```
library(lme4)
library(lmerTest)
library(ggplot2)
library(ordinal)
library(dplyr)
library(emmeans)
library(sjPlot)

setwd("C:/Users/iamcs/Dropbox/Doctoralcourse/PurdueR")

data <- read.csv("KKpassive.csv")
data <- data
View(data)

data$Subject<-as.factor(data$Subject)
data$Group<-as.factor(data$Group)
data$Gender<-as.factor(data$Gender)
data$Age<-as.numeric(data$Age)
data$Education<-as.numeric(data$Education)
data$MMSE<-as.numeric(data$MMSE)
data$Item<-as.factor(data$Item)
data$Condition<-as.factor(data$Condition)
data$SentenceType<-as.factor(data$SentenceType)
data$Wordorder<-as.factor(data$Wordorder)
data$KKpassive<-as.factor(data$KKpassive)
data$WM <-as.numeric(data$WM)

data$SentenceType <- factor(data$SentenceType, levels = c("Passive", "Active"))
data$Wordorder <- factor(data$Wordorder, levels = c("NC", "C"))
contrasts(data$Group) <- contr.sum(2)
contrasts(data$SentenceType) <- contr.sum(2)
contrasts(data$Wordorder) <-contr.sum(2)
contrasts(data$Group)
contrasts(data$Wordorder)
contrasts(data$SentenceType)

levels(data$Group)
levels(data$SentenceType)
levels(data$Wordorder)

m4<-glmer(KKpassive~WM*SentenceType*Wordorder*Group+Age+Education+(1|Item)+
(1|Subject),data=data,family=binomial(link="logit"),control=glmerControl(optimizer =
"bobyqa",calc.derivs=FALSE,optCtrl = list(maxfun=2e5)))
summary(m4)


library(lme4)
library(lmerTest)
library(ggplot2)
library(ordinal)
library(dplyr)
library(emmeans)
library(sjPlot)

setwd("C:/Users/iamcs/Dropbox/Doctoralcourse/PurdueR")
data <- read.csv("KEpassive.csv")
data <- data
View(data)


data$Subject<-as.factor(data$Subject)
data$Group<-as.factor(data$Group)
data$Gender<-as.factor(data$Gender)
data$Age<-as.numeric(data$Age)
data$Education<-as.numeric(data$Education)
data$MMSE<-as.numeric(data$MMSE)
data$Item<-as.factor(data$Item)
data$Condition<-as.factor(data$Condition)
data$SentenceType<-as.factor(data$SentenceType)
```

```
data$Wordorder<-as.factor(data$Wordorder)
data$KEPassive<-as.factor(data$KEpassive)
data$WM <-as.numeric(data$WM)

data_passive <- subset(data, SentenceType == "Passive")
data_active <- subset(data, SentenceType == "Active")
data$Group <- factor(data$Group, levels = c("Mono", "Bi"))
contrasts(data$Group) <- contr.sum(2)
contrasts(data$SentenceType) <- contr.sum(2)
contrasts(data$Group)

levels(data$Group)
levels(data$SentenceType)
levels(data$Wordorder)


m1<-glmer(KEPassive~WM*Group*SentenceType*Wordorder+Age+Education+(1|Item)+
(1|Subject),data=data,family=binomial(link="logit"),,control=glmerControl(optimizer =
"bobyqa",calc.derivs=FALSE,optCtrl = list(maxfun=2e5)))
summary(m1)
```