weight by weight.

```
*Support for Recreational Marijuana by Ideology*.
data list free / MJ3 liberal3 count.
begin data.
1 1 192
1 2 90
1 3 69
2 1 69
2 2 93
2 3 116
3 1 74
3 2 105
3 3 173
end data.
value labels MJ3 1 'low' 2 'med' 3 'hi'.
variable labels influence 'undue influence' group 'group'.
value labels liberal3 1 'liberal' 2 'middle' 3 'conserv'.

weight by count.
crosstabs tables = MJ3 by liberal3
 /cells = column count
 /statistics = all.
```

We compare the percentage differences or measures of association we gets in one sample with a <u>theoretical</u> model called a sampling distribution. It represents all the possible values one might get in taking a large number of samples.
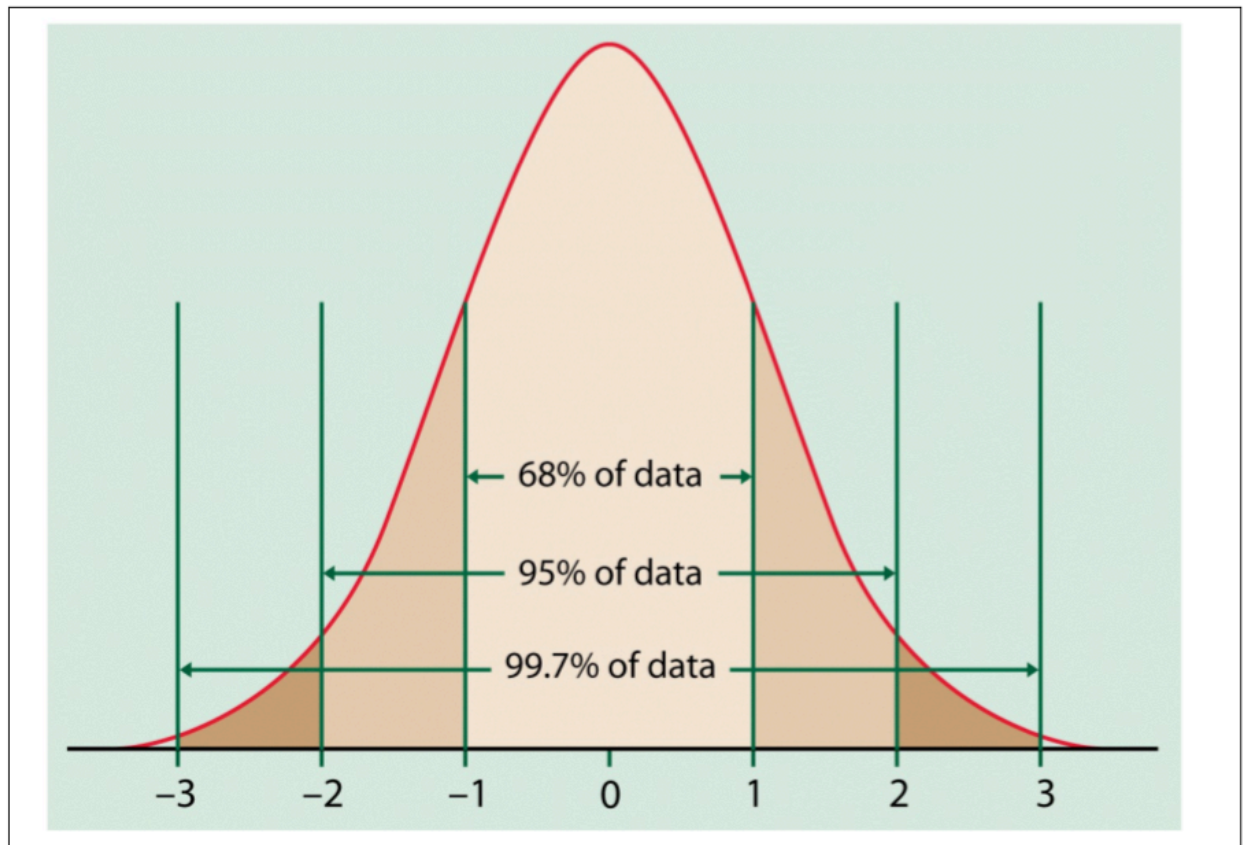
Central Limit Theorem

Even when a variable does not have a normal distribution, for random samples of any appreciable size, the sampling or probability distribution for that variable is approximately normal

Margin of error

$$= 1.96\sqrt{\frac{p(1-p)}{n}}$$

K&W Figure 7.2

p =.10
p =.07
p = .05
p = .01
p =.001

Graphic probability calculator.

http://homepage.divms.uiowa.edu/~mbognar/applets/bin.html

Numeric Probability calculator

http://graphpad.com/quickcalcs/probability1.cfm

$$t = \frac{\overline{Y}_2 - \overline{Y}_1}{s_y / \sqrt{N}}$$

where:

s_y = standard deviation of y

N = number of cases

$$F = \frac{\overline{BetweenGroupVariation}}{WithinGroupVariation}$$

Syntax for Chi-square

```
weight by weight.

crosstabs tables= MJ3 by Democrat liberal3
    /cells = column count
    /statistics = phi chisq.
```

Syntax for ANOVA

```
weight by weight.
oneway rawMJ3 by Democrat
    /statistics=descriptives
    /ranges=scheffe
    /plot means.


oneway rawMJ3 by liberal3
    /statistics=descriptives
    /ranges=scheffe
    /plot means.
```