

Measuring School Enrollment with the American Community Survey: Comparisons with the Census and Current Population Survey

Scott Boggess, Wendy Bruno, Gladys Martinez and Jennifer Day

U S C E N S U S B U R E A U

Helping You Make Informed Decisions

INTRODUCTION

By the end of the decade the American Community Survey (ACS) will become a primary source for state and local estimates of school enrollment.

How well does the American Community Survey measure school enrollment?

This study attempts to answer this question by comparing school enrollment estimates from the 1990 Census, 1990 and 1998 CPS, and 1996-1998 ACS.

THE AMERICAN COMMUNITY SURVEY

When fully implemented the American Community Survey (ACS) will annually survey a nationwide sample of 3 million households. The ACS is designed to provide annual demographic, housing, social, and economic estimates for all states, as well as for all cities, counties, metropolitan areas, and population groups of 65,000 people or more. It is an on-going survey that could replace the decennial Census long form in 2010.

ACS Sites*

Brevard Co., FL (1996-97)

Franklin Co., OH (1997-98)

Broward Co., FL (1998) **Multnomah Co., OR (1996-98)**

Douglas Co., NE (1997-98)

Fulton Co., PA (1996-98)

Otero Co., NM (1998)

Kershaw-Richland Cos., SC (1998)

Rockland Co., NY (1996-98)

Ft. Bend-Harris Cos., TX (1997-98)

*for ease of presentation, results are presented only for **bold** sites.

THE DECENNIAL CENSUS

School enrollment data are collected on the Census long-form questionnaire--received by 1 in 6 households. Census questionnaires are mailed to all households in late March.

THE CURRENT POPULATION SURVEY

The Current Population Survey (CPS) is a monthly, nationally representative survey of 59,000 households. The primary purpose of the CPS is to provide estimates of labor force characteristics for the civilian population and for various subpopulations. In addition, the October supplement to the CPS collects annual data on school enrollment.

MAJOR SURVEY DIFFERENCES

1. MODE OF ADMINISTRATION

	ACS	Census		CPS	
	1996-1998	1990	2000	1990	1998
Self-enumeration mailout/mailback	✓	✓	✓		
Computer assisted telephone interview	✓		✓		✓
Computer assisted personal interview	✓				✓
Self-enumeration instrument left at home to be mailed back		✓	✓		
Enumerator filled interview		✓	✓	✓	
Telephone interview		✓		✓	

2. QUESTION WORDING

ACS

At any time **IN THE LAST 3 MONTHS**, has this person attended regular school or college?

Census (1990/2000 Long form)

At any time since February 1, 1990 (2000), has this person attended regular school or college?

CPS

Are you attending or enrolled in regular school?

3. TIMING

Data Collection Period

Reference Period

ACS

All year, every month

Last 3 months

Census

January-July

Since February 1st

March-May
(most cases)

February 1 - April 1
(most cases)

CPS

Week of October 19

Current school term

4. UNIVERSE

ACS

1996-1998 All residents except those in group quarters

1999-2000 All residents except those enumerated at mobile food vans and targeted non-sheltered outdoor locations.

Census

All residents except those enumerated at mobile food vans and targeted non-sheltered outdoor locations.

CPS

Civilian non-institutional population

5. SAMPLE WEIGHTS

Sample Weight Base Population

ACS

1996-99 1990 Census unadjusted* population

Census

1990 1990 Census unadjusted population

2000 2000 Census unadjusted population

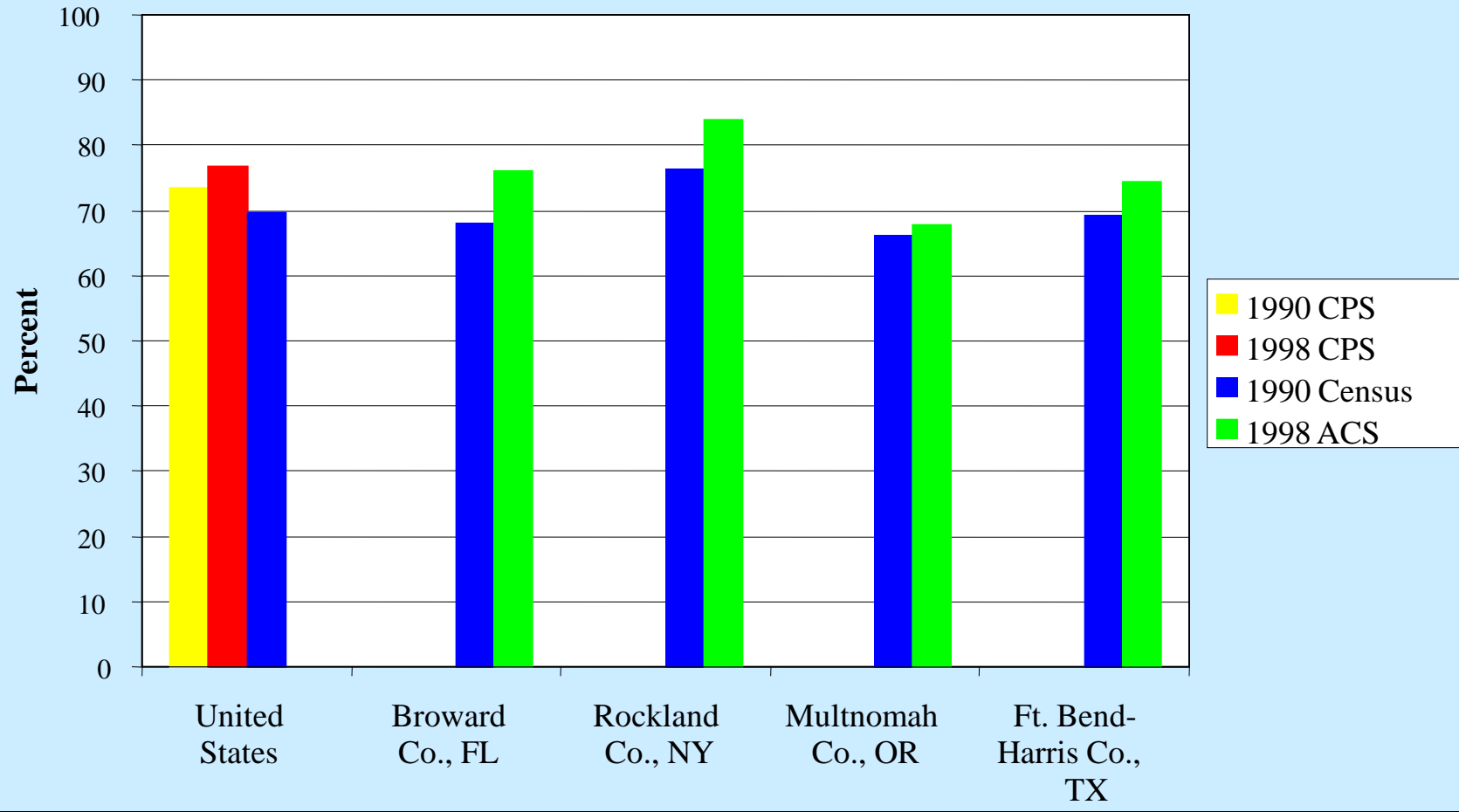
CPS

1990 1980 Census unadjusted population

1998 1990 Census adjusted for undercount

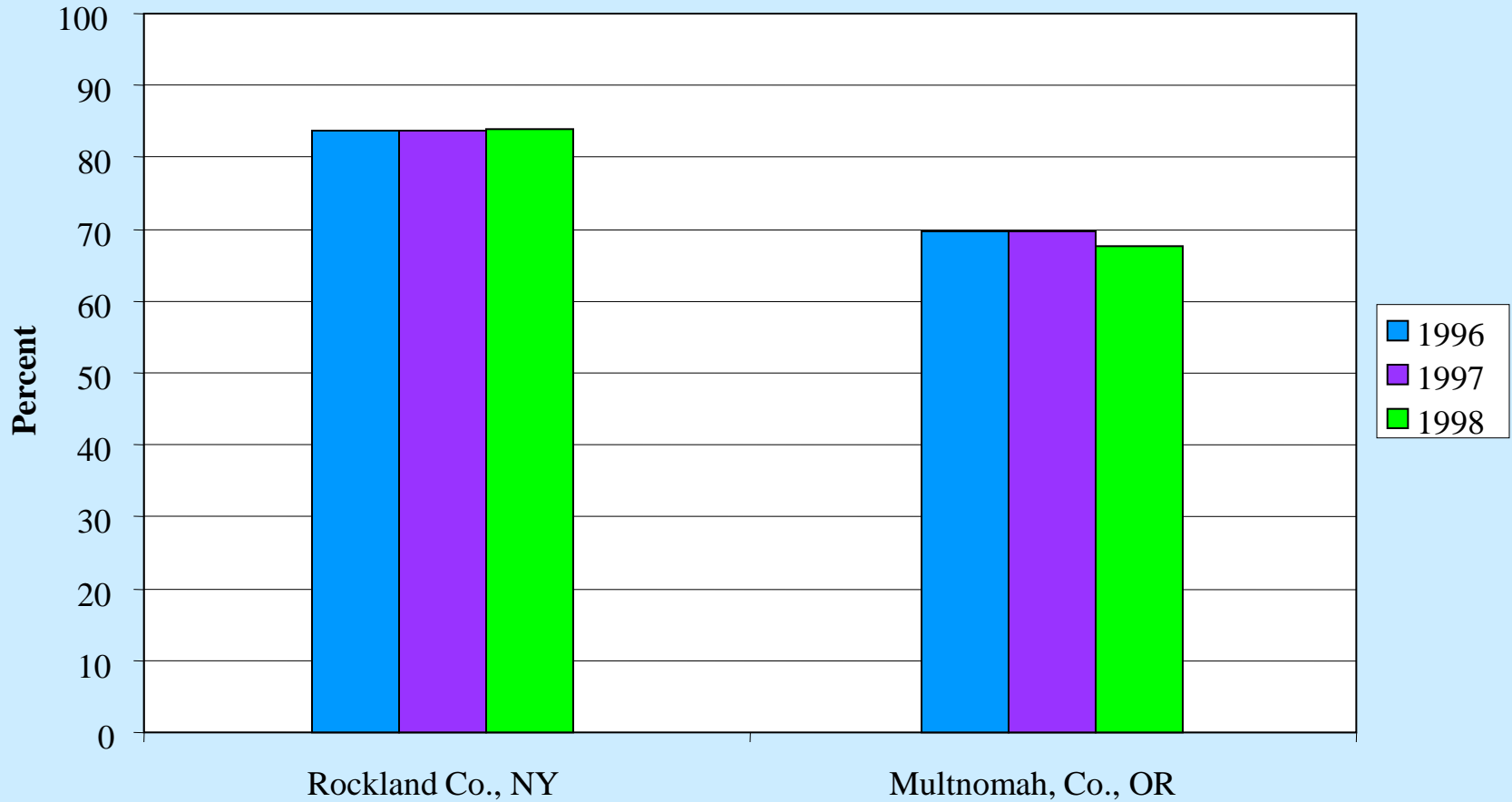
*not adjusted for undercount

ESTIMATED PERCENTAGE OF THOSE AGED 3-24 ENROLLED IN SCHOOL



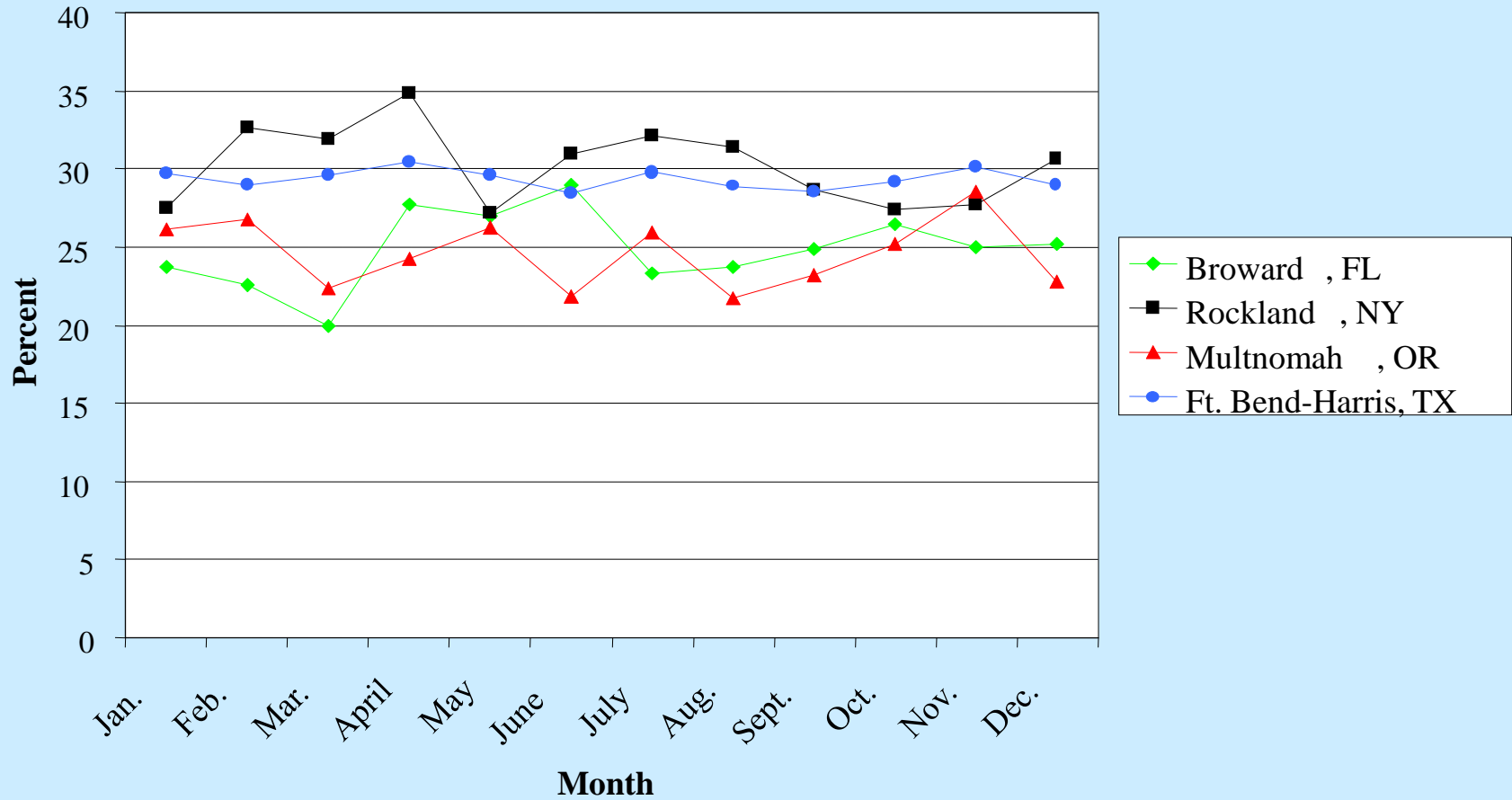
- CPS enrollment rates were 5% higher than Census rates in 1990
- CPS enrollment rates increased 5% from 1990 to 1998
- 1998 ACS enrollment rates for Florida, New York, and Texas were significantly higher than comparable rates from the 1990 Census

ESTIMATED PERCENTAGE OF THOSE AGE 3-24 ENROLLED IN SCHOOL, 1996-1998 ACS



- There were no significant difference in ACS enrollment rates for NY or OR from either 1996 to 1997 or from 1997 to 1998.

ESTIMATED PERCENTAGE OF THOSE 3 AND OLDER ENROLLED IN SCHOOL IN THE LAST 3 MONTHS, BY MONTH OF SURVEY, 1998 ACS



•ACS enrollment rates do not differ systematically across states by month of survey.

**ESTIMATED SCHOOL ENROLLMENT LEVELS OF THOSE AGED
3 AND OLDER FROM THE 1990 CENSUS, 1990 CPS,
AND 1998 CPS, BY TYPE OF ENROLLMENT (000's)**

Data Set	Population 3+	Preprimary School	Elementary & High School	College
1990 Census	237,728	4,503	42,567	17,917
1990 CPS	235,136	7,300	41,984	13,625
1998 CPS	258,111	8,405	48,157	15,546

The CPS estimated a much higher level of preprimary enrollment than the Census.

The CPS and Census estimates of elementary and high school enrollment were only slightly different.

The Census estimated a much higher level of college enrollment than the CPS.

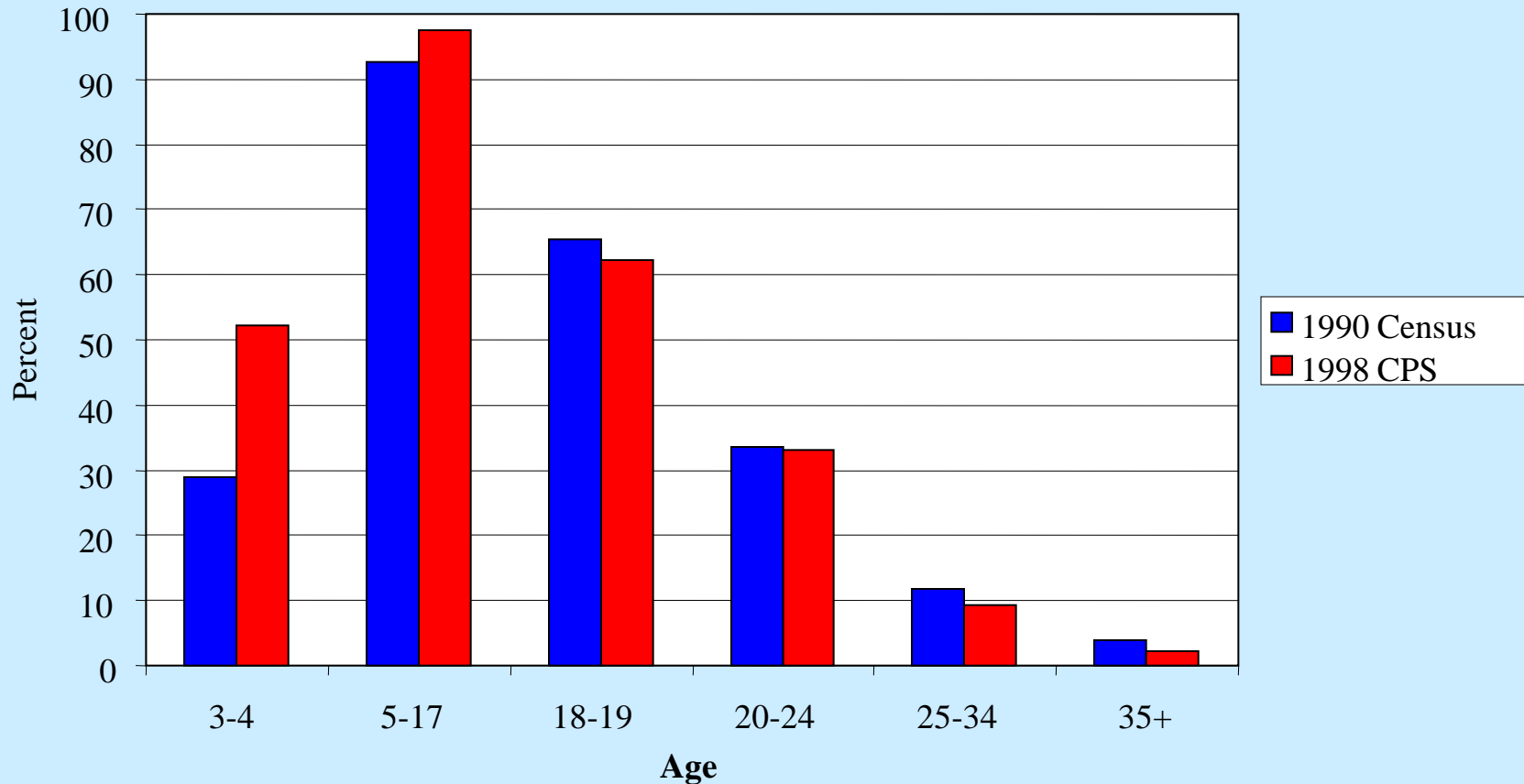
ESTIMATED SCHOOL ENROLLMENT LEVELS OF THOSE 3 AND OLDER FROM THE 1990 CENSUS AND 1998 ACS, BY COUNTY AND TYPE OF ENROLLMENT (000'S)

Data Set	Population 3+		Preprimary School		Elementary & High School		College	
	Number	% Diff.	Number	% Diff.	Number	% Diff.	Number	% Diff.
<i>Broward Co., FL</i>								
1990 Census	1,208		22.3		168.1		72.9	
1998 ACS	1,434	18.7	34.2	53.4	237.2	41.1	84.5	15.9
<i>Ft. Bend-Harris Cos., TX</i>								
1990 Census	2,885		61.3		594.3		210.9	
1998 ACS	3,330	15.4	89.3	45.7	683.5	15.0	204.0	-3.3
<i>Rockland Co., NY</i>								
1990 Census	254.0		5.9		47.6		22.1	
1998 ACS	263.6	3.8	7.4	25.4	50.8	6.7	21.4	-3.2
<i>Multnomah Co., OR</i>								
1990 Census	558.7		10.3		83.8		46.4	
1998 ACS	591.2	5.8	11.9	15.5	91.9	9.7	40.7	-12.3

Taking into account the change in population between 1990 and 1998,

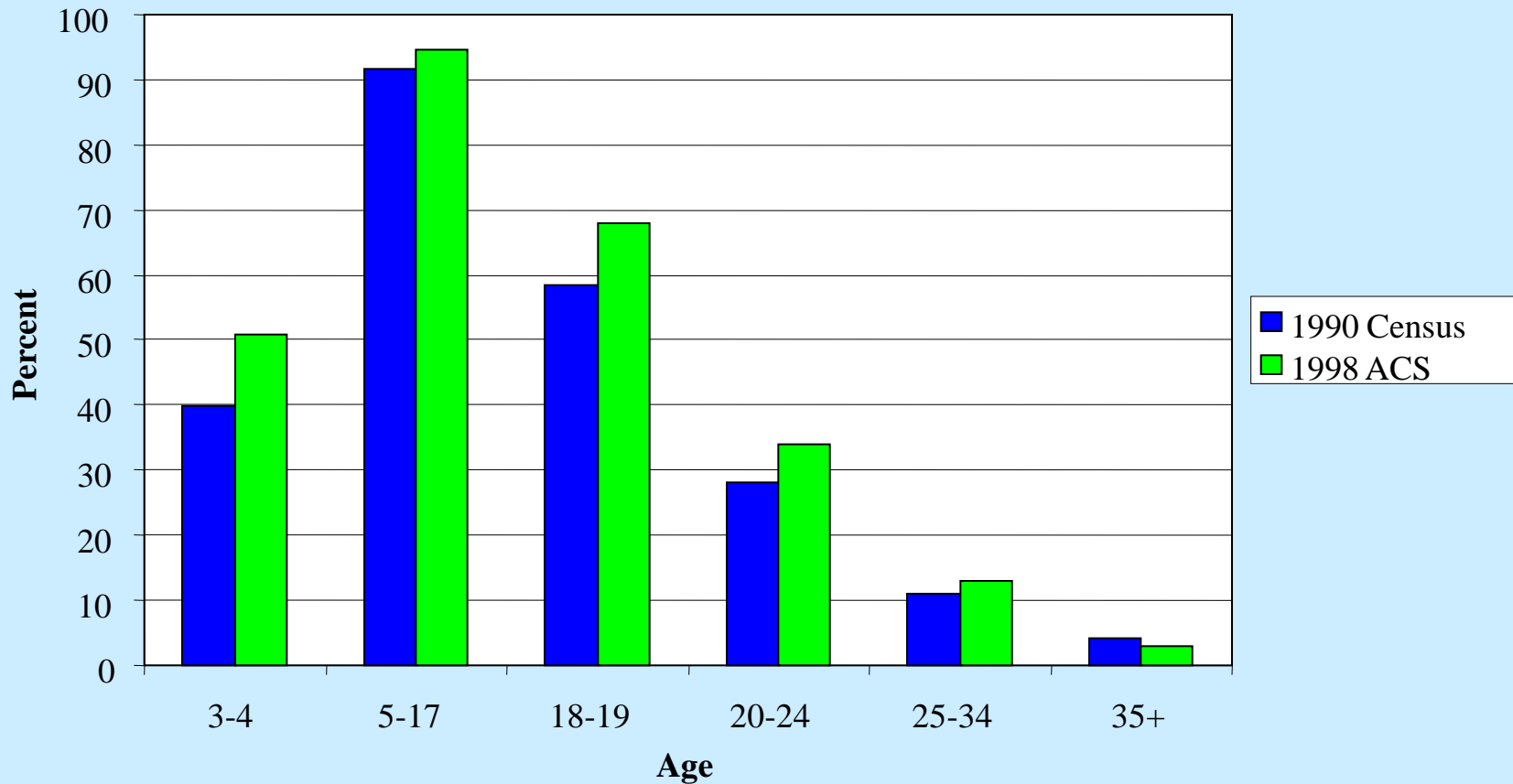
1. The ACS estimated higher levels of preprimary enrollment than the Census for both FL and TX.
2. The ACS and Census estimated comparable levels of elementary and high school enrollment for three of the four sites.
3. The ACS estimated lower levels of college enrollment than the Census for three of the four sites.

ESTIMATED PERCENTAGE ENROLLED BY AGE FROM THE 1990 CENSUS AND 1998 CPS, UNITED STATES



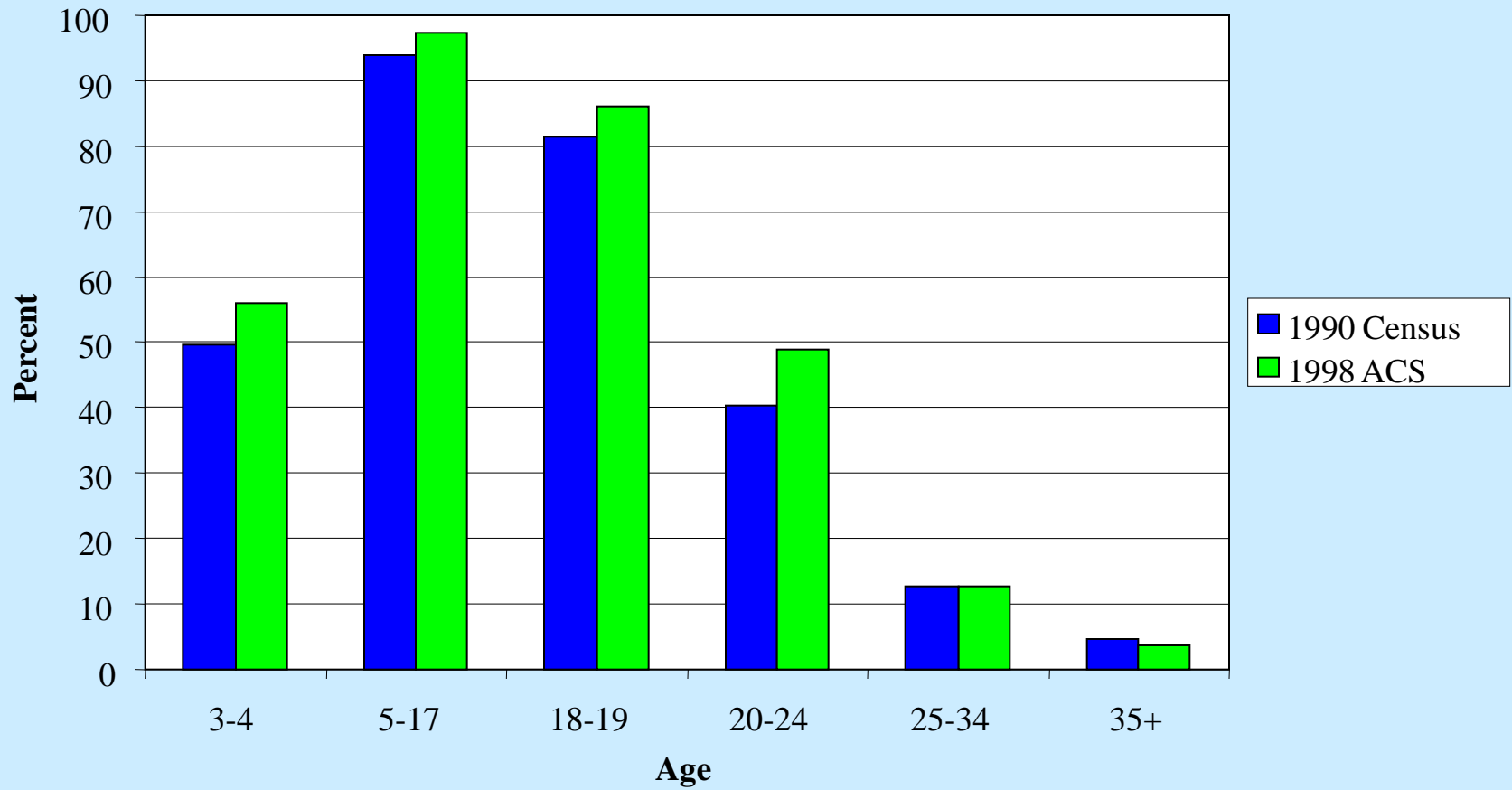
- Enrollment rates for those aged 5-24 differ by less than 6%.
- CPS enrollment rates for 3-4 y.o. are 80% higher than Census rates.
- Census enrollment rates for those aged 25-34 and 35+ are 27% and 91% higher than similar CPS rates.

ESTIMATED PERCENTAGE ENROLLED BY AGE FROM THE 1990 CENSUS AND 1998 ACS, BROWARD CO., FL



- The ACS estimated a much higher enrollment rate for those aged 3-4, a slightly higher rate for those aged 5-17, and a much *lower* rate for those aged 35+.
- Note: According to national estimates from the CPS, the proportion of those aged 3+ enrolled in school increased 4% between 1990 and 1998.

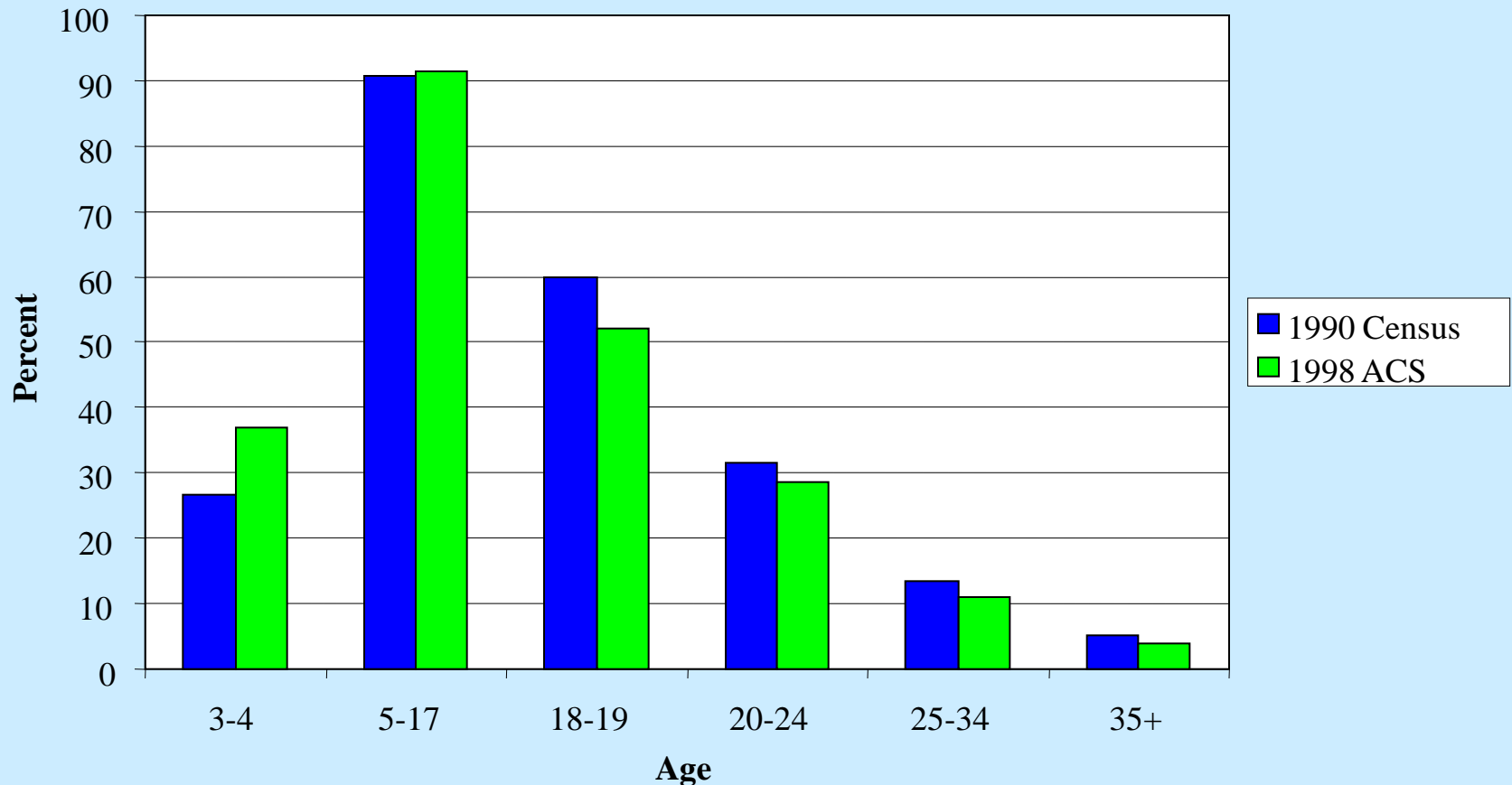
**ESTIMATED PERCENTAGE ENROLLED BY AGE FROM THE
1990 CENSUS AND 1998 ACS, ROCKLAND CO., NY**



- The ACS estimated a slightly higher enrollment rate for those aged 5-17 and 20-24, and a *lower* rate for those aged 35+.

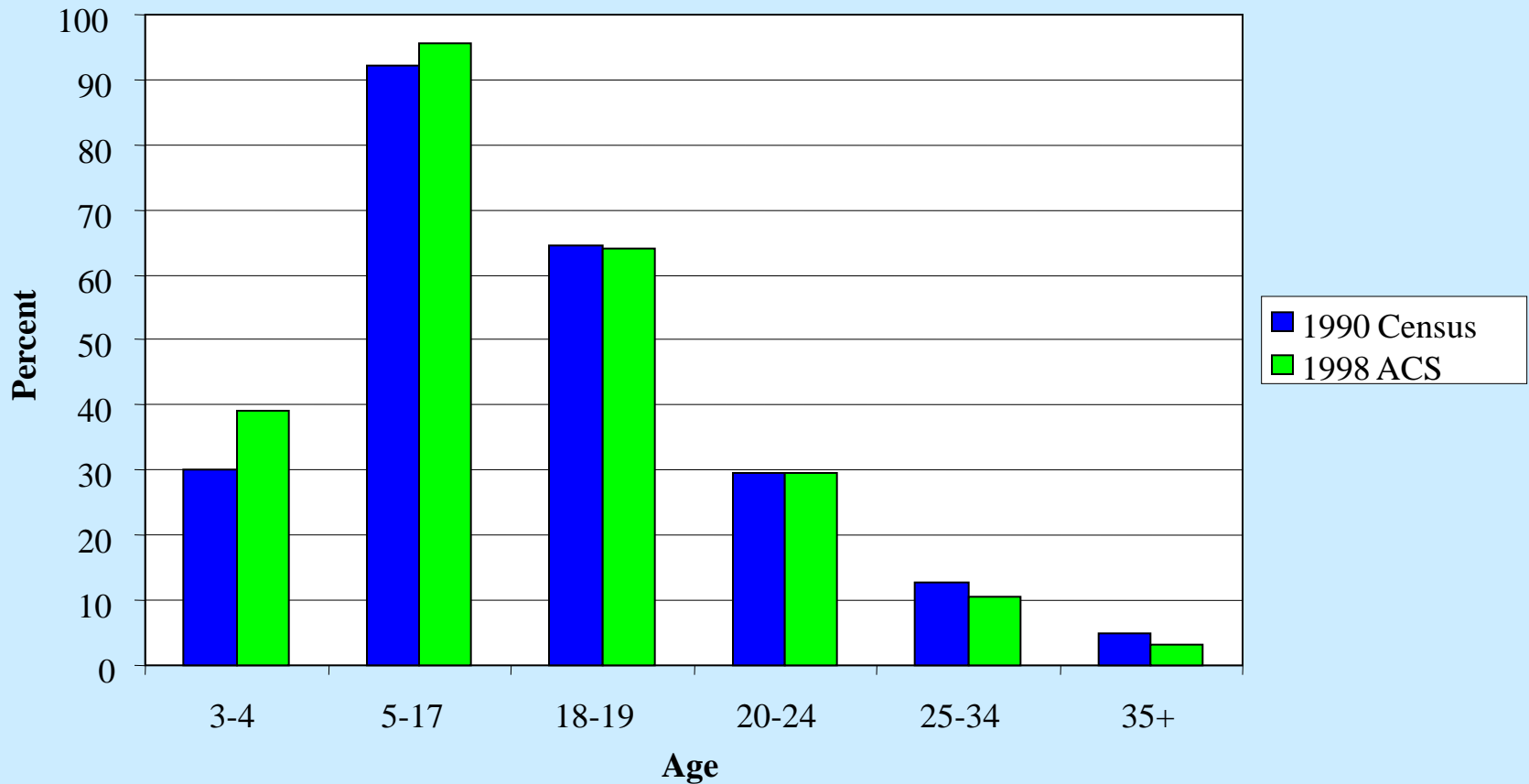
- Note: According to national estimates from the CPS, the proportion of those aged 3+ enrolled in school increased 4% between 1990 and 1998.

ESTIMATED PERCENTAGE ENROLLED BY AGE FROM THE 1990 CENSUS AND 1998 ACS, MULTNOMAH CO., OR



- The ACS estimated a much higher enrollment rate for those aged 3-4, an equal rate for those 5-17, and a *lower* rate for those aged 18-19 and 25+.
- Note: According to national estimates from the CPS, the proportion of those aged 3+ enrolled in school increased 4% between 1990 and 1998.

ESTIMATED PERCENTAGE ENROLLED BY AGE FROM THE 1990 CENSUS AND 1998 ACS, FT. BEND-HARRIS COS., TX



•The ACS estimated a higher enrollment rate for those aged 3-17, and a *lower* rate for those 25+.

•Note: According to national estimates from the CPS, the proportion of those aged 3+ enrolled in school increased 4% between 1990 and 1998.

SUMMARY, ENROLLMENT BY AGE

The American Community Survey, decennial Census, and Current Population Survey estimate relatively similar rates of enrollment for those 5-17 years old.

Both the ACS and the October CPS estimate higher rates of enrollment among 3-4 year olds than the decennial Census.

Among those 25 and older, the decennial Census estimates higher rates of enrollment than either the ACS or the CPS.

CONCLUSIONS

↪ Estimated school enrollment rates from the American Community Survey are relatively stable over time (panel 12).

✦ Estimated ACS school enrollment rates do not differ systematically by month of survey (panel 13).

✦ The ACS and Census are likely to produce relatively similar estimates of elementary and high school enrollment (panels 15, 17-20).

✦ The ACS is likely to produce lower estimated levels of college enrollment than Census 2000 (panels 15, 17-20). This difference may be due to the fact that the ACS did not survey group quarters in 1996-1998. If so, we should expect more similarity in the estimates from 1999 forward.

☞ The ACS is likely to produce higher estimated levels of preprimary enrollment than Census 2000 (panels 15, 17-20). This difference may result from the longer ACS reference period.

☞ The American Community Survey is likely to produce higher estimated levels of college enrollment than the CPS (panels 14-15). These differences may result from the longer ACS reference period and greater reliance on self enumeration.

A more extensive comparison of the American Community Survey and the decennial Census will be possible once 2000 ACS data and 2000 Census data are available.

CONTACT INFORMATION

Authors

scott.boggess@ccmail.census.gov

rbruno@census.gov

gladys.m.martinez@ccmail.census.gov

jday@census.gov

American Community Survey

Webpage: www.census.gov/acs/www

Email: ACS@census.gov

Phone: (888) 456-7215