

## Assumptions of the General Linear Model

## Distributional Assumptions of the Analysis of Variance

Error (in the population) is distributed  $\epsilon \sim N(0, \sigma^2)$   
 with mean = 0 normally and variance  $\sigma^2$

## Unruly Data

Heterogeneous  
Error Variance

Non-normal  
Error Variance

Outliers

Distributional Violations

Distributional Contamination

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Heterogeneous  
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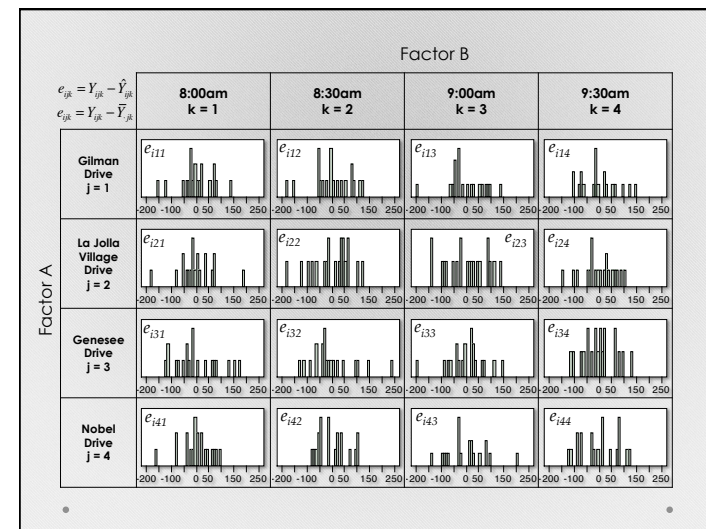
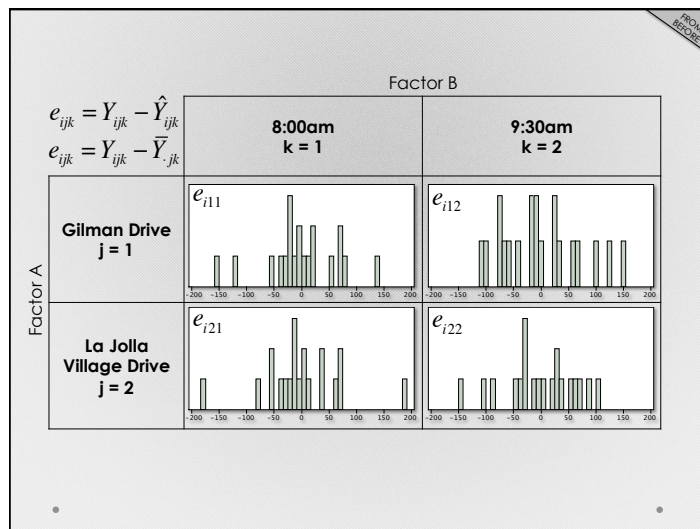
## Distributional Assumptions of the Analysis of Variance

Error (in the population) normally distributed with mean = 0 and variance  $\sigma^2$

$$\epsilon \sim N(0, \sigma^2)$$

FROM BEFORE

		Factor B	
		8:00am k = 1	9:30am k = 2
Factor A	Gilman Drive j = 1	$\bar{Y}_{\cdot 11} = 670$	$\bar{Y}_{\cdot 12} = 686$
	La Jolla Village Drive j = 2	$\bar{Y}_{\cdot 21} = 845$	$\bar{Y}_{\cdot 22} = 764$



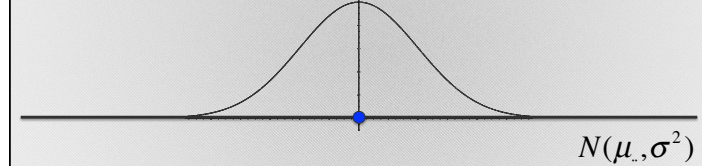
## Distributional Assumptions of the Analysis of Variance

Error (in the population) is distributed normally with mean = 0 and variance  $\sigma^2$

$$\varepsilon \sim N(0, \sigma^2)$$

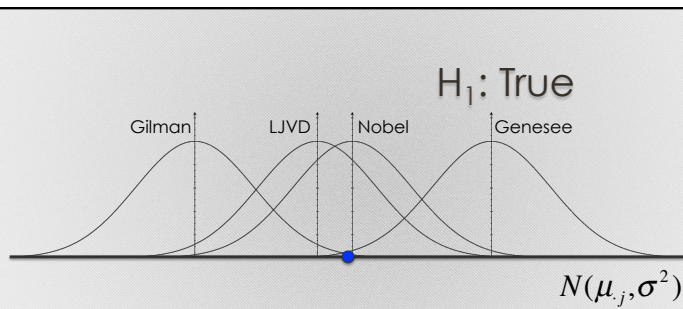
$H_0: \text{True}$

Gilman  
Nobel  
LJVD  
Genesee



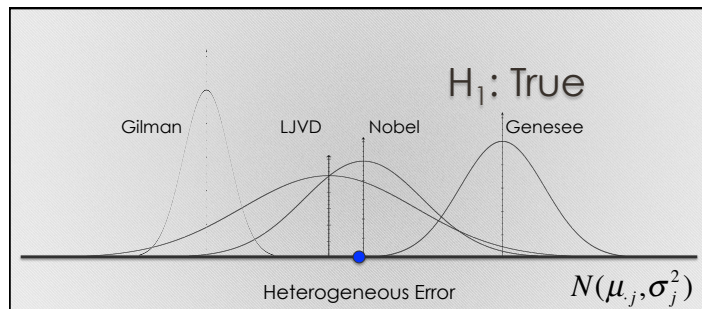
$H_1: \text{True}$

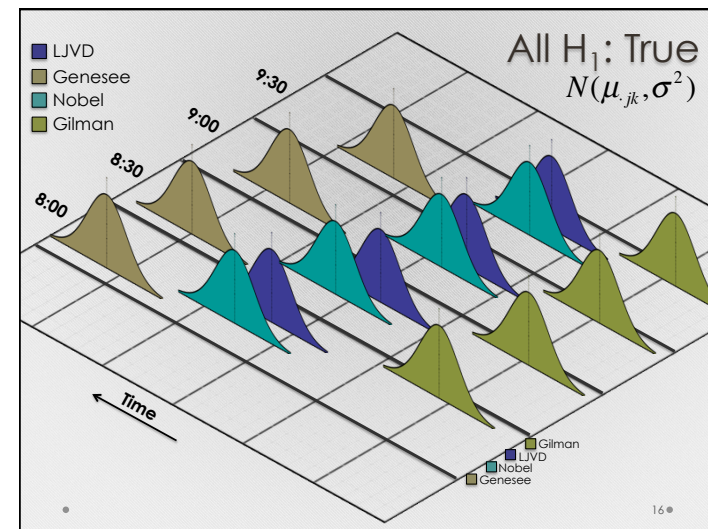
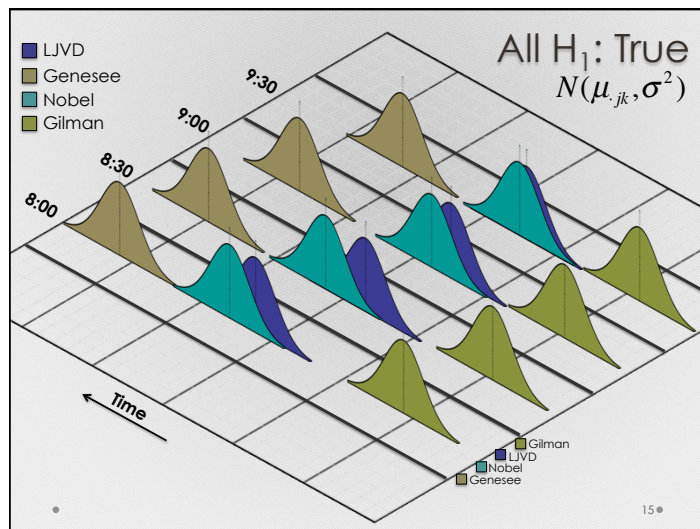
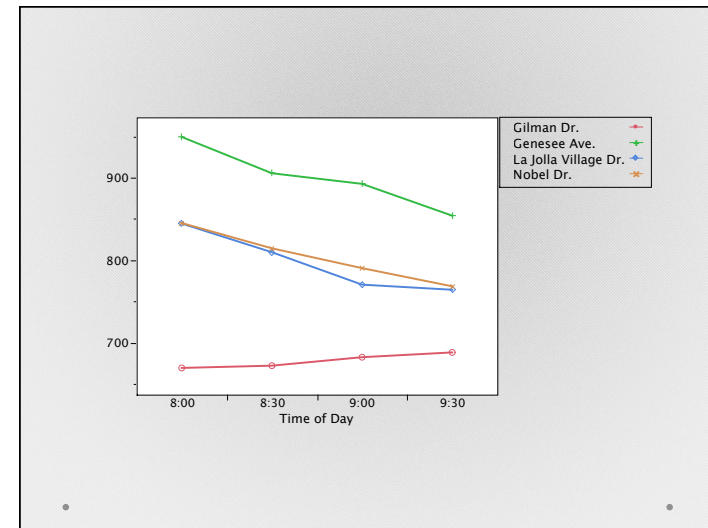
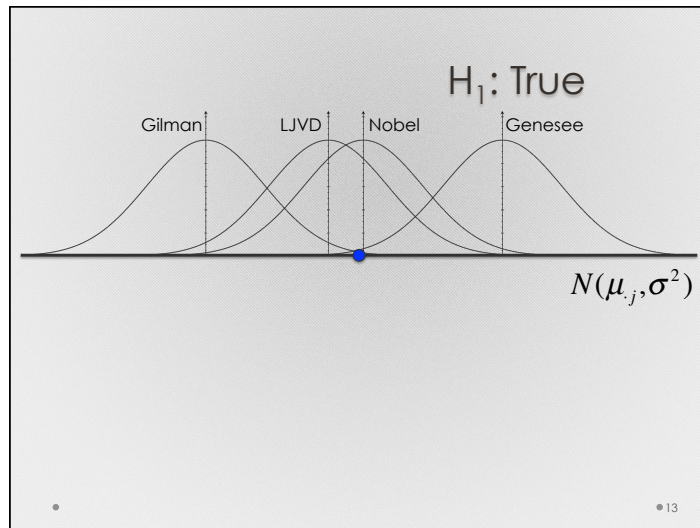
Gilman LJVD Nobel Genesee



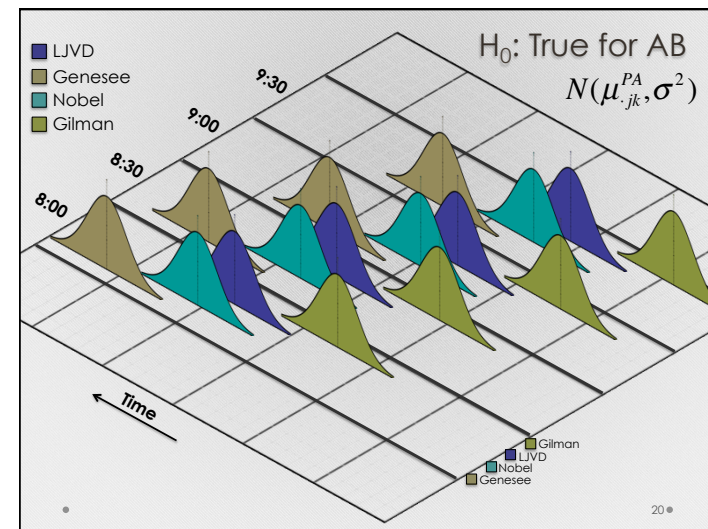
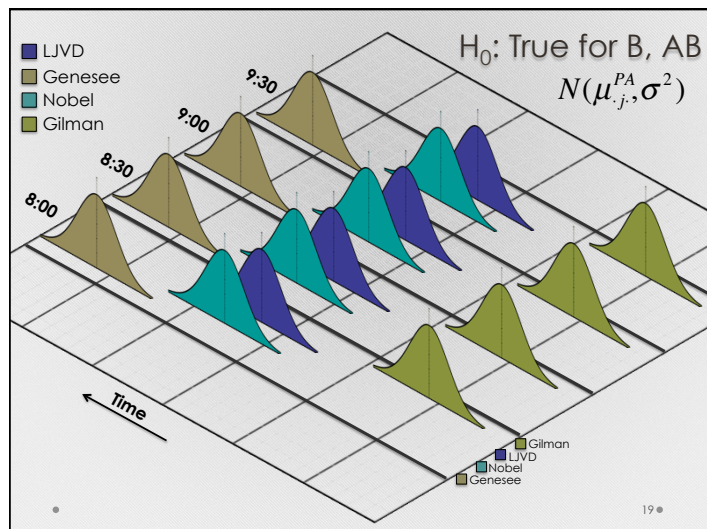
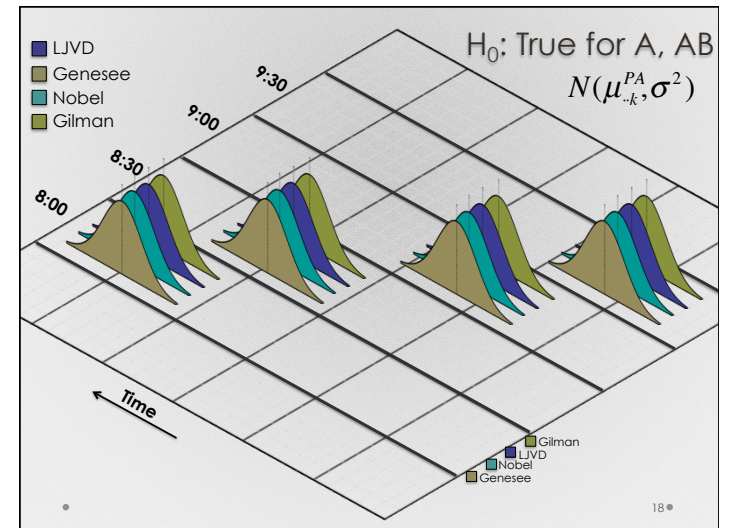
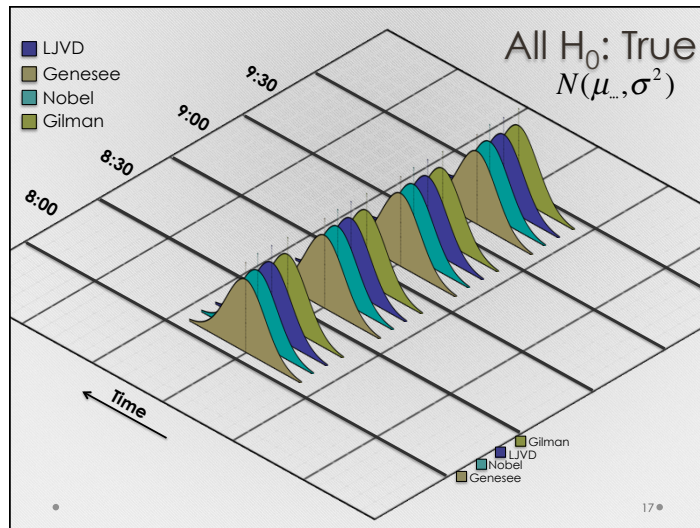
$H_1: \text{True}$

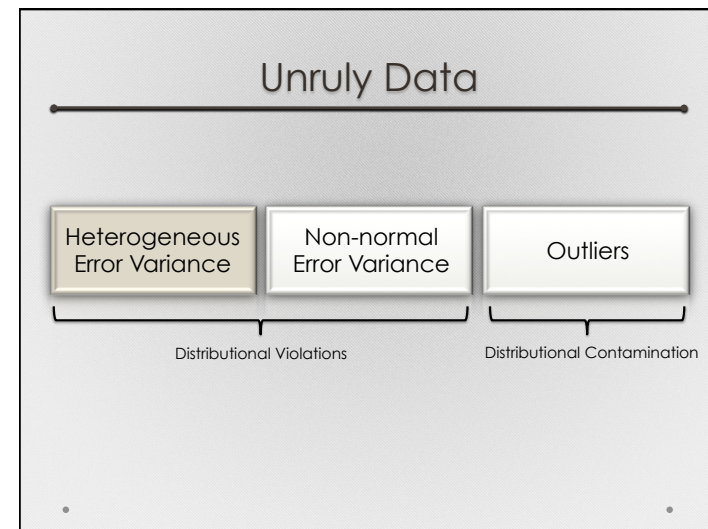
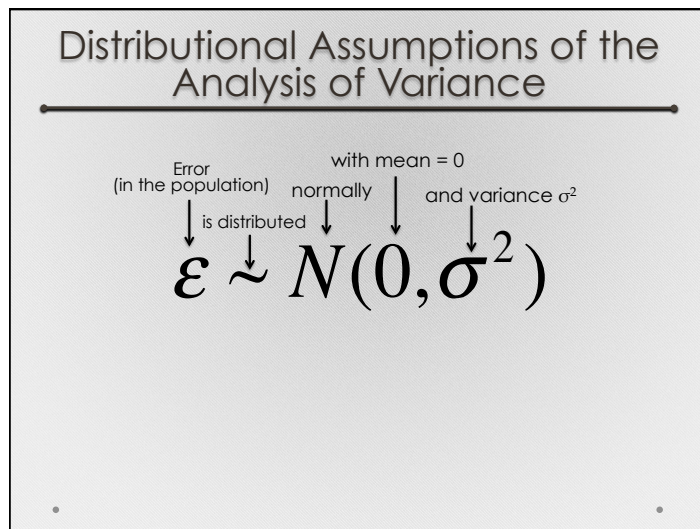
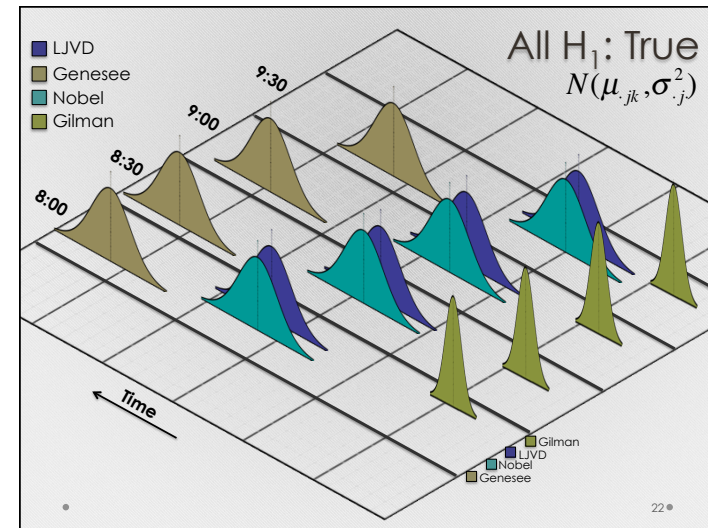
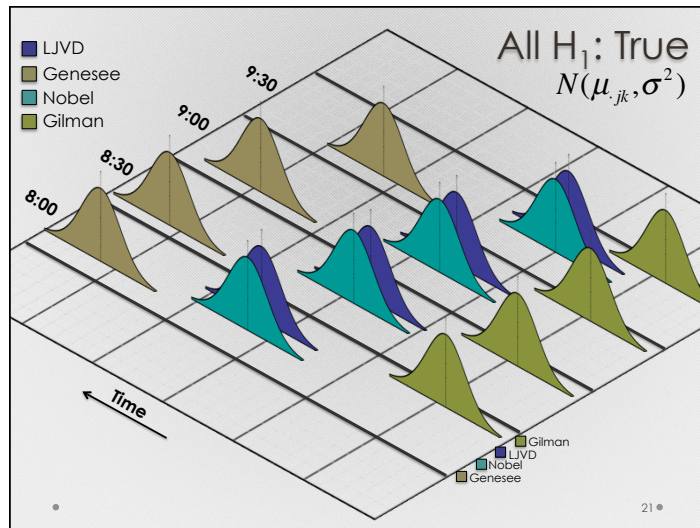
Gilman LJVD Nobel Genesee

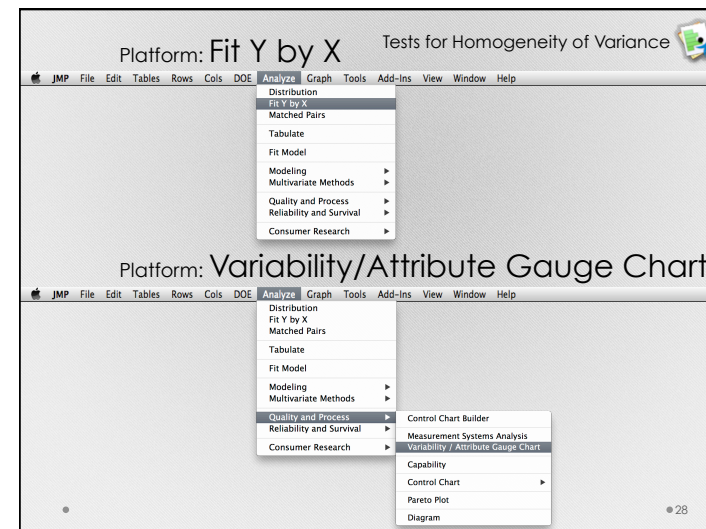
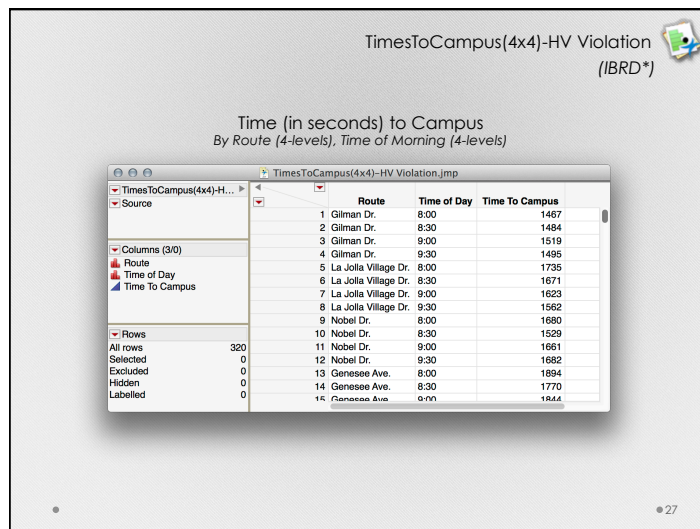
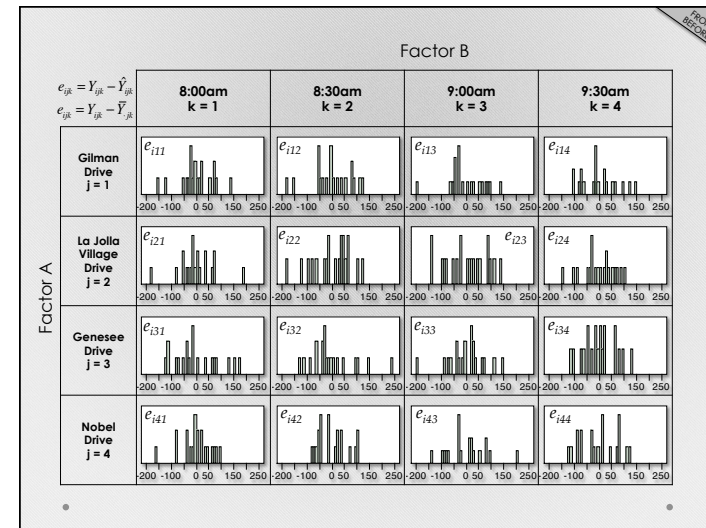
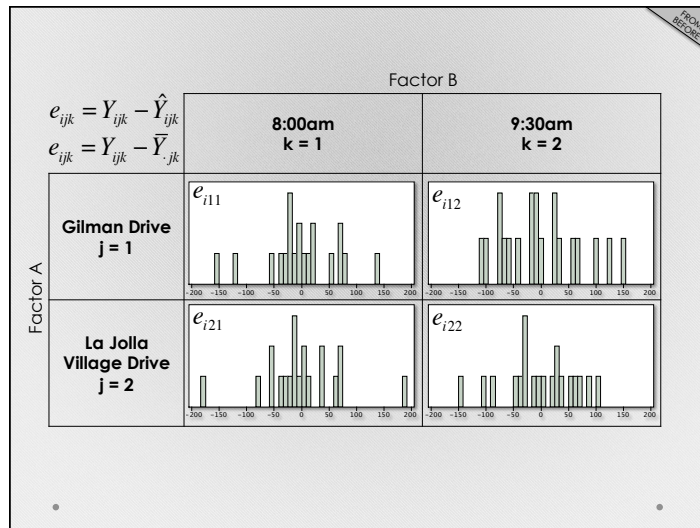




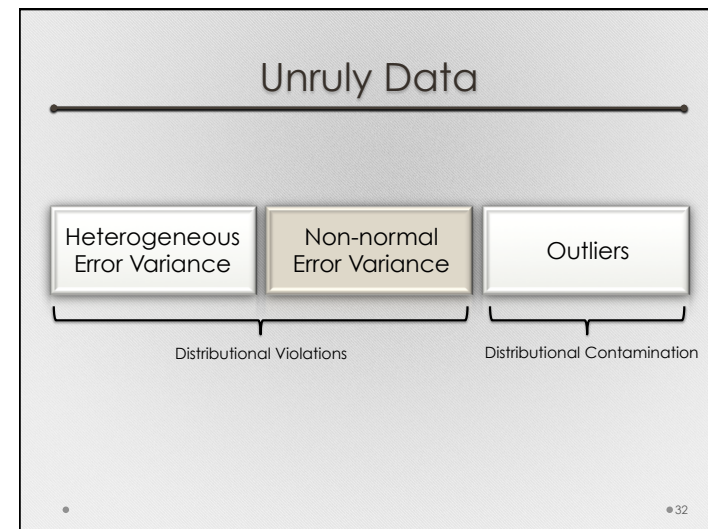
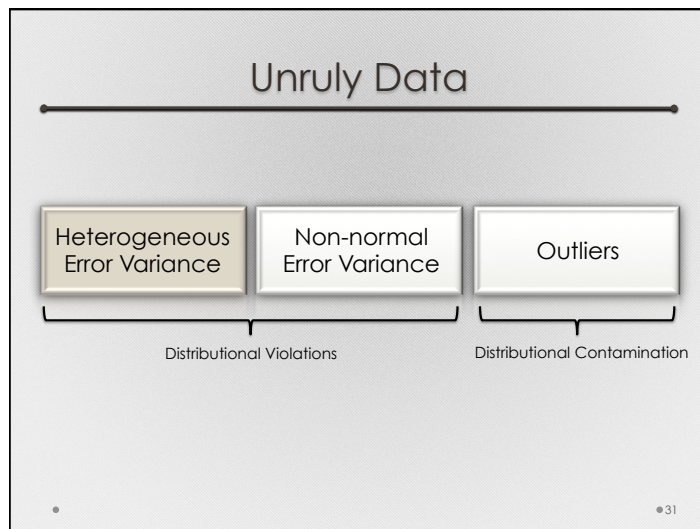
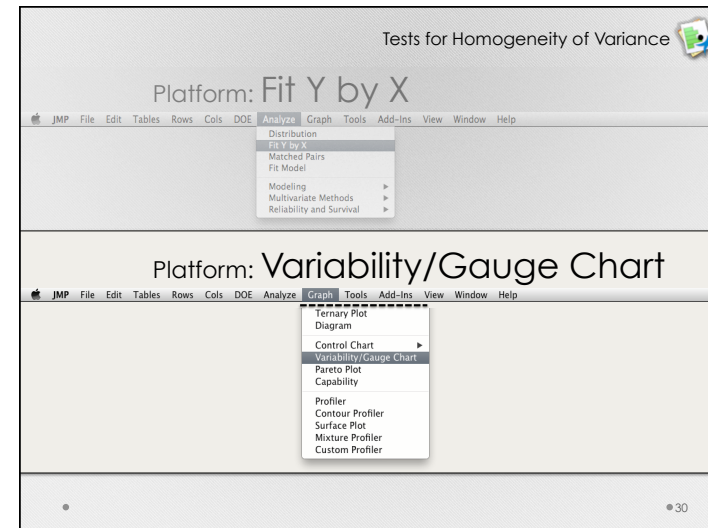
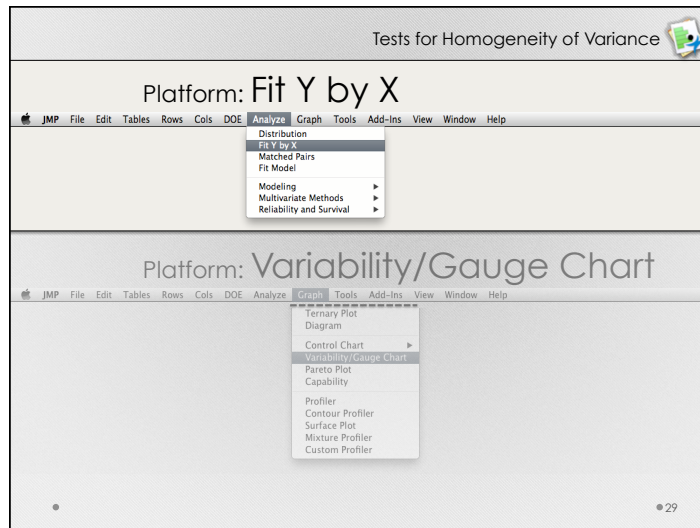















## Checking Assumptions of Normality in JMP



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Tests for Normality of Error 

Platform: **Distribution**

JMP File Edit Tables Rows Cols DOE **Analyze** Graph Tools Add-Ins View Window Help


Distribution  
 Fit Y by X  
 Matched Pairs  
 Fit Model  
 Modeling  
 Multivariate Methods  
 Reliability and Survival

Platform: **Fit Y by X**

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