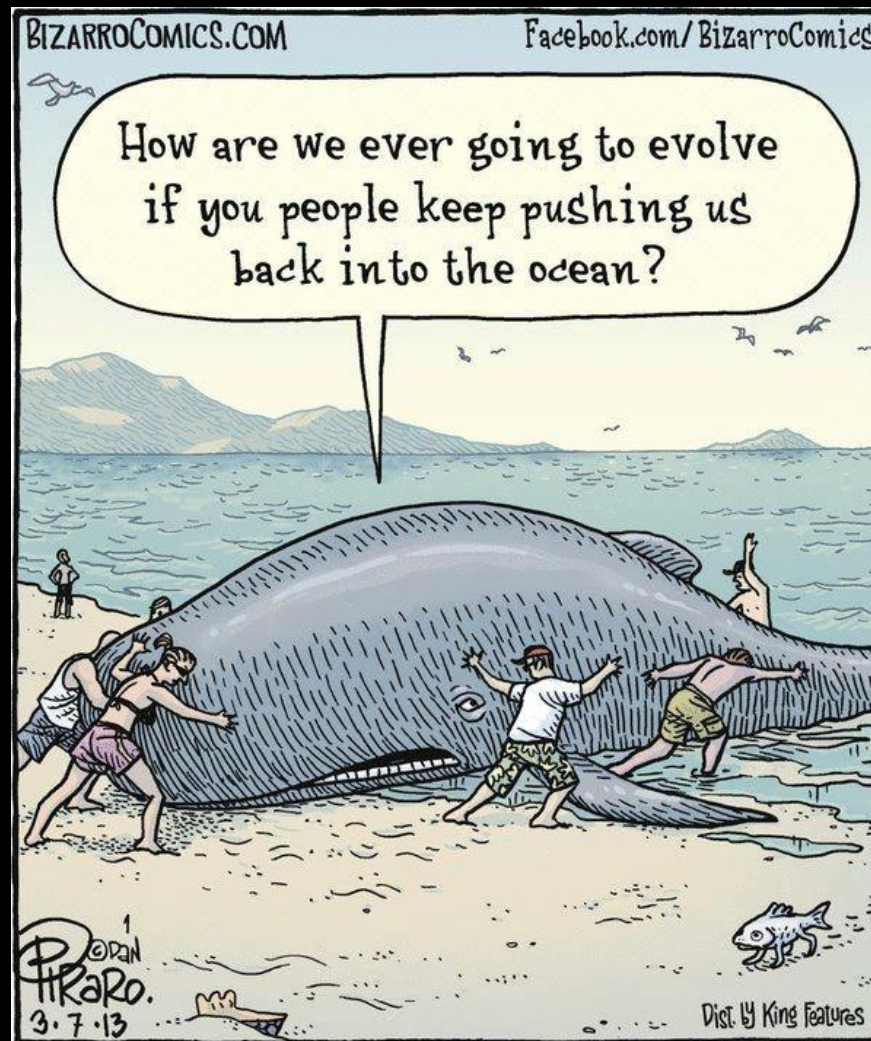
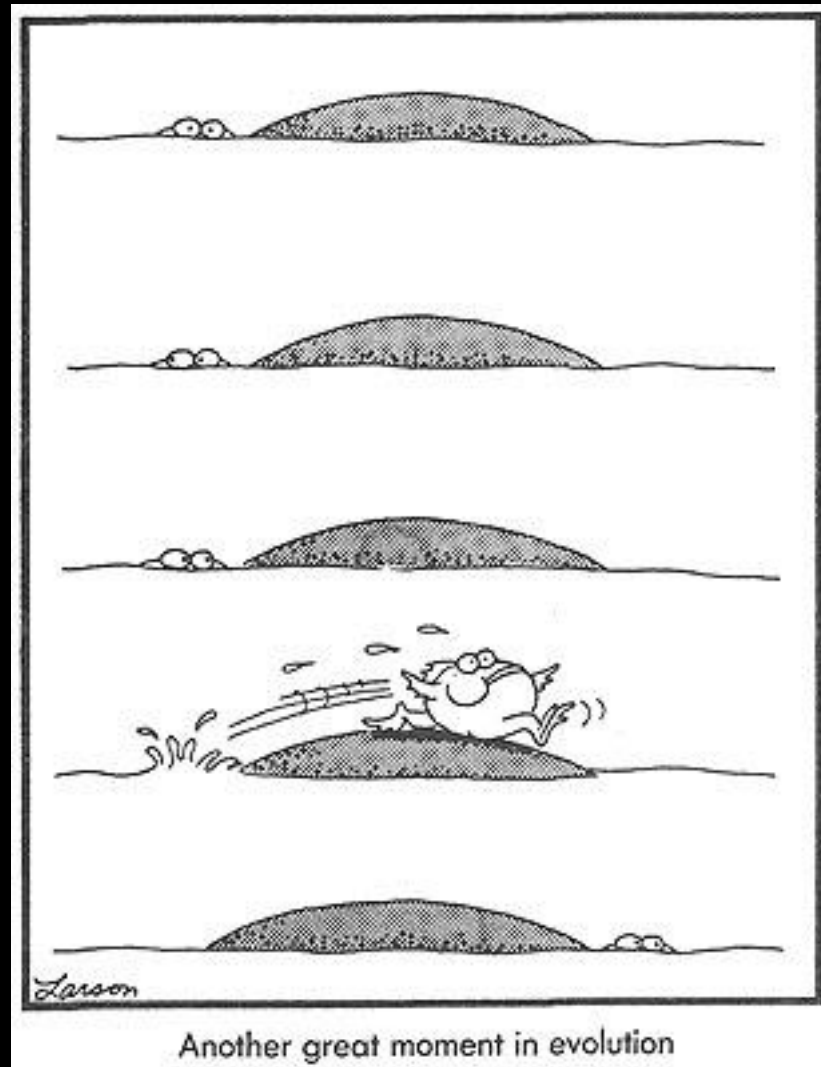


# Types of Natural Selection



# There are 3 types of selection:

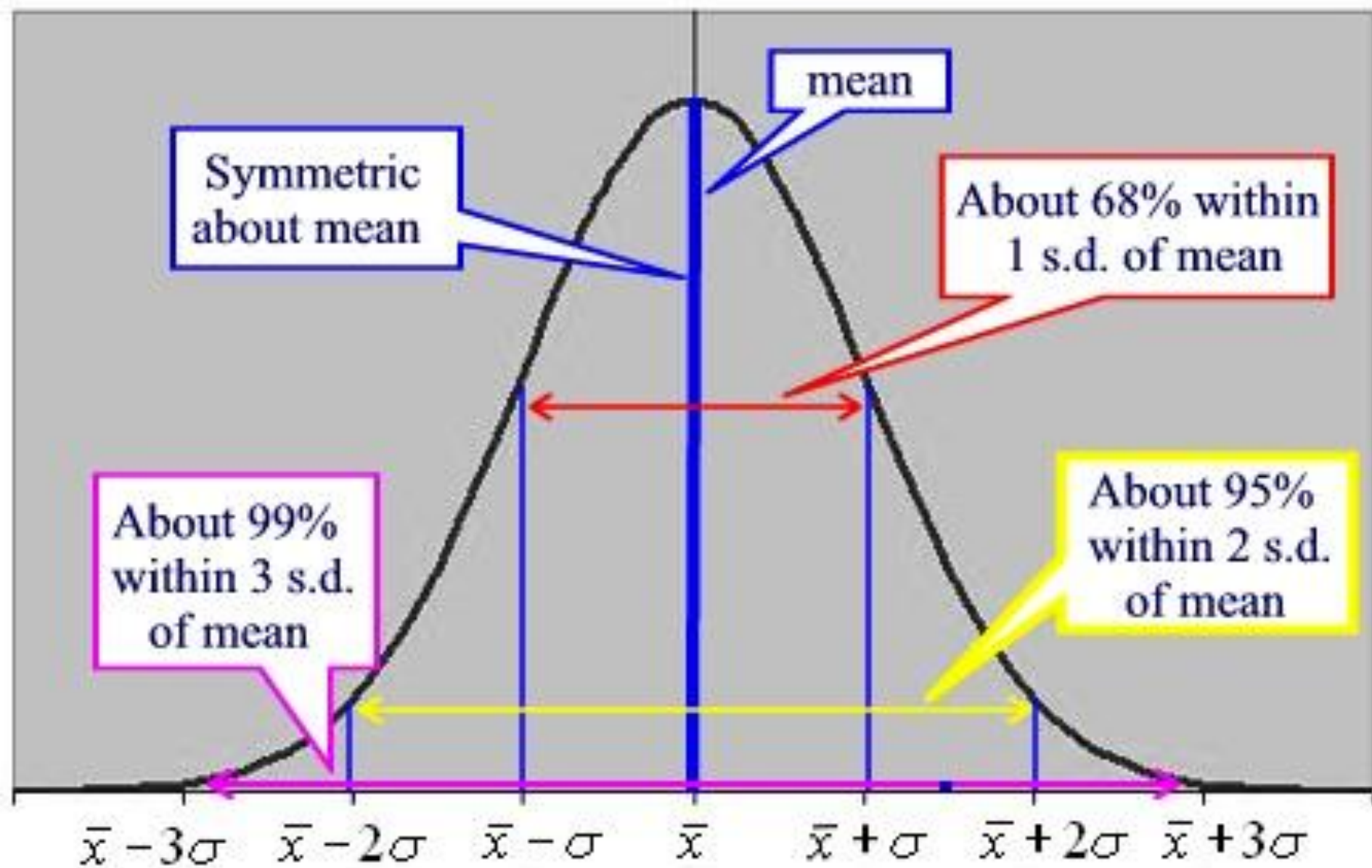
1. Directional
2. Disruptive
3. Stabilizing



# Normal Distribution

For example: Height

- In a normal distribution curve, most individuals are in the middle of the curve
  - medium height
- There are few at the extremes
  - very short or very tall

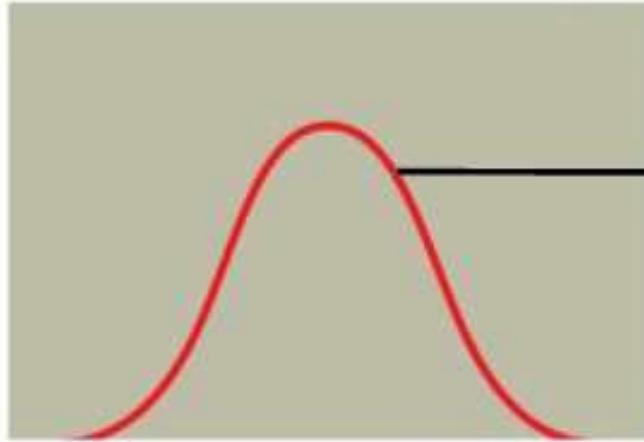


# 1. Directional Selection

- Environmental conditions favour individuals of one extreme
- The curve shifts to the right or to the left
- Occurs when the environment is changing
- Can cause evolution to occur
- Does not increase biodiversity

Ex) Either very tall or very short is better suited to the environment

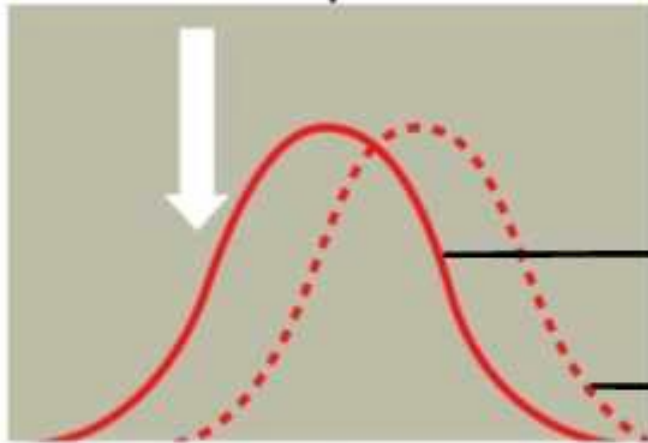
Frequency of individuals →



Original population



Phenotypes (fur color)



Original population

Evolved population

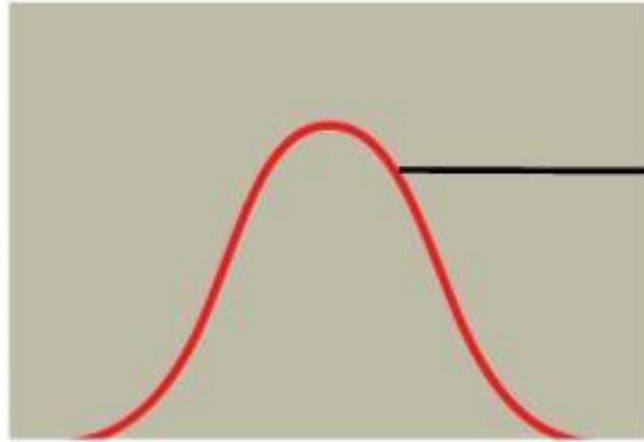


## 2. Disruptive Selection

- Selection against the middle of the curve
- Both extremes are favoured
- Can lead to divergent evolution (a.k.a. adaptive radiation)
- Can increase biodiversity

Ex) medium height is no longer best suited to the environment rather being either very short or very tall is

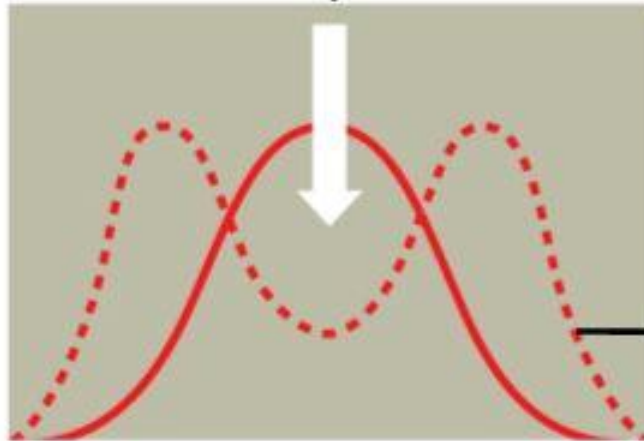
Frequency of individuals →



Original population



Phenotypes (fur color)



Evolved population



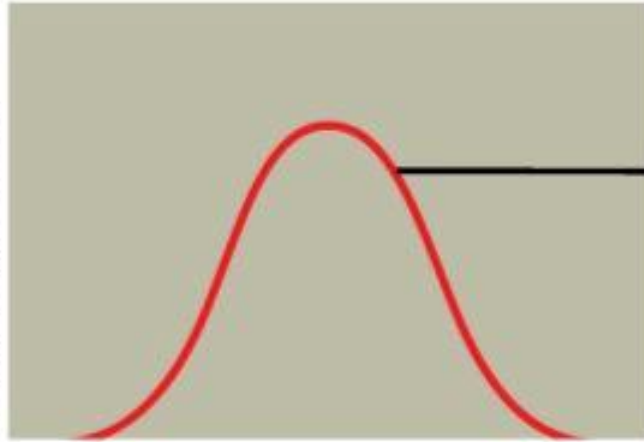


# 3. Stabilizing Selection

- Selection is against the extremes
- The middle traits are most suited to the environment
- Environmental conditions remain stable for long periods of time
- No divergence occurs
- Does not increase biodiversity

Ex) medium height is best suited

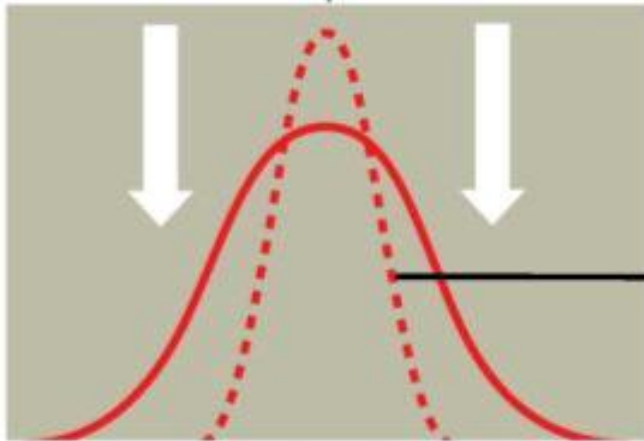
Frequency of individuals →



Original population

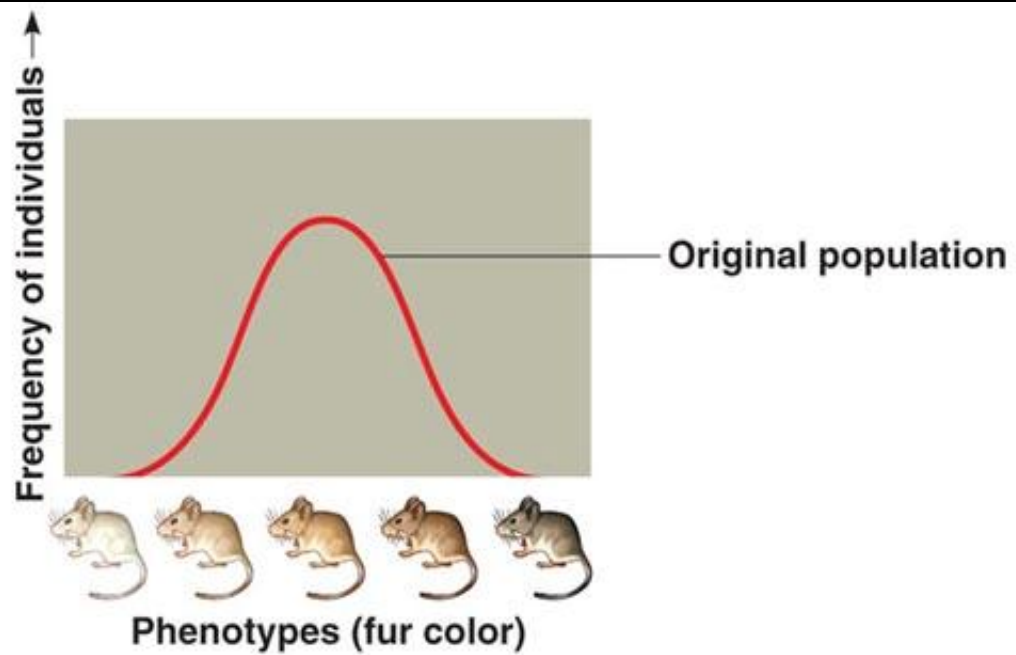


Phenotypes (fur color)

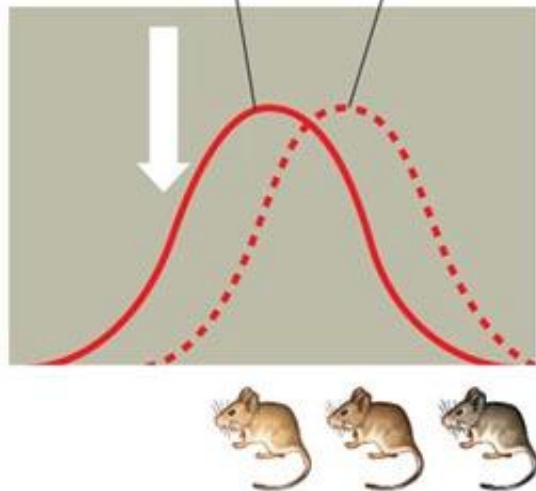


Evolved population

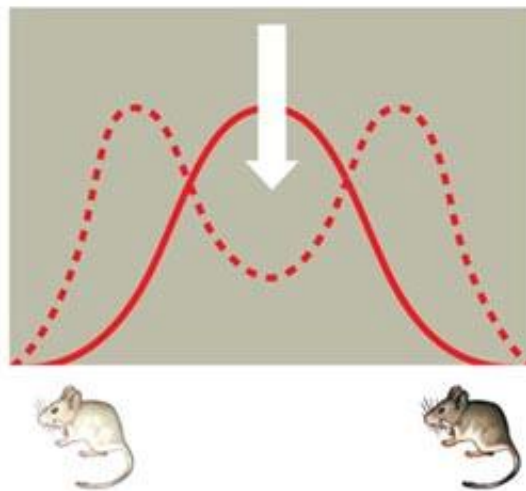




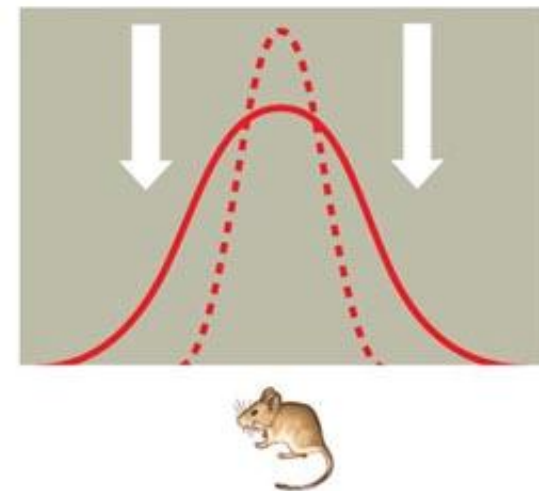
Original population  
Evolved population



(a) Directional selection



(b) Disruptive selection



(c) Stabilizing selection