Econ 330: Urban Economics

Lecture 8

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April 21st, 2021

Lecture 8: Neighborhood Choice II

Schedule

Today

1. **Model of Neighborhood Sorting**
2. **De Facto or De Jure?**
3. **Discussion**

Upcoming

- HW2: April 30th (Friday, not Sat)
- Midterm: May 3rd -- more details next week

Neighborhood Sorting

Last class we asked:

1. Who gets desirable neighbors?
2. Will there be segregated or integrated neighborhoods?
3. Will there be sorting or mixing with respect to income, age, race, or some combination of those factors?
4. What are the implications for the price of land in various neighborhoods?

Intro

We will focus on positive externalities (for now). **Assume**

- These increase with income and education level

Question:

- What is the income mix of neighborhoods - segregated or integrated?

Model

- Two neighborhoods: A and B, each with 80 lots
- Only difference between the neighborhoods is income mix

Model

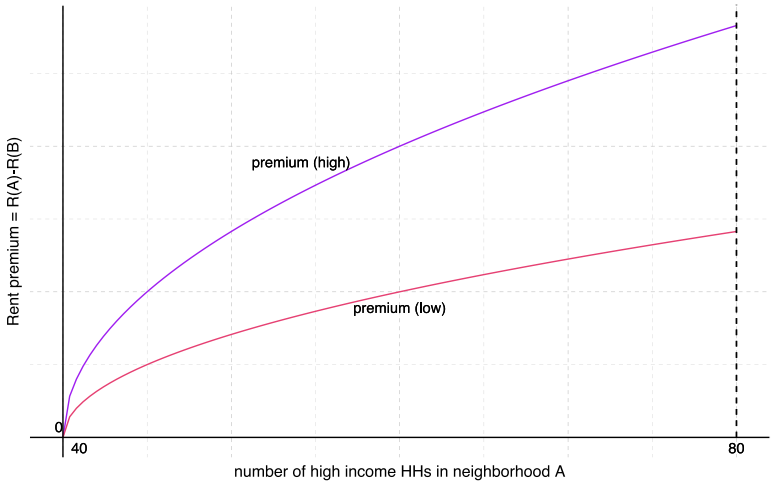
In this model, individual choices to stay or move are determined by the *rent premium*

- **Rent Premium** (for neighborhood A): $RP = R(A) - R(B)$
- Premium for workers might be different by type: $RP_{high} \neq RP_{low}$
  - IE, the benefit of living close to high types might vary by type

    Assume

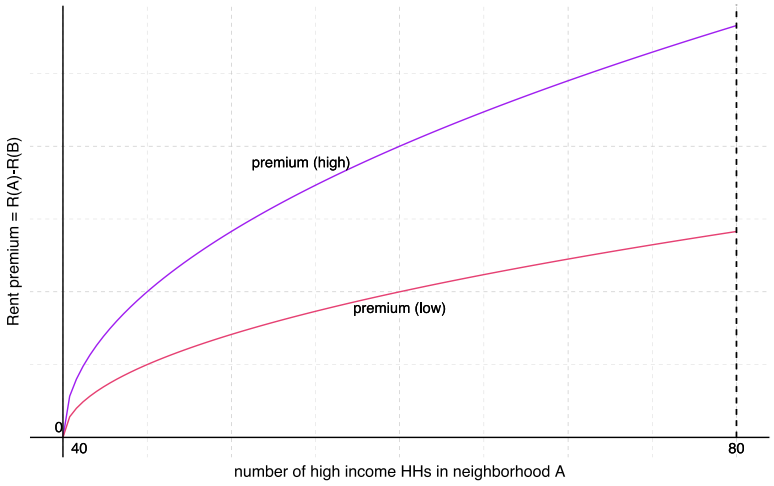
    - **Houses go to highest RP group**
      - Means either highest WTP or consumer surplus leads to bargaining amongst households
    - Everyone in the same neighborhood pays the same rent/price

Segregation Eq



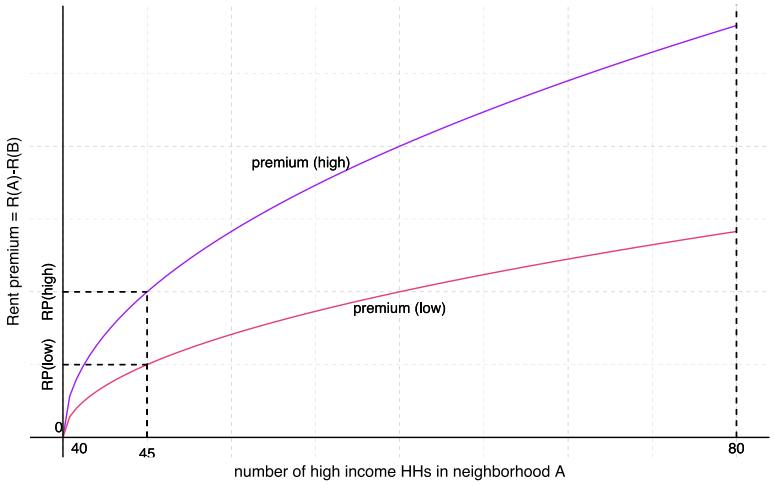
- Suppose we start at 40 HHs in neighborhood A. This is a **perfectly intergrated** equilibrium
- The RP is 0 for both groups, so households are indifferent between neighborhoods (no incentive to move)

Segregation Eq



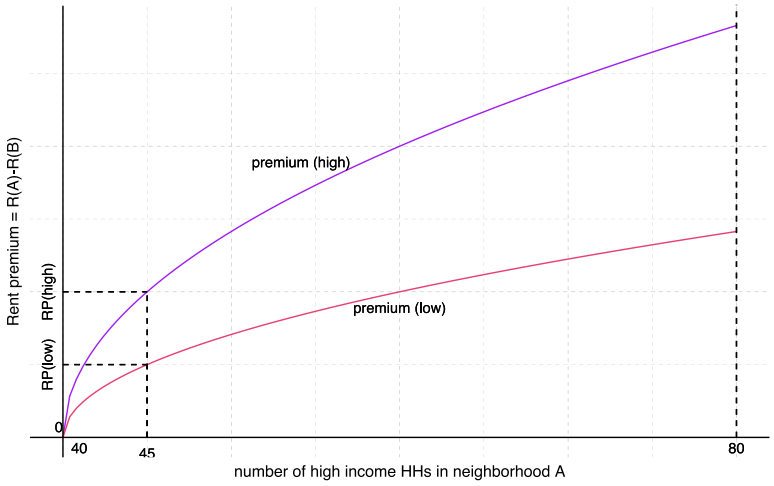
- Suppose we start at 40 HHs in neighborhood A. This is a **perfectly intergrated** equilibrium
- The RP is 0 for both groups, so households are indifferent between neighborhoods (no incentive to move)
- What happens if there is a small "shock" to the equilibrium and a few high income households move to neighborhood A?

Segregation Eq



- If 5 high income HHs move into A, $RP(high) > RP(low)$
- This means high income HHs are willing to bid more for neighborhood A even if they are in neighborhood B. So what happens?

Segregation Eq



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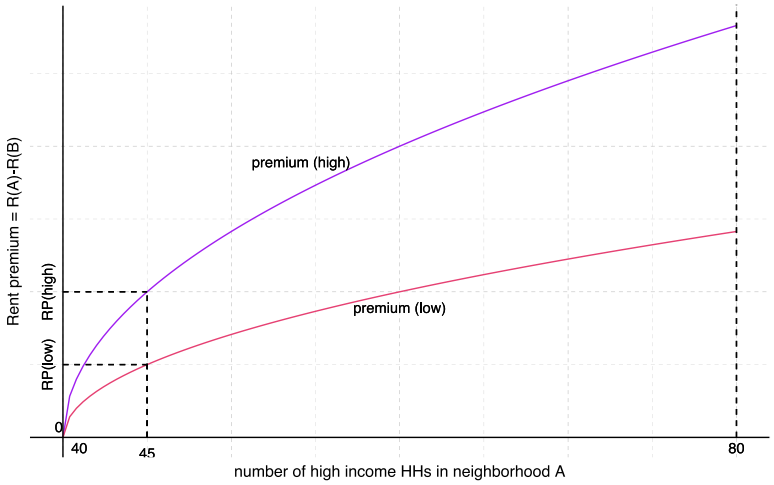
- More highs move in (and since they bid higher, they get to live in neighborhood A). This is called a *self-reinforcing effect* or positive feedback loop.

Segregation Eq



- **Axiom 2**: ***Self-reinforcing effects*** *generate extreme outcomes* $\implies$ we end up at a fully segregated eq of all 80 high inc HHs in nbhd A

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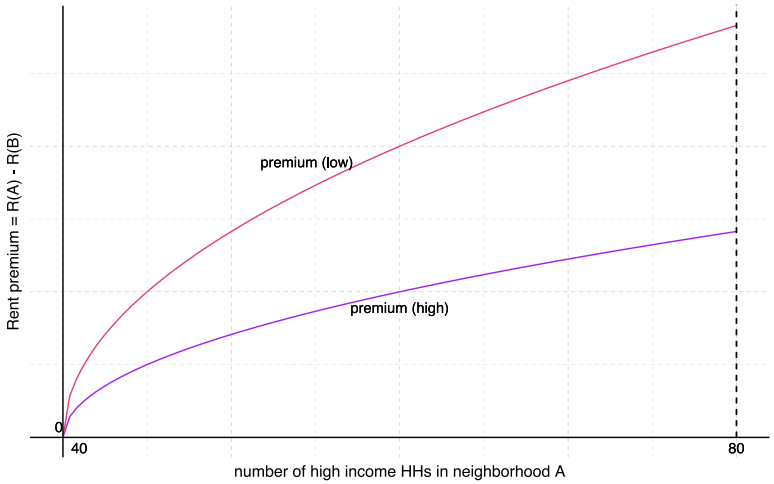
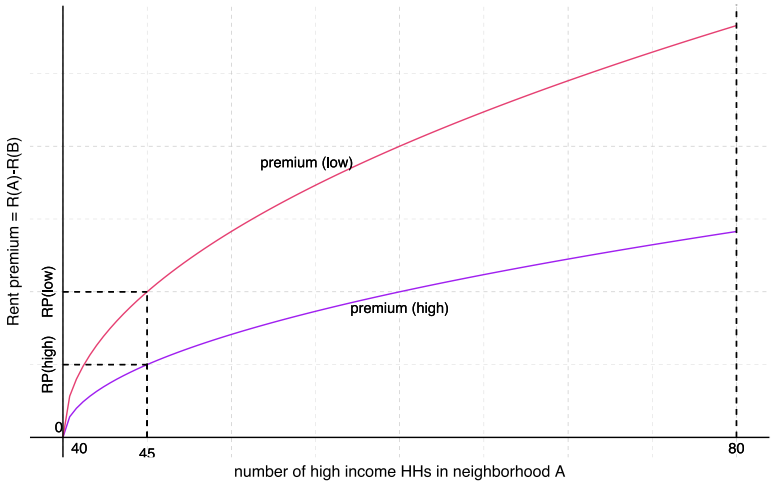


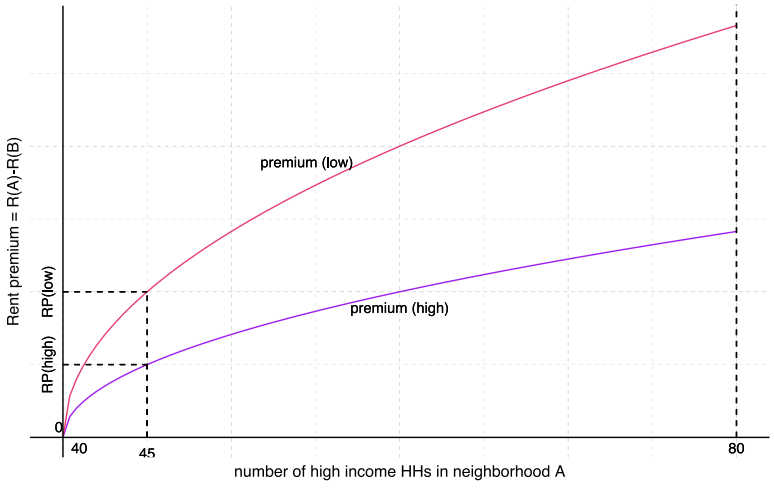
- Is the story the same here?

Integration Eq



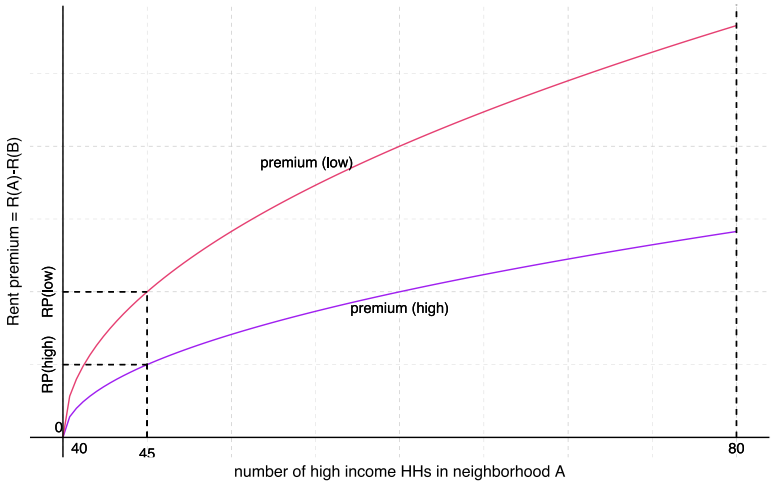
- Is the story the same here?
- Now, a small movement of high-income HHs into A means $RP(High) < RP(low)$

Integration Eq



- Is the story the same here?
- Now, a small movement of high-income HHs into A means $RP(High) < RP(low)$
- So we get pushed back to the initial equilibrium. In this case, integration is the **only equilibrium**
- Furthermore, integration is a **stable equilibrium**

Integration Eq



Note: 80 high income HHs in A is not an EQ because $RP(low) > RP(high)$. So low incomes will outbid highs and move in

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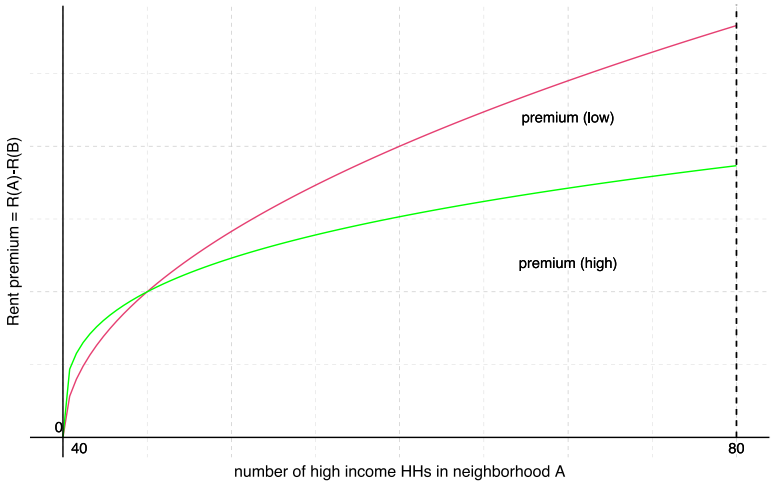
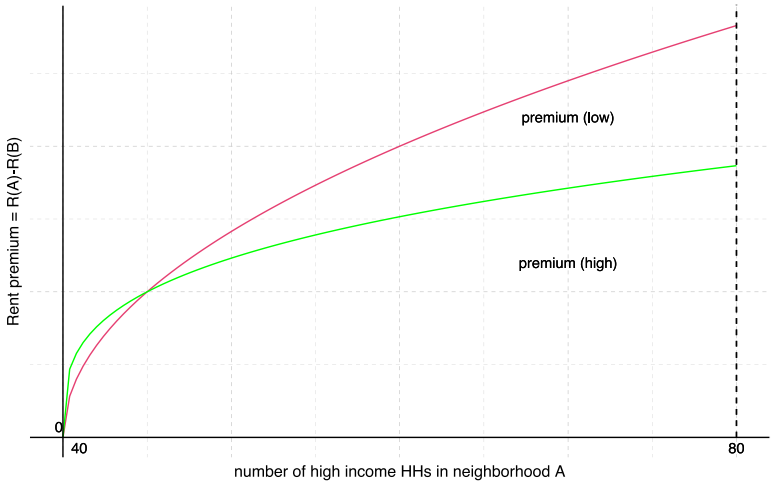
Mixed Eq



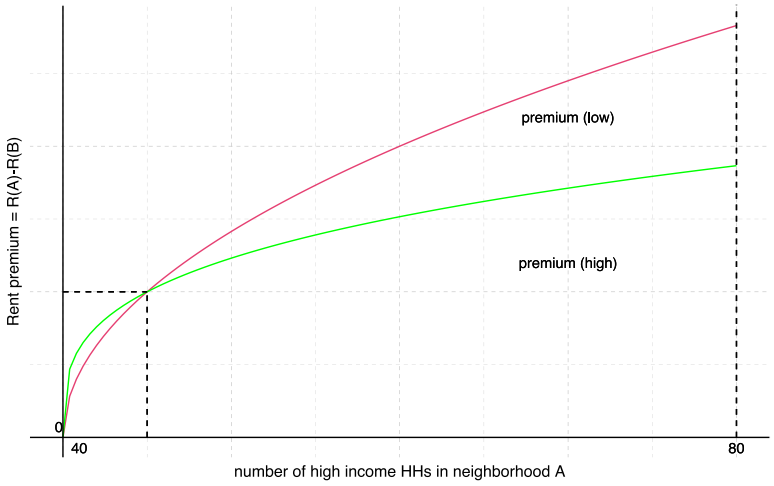
- What about a story like this?

Mixed Eq



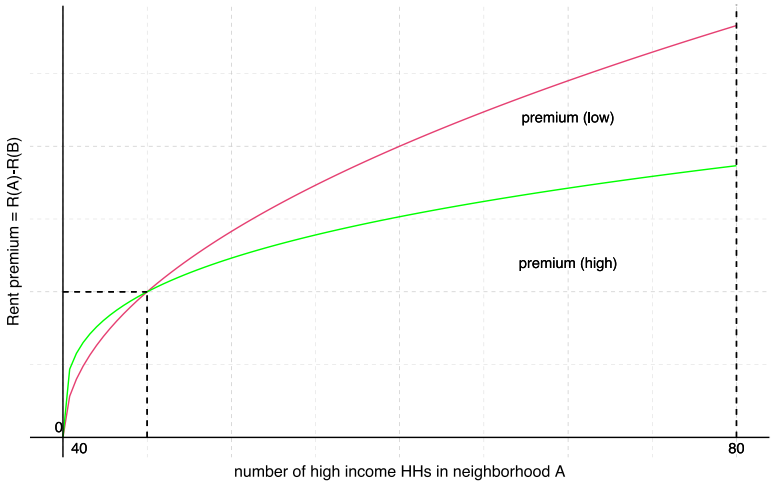
- What about a story like this?
- Integration eq (40 of each type in each nbhd) is still an equilibrium. Is it **stable**?

Mixed Eq



- What about a story like this?
- Integration eq (40 of each type in each nbhd) is still an equilibrium. Is it **stable**?
- No. A small deviation away means $RP(high) > RP(low)$. So highs outbid lows until $RP(high) = RP(low)$ at 45 highs in A and 35 lows.
- Is 45 highs in A stable?

Mixed Eq



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- Is 45 highs in A stable? Yes (you think about why)

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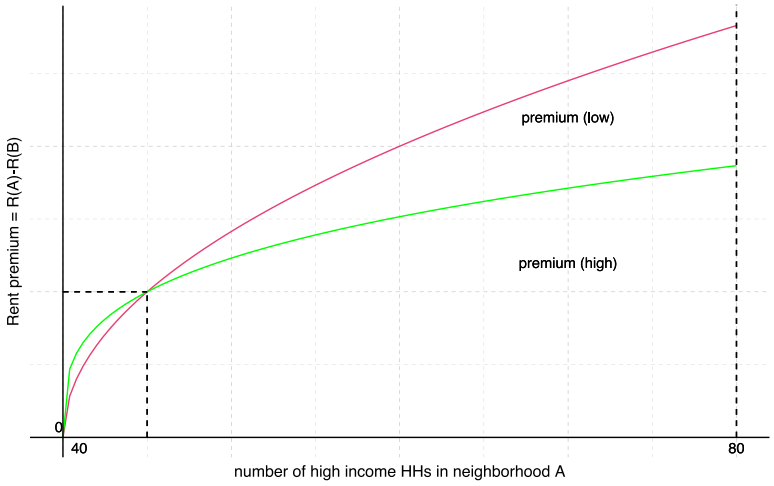

- **Note**: Full segregation here is *not* an equilibrium for a similar reason to the last example

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- Is 45 highs in A stable? Yes (you think about why)

Eq Defn

To be clear, an *equilibrium* in this model is a point at which the rent premium is in balance across both groups

- This will hold when the rent premium curves intersect. Except at full segregation
  - If the RP for the group listed on the axis is *higher* then this will also be an equilibrium because **there is no tendency for change**
  - If the RP for the group listed on the axis is *lower* then population dynamics move away from this point

Stable vs Unstable Eq

1) An eq is **stable** if a small movement away will encounter self - **correcting** forces

- An eq is stable if when you move away from it, the pop. dynamics push you back to where you came from

2) A eq is **unstable** if a small movement away will encounter self - **reinforcing** forces

- That is, an eq is unstable if when you move away from it, the population dynamics push you even farther than where you came from

A Heuristic

1) Draw a verticle dashed line at every intersection point

2) For every region between the verticle dashed lines, it must be the case that one of the rent premium curves is above the other

- If the rent prem curve for the group listed on the axis is **higher**, then this group will increase in number. Draw rightward arrows on the axis
- If the rent prem curve for the group listed on the axis is **lower**, then this group will decrease in number. Draw leftward arrows

A Heuristic

3) If there are rightward arrows pushing toward 100% in one nbhd, then 100% (complete segregation) is an eq even if the rent prem curves do not intersect there

4) For every eq. value, look at its immediate vicinity

- If arrows are moving towards it, it is a **stable eq**
- If arrows are moving away from it on one or both sides, it is a **unstable eq**

Checklist

1) **Model of Neighborhood Sorting** ✅

- Segregated, Integrated, & Mixed Equilibria
- Stable vs Unstable Equilibria

2) **De Facto vs De Jure**

3) **Discussion**

Last Model: Big Picture

The model we just covered assumed that people sort entirely based on personal preferences (essentially). We ignored:

- Financial constraints (varies by demographic group)
- Information constraints (may vary across demographic groups)
- Institutional constraints (historical and present -- **varies across demographic groups**)

The equilibrium we observe in the last model might be called **de facto**

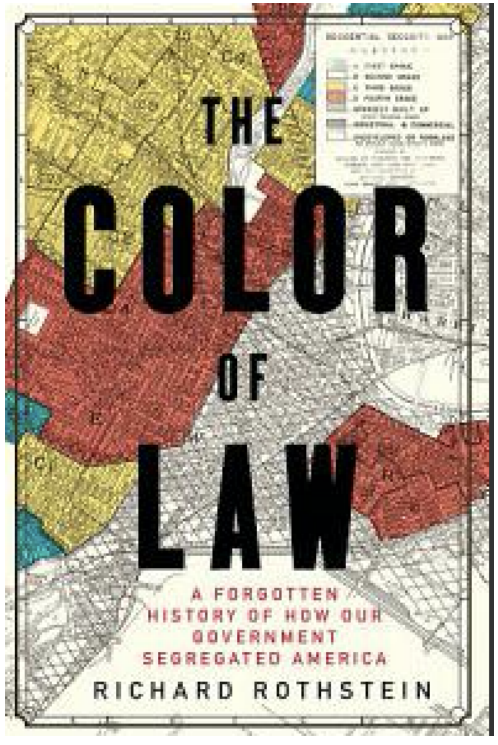
Definitions

De-facto segregation: Results from choices made by private individuals (and not deliberate actions by institutions)

De-Jure segregation: Results from (either one or more) local, state, and federal policies that are specifically designed to exclude certain groups

Book

You will have an extra credit assignment based on a video and interview with Richard Rothstein on his book The Color of Law



A bit of History

Let's walk back in time a bit....

- **October 29th, 1929:**
  - Economic devastation. Profound impact on daily American life and culture
  - Bank failiures $\Longrightarrow$ mortgages are harder to come by
- **1934:** National Housing Act
  - Created the Federal Housing Administration (FHA). **Goals:**
  - facilitate access to affordable home low for low-middle income buyers
  - subsidize construction
- **Sept 1st, 1939:** Germany invades Poland (and WW2 beings)

A bit more history

1945 WW2 is over. Americans are coming home from Europe

- **unprecented housing demand**
- **Europe also has a massive refuge crisis (unfortunately we don't have time for this)**

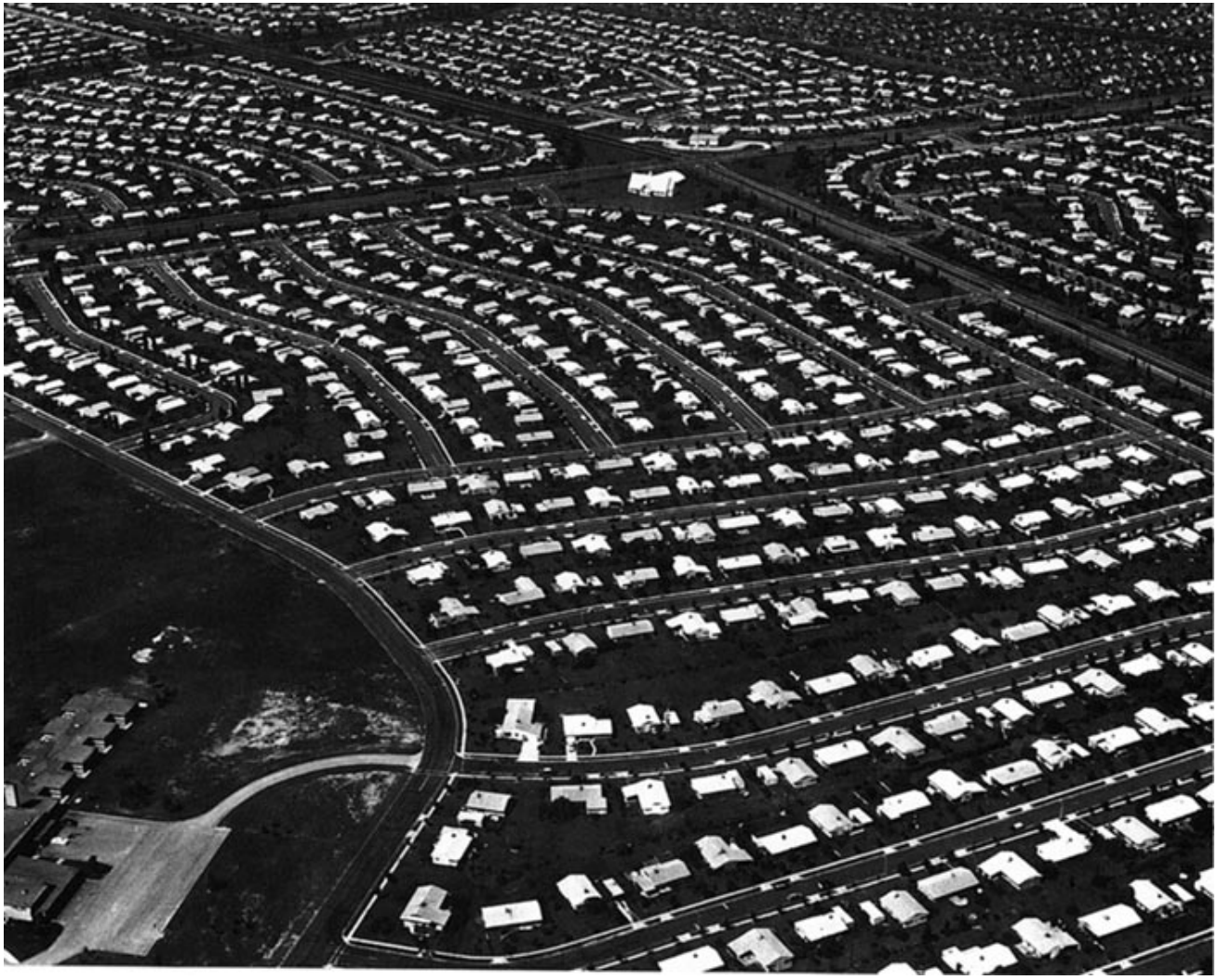
FHA insured (guaranteed) home loans for banks. Except they explicitly did so on the condition that homes were not sold to African Americans

Example: Levittown

Levittown, PA was a large development built by [Levitt & Sons].

- FHA guaranteed Levitt & Sons demand by offering qualified veterans subsidies on housing
- FHA explicitly included racial covenants, and Levitt & Sons refused to sell homes to people of color.

Example: Levittown



Housing Policy

Many things I am not covering here. Read the book, watch the video. Read parts of the underwriting manual for specifics

1968: Fair Housing Act (Title VII of the Civil Rights Act)

- Explicitly bans racial discrimination in home loans, sales, etc.
- Through one of the largest expansions (*the largest?*) in home-ownership *ever*, it was explicit government policy to exclude African Americans. Other people of color impacted, too

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Ideas to explore: assets are generally transferred via bequests in families (you get your parents stuff when they die)

- What has happened to property values over the last 50 years? How might all of these facts help us understand racial income inequality?

Checklist

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- Segregated, Integrated, & Mixed Equilibria
- Stable vs Unstable Equilibria

2) **De Facto vs De Jure** ✅

3) **Discussion**

Discussion

Common theories for racial segregation (in no particular order)

1) White households have a preference for segregated neighborhoods

2) Income and race are strongly correlated, so income segregation contributes to racial segregation

3) MLS zoning excludes low-income HHs

4) **Racial Steering**: Encouraging by real-estate agents, bureaucrats, or property owners reduce access of minority households to certain neighborhoods

So What?

What are the consequences of nbhd segregation? *Spatial Mismatch*

- Inferior access to jobs
  - **Inferior access** explains **25%** of black-white employment gap
  - **Inferior acess** explains **31%** of Hispanic-white employment gap
- Mismatching bigger problem in large cities

So What?

Schools and Poverty Traps

- Low education spending $\Longrightarrow$ low achievement in poor nbhds

Central City Schools

- twice high school dropout rate
- Education for black HS grad eq to ed of white suburban dropout
- High poverty schools: low proficiency rates for math and reading

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