

# Ex.6 and QQ plots shenanigans


a presentation by Giovanni Santantonio





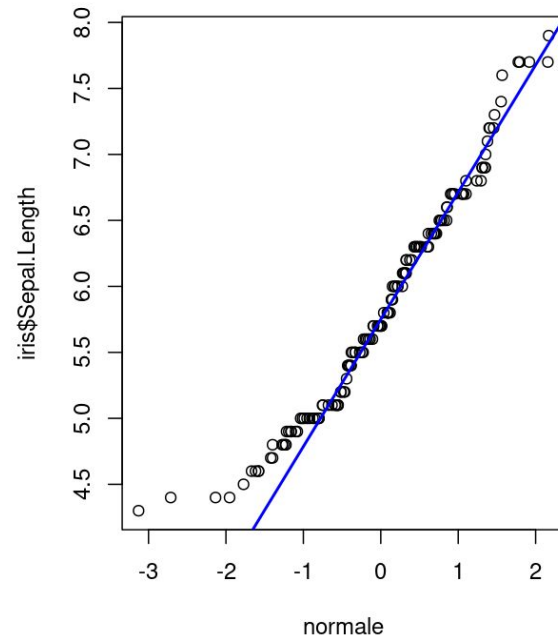
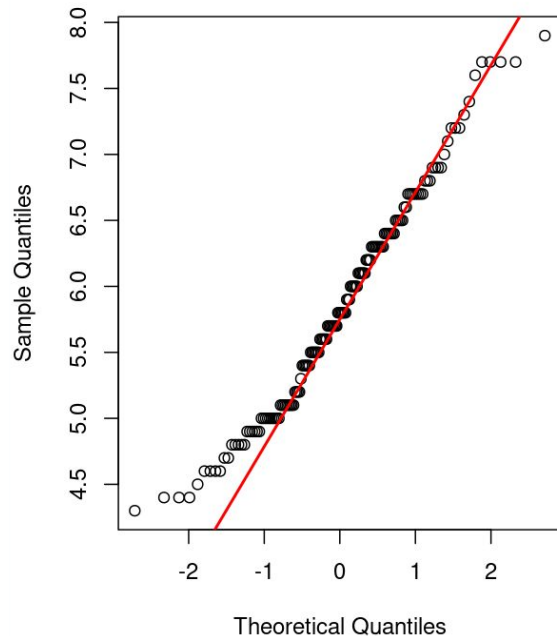
**1) Generate QQ plots for Sepal Width and Petal Width.**

**2) Compare them with the QQ plot for Sepal Length and discuss which variable appears to be the most normally distributed based on the QQ plots.**



# What is a Quantile Quantile plot?

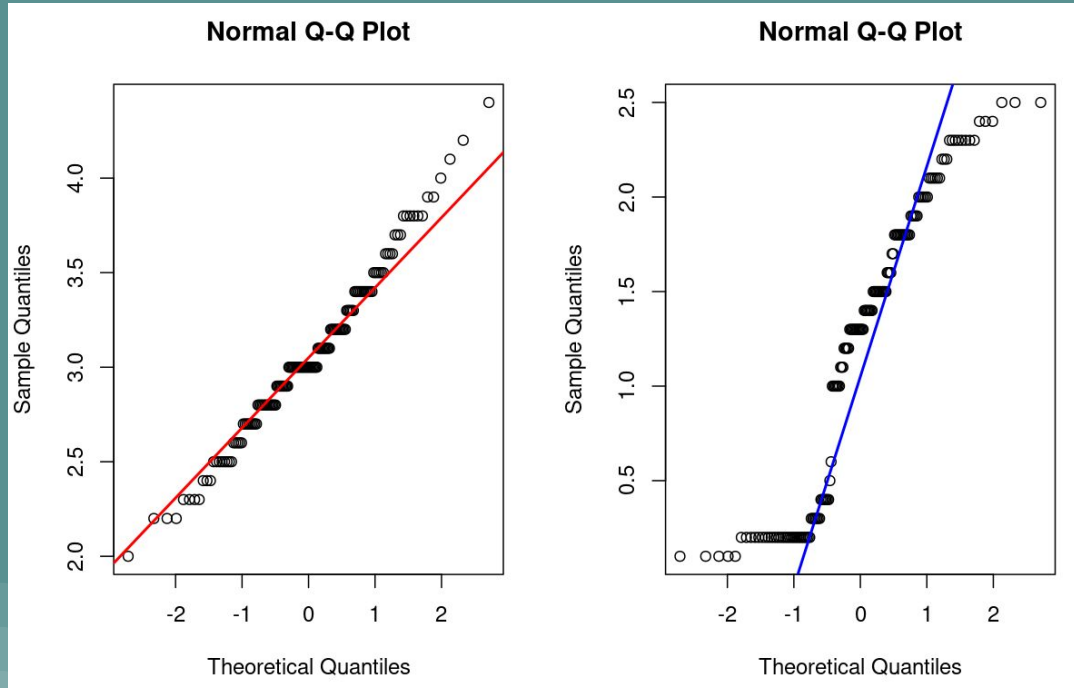
Compares a  
distribution (y axis)  
With a normal  
distribution (x axis)



```
normale <- rnorm(150, mean=0, sd=1)

par(mfrow = c(1,2)) # to display two graphs one beside the other
qqnorm(iris$Sepal.Length, ylab="Sepal Length")
qqline(iris$Sepal.Length, lwd=2, col="red") # this graph
```

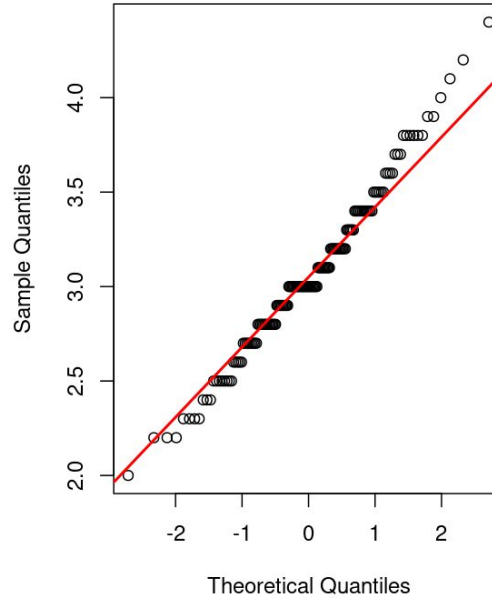
```
qqnorm(iris$Sepal.Width); qqline(iris$Sepal.Width, lwd=2, col="red")  
qqplot(normale, iris$Petal.Width); qqline(iris$Petal.Width, lwd=2, col="blue")
```



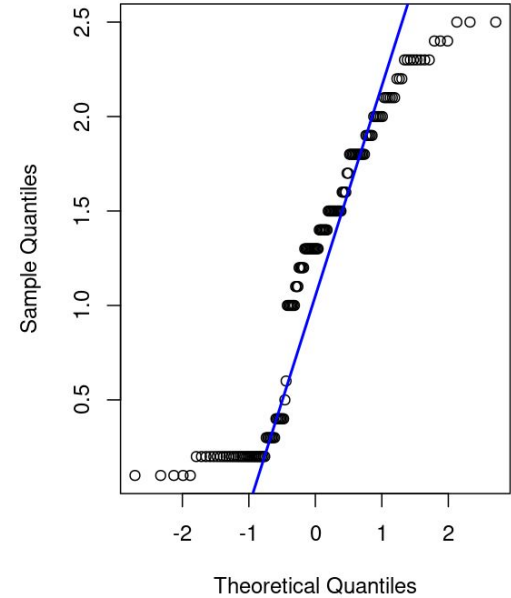
# Mumble mumble, what does it mean?



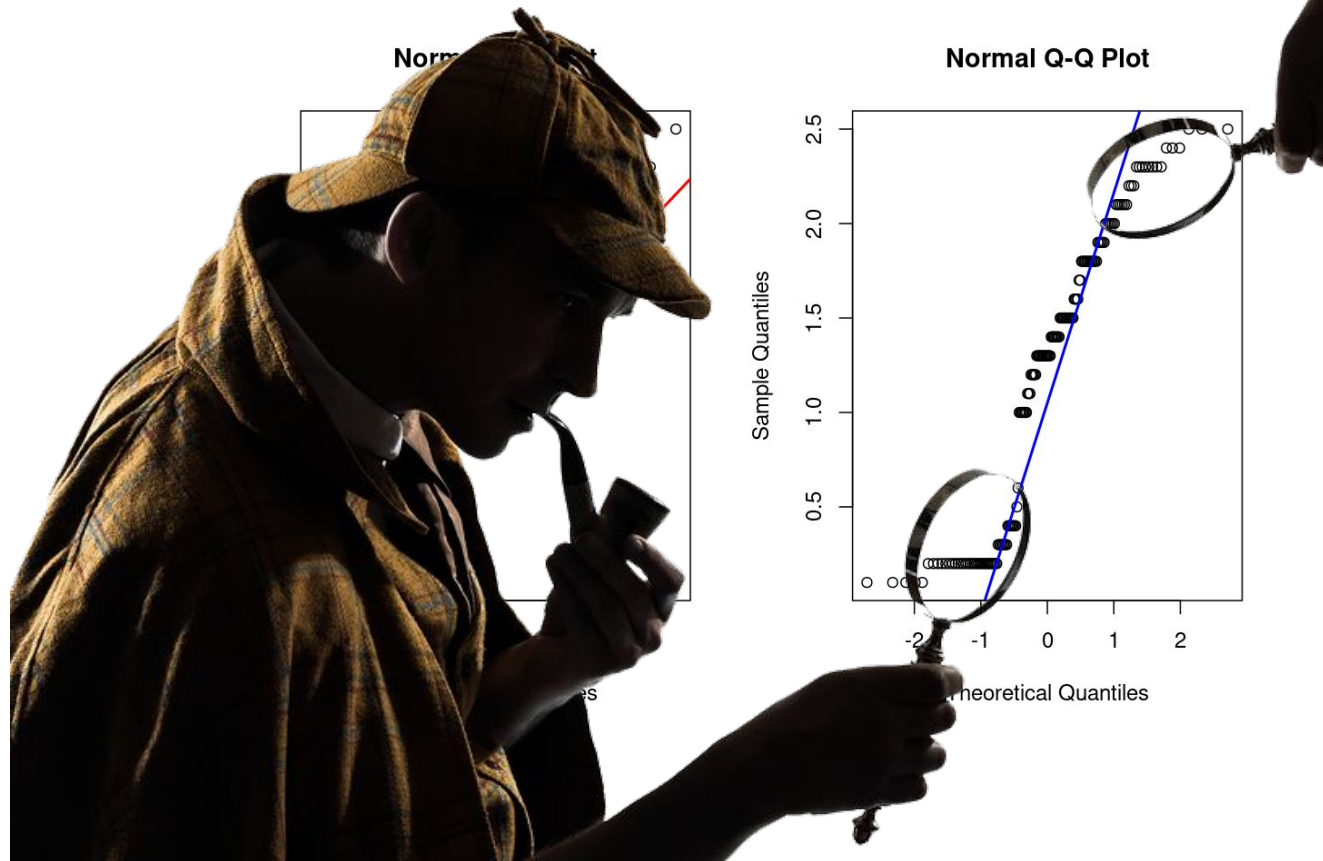
Normal Q-Q Plot



Normal Q-Q Plot



there's deviation from the line!

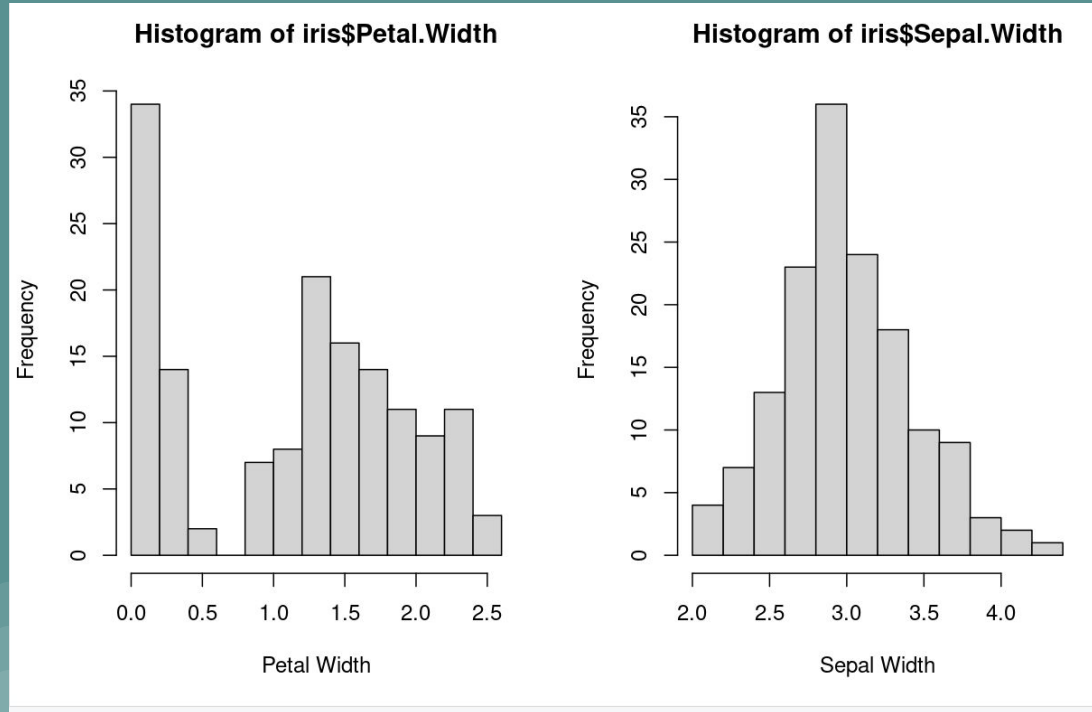




**Can you guess how their  
distributions look like?**

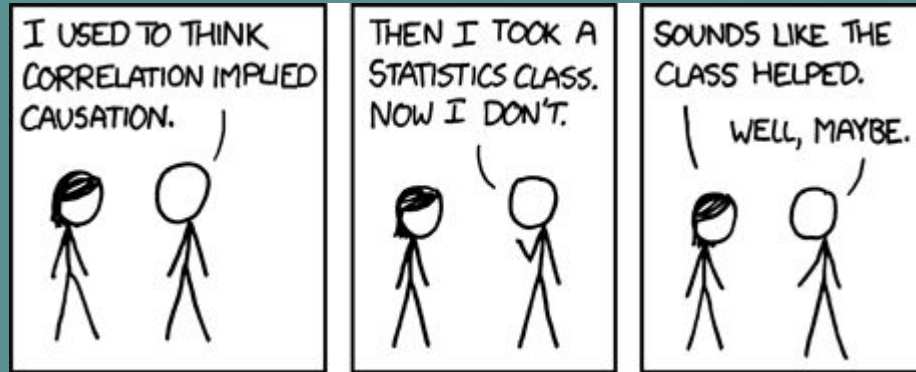
Petal Width is not normally distributed!

Whereas Sepal Width is! We are done.





# But remember...



Thank you!