

STATISTICAL GRAPHICS FOR VISUALIZING DATA

Tables and Figures, I

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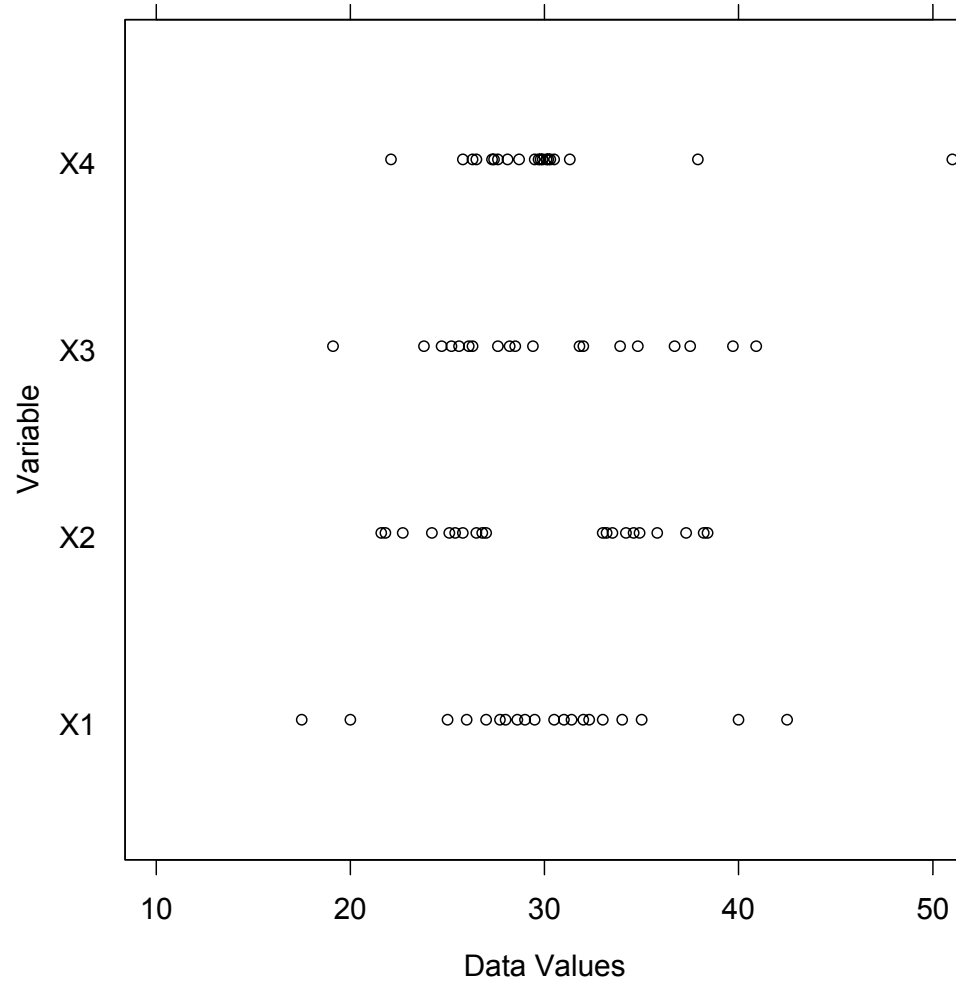
ICPSR Summer Program
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<http://polisci.msu.edu/jacoby/icpsr/graphics>

Table 1: Hypothetical Data Matrix Containing Four Variables and Twenty Observations.

Observation:	X_1	X_2	X_3	X_4
1	32.3	33.2	24.7	29.7
2	28.0	34.2	29.4	30.2
3	31.4	27.0	28.5	28.7
4	29.5	33.0	25.6	27.3
5	40.0	35.8	27.6	31.3
6	20.0	34.6	32.0	29.5
7	26.0	24.2	28.2	26.3
8	28.6	34.9	40.9	29.9
9	27.7	25.1	37.5	29.8
10	27.0	37.3	26.3	30.1
11	17.5	22.7	33.9	37.9
12	31.0	25.4	36.7	27.6
13	32.0	25.8	25.2	30.3
14	30.5	38.2	23.8	22.1
15	34.0	26.5	26.1	28.1
16	42.5	38.4	28.2	26.5
17	35.0	26.8	31.8	30.5
18	29.0	21.6	39.7	27.4
19	25.0	33.5	19.1	51.0
20	33.0	21.8	34.8	25.8
Mean:	30.0	30.0	30.0	30.0
Standard Deviation:	5.8	5.8	5.8	5.8

Figure 1: Univariate Scatterplots for Distributions of Hypothetical Variables.



Data Source: Table 1

Figure 2: Example of a Graphical Display for Presentation, Rather Than Analysis.

1992 Presidential Vote Totals:

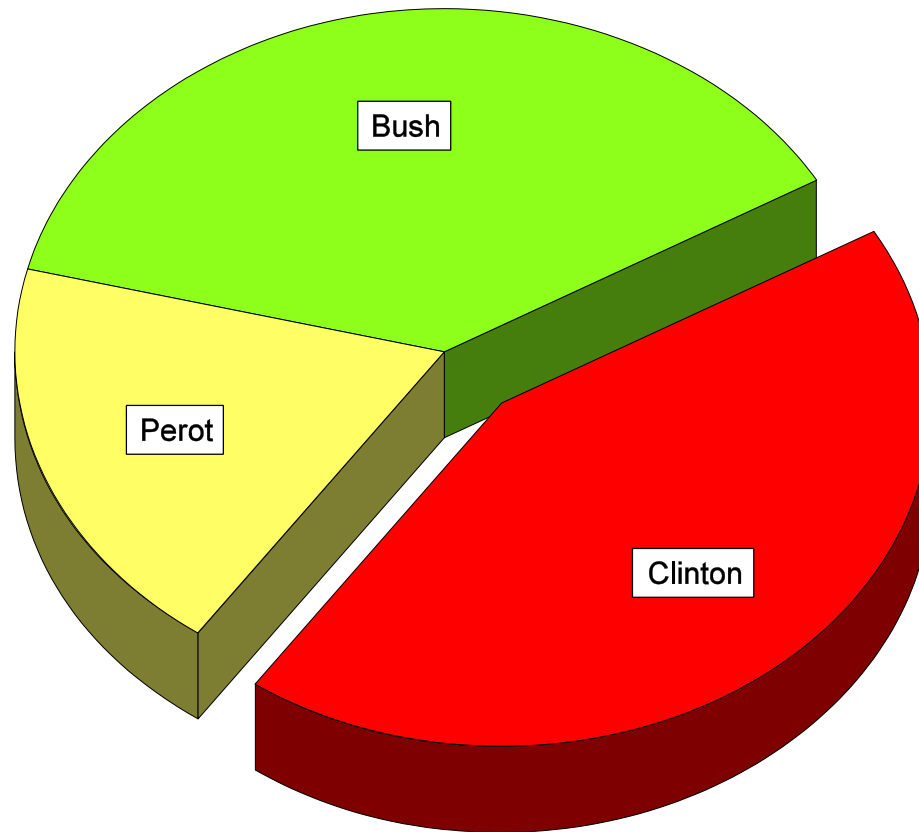


Figure 3: Candidate Vote Percentages in 2000 U.S. Presidential Election

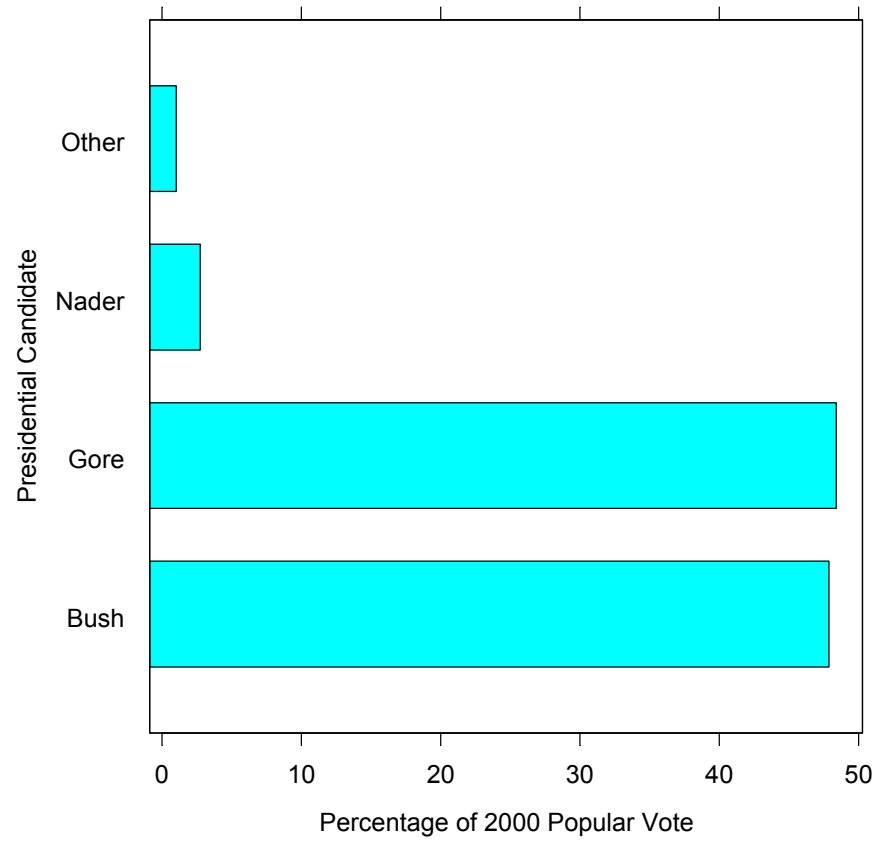
A. Tabular Display

Presidential Candidate	Percentage of Popular Vote	Popular Vote (in Millions)
Bush	47.87	50.46
Gore	48.39	51.00
Nader	2.74	2.88
Other	1.01	1.06
Total	100.00	105.40

Data Source: U.S. Federal Election Commission

Figure 3: Candidate Vote Percentages in 2000 U.S. Presidential Election

B. Graphical Display



Data Source: U.S. Federal Election Commission

Figure 4: Partisanship of State Electorates, 1992.

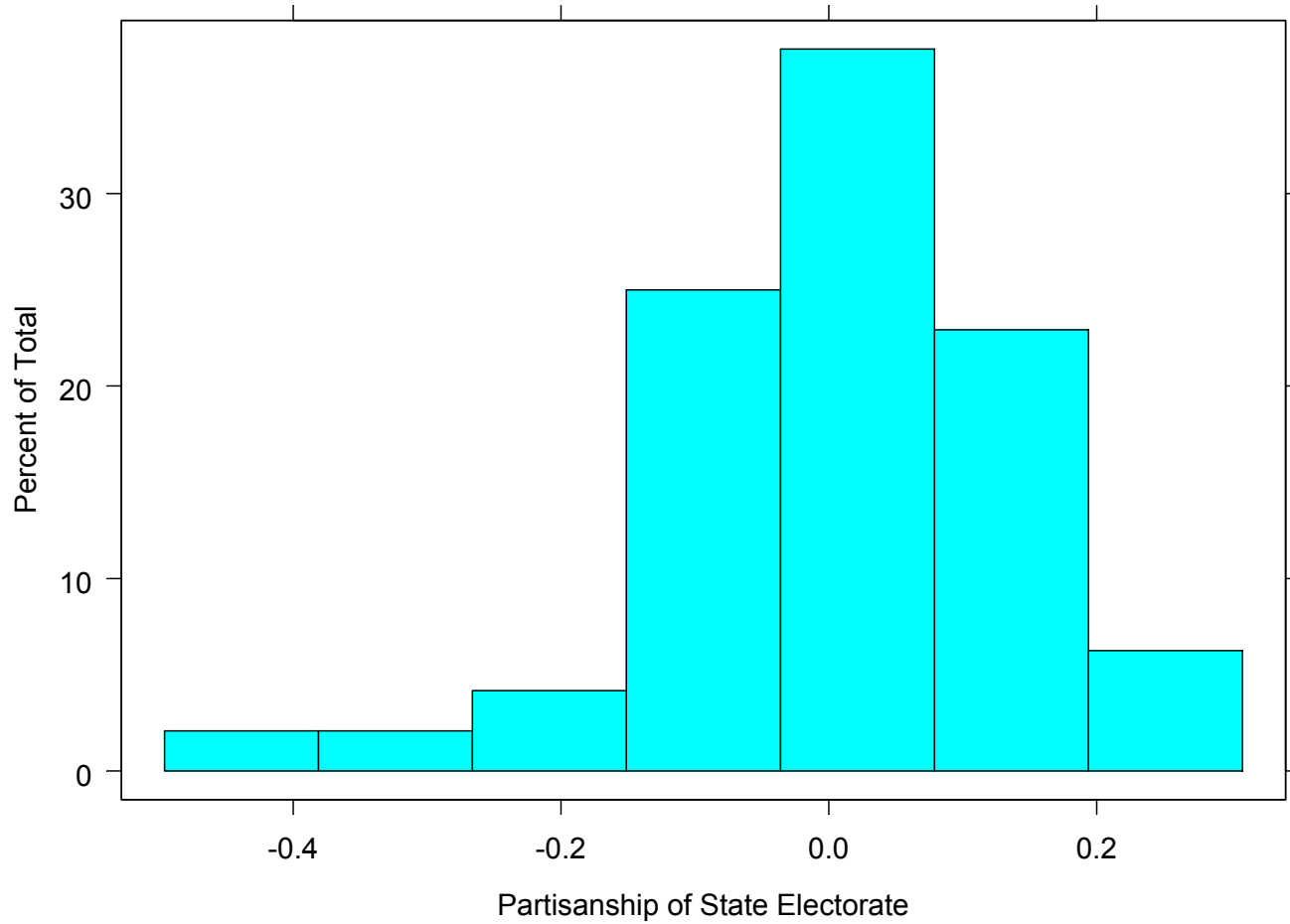
A. Tabular Display

States and Partisanship Scores*			
WY	-0.488	CA	0.023
UT	-0.322	NM	0.029
ID	-0.260	AL	0.029
SD	-0.161	MN	0.031
NE	-0.140	OH	0.031
AZ	-0.133	PA	0.042
VT	-0.109	WI	0.046
DE	-0.091	MO	0.052
NV	-0.090	NY	0.053
VA	-0.089	TX	0.055
ND	-0.068	ME	0.092
NH	-0.064	IA	0.100
OR	-0.054	NC	0.107
MS	-0.045	MT	0.108
NJ	-0.044	RI	0.128
MI	-0.044	WV	0.130
CT	-0.022	TN	0.142
IN	-0.008	OK	0.156
SC	-0.007	MA	0.158
KS	0.006	GA	0.180
FL	0.007	MD	0.185
IL	0.013	LA	0.261
CO	0.019	AR	0.267
WA	0.021	KY	0.301

Data Source: Gerald C. Wright.

Figure 4: Partisanship of State Electorates, 1992.

B. Graphical Display



Data Source: Gerald C. Wright.

Figure 5: Party Affiliation by Age Groups within the American Electorate, 1992.

A. Tabular Display

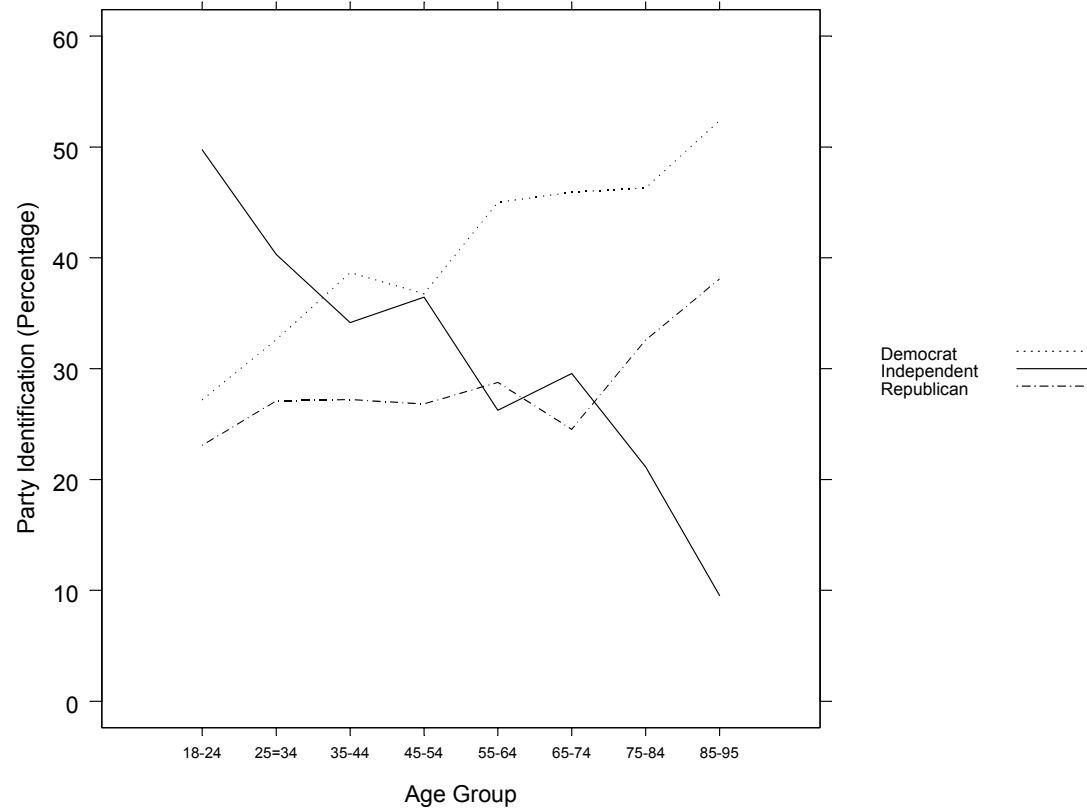
Age Group:	Party Affiliation:*		
	Democrats	Independents	Republicans
18-24	27.18	49.74	23.08
25-34	32.62	40.29	27.09
35-44	38.65	34.15	27.20
45-54	36.74	36.46	26.80
55-64	45.00	26.25	28.75
65-74	45.91	29.57	24.51
75-84	46.29	21.14	32.57
85-94	52.38	9.52	38.10

* Table entries are row percentages.

Data Source: CPS 1992 National Election Study.

Figure 5: Party Affiliation by Age Groups within the American Electorate, 1992.

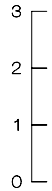
B. Graphical Display



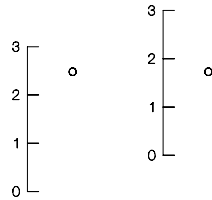
Data Source: CPS 1992 National Election Study.

Figure 6: Graphical Perception Tasks, Ordered from Most Accurate to Least Accurate.

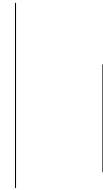
A. Position Along a Common Scale



B. Position Along Common, Nonaligned Scales



C. Length



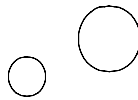
D. Angle*



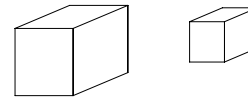
E. Slope, Direction*



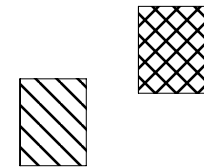
F. Area



G. Volume



H. Fill Density, Color Saturation



* Perceptual judgments about angles and slopes/directions are carried out with equal accuracy, so their relative ordering in this figure is arbitrary.

Source: Created from information provided in Cleveland (1994).