

Understanding the US Census and American Community Survey

Announcements

- Assignment 1
- Reading Response Questions
- Piazza
- Lectures video recordings
- Lab 1

Agenda for Today

Introduction to the Census & American Community Survey

- The 2020 Census
- History of the Census and ACS
- Geographic scales
- Race and ethnicity in Census

Lab 1: Excel Fundamentals Using ACS data

Reading Response Question

Eason Zhu

Singleton, 2018, "Urban Analytics" Chapter 6

The authors introduces the idea of identifying problematic data that might impede the research. In order to get a clean and accurate dataset, they argue that "identify missing data and erroneous attributes is a critical step in the analysis." It's important to distinguish what values are "missing" and what values are "zero", so how do researchers differentiate "missing" and "zero" data, and how do they appropriately manage these problematic data? Same questions applies to outliers as well, how do researchers assess what outliers to remove and what to keep in the data set? Do researchers consider sample size when they decide how many outliers or what outliers to drop?

Shape your future.

START HERE.

RESPOND



It's Quick and Easy

The 2020 Census takes just a few moments to complete.



It's Not Too Late

You can still complete the census today.



It's Safe and Secure

The U.S. Census Bureau keeps your answers safe and confidential.

Shape your future.



How to Respond
Online



How to Respond by
Phone



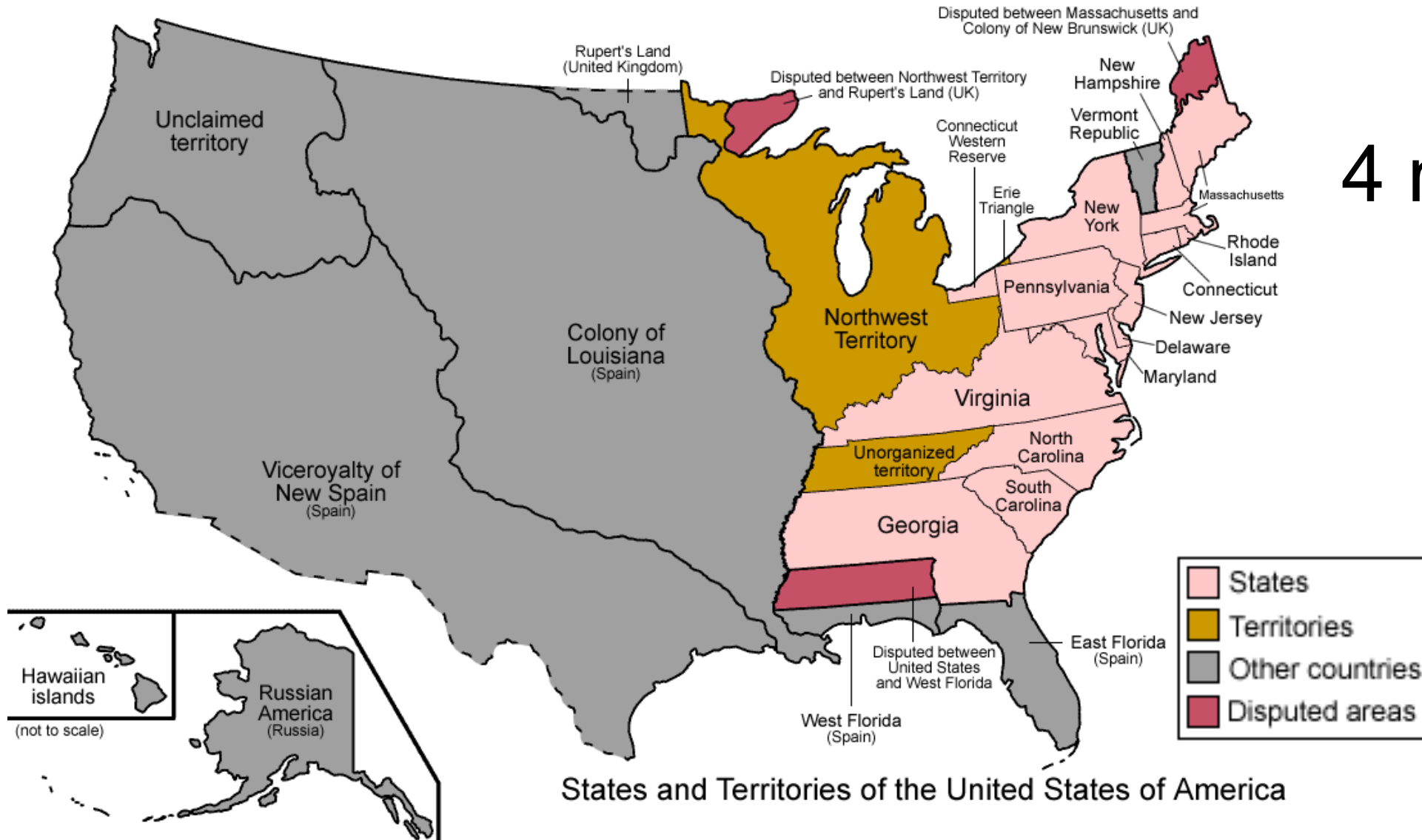
How to Respond by
Mail

History

History of the Decennial Census

1930

History of the Decennial Census



1790
4 million inh.

States and Territories of the United States of America

History of the Decennial Census

The Census: A Cultural Document

- 1900** Included incidents of **deafness**, **blindness**, **insanity**, juvenile delinquency
- 1910** Added questions about **mines** and **quarries**. First time questions were asked about **nationality** or **mother tongue** of foreign-born persons and their parents
- 1940** First time information was collected on **housing**
- 1960** First time census forms were **mailed**, the birth of the “**long form**” (SF3 and SF4)
- 1980** First time questions were asked about **Hispanic origin** of 100% of the population
- 1990** First time a household could indicate “**same-sex**” partnership
- 2000** First time an individual could indicate **mixed-race** identity

The 'Short' and 'Long' Form

1970, 1990, 1990 & 2000

The "Short Form"
[Summary File 1]

- 100 % sample

The "long form"
[Summary File 3]

- about 1 in 6 households

The 'Short' and 'Long' Form

2000 Census

The "Short Form" [Summary File 1]

- **100 % sample**
- Count of people, households, housing units
- Age, sex, race/ethnicity,
- Owner/renter status
- Family composition

The "long form" [Summary File 3]

- **About 1 in 6 households**
- Sample of about 19 million housing units
- Social, economic and housing characteristics

2010: The Beginning of the ACS

Decennial Census
The “Short Form”

~~The “long form”~~
American Community Survey

2010: The Beginning of the ACS

Decennial Census
The “Short Form”

~~The “long form”~~

American Community Survey

- ‘Rolling’ sample
- 3 million housing units each year
- Sample size much smaller than ‘long form’
- **MoE** become important

2010: The Beginning of the ACS

Decennial Census
The “Short Form”

~~The “long form”~~
American Community? Survey

Defining Community

- **What** or **who** is the community? People, houses, activity?
- When we're working with data, what is the **boundary**? Political or census boundaries may not align with “places” and their social meanings
- **Zip codes** increasingly more common with administrative or private sources of data (because of link to street address)
- Most researchers use **one or more** census **tracts** to define neighborhoods

•What or who is the community? People, houses, activity?

•When we're working with data, what is the boundary? Political or census boundaries or definitions with their social meanings

•Zip codes increasingly more common with administrative or private sources of data (because of link to street addresses)

•Most researchers use one or more census tracts to define neighborhoods

Balance between recognizing the complexity of a community and the need to “make plans” or “take action”

The American Community Survey

1-year estimates	3-year estimates*	5-year estimates
12 months of collected data <i>Example: 2018 ACS 1-year estimates</i> <i>Date collected between: January 1, 2018 and December 31, 2018</i>	36 months of collected data <i>Example: 2011-2013 ACS 3-year estimates</i> <i>Date collected between: January 1, 2011 and December 31, 2013</i>	60 months of collected data <i>Example: 2014-2018 ACS 5-year estimates</i> <i>Date collected between: January 1, 2014 and December 31, 2018</i>
Data for areas with populations of 65,000+	Data for areas with populations of 20,000+	Data for all areas

The American Community Survey

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states, big counties 65,000+	Data for areas with populations of 20,000+	census tracts, block groups

The American Community Survey

Units of analysis

Aggregate
(places)

1-year estimates	3-year estimates*	5-year estimates
<p>12 months of collected data</p> <p><i>Example: 2018 ACS 1-year estimates</i></p> <p><i>Date collected between: January 1, 2018 and December 31, 2018</i></p>	<p>36 months of collected data</p> <p><i>Example: 2011-2013 ACS 3-year estimates</i></p> <p><i>Date collected between: January 1, 2011 and December 31, 2013</i></p>	<p>60 months of collected data</p> <p><i>Example: 2014-2018 ACS 5-year estimates</i></p> <p><i>Date collected between: January 1, 2014 and December 31, 2018</i></p>
<p>states, big counties</p> <p>65,000+</p>	<p>Data for areas with populations of 20,000+</p>	<p>census tracts, block groups</p>

Units of analysis

Commuting in Berkeley Analyses

Aggregate

<u>Tract</u>	<u>Attending college</u>	<u>Commutes by bike</u>
Tract 4222	0.25	0.14
Tract 4223	0.13	0.08
Tract 4224	0.55	0.52

Disaggregate

<u>Person</u>	<u>Attending college</u>	<u>Commutes by bike</u>
125154324	1	0
125154325	0	1
125154326	1	1

Units of analysis

Commuting in Berkeley

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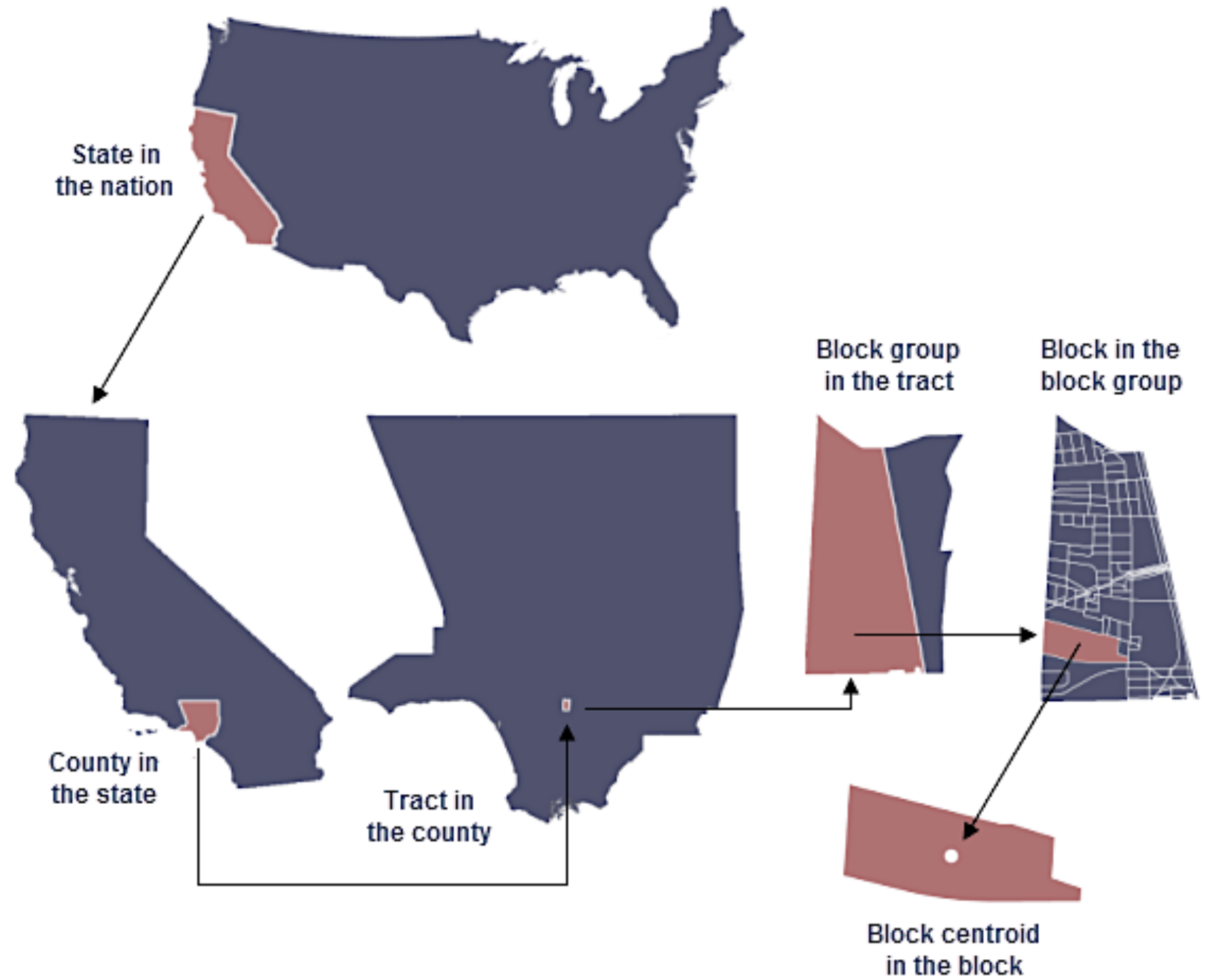
<u>Person</u>	<u>Attending college</u>	<u>Commutes by bike</u>
125154324	1	0
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Beware of the **ecological fallacy!**

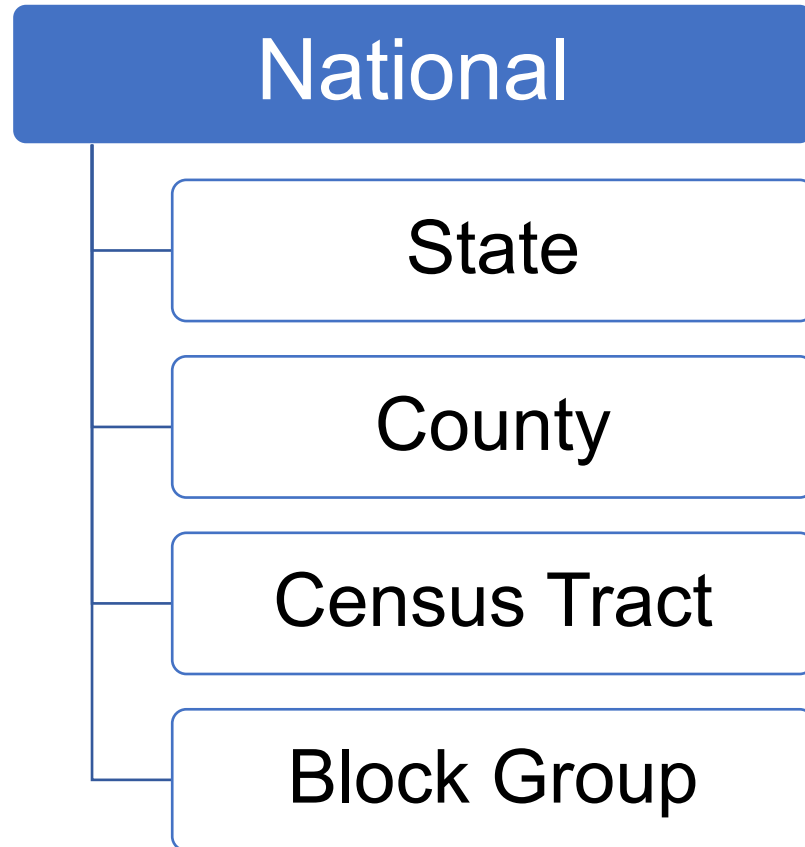
making inferences about individuals from group data

Geographic Scales

Key Census Building Blocks

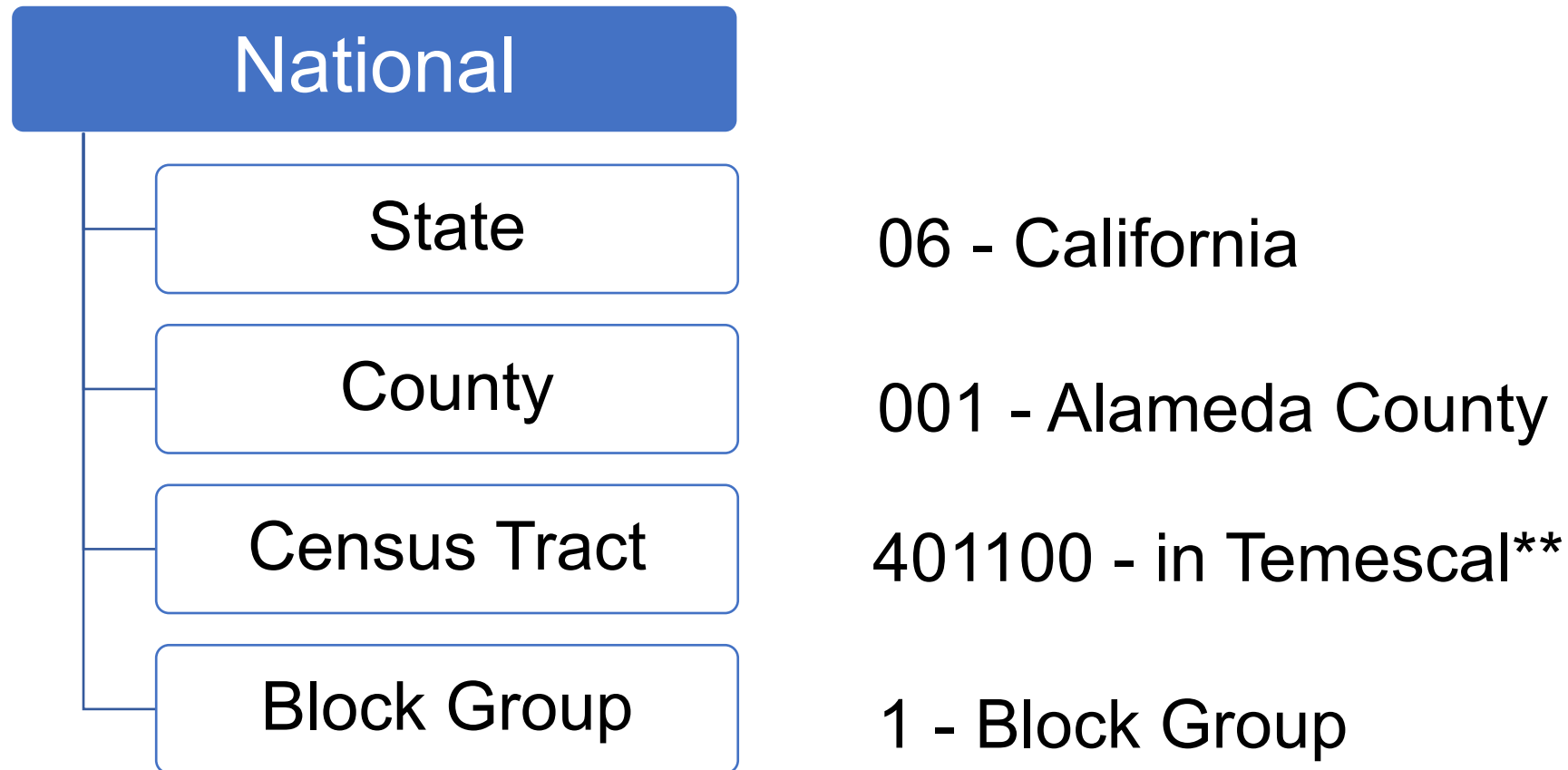


Key Census Building Blocks



Nested geographies
identified by a Federal
Information Processing
Standards (**FIPS**) code

Key Census Building Blocks



Key Census Building Blocks

FIPS

060014011001

06 - California

001 - Alameda County

401100 - in Temescal**

1 - Block Group

Key Census Building Blocks

FIPS

060014011001

California

Alameda
County

Tract

Temescal**

Block Group

Race and Ethnicity

Race/Ethnicity

Brazil 2000 Census

Choose your race:

- ☐ White - branca
- ☐ Black - preta
- ☐ Yellow - amarela
- ☐ Brown - parda
- ☐ Native, aboriginal - indigena
- ☐ Undeclared

England 2001 Census

What is your ethnic group?

A) White:

- ☐ British
- ☐ Irish
- ☐ Any other white background

B) Mixed

- ☐ White and Black Caribbean
- ☐ White and Black African
- ☐ White and Asian
- ☐ Any other Mixed background

C) Asian or Asian British

- ☐ Indian
- ☐ Pakistani
- ☐ Bangladeshi
- ☐ Any other Asian background

D) Black or Black British

- ☐ Caribbean
- ☐ African
- ☐ Any other black background

E) Chinese or other ethnic group

- ☐ Chinese
- ☐ Any other

Race/Ethnicity is a Social Construct

Brazil 2000 Census

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D) Black or Black British

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- ☐ African
- ☐ Any other black background

E) Chinese or other ethnic group

- ☐ Chinese
- ☐ Any other

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, for example, Salvadoran, Dominican, Colombian, Guatemalan, Spaniard, Ecuadorian, etc.* ↗

[illegible]

9. What is Person 1's race?

Mark ☒ one or more boxes **AND** print origins.

☐ White – *Print, for example, German, Irish, English, Italian, Lebanese, Egyptian, etc.* ➤

☐ Black or African Am. – *Print, for example, African American, Jamaican, Haitian, Nigerian, Ethiopian, Somali, etc.* ➤

☐ American Indian or Alaska Native – *Print name of enrolled or principal tribe(s), for example, Navajo Nation, Blackfeet Tribe, Mayan, Aztec, Native Village of Barrow Inupiat Traditional Government, Nome Eskimo Community, etc.* ➤

☐ Chinese
 ☐ Vietnamese
 ☐ Native Hawaiian

☐ Filipino
 ☐ Korean
 ☐ Samoan

☐ Asian Indian
 ☐ Japanese
 ☐ Chamorro

☐ Other Asian –
*Print, for example,
 Pakistani, Cambodian,
 Hmong, etc.*

☐ Other Pacific Islander –
*Print, for example,
 Tongan, Fijian,
 Marshallese, etc.*

☐ Some other race – *Print race or origin.*

The

Myth

of

the

White

Minority

Reading Response Question

Annie Ouyang

Alba, 2015, The Myth of a White Minority

The article has raised the question of what should be the definition of "minority" in America. With the increase in immigration as well as cultural exchanges, is it still reasonable to group people based on their skin color and appearance? How do we account for the many multi-generational families who no longer connect with the heritage of their ancestors in terms of language and art? The author argues that we cannot be completely a post-racial society, as we "cannot abandon ethno-racial categories. They register legacies of slavery, conquest and oppression that have enduring effects." Nevertheless, how important is race in telling one's story and beyond race, are there other means to capture the essence of one's identity?

Race/Ethnicity is a **Social Construct**

What's wrong here?

Table 1 - Population Demographics, Alameda County

	Population	Percent
White	517,76	33.7
Black or African American	181,315	11.8
American Indian and Alaska Native	4,484	0.3
Asian	408,556	28.6
Native Hawaiian and Other Pacific Islander	12,230	0.8

Source: ACS 2013

Race/Ethnicity is a **Social Construct**

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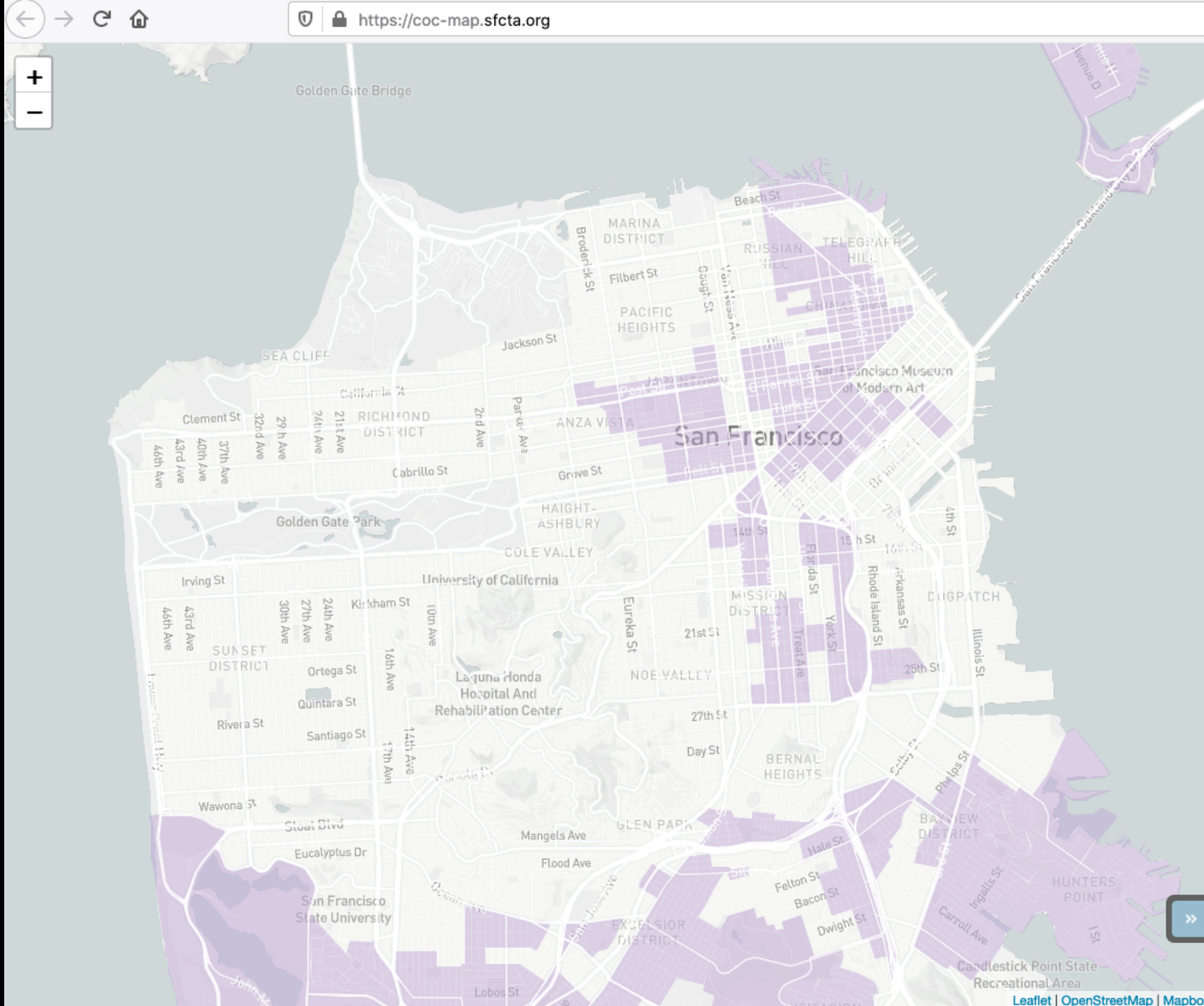
Race/Ethnicity is a **Social Construct**

Table 1 - Population Demographics, Alameda County

	Population	Percent
Non-Hispanic White	517,764 700,110	33.7 45.6
Black or African American	181,315 185,467	11.8 12.1
American Indian and Alaska Native	4,484 8,919	0.3 0.6
Hispanic	345,847	22.5
Asian	408,556 411,240	28.6 26.8
Native Hawaiian and Other Pacific Islander	12,230 12,579	0.8

Source: ACS 2013, Table B03002 '**Hispanic or Latino Origin by Race**'

Communities of Concern



Communities of Concern

What is this?



Learn More



CHOOSE MEASURE

None

Minority

Low Income

Elderly

Disability

Low English Prof.

Zero-Veh HH

Single Parent

Rent Burdened

MAP LAYERS

Add additional geographic data to the map.



High Injury Network



Supervisory District Boundaries



Major Parks

YOUR FEEDBACK

Please provide feedback. What do you think about this map?
(800 maximum characters)

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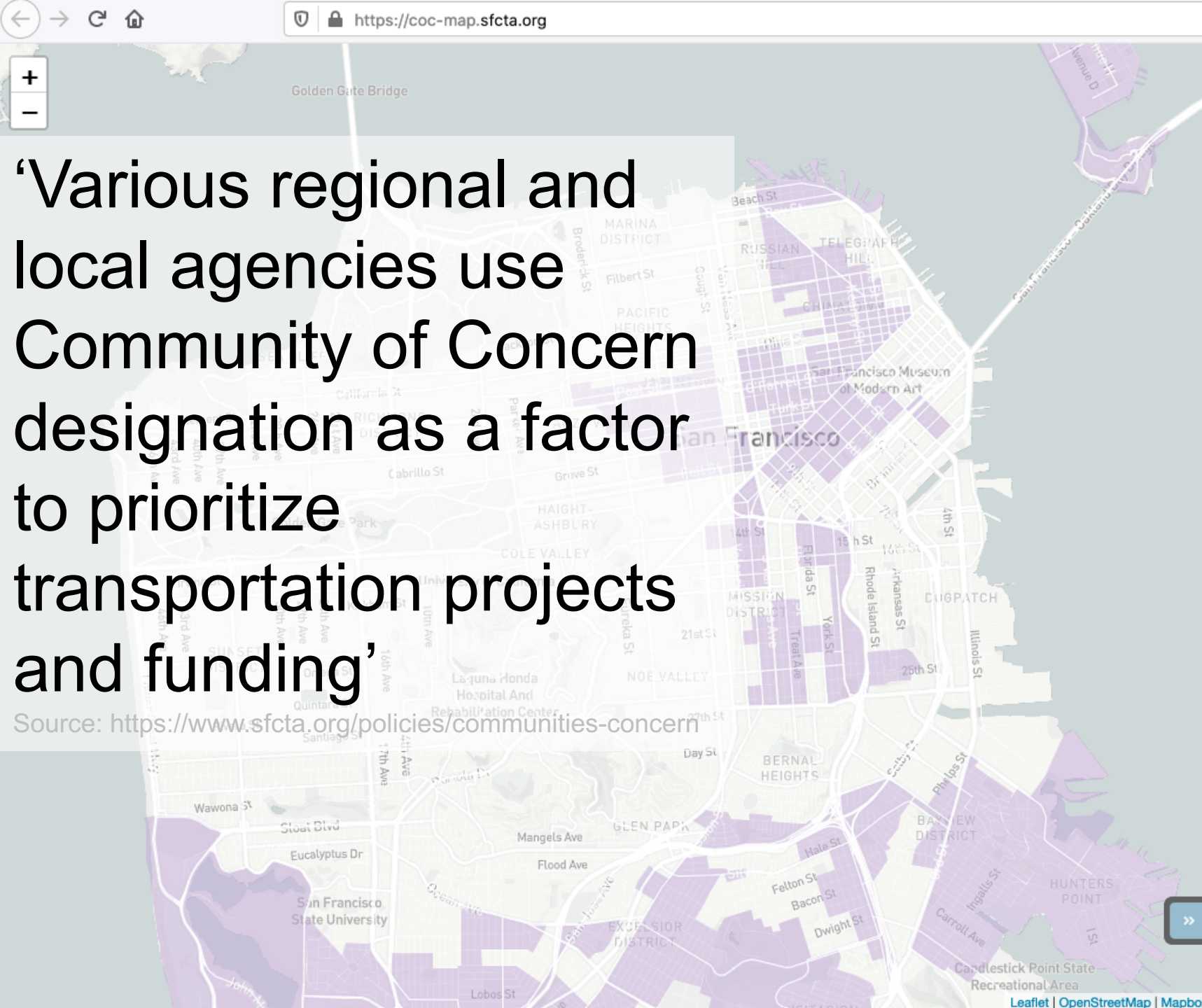
Submit



San Francisco
County Transportation
Authority

‘Various regional and local agencies use Community of Concern designation as a factor to prioritize transportation projects and funding’

Source: <https://www.sfcta.org/policies/communities-concern>



Communities of Concern

What is this?



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Submit



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Lab 1 – Excel Fun with ACS Data