Chapter 3

Visual Criminology: Making Sense of Crime Data and Analysis for Criminology Students

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ABSTRACT

An understanding of crime data and analysis is central to any Criminology degree. Graduates need to know how and where to access a wide variety of secondary data sources, and understand how to read and critically evaluate crime statistics, crime maps, and quantitative research publications, and through assessment, know how to apply this learning to understanding crime rates within a community. This chapter reviews the various types of data and analysis that form a substantial part of content within a Bachelor of Criminology degree. Several types of assessment are described as examples of how to engage students in practical exercises to show them how data and analysis can provide fascinating insight into the social life of their own community.

INTRODUCTION

Research is a critical part of Criminology and underpins criminal justice policy and practice. It encompasses a wide and varied range of research methods to account for the diversity of social and crime issues of interest which involves the rigorous exploration and testing of disciplinary assumptions and theories through systematic empirical inquiry (Chamberlain 2013:1). Data visualization techniques are central to this endeavour to analyse, explain and present research findings (Wheeldon & Harris...

Data visualization is increasingly important for operations for police and other agencies of the criminal justice system. It is also an important tool for teaching and explaining data analysis to students. In the sections that follow, the ways in which data visualization is employed with criminology is outlined. The nature and extent to which criminal justice agencies, especially the police, employ data visualization in developing policy and practice and evaluating ‘what works’ for effective crime control is also described. The value of data visualization for teaching quantitative methods to Criminology students is emphasized through a description of the design, implementation, and assessment of Criminology units that employ an experiential learning model (Kolb 1984). The chapter concludes with a call for more awareness of the need for quantitative skills that focus on data visualization, particularly spatial crime analyses as these capabilities are increasingly required by employers within the criminal justice system, and within academia.

BACKGROUND

Data Visualization Within Criminology

Criminology is a highly diverse and fragmented discipline that draws on a wide range of diverse theoretical perspectives to explain crime and other social problems (Chamberlain, 2013:1). Yet there is a common commitment among criminologists to undertaking rigorous and systematic empirical research to explore and test disciplinary assumptions and theories (Chamberlain, 2013:1, 2). Criminological research is undertaken for scholarly inquiry but also to influence government and lobby for change in social policy and within the criminal justice system. The potential to effect social change makes research in criminology a rewarding experience. However, this goal can only be achieved by conducting high-quality research (Chamberlain, 2013:2). Criminologists tend to take a positive approach to research which promotes a value-neutral and objective method of systematic observation and experiment to gather statistical evidence of ‘what works’ in relation to a range of criminal justice policy initiatives, interventions and crime reduction strategies (Chamberlain, 2013:2).

Data visualization plays a key role in this process through the use of graphs, plots, charts, maps, timelines, multi-level modelling and the mapping of data using GIS programs. For example, data visualization is key to the analysis and explanation of Social Network Analysis examining the ecology of crime. Social Network Data can be employed to examine the spatial distribution of crime such as the social networks
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