

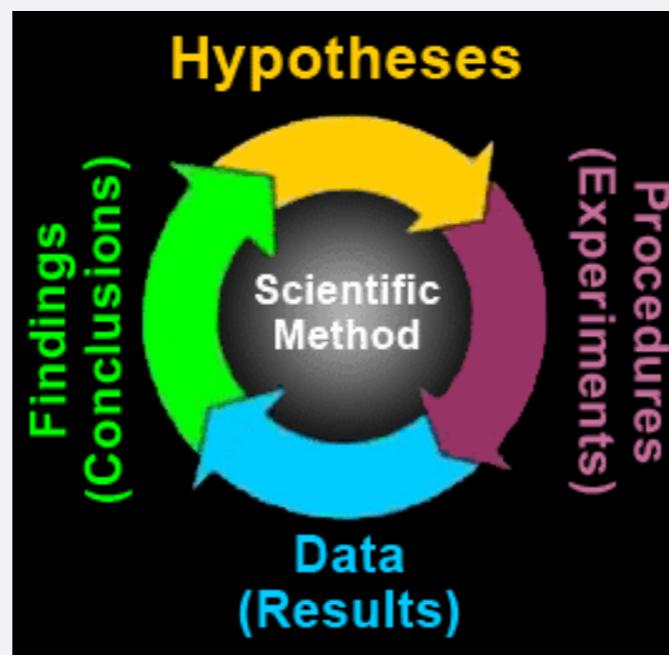
PSC 202

SYRACUSE UNIVERSITY

INTRODUCTION TO POLITICAL ANALYSIS CAUSALITY, QUANTITATIVE AND QUALITATIVE ANALYSES

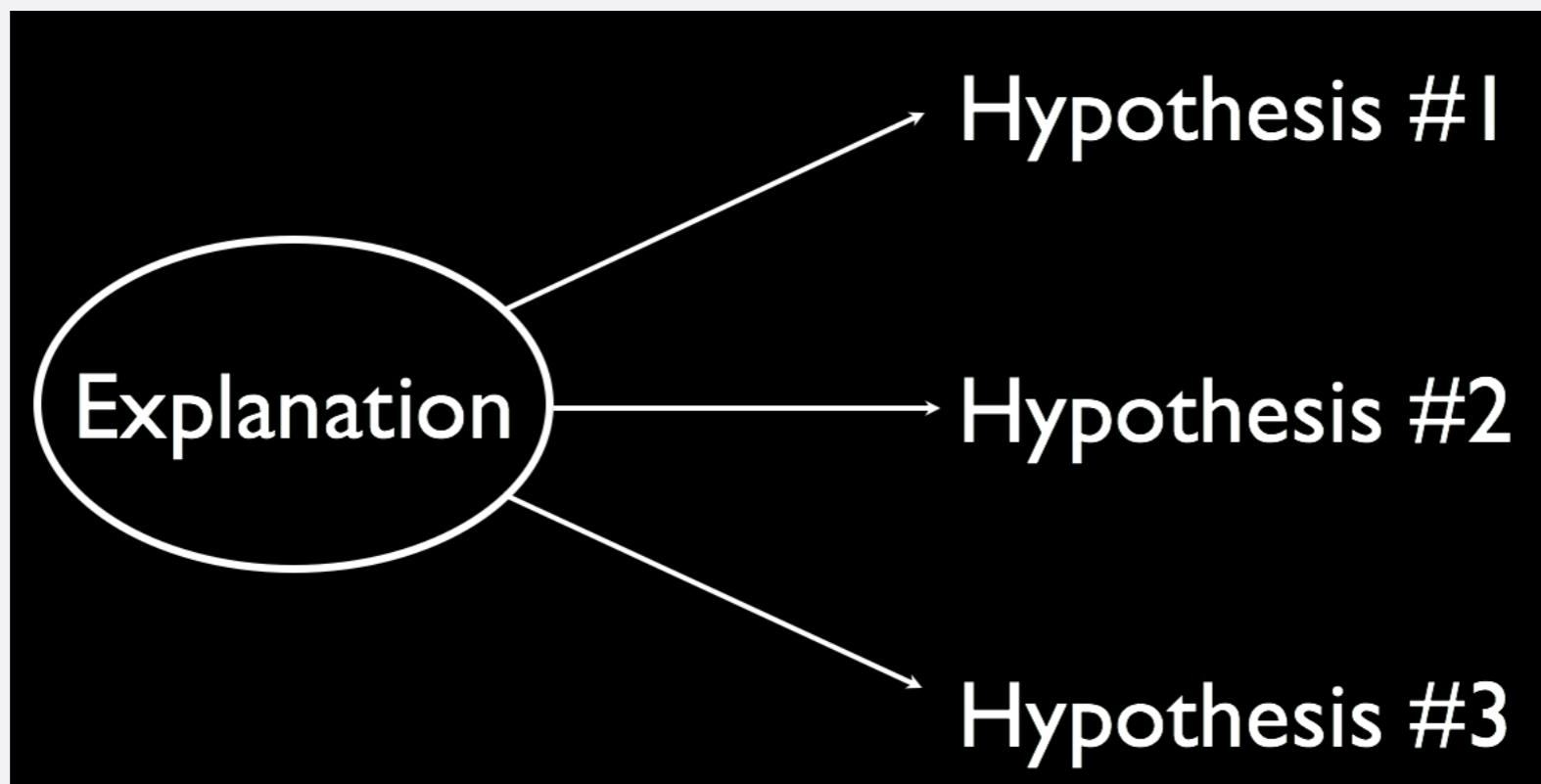
WHERE WE ARE

- Formulate research question
- Propose explanation/theory, hypotheses
- Data collection process
- Use data to evaluate hypotheses
- Reassess explanation



RECAP

- **Explanation/Theory:** (Simplified) description of how social reality works
- **Hypotheses:** Statements what, if the theory is true, we should observe in our data



GOOD HYPOTHESES

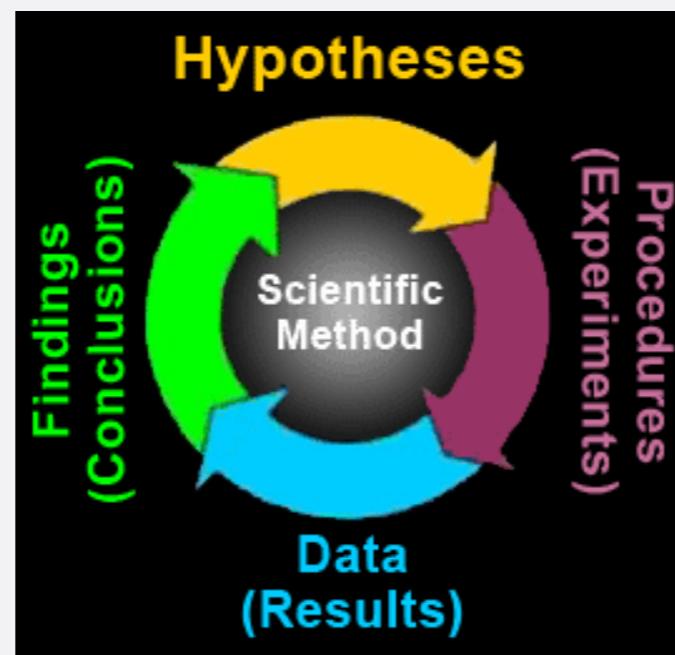
- Involves two variables
 - dependent and independent variable
- Relationship between the variables is clearly specified and measurable
- Unit of analysis is clear
- Hypothesis is testable
 - falsifiable

HYPOTHESES

- H1: In a comparison of individuals, those having conservative parents will be more likely to be conservative than those having liberal parents.
- H2: In a comparison of individuals, those who grew up in a conservative area will be more likely to be conservative than those who grew up in a liberal area.
- H3: In a comparison of individuals, those who attended a STEM-focused high school will be more likely to be conservative than those who attended a Liberal Arts-focused high school.

RESEARCH PROCESS

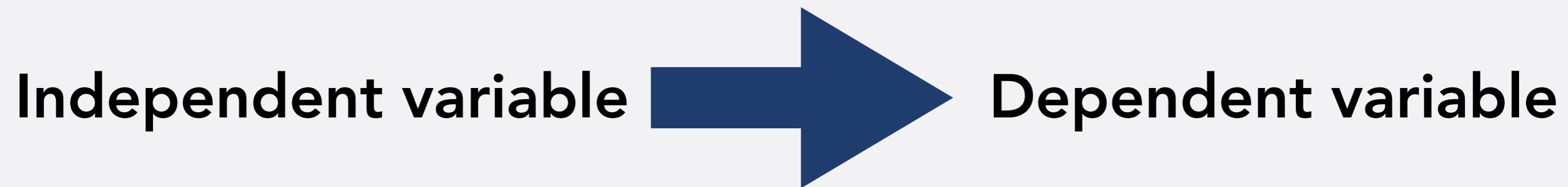
- Formulate research question
- Propose explanation/theory, hypotheses
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EVALUATING HYPOTHESES

- How to establish a causal relationship with data?

CAUSALITY

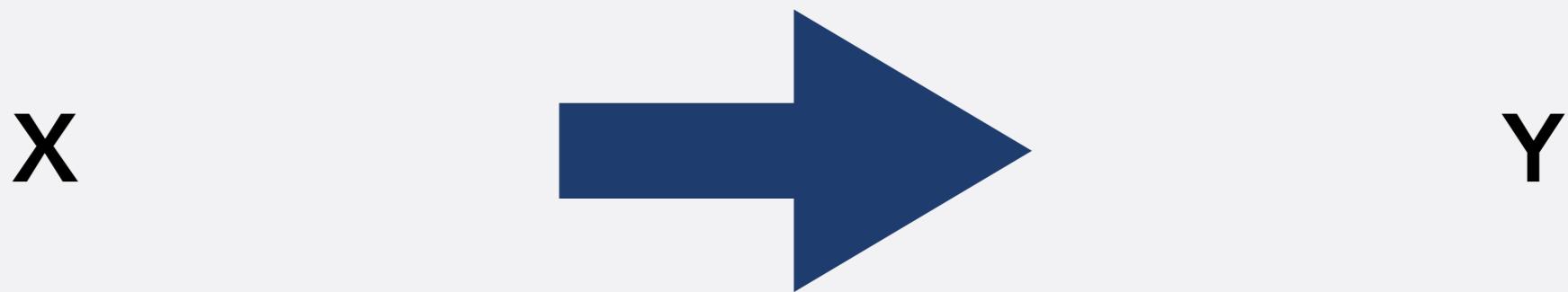


- Most of our theories: relationship between a single cause (independent variable) and a single effect (dependent variable)
 - “bivariate” relationship (2 variables)

CAUSALITY

- But: World is more complicated than that
 - Almost never the case that **only one independent variable causes variation in the dependent variable**
 - Theories are simplified descriptions how world works, but when we test them with data, we need to take the complexity of the real world into account

HURDLES TO CAUSALITY



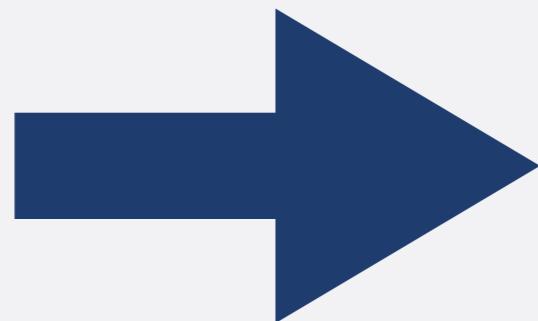
- **X=-independent variable; Y=dependent variable**
- **Want to establish that X is a cause of Y**
- **Four hurdles along the route to establish causality**

HURDLE 1

- Is there a credible causal mechanism that connects X to Y?
 - Talked about this when looking at theory
 - Need a convincing process/mechanism that logically suggests why X might be a cause of Y

HURDLE 1

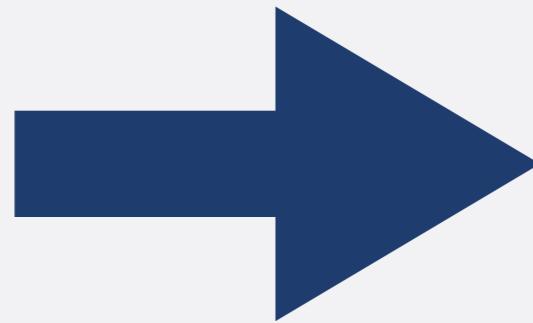
Parents' liberal-conservative orientation



Liberal-Conservative

HURDLE 1

Parents' liberal-conservative orientation



Liberal-Conservative

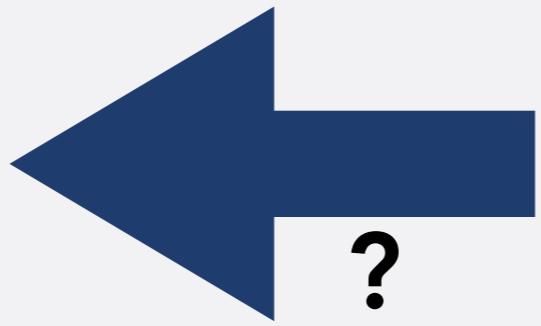
- Example
 - When raising children, parents transmit their values to their children (e.g. dinner table conversations, emphasis what is important and right or wrong, parents' political activism)

HURDLE 2

- Can we rule out the possibility that Y could cause X?
 - e.g. your theory is that smoking (X) causes depression (Y)
 - But: People who suffer from depression may be more likely to smoke

HURDLE 2

Parents' liberal-conservative orientation



Liberal-Conservative

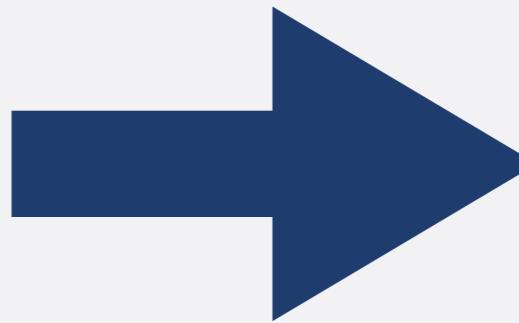
- Likely or not?

HURDLE 3

- Is there covariation between X and Y?
 - i.e. is more of X associated with more/less of Y?

HURDLE 3

Parents' liberal-conservative orientation



Liberal-Conservative

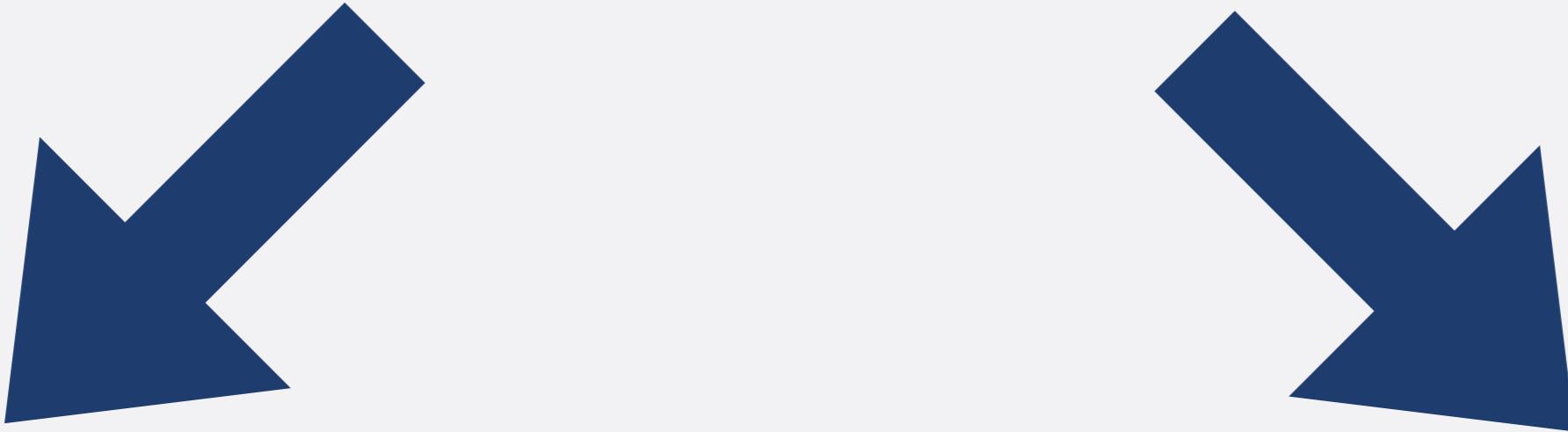
- Looking at two variables, we should see that:
 - People whose parents are conservative are themselves more conservative than people whose parents are liberal ("bivariate relationship")
 - If we find that lib-cons score is same in both groups, our theory may have a problem...

HURDLE 4

- Have we controlled for all confounding variables (Z) that might make the association between X and Y spurious?
 - World is complicated and Y usually has more than one cause
 - We need to make sure to take that into account

HURDLE 4

Family wealth

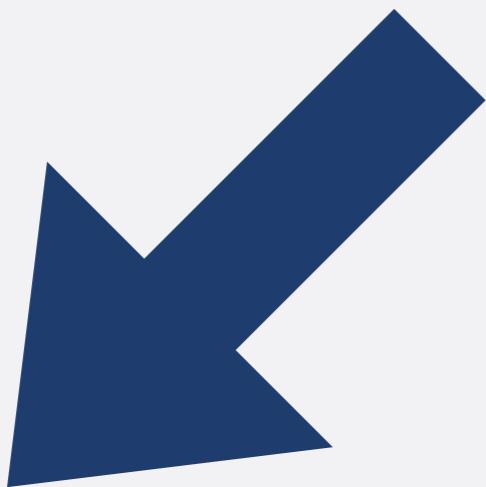


Parents' liberal-
conservative
orientation

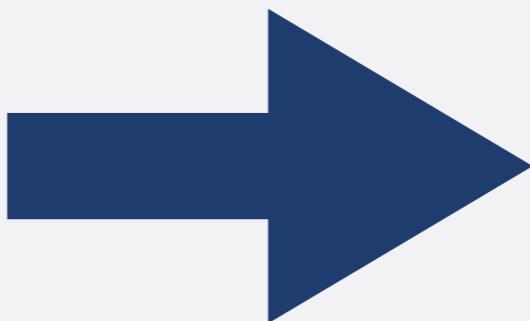
Liberal-Conservative

HURDLE 4

Personality Traits (e.g.
openness to new experience)



STEM vs. Liberal
Arts education



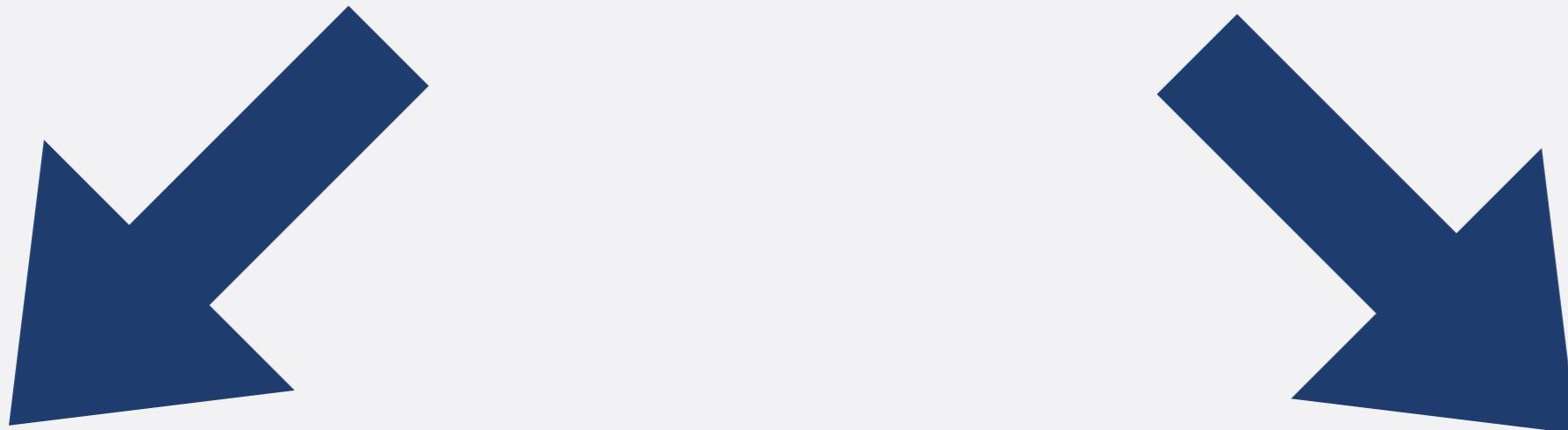
Liberal-Conservative

HURDLE 4

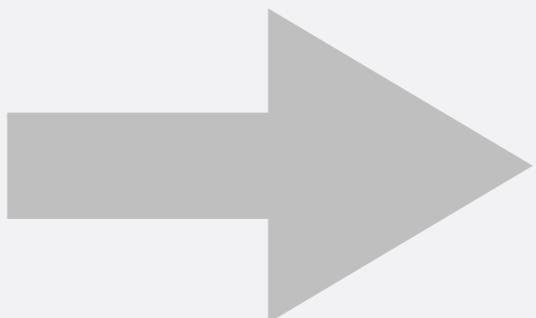
- Maybe personality traits cause both whether people attend STEM/Liberal Arts and liberal-conservative
 - People more open to new experiences might be more likely to prefer Liberal Arts education
 - People more open to new experiences might be more likely to have a liberal ideology

HURDLE 4

Personality Traits (e.g.
openness to new experience)



STEM vs. Liberal
Arts education

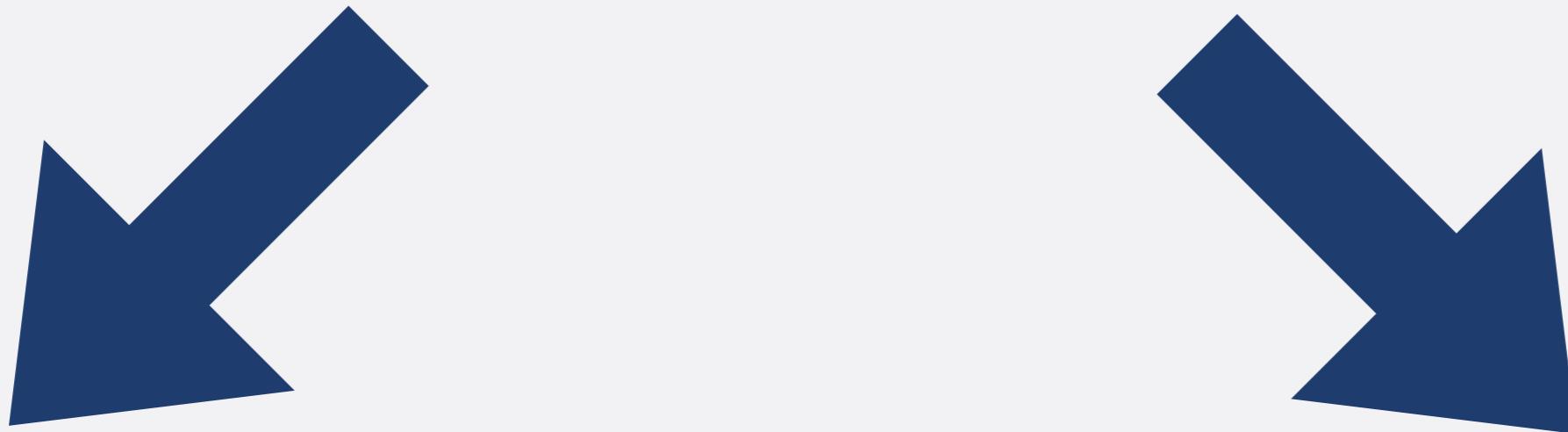


Liberal-Conservative

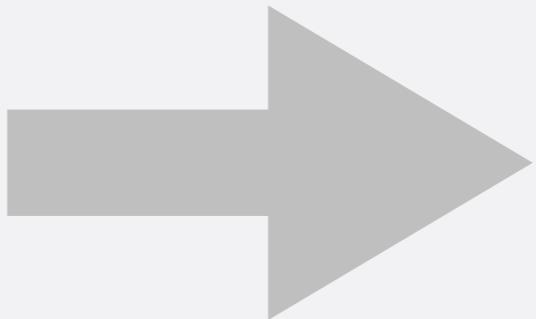
- Once we take the effect of personality traits into account, STEM vs. Liberal Arts education may not have an *independent* effect on liberal-conservative ideology anymore

HURDLE 4

Personality Traits (e.g.
openness to new experience)



STEM vs. Liberal
Arts education



Liberal-Conservative

- Bivariate relation between STEM vs. Liberal Arts education and liberal-conservative ideology might have been *spurious*

REST OF THIS SEMESTER

- How can we make sure that Y does not cause X?
- How can we test whether X and Y covary?
- How can we test whether Z is a confounder and the relation between X and Y is not spurious?

OK, HOW DO WE DO THAT?

- **Social sciences:** Mostly *observational* research
 - Take data as we find it in the world
 - Try to test whether X causes Y

HURDLES TO CAUSALITY

- Is there a credible causal mechanism that connects X to Y?
- Can we rule out the possibility that Y could cause X?
- Is there covariation between X and Y?
- Have we controlled for all confounding variables (Z) that might make the association between X and Y spurious?

TODAY AND WEDNESDAY

- Two major ways to address these 3 hurdles using *observational* research: small-n (qualitative) and large-n (quantitative)
 - What are these?

OUR EXAMPLE

- **To what extent is the ethos of the “American Dream” an accurate description of reality today?**
 - Specifically: “upward social mobility” and chance of achieving it

OUR EXAMPLE

- **Chance of rising in income distribution**
 - “Intergenerational mobility”
- **How much intergenerational mobility is there?**
- **What factors prevent people born into the bottom of the income distribution to rise up?**

LARGE-N (QUANTITATIVE)



Popular

Latest

The Atlantic

A portrait photograph of Raj Chetty, an Indian-American economist. He is shown from the chest up, wearing a light blue button-down shirt. He has dark hair and a mustache, and is looking slightly downwards and to his left with a thoughtful expression. The background is a plain, light color. The image is framed by a white border, which is itself set against a dark gray background.

The Economist Who Would Fix the American Dream

No one has done more to dispel the myth of social mobility than Raj Chetty. But he has a plan to make equality of opportunity a reality.

SMALL-N (QUALITATIVE)

The New York Times

Deep Cover: Alice Goffman's 'On the Run'



Alice Goffman Ricardo Barros

SMALL-N (QUALITATIVE)

The Ethics of Ethnography

Alice Goffman's heralded book about inner-city life has come under fire for inconsistencies and inaccuracies. Is the author to blame—or does the fault lie with her field?

The Trials of Alice Goffman

Her first book, 'On the Run' — about the lives of young black men in West Philadelphia — has fueled a fight within sociology over who gets to speak for whom.

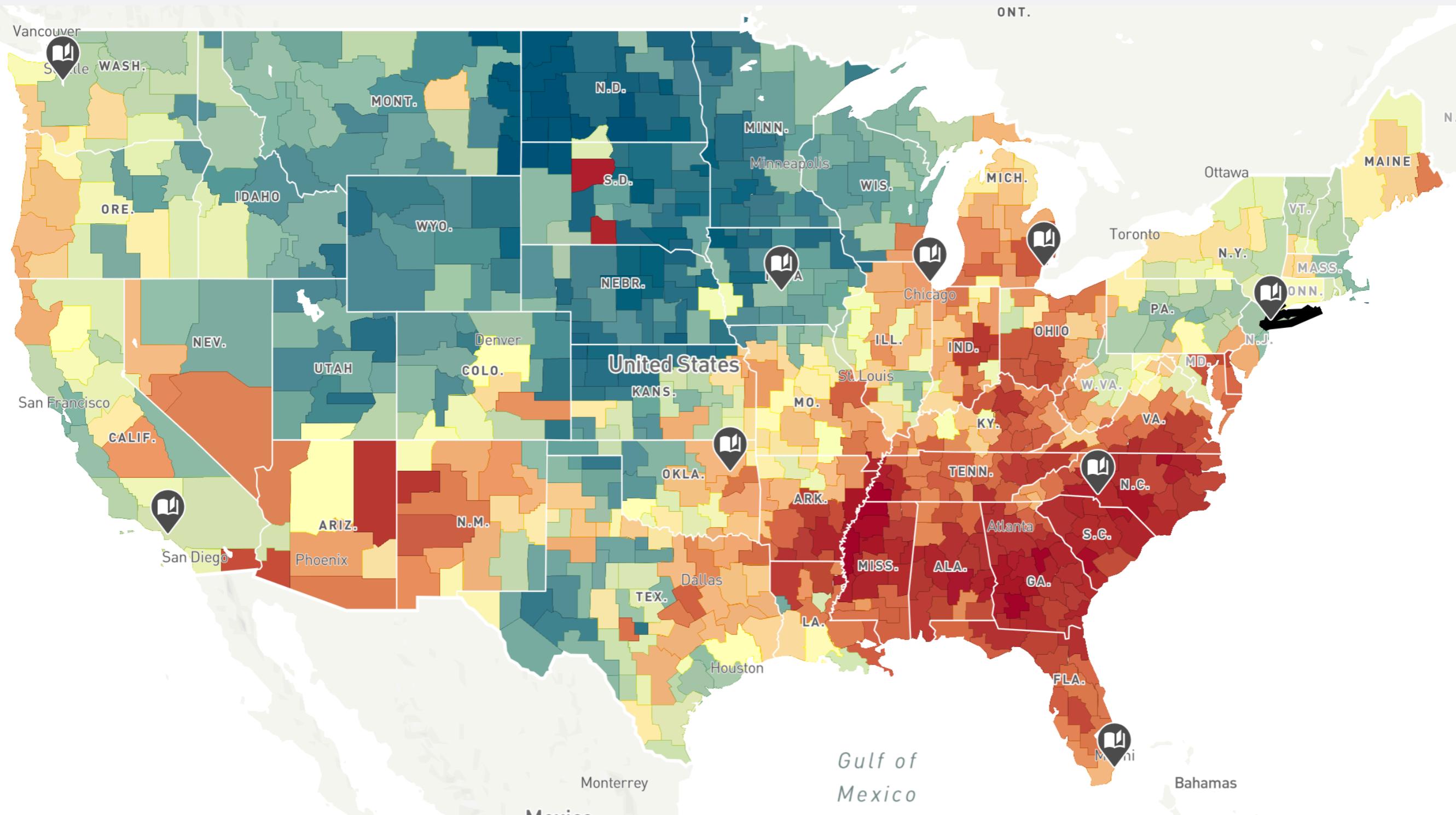
EMPIRICAL STUDIES

- **Two ways to do observational studies:**
 - **Quantitative, large n**
 - **Qualitative, small n**
 - **n=number of observations**

EMPIRICAL STUDIES

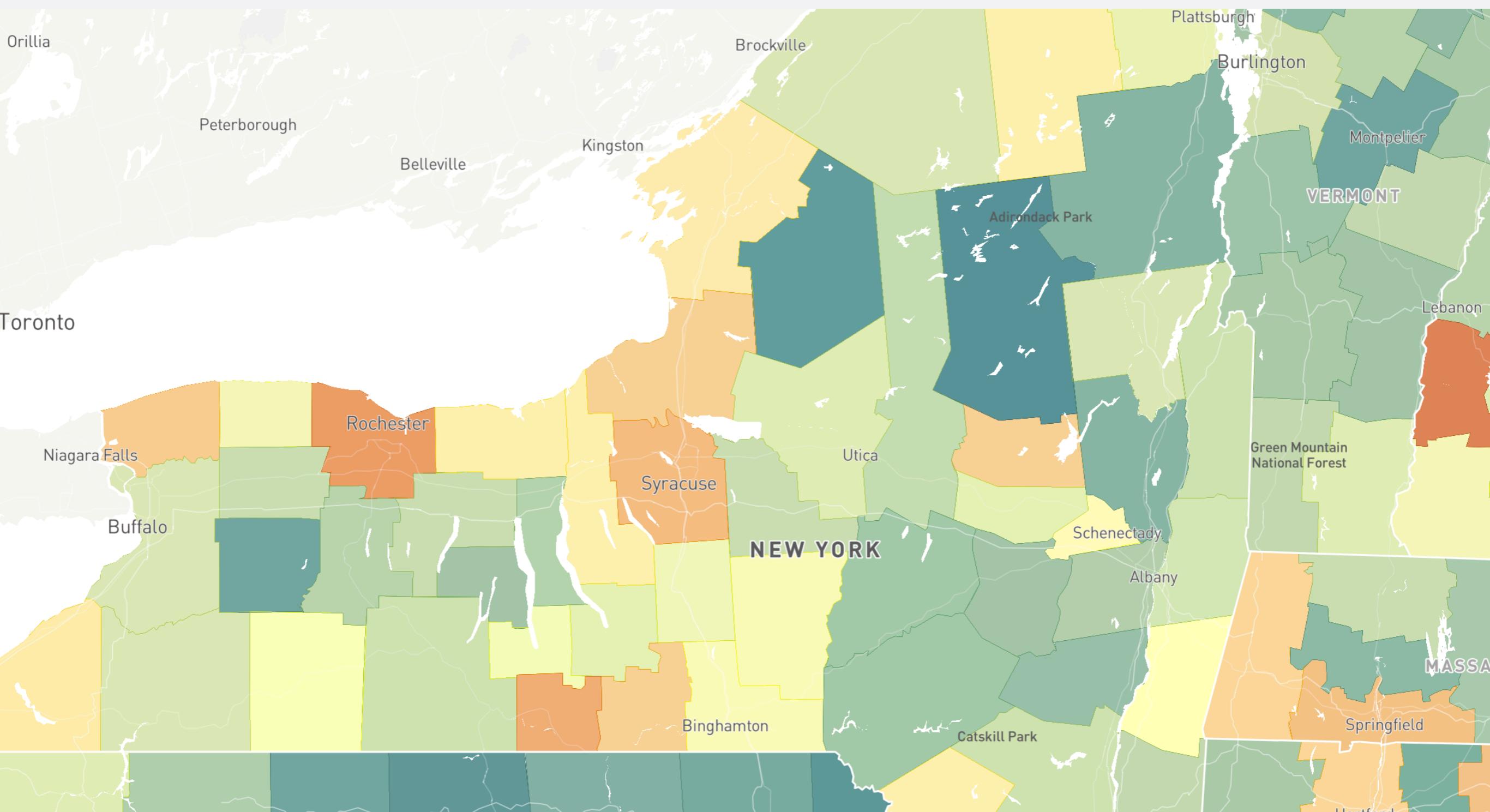
- **Quantitative, large n**
 - Chetty: study of millions of people in the entire US
- **Qualitative, small n**
 - Goffman: study of a few people in a single neighborhood
 - *Case study*

WHY DO A CASE STUDY?



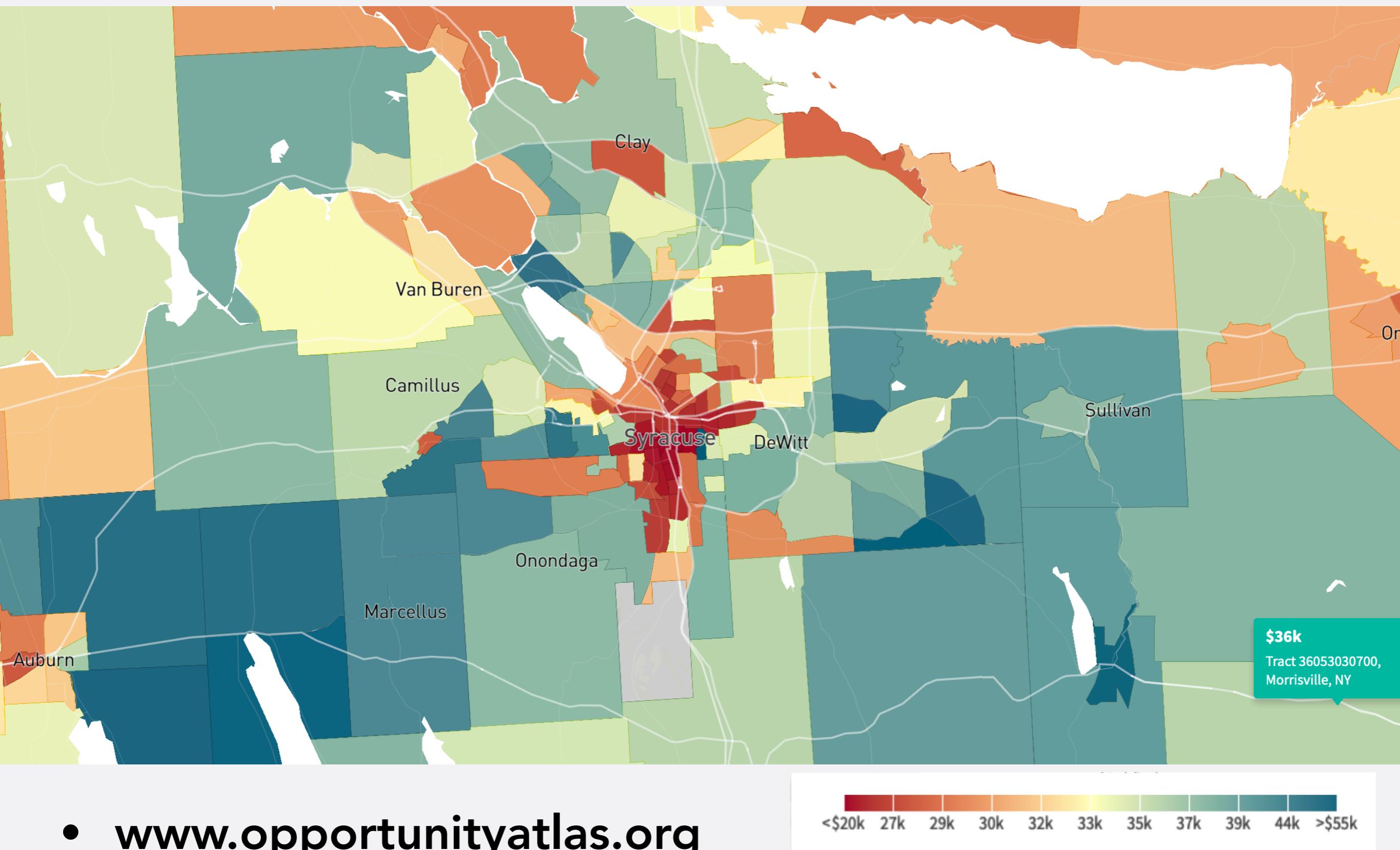
- www.opportunityatlas.org

WHY DO A CASE STUDY?

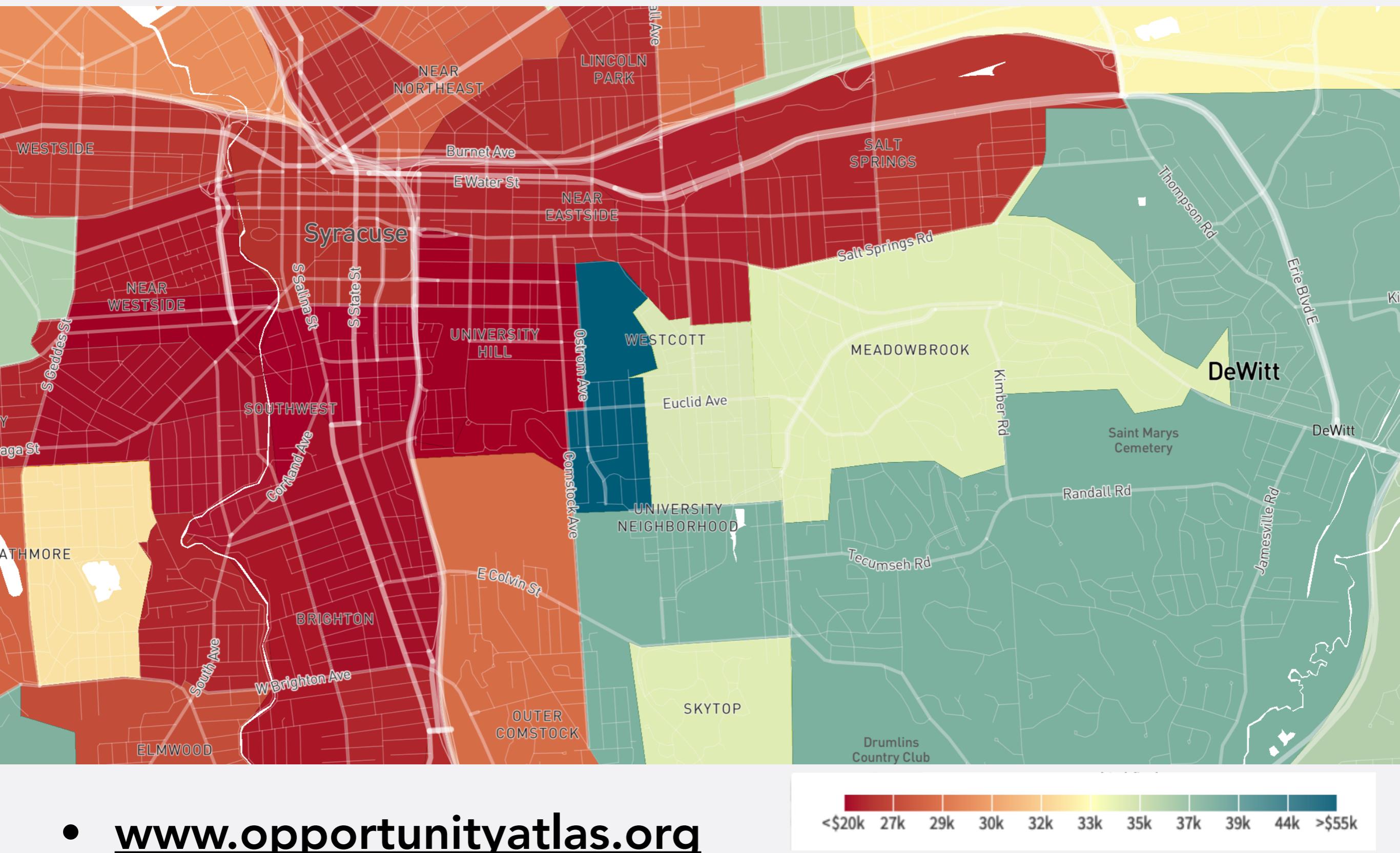


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WHY DO A CASE STUDY?



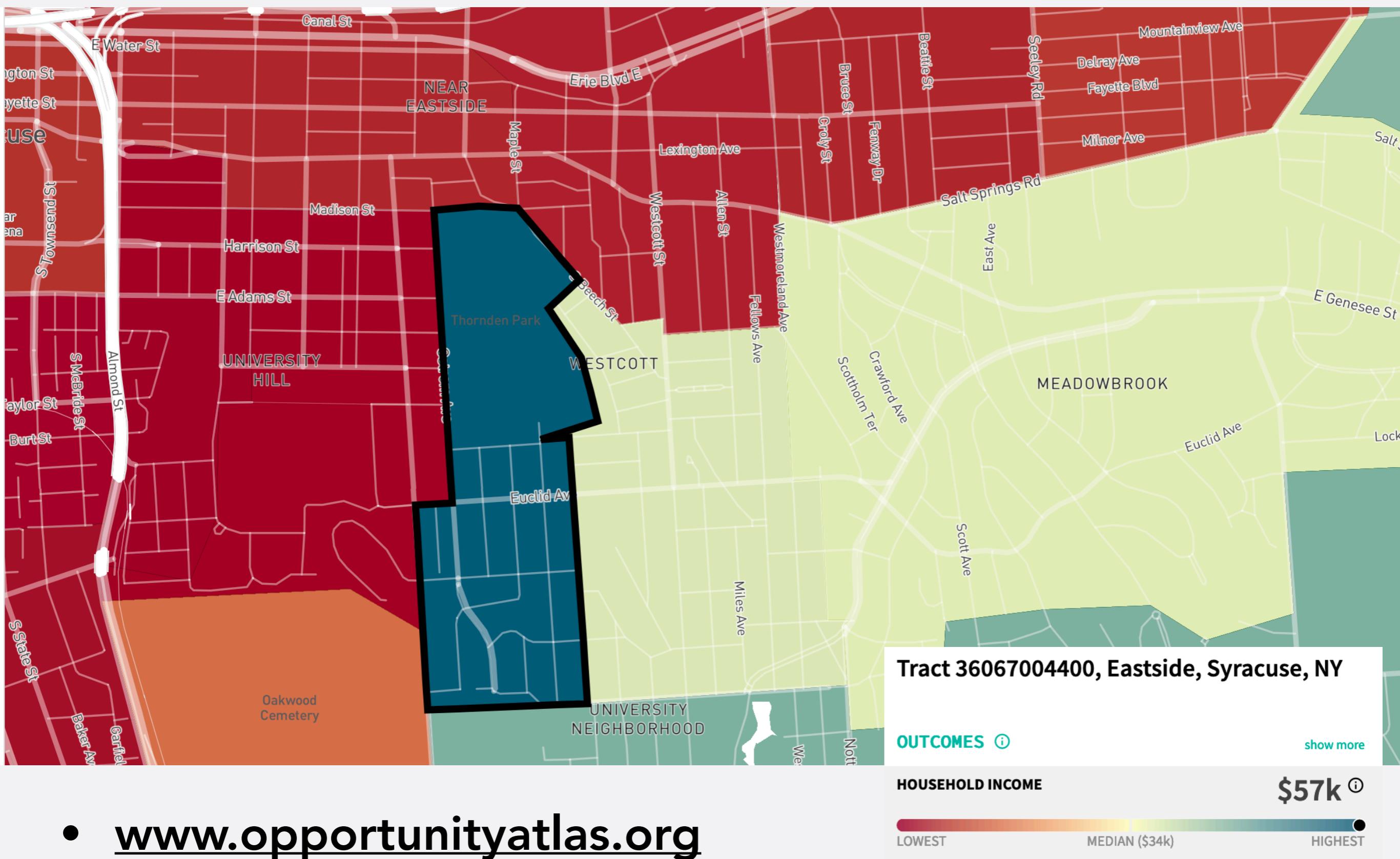
WHY DO A CASE STUDY?



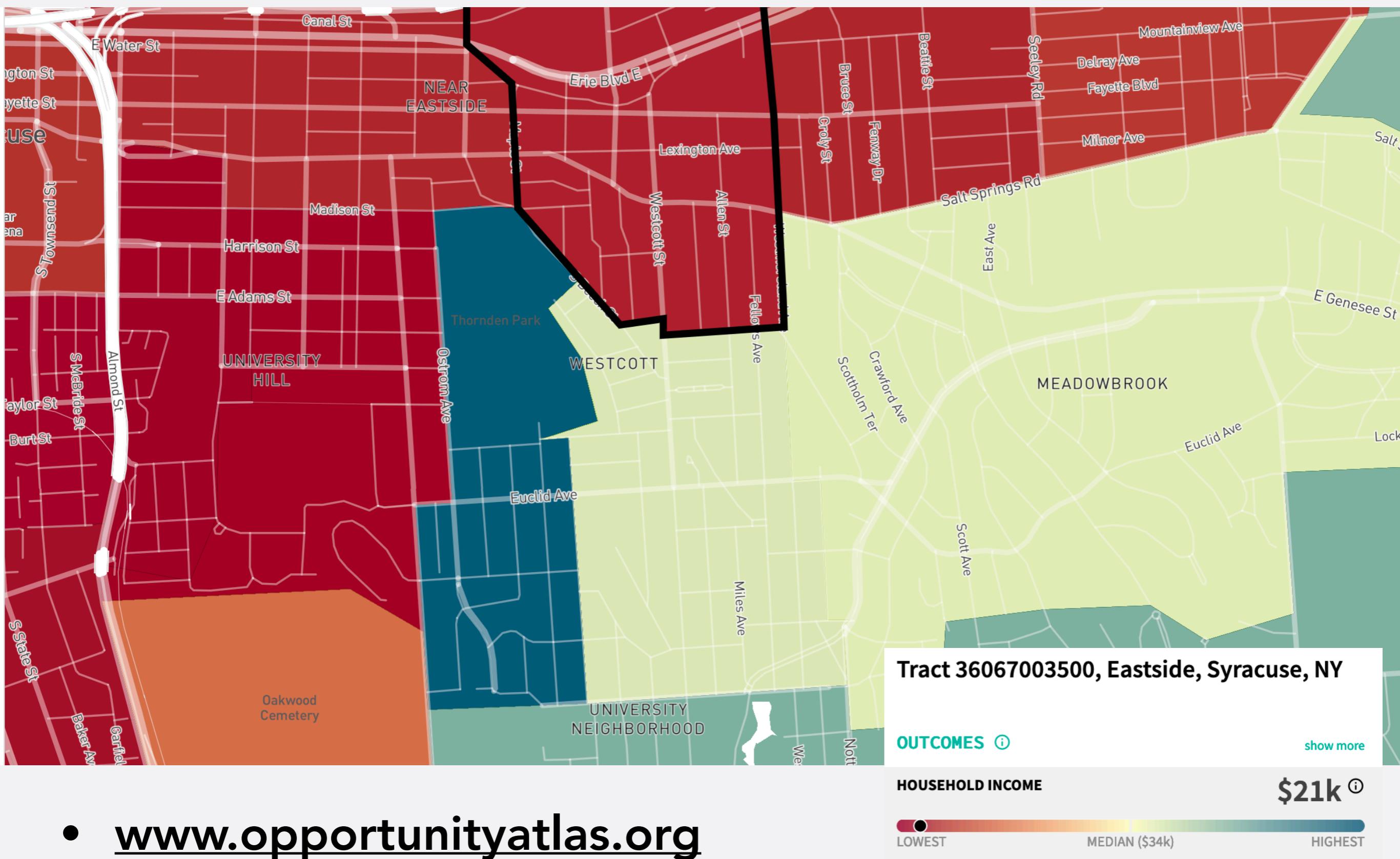
WHY DO A CASE STUDY?

- Looking at effect of growing up in poor neighborhood on earnings in adulthood
 - Quantitative analysis of millions of people in entire country
- What can a case study contribute?
 - Why would we study e.g. just a single neighborhood?

SOCIAL MOBILITY, QUANTITATIVE



SOCIAL MOBILITY, QUANTITATIVE



WHY DO A CASE STUDY?

- Problem: Why exactly are children in second neighborhood so disadvantaged compared to children in the first?
 - IRS tax records don't tell us that

CASE STUDY CHARACTERISTICS

- Detailed examination of a particular phenomenon of scientific interest
- Focus on *one or a few cases, study in detail*

WHY DO A CASE STUDY?

- Case studies help us to figure out **how** exactly causation happens
 - Why exactly would growing up in a poor neighborhood make it difficult to succeed later in life?

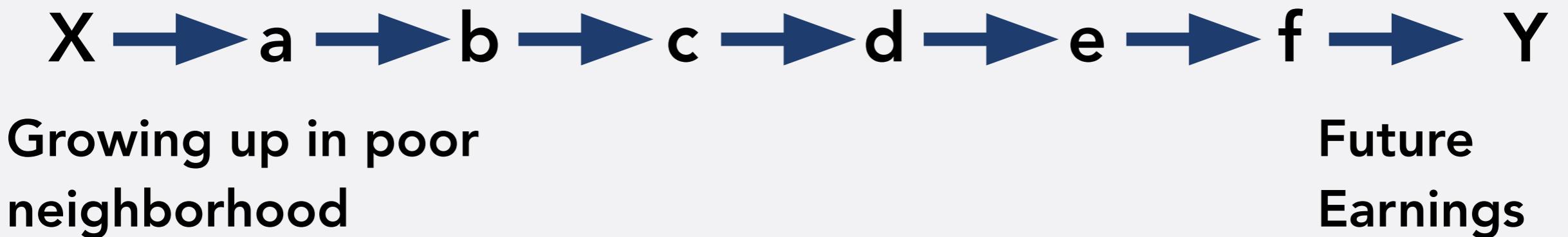
HOW TO DO A CASE STUDY

- Key technique: “Process tracing”
 - Method to identify the causal relationship in a particular case through detailed examination of each step in the causal chain
 - within-case analysis

PROCESS TRACING



PROCESS TRACING



HOW TO DO THAT

- **Goal: Uncover each step along the way from X to Y**
 - **Observe the entire causal process**
 - **Quantitative research often goes from X to Y, without examining the steps in between**
 - **Simple process-tracing example**