

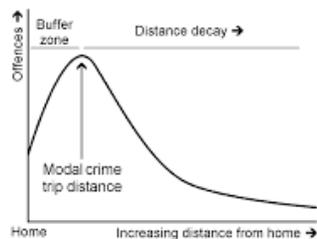
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INTRODUCTION

Geographic psychological profiling is the science of analyzing and predicting the migratory patterns of criminals within a discreet space. Geographic profiling works retroactively to calculate a criminal's point of origin, given a distribution of targets for commission of crimes. Through fundamental yet key theories and models, the goal of the proposed presentation is to explore the decision making processes that drive spatial heterogeneity. The science of geographic profiling is based on three fundamental models, discussed below and to the right.

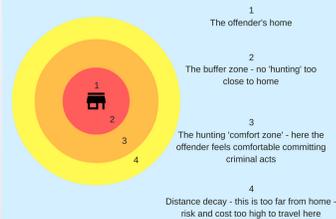
DECAY MODEL

- The decay model of geographic profiling dictates that criminals will choose targets close to their home base, with exponentially fewer crimes committed by a single criminal as distance from the home base increases.
- The regressive predictability of the relationship is modified by the significance of the home base to the criminal (Hammond & Young, 2011).



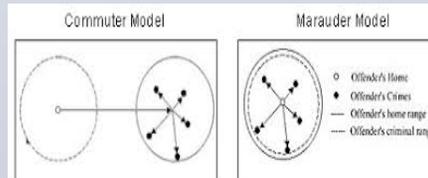
DECAY MODEL

GEOGRAPHICAL PROFILING: KEY ZONES



CIRCLE THEORY

- Offering more complex descriptions of criminal movements, Kocsis, Cooksey, Irwin and Allen (2002) cite researchers Canter and Larkin (1993) for their introduction of Circle Theory, which presented two contrasting models.
- The "marauder" model posits that a criminal will commit the majority of offenses within a set radius, with home base near or at the center of a given territory, or range.
- Circle Theory's "commuter" model argues that criminals will commit a significantly higher number of crimes outside of the home territory, particularly after considering the cost of committing criminal acts (Fabrikant, 1979; Kocsis, Cooksey, Irwin & Allen, 2002).



CHOICE THEORY

- Potchak, McGloin and Zgoba (2002) introduced the rational choice theory which attempts to explain the cost/benefit decisions criminals make prior to commission of crimes.
- According to rational choice theory, a majority of criminals weigh the energy and resources and risks to commit a crime against the benefits of committing that crime.
- The greater the perceived benefit, the greater the effort, particularly with respect to distance to crime (Fabrikant, 1979; Lundrigan & Canter, 2001). Studies on the spatial activity of criminals supported the theoretical models, and generally showed that urban targets were the most vulnerable to crime (Deane, Messner, Stucky, McGeever, & Kubrin, 2008; Deller & Deller, 2012; Potchak, McGloin, & Zgoba, 2002).
- Fabrikant (1979) expressed the phenomenon as $O_{ij} = F(C_{ij}, W_{ij}, CR_{ij}, PCF_{ij})$.
- O_{ij} is the resultant number of criminal flows in a targeted community (represented by j) committed by a criminal either outside or inside of the community (represented by i).
- Predictor variables include direct costs to the criminal (C_{ij}), including probability and severity of punishment if apprehended.
- W_{ij} represents the potential rewards of commission of a criminal act, either in the home or outside community. The relative wealth of the community was also included in this variable.
- CR_{ij} represents relative risk other than of apprehension.
- PCF_{ij} represents competitive pressures.

SOCIAL COHESION AS A DETERRENT

- Despite this coverage of factors in a criminal's cognitive processing of benefits to cost, the model did not appear to directly account for unique characteristics of communities that transcend socioeconomic factors of decision making, such as social cohesion. Social cohesion refers to the altruistic bond between neighbors in a given community.
- Socially cohesive communities are areas, typically characterized as rural, where residents are at least acquainted, and their whereabouts and properties can be closely observed.
- Research indicates that official policing efforts and crime reporting are characteristically low in such areas, and are related to community efforts to self-police (Deller & Deller, 2012; Laub, 1981).

CONCLUSION

Three models explain commission of crime based on geography. Social cohesion is a significant decision variable against commission of a crime in a given area.

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