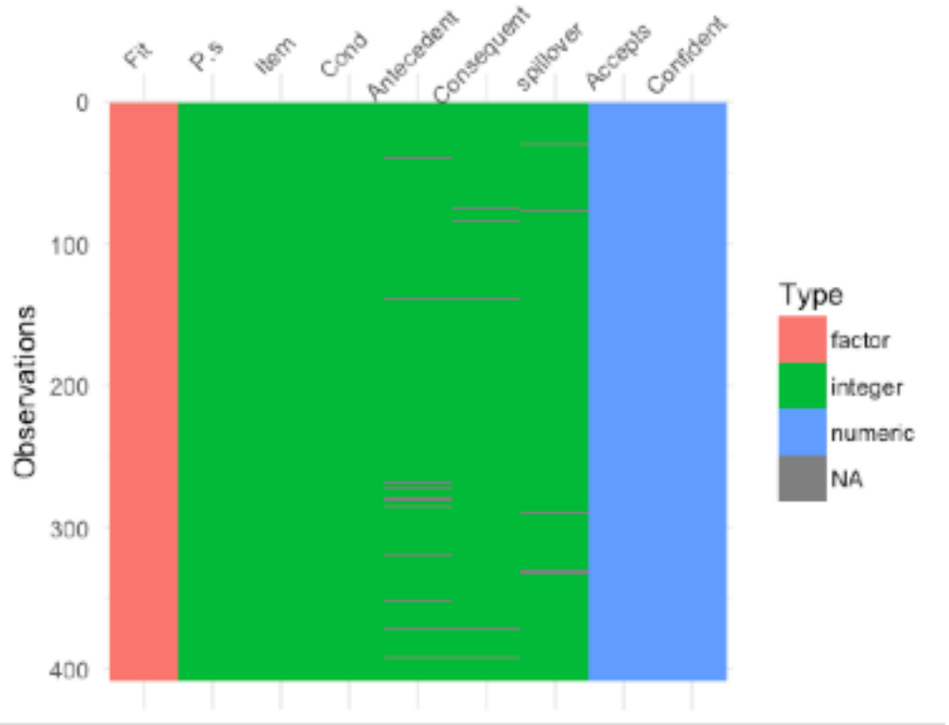
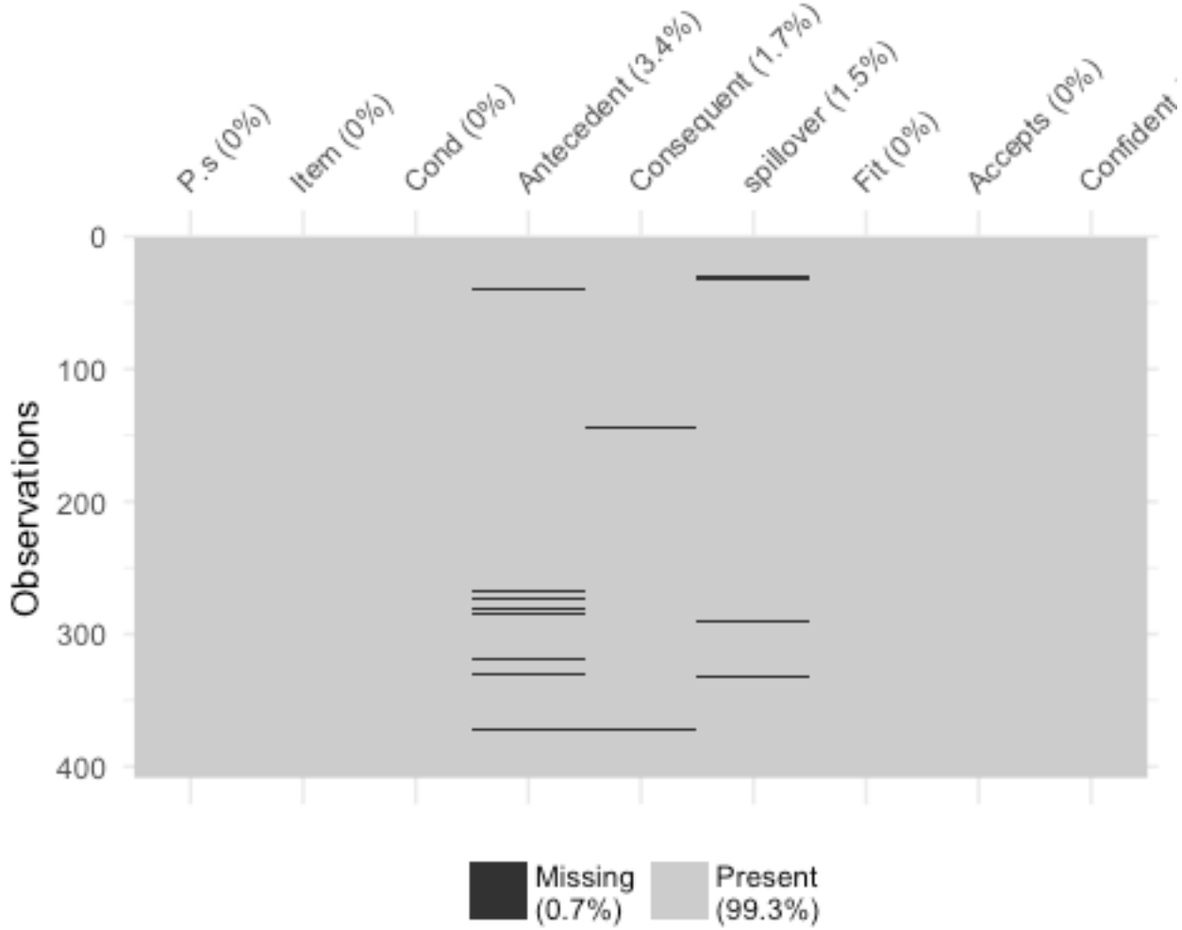
Visualising our whole dataset using “visdat"

```r
install.packages ("visdat")
library (visdat)

#read in data file
RPs_plus_ratings <- read_csv("~/Desktop/Air Work/R analyses/Igor study/RPs_plus_ratings.csv")

#make Fit a factor
RPs_plus_ratings$Fit <- factor (RPs_plus_ratings$Fit)

#create an index so we can remove item 9
index <- RPs_plus_ratings$Item !="9"

#visualise the data
vis_dat(RPs_plus_ratings[index,])

#visualise missing data
vis_miss(RPs_plus_ratings[index,])

```





What about normality?

- In LMMs (as with the GLM) we need to worry about the normality of the residuals…
- You can check normality in a number of ways.
- Graphically, you can use the *qqnorm* function (which produces a Q-Q plot), and *hist* (which produces a histogram) applied to the model residuals.
- Statistically, you could use the *shapiro.test* function applied to a distribution of data. Be aware that for large datasets, even small deviations from normality will result in a significant Shapiro test. So best not to use this…