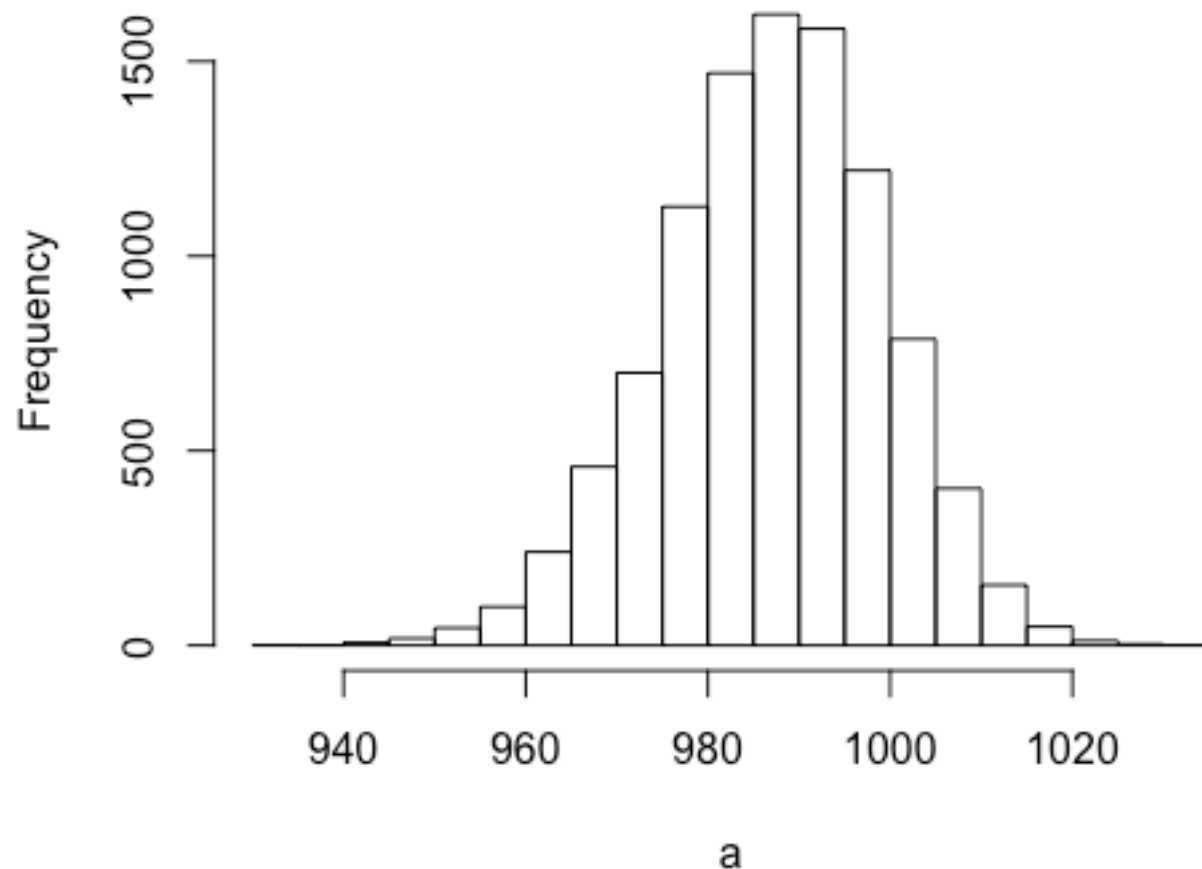


```
a <- numeric(10000)
for (i in 1:10000) {
  a[i] <- mean(sample(speed, replace = TRUE))
}
hist(a)
```

- This bit of code creates 10,000 samples based on our 25 observations and plots a histogram of these 10,000 sample means.

Histogram of a



- We can use this to estimate population parameters such as mean and CI.
- If we measure a plane with speed of less 950, how likely is that given our estimated population? We can work out the total number of planes with a speed of 950 (which is 18)...
- The probability is therefore less than or equal to 18 in 10,000 (so $p \leq .0018$)

The following mediation and moderation content is from the interactive R book by Alexander Demos & Carlos Salas.

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The full book with lots more content is available from here:

<http://ademos.people.uic.edu/index.html>