Profiling the life course of resource-based boomtowns: A key step in crime prevention

Rick Ruddell* and Heather A. Ray†

The rapid population growth and industrialization associated with a natural resource-based boom poses a number of challenges for the residents of a small community, including significant reductions in their quality of life, well-being, and public safety. The majority of Canadian communities undergoing such growth are associated with the extraction of oil and gas or other mining operations, although booms do also occur in single-industry towns (Broadway, 2007). Since 2000 dozens of boomtowns have emerged throughout Canada, from Kitimat, British Columbia to St. John's, Newfoundland. With the exception of Fort McMurray, Alberta, however, very few of these places receive much attention as they are often small towns in rural and remote places that are both out of sight and out of mind. The challenges created by rapid population growth, however, are of critical importance to the residents, as well as the workers in the health, education, social service, and justice systems who must respond to escalating demands for services with inadequate resources (Jayasundara, Danis, Legerski et al., 2018).

The resource-based booms occurring across North America after hydraulic fracturing (fracking) became commonplace after 2005 produced scores of academic papers highlighting the disruptions occurring in boomtowns. Many of these studies examined circumstances in the Bakken region in eastern North Dakota and western Montana, a region that straddles the Manitoba and Saskatchewan borders. Foremost of these challenges was an inability of local governments to meet the demands of their growing populations. Not only did the size of small and rural communities increase, but the composition of the newcomer population—predominantly made up of young, high-salaried males with little stake in the community—leads to increased involvement in antisocial behaviour and crime (Dahle & Archbold, 2015). Police officers reported many of these newcomers had prior criminal records (Archbold, Dahle, & Jordan, 2014), and researchers found that the proportion of registered sex offenders living in resource-based boom communities was higher than in neighbouring jurisdictions (Berger & Beckman, 2010; Jayasundara, Heitkamp, Mayzer et al., 2016a).

Writing about boomtowns, Thomas, Smith, and Ortiz (2016) observed that since the problems associated with a boom can be predicted, they can be prevented. In this paper we propose that a key first step in developing crime prevention strategies in communities experiencing resource-based

booms is to consider the life course of these places, and how the evolution of a boom affects community services and public safety. In what follows we briefly define boomtown effects, describe the life course of resource-based boom communities, and discuss the importance of using our knowledge to increase public safety and the quality of life for boomtown residents.

BOOMTOWN EFFECTS

The outcomes of the rapid population growth and changes associated with resource-based booms have attracted the interest of Canadians since the 1896 Klondike gold rush (Berton, 1972). From the 1900s until today, hundreds of boomtowns emerged throughout rural Canada and although their location, as well as the duration and intensity of each respective boom, may have differed, there are a number of social ills that occur after a boom, which are called boomtown effects. These factors were described by the Government of New Brunswick (2012, p. 5) as:

> … impact[ing] community health. These can include increased rates of crime, drug and alcohol abuse, sexually-transmitted infections (STIs), and domestic violence; inadequate supply and equality of housing; increased cost of living; increased community dissatisfaction; increased mental health and social services caseloads; increased hospital admissions; insufficient infrastructure; and insufficient capacity in public services, including policing, local government, social services, and health care.

Although all of these factors reduce the safety and quality of life for boomtown residents, we focus upon the responses of the justice systems to the increase in antisocial behaviour and crime. Media accounts have portrayed Canadian and US boomtowns as a new "wild west," (Daily Mail, 2013; Ferguson, 2007), and journalists report these towns are plagued with "murder and mayhem" (Nienaber, 2014). A review of the actual crime statistics in these places, however, shows that, while overall levels of crime increase in boom communities, most of these offences are fairly minor and associated with drug offences (Grossman, Humphreys, Khalil et al., 2016; Heitkamp, 2016), common assaults, driving under the influence, and

Correspondence to: Rick Ruddell
E-mail: rick.ruddell@uregina.ca

mischief (Montana Board of Crime Control, 2016; O'Connor, 2017). Those crime increases are fairly consistent in studies carried out in Australia (Carrington, Hogg, & McIntosh, 2011), Canada (Ruddell, 2011), and the US (Ruddell, 2017).

With respect to serious and violent crimes, a review of the extant research shows an increase in these offences in US jurisdictions after booms occur (James & Smith, 2017; Liao, Berzofsky, Heller at al., 2015). There is, however, some variation in the distribution of violent offences and there are significantly higher rates of these crimes in some towns or counties (O'Connor, 2017; Ruddell, Jayasundara, Mayzer at al., 2014). Moreover, rates of violent crime tend to decrease over time. With respect to Fort McMurray, for example, Statistics Canada (2018) data shows that the violent crime rate in Fort McMurray was twice the Alberta rate in 1998, but by 2017 Fort McMurray's violent crime rate had decreased by 42 per cent.

The literature supports that some boomtown populations may be more vulnerable to victimization. A growing number of researchers report that violence toward women increases after the start of a boom (James & Smith, 2017; Jayasundara et al., 2016a; Komarek, 2018). Survivors of family violence may be reluctant to report their victimization to the police if they come from marginalized populations, such as Indigenous women or newcomers who are socially isolated (e.g., unemployed women with few friends or kinship networks). A study of women in rural British Columbia communities that had economies based on resource extraction found that many of them lived in precarious living arrangements, and "were just one argument with their spouse from being on the streets" (Amnesty International Canada, 2016, p. 45). This vulnerability increased in the North Dakota oilfields due to a lack of domestic violence services and shortcomings in the local justice systems that made it difficult to prosecute domestic violence offenders (Ruddell, Britto, & Schafer, 2018)

The occurrence of dangerous driving is also shown to rise in boomtowns. Fatalities and serious injuries increase as few rural roads were designed for the increased volume of traffic caused by the boom, and local governments could not afford to repair the damages to the roadways caused by large trucks (Raimi & Newell, 2016). Driving-related offences in boomtowns are also associated with increases in fatal collisions and in Fort McMurray, between 2008 and 2015, 6.4% of drivers in fatal vehicle crashes had been drinking, were impaired by alcohol or drugs, were fatigued/fell asleep, or reported other medical-related causes, and 13 per cent were travelling at an unsafe speed (Alberta Transportation, 2017). These statistics are indicative of a culture where the end of a worker's shift is synonymous with the desire to abuse alcohol and drugs—what the workers call "blowing off steam" (Amnesty International Canada, 2016).

In addition to the rise in collisions, traffic congestion is also described as reducing a community's quality of life (Anderson & Theodori, 2009). Britto's (2016) examination of surveys of Fort McMurray residents found that speeding, aggressive driving, and driving under the influence offences were their biggest concerns, with enforcement of these crimes being the top priorities identified for law enforcement to address. In terms of the prevalence of these offences, a review of impaired and dangerous driving offences reveals that these crimes in Fort McMurray in 2017 were about one-fifth higher than the provincial rates (Statistics Canada, 2018).

The increases in antisocial behaviour, crime, and the need for expanded traffic enforcement in these rapid-growth communities place significant burdens on police officer workloads (Archbold et al., 2014, Montana All Threat Intelligence Center and North Dakota State & Local Intelligence Center, 2012). Officer workloads in Fort McMurray, for example, grew to three times the national average, and it took more than a decade until they decreased to the provincial average (Ruddell, 2011). Local courts are also impacted by the boom and the dockets in oil-impacted counties increased to the point where some cases were backlogged for years (North Dakota Court System, 2015; Perry, 2007). Local probation agencies were also overwhelmed (Guldborg, 2016) and many counties impacted by the boom were forced to expand their jail populations (Ruddell, 2017).

Altogether, we find that levels of antisocial behaviour, disorder, and crimes in boomtown increase, and this places significant demands on the operations of the police, courts, and corrections. It has long been recognized, however, that all social problems occurring in rapid growth communities are in fact interrelated (Gilmore, 1976). This can result in "overwhelmed public services, degradation of quality-of-life factors" and challenges in community planning and development (Bangsud & Hodur, 2014, p. 43). Jayasundara, Heitkamp and Ruddell (2016b) found the volume of clients seeking help from health, educational, and social service agencies increased after the oil boom occurred in the Bakken, and the cases that workers confronted were more often more serious and complex than ones they had normally encountered. These demands can seem relentless to human service workers, and a respondent in the research by Flanagan, Heitkamp, Nedegaard et al., (2014, p. 100) "described oil booms as a human tornado."

LIFE COURSE PERSPECTIVE

Local government officials can mitigate boomtown effects by basing their responses to rapid community change on a full understanding of the dynamics occurring in these places. One way to analyze these conditions is to draw upon the life course perspective, which has long been used in the study of human development, and more recently been applied to organizational performance (Aldrich & Ruef, 2006). The life course perspective is based on understanding the influences of time and history of a boom community, and we argue this approach provides a way of understanding the birth, evolution, and demise of a boom; all booms ultimately bust.

The life course approach presented in this section is modeled on King's (2009) studies of police organizations. The profile was developed following an extensive review of the extant literature and applying a framework analysis to identify the themes reported below. These boomtown effects focus primarily on issues related to crime and the operations of the justice system, and are presented in the following list.

LIFE COURSE OF A RESOURCE-BASED BOOM COMMUNITY

- Rising commodity values increase resource exploration and extraction in rural and/or remote communities.

- The population increases rapidly with the majority of newcomers being young males with little stake in the community. There is an out-migration of established community residents, such as senior citizens. Existing sex ratios are disrupted and men often outnumber women.
- There are an increased number of public order offences (e.g., alcohol-related crimes, drug offences, driving under the influence, and prostitution).
- Incidents of domestic violence increase, as do rates of property crime and non-lethal violence, although the magnitude of the increase varies with location.
- Traffic congestion and the number of serious and fatal collisions increases.
- The population exceeds the community's ability to meet the demand for basic services such as housing. Man camps, with hundreds or thousands of residents, emerge in the areas surrounding the boom's epicenter.
- Demands for health, educational, social, and protective services such as police, fire, and emergency medical services, increase exponentially.
- Quality of life and community well-being decreases with a rise in traffic collisions, pollution, noise, and industrial accidents. Visible signs of disorder, such as litter and graffiti increase.
- Local residents express frustration toward the newcomers and tensions between these groups rises.
- Tension between different factions of long-term community residents can also increase due to conflicts about the desirability and impacts of growth and development.
- The police struggle to manage the demands created by the growing populations and associated crime rates. Organized crime offenders and gang members supply residents with drugs and are involved in the sex-trade, including sex trafficking. The threshold for arrests increases as officers prioritize responses to serious offences.
- The population composition changes as the construction phase of development ends and the production phase requires fewer employees. Workers with families replace young single males in the population.
- Local government services eventually match demands in a sustained boom.
- As the turnover of short-term workers decreases, the population stabilizes, including the ratio of men to women.
- Crime and disorder plateaus and then drops.
- Resident quality of life and overall community well-being improves.
- The economic boom withers and then busts. All resource-based booms eventually bust.
- Some communities experience cycles of booms and busts as commodity prices and extraction costs fluctuate.

Having profiled the life course of a resource-based boom community, there are a number of limitations regarding the profile portrayed above that should be considered. Jacquet and Kay (2014), for example, point out there is no single type of boomtown and Keough (2015, p. 1189) observes "there is no single contemporary model" for growth. Moreover, not all boomtowns will follow the model presented above, and it is impossible to predict the time span for each of these

stages. Boomtown populations increase rapidly; Keough (2015, p. 1180) notes that the work camp population of Fort McMurray grew 68 per cent between 2010 and 2012. With respect to the municipal population, Fort McMurray experienced a 120 per cent increase between 2001 and 2016 (Alberta Transportation, 2017).

Whether a boom progresses as presented in this framework is also related to a number of geographical, political, economic, historical, and demographic factors. For example, the expansion of diamond mining in a geographically remote and sparsely populated northern Indigenous community with little economic development will have a different impact compared to a boom based on oil and gas extraction in a rural community 100 kilometres from an urban centre. With respect to geography, fracking can occur across an entire region, and the population increase may be diffused across a number of communities rather than overwhelming a single city, such as the communities of Williston, North Dakota or Fort McMurray (Jayasundara et al., 2016a). Moreover, historical factors, such as whether a community has previously experienced a boom—and whether local government leaders had learned from these lessons of the past—may also play a role in how they manage the boomtown effects. Leaders who have learned from the mistakes of others may also be more successful in mitigating the boomtown effects.

DISCUSSION

Freudenburg (1981) observes that residents of rural communities anticipating booms are often enthusiastic about the potential for economic growth and reduced unemployment. After experiencing the realities of the boom, however, they quickly become disillusioned with changes affecting their former way of life. Conflict about the desirability of the boom often emerges according to one's status as a "have" (e.g., those benefiting directly from the boom, such as landowners receiving resource royalties) and the "have nots" who have not shared in the benefits of the boom (Jaquet, 2014). Although some long-term residents decide to leave, most do stay and adapt to their new communities and living situations. Other communities may undergo a series of booms, busts, and periods of recovery (Putz, Finken, & Goreham, 2011), and some Alberta and North Dakota boomtowns experienced at least three of these cycles since the 1950s.

One of the most important steps municipal and county (or regional municipalities) government officials can take is to acknowledge that all booms will end, and that their role is to "protect the public and natural resources, nurture a healthy local business environment, and provide independent oversight of the impacts of…development within their jurisdiction" (Kelsey, Partridge, & White, 2016, p. 209). Forward-looking politicians and government officials planning for the bust will have ideally channelled surplus revenues into the creation of their municipality's or county's physical infrastructure or human resource development to create long-term advantages for their communities (Kelsey, Partridge, & White, 2016). That is a tall order, as the evidence shows that the long-term economic, social, and environmental outcomes of a boom are often grim, and many communities are worse off after the boom turns into a bust (Jacobsen & Parker, 2016).

CONCLUSIONS

This commentary started with the contention by Thomas et al. (2016) that, if a social problem can be predicted, it can be prevented. In this paper we describe the life course of resource-based booms and our intent in developing this framework is to provide local government officials a starting point from which to base responses to the rapid population growth and industrialization affecting their communities. Government officials anticipating a boom in their communities or surrounding locales are at some advantage if they can learn from the experiences of others.

CONFLICT OF INTEREST DISCLOSURES

The authors declare there are no conflicts of interest.

AUTHOR AFFILIATIONS

*Justice Studies, University of Regina, Regina, SK; †Department of Health & Physical Education, Mount Royal University, Calgary, AB, Canada.

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