THE INCIDENCE AND FEAR OF TRANSIT CRIME:
A Review of the Literature

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INTRODUCTION

Transit crime and the fear of transit crime are two of the more under researched areas in the field of crime prevention (Poinster, 1996; Newton, Johnson, & Bowers, 2004; Loukaitou-Sideris and Fink, 2009). This is the case with respect to both the actual incidence of crime along transit corridors (Newton, 2004) and the public's perception of crime associated with transit usage (Yavus and Welch, 2009). There is a need to establish guidelines to best measure crime in public transit systems and identify the appropriate theoretical perspective(s) with which to do so (Transit Cooperative Research Program, 2001). Additionally, the fear of transit related crime experienced by the general public has a profound effect on citizens' well being and their choice of transportation (Cozens, Neale, & Hillier, 2004; Loukaitou-Sideris and Fink, 2009).

This review specifically examines existing guidelines and strategies to collect and measure transit related crime data, reported levels of crime, and passenger perceptions of transit crime. It does so by retrieving and analyzing reports from various transit authorities and reviewing scholarly publications in this area. However, the body of literature is somewhat problematic at this point in time. Despite the topicality of transit crime, along with considerable media attention, there is a lack of published, peer-reviewed research. The reports issued by transit agencies and their overseeing bodies are typically brief with minimal analysis and, often times, an absence of any reported methodology. Such limitations should be kept in mind, especially with regard to reported measurements of transit related crime. Smith and Clarke forcefully articulated the paucity of information in this area:

> Few of us, however, have much understanding of how the conditions favoring crime on public transport have arisen and why they persist. We have limited knowledge of the mix of forces and constraints - political, geographical, economic, engineering, and others - which have combined to shape and form modern public transport. We do not know how much room there is for planners and engineers to overcome these constraints, or for transit managers to maneuver within them. Finally, we have little detailed understanding of the conditions that favor a particular crime, but not others, and little detailed information about specific interventions that have succeeded or failed (2000: 170).

REVIEW OF THE LITERATURE

Defining transit related crime

Ketola and Chia (2000: S-1) explained that the lack of a standard definition of "transit-related" crime meant that "local law enforcement personnel rarely specify that a crime is transit-related; therefore, the information about the crime is unavailable for analysis and decision making". Newton (2004: 25) noted that, "police do not record incidents of crime on public transport as a category in its own right". The literature also identifies several concerns with developing an

operational definition of "transit-related crime", while distinguishing this from actual "transit crime" (Transit Cooperative Research Program, 2001). Because these terms are often used interchangeably, it is difficult to engage in comparative analysis from one agency to another. For instance, Smith and Clarke (2000) explained that the targets of crime included, but were not limited to, the transit system itself by way of vandalism and fare evasion, employees who may be threatened or assaulted, and passengers who can be victimized in numerous ways. One of the key findings by Ketola and Chia "was the total incompatibility of the transit crime analysis and reporting systems used by the 21 agencies" (2000: 53) interviewed for their study.

The lack of an operational definition is further problematic when considering that there is no clear understanding of which stages of public transit travel should be taken into account when thinking about transit or transit related crime. According to the Transit Cooperative Research Program, "(t)here is no uniformity in the types of data collected about transit crime, in the names or terms used to describe transit crime, or in the methods used to present or report the data for internal or external use" (2009: 3). As Newton, Johnson, & Bowers (2004) explained, a holistic approach to traveling on public transit should include, not just riding the bus, but also the experience of waiting at stops and walking in between stops. Finally, in the absence of a shared, operational definition, many quality of life violations are not accounted for, nor taken into account by decision makers (Transit Cooperative Research Program, 2001; Ketola and Chia, 2000).

Collecting transit related data

There are a number of problems associated with transit crime related data collection. Newton eluded to a 1986 study by Levine and Wachs in explaining the insufficient data on actual levels of public transit crime; "(t)he amount of under-reporting of public transport crime is also unknown and may, as an underestimate, be 25 to 30 times below the actual level of public transport crime" (2004: 26). Among the obstacles to collecting accurate data, Newton noted "with the exception of data collected by British Transport Police on rail crimes, there is no dedicated unit responsible for policing buses or trams, and there is no requirement to collect data on levels of public transport crime" (2004: 26). Loukaitou-Sideris, Ligget, & Hiseki (2002) agreed that transit crime was underreported, especially in urban areas. Cozens, Neal, Hillier, & Whitaker (2004) made a similar observation.

In addition to underreporting, Poister (1996) added that there has been minimal research to determine the effect of new transit services in suburban areas. A 2003 review of the literature (Ihlanfeldt, 2003) found just four studies that presented evidence as to whether rail stations had an effect on neighbouring crime. Another issue was identified by Gisborne et al., "(p) previous studies have been conducted into providing security and policing services to the transit system, but these studies, by and large, looked at the ability of various enforcement agencies to service the system as they saw it, rather than looking at the needs of the transit system itself" (2000: 6).

One particularly illuminating item was the revelation that online news has been incorporated by at least one transit agency as a source of data in addition to primary security data and police reports (Transit Cooperative Research Program, 2009).

The field of environmental criminology (Brantingham and Brantingham, 1993) tends to serve as a popular source of techniques for measuring and analyzing transit related crime (Ligget and Hiseki, 2002; Loukaitou-Sideris, 1999; Loukaitou-Sideris, Pearlstein, & Wachs, 1982; Newton, 2004; Newton, Johnson, & Bowers, 2004). Loukaitou-Sideris (1999) provided a comprehensive discussion regarding the role of environmental design and defensible space in understanding crime at bus stops. Cozens, Neal, Hillier, & Whitaker (2004) stressed the need to employ crime prevention through environmental design (CPTED) tools in understanding public transport.

Others have offered strategies with which to collect, analyze, and present transit crime data (Transit Cooperative Research Program, 2001). Ketola and Chia provided models to "(i)dentify the problems that transit agencies face in collecting transit-related crime and security incident data that are important in their security operations" and "(e)stablish the method(s) that transit agencies can use to improve the usefulness (utilization of their crime and security incident data) through improved data collection, analysis and reporting" (2000: S-2).

The findings

A study of crime and anti-social behaviour involving the London Bus Network, London Underground/Dockhands Light Railway, and London Overground Service found there were 12 crimes per million passengers during 2008-2009 on the bus network and 13 crimes per million on the underground and overground services (Transport for London, 2009/2010). A 1997 passenger study in England and Wales indicated that 5% of passengers had been threatened with violence and 4% had been the victim of theft (Easton and Smith, 2003). Vandalism, in particular, appeared to be on the downswing, according to a 2005 review (Rail Safety & Standards Board, 2005). An analysis of crime on and around the Green Line Stations in Los Angeles, for example, found an average of 1.55 crime incidents per 100 riders (Loukaitou-Sideris, Ligget, & Hiseki, 2002). According to others, transit crime has, for the most part, followed declining national crime rates (Transit Cooperative Research Program, 2009).

Transit related crime is most likely to occur along those routes that have higher than normal rates of criminal activity in general (Pearlstein and Wachs, 1982). This is consistent with Newton's observation that, "the external environment a public transport vehicle traverses can influence the level of crime experienced" (2004: 39). Others have reached similar conclusions (RTD Fastracks Fact Sheet, 2007). Poister (1996) conducted a preliminary time series analysis and determined that the opening of new stations and line expansions may be accompanied by an increase in reported crime, but this level may return to expected levels after several months. New stations in the inner city tended to be associated with increased criminal activity, whereas the opposite was

the case in the suburbs, according to a case study in Atlanta, Georgia by Ihlanfeldt (2003). Overall, reported transit crime tends to be low (Cozens, Neal, Hillier, & Whitaker, 2004). This review was unable to identify any documented evidence to the contrary.

Fear of crime

The significance of making passengers feel safe, regardless of how much actual crime may or may not be occurring, is a shared mandate among major transit systems (Smith and Clarke, 2000). This is a function both of altruism and the reality that transit systems cannot afford to lose customers who are scared to use public transit. The factors that contribute to fear of transit crime are not unique from those associated with crime in general (Yavuz and Welch, 2010). Yavuz and Welch (2010) added that the dynamics of vulnerability varied based on gender, ethnicity, age, and other factors. The differential experiences and levels of fear associated with transit crime between men and women were cited as an area in need of attention. For example, women tended to feel safer being watched by a police officer than being in the vicinity of a security camera (Loukaitou-Sideris and Fink, 2009). Another issue raised in this report is the possibility that anti-terrorist technology is taking resources away from addressing the type of behaviour that is more immediately threatening to women.

The British Transport Police asserted that "feeling safe is as important as being safe" (2010/2011: 2). The same report posited that fear of crime varied along certain routes and at certain stations. This suggests that safety and security resources should not necessarily be shared evenly. Others noted that passengers may overestimate the number of serious crimes associated with transit systems and this can be exasperated by the media and entertainment industry (Transit Cooperative Research Program, 2009). The literature tended to embrace varying strategies involving high visibility policing (including the use of cameras), addressing graffiti, making better use of the media, reducing incivilities, and anti-crime conscious physical design (Smith and Clarke, 2000; Calgary Transit, 2009; Transit Police Bi-Monthly Report, 2010; Yavuz and Welch, 2010; British Transport Police, 2010/2011). In fact, one study (Yavuz and Welch, 2010) concluded that familiarity with and regular use of transit was likely to make passengers feel safer.

CONCLUSION

On the whole, there is little to suggest that transit related crime is any more serious than crime in general. All indicators indicate that, like the broader crime picture, transit crime is in decline. Fear of transit related crime, graffiti, and neighbourhood concerns about what problems a new transit stop might bring are not unique and are the same challenges transit authorities have long had to contend with. Addressing these issues tends to be an enduring regularity. The problem is that without a shared definition of what actually constitutes transit related crime, there will be problems in how to measure it and how to compare rates between systems and jurisdictions. Fear

of crime is often significantly out of proportion with the actual incidence of crime and may have a powerful negative effect on ridership and the degree to which people are comfortable using public transit. This is particularly the case for women. It is also possible that a significant number of potential riders, the elderly for instance, simply will not use transit on account of fear.

Several strategies, including high visibility policing, security cameras, physical design, and situational crime prevention, have found varying degrees of success in addressing both crime and the fear of crime on and along transit corridors. Environmental crime models, in particular, have been helpful in providing a theoretical foundation for how to conceptualize public transit crime for the purposes of data collection, analysis, and problem solving.

Scholarly research in this area is scarce and of limited use to planners and decision makers tasked with confronting both transit related crime and the public's perceptions of vulnerability. Extrapolating the experiences of one transit system or segments of one transit system is problematic given the lack of uniformity in physical design and operation. The most pressing methodological issue would appear to be the absence of a standardized definition of "transit related crime" and the activities to be subsumed under this definition.

There is one area in particular that has not been adequately investigated. With few exceptions, there is minimal inquiry directed toward the extent to which media coverage of transit related crime shapes and contributes to the public's perception of this subject matter. Transit crime, when it does occur, tends to receive considerable media attention. The Vancouver Sun, for example, provides an online, interactive overview of transit related crime and adds stories to the stored file as they become available (http://www.vancouversun.com/news/transit-system-crime/police-respond.html). The 2005 beating death of a teenager at a SkyTrain station in Surrey, British Columbia generated considerable news coverage of the transit system's security systems. The fatal assault was captured on the SkyTrain surveillance camera and, though never publicly released, became a significant talking point regarding transit safety. A Google search on December 10th, 2010 of "SkyTrain" and the victim, Matthew Martins, yielded close to 5,000 hits and included virtually every major media outlet in the country.

It would appear that a transit-related component to a criminal event assists in giving the story "legs" and generates more interest and follow-up reporting than criminal occurrences in other locales. The nature of media coverage of transit related crime is clearly in need of major investigation.

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