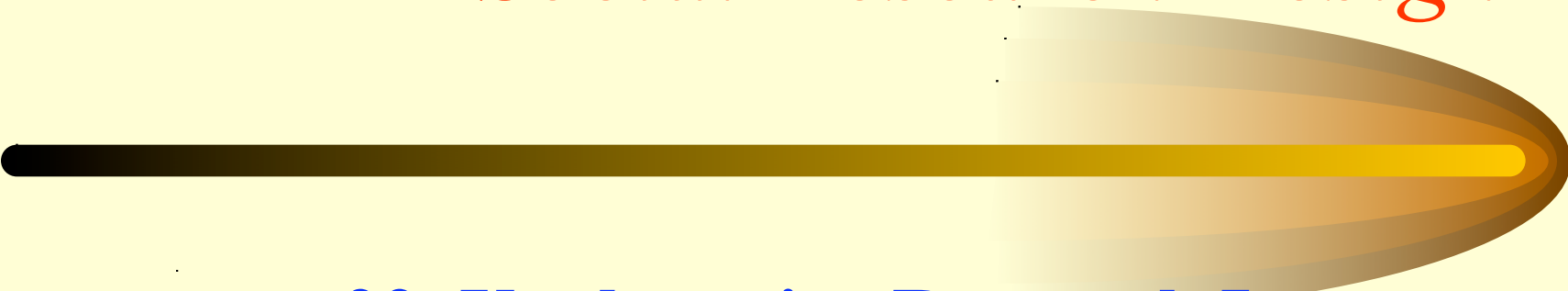# *Sociology 201:*
Social Research Design

12. The Logic of Sampling

Preview

- *Workbook assignments due: 7.1, 72*
- Review Chapter 6 homework
- Video on Sampling
- History of Sampling
- Logic of Probability Sampling
- Sampling Techniques

Total = 31 slides

Review Chap 6 Workbook Assignments

- ## Range: 0 to 98

Total – 31 slides

6.2 Semantic differential

- Attitudes toward fast food
  - Nutrition: nutritious, junk
  - Taste: Tastes good, tastes bad
  - Cost: Expensive, cheap

Total = 31 slides

Semantic Differential Format

	Very Much	Some-what	Neither	Some-what	Very Much	
Nutritious	[ ]	[ ]	[ ]	[ ]	[ ]	Junk
Tastes good	[ ]	[ ]	[ ]	[ ]	[ ]	Tastes bad
Cheap	[ ]	[ ]	[ ]	[ ]	[ ]	Expensive

How would you score the various responses?

Total = 31 slides

Scoring Semantic Differential

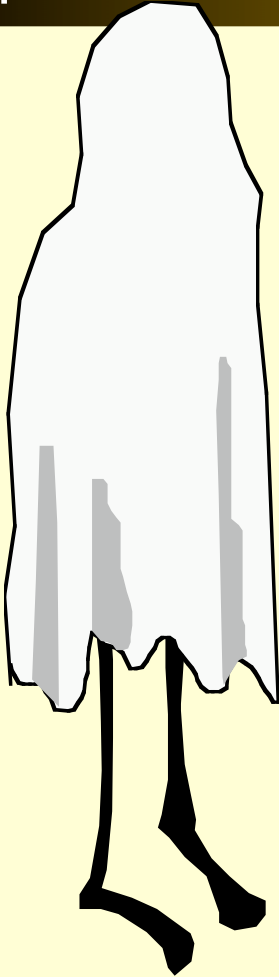|	Very Much	Some-what	Neither	Some-what	Very Much	
Nutritious	4	3	2	1	0	Junk
Tastes good	4	3	2	1	0	Tastes bad
Expensive	0	1	2	3	4	Cheap

Range = 0 (Bad) to 12 (Good)

Total = 31 slides

It's Showtime!
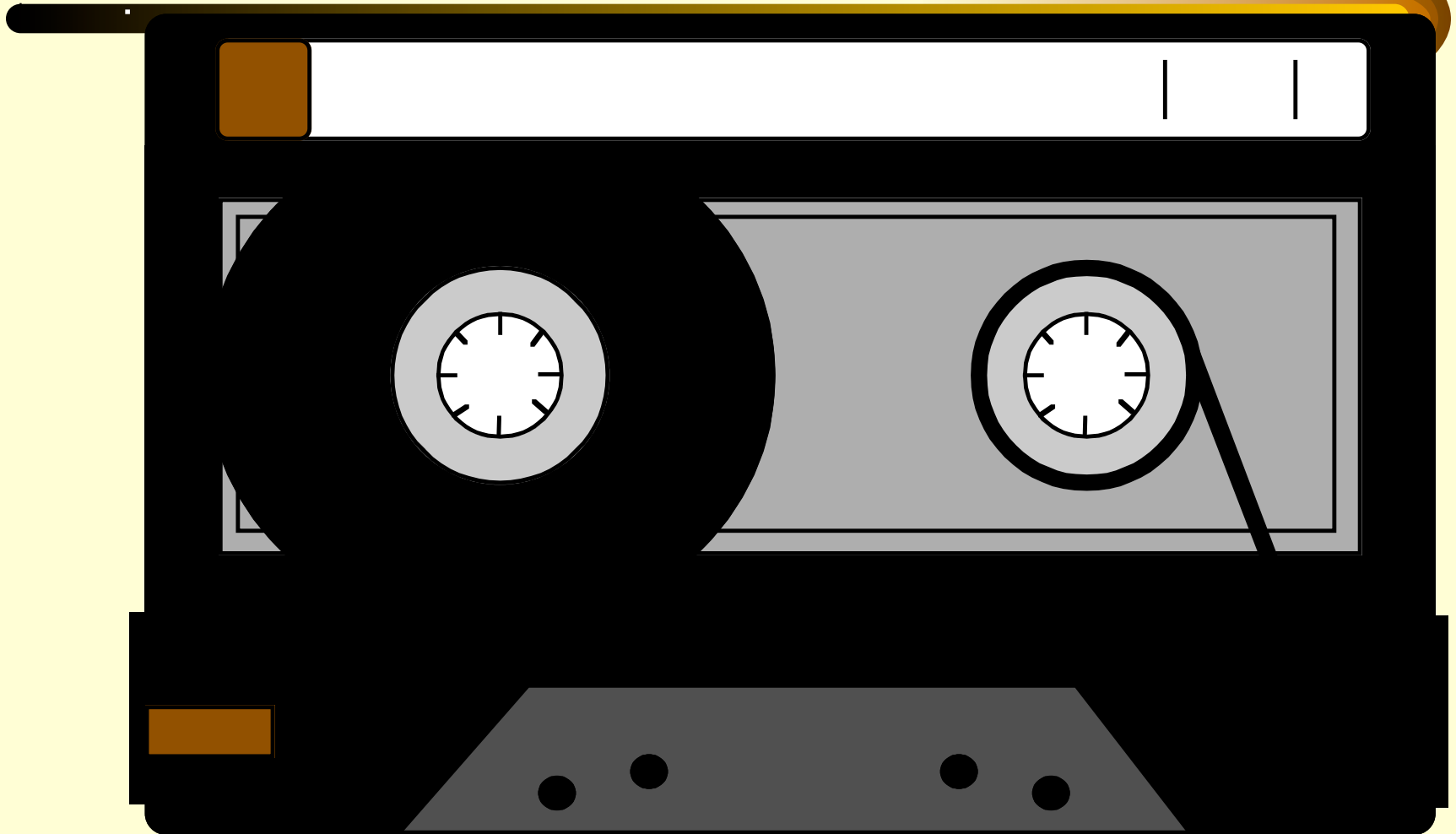
Total = 31 slides

Intuitive sampling

- Chapman student experience of sexual harassment
- "Have you ever been sexually harassed?"
- Ask all? -- too many
- Ask some?
- How many?
- Which ones?

Total = 31 slides

Sampling History: Literary Digest

- Picked winner in 1920-1932
- Picked Landon over FDR in 1936
  - Mailed 10,000,000 ballots
  - 2,000,000 came back
- FDR won with enormous landslide
- Who knows what went wrong?
- Sampling frame: cars and phones
- Excluded the poor--during Depression
- 20% return isn't very good
  - 70% or more is common in good studies

Total = 31 slides

Sampling History: Gallup

- Gallup predicted FDR in 1936

Total = 31 slides

Sampling History: Gallup

- Gallup predicted FDR in 1936
  - Quota Sampling

Men	Women

Sampling History: Gallup

- Gallup predicted FDR in 1936
  - Quota Sampling

	Men	Women
Rural		
Urban		

Sampling History: Gallup

- Gallup predicted FDR in 1936
  - Quota Sampling

	Men		Women	
	College	Less	College	Less
Rural				
Urban				

Sampling History: Gallup

- Gallup predicted FDR in 1936
  - Quota Sampling

		Men		Women	
		College	Less	College	Less
Rural	White				
	Non-white				
Urban	White				
	Non-white				

Sampling History: Gallup

- ## Gallup predicted FDR in 1936
  - Quota Sampling

		Men		Women	
		College	Less	College	Less
Rural	White	%	%	%	%
	Non-white	%	%	%	%
Urban	White	%	%	%	%
	Non-white	%	%	%	%

Sampling History: Gallup

- Accurate in 1936-1944

- Predicted Dewey in 1948

Total = 31 slides

Sampling History: Gallup

- Accurate in 1936-1944
- Predicted Dewey in 1948
- Truman won

Total = 31 slides

What did Gallup do wrong?

- Quota frames were based on 1940 census
  - Urban migration during WWII
  - Underrepresented urban masses
- Stopped polling too soon
  - Extrapolation of trends pointed to Truman

Total = 31 slides

1992 Presidential Election

			Clinton	Bush	Perot
•	Oct 25-26	Gallup/USA Today/CNN	44	38	18
•	Oct 25-26	ABC News	43	35	22
•	Oct 26-27	Gallup/USA Today/CNN	43	40	17
•	Oct 26-27	ABC News	43	36	21
•	Oct 27	NBC News/Wall St Jour	46	38	16
•	Oct 27-28	Gallup/USA/Today/CNN	43	40	17
•	10/31/92	Gallup	46	38	16
•	10/31/92	CBS News/New York Times	45	37	18
•	10/31/92	ABC News	44	39	18
•	10/31/92	Gallup/CNN/USA Today	44	41	15
•	11/01/92	Gallup/CNN/USA Today	47	38	15
•	11/02/92	ABC News	45	38	16
•	11/02/92	CBS News/New York Times	46	38	15
•	11/02/92	NBC News/Wall St. Jour	46	38	16
•	11/03/92	Harris Poll	44	38	17
•					
•	**11/03/92**	**ELECTION RESULTS**	**43**	**38**	**19**

Total = 31 slides

1996 Presidential Election

Dates	Agency	Clinton	Dole	Perot	Other
10/28-31	Hotline/Battleground	49	40	9	2
10/30-11/2	CBS/New York Times		54	35	9	2
10/31-11/3	Pew Research Center	52	38	8	2
11/1-3	Reuter/Zogby	49	41	8	2
11/1-3	Harris	51	39	9	1
11/2-3	ABC	52	39	7	

Total = 31 slides

2000 Presidential Election

|	Gore	Bush	Nader	Buchnan*
11/5: Hotline [Polling Co/GSG]	43	51	4	1
11/5: Marist College	46	51	2	1
11/5: Fox [Opinion Dynamics]	47	47	3	2
11/5: Newsweek [PRSA]	46	49	6	0
11/5: NBC/Wall St. Journal [Hart/Teeter]	45	48	4	2
11/5: Pew	46	49	3	1
11/5: ICR	44	46	7	2
11/5: Harris	47	47	5	1
11/5: Harris (online)	47	47	4	2
11/5: ABC/ Washington Post [TNSI]	46	49	3	1
11/6: IDB/CSM [TIPP]	47	49	4	0
11/6: CBS	48	47	4	1
11/6: Portrait of America [Rasmussen]	43	52	4	1
11/6: CNN/USA Today [Gallup]	46	48	4	1
11/6: Reuters/MSNBC [Zogby]	48	46	5	1
11/6: Voter.com [Lake/Goeas]	45	51	4	0
November 7th Election Results	**48**	**48**	**3**	**1**

Total = 31 slides

Probability sampling--EPSEM
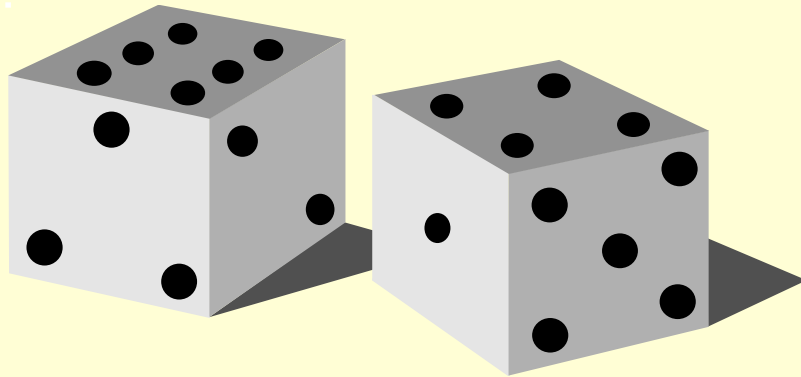
- **Equal**
- **Probability of**
- **Selection**
- **Method**

Total = 31 slides

Calculate sampling error

95 percent confidence level is a standard

AGE OF RESPONDENT
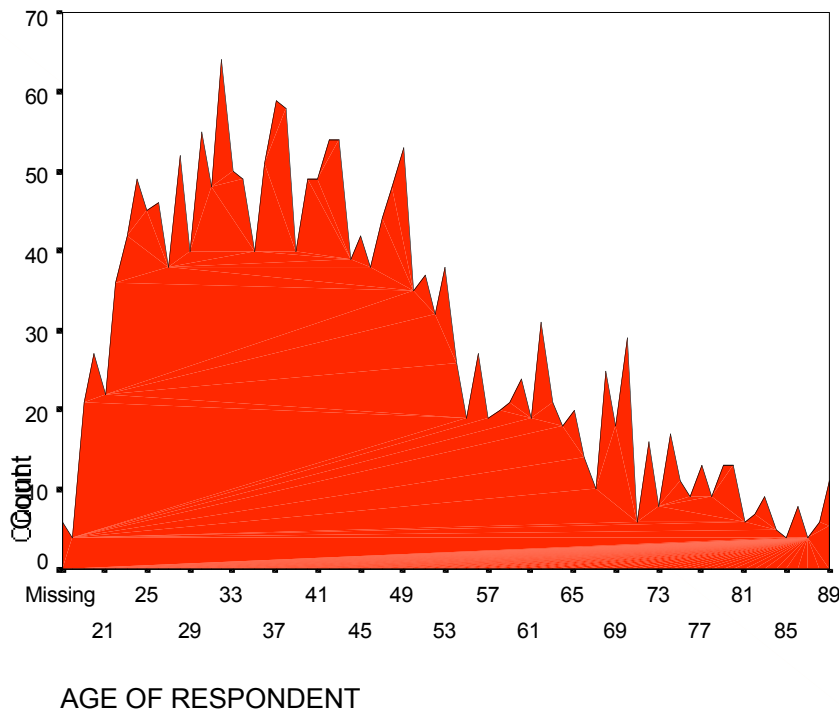
$100 = \pm 10$ percentage points

$400 = \pm 5$ percentage points

$1600 = \pm 2.5$ percentage points
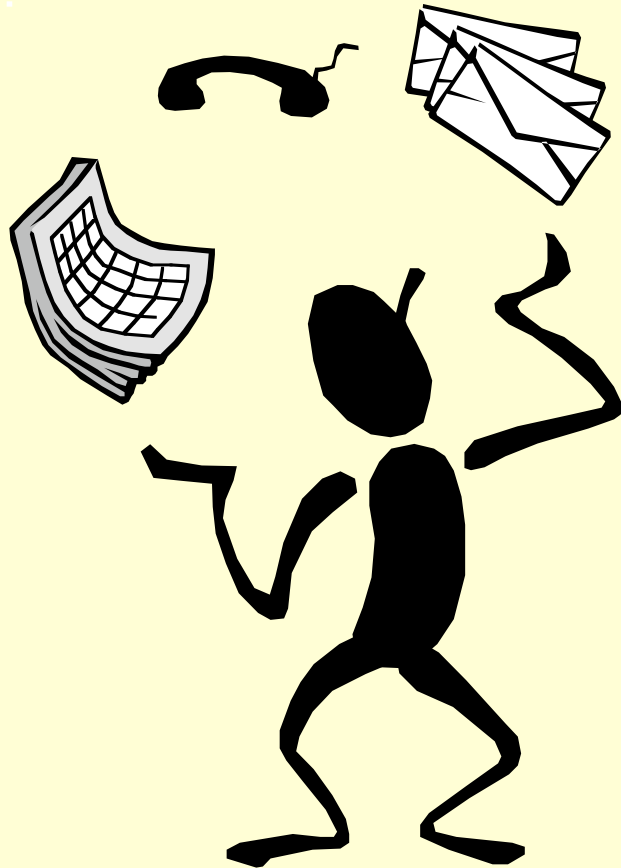
Total = 31 slides

- Problem of phone directory
- Problem of radio call-ins
- Problem of newspaper write-ins

Total = 31 slides

Types of Sampling designs

- Simple Random Sample

- Systematic

- Stratified

- Cluster sampling

- Probability proportionate to size (PPS)

Total = 31 slides

Simple Random Sample

- Number each person in the population

- Select random numbers (from table or computer)

- Those people are in the sample
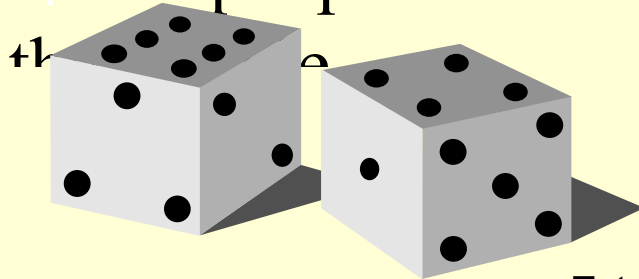
Total = 31 slides

Systematic Sample

- Divide population size by desired sample to get sampling interval: K

- e.g., 1,000,000 / 2,000 = 500

- Select every 500th person

Total = 31 slides

Stratified Sample

- Group population according to some variable(s), e.g., gender

- Then select random or systematic sample in each subgroup
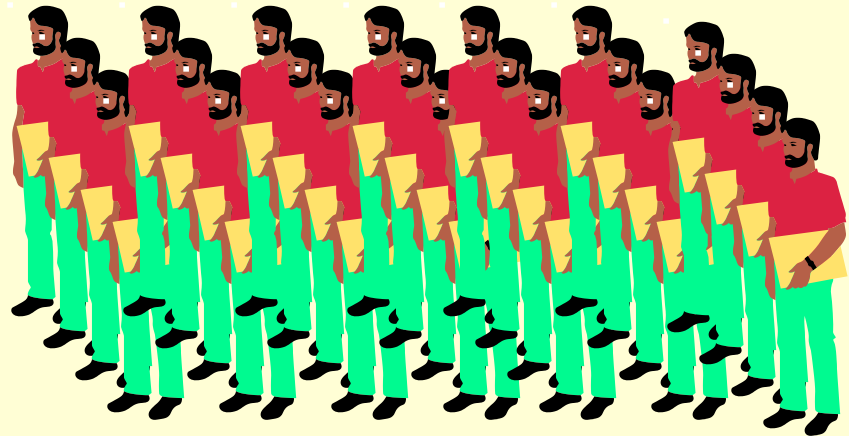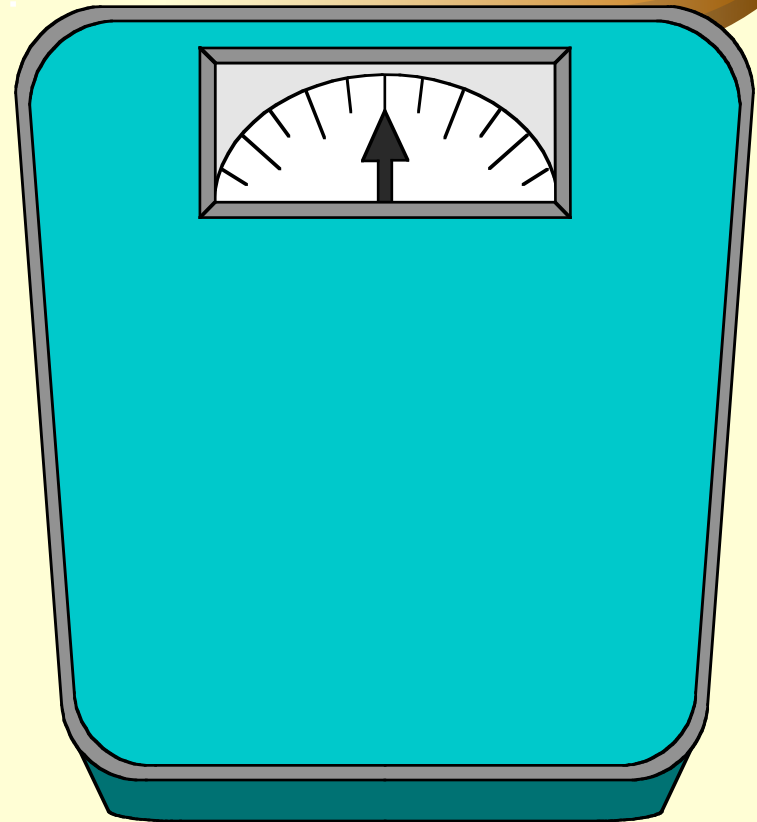

Total = 31 slides

Cluster Sample

- Identify clusters that people exist in
- Sample the clusters
- List people in each selected cluster
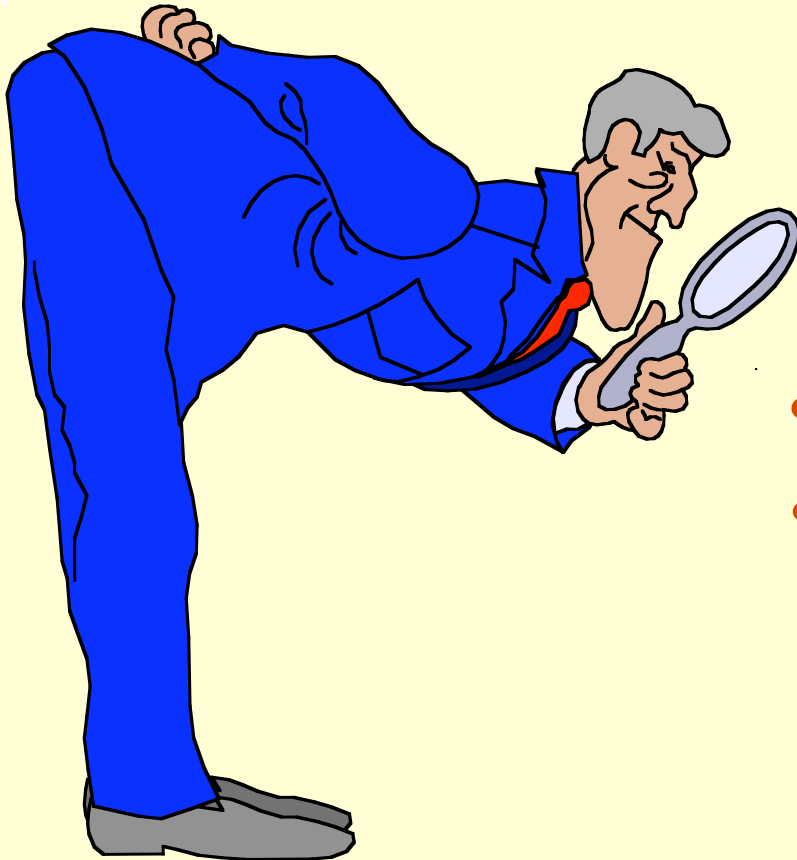- Sample people within each of the selected clu[ster]
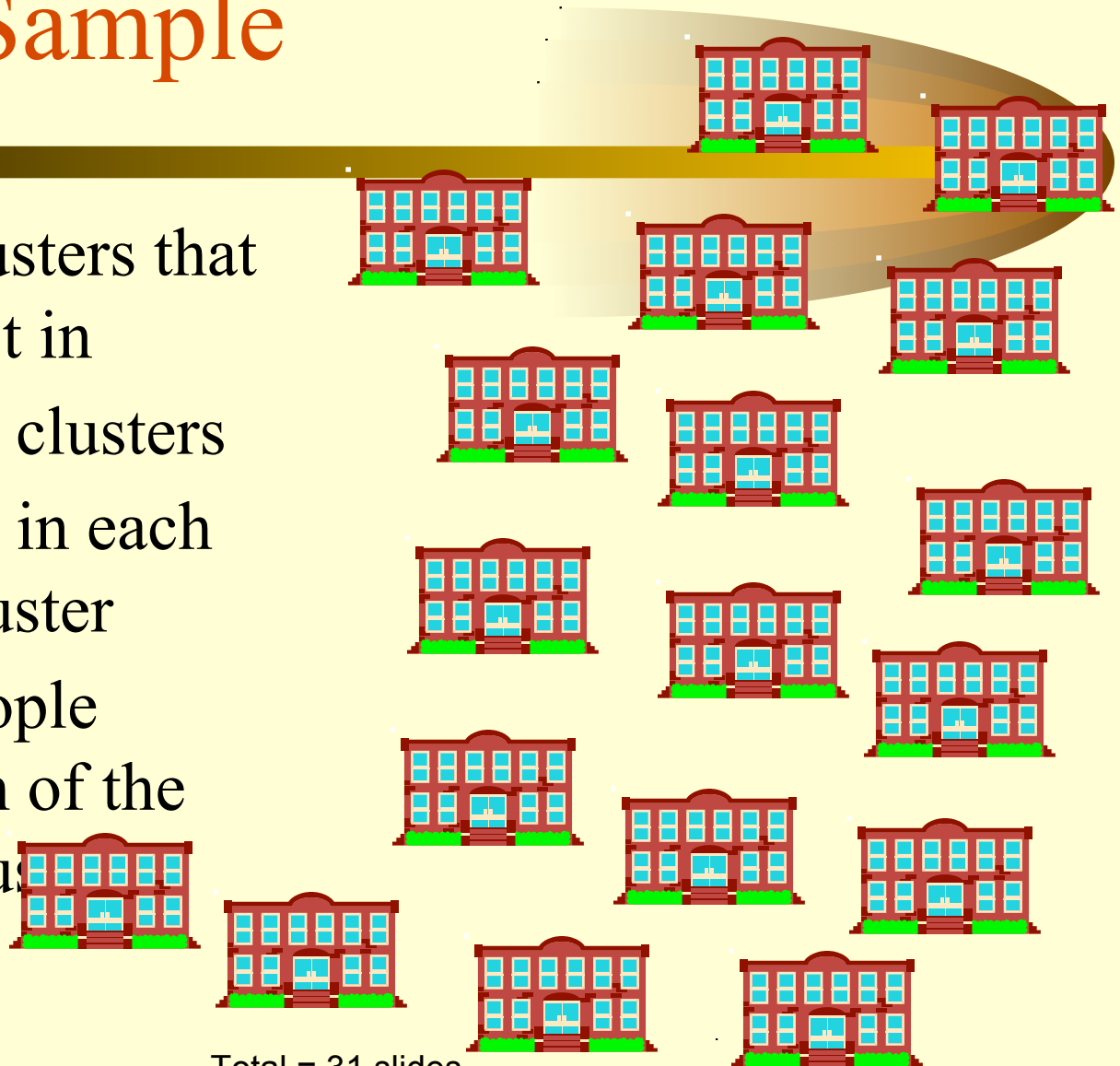
Total = 31 slides

Weighting

- Recall Quota Sampling

- Logic

- Methods

Total = 31 slides

Next Time

- **Sampling Examples**
- Review Chapter 7

Total = 31 slides