OpinionViz

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```
favorable <- read.csv("FavOp.csv",stringsAsFactors = FALSE)
favorable$X2002 <- as.numeric(as.character(favorable$X2002))
```

```
## Warning: NAs introduced by coercion
```

```
favorable$X2003 <- as.numeric(as.character(favorable$X2003))
```

```
## Warning: NAs introduced by coercion
```

```
favorable$X2004 <- as.numeric(as.character(favorable$X2004))
```

```
## Warning: NAs introduced by coercion
```

```
favorable$X2005 <- as.numeric(as.character(favorable$X2005))
```

```
## Warning: NAs introduced by coercion
```

```
favorable$X2006 <- as.numeric(as.character(favorable$X2006))
```

```
## Warning: NAs introduced by coercion
```

```
favorable$X2007 <- as.numeric(as.character(favorable$X2007))
```

```
## Warning: NAs introduced by coercion
```

```
favorable$X2008 <- as.numeric(as.character(favorable$X2008))
```

```
## Warning: NAs introduced by coercion
```

```
favorable$X2009 <- as.numeric(as.character(favorable$X2009))
```

```
## Warning: NAs introduced by coercion
```

```
favorable$X2010 <- as.numeric(as.character(favorable$X2010))
```

```
## Warning: NAs introduced by coercion
```

```
favorable$X2011 <- as.numeric(as.character(favorable$X2011))
```

```
## Warning: NAs introduced by coercion
```

```
favorable$X2012 <- as.numeric(as.character(favorable$X2012))
```

```
## Warning: NAs introduced by coercion
```

```
favorable$X2013 <- as.numeric(as.character(favorable$X2013))
```

```
## Warning: NAs introduced by coercion
```

```
favorable$X2014 <- as.numeric(as.character(favorable$X2014))
```

```
## Warning: NAs introduced by coercion
```

```
favorable$X2015 <- as.numeric(as.character(favorable$X2015))
```

```
## Warning: NAs introduced by coercion
```

```
favorable$X2016 <- as.numeric(as.character(favorable$X2016))
```

```
## Warning: NAs introduced by coercion
```

```
colnames(favorable) <- c("Country","2002","2003","2004","2005","2006","2007","2008","2009","2010","2011
favop.data <- melt(favorable,id="Country")
```

```
unfavorable <- read.csv("UnfavOp.csv", stringsAsFactors = FALSE)
unfavorable$X2002 <- as.numeric(as.character(unfavorable$X2002))
```

```
## Warning: NAs introduced by coercion
```

```
unfavorable$X2003 <- as.numeric(as.character(unfavorable$X2003))
```

```
## Warning: NAs introduced by coercion
```

```
unfavorable$X2004 <- as.numeric(as.character(unfavorable$X2004))
```

```
## Warning: NAs introduced by coercion
```

```
unfavorable$X2005 <- as.numeric(as.character(unfavorable$X2005))
```

```
## Warning: NAs introduced by coercion
```

```
unfavorable$X2006 <- as.numeric(as.character(unfavorable$X2006))
```

```
## Warning: NAs introduced by coercion
```

```
unfavorable$X2007 <- as.numeric(as.character(unfavorable$X2007))
```

```
## Warning: NAs introduced by coercion
```

```
unfavorable$X2008 <- as.numeric(as.character(unfavorable$X2008))
```

```
## Warning: NAs introduced by coercion
```

```
unfavorable$X2009 <- as.numeric(as.character(unfavorable$X2009))
```

```
## Warning: NAs introduced by coercion
```

```
unfavorable$X2010 <- as.numeric(as.character(unfavorable$X2010))
```

```
## Warning: NAs introduced by coercion
```

```
unfavorable$X2011 <- as.numeric(as.character(unfavorable$X2011))
```

```
## Warning: NAs introduced by coercion
```

```
unfavorable$X2012 <- as.numeric(as.character(unfavorable$X2012))
```

```
## Warning: NAs introduced by coercion
```

```
unfavorable$X2013 <- as.numeric(as.character(unfavorable$X2013))
```

```
## Warning: NAs introduced by coercion
```

```
unfavorable$X2014 <- as.numeric(as.character(unfavorable$X2014))
```

```
## Warning: NAs introduced by coercion
```

```
unfavorable$X2015 <- as.numeric(as.character(unfavorable$X2015))
```

```
## Warning: NAs introduced by coercion
```

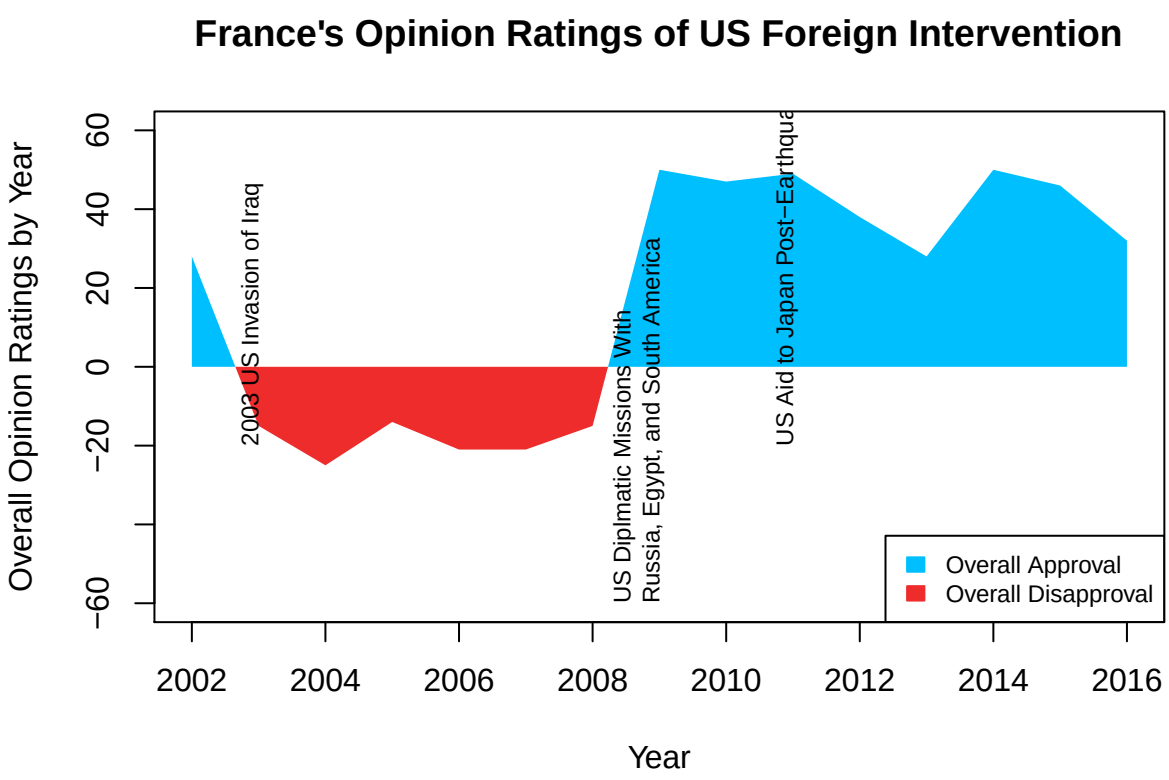
```
unfavorable$X2016 <- as.numeric(as.character(unfavorable$X2016))
```

```
## Warning: NAs introduced by coercion
```

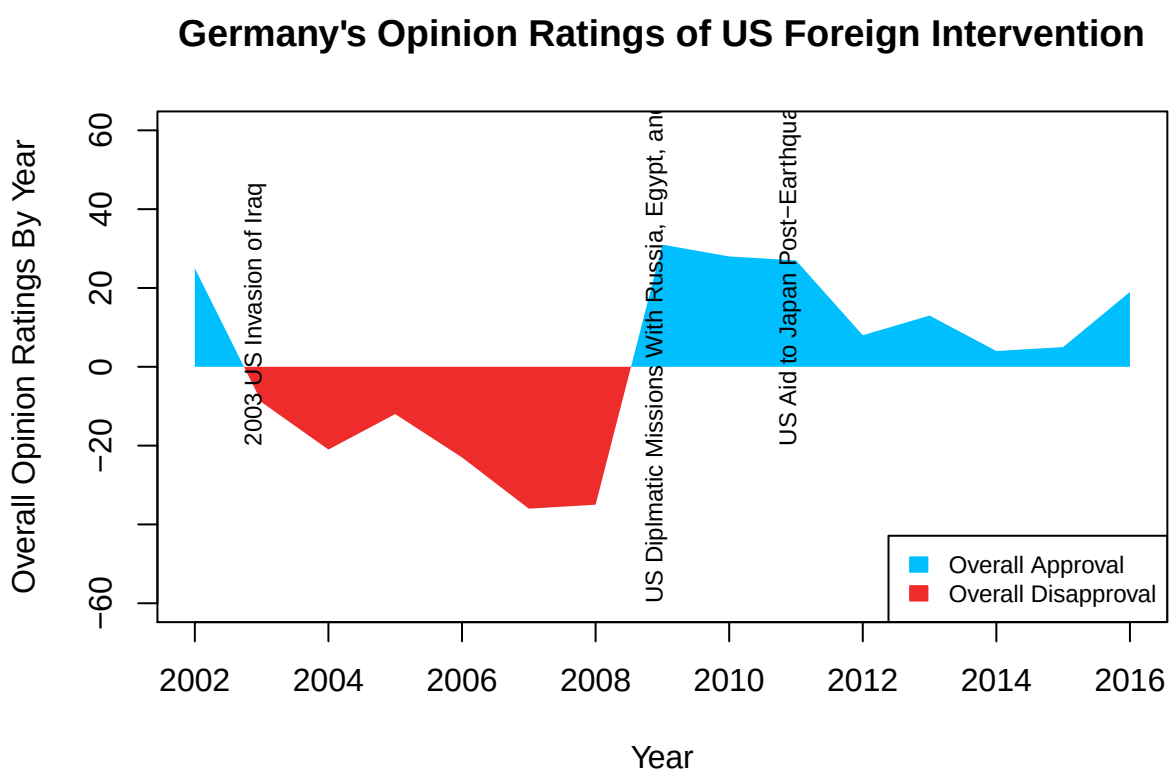
```
colnames(unfavorable) <- c("Country","2002","2003","2004","2005","2006","2007","2008","2009","2010","20
unfavop.data <- melt(unfavorable, id="Country")
```

```
total.data <- merge(favop.data,unfavop.data,by=c("Country","variable"))
colnames(total.data) <- c("Country","Year","Favorable Ratings","Unfavorable Ratings")
allied.data <- subset(total.data, Country=="France"|Country=="Germany"|Country=="United Kingdom")
allied.data$Year <- as.numeric(as.factor(allied.data$Year))
allied.data$Year[allied.data$Year==1] <- 2002
allied.data$Year[allied.data$Year==2] <- 2003
allied.data$Year[allied.data$Year==3] <- 2004
allied.data$Year[allied.data$Year==4] <- 2005
allied.data$Year[allied.data$Year==5] <- 2006
allied.data$Year[allied.data$Year==6] <- 2007
allied.data$Year[allied.data$Year==7] <- 2008
allied.data$Year[allied.data$Year==8] <- 2009
allied.data$Year[allied.data$Year==9] <- 2010
allied.data$Year[allied.data$Year==10] <- 2011
allied.data$Year[allied.data$Year==11] <- 2012
allied.data$Year[allied.data$Year==12] <- 2013
allied.data$Year[allied.data$Year==13] <- 2014
allied.data$Year[allied.data$Year==14] <- 2015
allied.data$Year[allied.data$Year==15] <- 2016
france <- subset(allied.data, Country=="France")
germany <- subset(allied.data, Country=="Germany")
uk <- subset(allied.data, Country=="United Kingdom")
```

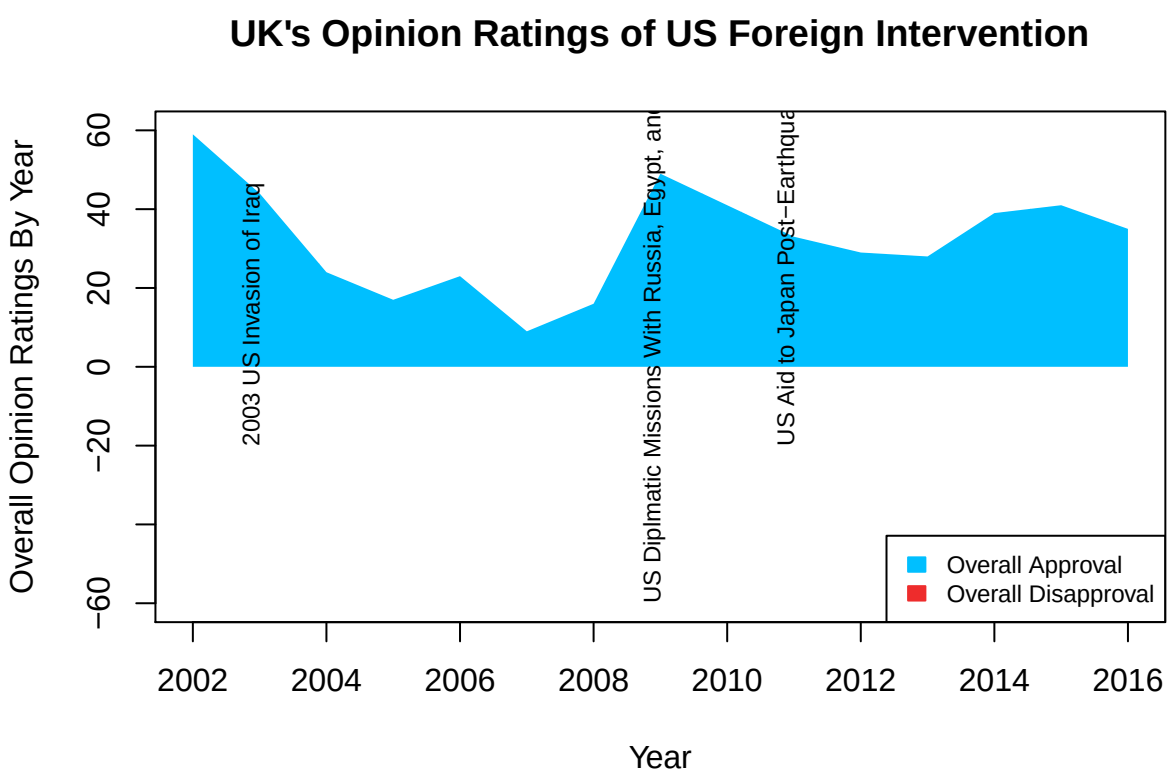
```
france$`Overall Ratings` <- france$`Favorable Ratings`-france$`Unfavorable Ratings`
fr.date <- approx(france$Year,france$`Overall Ratings`,n=2000)$x
fr.overall <- approx(france$Year,france$`Overall Ratings`,n=2000)$y
overall.poly.plus <- fr.overall
overall.poly.minus <- fr.overall
overall.poly.minus[overall.poly.minus>0] <- 0
overall.poly.plus[overall.poly.plus<0] <- 0
x.overall.poly.plus <- c(fr.date,rev(fr.date))
y.overall.poly.plus <- c(overall.poly.plus,rep(0,2000))
x.overall.poly.minus <- c(fr.date,rev(fr.date))
y.overall.poly.minus <- c(overall.poly.minus,rep(0,2000))
plot(france$Year,rep(NA,15),ylim = c(-60,60),xlab = "Year",ylab = "Overall Opinion Ratings by Year",mai
polygon(x.overall.poly.plus,y.overall.poly.plus,col="deepskyblue",border = NA)
polygon(x.overall.poly.minus,y.overall.poly.minus,col="firebrick2",border = NA)
legend("bottomright",fill=c("deepskyblue","firebrick2"),border = c("deepskyblue","firebrick2"),legend=c
text(2003, -20, "2003 US Invasion of Iraq",srt=90,adj = c(0,0),cex = 0.75)
text(2009, -60, "US Diplmatic Missions With \nRussia, Egypt, and South America",srt=90,adj = c(0,0),cex
text(2011, -20, "US Aid to Japan Post-Earthquake",srt=90,adj = c(0,0),cex = 0.75)
```



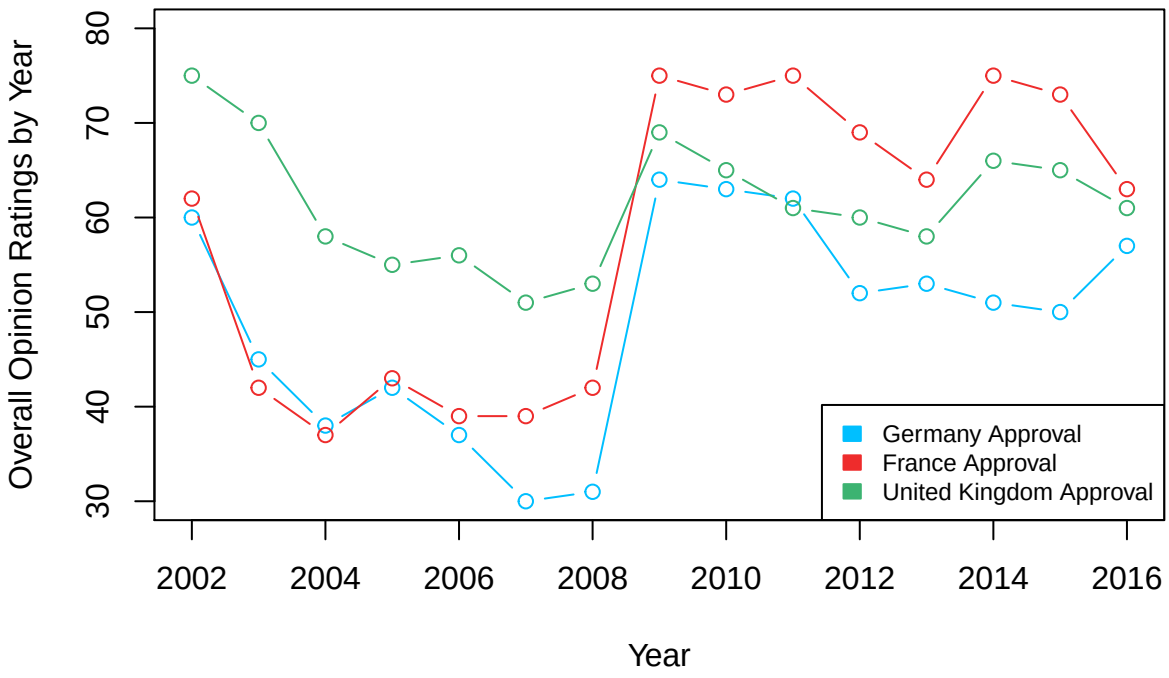

```
germany$'Overall Ratings' <- germany$`Favorable Ratings`-germany$`Unfavorable Ratings`
gr.date <- approx(germany$Year,germany$`Overall Ratings`,n=2000)$x
gr.overall <- approx(germany$Year,germany$`Overall Ratings`,n=2000)$y
gr.overall.poly.plus <- gr.overall
gr.overall.poly.minus <- gr.overall
gr.overall.poly.plus[gr.overall.poly.plus<0] <- 0
gr.overall.poly.minus[gr.overall.poly.minus>0] <- 0
gr.x.overall.poly.plus <- c(gr.date,rev(gr.date))
gr.y.overall.poly.plus <- c(gr.overall.poly.plus,rep(0,2000))
gr.x.overall.poly.minus <- c(gr.date,rev(gr.date))
gr.y.overall.poly.minus <- c(gr.overall.poly.minus,rep(0,2000))
gr.y.overall.poly.minus <- c(gr.overall.poly.minus,rep(0,2000))
plot(germany$Year,rep(NA,15),ylim = c(-60,60),xlab = "Year",ylab = "Overall Opinion Ratings By Year",ma
polygon(gr.x.overall.poly.plus,gr.y.overall.poly.plus,col="deepskyblue",border = NA)
polygon(gr.x.overall.poly.minus,gr.y.overall.poly.minus,col="firebrick2",border = NA)
legend("bottomright",fill=c("deepskyblue","firebrick2"),border = c("deepskyblue","firebrick2"),legend=c
text(2003, -20, "2003 US Invasion of Iraq",srt=90,adj = c(0,0),cex = 0.75)
text(2009, -60, "US Diplmatic Missions With Russia, Egypt, and South America",srt=90,adj = c(0,0),cex =
text(2011, -20, "US Aid to Japan Post-Earthquake",srt=90,adj = c(0,0),cex = 0.75)
```



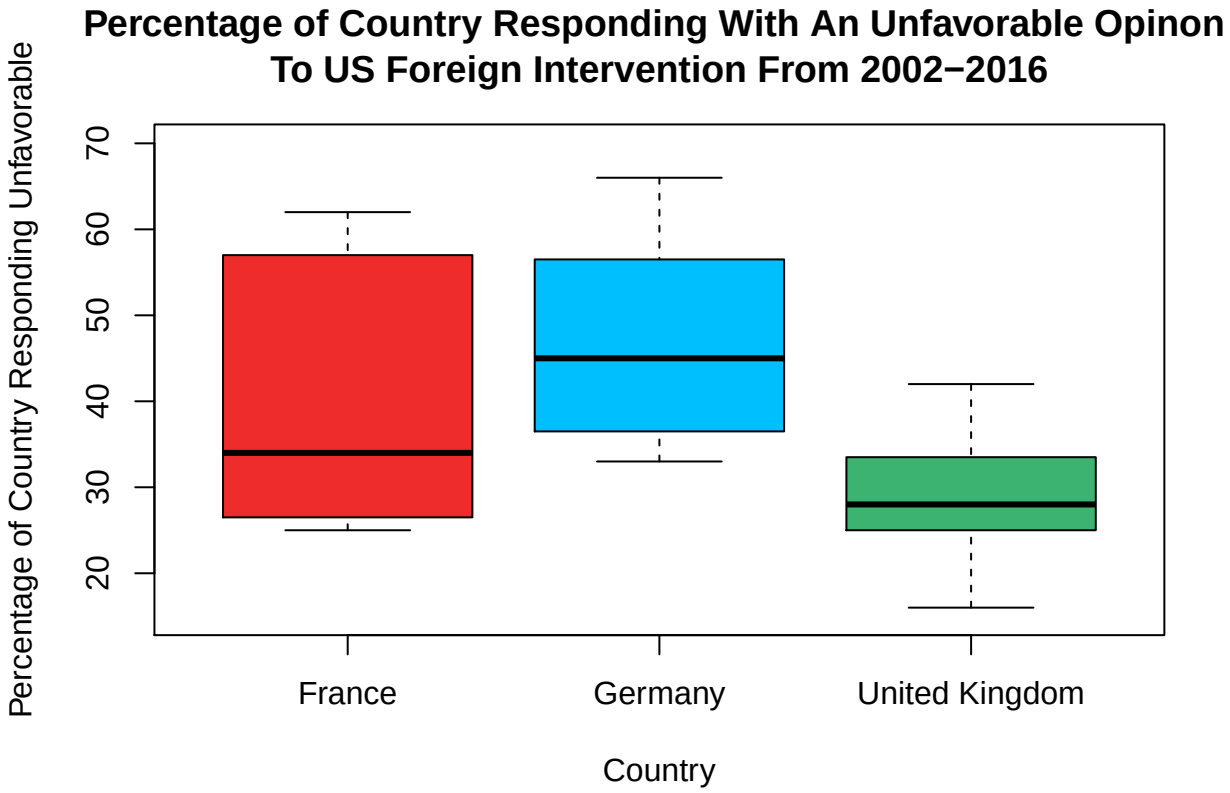

```
uk$`Overall Ratings` <- uk$`Favorable Ratings`-uk$`Unfavorable Ratings`
uk.date <- approx(uk$Year,uk$`Overall Ratings`,n=2000)$x
uk.overall <- approx(uk$Year,uk$`Overall Ratings`,n=2000)$y
uk.overall.poly.plus <- uk.overall
uk.overall.poly.minus <- uk.overall
uk.overall.poly.plus[uk.overall.poly.plus<0] <- 0
uk.overall.poly.minus[uk.overall.poly.minus>0] <- 0
uk.x.overall.poly.plus <- c(uk.date,rev(uk.date))
uk.y.overall.poly.plus <- c(uk.overall.poly.plus,rep(0,2000))
uk.x.overall.poly.minus <- c(uk.date,rev(uk.date))
uk.y.overall.poly.minus <- c(uk.overall.poly.minus,rep(0,2000))
plot(uk$Year,rep(NA,15),ylim = c(-60,60),xlab = "Year",ylab = "Overall Opinion Ratings By Year",main = "
polygon(uk.x.overall.poly.plus,uk.y.overall.poly.plus,col="deepskyblue",border = NA)
polygon(uk.x.overall.poly.minus,uk.y.overall.poly.minus,col="firebrick2",border = NA)
legend("bottomright",fill=c("deepskyblue","firebrick2"),border = c("deepskyblue","firebrick2"),legend=c
text(2003, -20, "2003 US Invasion of Iraq",srt=90,adj = c(0,0),cex = 0.75)
text(2009, -60, "US Diplmatic Missions With Russia, Egypt, and South America",srt=90,adj = c(0,0),cex =
text(2011, -20, "US Aid to Japan Post-Earthquake",srt=90,adj = c(0,0),cex = 0.75)
```




```
plot(germany$Year,germany$`Favorable Ratings`,ylim=c(30,80),xlab = "Year",ylab = "Overall Opinion Ratin
lines(france$Year,france$`Favorable Ratings`,type = "b",col="firebrick2")
lines(uk$Year,uk$`Favorable Ratings`,type = "b",col="mediumseagreen")
legend("bottomright",fill=c("deepskyblue","firebrick2","mediumseagreen"),border = c("deepskyblue","firel
```




```
boxplot(allied.data$`Unfavorable Ratings`~allied.data$Country,xlab="Country",ylab="Percentage of Country
```


Percentage of Country Responding With An Unfavorable Opinon
To US Foreign Intervention From 2002−2016
Percentage of Country Responding Unfavorable
20
30
40
50
60
70
France
Germany
United Kingdom
Country