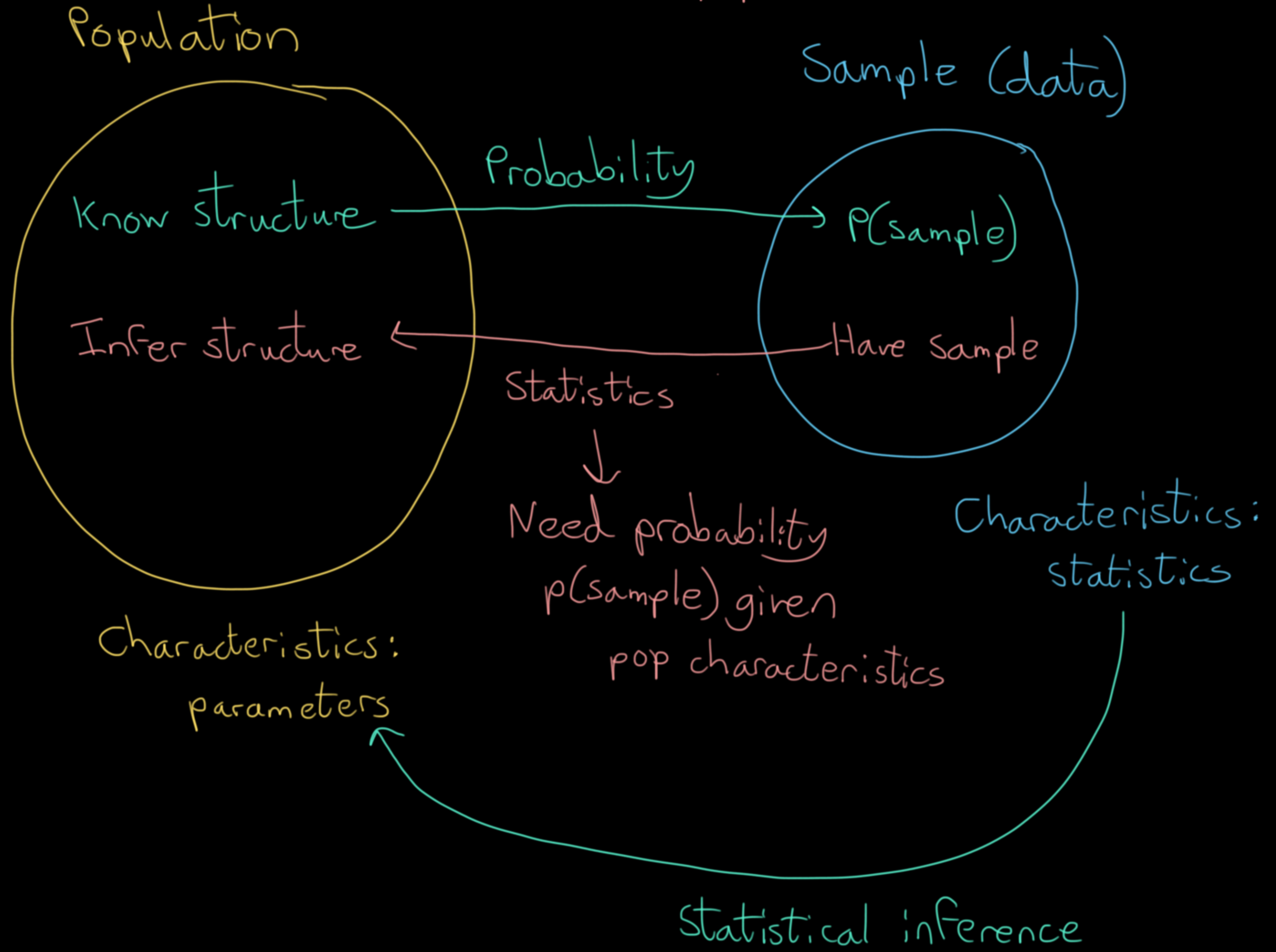


Descriptive statistics: describe data in front of us

Statistical inference:

→ assume data is sample from population

→ make inferences about pop based on sample



Estimation: estimate parameters

estimator: rule (formula) to compute value of estimate

estimate: guessed value of parameter

Point estimate  
single value  
mean of pop = 0.5

Interval estimate  
interval that should  
enclose parameter  
mean between 0.2 and 0.8

Hypothesis testing

Hypothesis: assumption about a population parameter

Test if true based on sample

Alternate hypothesis: what we seek to support

Null hypothesis: default assumption

Identify test statistic

Find value of  $\uparrow$

Reject null

Fail to reject null

} Decision: p-value, etc

Null hypothesis

Alternate hypothesis

Test statistic

Rejection region