

The University of Georgia
 Department of Political Science
 POLS 2000 Introduction to Political Science


Univariate Data Analysis

6/4/20061

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- **Overview: Univariate Data Analysis**
 - **Tables and Figures**
 - **Descriptive Statistics**

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- **Univariate Data Analysis, Cont.**
 - **Tables and Figures**
 - **Frequency Distribution**
 - **e.g., Presidential Vote Choice in the 2004 NES**

```

    . tab presvote
  
```

| vote for president, 0-1 | Freq. | Percent | Cum. |
|-------------------------------|------------|---------------|--------|
| Bush | 412 | 50.80 | 50.80 |
| Kerry | 399 | 49.20 | 100.00 |
| Total | 811 | 100.00 | |


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- **Tables and Figures, Cont.**
 - **Frequency Distribution, Cont.**
 - **e.g., Support for Gay Marriage in the 2004 NES**

Should same-sex couples be ALLOWED to marry, or
 do you think they should NOT BE ALLOWED to
 marry?
 1. Should be allowed
 3. Should not be allowed
 5. Should not be allowed to marry but should be
 allowed to legally form a civil union [VOL]
 7. Other [VOL] (SPECIFY)

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- **Tables and Figures, Cont.**
 - **Frequency Distribution, Cont.**
 - **e.g., Support for Gay Marriage in the 2004 NES**

```

.tab v043210
-----
R1. R position on gay marriage | Freq.  Percent  Cum.
-----+-----
1. Should be allowed         |    400    34.01   34.01
3. Should not be allowed     |    705    59.95   93.96
5. Should not be allowed to  |     41     3.49   97.45
   marry but s                |
7. Other [VOL] (SPECIFY)    |     30     2.55  100.00
-----+-----
                        Total |   1176  100.00
    
```


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Stimson's "Policy Mood" Index (Selected Years) 

| Year | Liberalism Score |
|------|------------------|
| 1984 | 58.067 |
| 1985 | 58.879 |
| 1986 | 61.011 |
| 1987 | 62.235 |
| 1988 | 63.323 |
| 1989 | 63.158 |
| 1990 | 62.567 |
| 1991 | 62.568 |
| 1992 | 62.864 |
| 1993 | 60.985 |
| 1994 | 58.837 |
| 1995 | 61.275 |
| 1996 | 59.204 |
| 1997 | 61.448 |
| 1998 | 60.402 |
| 1999 | 60.138 |
| 2000 | 60.606 |
| 2001 | 59.436 |
| 2002 | 62.974 |
| 2003 | 67.011 |
| 2004 | 68.763 |


- **Tables and Figures, Cont.**
- **Frequency Distribution, Cont.**
- **Enumerative Table**

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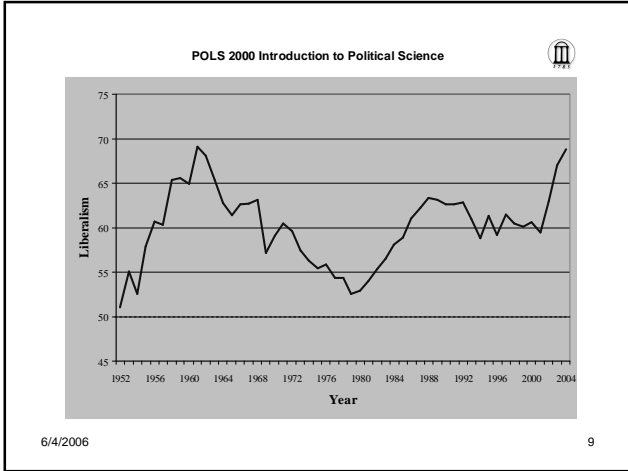
- **Tables and Figures, Cont.**
 - **Reporting the Results of Tables**
 - **Numbering**
 - **Titles**
 - **Placement**
 - **Discussion**

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- **Figures**
 - **Line Diagram**
 - **e.g., Stimson's Policy Mood**

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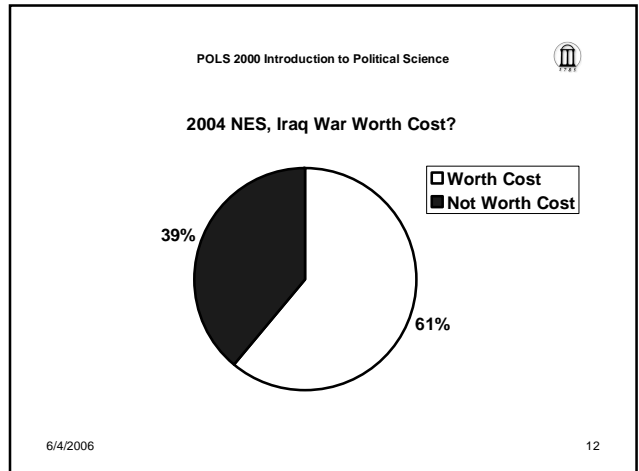
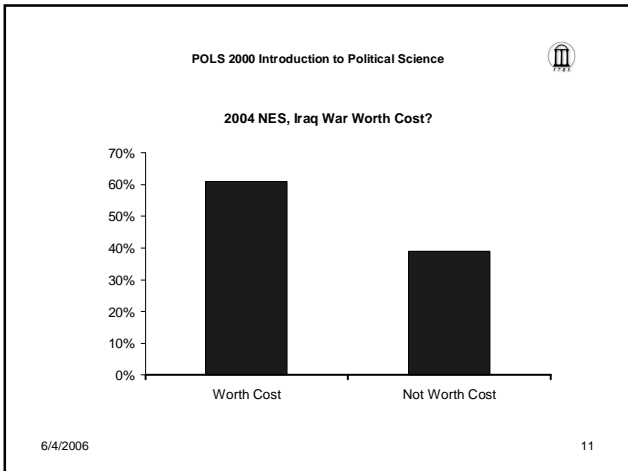
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- Figures, Cont.
 - Bar Chart
 - Pie Chart
 - e.g., Iraq War, 2004 NES

Taking everything into account, do you think the war in Iraq has been WORTH THE COST or NOT?

- Worth it
- Not worth it


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- **Univariate Data Analysis, Cont.**
 - **Descriptive Statistics: Overview**
 - **Measures of Central Tendency**
 - e.g., Mean, Median, Mode
 - **Measures of Variability**
 - e.g., Range, Standard Deviation

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- **Central Tendency (Overview)**
 - Mode
 - Median
 - Mean

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- **Central Tendency, Cont.**
- **e.g., Support for Legalized Abortion in the 2004 NES**

There has been some discussion about abortion during recent years. Which one of the opinions on this page best agrees with your view?

1. By law, abortion should never be permitted.
2. The law should permit abortion only in case of rape, incest, or when the woman's life is in danger.
3. The law should permit abortion for reasons other than rape, incest, or danger to the woman's life, but only after the need for the abortion has been clearly established.
4. By law, a woman should always be able to obtain an abortion as a matter of personal choice.
7. Other (SPECIFY) [VOL]

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What is the Mode? ... Median?

```

.tab V045132

G7a. Abortion position: self-placement |      Freq.   Percent   Cum.
-----|-----|-----|-----
1. By law, abortion should never be per |      139     13.18    13.18
2. The law should permit abortion only |      332     31.47    44.64
3. The law should permit abortion for r |      185     17.54    62.18
4. By law, a woman should always be abl |      391     37.06    99.24
7. Other (SPECIFY) [VOL] |           8       0.76   100.00
-----|-----|-----|-----
Total |     1055   100.00
    
```

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- Median: Middle Observation
 - Find the Median ...
 - 3 3 4 6 7
 - 11 27 48 5000 11,000
 - 50 100 100 200 400
 - \$4k \$24k \$32k \$44k \$3.2 million

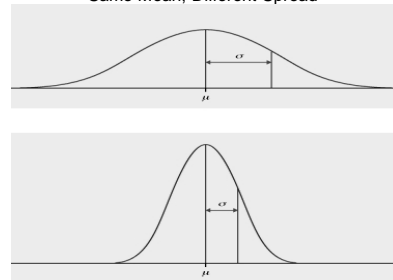


- Mean
 - $X = (\sum X) / N$
 - e.g., Mean of Stimson's Policy Mood, 1952-2004, is 60.1

- Measures of Central Tendency, Cont.
 - Appropriate Measures for Levels of Data
 - Nominal Variables: Mode
 - Ordinal Variables: Median or Mode
 - Interval Variables: Mean if Normal, Otherwise Median



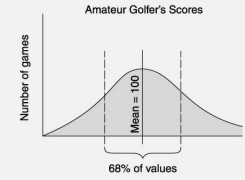
Variability
Two Distributions:
Same Mean, Different Spread





- Measures of Variability
 - Range
 - Interquartile Range
 - Variance
 - Standard Deviation

A. High standard deviation = spread-out values



B. Low standard deviation = tightly clustered values



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