

Chapter 15

Police Service Crime Mapping as Civic Technology: A Critical Assessment

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ABSTRACT

It is increasingly common for municipal police services in North America to make online crime maps available to the public. This form of civic technology is now so widely used that there is a competitive private sector market for crime mapping platforms. This paper considers the crime maps made available by three Canadian police forces using platforms developed by U.S.-based private sector corporations. The paper considers how these crime maps present particular narratives of crime in the city, evaluates the quality of the mapped data, and explores how laws shape and constrain the use and reuse of crime data. It considers as well the problems that may arise in using off-the-shelf solutions – particularly ones developed in another country. It asks whether this model of crime mapping advances or limits goals of transparency and accountability, and what lessons it offers about the use of private sector civic technologies to serve public sector purposes.

INTRODUCTION

This paper offers a critical assessment of crime maps as a form of civic technology. Publicly-accessible crime maps offer an interactive visual display of criminal activity within a municipality. Typically, they display multiple categories of crime plotted according to time and geographic location. There is a growing trend in Canada and elsewhere for police forces to use crime maps as tools for some form of civic engagement. In theory, at least, the provision of information to the public increases public confidence (Sampson & Kinnear, 2009), and promotes transparency and accountability (Janssen, 2012; O’Hara, 2012). In practice, the extent to which these goals are realized depends upon how they are approached and implemented.

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Police Service Crime Mapping as Civic Technology

This paper examines the results of partnerships between police services and private sector data analytics companies to produce public-facing crime maps for three Canadian cities. There has been considerable uptake by police services of crime mapping in the last decade, leading to a relatively well-developed private sector market for crime mapping platforms. In North America, crime mapping is dominated by three companies based in the United States that offer their services in both the U.S. and Canada. This paper considers the crime maps available in the cities of Ottawa (Ontario), London (Ontario), and St John (New Brunswick). These cities are chosen because each contracts with a different one of the three main U.S.-based crime data analytics service-providers, and as a result, each uses a different crime mapping platform. Not only are there differences between each of the mapping platforms, different police services implement crime mapping in different ways. This paper offers a comparison of the major platforms, but also examines their local customization. Points of comparison include the stated goals of the maps as expressed by both police services and crime mapping services; the data points made available for mapping and those actually mapped; and issues of data quality, ownership and control. These issues are considered through an analysis of the maps, the supporting documentation provided by both mapping companies and police services, and the website terms of use.

Part I of this paper explains what crime maps are. Part 2 offers a closer look at the practice of crime mapping. It considers what data are used in these visualizations, and introduces the three mapping platforms that are the focus of this paper. Part 3 looks at the stated objectives for offering publicly-available crime maps, and it considers the extent to which crime mapping achieves these objectives. Part 4 considers the data used in crime maps and examines its limitations. Part 5 looks at issues of ownership and control of crime data and examines how ownership issues may impact open data goals of transparency and accountability. The paper concludes with an assessment of crime maps as a form of civic technology.

CRIME MAPS

Crime maps provide visual representations of urban crime, and are a means by which police services can communicate information about crime to the community (Chainey & Tompson, 2012). Police services may create their own maps using commercially available mapping templates; alternatively, they may use the services of a private sector company in the crime analytics sector. Such companies also offer a variety of other data analytics services that may include predictive analytics, data management tools, and dashboards for internal police use. In some cases, crime mapping companies offer publicly accessible crime maps to police forces for free – perhaps in the hope that other for-fee data analytics services or enhancements to the map will be chosen for use by the force (Paulsen & LeBeau, 2012). Even where fees are charged for the crime maps, these are relatively low. For example, Wisnieski (2014) reports that crime mapping companies can charge fees that range from \$600 to \$2400 (USD) per year depending upon the size of the police force. Cost and convenience may be motivating factors for police services to choose to contract with private sector companies for crime mapping services.

In a review of online crime mapping companies carried out for the U.S. Department of Justice, Paulsen & LeBeau (2012) identified 7 companies that offered some form of crime mapping services in the U.S. Three of these companies also offer crime mapping services to Canadian police forces. These are: Bair Analytics (Raids Online™), Public Engines (Crime Reports™) and The Omega Group (Crimemapping.com™). While private sector crime mapping services dominate the North American market, some police forces in Canada have opted to develop their own in-house crime maps using more generic mapping

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