



# JDiBrief – Crime

## Bicycle theft: SUMMARY (1 of 5)

Author: Aiden Sidebottom, UCL Jill Dando Institute

Bicycle theft is a common problem internationally. Ordinarily it refers to the theft of the entire bicycle, but can also include the theft of component parts and accessories. Estimates on the volume of cycle theft using police recorded crime data undercount the extent the problem because of the high levels of underreporting; the police are typically informed of one cycle theft for every five stolen. UK victim survey data overcome this problem and reveal general increases both in the volume and rate of cycle theft in recent years. This demands our attention since most types of acquisitive crime against property have witnessed considerable reductions over the same period. What's more, the risk of bicycle theft is shown to be an important consideration in whether individuals choose to cycle. High levels of (perceived) bicycle theft may therefore undermine attempts to increase cycle usage as a sustainable form of health-promoting transport.

**PLACE:** Most cycle thefts occur in the immediate vicinity of the victim's home such as gardens, sheds and garages. This is largely attributed to a lack of secure storage at such locations. Presently though, research has tended to focus on bicycle theft in public settings, particularly schools, university campuses and transport hubs. These tend to suffer high levels of cycle theft due to a regular supply of unguarded dormant bicycles.

**OFFENDER:** There is a scarcity of knowledge on bicycle thieves. Few are caught by the police and victims are rarely able to provide information that might assist an investigation. What we do know is that cycles are stolen for different reasons, reflecting the contrasting motivations of different types of offenders. Some cycles are stolen as a method of transport; others to convert for cash or drugs; and some to facilitate the commission of further crimes. Awareness of these distinctions can usefully inform your response.

**TARGET:** Bicycles are attractive targets for theft. They are widely available (increasingly so in many urban settings), easy to use, easy to sell and, critically, often left poorly secured despite their high value.

**VICTIM:** According to victim survey data from several countries, the risk of experiencing cycle theft is higher than that of other vehicle crimes. Many victims of cycle theft suffer multiple victimisations and the risk of cycle theft appears somewhat contagious: in the wake of a cycle theft event the probability of further cycle thefts is raised in nearby locations for a period of around a month.

**IMPLEMENTING RESPONSES:** Numerous interventions have been put in place to reduce cycle theft. These tend to focus on catching offenders attempting to steal bikes, increasing the difficulty associated with disposing of stolen bikes through the use of bicycle registration schemes, improving the security of cycle parks and cycle furniture, promoting the use of better locks and/or better locking practice, and combinations of the former. While success stories are available, much of the evidence indicating the success of schemes is weak and anecdotal. Systematic evaluations are rare but necessary for the future to determine 'what works'.



# JDiBrief – Crime

## Bicycle theft: CRIME OVERVIEW (2 of 5)

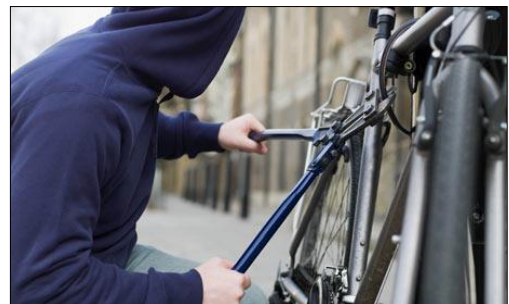
Author: Aiden Sidebottom, UCL Jill Dando Institute

**DEFINITION:** Bicycle theft is defined as the illegal removal of a non-motorized pedal cycle. This refers both to thefts *of* bicycles and thefts *from* bicycles. Theft of bicycles include thefts for transportation, thefts in which stolen cycles are traded in for cash or drugs, thefts of specific bikes to order and thefts to facilitate further crimes. Theft from bicycles refer to the removal of cycle components such as seats and wheels as well as the theft of cycling accessories such as lights, pumps and helmets. Awareness of the different offence types is important: different types of bicycle theft often require different responses.

Bicycle theft is a high-volume crime, yet has been the subject of limited academic attention. Research findings that are available suggest that opportunity plays a major role in explaining cycle theft patterns. Levels of cycle theft are positively correlated with bicycle ownership levels and cycle thefts tend to concentrate at locations where bikes are bountiful, such as university campuses and transport hubs. What's more, crime victim surveys repeatedly find that many bicycles are stolen from in and around the victim's home. Common to all settings is the observation that many stolen bicycles are locked insecurely – making them attractive targets to steal.

**UK TRENDS:** According to police recorded crime data, the levels of cycle theft in England and Wales have remained largely static for over a decade, with around 100,000 cycle thefts in 2010/11. However, these figures undoubtedly shrink the true extent of the problem because many cycle thefts are never reported to the police. For example, estimates from the British Crime (victims) Survey suggest that there were over 500,000 cycle thefts in 2010/11. This would be higher still was it not for the exclusion of under 16s in the survey sample. Also, the British Crime Survey estimates indicate a general increase in cycle theft over time, at a period when most other forms of acquisitive crime have seen marked reductions.

**HARMS:** Theft, and the fear of cycle theft, is a major disincentive to cycle use. Many victims of cycle theft do not replace their stolen bike. Others cycle less often. This has important policy implications because it suggests that cycle theft may jeopardise efforts to increase the use of cycles, efforts that are now widespread in many industrialized countries in an attempt to reduce automobile dependency and obesity rates in urban settings.





# JDiBrief – Crime

## Bicycle theft: ANALYSIS (3 of 5)

Author: Aiden Sidebottom, UCL Jill Dando Institute

**PLACE:** Like all crimes, bicycle theft is found to concentrate at certain locations. Contrary to popular opinion, crime victim surveys indicate that around two thirds of cycle thefts in England and Wales occur in and around the victim's home.



Problem areas include gardens, passageways between houses and outbuildings (such as sheds and garages). High rates of residential cycle theft are attributed to a lack of secure storage and because of the (perceived) inconvenience of securely locking bicycles when at home.

Bicycle theft is also found to concentrate at schools, university campuses and transport nodes, where large quantities of cycles are routinely left unguarded and where offenders typically look inconspicuous when foraging for suitable targets.

**OFFENDER:** Detailed information on cycle thieves is limited. Police detection rates are traditionally low - in England and Wales detection rates are around 5% - in part because many victims of cycle theft cannot provide any information on who stole their bicycle. Evidence that is available suggests that most offenders are young males and that cycle theft is often an “entry crime” to more serious offences. In terms of offender motivation, there are (at least) three categories of cycle thief, those that steal:

- To joyride. These offenders tend to be young (under 16) and will steal any bicycle for pleasure or to get from one place to another.
- For cash or drugs. These offenders take advantage of available opportunities in order to return a profit.
- To order. These offenders tend to be more organised and target specific bikes to order.

**VICTIM:** Research evidence shows that cyclists display a higher risk of having their bicycle stolen than motorists their car and motorcyclists their motorbike. What's more, like many crime types, theft is found to disproportionately concentrate on a small number of victims – repeat victimisation is common. This may reflect the areas in which cyclists park their bikes or the way in which they lock it.

Although an understudied issue, preliminary research findings from England suggests that following an initial cycle theft, the risk of cycle thefts occurring at locations nearby is elevated for a period of around 4 weeks. This is known as the *near-repeat phenomenon* which has been found for different crime types (from domestic burglary to roadside bombs in Iraq) across many countries.

**TARGET:** Bicycles are hot products. They possess many of the ‘CRAVED’ features common to frequently stolen items. For example, they are widely available, often expensive, easy to use and there are numerous channels through which they can be sold. Applying CRAVED to your local cycle theft problem might usefully point towards opportunities for intervention, such as developing ways to make cycles less removable or less disposable.



# JDiBrief – Crime

## Bicycle theft: IMPLEMENTING RESPONSES (4 of 5)

Author: Aiden Sidebottom, UCL Jill Dando Institute

There is no intervention that ‘works’ invariably to reduce cycle theft. Responses should be attuned to the local context and grounded in analysis of the presenting problem. Previous efforts to reduce cycle theft have usually taken one of four forms:

1. Interventions designed to detect offenders’ in the act. A common example of this type of measure is “bait bikes”: cycles fitted with covert tracking systems that are left inadequately secured with the intention of catching offenders stealing the bike and/or gathering intelligence as to where stolen bicycles are disposed of. This type of intervention is often implemented in the hope of catching prolific offenders believed to be operating in an area.
2. Interventions which look to deter offenders through improving the registration of bicycles, thereby increasing the difficulty of disposing of stolen bikes. This can range from the use of ultra violet pens to more advanced RFID tags. Initiatives of this sort can also aid the police in reuniting stolen cycles with their legitimate owners. Presently, documented cases of attempts to disrupt the market for stolen cycles, including online auctions, are limited.
3. Interventions intended to improve the security of cycle parking facilities. These can take several forms, reflecting the specific characteristics of different cycle theft problems. For example, in areas where cycle parking facilities suffer from poor visibility, attempts have been made to improve natural surveillance either by increasing the flow of passers-by or through the (re)positioning of businesses such as taxi ranks. The rationale for such schemes is that offenders will be less likely to offend in areas where their (perceived) likelihood of being spotted is high.
4. Interventions which seek to improve how cyclists lock their cycles. This is typically through the use of education campaigns informing cyclists of recommended practices concerning the types of locks to use and the manner with which they should be applied.

Interventions to reduce cycle theft are plentiful. Reliable evaluations on their effectiveness are not. While there is much anecdotal evidence on the effectiveness of various schemes, a hallmark of the cycle theft research literature is the weak evidence-base on ‘what works’. There are two exceptions: the first is a study evaluating the effectiveness of a targeted publicity campaign in which stickers - intended to improve cyclists’ locking behaviour through providing an image of how to lock a bicycle securely - were attached to bicycle parking stands in on-street public cycle parks. A comparison of the security of cyclists’ locking practices before and after intervention indicated significant improvements at those sites where the intervention was fitted.

The second study relates to the impact of different types of bicycle parking furniture on cyclists’ locking practices, specifically designs intended to facilitate the ease with which cyclists can secure both the wheels and frame of their bike to the stand. Figure 1 shows one of these prototype parking stands. Data collected as part of several thousand systematic observations showed significant improvements in locking practice at the new bicycle stands compared to the control (Sheffield) stands.



Figure 1 – the ‘M’ bicycle parking stand



# JDiBrief – Crime

## Bicycle theft: RESOURCES (5 of 5)

Author: Aiden Sidebottom, UCL Jill Dando Institute

### GENERAL RESOURCES

- UK based – POLKA library run by the National Policing Improvement Agency  
<http://polka.pnn.police.uk/>
- Clarke, R. V. and Eck, J. (2003). Become a Problem Solving Crime Analyst in 55 Small Steps. Manual. Jill Dando Institute of Crime Science: London. Available at: <http://www.popcenter.org/library/reading/pdfs/55stepsUK.pdf>
- Johnson, S. D., Sidebottom, A. and Thorpe, A. (2008). Bicycle theft. Problem-Oriented Guides for Police Series. U.S. Department of Justice, Office of Community Oriented Policing Services. Available at: [http://www.popcenter.org/problems/bicycle\\_theft/](http://www.popcenter.org/problems/bicycle_theft/)
- Weisel, D. (2005). Analyzing Repeat Victimization. Problem-Solving Tool Guides. U.S. Department of Justice, Office of Community Oriented Policing Services. Available at: [http://www.popcenter.org/tools/repeat\\_victimization/](http://www.popcenter.org/tools/repeat_victimization/)

### UK GOVERNMENT REPORTS

- Clarke, R. V. (1999). Hot Products: understanding, anticipating and reducing demand for stolen goods. Police Research Series. Paper 112. Home Office: London. Available at: <http://www.popcenter.org/problems/shoplifting/PDFs/fprs112.pdf>

### A SELECTION OF ACADEMIC PAPERS AND BOOK CHAPTERS

- Gamman, L., Thorpe, A. and Willcocks, M. (2004). Bike Off! Tracking the Design Terrains of Cycle Parking: Reviewing Use, Misuse, and Abuse. *Crime Prevention and Community Safety: An International Journal*, 6(4), 19–36.
- Johnson, S. D., Bernasco, W., Bowers, K. J., Elffers, H., Ratcliffe, J. H., Rengert, G. F. & Townsley, M. (2007). Space-time patterns of risk: A cross national assessment of residential burglary victimization. *Journal of Quantitative Criminology*. Vol 23(3), pp. 201-219.
- Sidebottom, A., Thorpe, A. and Johnson, S. D. (2009). Using targeted publicity to reduce opportunities for bicycle theft: A demonstration and replication. *European Journal of Criminology*. Vol 6(3), pp. 267–286.
- Thorpe, A., Johnson, S.D. and Sidebottom, A. (2012). The impact of seven prototype bicycle parking stands on opportunities for bicycle theft. In P. Ekblom (Ed.) *Design Against Crime: Crime Proofing Everyday Products*. *Crime Prevention Studies* 27. Lynne Rienner.
- Zhang, L., Messner, S. and Liu, J. (2007). Bicycle-Theft Victimization in Contemporary Urban China: A Multilevel Assessment of Risk and Protective Factors. *Journal of Research in Crime and Delinquency*. Vol 44(4), pp. 406–426.