Red Light, Green Light: The Emergent Geography of Crime

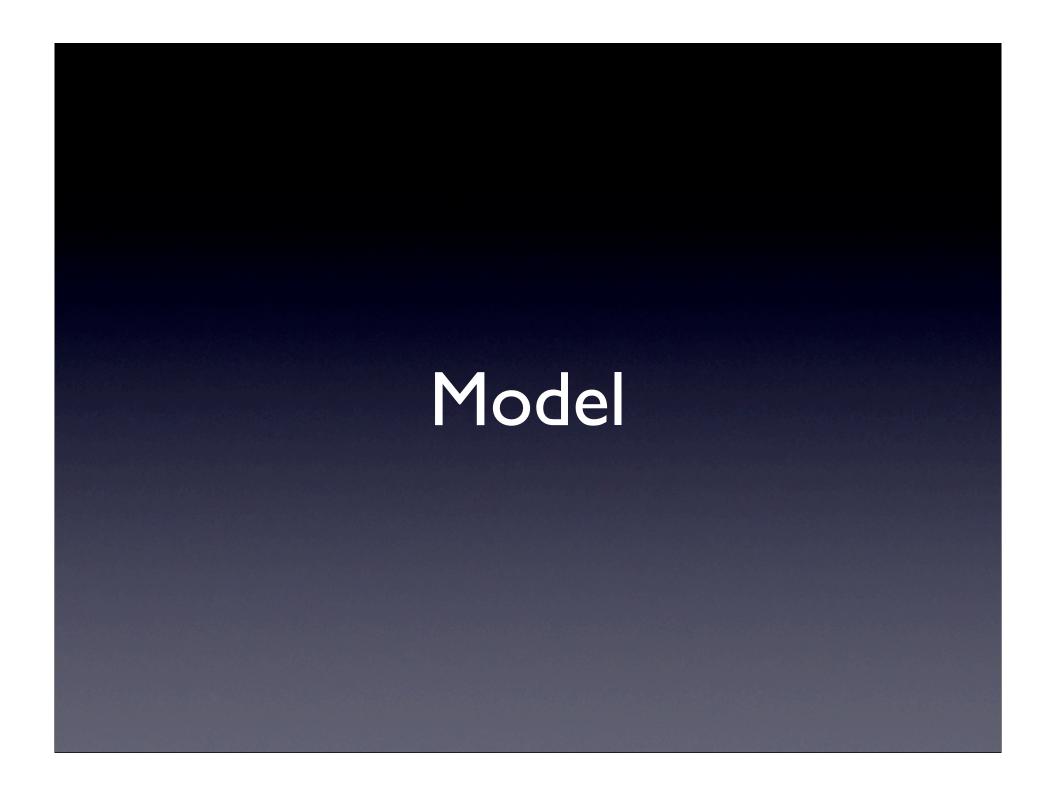
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Question

• Why is crime unevenly distributed?

Theories

- Sorting effects
- Peer effects
- State effects
- Ecological effects
- Feedback effects



Objective: Maximize current wage

Initial Setup: People

- Civilians
 - honesty productivity
 - criminal productivity
- Cops
 - policing productivity

Initial Setup: Places

- Neighborhood
 - Honest wages
 - Criminal wages
- Placement of people
 - Civilians randomly scattered
 - Police placed in a lattice

Order of Play

- Calculate wages
- Choose work
- Choose whether to move

Rules

- Calculate wages (honest, criminal)
 - peer effect * policing effect * individual effect * baseline wage
- Choose work
 - Max (honest wage, criminal wage)

Rules

- Move
 - Pick patch randomly
 - Calculate new neighborhood wages
 - Choose neighborhood with max wage

Rules

- Neighborhood honest wage
 - base wage * (I + police effect) * (I % criminal)
- Neighborhood criminal wage
 - base wage * (I police effect) * (I + % criminal)

Results

- Neighborhoods specialize
- Peer and police effects overwhelm personal character

Results

- Scenarios:
 - Crash of civilization
 - "Green zone"
 - Checkerboard
 - Red light district
 - Utopia

Conclusions

Model supports interaction of effects