Gathering Information and Analyzing Data

J202: Week 6

What you can use

- on the record

- not for attribution

- off the record

- seek on the record at all times, except:

  - extremely important info

  - only way to get it

  - sure you won't use it

- agree to terms at outset

Law vs. ethics

- what you can do vs. what you should do
- cannot:
  - change wording of direct quotation
    - ums, likes, ya knows
  - act fraudulently to obtain quotes
  - libel/slander
  - break off-the-record contract

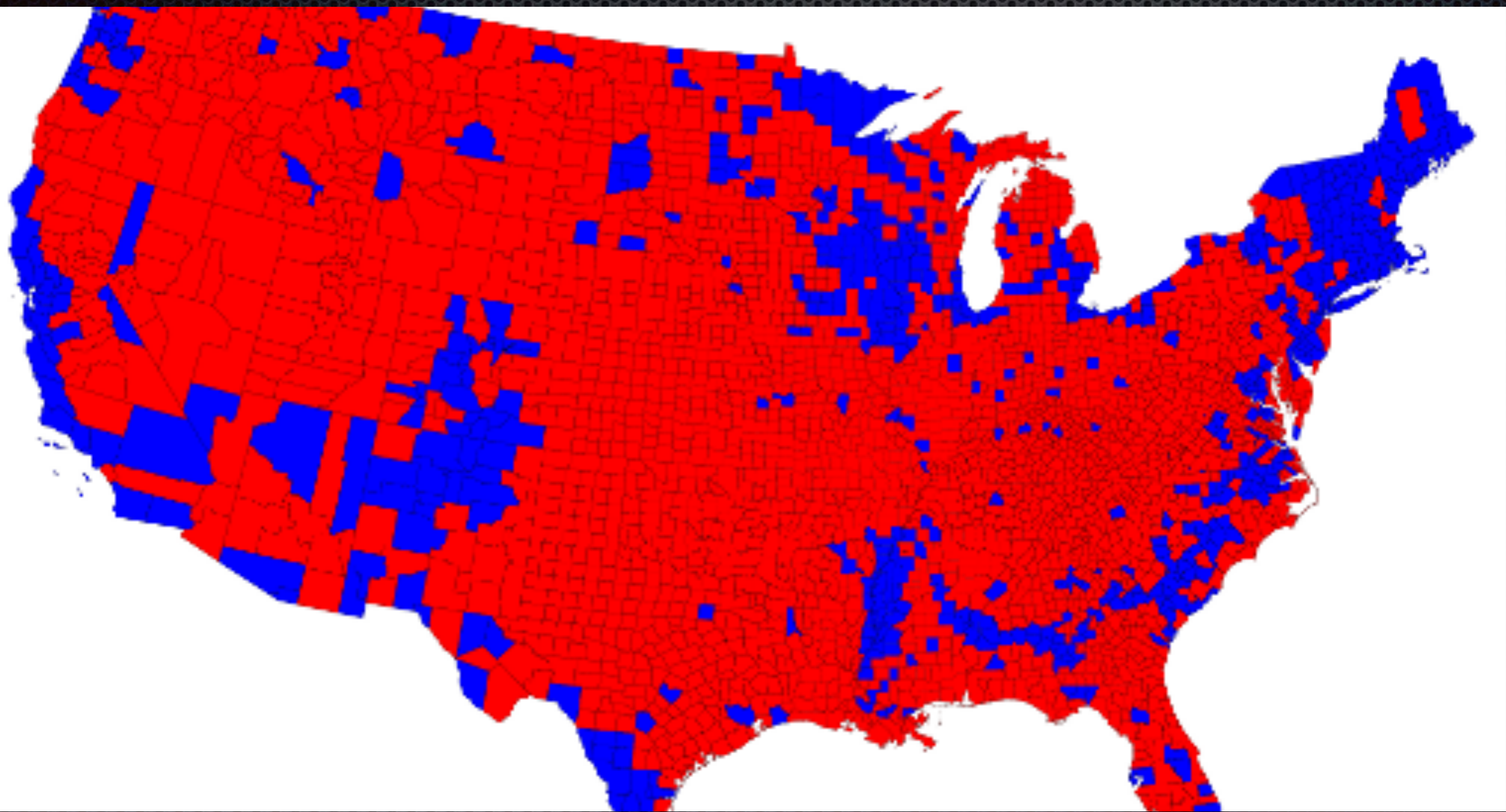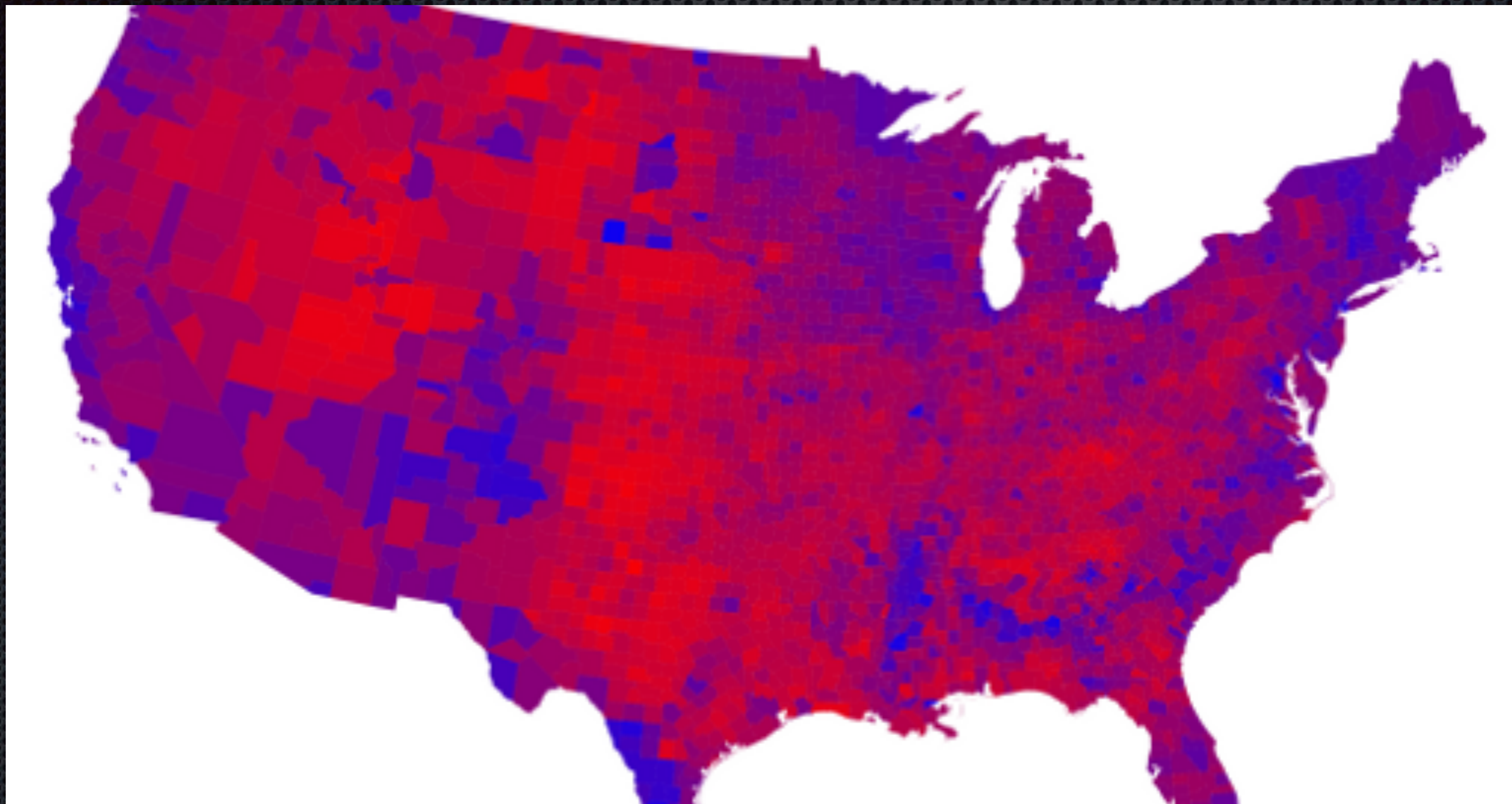# Law vs. ethics

- should not
    - record surreptitiously
    - use others' quotes without credit
    - pay for interviews
    - sensationalize
    - select unrepresentative bits
    - jeopardize source
    - interview those unaware of consequences
    - use foul language recklessly

Does the evidence tell you what you want to know?
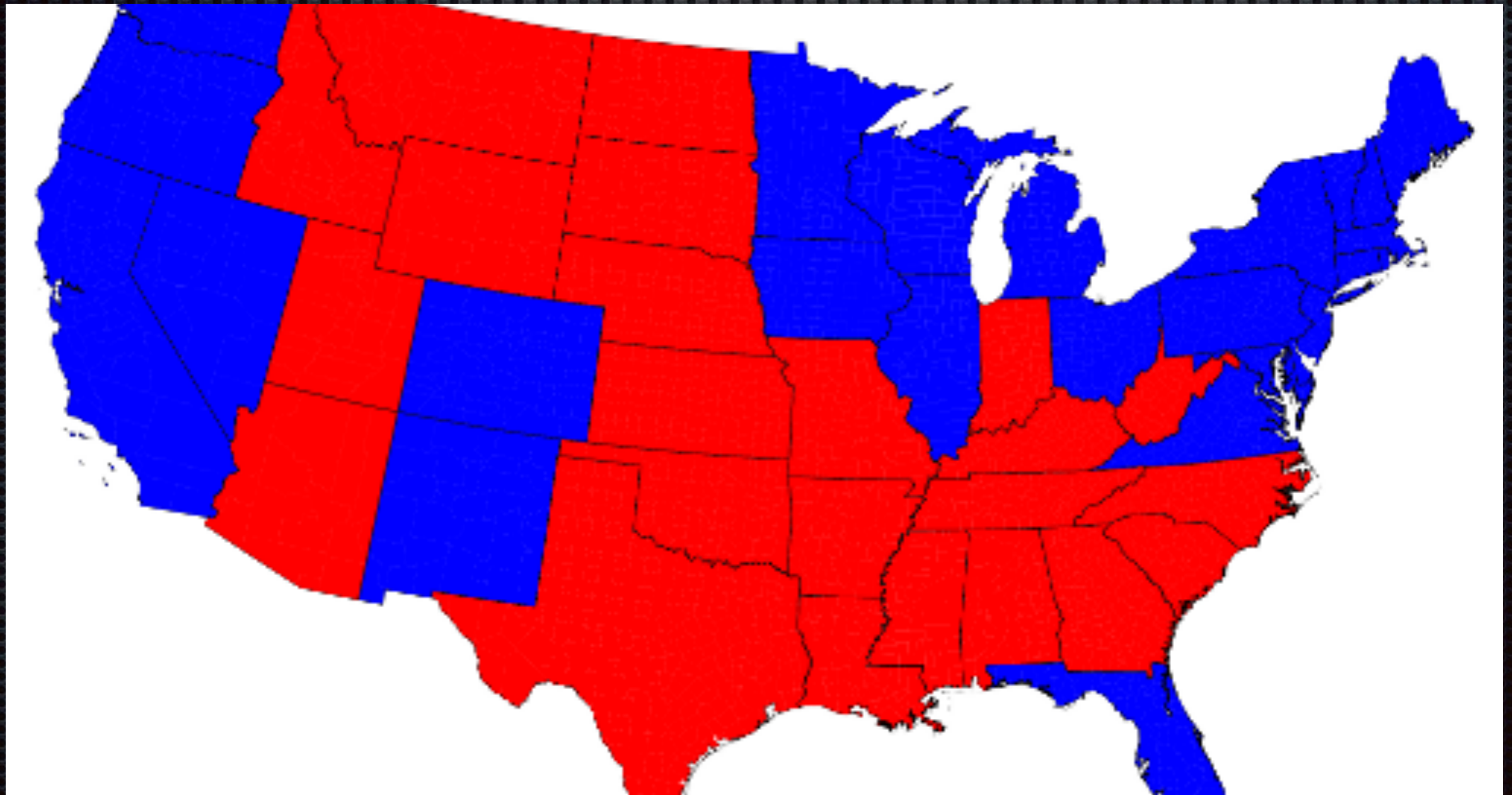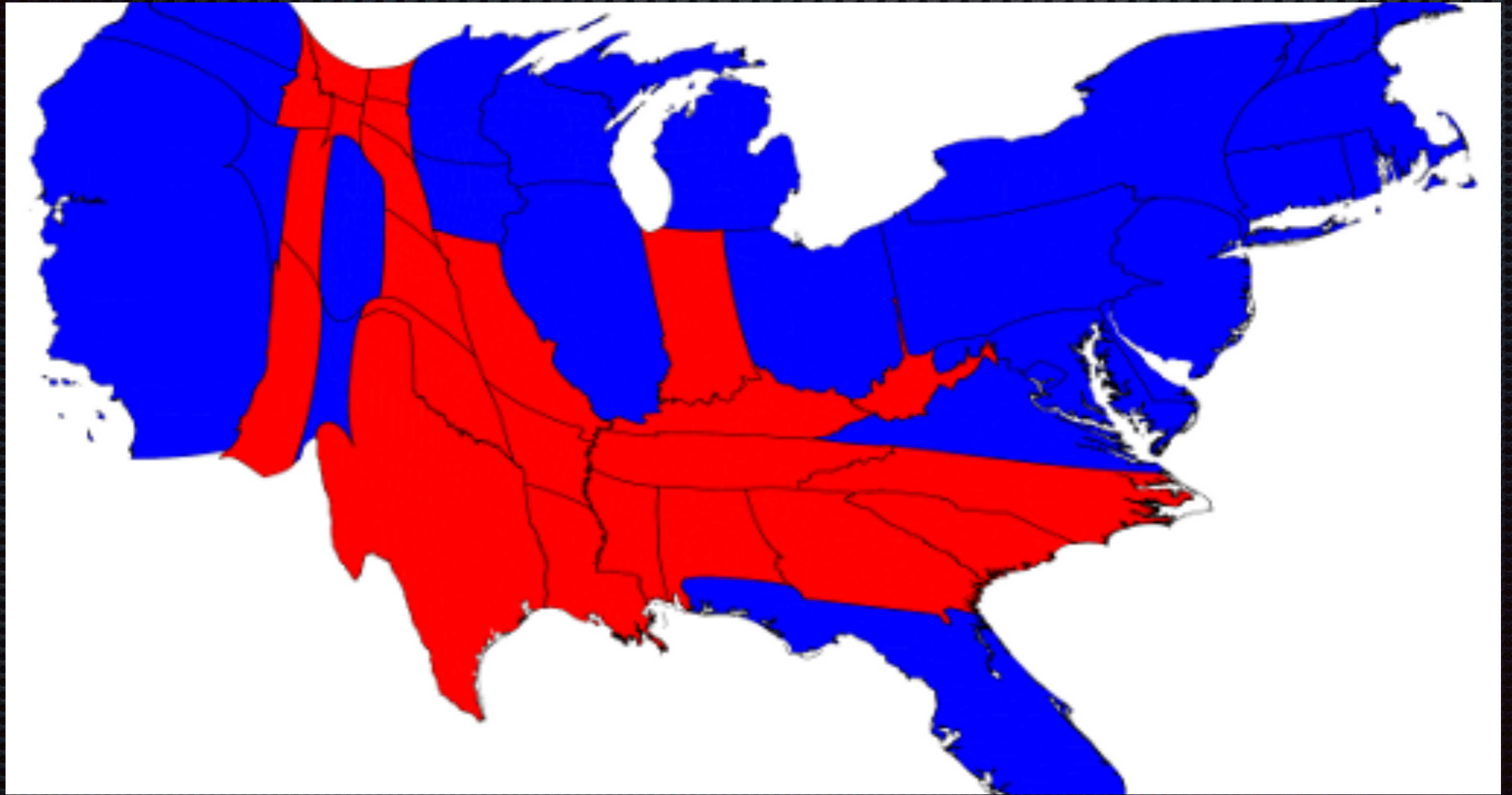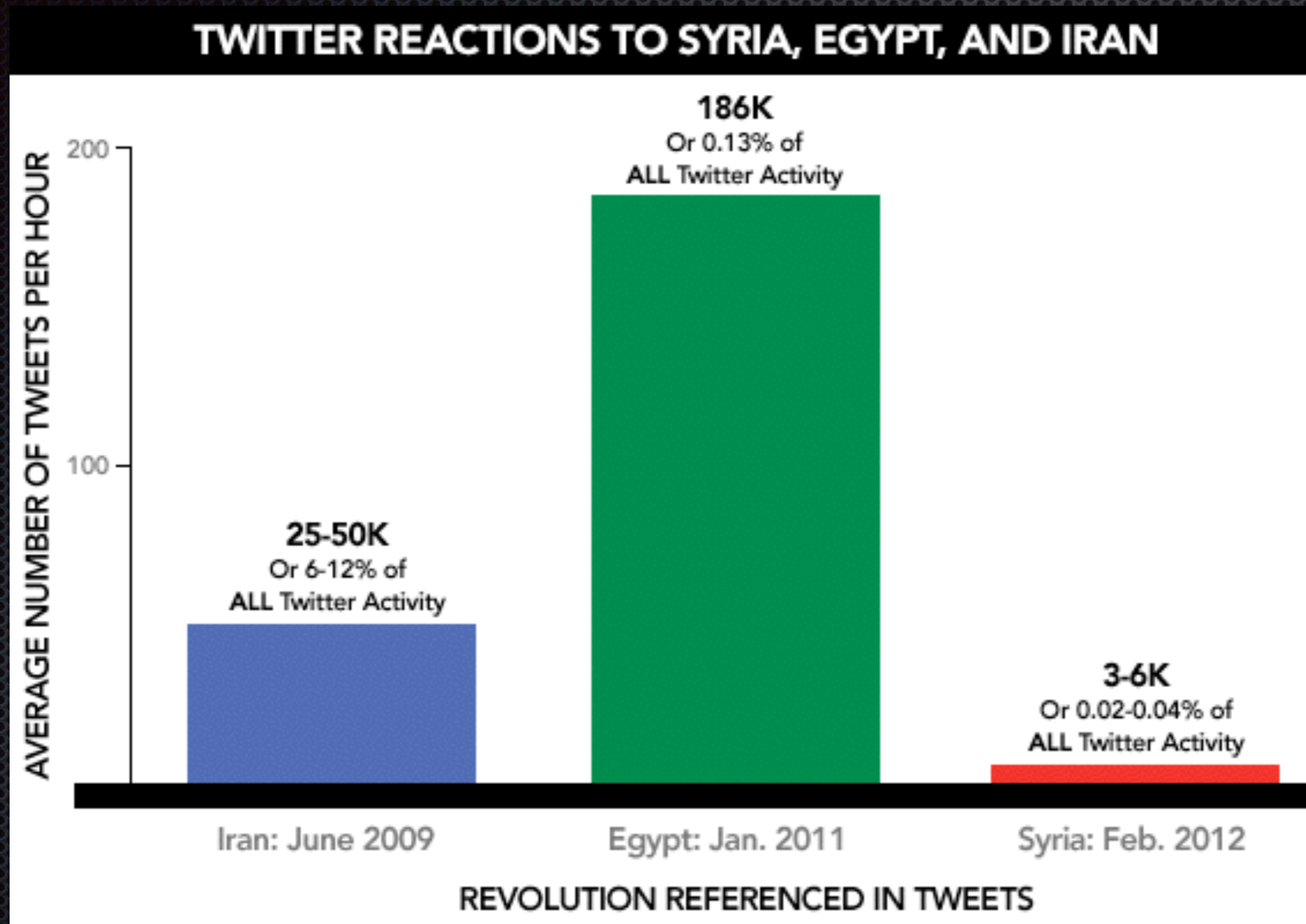
Data Journalism: Not This

$$\left(-k^4 + 16\Omega^2 - 16\varepsilon^2 q^2 + 6\varepsilon^2 k^2 r^2 - \frac{\varepsilon^4 q^2 r^2}{1+\nu} - \varepsilon^4 r^4 \right) U$$

$$+ \left(4\varepsilon k^3 r - \frac{\varepsilon^3 k q^2 r}{1+\nu} - 4\varepsilon^3 k r^3 \right) V + (16\varepsilon k q - \varepsilon k^3 q + 3\varepsilon^3 k q r^2) W$$

$$- \left(2\varepsilon^2 k q r + \frac{\varepsilon^2 k q r}{1+\nu} \right) \Gamma = 0,$$

$$- \left(4\varepsilon k^3 r - \frac{\varepsilon^3 k q^2 r}{1+\nu} - 4\varepsilon^3 k r^3 \right) U + \left(-k^4 + 16\Omega^2 + \frac{\varepsilon^2 q^2 k^2}{1+\nu} + 6\varepsilon^2 k^2 r^2 - \varepsilon^4 r^4 \right) V$$

$$+ (-3\varepsilon^2 k^2 q r + \varepsilon^4 q r^3) W + \left(\varepsilon k^2 q + \frac{\varepsilon k^2 q}{1+\nu} - \varepsilon^3 q r^2 \right) \Gamma = 0,$$

$$- (16\varepsilon k q - \varepsilon k^3 q + 3\varepsilon^3 k q r^2) U + (-3\varepsilon^2 k^2 q r + \varepsilon^4 q r^3) V$$

$$+ (16 k^2 + 16\Omega^2 + \varepsilon^2 k^2 q^2 - \varepsilon^4 q^2 r^2) W + \varepsilon^3 q^2 r \Gamma = 0,$$

$$\left(2\varepsilon^2 k q r + \frac{\varepsilon^2 k q r}{1+\nu} \right) U + \left(\varepsilon k^2 q + \frac{\varepsilon k^2 q}{1+\nu} - \varepsilon^3 q r^2 \right) V + \varepsilon^3 q^2 r W$$

$$+ \left(\frac{k^2}{1+\nu} + 2\Omega^2 - \varepsilon^2 q^2 \right) \Gamma = 0.$$

It's this

And This

* http://trends.google.com

* http://www.nytimes.com/2014/09/05/upshot/4th-down-when-to-go-for-it-and-why.html?rref=upshot&abt=0002&abg=1

Surveys

- sample size and sampling strategy
  - affects reliability of data
  - drawn from a population
  - 1,500 ideal but rare
  - random selection
    - biased selection
    - self-selection
      - gender differences
      - racial differences
  - generalizability

Surveys

- sampling error

  - applies to random samples

  - range of error based on sample size

  - larger sample = smaller standard error

  - results correct +/- 3 percentage points

  - usually made with 95% confidence

  - http://www.teacherlink.org/content/math/interactiv
    marginoferror/marginoferror.html

- statistical vs. practical significance

- Aggregators!

- http://host.madison.com/news/local/city-life/mary-
  burke-vs-scott-walker-charting-the-governor-s-race/

Approval
Ratings
+/- 3

59

App: 56%

53

47

Disapp: 44%

41

Surveys

- common problems in questions

- bias in wording

- weak: Wouldn't you oppose efforts to decrease affirmative action efforts on campus?

- improved: Consider affirmative action efforts on campus. Do you favor such efforts, oppose such efforts or have no opinion?

- improved: Some people say increasing affirmative action efforts on campus is necessary to correct past injustices toward people of color. Some people say decreasing affirmative action efforts on campus is necessary to combat reverse racism. Do you think affirmative action efforts should be increased, decreased, kept the same, or are you not sure?

Surveys

- common problems in questions

- references to authority

- weak: Chancellor David Ward sees diversity as a top issue on campus. Do you agree?

- improved: On a scale of 1 to 7 with 1 being not at all important and 7 being extremely important, how important an issue is diversity on campus?

- improved: What it the most important issue facing campus?

Surveys

- common problems in questions

- double-barreled questions

- weak: Do you favor or oppose proposed cuts to state funding of the UW and the effect they will have on diversity?

- improved: Do you favor or oppose the proposed $250 million cut in state funding to the UW?
(If favor) If the cuts meant a loss of funding for diversity efforts, would that strengthen your support, weaken your support or not change your support

Surveys

- common problems in questions

- illogical or incomplete answer set

- weak: Do you consider the UW faculty a racially diverse group? Yes or no

- improved: On a scale of 1 to 7, with 1 being not at all racially diverse and 7 being completely racially diverse, how racially diverse is the UW faculty?

Surveys

* common problems in surveys

* Forced choice vs. don't know

* Women are more likely to say don't know

    * questions of knowledge

* If you had to vote for the position of Wisconsin Governor today, would you vote for Scott Walker or Mary Burke?

* If you had to vote for the position of Wisconsin governor today, would you vote for Scott Walker, Mary Burke, or have you not decided yet?

Bias

* What is the purpose?

* ideological

  * liberal

  * conservative

  * "moderate"

* commercial

* corporate

* gender

* racial

* sexual orientation

Mind-Reading

* Infer what people are thinking

* Over-reading body language

* Can work in strat comm if your audience draws the conclusions you want them to

Mind-Reading

- Q Thank you, Mr. President. I may want to apologize in advance because --

THE PRESIDENT: Please do.

Q -- I can't help but read your body language this morning, Mr. President. You seem somehow dispirited, somewhat dispirited.

THE PRESIDENT: I think you need to apologize for advance -- (laughter.) This is like -- all of a sudden, it's like Psychology 101, you know? (Laughter.)

Scholarship in Mass Comm Writing

* Putting episodic developments in structural context

* providing new angles

* countering spin

* describing historical trends

* identifying unknowns

Party Polarization 1879-2012
Distance Between the Parties First Dimension

r = 0.88

House

Senate

Polarized America / voteview.com
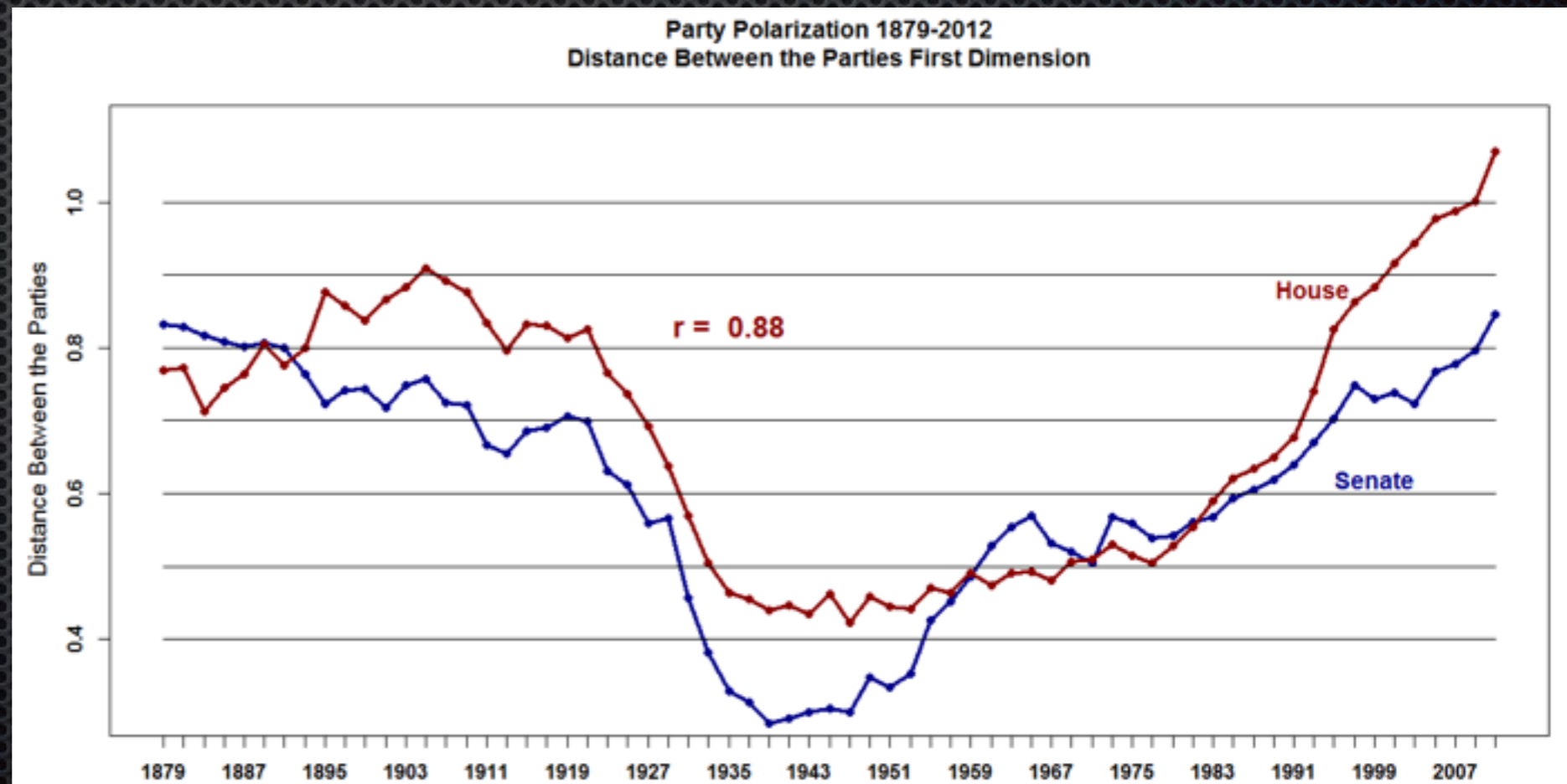
How Do I Find Out What Scholars Say?

* Google Scholar

* JStor

* Academic Search Premier

* Wonky Journalists

* Scholarly Blogs

  * The Monkey Cage

  * Mischiefs of Faction

  * What Makes Them Click

  * PsyBlog

  * Influence PEOPLE

False equivalence

- "Both sides do it"
- Incentivizes bad behavior
- Can help in strat comm
  - Is it ethical?

Calculations you better know

- mean (average) = sum/# of items

- median = middle number of ordered set

  - outliers

- percentage = x/y where x is the portion and y the whole population

  - 43 subjects of 210 in focus group chose Oreos

  - 43/210 = .205

  - 20.5% of subjects chose Oreos

Calculations you better know

- rate = percentage with a standard baseline

    - murders last year: Milwaukee = 111, Madison = 3

    - population: Milwaukee = 596,974, Madison = 208,054

    - murder rate per 100,000 residents

        - Milwaukee = 111/(596,974/100,000) = 18.6

        - Madison - 3/(208,054/100,000) = 1.4

Spending (trillions)

Spending as a Percent of Gross Domestic Product (GDP)
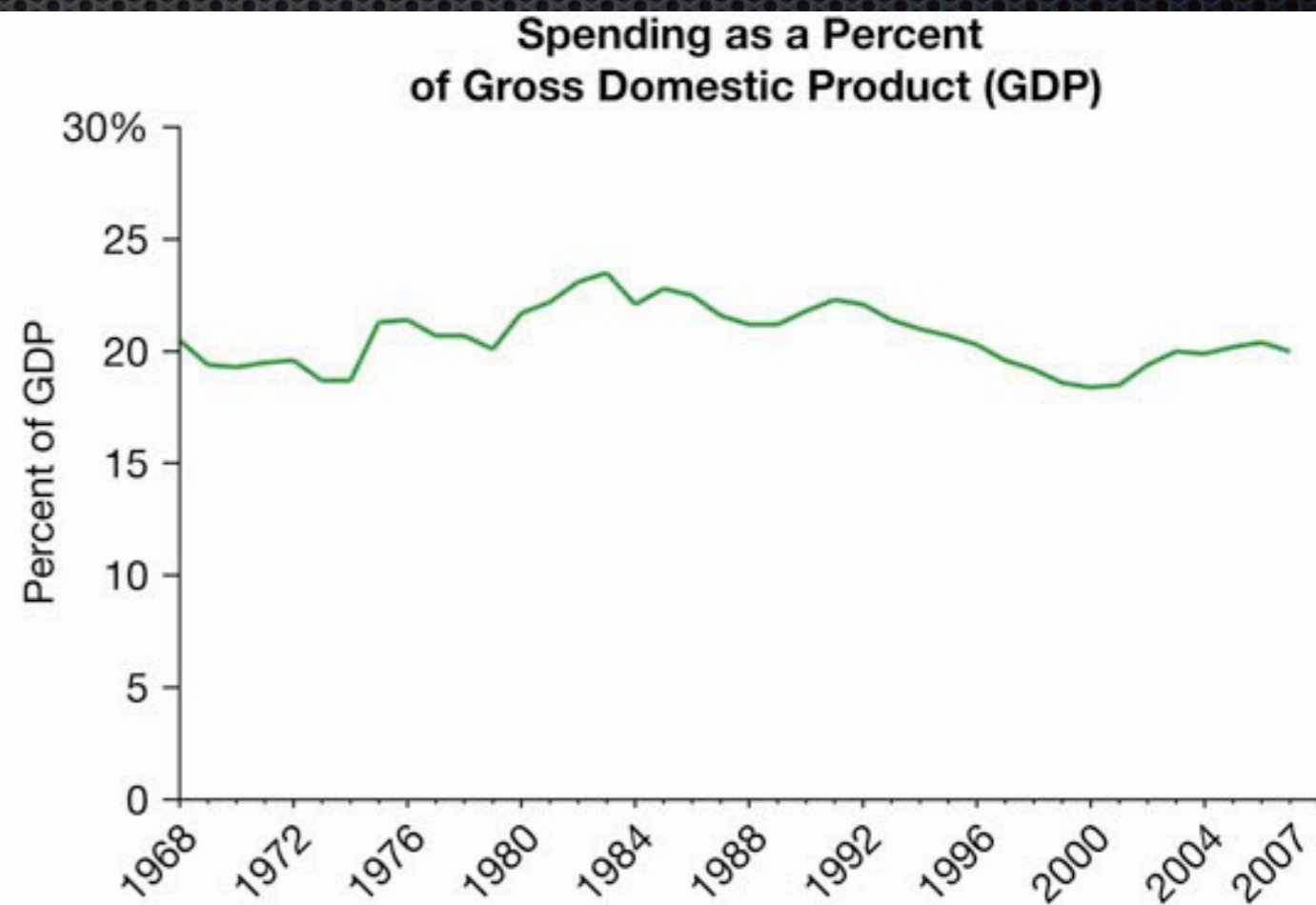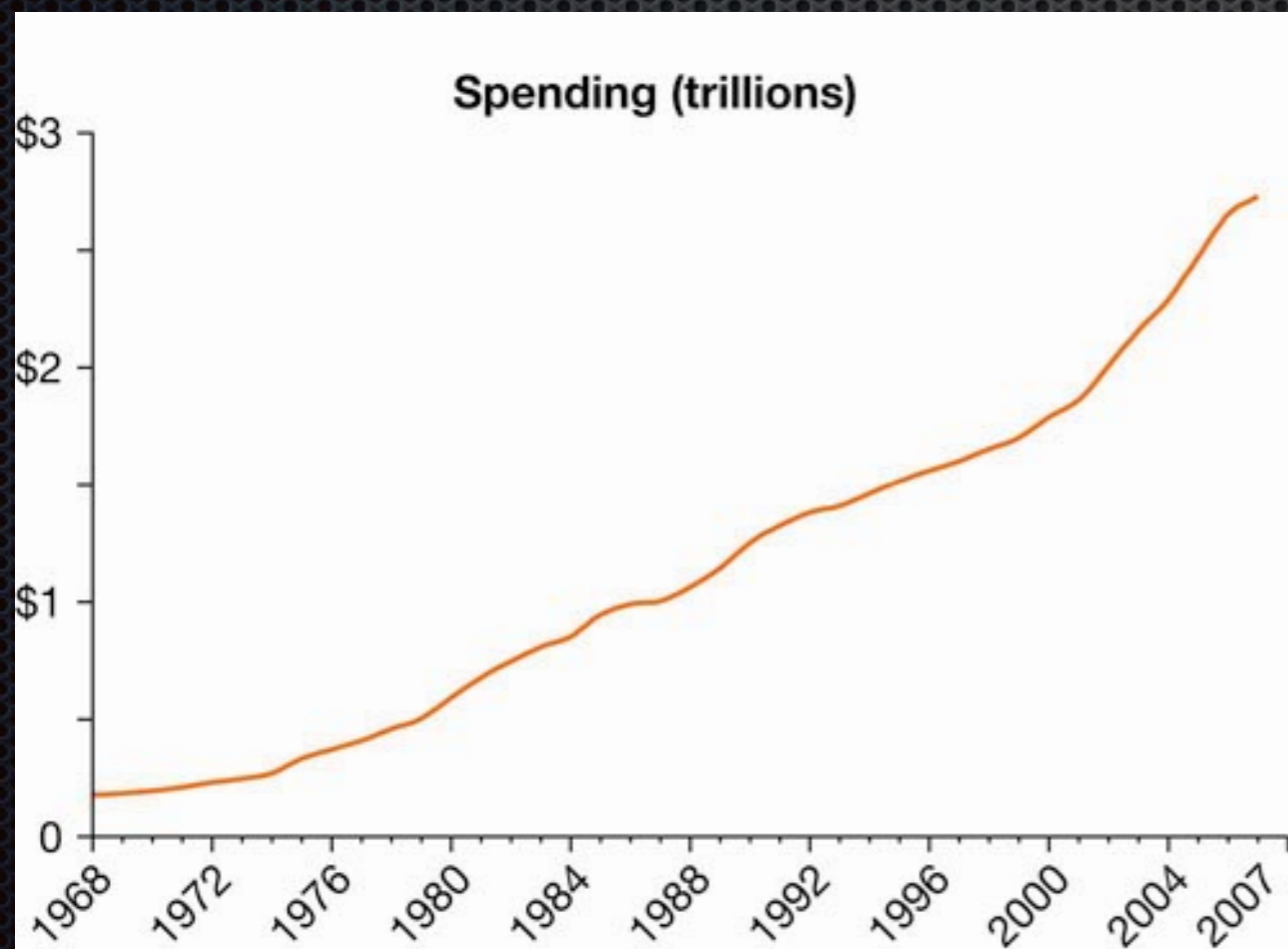
Calculations you better know

- CPM (cost per thousand)

  - basically a rate

  - (ad cost x 1,000)/audience

  - Sports Illustrated

    - $203,000 for full-page ad

    - 3,212,000 audience

    - CPM = (203,000 x 1,000)/3,212,000 = $63.20

- Analogues of CPP (Cost Per Point) and CTR (Click Through Rate)

More Calculations

* counts =
  # of instances of
  a variable

Excel   File   Edit   View   Insert   Format   Tools

Verdana   10   **B**   *I*   U $

C28   =COUNTIF(C$3:C$26,"1")

	A	B	C	D	E
1	Ads in personality magazines				
2		**Advertiser**	**Category**		
3		Covergirl	1		
4		Victoria's Secret	2		
5		Neutrogena	1		
6		Neutrogena	1		
7		Skyy	3		
8		L'Oreal	1		
9		L'Oreal	1		
10		Match.com	4		
11		Revlon	1		
12		Covergirl	1		
13		Olay	1		
14		WB	5		
15		Olay	1		
16		Bebe	2		
17		Payless	2		
18		Reach	6		
19		Covergirl	1		
20		Splenda	7		
21		Matrix	1		
22		Covergirl	1		
23		TIVO	4		
24		L'Oreal	1		
25		Vegas	9		
26		Covergirl	1		
27					
28	Covergirl	5	14	1=beauty	
29	L'Oreal	3	3	2=apparel	
30	Olay	2	1	3=alcohol	
31			2	4=services	
32					

Calculations you better know

- percentage points vs. percent changed
    - percent changed = change/original value
    - consumer recognition of the brand jumped from 15% to 25%
    - change of 10 percentage points
    - but percent changed much more
    - 10/15 = .66666666 (67%)
    - Context matters. An increase in recogntion from 1 to 2 percent is a 100% percent change, but is it super meaningful?
        - Depends on the audience.

Calculations you better know

- audience composition percentages

  - % of audience that fits a characteristic

  - gender, education, income, lifestyle

- index

  - compares a comp percentage against expectation for whole population (100)

  - Newsweek:

    - men: 55.5% (116 index)

    - women: 44.5% (86 index)

Calculations you better know

- budgets

D5 ✕ ✓ 🔲 ☰ =(C5-B5)/B5

wk5_budget.xls

	A	B	C	D
3	**REVENUE**			
4				
5	TAXES	$79,351.00	$81,882.03	3%
6	SPECIAL ASSESSMENT	$0.00	$0.00	0%
7	MOBILE HOME FEES/LOTTERY CREDIT	$4,500.00	$4,000.00	-11%
8		$83,851.00	$85,882.03	2%
9				
10	**INTERGOVERNMENTAL REVENUE**			
11	STATE SHARED REVENUE	$152,588.00	$152,528.00	0%
12	FIRE INSURANCE DUES	$700.00	$825.00	18%
13	STATE TRANSPORTATION	$20,956.00	$24,099.97	15%
14	RECYCLING GRANT	$0.00	$0.00	0%
15		$174,244.00	$177,452.97	2%
16				
17	**REGULATION AND COMPLIANCE**			
18	BEER/LIQUOR LICENSE	$800.00	$1,000.00	25%
19	CIGARETTE & BARTENDER LICENSES	$140.00	$150.00	7%
20	REFUSE & MOBILE HOME LICENSES	$140.00	$140.00	0%
21	BUILDING PERMITS	$500.00	$500.00	0%
22	PARKING FINES	$0.00	$0.00	0%
23	INSURANCE REFUND-WAUSAU	$500.00	$225.00	-55%
24	FIRE PROTECTION-TOWNSHIP	$4,000.00	$4,000.00	0%
25	REFUNDS/DIVIDENDS	$0.00	$0.00	0%
26	REFUSE COLLECTION FEES	$22,000.00	$22,000.00	0%
27	OTHER	$0.00	$0.00	0%
28	PROCEEDS LONG-TERM DEBT (WATER-SEWER)	$20,550.00	$18,550.00	-10%
29		$48,630.00	$46,565.00	-4%
30				
31	**USE OF MONEY & PROPERTY**			
32	INTEREST ON INVESTMENTS	$3,000.00	$2,000.00	-33%
33	RENTAL INCOME-HALL	$1,200.00	$1,200.00	0%
34	RENTAL PROPERTY	$5,000.00	$5,000.00	0%
35	PRIOR YEAR BALANCE	$12,500.00	$12,000.00	-4%
36	PARK RENTAL	$500.00	$250.00	-50%
37		$22,200.00	$20,450.00	-8%

Calculations you better know

- budgets

	E23	▼	✖	✔	▦	☰	=E21-B21	

● ● ●				wk5_budget2.xls	

◇	A	B	C	D	E
1					
2	*Magazine Budget Fall Issue*				
3	**Expenses**			**Revenues**	
4					
5	*Printing*			*Advertising*	
6	50,000 issues	$65,000.00		FP	46,000.00
7	PR printing	$3,000.00		Covers	8,600.00
8	Subtotal	$68,000.00		Partials	4,200.00
9				Subtotal	58,800.00
10					
11	*Mailing*				
12	Postage $.189	$9,450.00		*Grants*	
13	Duplicates Scan ($5 per 1000	$250.00		SBA	5,000.00
14	Addressing ($25 per 1000)	$1,250.00		CVB	2,500.00
15	Permit Charge	$5.50		Subtotal	7,500.00
16	Barcode ($5 per 1000)	$250.00			
17	Auto pre-sort ($5 per 1000)	$250.00			
18	Subtotal	$11,455.50		*Fundraising*	
19				Magazine sales	1,800.00
20					
21	Total expense	$79,455.50		Total Revenue	68,100.00
22					
23				**TOTAL**	**11,355.50**
24					
25					
26					
27					

Analytical skills

- personalization
  - confuse evidence by focusing on self
- overestimation
  - believe evidence is more extensive
- correlation vs. causation
  - intervening factor
  - and over interpretation of studies
- flaws of eye witnesses
  - powerful but inaccurate
- evidence out of context

Numeracy in writing

- support your theme with evidence

- ask:

  - evidence accurate?

  - bias in evidence? justified?

  - evidence complete?

  - evidence in context?

  - evidence understood by audience?