

**Counting the people:**

**The 2010 Census and  
measurement issues**

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# Outline

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- **The 2010 Census**
- Why is California hard to count?
- Census undercount



# Census basics

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## ■ Why take a census?

- Apportion the House of Representatives
- Determine political districts
- Disburse funds for programs (more than \$400 billion in federal funds every year)
- Develop a portrait of our nation

## ■ The 2010 Census:

- Goal: Count everyone once, only once, and in the right place
- Questionnaire: Among the shortest in history (10 questions for the first person, 7 for all others)



# Who and where?

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## Who is counted?

- Every resident of the United States, including unauthorized immigrants

## Where are people counted?

- Place of usual residence (“where a person lives and sleeps most of the time”)
  - College students: where they go to college
  - Military in barracks: location of the barracks
  - Prisoners: location of the prison
  - Snowbirds: in Michigan





# Census content: 2000 Census versus 2010 Census

For each resident		For each household	
<u>2000 Census</u>	<u>2010 Census</u>	<u>2000 Census</u>	<u>2010 Census</u>
Gender			
Age		Number of residents	
Hispanic origin		Tenure	
Race		Type of housing unit	
Relationship to householder		Acerage	
Marital status		Mortgage amount	
Birthplace		Mortgage payment	
Ancestry		Property tax	
Citizenship		Other owner costs	
Year of immigration		Rent	
Year naturalized		Utility costs	
Language spoken		Government subsidy	
Ability to speak English		House value	
Educational attainment		Age of house	
School attendance		Characteristics of housing unit	
Type of school		Phone	
Employment status		Type of heating	
Occupation		Vehicles	
Industry			
Hours and weeks worked			
Income by source			
Migration			
Disability			
Veteran status			
Location of workplace			
Commuting			



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Age	<b>Age</b>	Number of residents	<b>Number of residents</b>
Hispanic origin	<b>Hispanic origin</b>	Tenure	<b>Tenure</b>
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Relationship to householder	<b>Relationship to householder</b>	Acerage	
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# Census Questions on Hispanic Origin and Race

## 8. Is Person 1 of Hispanic, Latino, or Spanish origin?

- No, not of Hispanic, Latino, or Spanish origin
- Yes, Mexican, Mexican Am., Chicano
- Yes, Puerto Rican
- Yes, Cuban
- Yes, another Hispanic, Latino, or Spanish origin — *Print origin, for example, Argentinean, Colombian, Dominican, Nicaraguan, Salvadoran, Spaniard, and so on.* ↴

## 9. What is Person 1's race? Mark one or more boxes.

- White
- Black, African Am., or Negro
- American Indian or Alaska Native — *Print name of enrolled or principal tribe.* ↴

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Asian Indian   | <input type="checkbox"/> Japanese  | <input type="checkbox"/> Native Hawaiian       |
| <input type="checkbox"/> Chinese  | <input type="checkbox"/> Korean  | <input type="checkbox"/> Guamanian or Chamorro |
| <input type="checkbox"/> Filipino   | <input type="checkbox"/> Vietnamese  | <input type="checkbox"/> Samoan                |
| <input type="checkbox"/> Other Asian — <i>Print race, for example, Hmong, Laotian, Thai, Pakistani, Cambodian, and so on.</i> ↴ | <input type="checkbox"/> Other Pacific Islander — <i>Print race, for example, Fijian, Tongan, and so on.</i> ↴ |  |

- Some other race — *Print race.* ↴







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# Hard to count populations

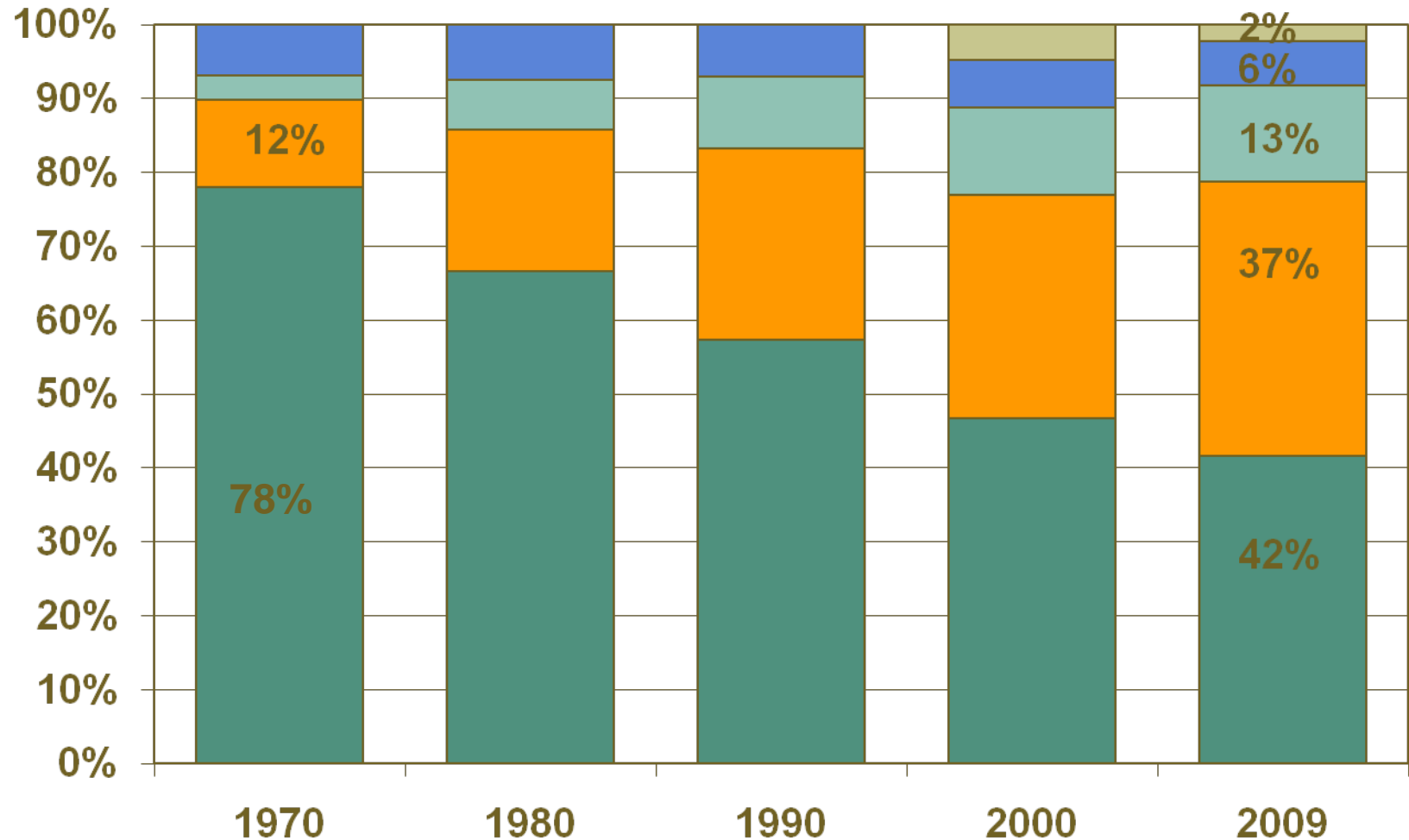
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- Renters
- Low-income households
- Immigrants
- Non-English speaking households
- Latinos and African Americans
- Young males



# California Population by Race/Ethnicity 1970-2009

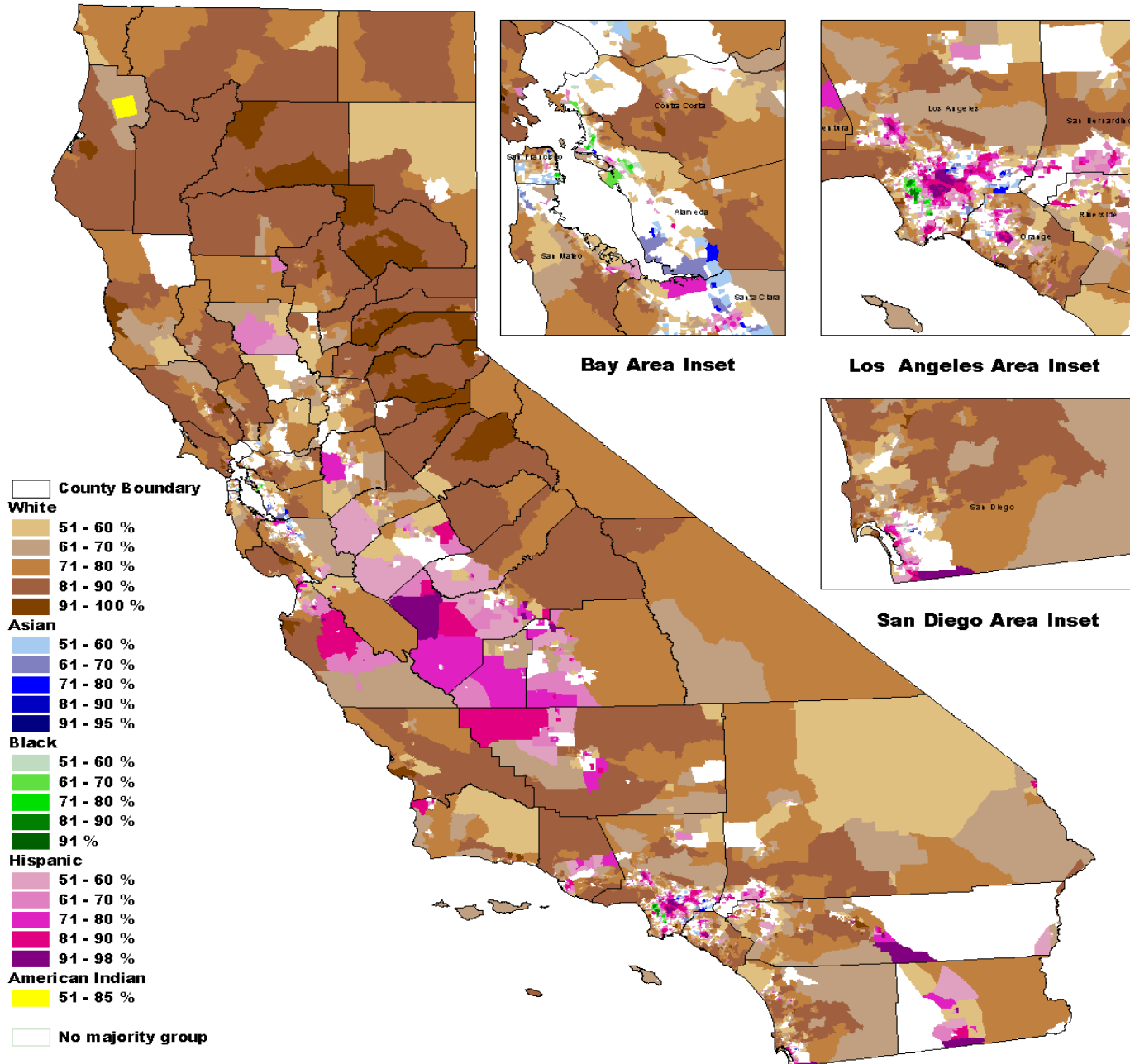
White Hispanic Asian/Other African American Multiracial



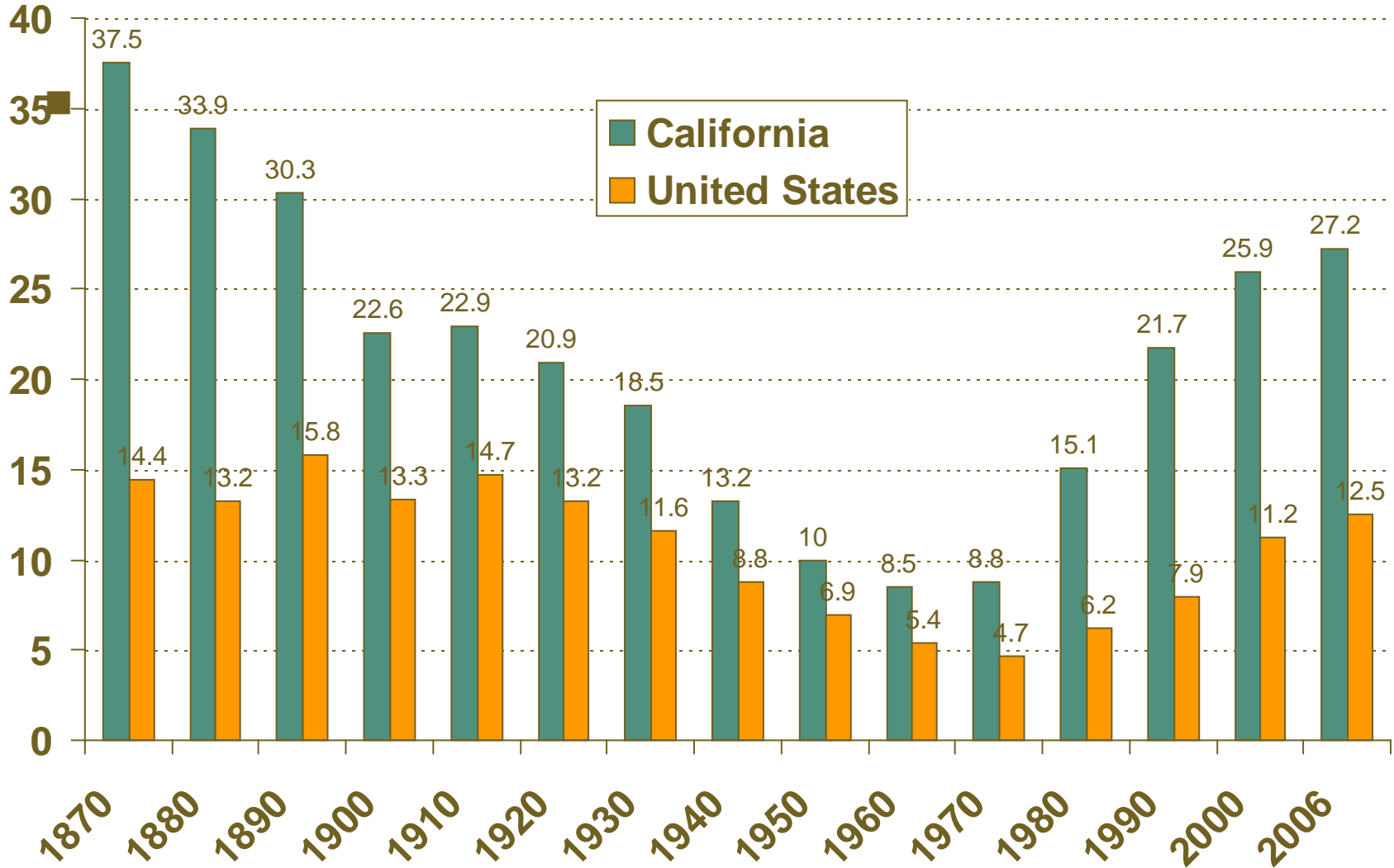
Source: United States Census Bureau, decennial censuses and American Community Survey



# Ethnic Majorities by Census Tract, 2000



# Percent Foreign Born 1880-2006



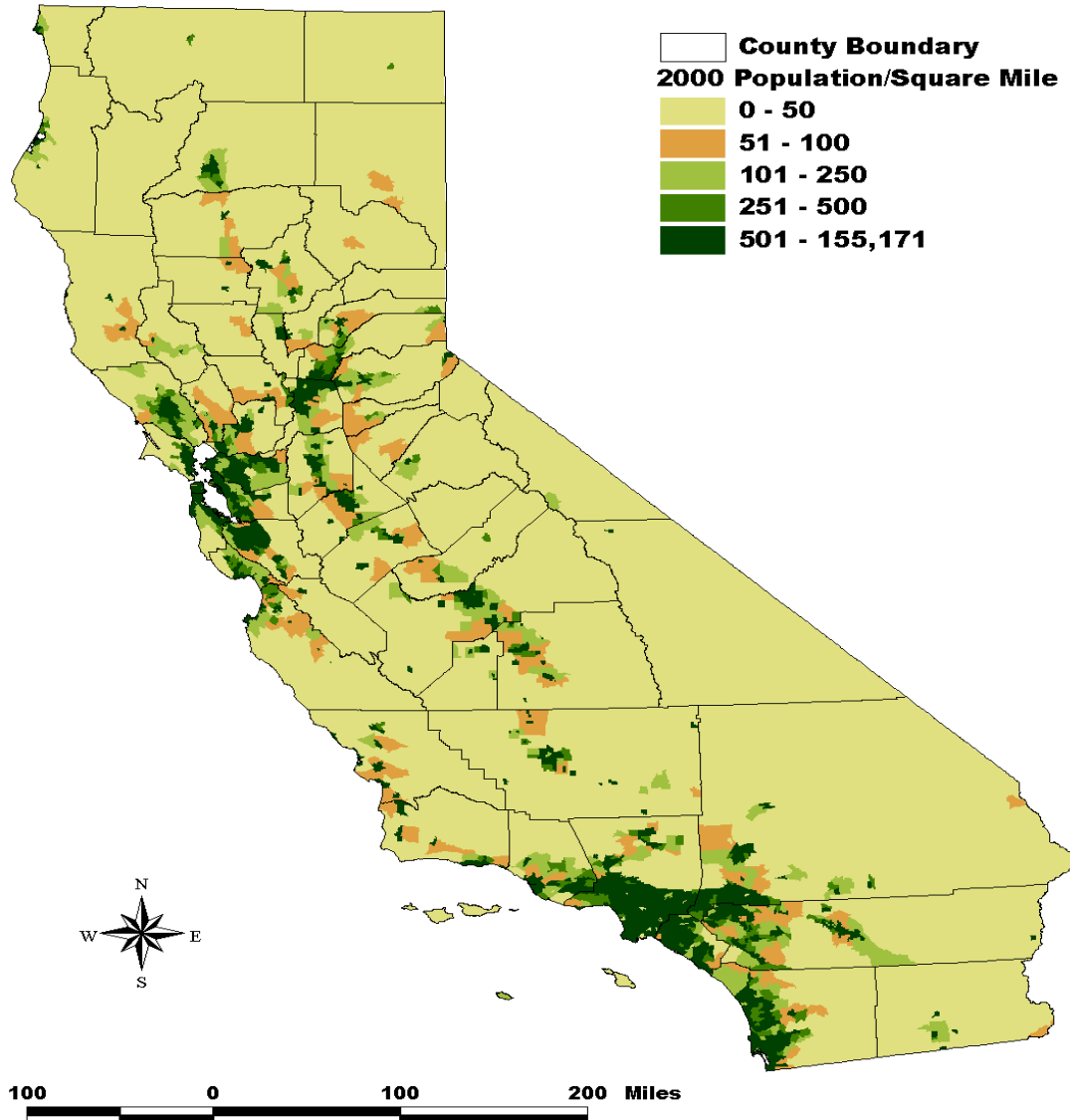
# Immigrants Come to California from Dozens of Countries

MEXICO	PHILIPPINES	CHINA	VIETNAM	EL SALVADOR
KOREA	INDIA	GUATEMALA	TAIWAN	IRAN
CANADA	JAPAN	HONG KONG	GERMANY	U.KINGDOM
NICARAGUA	PERU	LAOS	RUSSIA	THAILAND
ARMENIA	UKRAINE	CAMBODIA	HONDURAS	INDONESIA
CUBA	FRANCE	COLOMBIA	ISRAEL	ITALY
PAKISTAN	EGYPT	LEBANON	PORTUGAL	ARGENTINA
BRAZIL	ROMANIA	IRAQ	POLAND	NETHERLANDS
BURMA	IRELAND	ECUADOR	CHILE	SYRIA
NIGERIA	AFGHANISTAN	AUSTRALIA	ETHIOPIA	PANAMA
SOUTH AFRICA	BELIZE	HUNGARY	TURKEY	SPAIN
YUGOSLAVIA	GREECE	COSTA RICA	JAMAICA	BANGLADESH
SWEDEN	BELARUS	JORDAN		



# California's Population is Unevenly Distributed

## Population Density by Census Tract, 2000



Source: 2000 US Census, map prepared by the California DEPARTMENT OF FINANCE, Demographic Research Unit





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# Types of census errors

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- Undercount – people who are not counted in the census
- Overcount – people who are counted more than once
- **Net undercount = undercount – overcount**
- Other errors – misreporting (age heaping), miscoding, incorrect inference



# How is the undercount measured?

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Two primary approaches:

Demographic Analysis (DA) – 2000 census count is updated to 2010 by adding births, subtracting deaths, and adding net migration

Post census survey – a survey is taken just after the census to assess whether survey respondents were included in the census



# Post-Enumeration Surveys

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Approach involves case-by-case matching of persons in an independent survey with persons in the census to determine who was missed or counted in error.

- 1980 Census: Post-Enumeration Program (PEP)
- 1990 Census: Post-Enumeration Survey (PES)
- Census 2000: Accuracy and Coverage Evaluation (ACE)
- 2010 Census: Census Coverage Measurement (CCM)
  - 300,000 households



# California tends to have high net undercount rates

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- 2.7% net undercount rate in California in 1990 compared to 1.6% in the United States
- In 2000, California was one of only 10 states with a net undercount (the others had an overcount)



# Undercount rates vary by group

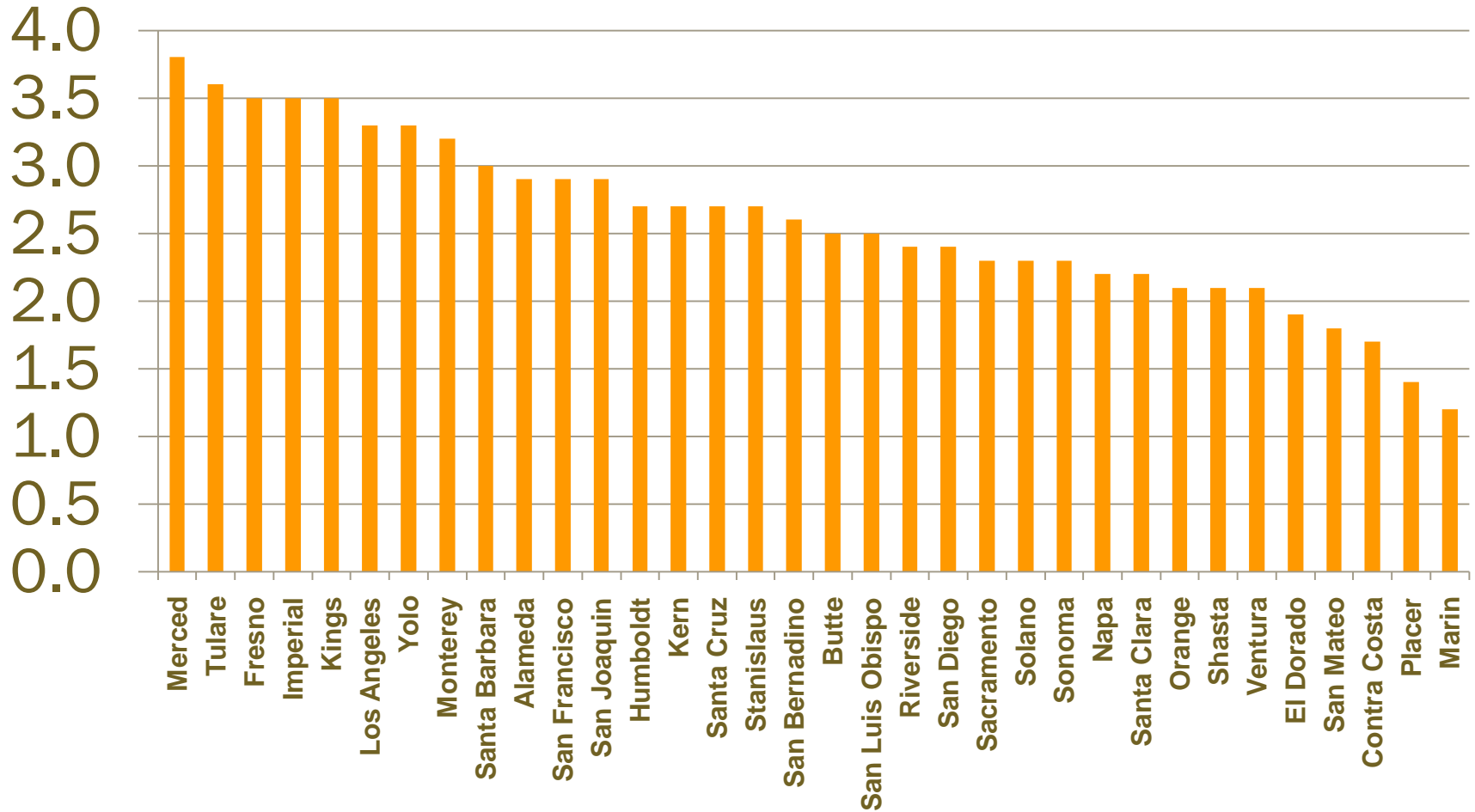
Undercount rates in 1990 and 2000 by ethnicity

	1990		2000	
	California	United States	California	United States
Total	2.7	1.6	0.1	-0.5
White	1.8	0.9		
Black	7.6	4.4		
American Indian	3.2	4.5		
Asian	2.2	2.3		
Hispanic - any race	4.9	5.0		

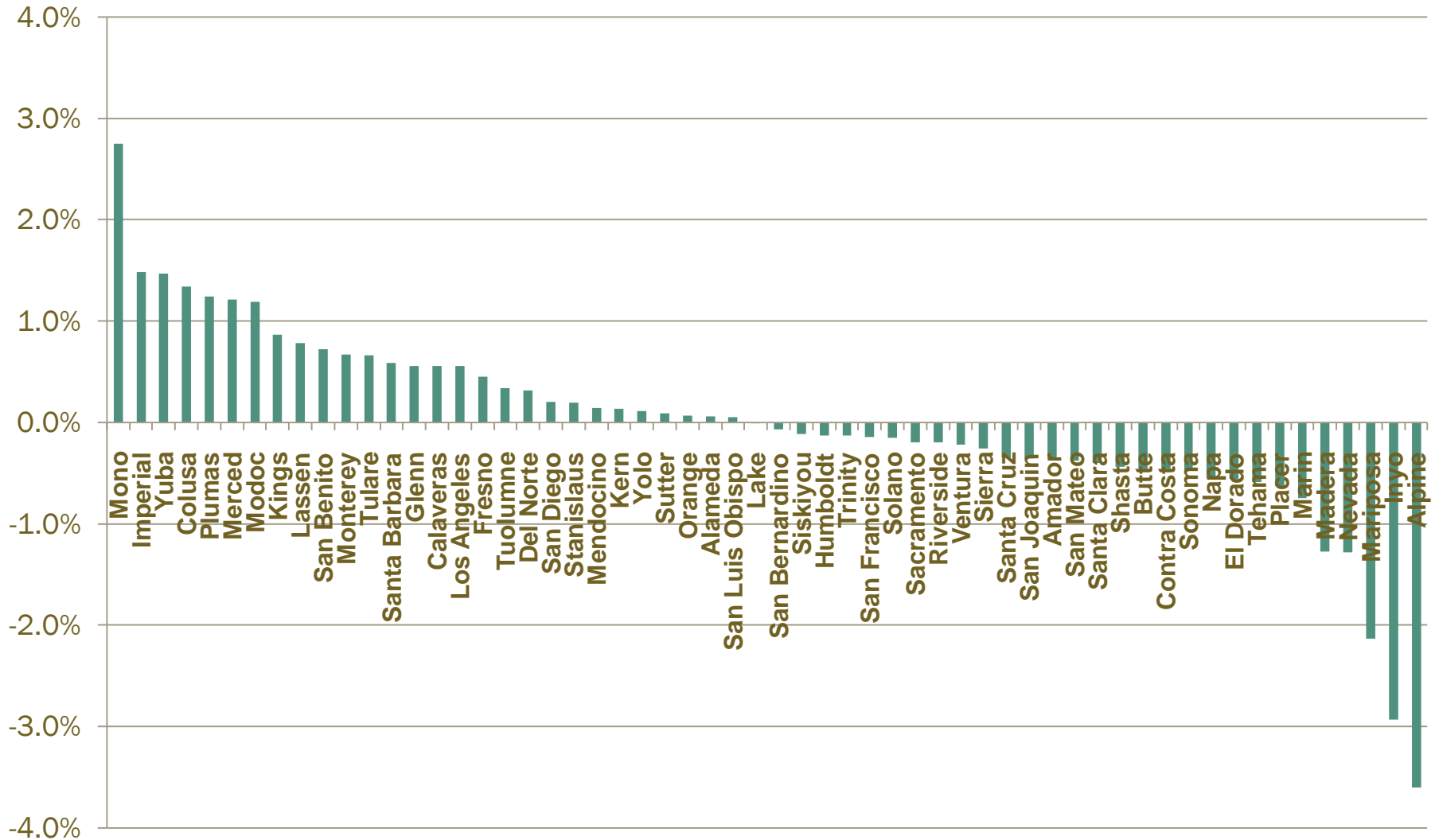


# Undercounts vary by county

## 1990 Undercount Rate (%)



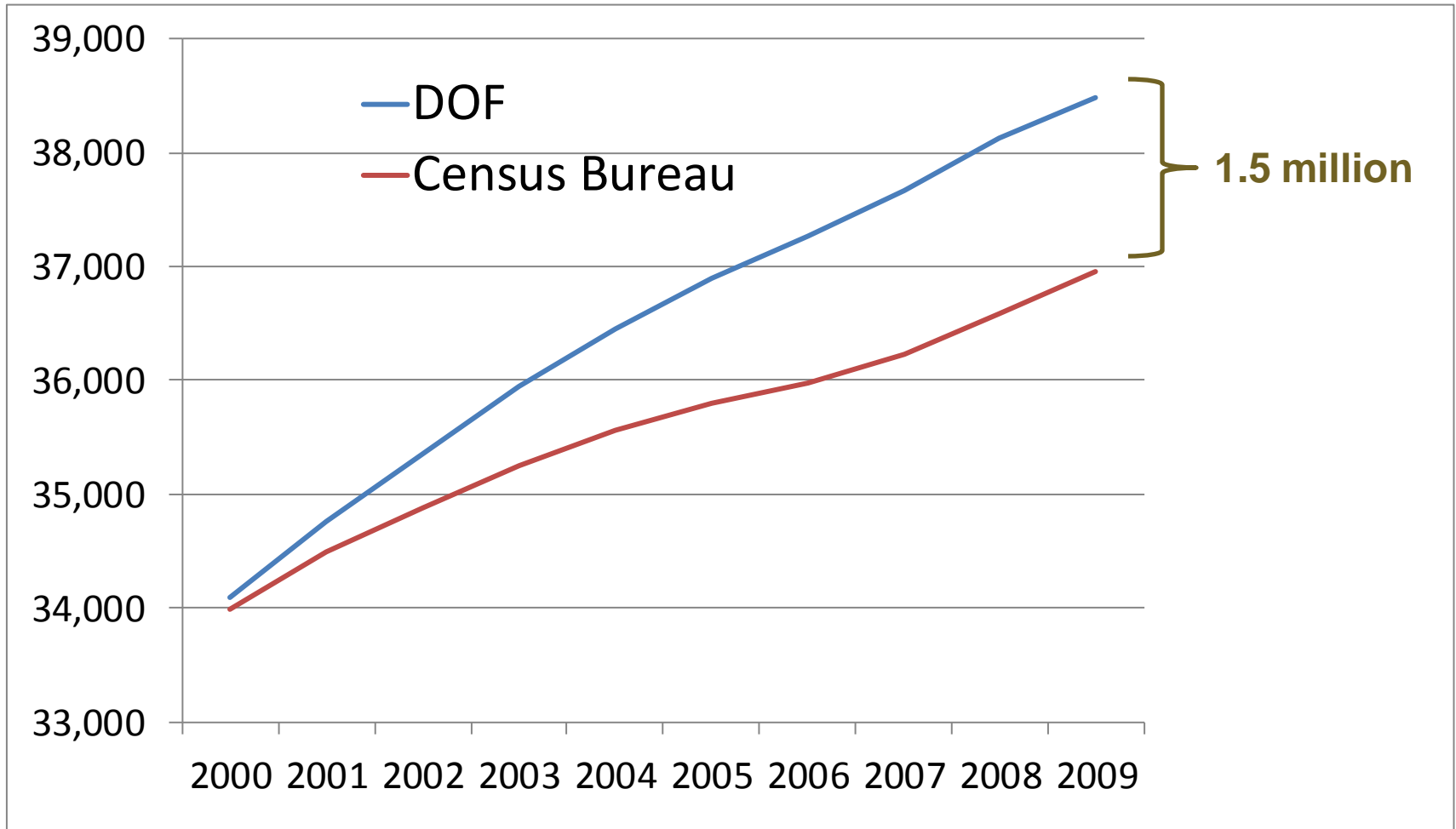
# 2000 Undercount rates by county





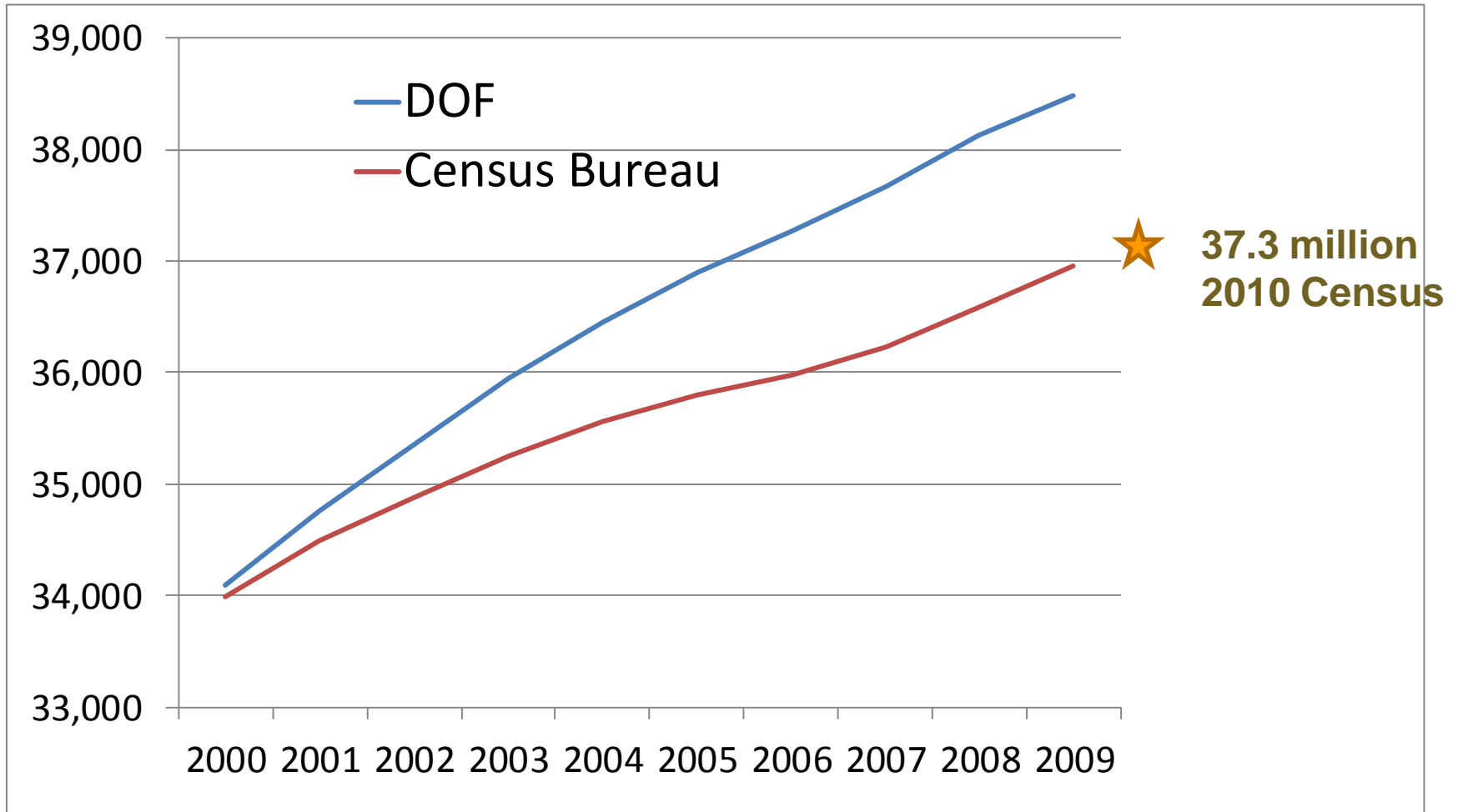
# Was California undercounted in 2010?

## Estimated Total Population (in thousands)

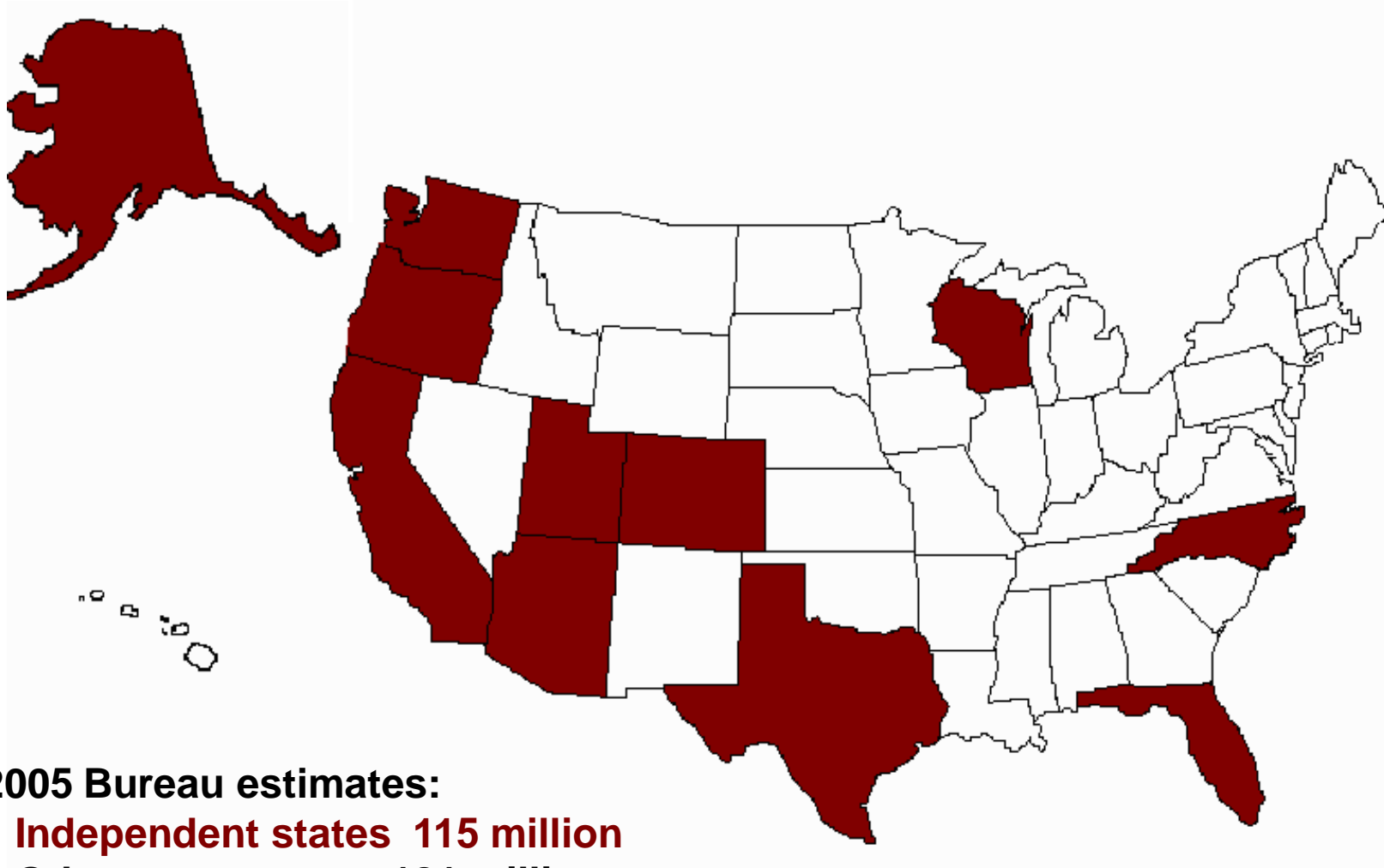


# Was California undercounted in 2010?

## Estimated Total Population (in thousands)



# States with independent state estimates



2005 Bureau estimates:

**Independent states 115 million**

**Other states 181 million**



# Comparison of Bureau and independent state estimates

	State estimate less CB estimate, 2006	Percent difference, 2006
Alaska	(7,397)	-1.1%
Arizona	139,521	2.3%
California	1,083,104	3.0%
Colorado	47,288	1.0%
Florida	383,192	2.1%
North Carolina	(9,101)	-0.1%
Oregon	(579)	0.0%
Texas	100,154	0.4%
Utah	35,594	1.4%
Washington	18,790	0.3%
Wisconsin	37,045	0.7%
States with independent estimates	1,827,611	1.6%
Other states		



# Estimates methods

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- Bureau:
  - Component method
  - Migration most uncertain
  - Domestic migration based on tax records
- States:
  - Various methods, including component methods and ratio correlation
  - Migration based on tax records and other administrative records



# To adjust or not to adjust?

- States and localities have filed lawsuits to require the Census Bureau to use adjusted counts.
- 1976 amendments to the Census Act required sampling to be used “if feasible” to adjust census counts for non-apportionment uses of the census.
- In 1990, Census Bureau officials recommended using adjusted counts, but were overruled by the Secretary of Commerce.
- In 1999, the Supreme Court ruled (5-4) that the unadjusted counts from the census must be used for reapportionment. The Court allowed for adjusted counts to be used for other purposes, including redistricting.
- In 2000, the census count was surprisingly high. In March 2001, Census Bureau officials were “*unable to conclude, based on information available at this time, that the adjusted Census 2000 data are more accurate for redistricting.*”



# 2010 CCM:

## *No intent to adjust the Census*\* ---

*“The primary goal of the 2010 CCM program is to measure coverage error in the 2010 Census such that this information can be **used to improve the coverage of future censuses**. As a result, the scope of coverage measurement will be broader and the emphasis will be different than it has been in the past. Specifically, the 2010 CCM goals are to: 1) produce measures of coverage error, including its components of omissions and erroneous enumerations; 2) produce these measures of coverage error not only for demographic groups and geographic areas, but also for key census operations; and 3) continue to provide measures of net coverage error.”*

Source: [http://www.census.gov/coverage\\_measurement/](http://www.census.gov/coverage_measurement/)

\* Thomas Mule, US Census Bureau, Feb. 23 2010 presentation



# Redistricting options for census counts in California

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- Consult an attorney!
- Adjusted counts will probably *not* be made available by the Census Bureau.
- Some argue that prisoners should be allocated to their home residence, or excluded entirely in state redistricting (Kansas).





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# Notes on the use of these slides

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These slides were created to accompany a presentation. They do not include full documentation of sources, data samples, methods, and interpretations. To avoid misinterpretations, please contact:

Hans Johnson: 415-291-4460, [johnson@ppic.org](mailto:johnson@ppic.org)

Thank you for your interest in this work.



# Census Questions on Hispanic Origin and Race

## 8. Is Person 1 of Hispanic, Latino, or Spanish origin?

- No, not of Hispanic, Latino, or Spanish origin
- Yes, Mexican, Mexican Am., Chicano
- Yes, Puerto Rican
- Yes, Cuban
- Yes, another Hispanic, Latino, or Spanish origin — *Print origin, for example, Argentinean, Colombian, Dominican, Nicaraguan, Salvadoran, Spaniard, and so on.* ↗

Asked since 1970. The data collected in this question are needed by federal agencies to monitor compliance with anti-discrimination provisions, such as under the Voting Rights Act and the Civil Rights Act. State and local governments may use the data to help plan and administer bilingual programs for people of Hispanic origin.

## 9. What is Person 1's race? Mark one or more boxes.

- White
  - Black, African Am., or Negro
  - American Indian or Alaska Native — *Print name of enrolled or principal tribe.* ↗
- 
- 
- Asian Indian
  - Chinese
  - Filipino
  - Other Asian — *Print race, for example, Hmong, Laotian, Thai, Pakistani, Cambodian, and so on.* ↗
  - Japanese
  - Korean
  - Vietnamese
  - Native Hawaiian
  - Guamanian or Chamorro
  - Samoan
  - Other Pacific Islander — *Print race, for example, Fijian, Tongan, and so on.* ↗

- Some other race — *Print race.* ↗

Asked since 1790. Race is key to implementing many federal laws and is needed to monitor compliance with the Voting Rights Act and the Civil Rights Act. State governments use the data to determine congressional, state and local voting districts. Race data are also used to assess fairness of employment practices, to monitor racial disparities in characteristics such as health and education and to plan and obtain funds for public services.



# Census Terminology: Identity

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## **Race**

Race is a self-identification data item in which respondents choose the race or races with which they most closely identify.

## **Hispanic, Latino, or Spanish origin**

Origin can be viewed as the heritage, nationality group, lineage, or country of birth of the person or the person's parents or ancestors before their arrival in the United States. People who identify their origin as Spanish, Hispanic, or Latino may be of any race.

