

# In-person session 2

**January 22, 2026**

PMAP 8521: Program evaluation  
Andrew Young School of Policy Studies

# Plan for today

Files, folders, and projects

Regression, p-values, and null worlds

R lab! with `{ggplot2}` and `{dplyr}`

# Files, folders, and projects

**Why so much content  
these first two weeks?**

# How much should I be reading?

**What does all this R stuff  
have to do with social programs?!**

# File paths, working directories, and RStudio projects

.zip files

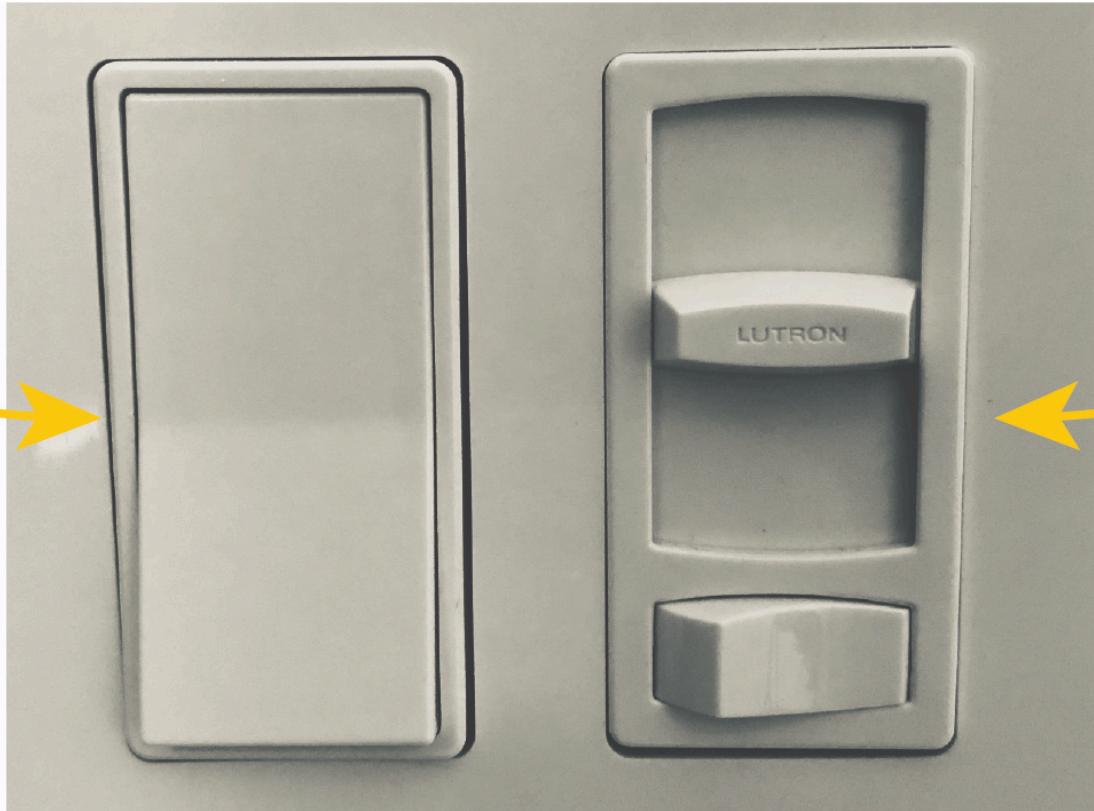
# The hyperliterality of computers

## Warnings and messages

# Quarto tips

# Regression stuff

**Categorical  
variable**



**Continuous  
variable**

From slides

Many  
simultaneous  
continuous  
variables



Many  
simultaneous  
categorical  
variables

# Regression equations

**And is the intercept ever useful,  
or should we always ignore it?**

**Why use two steps to create a regression in R?  
(i.e. assigning it to an object with <-?)**

**Why use `model_parameters()`  
from the `{parameters}` package?**

## How was the 0.05 significance threshold determined?

Could we say something is significant if  $p > 0.05$ , but just note that it is at a higher p-value?  
Or does it have to fall under 0.05?

Why all this convoluted  
logic of null worlds?



## 5-Minute Healthy Oatmeal

Fit Foodie Finds

4.6 ★★★★★ (93)

10 min



## Basic Oatmeal Recipe

Del's cooking twist

5.0 ★★★★★ (1)

15 min



FeelGoodFoodie

[https://feelgoodfoodie.net › recipe › how-to-make-oat...](https://feelgoodfoodie.net/recipe/how-to-make-oatmeal/) ::



## How to Make Oatmeal

Jan 17, 2019 — Microwave Instructions. Place the **oats**, water and salt in a microwave safe bowl. Heat in the microwave on high for 90 seconds. · Stovetop ...

★★★★★ Rating: 5 · 8,192 votes · 4 min

[Microwave Cooking...](#) · [Stovetop Cooking...](#) · [Healthy Oatmeal Recipes](#)



Downshiftology

[https://downshiftology.com › ... › Courses › Breakfast](https://downshiftology.com/courses/breakfast) ::



## Easy Oatmeal Recipe

Sep 11, 2023 — Learn how to make **oatmeal** that's hearty and creamy. It's easy to make on the stove or in the microwave - and it's healthy too!

★★★★★ Rating: 5 · 21 votes · 7 min

[Popular Types Of Oatmeal](#) · [How To Make Oatmeal Like A...](#) · [Make Your Oatmeal Taste...](#)

**Do we care about the actual coefficients  
or just whether or not they're significant?**

**How does significance  
relate to policy relevance?**

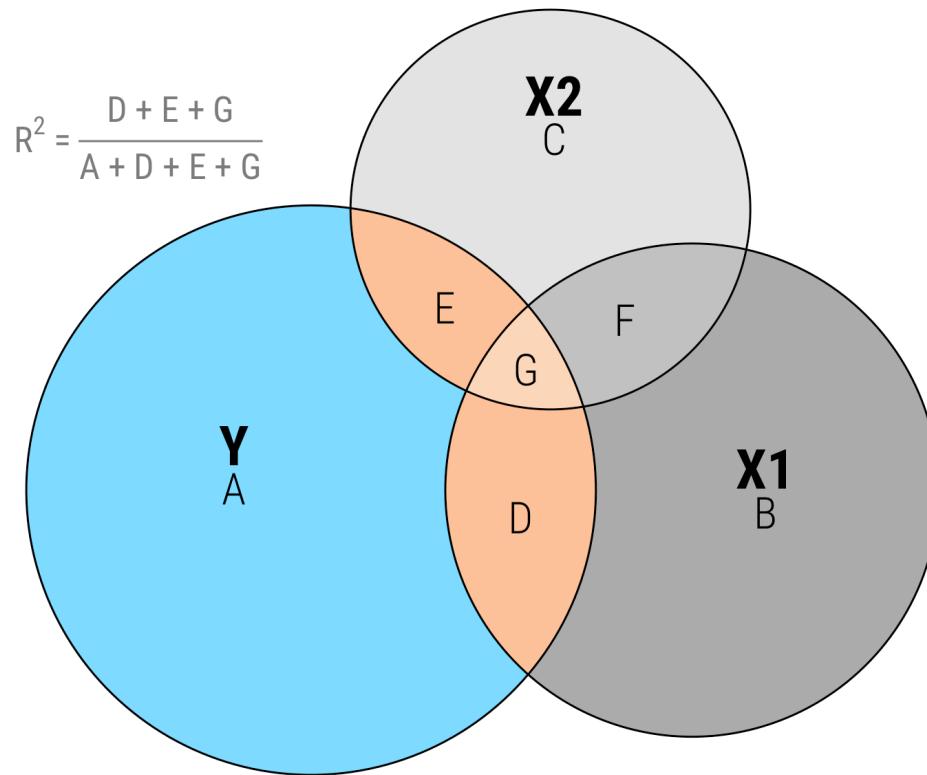
**How does significance  
relate to causation?**

**If we can't use statistics to assert causation  
how are we going to use this information  
in program evaluation?**

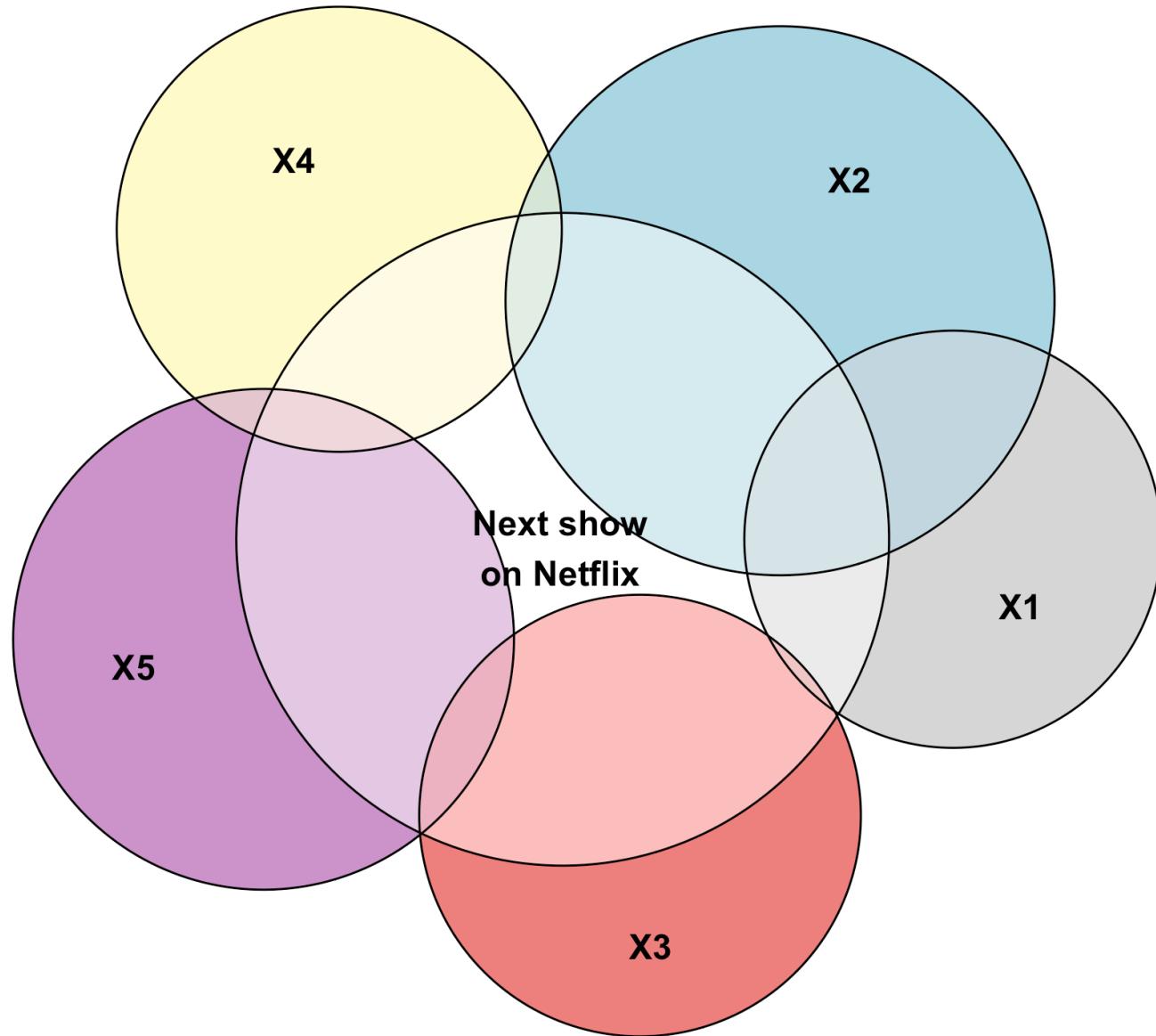
**What counts as a "good"  $R^2$ ?**

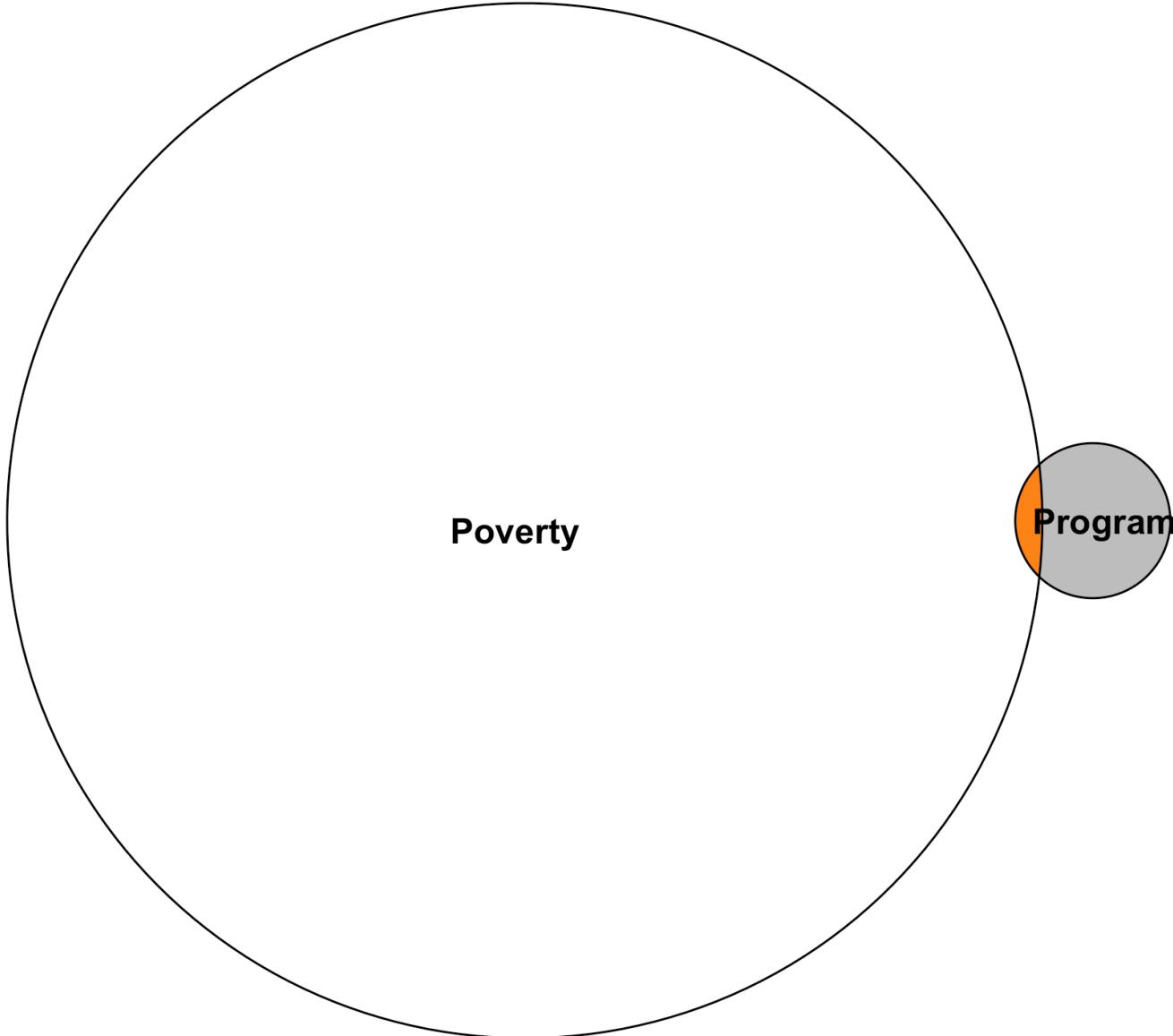
## **$R^2$ represented as an Euler diagram**

Orange area (D + E + G) shows the total variance in outcome Y that is jointly explained by X1 and X2



Circles sized according to each variable's sum of squares; size of overlapping areas is not 100% correct due to limitations in available geometric space

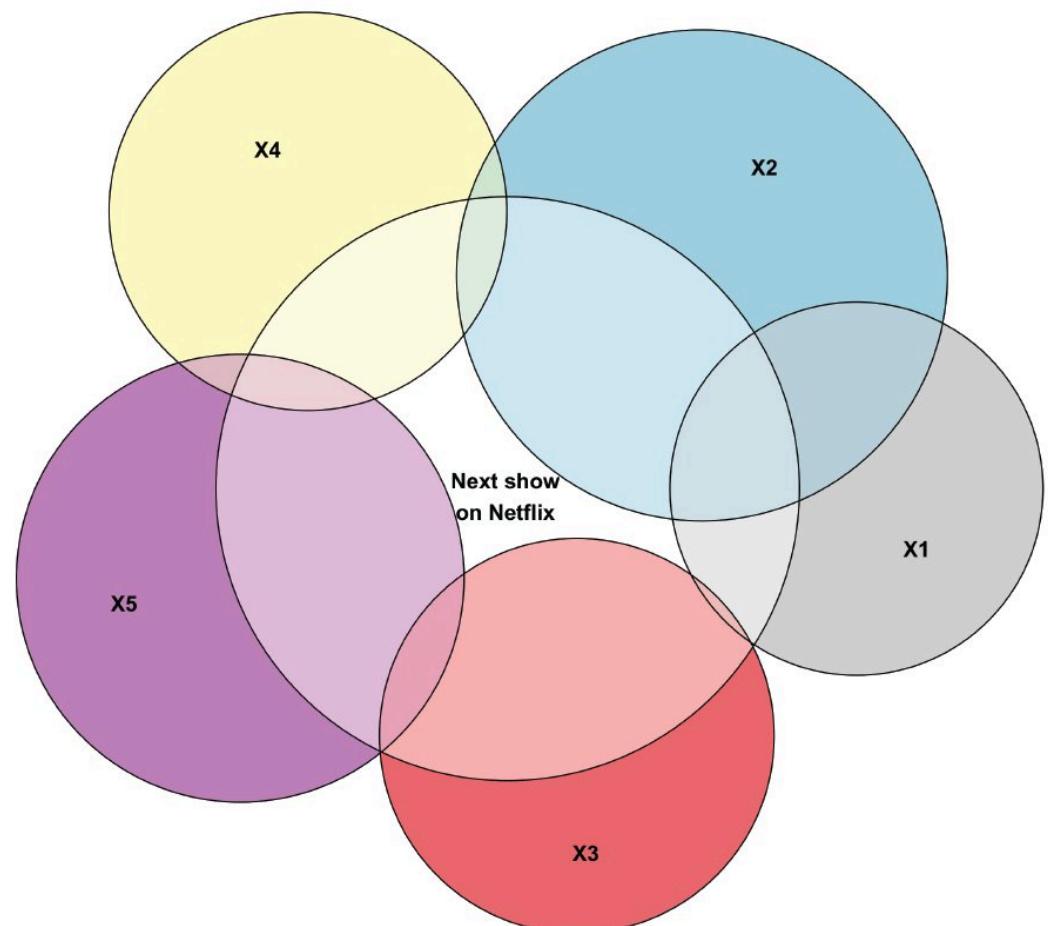




## Regression focused on prediction

Focus is on Y

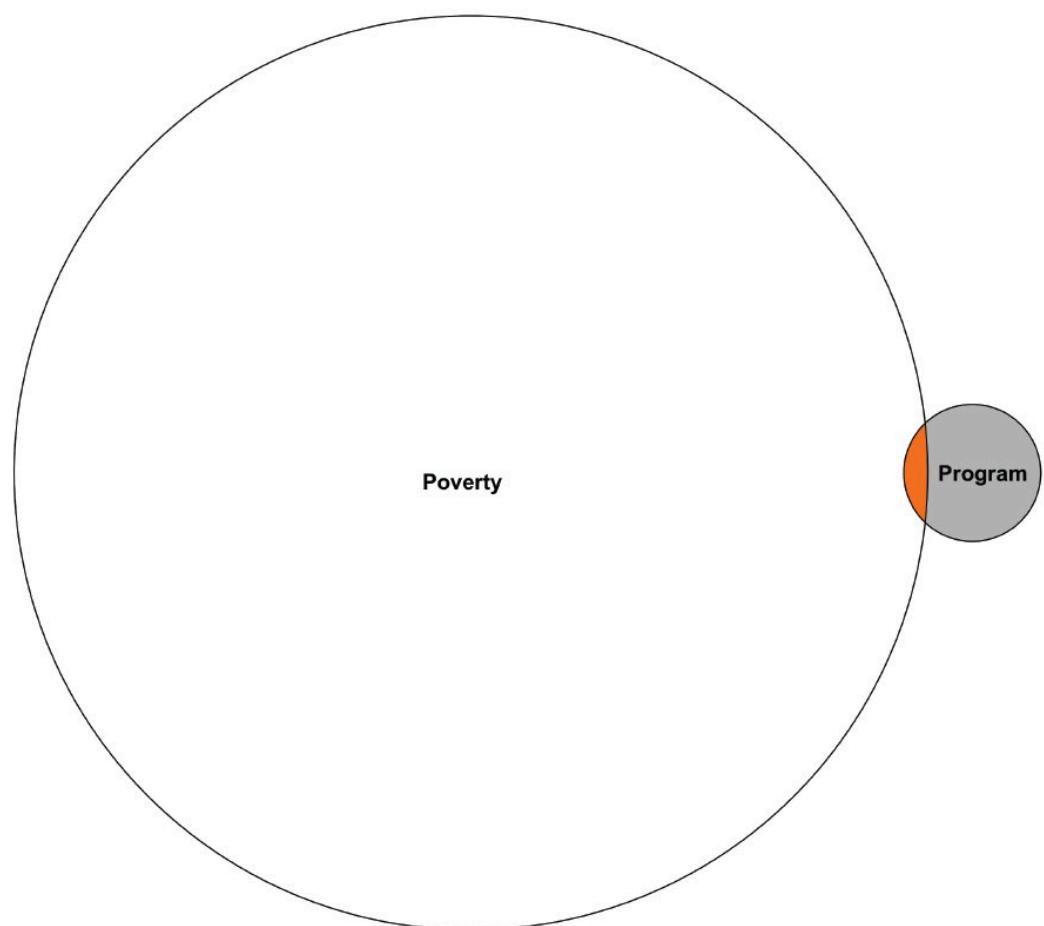
Minimize unexplained variation in the outcome



## Regression focused on estimation

Focus is on a single X

Get that little sliver as accurate as possible



# R lab!

# {ggplot2} and {dplyr}