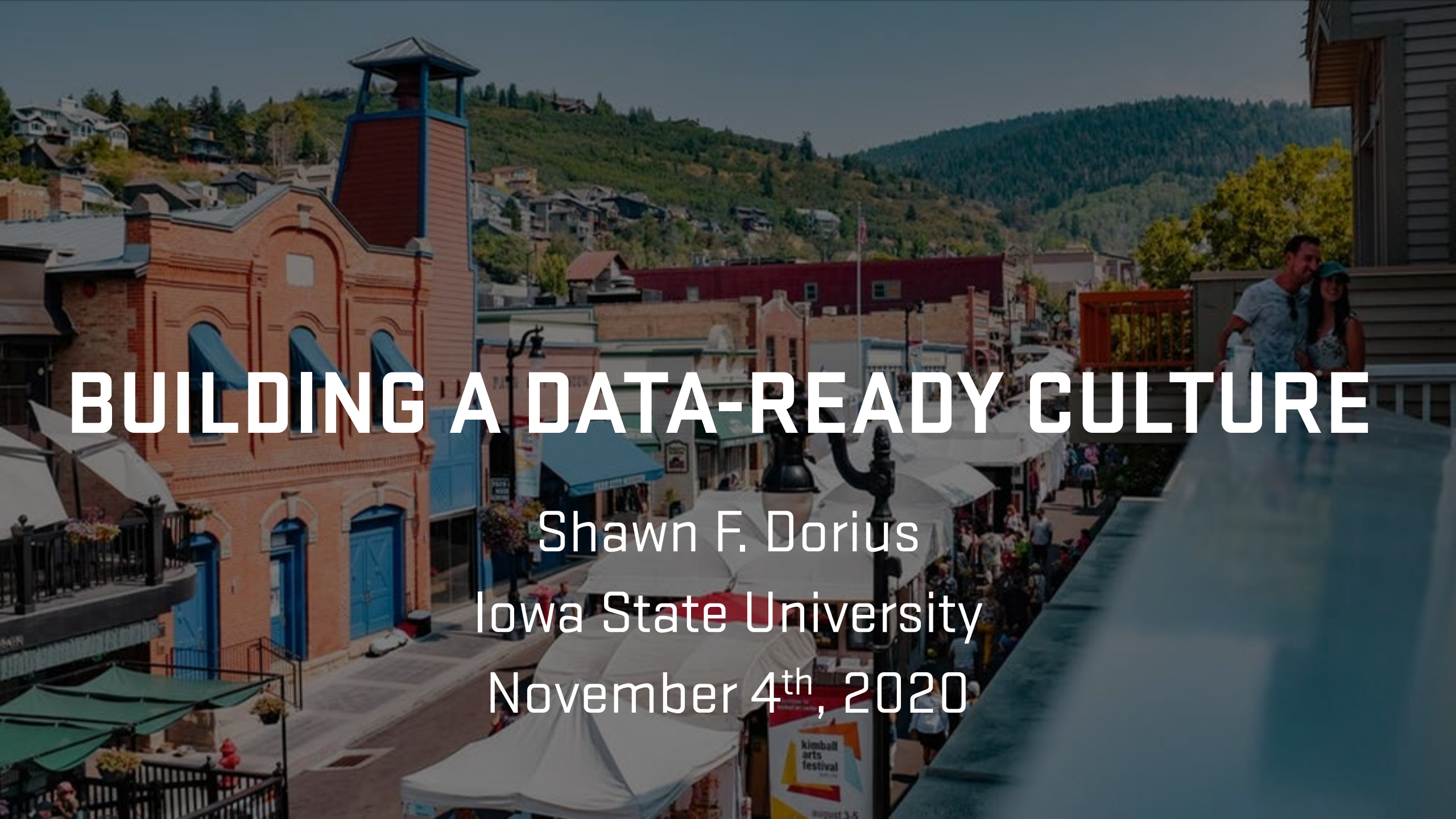
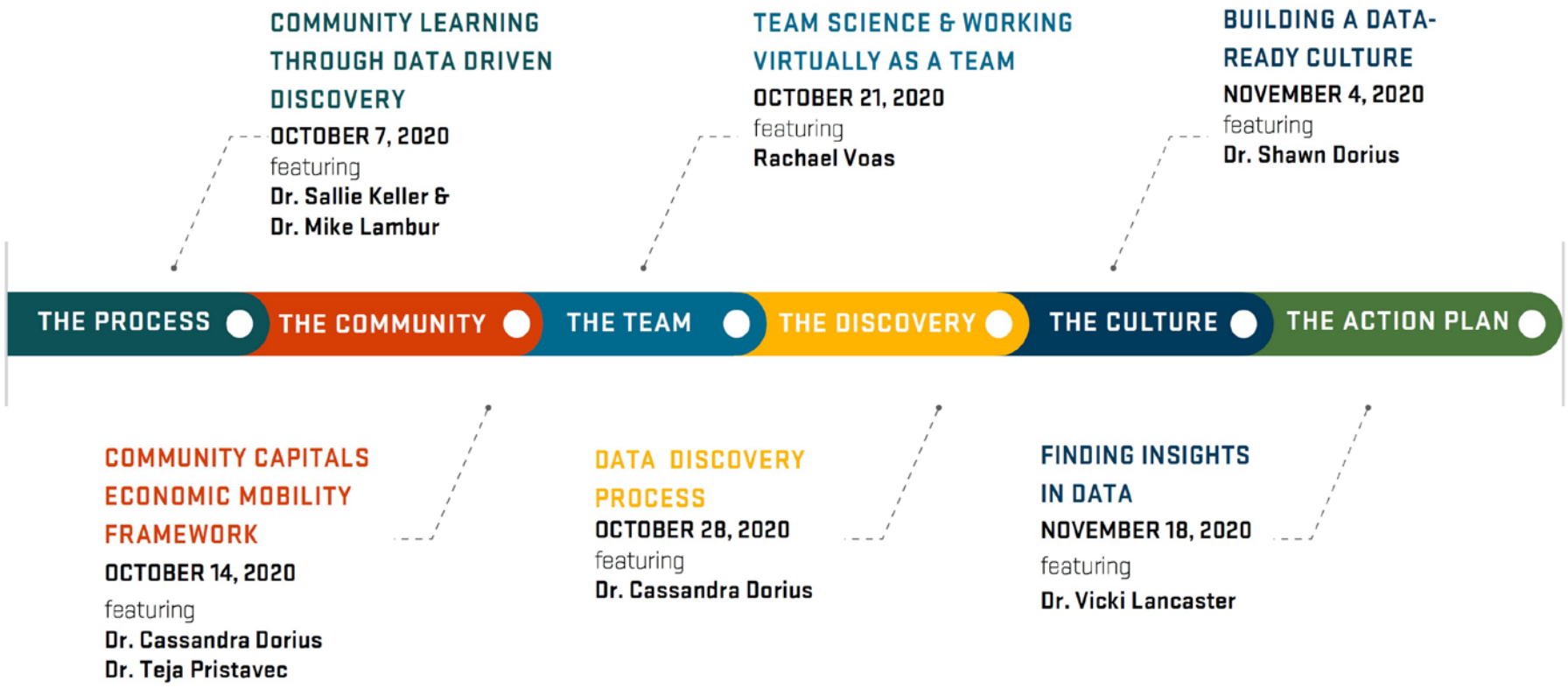


BUILDING A DATA-READY CULTURE

Shawn F. Dorius
Iowa State University

November 4th, 2020

COMMUNITY CATALYST WEBINAR SERIES OVERVIEW



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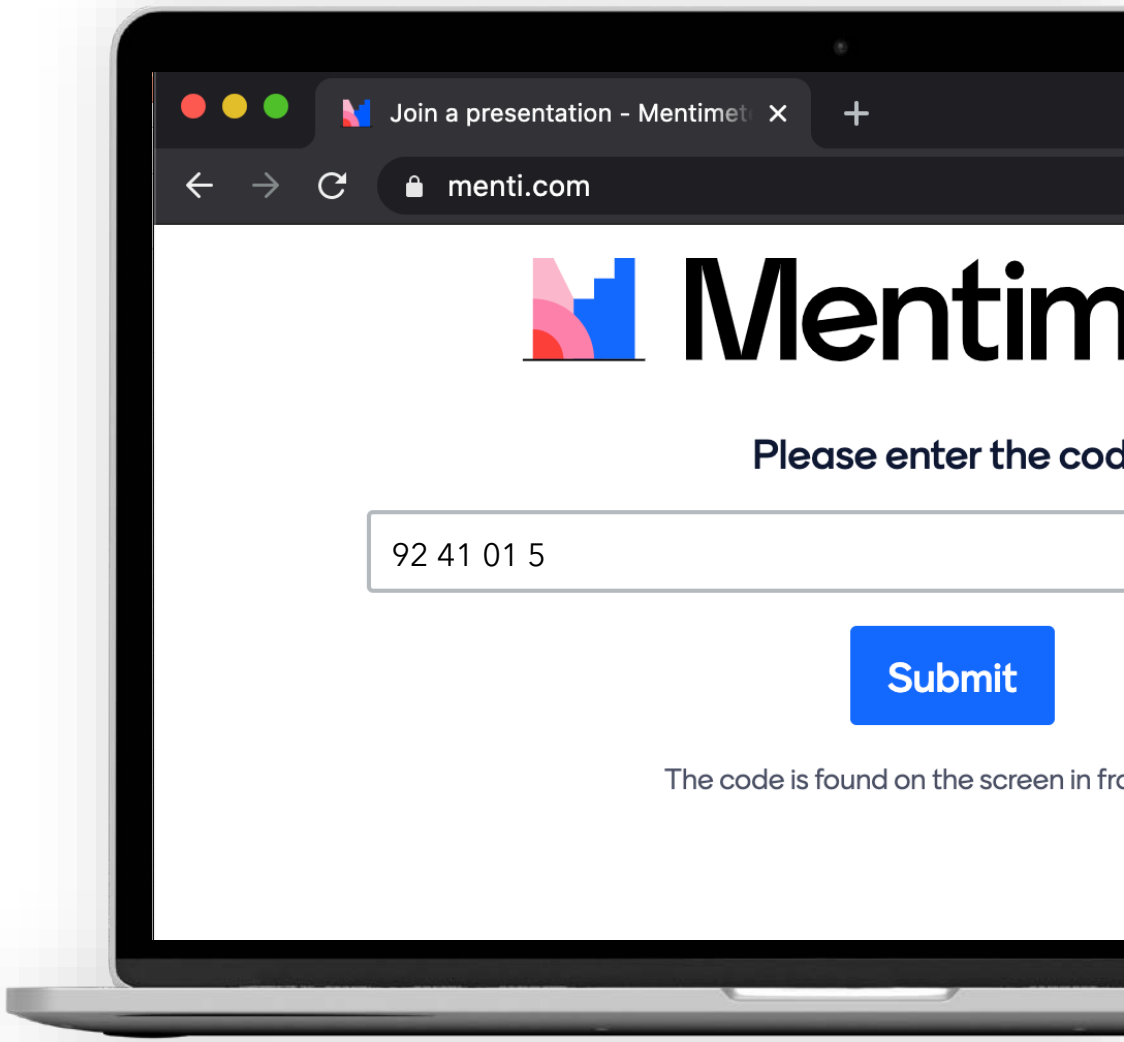

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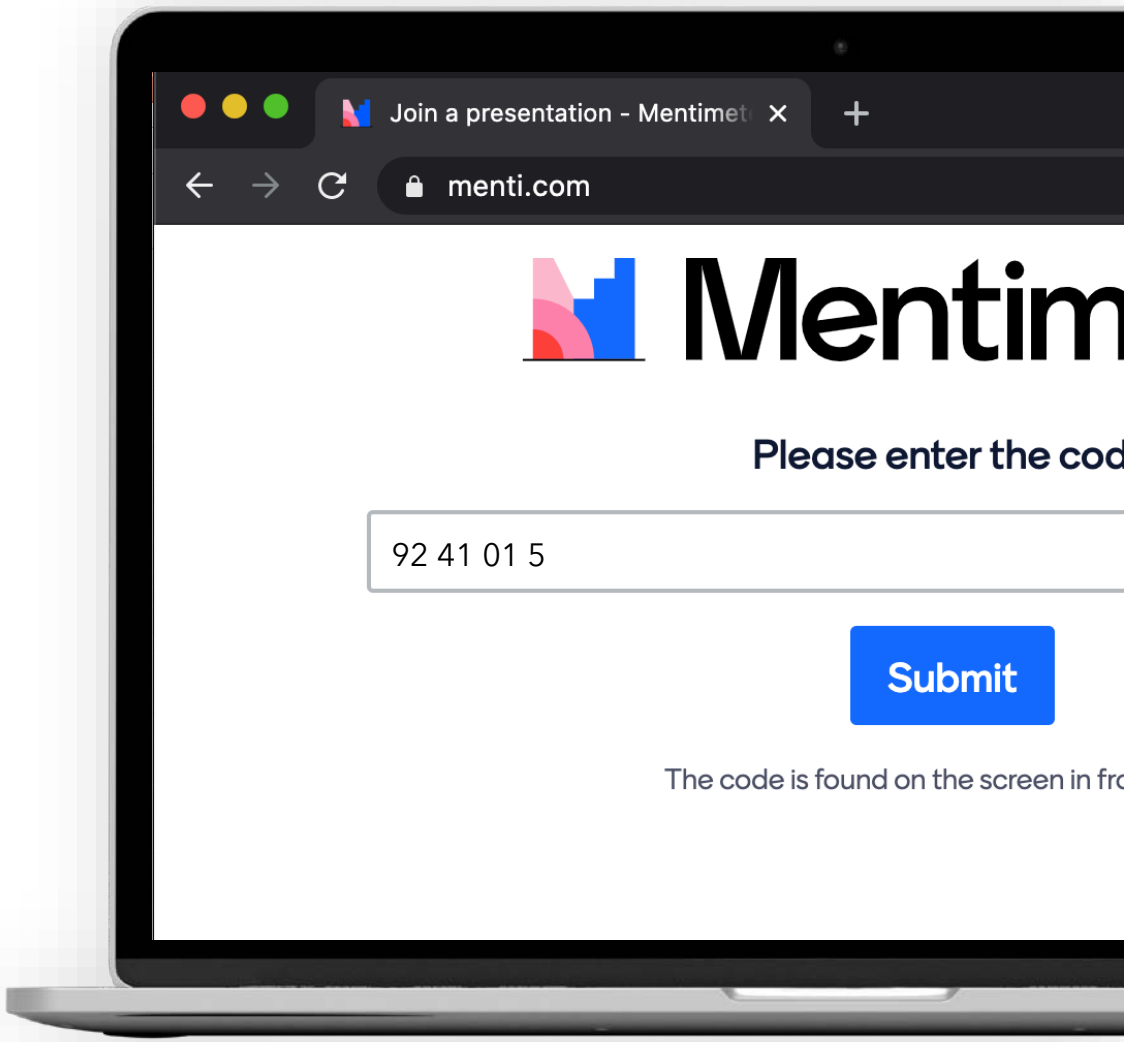

TODAY WE WILL EXPLORE HOW TO BUILD A DATA READY CULTURE:

1. WHAT IS A DATA READY CULTURE?
2. WHAT IS PLACE BIAS? WHERE DOES IT COME FROM? AND WHY SHOULD IT MATTER TO YOU?
3. HOW CAN EXTENSION PROMOTE A MORE EQUITABLE DATA READY CULTURE?
    - HOW CAN YOU DETECT BIAS?
    - HOW CAN YOU CORRECT BIAS?

ENABLING A DATA READY CULTURE

- Data are powerful, both for good and for bad
- Communities can use their own data to chart their own, unique path (CLD3)
- Place-based bias limits opportunities for many rural communities
- We need new and better ways to measure and talk about rural places to reduce place bias

- When we search for information using a web browser (e.g. Google or Firefox), the results are determined by algorithms

- Algorithms are bits of code…a program…designed to help us find what we're looking for. They are based on:
  - Prior search history
  - Search histories of people like us

- Search results reveal hidden biases, assumptions, and unchecked stereotypes about people and places

When people search for information about rural & urban places this is what they see

oming to Rural America ...
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Rural America" doesn't mea...
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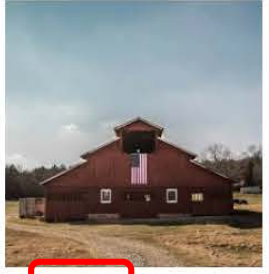

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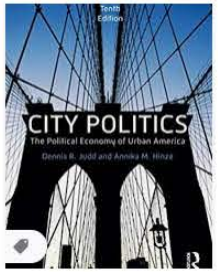

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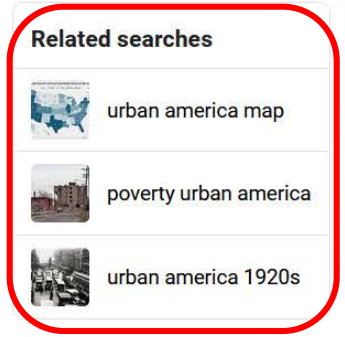

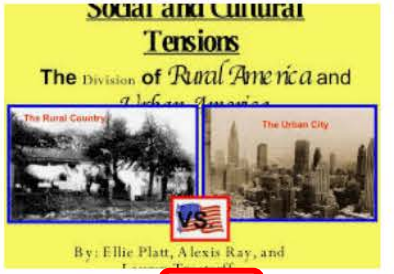

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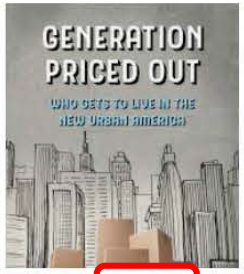

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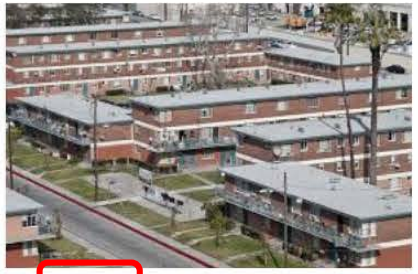

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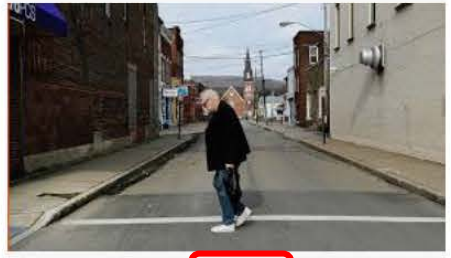

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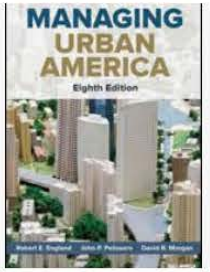

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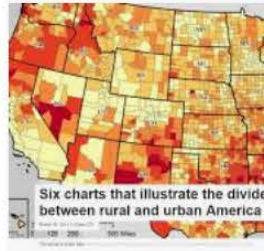

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Why rural America needs cities
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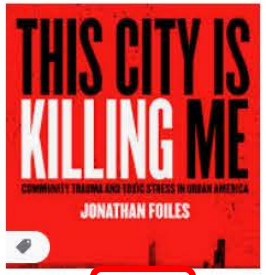

This City Is Killing Me: Com...
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Rural and Urban America Aren't so ...
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Why rural America needs cities
brookings.edu

playing into the 2020 presidential race ...
cnn.com

When people search for information about places, what they ask tells how they think

Oregon

why is oregon so

- why is oregon so **weird**
- why is oregon so **expensive**
- why is oregon so **beautiful**
- why is oregon so **dry**
- why is oregon so **foggy**
- why is oregon so **cold**
- why is oregon so **poor**
- why is oregon so **cheap**
- why is oregon so **hot right now**
- why is oregon so **green**

Iowa

why is iowa so

- why is iowa so **humid**
- why is iowa so **boring**
- why is iowa so **flat**
- why is iowa soil **so good**
- why is iowa **caucus** so **important**
- why is iowa so **windy**
- why is iowa **and new hampshire** so **important**
- why is iowa so **important in the presidential nomination process**
- why is iowa so **important in elections**
- why is iowa so **important in politics**

What happens when you search for countries?

- We collected the top-10 English language terms about every country of the world
- We collected these data as though the searches were coming from each country, about every country

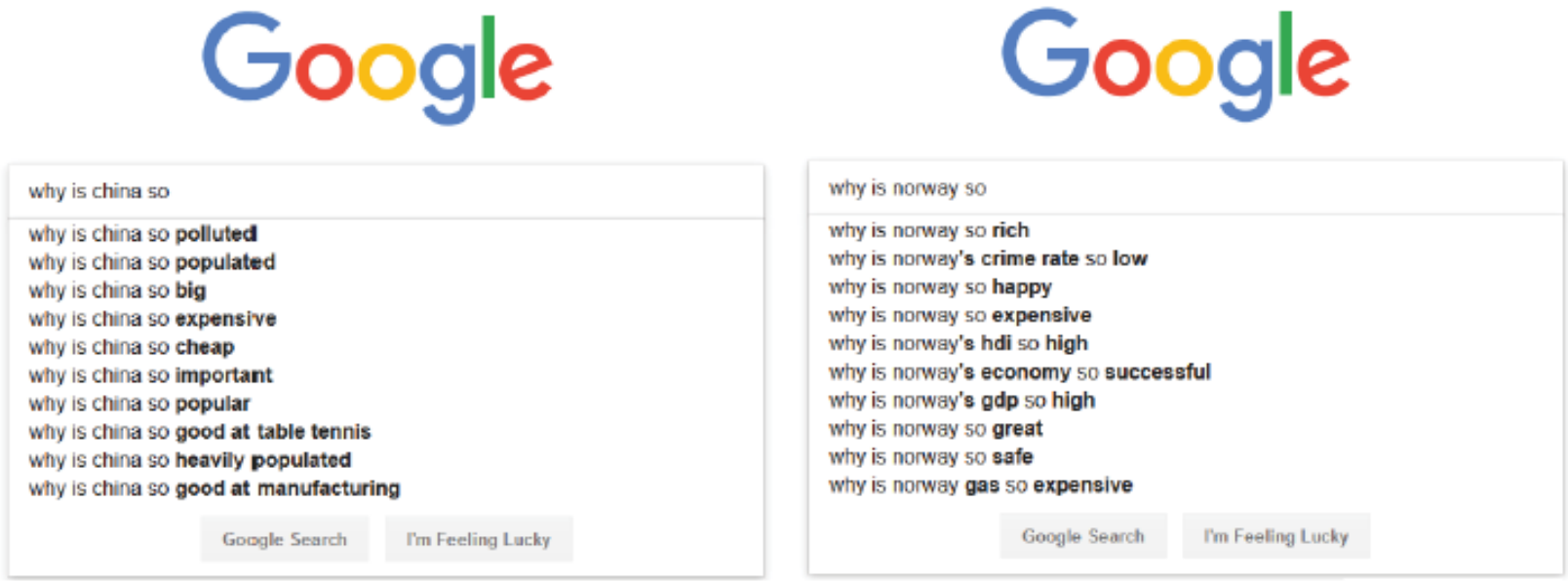


FIGURE 1. Measuring national and developmental perceptions in Google search data

Dorius, S. & Swindle, J. (2019). *Developmental Idealism in Internet Search Data*. Sociology of Development.

A Developmental Worldview

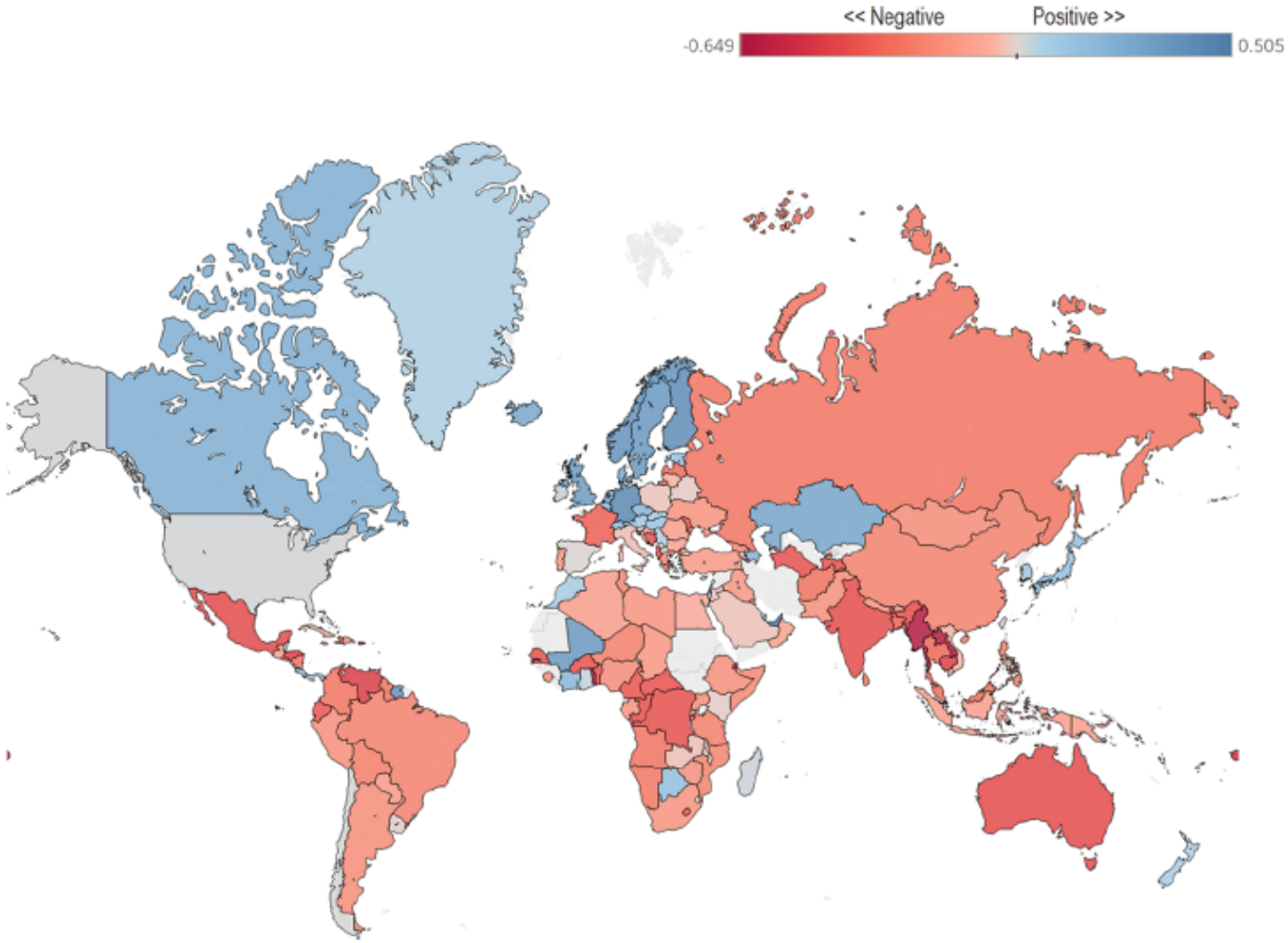


FIGURE 3. Average sentiment toward countries, according to Google search queries about countries

POOR COUNTRY SEARCH TERMS	RICH COUNTRY SEARCH TERMS
Poor	Safe
Dangerous	Great
Underdeveloped	Clean
Messed up	Awesome
Homophobic	Health
Mean	Prosperous
Undernourished	Productive
Economy bad	Smart
Unhappy	Important
Crazy	Good
Isolated	
Disgusting	

Dorius, S. & Swindle, J. (2019). *Developmental Idealism in Internet Search Data*. Sociology of Development.

A Developmental Worldview

The **less we know** about a place, the more negatively we perceive it.

The **less developed** a place, the more negatively we perceive it.

What might this mean for how people view rural places in the US?

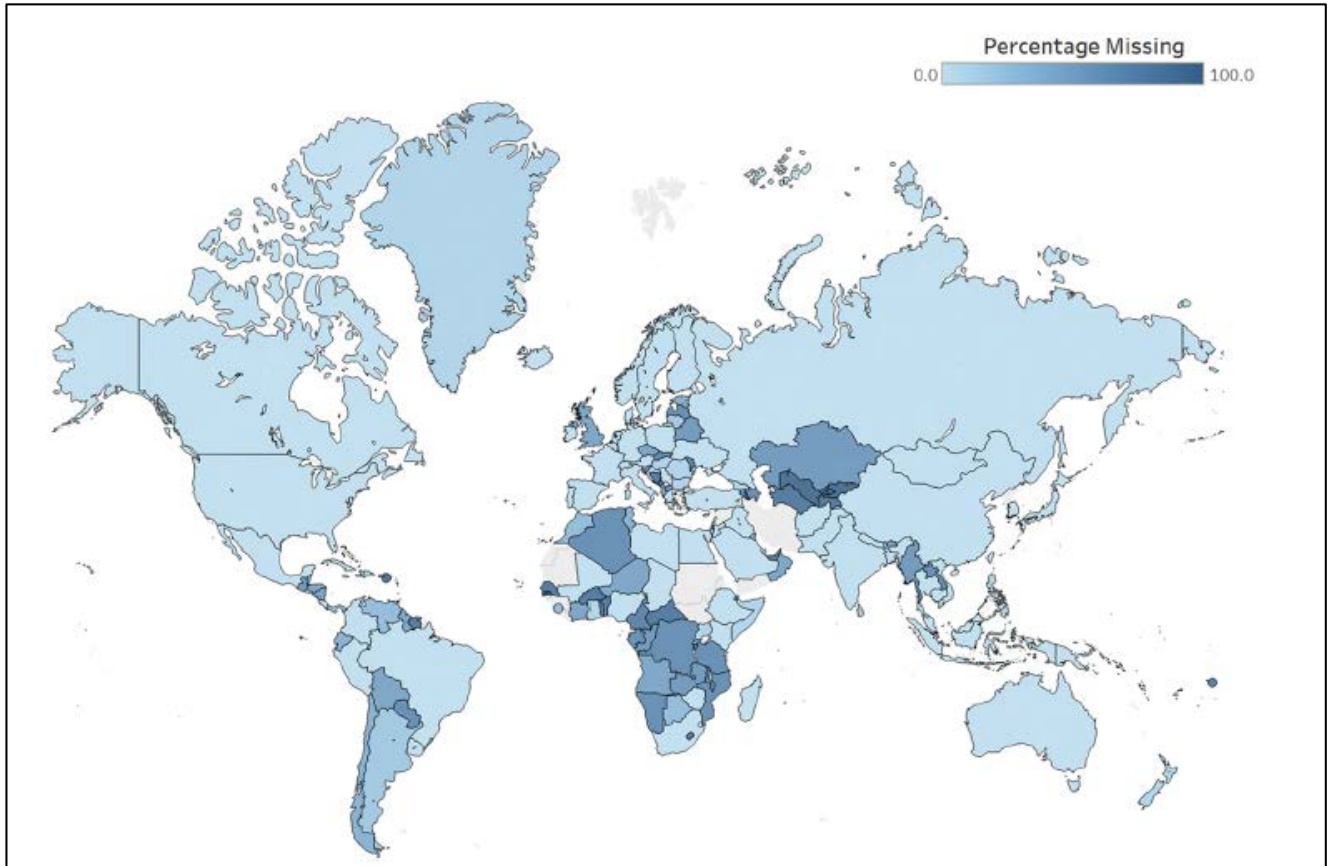


FIGURE 4. Country visibility according to percentage of missing data in Google search queries about countries

Note: Darker shading identifies low-visibility countries: those for which there were few or no search queries. Lighter shading identifies highly visible countries: those for which there were many search queries.

QUESTION BREAK WITH LINDSEY & SHAWN

How Implicit Attitudes (Bias) Work

Attitudes in Theory

COGNITIVE:

What we *think* about someone or something

AFFECTIVE:

How we *feel* about someone or something

BEHAVIORAL:

What we (intend to) *do* to someone or something

Attitudes in Practice

COGNITIVE:

I think people are poor because they are lazy

AFFECTIVE:

Poor people disgust me

BEHAVIORAL:

I'm not going to administer the program in Poor Town because it will only reward bad behavior.

Do Place-based Biases Impact Your Work?

- People have well-developed perceptions of places
- Often highly stylized and stereotypical beliefs about urban and rural places
- Beliefs shape actions
- Place-based bias lives in the shadow of more visible biases

Place Bias and Extension:

1. Extension programming is largely place-based

2. Extension professionals, and the people they serve, are not immune to the effects of and exposure to place-based stereotyping

Place Bias in Extension Culture

It is difficult to change place bias, but a good starting place is to recognize it exists and be aware of our preferences, attitudes, and stereotypes about places and the people that live there.

Where do we start?

We can start with data

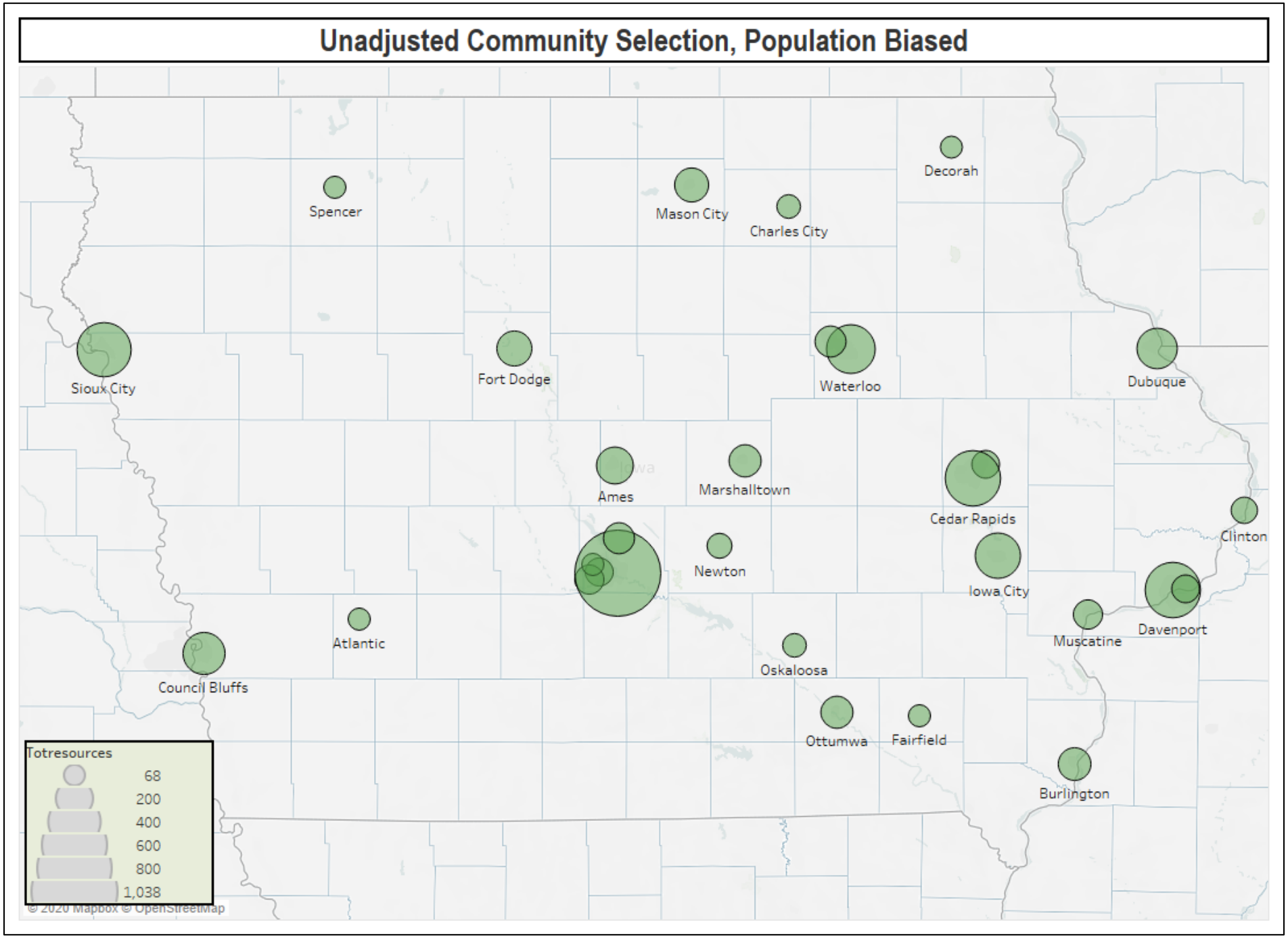
- Measure for presence of bias
- Both anti-rural and anti-urban (cosmopolitan)
- Correct for bias in our teams and in our data

PLACE-BASED BIAS IN DATA

CASE STUDY #1

When Resources Matter: Identifying Recovery Ready Communities

- Community resources significantly predict substance use recovery
- We collected data on 17 different types of resources for every community in Iowa
- Over 15,000 individual resources were mapped and analyzed to identify Recovery Ready Communities in Iowa



Mapping recovery resources helped us to identify recovery hotspots & recovery infrastructure deserts

Larger circles identify larger number of total resources

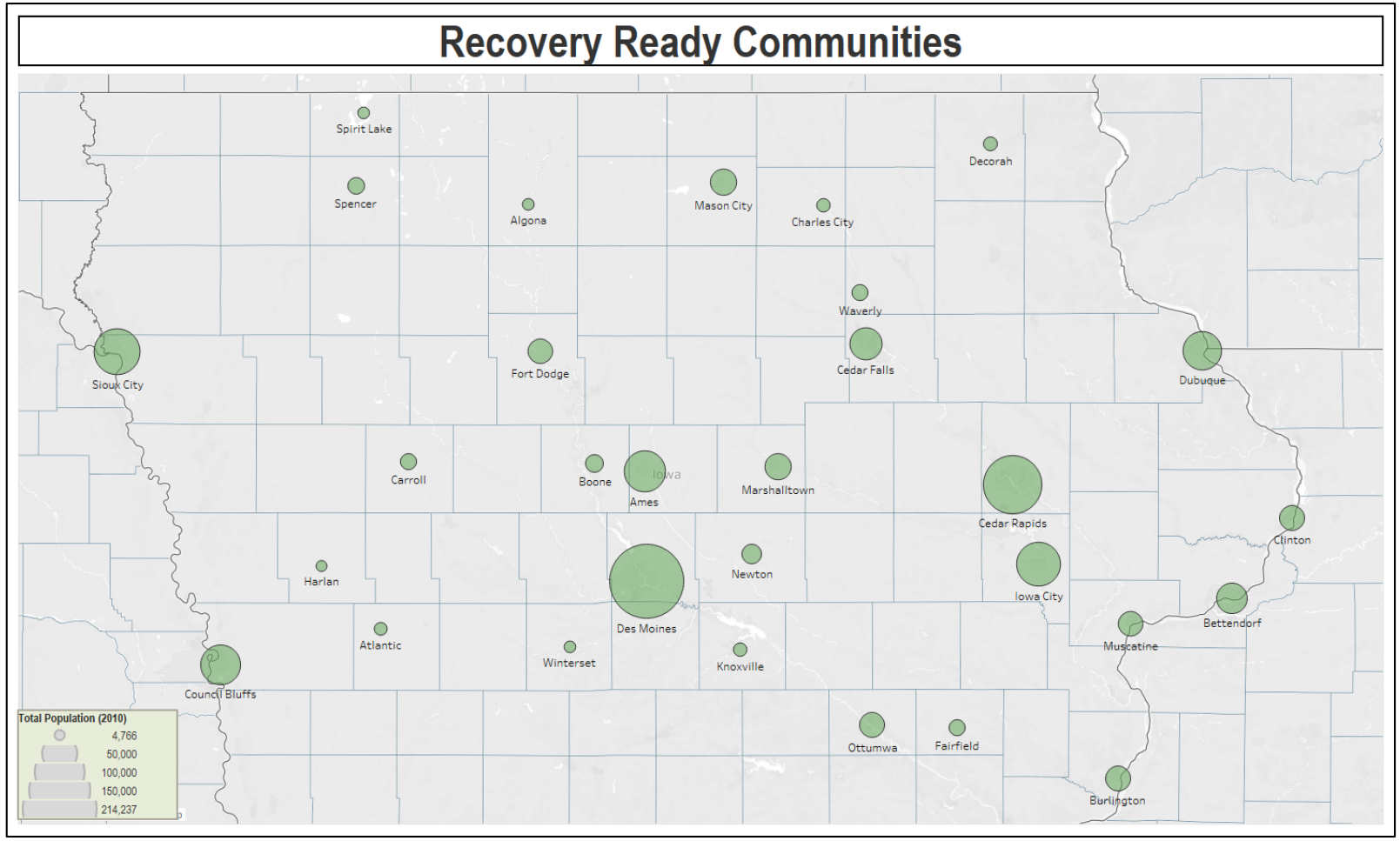
But this approach favors large and populous cities

Tips for Correcting for Place Bias in Research

1. Include rural places in your sample

2. Use many different measures to capture strengths & assets of various groups and places

3. Adjust data for population size (e.g. per capita)



Result: Rural places were better represented. Initially, just **7** of 30 communities selected were small towns (populations of less than 15,000). After adjustment, **13** of 30 communities selected were small towns.

QUESTION BREAK WITH LINDSEY & SHAWN

PLACE-BASED BIAS IN THE WORKPLACE

CASE STUDY #2

WE ASKED TEAMS...

We measured top-of-mind associations about rural places among students in a data science training program

How can a data scientist help rural communities?

Mentimeter

LISTEN LISTEN LISTEN! Hear what they need!

By working with them not by studying them

Find out what their main concerns are and figure out insights that help mitigate those concerns

Deploy the resources that they have within their communities to solve the problems that they want to solve.

By collecting data and set measuring indicators and do data analytics and interpreting the result

Analyzing data from diverse sources but working with the local government

A data scientist can help present ways that the communities can overcome the challenges that they do face

Work with DSPG on the projects that we will be doing this summer and beyond

The same way a data scientist would help any other group - by informing the rural community, with data, about the issues they want to know about and presenting them with effective options for solving those problems.

We can collect the problems that they most want to solve, and then help them solve those problems with social source.

Responses point to a collaborative, partner-oriented approach to community engagement (e.g. appreciative inquiry).

10

What is life like in rural America?

Mentimeter

Strong evidence of developmentalist thinking worldview when answering this question

What is the worst thing about living in rural America?

Mentimeter

Primary Keywords	Frequency
lack	5
resources	3
less	3
racism	3
variation	2
education	2
opportunity	2
much	2
job	2
accessibility	2
internet	2
low	2
limited	1

Deficit-based orientation toward rural places.
Focus on what is missing or deficient in rural places.

12

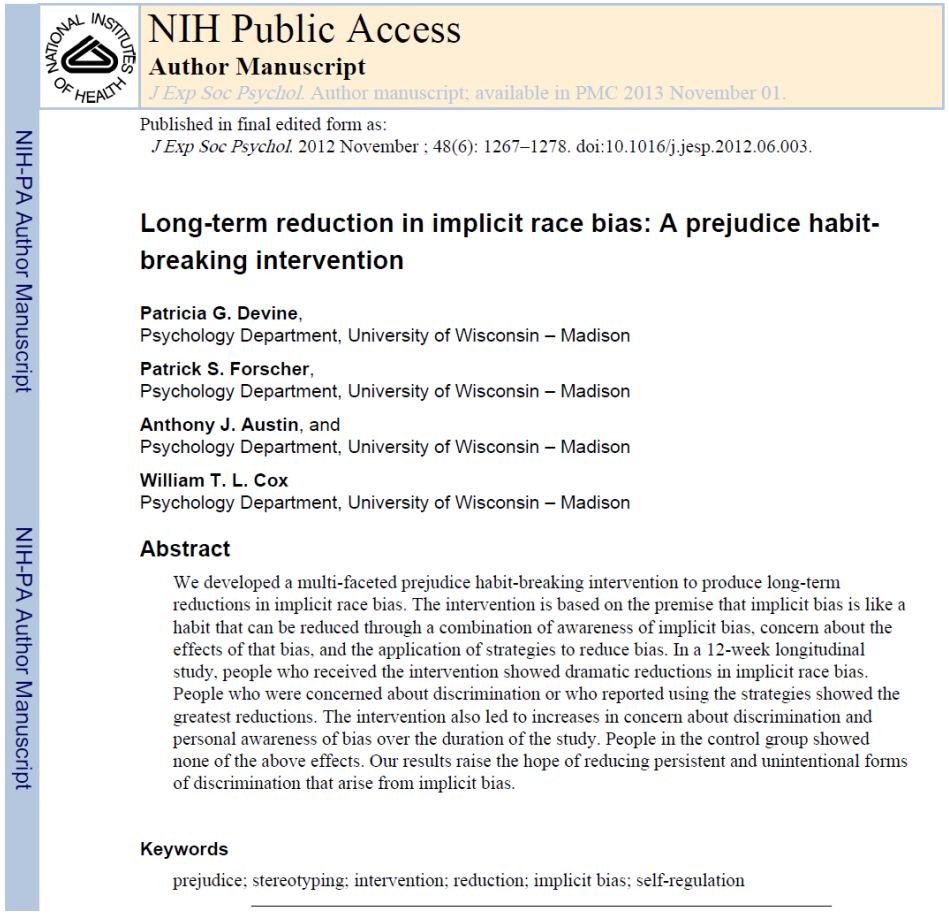
Tips for Correcting for Place Bias in the Workplace

1. Embed opportunities in your workplace to become aware of bias

2. Discuss how bias might impact your outreach, study design, analysis, or results. Then keep discussing!

3. Employ strategies to break the habit of bias, such as:

    - Individuation
    - Perspective taking
    - Counter-stereotypic imaging



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Published in final edited form as:
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Long-term reduction in implicit race bias: A prejudice habit-breaking intervention

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Psychology Department, University of Wisconsin – Madison

Anthony J. Austin, and
Psychology Department, University of Wisconsin – Madison

William T. L. Cox
Psychology Department, University of Wisconsin – Madison

Abstract

We developed a multi-faceted prejudice habit-breaking intervention to produce long-term reductions in implicit race bias. The intervention is based on the premise that implicit bias is like a habit that can be reduced through a combination of awareness of implicit bias, concern about the effects of that bias, and the application of strategies to reduce bias. In a 12-week longitudinal study, people who received the intervention showed dramatic reductions in implicit race bias. People who were concerned about discrimination or who reported using the strategies showed the greatest reductions. The intervention also led to increases in concern about discrimination and personal awareness of bias over the duration of the study. People in the control group showed none of the above effects. Our results raise the hope of reducing persistent and unintentional forms of discrimination that arise from implicit bias.

Keywords

prejudice; stereotyping; intervention; reduction; implicit bias; self-regulation

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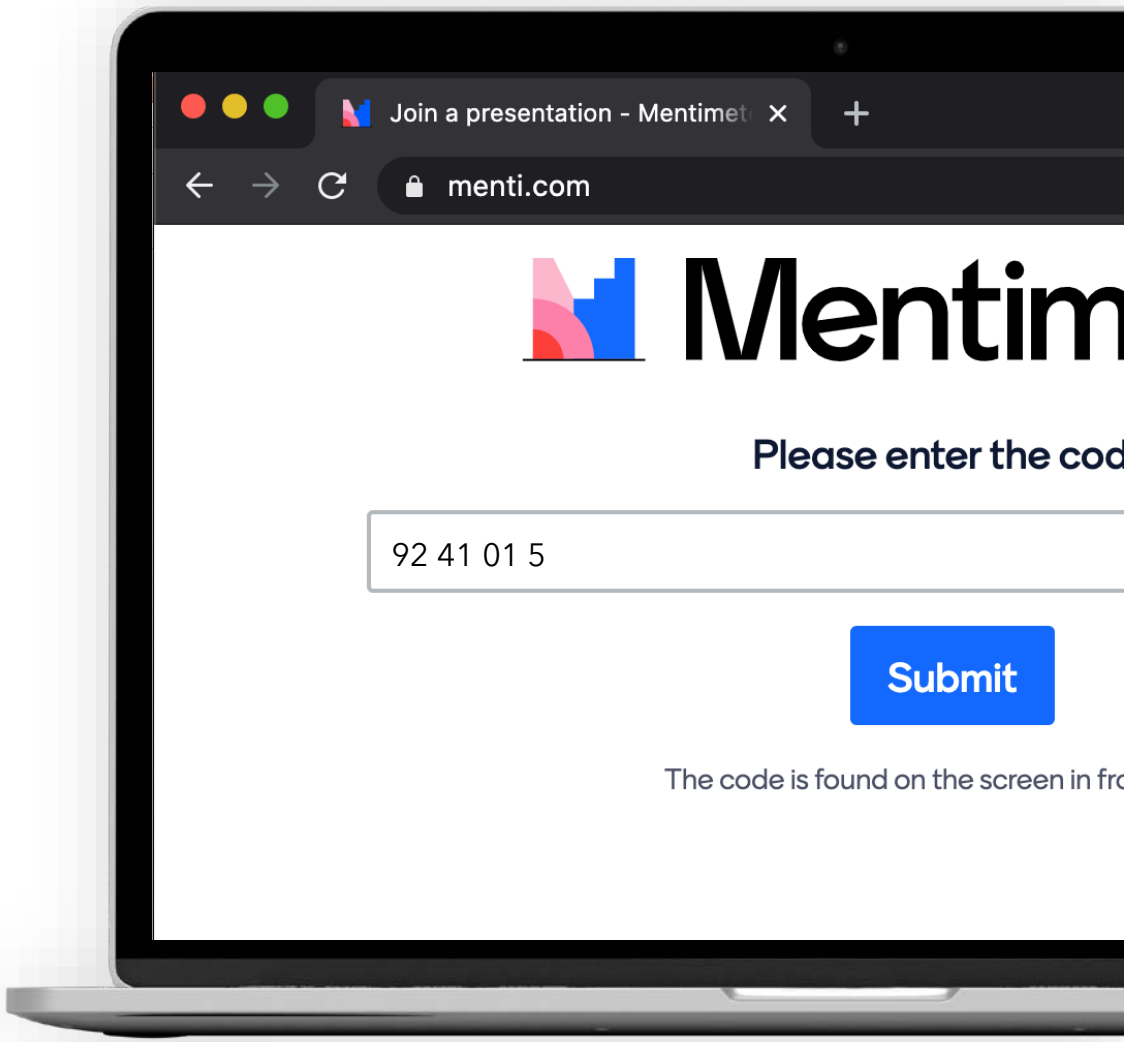
Result: After perspective-taking discussion, students committed to explore asset-based approaches to data collection and analysis during their data science internship (e.g., Community Capitals + health resources).

WHAT IS LIFE LIKE IN RURAL AMERICA?

LET'S LOOK AT YOUR DATA



QUESTION BREAK WITH LINDSEY & SHAWN

VISION

- Build a data ready culture for community work
- Be aware of your own place-based biases, the biases of your teams, and the biases in your data (this is an ongoing and iterative effort)
- Be intentional about minimizing the harmful effects of these biases on others

GOAL

Better support the communities we live, learn, and work in by reducing place-based biases

QUESTIONS?

WE APPRECIATE THE OPPORTUNITY TO TALK WITH YOU ABOUT BUILDING A DATA-READY CULTURE FOR EXTENSION!

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SDORIUS@IASTATE.EDU