor

data = as.table(HEC[,,"Male"] + HEC[,,"Female"])

dimnames(data) = list(
  Cabello = c("Negro", "Cafe", "Rojo", "Rubio"),
  Ojos = c("Cafes", "Azules", "Avellanos", "Verdes")
)
```

```
plot(data, main = "HairEyeColor")
```

```
# Cantidad de individuos
sum(data)
```

```
## [1] 592
```

```
colSums(data)
```

```
##      Cafes      Azules Avellanos      Verdes
##      220       215       93       64
```

```
rowSums(data)
```

```
## Negro  Cafe  Rojo Rubio
##   108   286   71  127
```

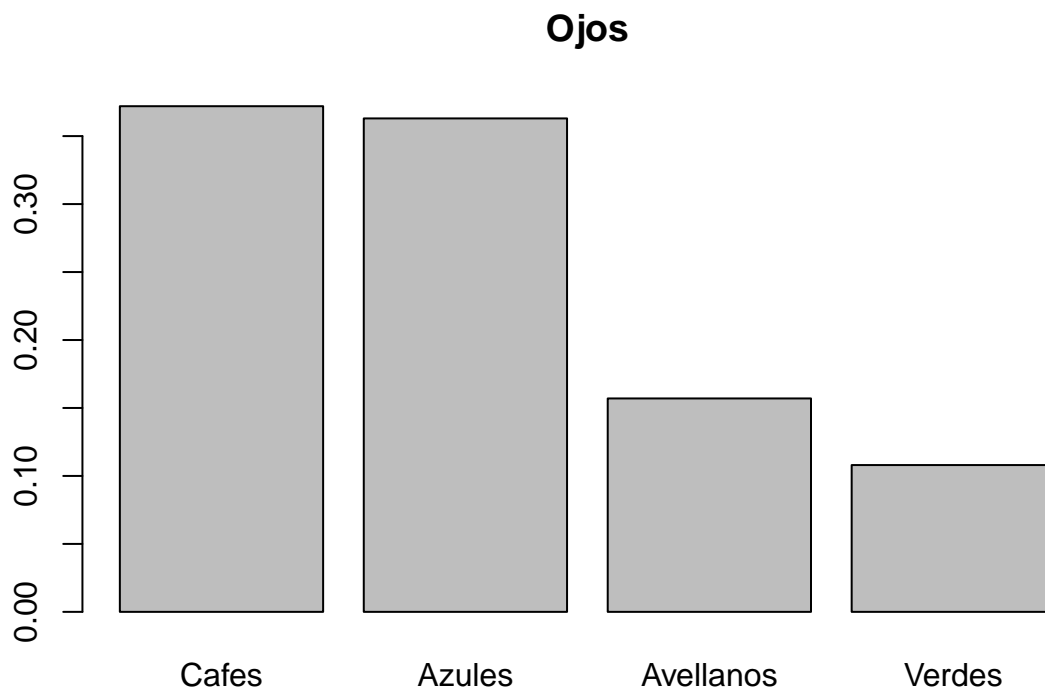
```
round(prop.table(colSums(data)), 3)
```

```
##      Cafes      Azules Avellanos      Verdes
##      0.372      0.363      0.157      0.108
```

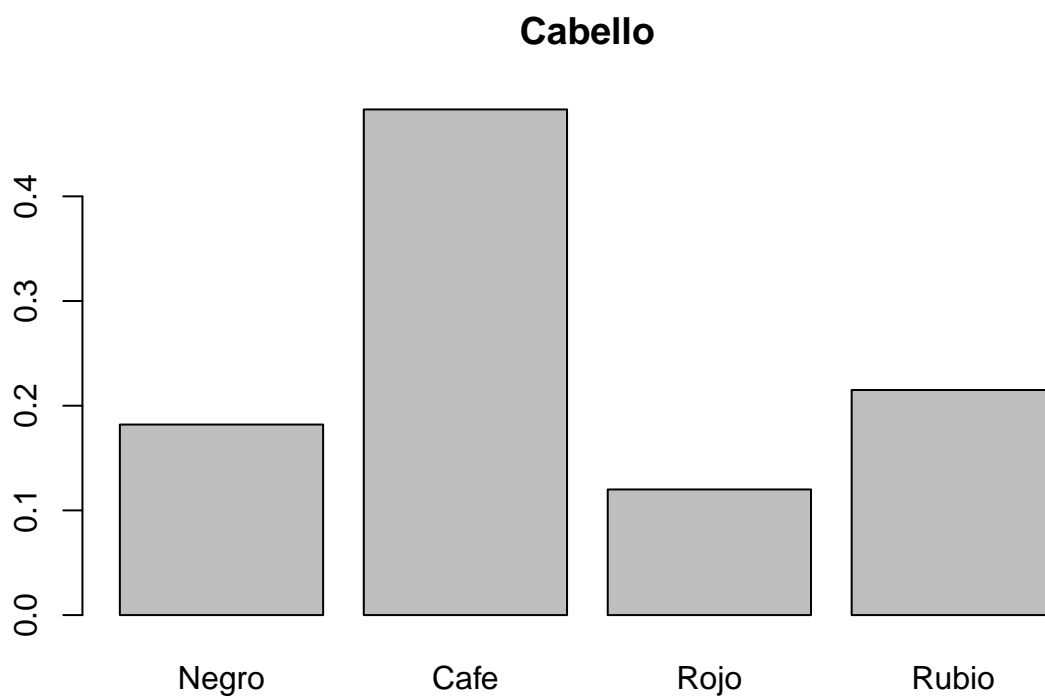
```
round(prop.table(rowSums(data)), 3)
```

```
## Negro  Cafe  Rojo Rubio
##  0.182  0.483  0.120  0.215
```

```
barplot(round(prop.table(colSums(data)), 3), main = "Ojos")
```



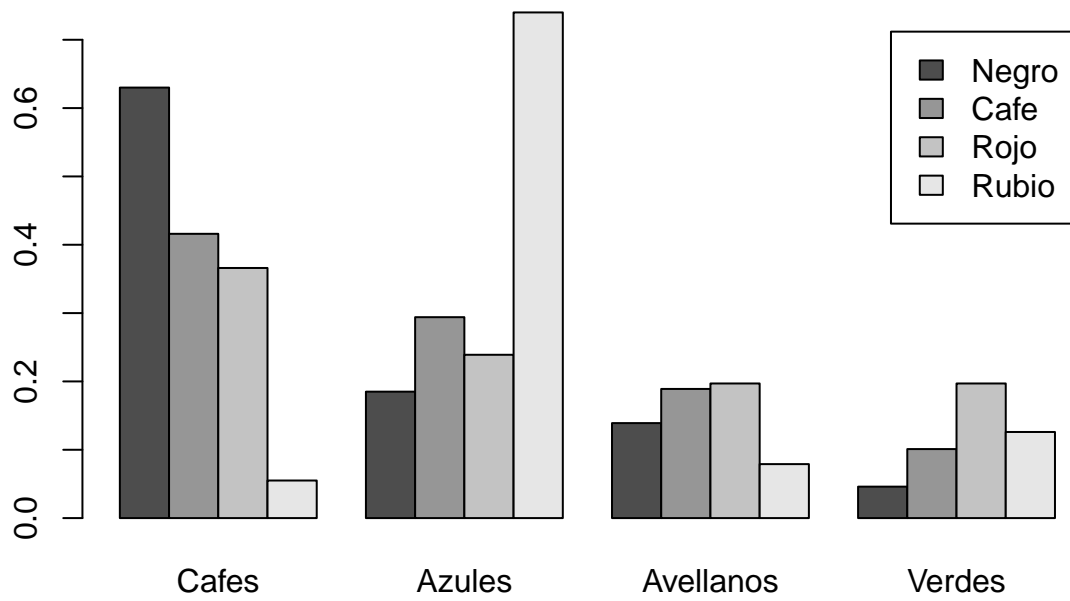
```
barplot(round(prop.table(rowSums(data)), 3), main = "Cabello")
```



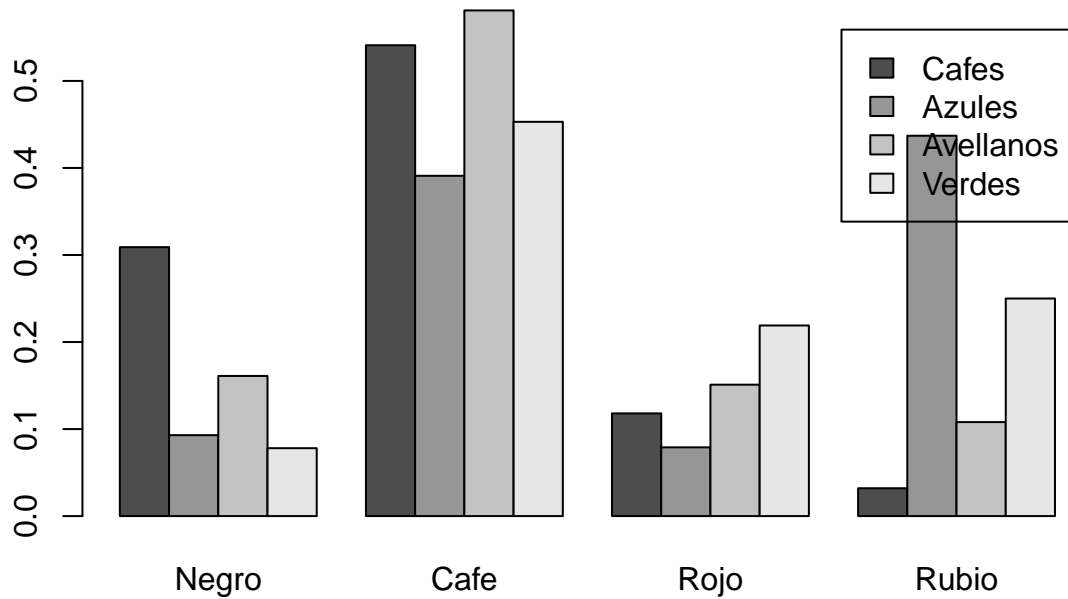
```
# Frecuencias relativas y globales
```

```
global = prop.table(data)  
marginCabello = round(prop.table(data, margin = 1), 3)  
marginOjos = round(prop.table(data, margin = 2), 3)
```

```
barplot(marginCabello, beside = TRUE, legend.text = TRUE)
```



```
barplot(t(marginOjos), beside = TRUE, legend.text = TRUE)
```



Otro ejercicio completo

Pregunta 1

Utiliza `str()` y `head()` para explorar la estructura, y con `help()`, mirar el significado de cada variable.