Is there ever more than one public school in the same area? Does that mean the family moved?

- Does not necessarily mean family moved, student just moved to a different school

For example, based on where you live in Durham, public school assigned to is pre-specified. The only way to switch schools without moving is going to private/charter school. Can't move child between public schools because you want to

- Category 4 may be just people who moved
- Potentially switch for IB/AP programs

Is there a pattern in the vanishing?

- Part 2 will quantify this, survival analysis

Make survival graph for original assignment, sometimes a push effect makes people leave, putting people in a class that is inferior might make them leave

- Use that as an instrument to estimate probability of leaving

Hypothesis is smarter kids are leaving but that probability may be higher if they also felt like they were randomized poorly

Advantage for model is you can control for class type, to look at isolated effect of ability
→ Interact those two, to see if there is marginal impact of isolation

Is there a reason you're using log(Ti) instead of proportional hazards model?

- Assumed exponential hazards
- Maybe use logit model instead (probability of exit as response) → Try this instead because there might be waves/time periods parents want kids to move

Pretend not looking at departures, just peer effects. Say who are my peers now, what's their average ability, how does that impact me? In the following year, if smart ones leave, current measure (CA) will go down. Including average skill of those who leave may be a double count?

- All of measures ability are lagged
- Assume classes stay the same

Stuff Connolly wrote on board
Last year 20 students —> Avg score 100
5 left → Avg score 120
14 stayed → Avg score 85
*Leave own test score out*

Regression now
L: 25%
PA: 120
CA: 85
PA*L interaction

The more people there are, the stronger the effects will be
CA is not weighed by number of people → seems asymmetric

What if you thought of L as a dummy? Can't interact CA and PA with L because L would be 0
L = 1 Dummy if student left
PA*L = 120*5
CA~~*Dummy if stayed~~ = 85*14

What is the notion of dilution? The more people there are, the more diluted each individual's effect is.

Can you assume that the magnitude of initial difference between the scores (between individual and mean) would have an impact on peer effects?

Magnitude of difference between individual and mean is a factor that determines if a student leaves → larger magnitude increases the probability a student leaves

Do you have test score for student year before? A
→ (A - classroom average) as a dummy and interact with student i's ability

Does it have to be student-based? Can it be classroom-based?
Look at 3 models:

1. Average score of given class
2. Variance in a class
3. Correlation between 2 student's grades

Make A a z-score
Mean center everything → If you're x amount above/below the average, what's the marginal effect

Average has a fundamental impact on the course
Think about number of students → would have to interact number of students with class type

What about people who came into the class?

- Not sure, have to think about that

Look at when test occurs (beginning vs. end of the year)

You're making assumption that people leave, those who stay are exactly the same as before and no one comes in

- Should be able to identify that given your dataset

More relevant for cases of small class because they are getting new people
New student whose parents don't know anything, may just stick child into regular class
Did regular classes get smaller? No, so there must have been replacement

When student enters, re-randomized into a particular type. How is that possible if they're increasing number of small classes?

- Movement into small classes only happened between K and 1st grade

If at beginning of year, you're fine. If at end of the year, you can just use the contemporaneous CA and the lag PA.

Class size and percent left

Include percentage of class that remained (1-L)

- Not collinear, it's a weighting
- True average of class last year is a weighted average
- CA*(1-L)
- L is not a dummy, L is a percentage

Are all regular classes and all small classes the same size?

- Yes all the same range

For each student, do you know how may students are in their class?

- Have Class Size variable

Keep type of class, but also include total number of students in class as a predictor

Make L number of students who left instead of proportion of students

- If include class size, proportion is included in combination of number and total class size

Don't have data for private schools in Tennessee

Stanford data - but problem is identifying the student and it's not randomized
If Tennessee has a similar dataset - can identify students that remained in a public school in Tennessee

- Assume those no longer in that dataset either moved out of state or went to private school
- Depends on IDs used for students in this dataset and that one

Can get clean estimates for 1-5. Step further by turning 5 into the 4 “vanishing” categories

- Likely that not all 4 vanishing are impactful → only focus on 1 and 3 (went to private school or migrated to different state)

Blue collar jobs don’t migrate as much (most schools are rural)

Do you have student names? Family factors?

- No names just ID
- Have parental income → check on how that’s quantified

Check of students who leave, what % were on free-reduced lunches?
Probability that someone on free lunches that left for private school is low
How far you are from the mean

Why does it matter if a student who left specifically leaves to a private school?

- If you know cream-skimming happens and kids in public school get left behind, policy implication → public school board will advocate against kids leaving to private schools if that will harm remaining public school students

Charter/magnet schools may take students more away from public schools compared to private schools

- Religious schools are much cheaper than regular private schools
- Get a list of private schools
- Certain families always intend to send kids to private school but may wait until kids are older

<u>More data options</u>
Look for list of private schools in Tennessee → Use Google Maps API
ACS info on education? Probably no information on private/public schools
Look for other surveys besides ACS
Find migration estimates

Of those who left, can I predict who were going to private schools?
InfoUSA → Another measure of residential mobility

Was this project throughout Tennessee?

- Schools volunteered to be in experiment, may be self selection
- Randomization within schools

Find in/out migration in cities and counties

- Ex: If only 2 people migrate to a city in any year, you can exclude those
- But did not have internet that far back

Look at list of current private schools and when they started

Not that easy to figure out which schools were the best in 1985, so would you move schools?

- We will remove those schools

Split kids into migrated or left to private school
Clustering idea → how to split kids into two groups?

Find migration data as far back as 1800s → see how much movement there is
If see high turnover, then this analysis becomes relevant