TRAJECTORIES OF CRIME AT PLACES: A LONGITUDINAL STUDY OF STREET SEGMENTS IN THE CITY OF SEATTLE

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SUMMARY

This study examines the stability of crime frequency at micro places over time. Prior studies of concentration of crime at places do not provide a solid empirical basis for focusing either theory or practice on micro places. This study examined assumptions about (1) the stability of crime at places and (2) whether different developmental trends can be discerned across groups of places. The results of this study strongly supported the position that crime is stable at places over time, but that crime trends within the city at large are driven by a very small number of places that either increase or decrease in crime.

DATA AND METHODS

To assess the stability of the relationship between crime and place, this study analyzed official crime incident data from Seattle, WA for a 14-year period using group trajectory analysis developed by Nagin (Nagin, 1999; Nagin and Land, 1993). The unit of analysis was a street segment, which includes two block faces on both sides of the street between two intersections. 1,544,604 incident reports were linked to the 29,849 street segments considered for the study. These segments were then grouped into crime trajectories, based on whether the number of incident reports increased, decreased, or remained stable in the segment over the period of the assessment.

FINDINGS

Micro places generally have stable concentrations of crime events over time, and a relatively small proportion of places belonged to groups with steeply rising or declining crime trajectories. These areas are primarily responsible for overall city trends in crime. Interestingly, increasing and decreasing trajectories are both themselves also concentrated, suggesting that there may be similar causal processes underlying both types of trajectories.

IMPLICATIONS

If trends in Seattle are common to other cities, a decrease in crime rate should be seen not as a phenomenon common to all places across a city but rather at specific places. Understanding overall changes in crime in specific groups of street segments is central to understanding overall trends in crime. Additionally, this study suggests that directed police activities at these places can have an impact in reducing the overall rate of crime in a city.

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