- Assumption 2 – Homogeneity of variance – the variances should not change systematically throughout the data. In designs where you test several groups of participants this means that the variances of each group should be equivalent.

- Levene's Test for equality of variance. If it is non-significant, then it means that the variances are equivalent (i.e., we have homogeneity of variance).
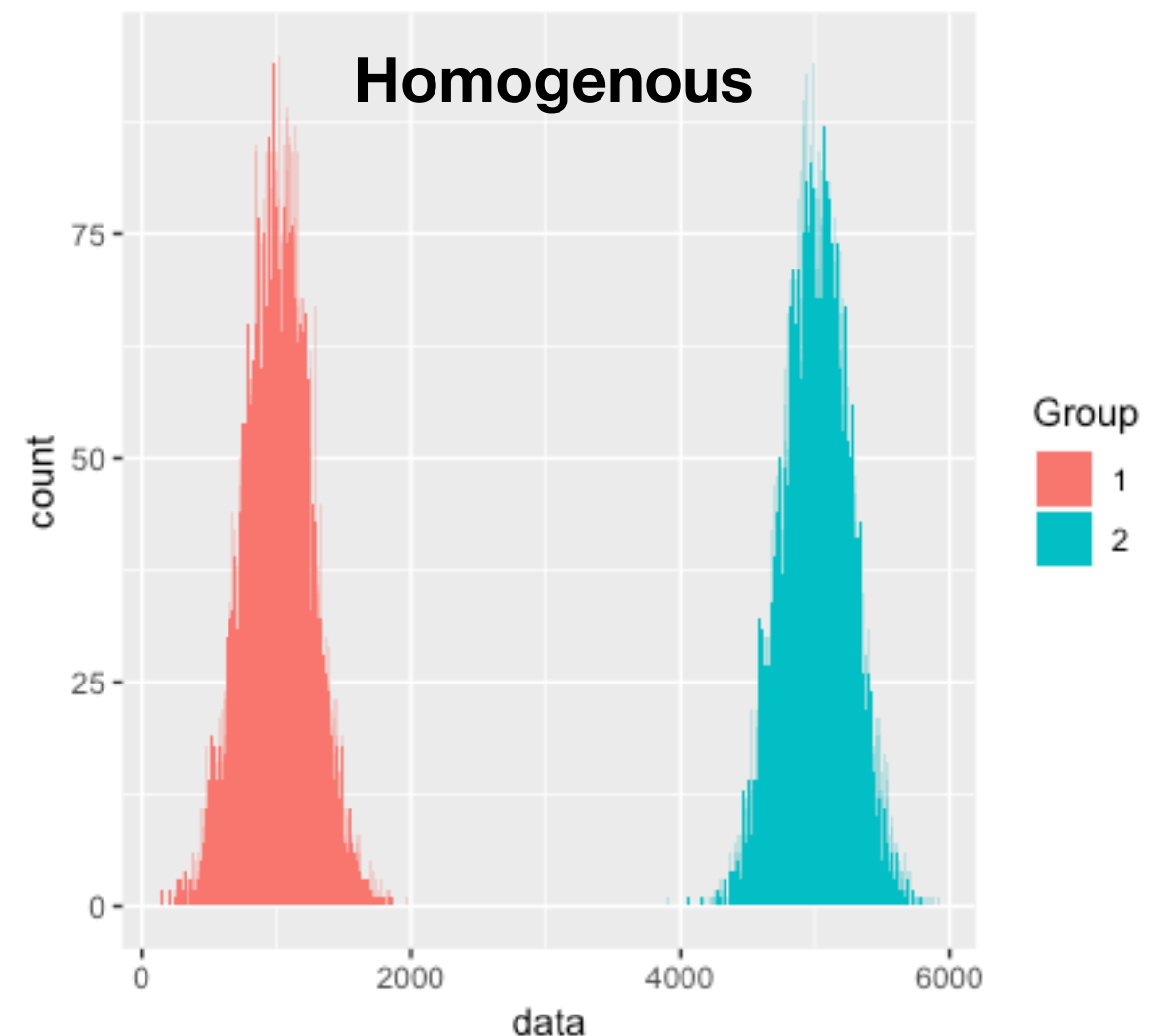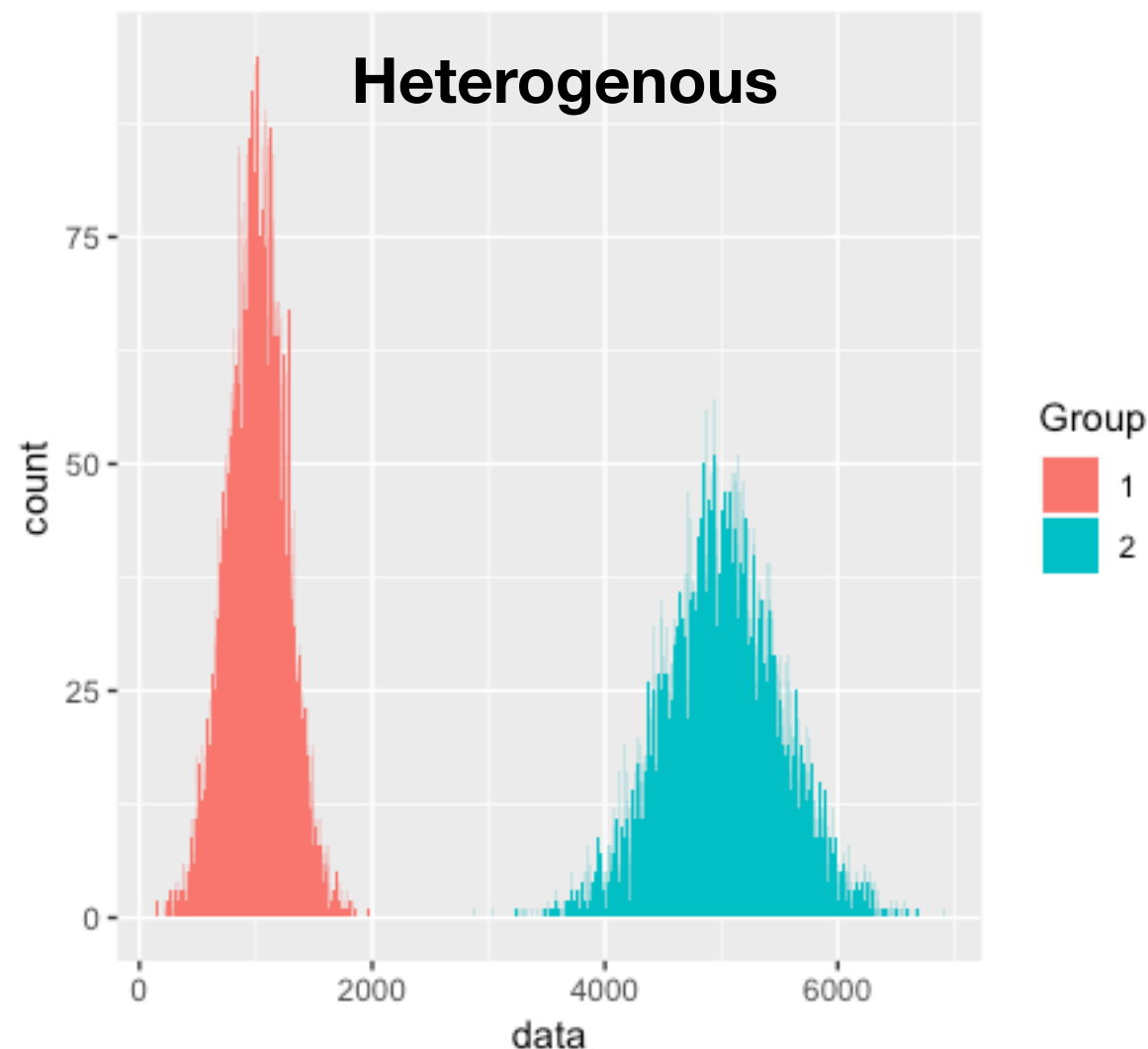
- Assumption 3 – Interval data – data should be measured on an interval scale. In other words, the distance between two adjacent points should be the same as the distance between any other two adjacent points. R can't tell you this – you need to determine it by yourself. Reaction time is a good example of interval data.

- Assumption 4 – Independence. The data from one participant does not affect the data from another (i.e., they are independent). In repeated measures designs, we expect the scores in the experimental conditions to be independent between participants.