



Motivations for kerbside dumping: Evidence from Brisbane, Australia [☆]

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ABSTRACT

Illegal dumping of waste on kerbsides outside residences is a problem in many urban areas around the world. Despite this, there has been little research undertaken on the reasons behind the practice or the barriers to alternative, legal disposal mechanisms. This study interviewed householders in Brisbane, Australia in an attempt to fill this gap. The interviews revealed that kerbside dumping is a complex behaviour with a variety of motivations. Unlike many other illegal activities, participants and observers of kerbside dumping did not necessarily realise that what they were doing was illegal. They also identified many positive benefits such as sharing items with other people. In addition, some residents felt they had no choice even though they were aware that it was illegal. For them, barriers such as lack of transport to the waste disposal facility and lack of storage until the official kerbside collection meant that the practice continued.

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1. Introduction

Kerbside dumping is a common term for the illegal disposal of unwanted household goods on the footpaths outside residences in urban areas. The illegally deposited goods typically include household furniture, mattresses, green waste, electronic goods and other assorted household items. Sometimes these items are too large to fit into municipal waste collection bins, and at other times both small and large items are left out with the intention of being made available for passers by to collect.

Many council websites in developed countries around the world reveal that they have multiple concerns with the problem of kerbside dumping outside of the official collection periods that exist in some jurisdictions. These include the financial burden placed upon councils of collecting any items that have not been collected casually by other residents; the reduction in amenity for local residents in the worst affected areas; and compromised safety by blocked footpaths or dangerous items. For these reasons the activity is generally illegal. Although dumping is a problem across both developed and developing countries, this research is likely to be more relevant to the situation in developed countries where most residential areas are provided waste collection services by authorities.

Despite the widespread and varying concerns arising from this behaviour there appears to have been little research carried out on the motivations for kerbside dumping. Most of the literature around motivations for illicit waste disposal has been focussed on littering (e.g. Ong and Sovacool, 2012; Schultz et al., 2013; Long et al., 2014; Ojedokun and Balogun, 2013; Torgler et al., 2009) or fly tipping/bushland dumping (e.g. Matsumoto and Takeuchi, 2011; Hodsman and Williams, 2011). However, dumping in a public location and littering are markedly different behaviours to dumping outside a residential property, and most likely driven by quite different motivations. Dumping in council parks, bushland or green spaces requires the dumper to load a vehicle and drive it to a secluded location. This means that the dumper not only has the means of accessing a waste disposal facility if they chose, it is almost certain that they would also know that what they are doing is illegal or they would not choose to dump in a remote location from their homes. Littering also usually occurs when someone is away from home – the most commonly reported sites in the Australian National Litter Index were retail, industrial and highway locations (Keep Australia Beautiful, 2014).

There is also a wider literature on the generation of waste and the behaviour of consumers when disposing of material goods. Apart from Guillard and Roux (2014) this literature does not appear to have directly investigated the behaviour of disposing of waste directly outside a home. However, understanding how people deal with unwanted material possessions can help provide insights into kerbside dumping. For example, it is evident from

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the waste management literature that waste practices are connected to issues of consumption, identity, value and social relations rather than being simple decisions to dispose of unwanted goods (Bulkeley and Gregson, 2009). Other studies have emphasised that people often feel that their items have residual value, and they do not want it to simply be thrown away (e.g. Gregson et al., 2013; Lane and Watson, 2012, Bulkeley and Gregson, 2009; Gregson et al., 2007; Hawkins, 2006; Lane et al., 2009). Generally people are committed to saving their items from waste, and they utilise many routes for reuse of goods in an economy, including informal ones such as giving items to acquaintances or to charity shops, to more formal modes such as garage sales and online sales (Watson and Lane, 2011; Bulkeley and Gregson, 2009; Gregson et al., 2007). These beliefs and habits help explain why leaving unwanted goods on footpaths is a common behaviour.

There is some research on kerbside dumping and scavenging. A small number of interviews with residents who place items on the kerbside in France, inside and outside the official collection period, found a key motivation was the convenience of disposing of unwanted objects with ease (Guillard and Roux, 2014). The idea that the dumper was helping someone by giving them the object was also mentioned frequently. There has also been research conducted specifically on the motivations and behaviours surrounding the practice of collecting items off the kerb (Lewis et al., 2014; Guillard and Roux, 2014; Brosius et al., 2013; Lane, 2011). This research often discusses the perceived benefits of materials being placed on the kerbside such as increased recycling rates.

The grey literature includes a research project carried out in New South Wales by the Department of Environment and Conservation examining the reasons for kerbside dumping (DEC, 2004). This study focussed on Multi Unit Dwellings (MUDs – for example semi-detached housing and apartment complexes) as they had been identified as kerbside dumping 'hotspots'. The researchers concluded that a social norm for kerbside dumping had been created, where dumping was perceived to be the easiest option, especially as no one was ever known to be fined and the rubbish was always taken away. The activity was not seen as illegal by most people, or at worst a minor misdemeanour. Other reasons for dumping included seeing the issue of waste removal as the council's responsibility, considering dumping as a recycling activity and perceiving the alternative options as too expensive.

The research reported in this paper helps fill an identified gap in the literature by investigating the motivations for kerbside dumping, the acceptability of dumping and the barriers to alternative disposal options. The empirical contribution of this research in understanding these factors will help waste managers in urban areas develop intervention strategies. Although this research was developed to reduce kerbside dumping, insights from the households involved could also be used to inform wider strategies about waste minimisation and recycling by households.

2. Material and methods

This section outlines the methodology used; how interviews were formed and carried out; describes the case study region; and outlines data analysis methods.

2.1. Methods and interview formation

This study primarily used a qualitative research methodology. Face to face interviews were chosen as the preferred method for collecting information given they were more likely to have higher response rates as well as elicit more open and in depth discussion about dumping than other methods. Structured interviews of approximately 15 min were carried out with residents in suburbs

that appeared to have high levels of dumping according to a Brisbane City Council database of illegal dumping. Both open ended and closed questions were used.

As this research used non-probabilistic sampling, only descriptive statistical techniques were appropriate for quantitative analysis. The non-parametric test of Chi-Square was used to test for any association between select variables. These quantitative tests supplemented the qualitative analysis.

In the absence of empirical evidence for the motivations for kerbside dumping, a series of questions were structured using the Theory of Planned Behaviour (Ajzen, 1991) as a guide. This theory builds on the Theory of Reasoned Action, which posits that people's actions are guided by their intentions, which in turn are influenced by their attitudes towards a behaviour and social influences (Ajzen and Fishbein, 1980). The importance of social norms in littering behaviour has long been recognised (Cialdini et al., 1990), with a type of contagiousness often observed. Keizer et al. (2008) found that when others violated one social norm, observers were more likely to violate another norm such as littering. The beliefs about the behaviour are likely to be influenced by their views as to its acceptability and the potential consequences of dumping. The Theory of Planned Behaviour adds perceived behavioural controls – such as financial constraints – into the model (Ajzen, 1991).

The interview questions covered: use of official kerbside collection and use of illegal kerbside dumping; willingness to use alternate disposal mechanisms such as online or garage/yard sales; reasons items were dumped; acceptability of reusable items and non-reusable items being left on the kerb; knowledge of the cost of the council waste facility [known colloquially as the tip]; and knowledge of a fine for kerbside dumping and whether this knowledge would change their behaviour. The question about reasons for dumping was left open ended as it was thought that people were more likely to give their true reasons for dumping when encouraged to discuss the issue rather than asking them to agree or disagree with a list of statements. The interviewer avoided negative terms such as "illegal", "litter", and "dumping", and gradually eased into asking if the interviewee had ever left anything on the kerb outside of official kerbside collection. This approach appeared to encourage honest discussions with most interviewees. Hand written notes were taken during the interviews with verbatim quotes captured whenever possible. Accuracy of notes was improved through the presence of an additional note-taking research officer at all interviews.

2.2. Case study region and characteristics of sample population

This study was conducted in Brisbane, the capital city of Queensland, Australia. This city was chosen because the local city council was interested in the problem of illegal kerbside dumping. Brisbane City Council (BCC) has the highest population of any local government area in Australia at 1.1 million (Australian Bureau of Statistics, 2016).

The selection process for the case study suburbs followed a purposive sampling methodology to maximise the number of dumpers interviewed. To this end, suburbs with an apparently high dumping level were chosen as the focus of the interviews. In order to maximise the chances of speaking to residents from a variety of backgrounds, suburbs with a mixture of key variables were chosen based on the findings of the Department of Conservation (2004) and the experience of BCC staff. The variables chosen were: the proportion of multi-unit dwellings vs. detached homes; the proportion of people who speak English not very well or not at all; the proportion of renters vs. home owners; and the proportion of students. The nearest waste disposal facilities were 8–12 km from the selected suburbs.

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