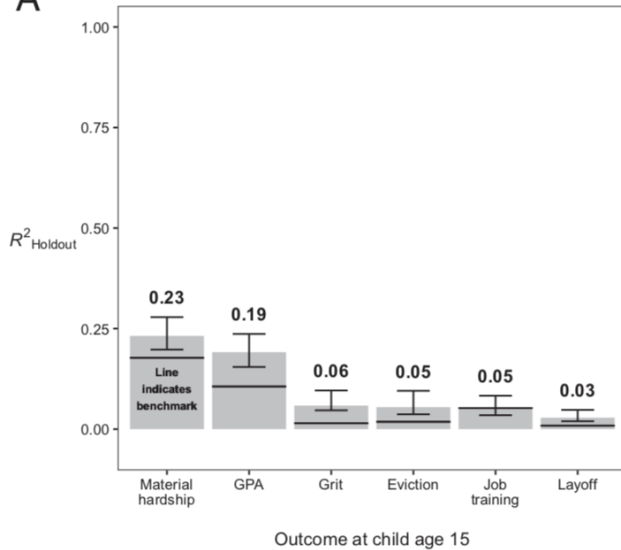# Class slides for Thursday, November 12: Searching for dark matter

Matthew J. Salganik

COS 597E/SOC 555 Limits to prediction
Fall 2020, Princeton University

A

Best submission for each outcome

R^2_{Holdout}

0.23   0.19   0.06   0.05   0.05   0.03

Line indicates benchmark

Material hardship   GPA   Grit   Eviction   Job training   Layoff

Outcome at child age 15

How can we expand our understanding? ($\hat{y}$ vs $\hat{\beta}$)

# How can we expand our understanding? ($\hat{y}$ vs $\hat{\beta}$)

In-depth, semi-structured interviews

Dark matter interview team: Rachel M. Brown-Weinstock, Bobbi Brashear, Kristin Catena, Susan Clampet-Lundquist, Sophie Damas, Katie Donnalley, Kaitlin Edin-Nelson, Kathryn Edin, Alexus Fraser, Sarah Gold, Ashley Hyman, Daniel Kim, Ian Lundberg, Abigail MacLean, Collin "Ren" MacLean, Stefanie Mavronis, Timothy Nelson, Matthew Salganik, Naomi Shifrin, and Vicki Yang.
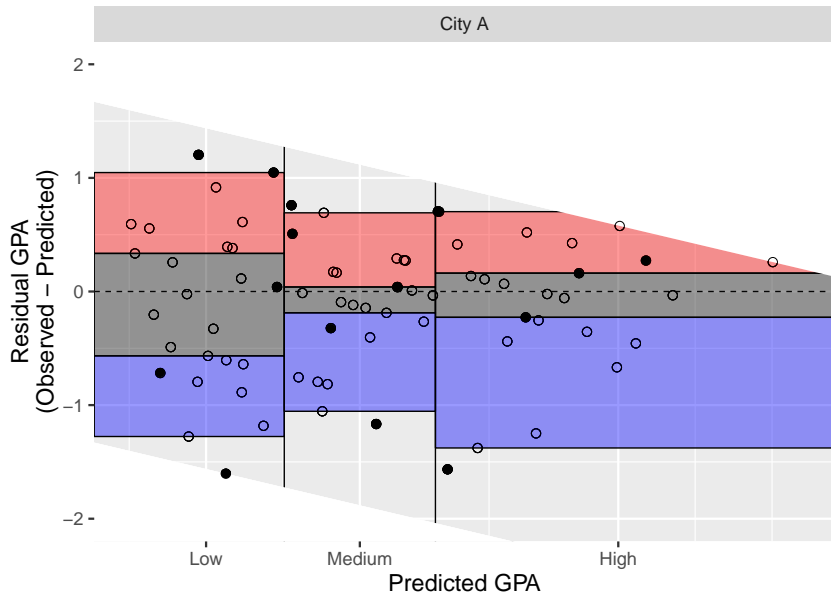
Sampling
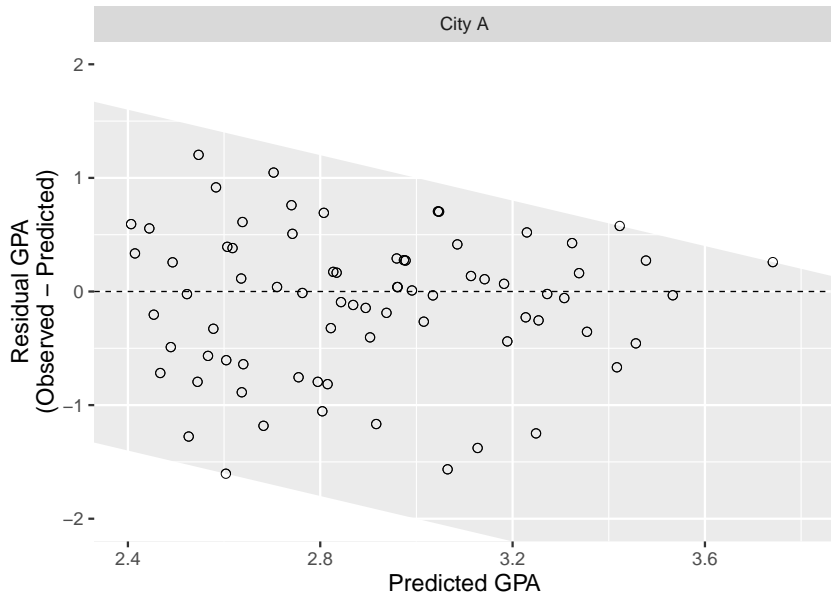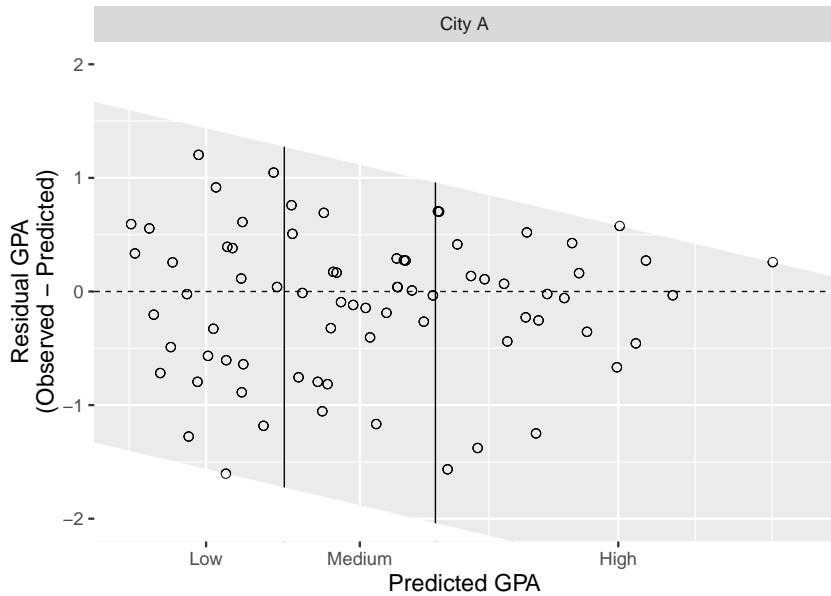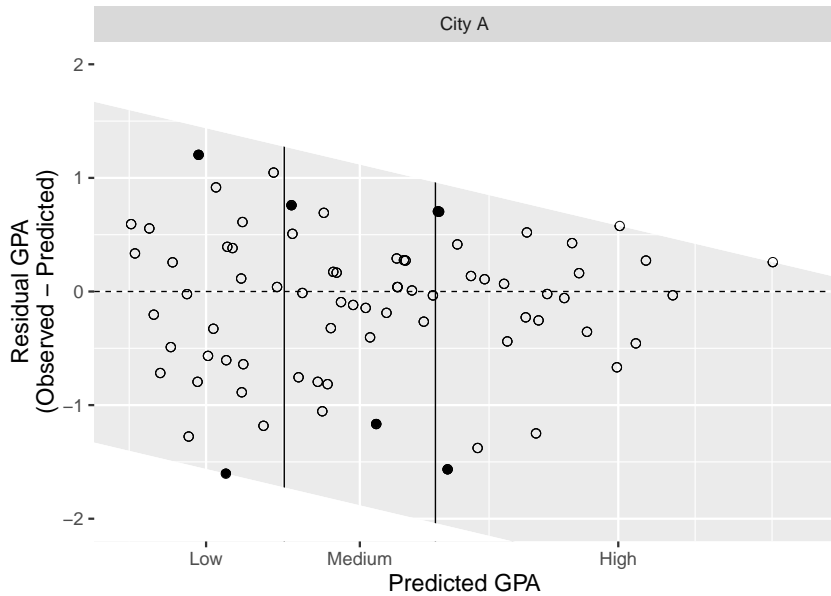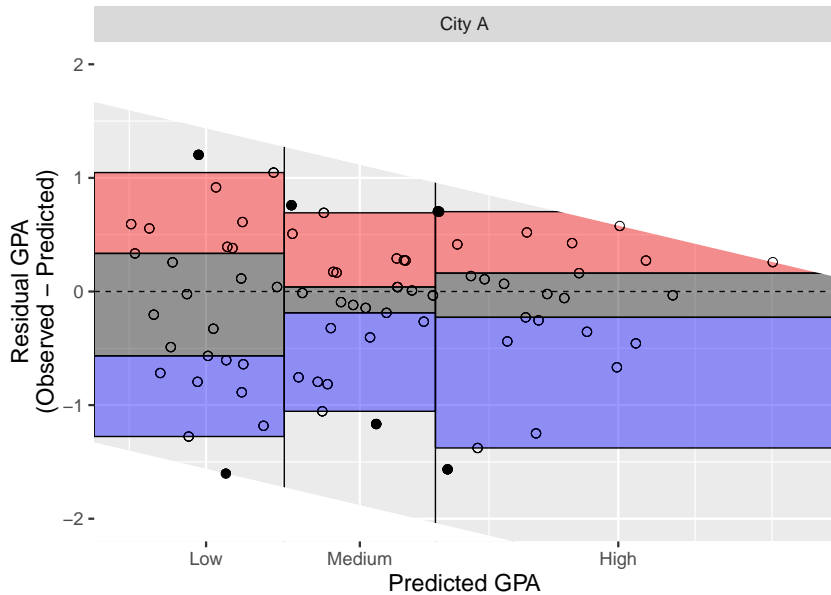
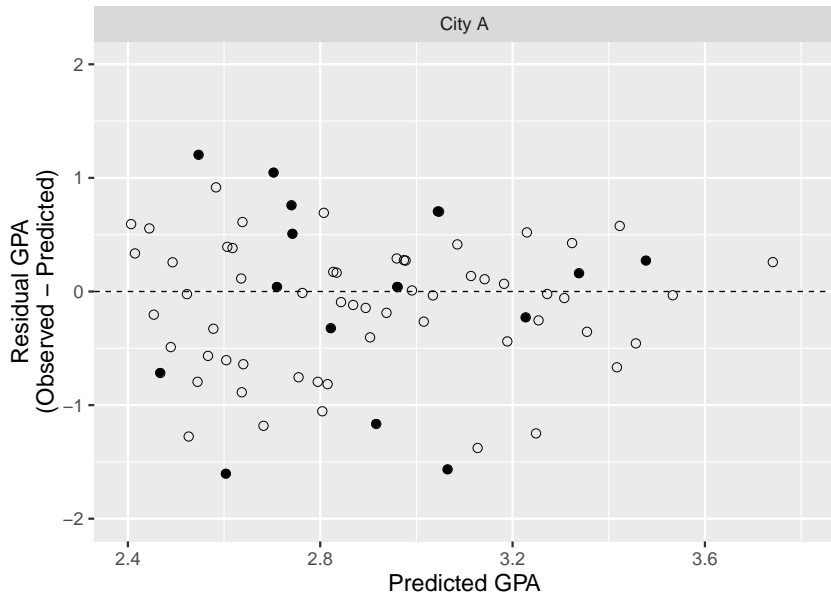Interviewing

- Life history interviews with primary care giver and young adult and follow-up interview with young adult
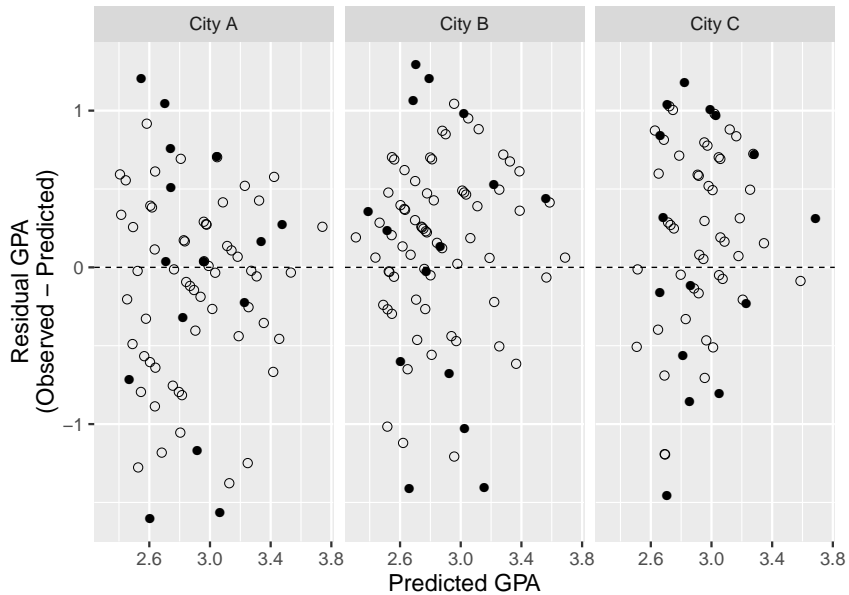
- Life history interviews with primary care giver and young adult and follow-up interview with young adult
- Three key time windows: Birth - 9, 9 - 15, 15+

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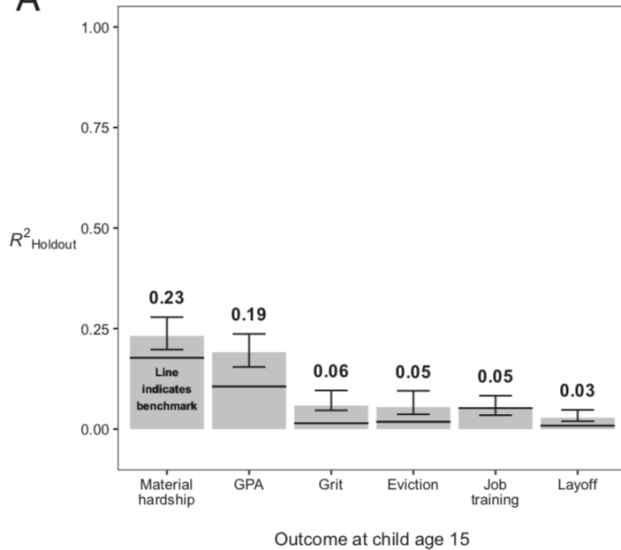- Many different domains in part because of many different researchers

Analysis

► There are standard methods to analyze this kind of data, but we are not going to use them for class because 1) time constraints and 2) they are not well suited to learn about limits to prediction

Recall case selection for this class

A Best submission for each outcome

Welcome guests

Split into groups

Measurement truncation/rare traits

Do you have a second family with whom you have an incredibly deep relationship and who can intervene at key points in your life?

vs

Asked to mother at year 9

E9. Suppose {CHILD} had a problem. Whom might {he/she} ask for help or advice other than you? Could {he/she} ask... CODE ALL THAT APPLY

e9_0 No one 0

e9_1 Your parents, ...1

e9_2 {{CHILD}'s father, ...2

e9_3 {{CHILD}'s father's {parents or} relatives, ...3

e9_4 Other relatives, ...4

e9_5 Friends, neighbors, co-workers, ...5

e9_6 {Your {partner/spouse}, or 6

e9_7 {Your {partner/spouse}'s parents or relatives? 7

Limited "dynamic range" of data collection

IN-HOME OBSERVATIONS GUIDE

Neighborhood
- Garbage/litter/broken Glass
- Condition of buildings
- Graffiti
- Abandon buildings and vehicles

Immediately outside home
- Entrance lighting
- Broken Steps
- Broken glass/toys
- Large ditches
- Alcohol/drug Paraphernalia
- Garbage/litter
- Peeling paint/damaged walls
- Broken/cracked windows
- Condition of road paving

Interior Common Areas
(for Apartments only)
- Cracks/holes in walls
- Holes in floor
- Broken plaster/peeling paint
- Exposed wires

Interior of home/apartment
- Broken/cracked windows
- Exposed wires
- Cracks/holes in walls/ceiling
- Holes in floor
- Broken plaster/peeling paint over 1 sq/ft
- Lighting
- Crowded
- Cluttered
- Dirty/trash
- Unsafe for young children (exposed wires, pests, broken glass, poisons, broken stairs/walls, peeling paint, flames/heat in reach, weapons)/
- Children's artwork, photos of children
- Noisy from inside the house
- Noisy from outside the house
- Alcohol/drug paraphernalia

Child's appearance
- Clothing
- Hygiene
- Hair
- Odor

Home Scale
- Freq. of interaction with child
- Responded to child
- Encouraged child to contribute
- Helped child demo skill/achievement
- Used term of endearment
- Positive feelings of or to child
- Showed physical affection
- Shouted, showed annoyance/hostility toward child
- Slapped/spanked child
- Scolded/criticized child
- Was Calm
- Clear speech
- Initiated verbal exchanges
- Expressed ideas freely, easily
- Understood questions
- Number of books (10?)
- Freq. phone rang/answered phone
- People coming/going
- Children screaming
- Parent yelling (not at child)
- Other children/adults interrupting
- Some turned on loud TV/music

Child
- Freq. of positive emotions
- Freq. of negative emotions
- Persistence at PPVT/Digit Span/WJ
- Cooperative at PPVT/Digit Span/WJ
- Attentive with interview
- Cooperative with interview, with physical measurements

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