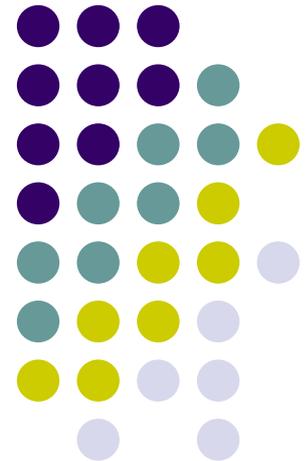


# Are Mixed Neighborhoods Always Unstable? Two-Sided and One-Sided Tipping

David Card

Alex Mas

Jesse Rothstein



# Racial segregation in the United States



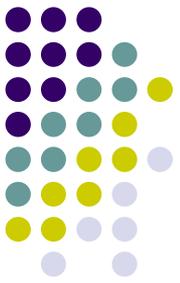
- Black children raised in more segregated areas have lower levels of completed education, lower test scores, lower marriage rates, lower employment and earnings, and higher crime rates
- A major goal of public policy over the past four decades has been to reduce racial segregation in neighborhoods, schools, and workplaces.
- What are the underlying forces that have led to and sustained segregation?
- Is there scope for public policy?

# Schelling's tipping model



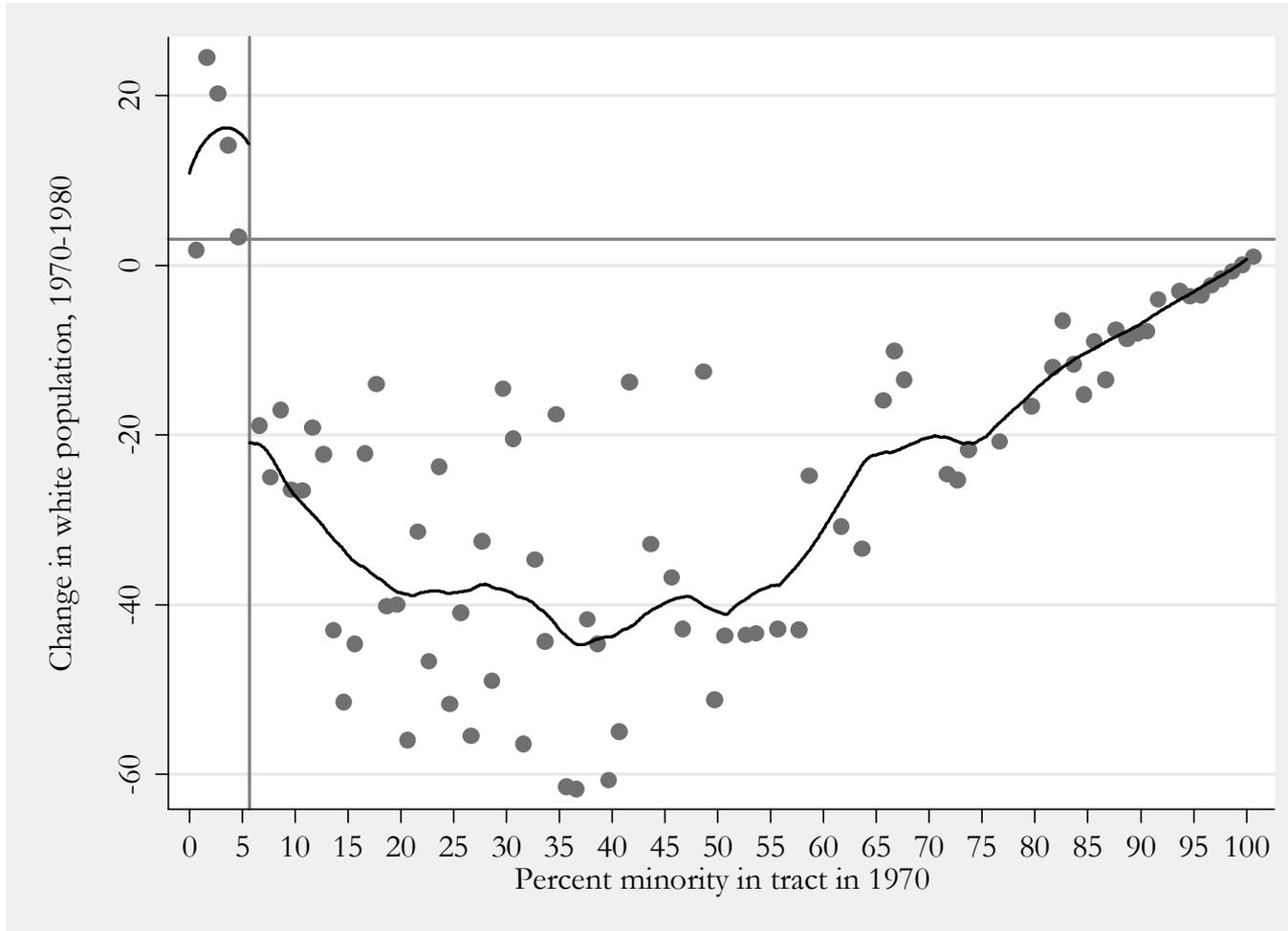
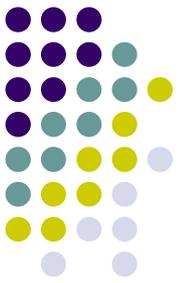
- In a highly influential contribution Schelling (1971) showed that even when most whites have relatively weak preferences for lower minority shares, social interactions in preferences are likely to lead to a fully segregated equilibrium.

# Card, Mas, and Rothstein (2008)

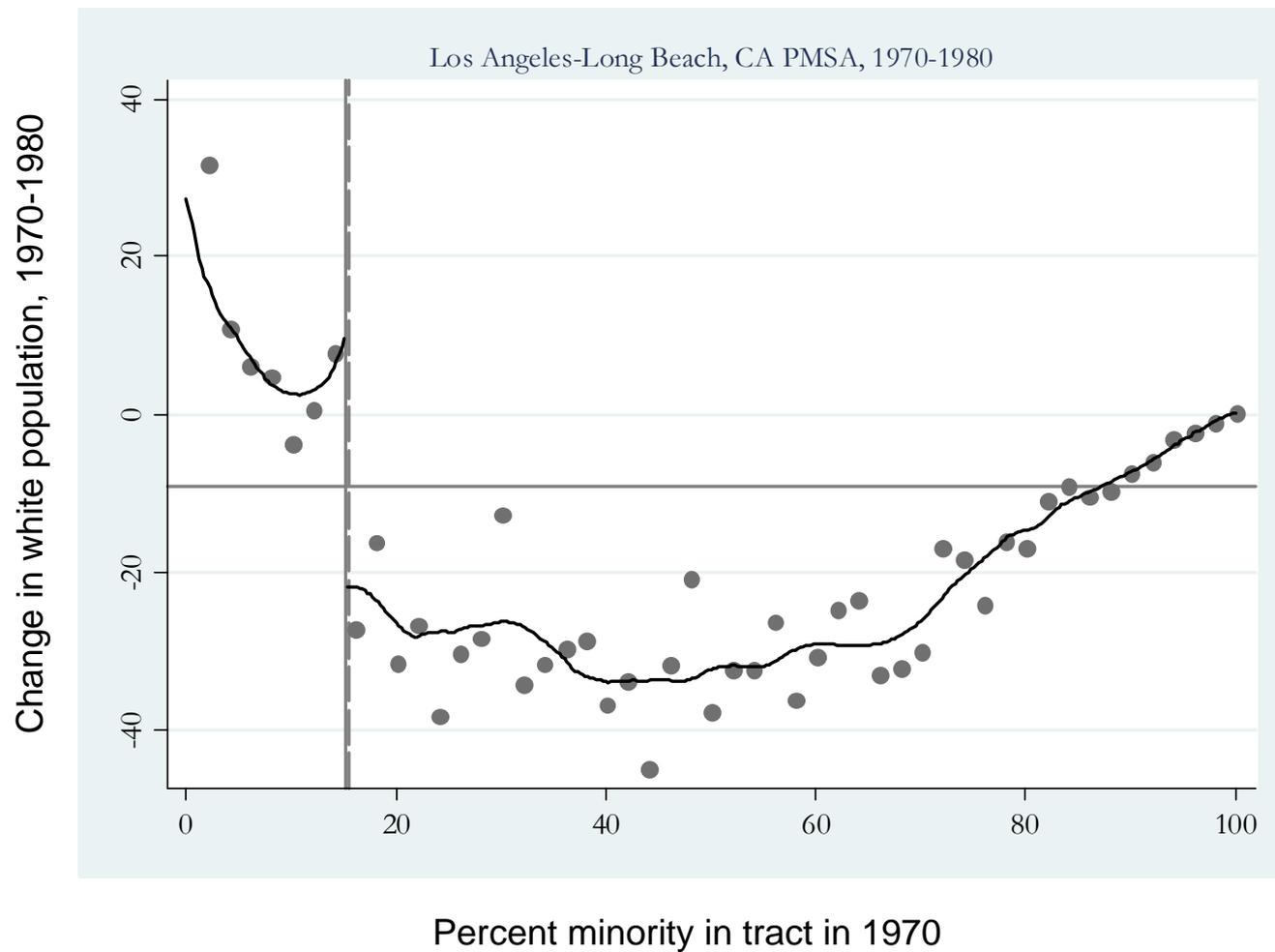


- Study neighborhoods (Census Tracts) 1970-2000
- Look at initial minority share in tract  $m_{t-10}$
- Existence of tipping =>
  - there must be some point  $m^*$  such that when  $m_{t-10}$  is just above  $m^*$ , white share falls fast
  - We assume a tipping point is city and decade specific, but can vary over time and across cities.

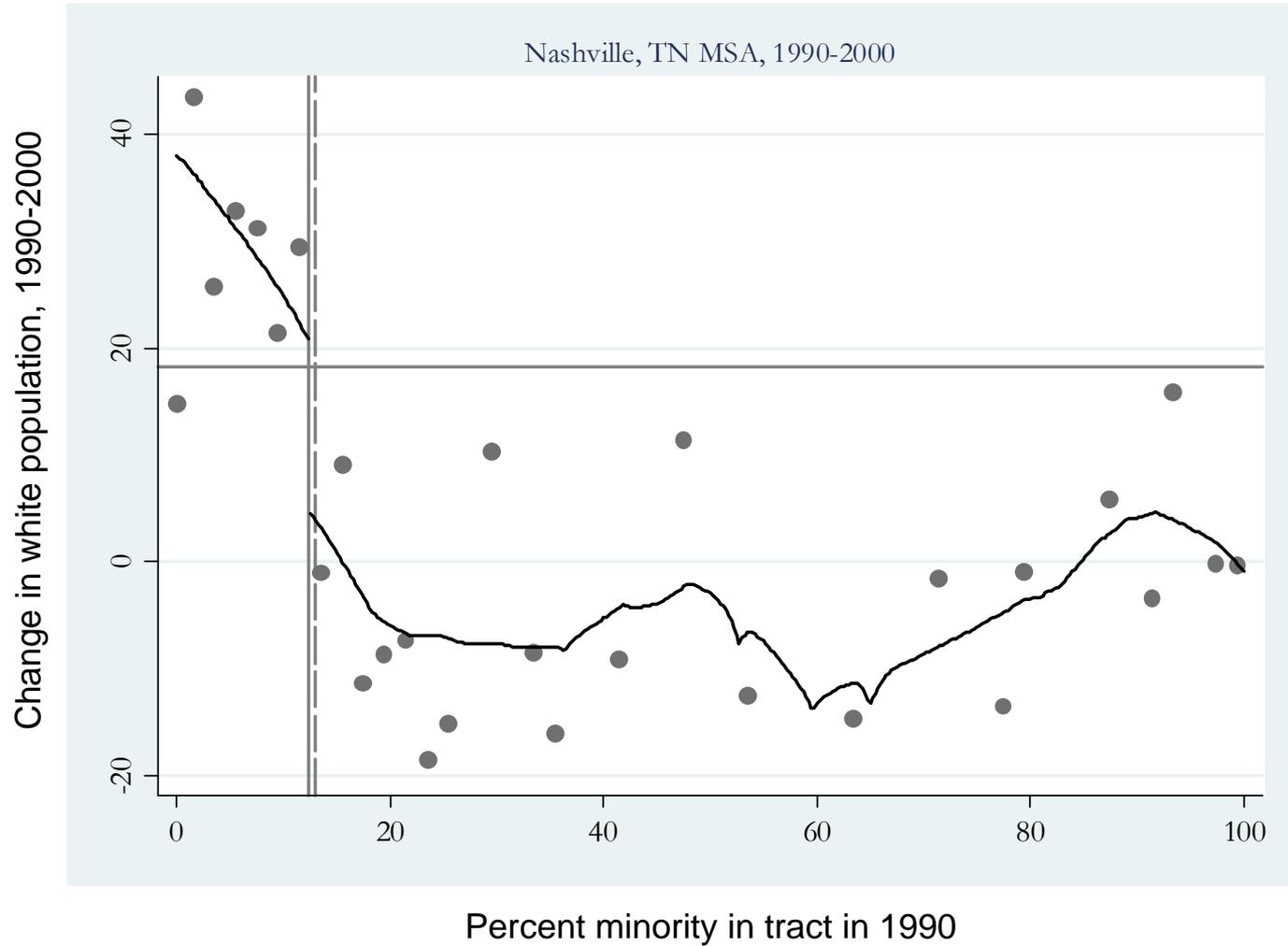
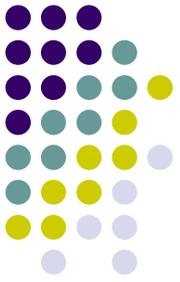
# Neighborhood change in Chicago, 1970 - 1980

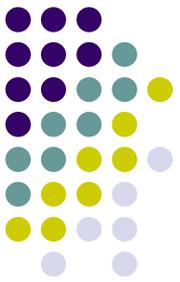


# Los Angeles in 1970 - 1980



# Nashville, 1990-2000





# Overview of tipping points

	<b>1970-1980</b>	<b>1980-1990</b>	<b>1990-2000</b>
	<b>(1)</b>	<b>(3)</b>	<b>(5)</b>
Mean city tipping point	11.87	13.53	14.46
Standard deviation	9.51	10.19	9.00

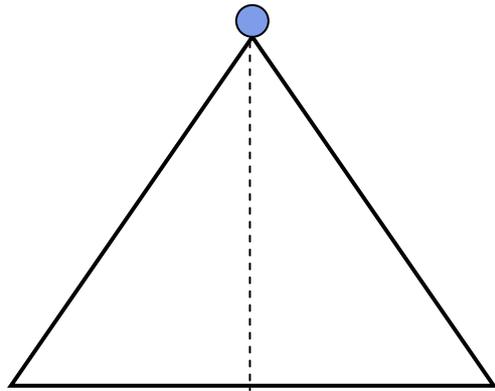
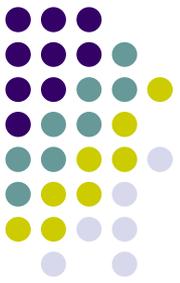
# Tipping points depend on:



- Race attitudes of whites (more tolerance=>higher tipping point)
- Crime rates (-)
- History of riots (-)
- Population density (-)



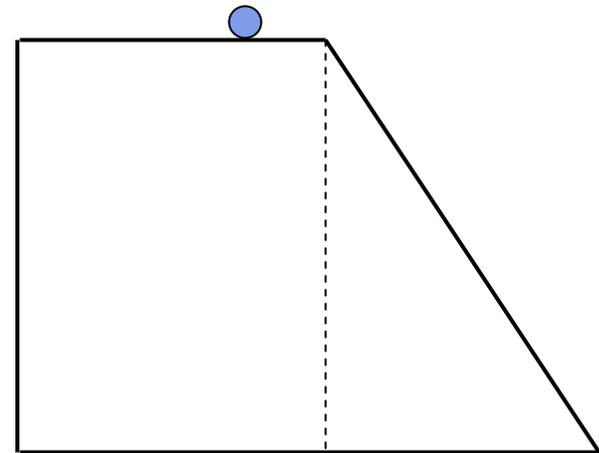
# Unstable versus semi-stable model of tipping



0% minority

100% minority

Unstable

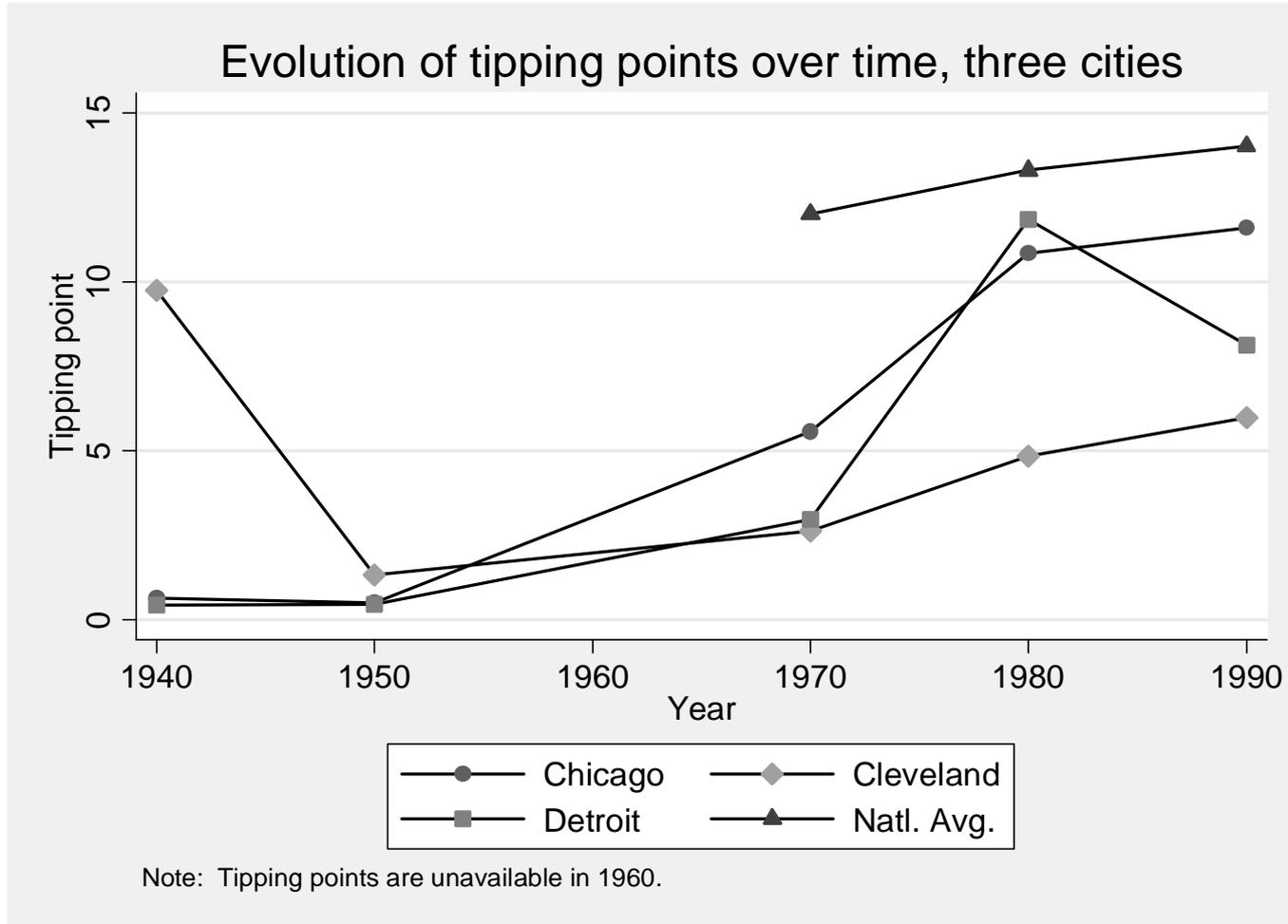
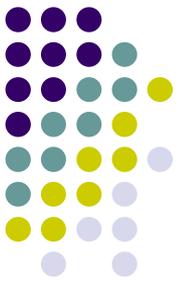


0% minority

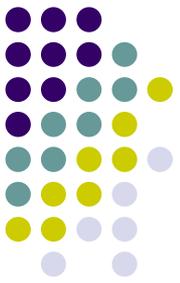
100% minority

Semi-stable

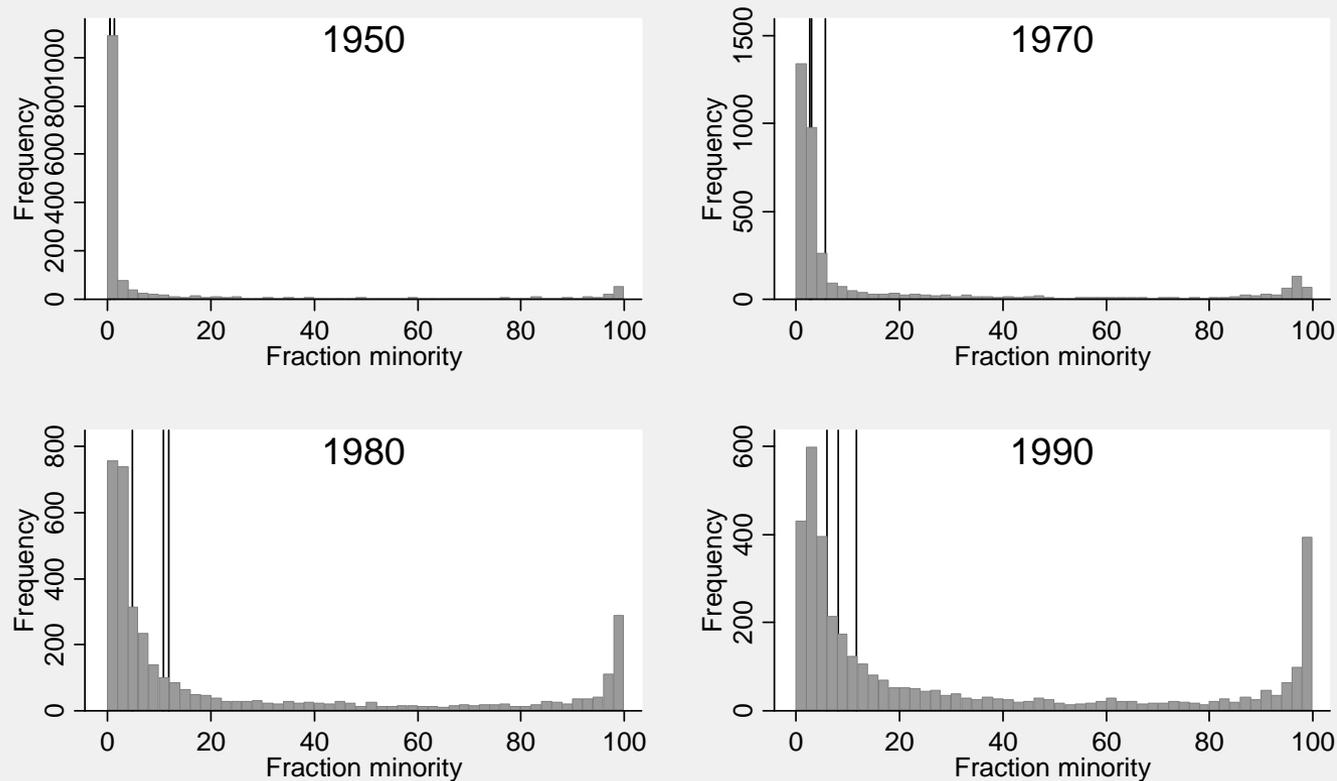
# Tipping points in Chicago, Cleveland, and Detroit over time



# Pooled histogram of tract minority shares in Chicago, Cleveland, and Detroit, 1950-1990.

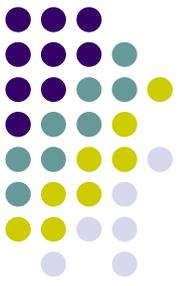


Distribution of tract minority shares in Chicago, Cleveland, and Detroit



Note: Vertical lines indicate the three cities' tipping points in the relevant years.

# Distinguishing between stable versus semi-stable tipping



- Only a very small fraction of tracts below the 1970 tipping point lose minority residents on net in the years after 1970
- Of those that do lose minority residents, most lose only a fairly small portion of their initial populations; essentially none lose more than half of their 1970 minority populations.
- The evidence suggests that tipping behavior is one-sided

# Conclusion



- We find strong evidence of tipping.
  - Although the extent of tipping declined between the 1970s and 1990s, it remains statistically and practically significant.
- Neighborhoods appear to retain an integrated character so long as they remain below the tipping point.
- Policies that are oriented toward maintaining stable neighborhoods can derive some justification from this result