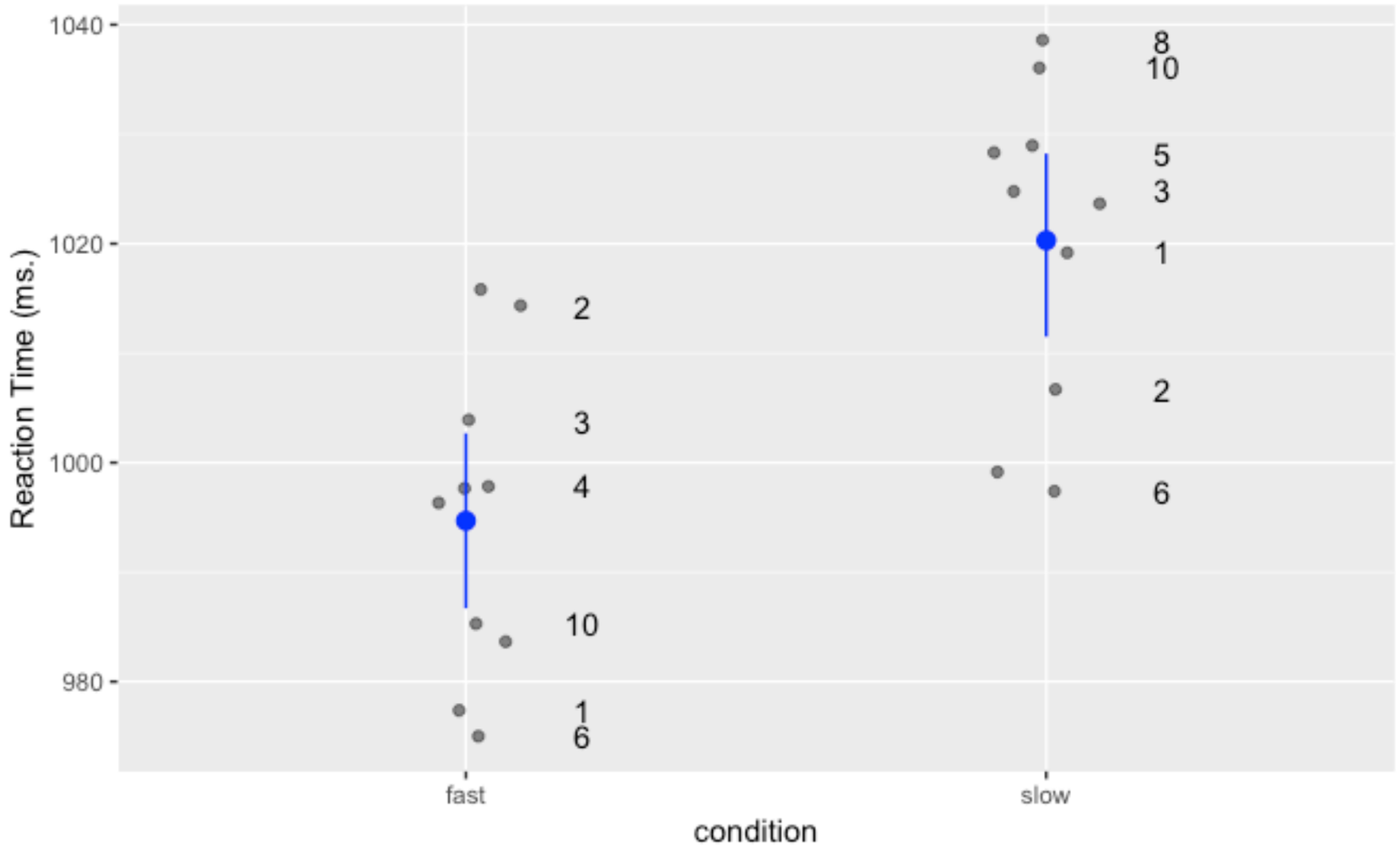

The mean for our ‘fast’ condition is a bit away close to the population mean (1000), while the mean for our ‘slow’ condition is very close to the population mean (1020). Sample 2 has an extreme mean for the ‘slow’ condition which is having an adverse effect on the overall mean for this condition - indeed, numerically the ‘slow’ condition is faster than the ‘fast’ condition in Sample 2. This is sampling error in practice and further highlights the problem with small sample sizes…

Comparing conditions

- Now imagine a case where we're simulating data from 100 experiments - each with one repeated measures factor with two levels - 'Fast' vs. 'Slow'

- After we have created our 100 simulations, we can carry out 100 t-tests to determine how many of the simulations produce a significant difference between our two conditions.