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BENNETT, Luke <<http://orcid.org/0000-0001-6416-3755>>

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Metal theft - anatomy of a resource crime

Luke Bennett, Senior Law Lecturer, Sheffield Hallam University

l.e.bennett@shu.ac.uk

ABSTRACT

This paper was drafted in Summer 2008. It features ideas and events that could not fit into my published paper 'Assets under attack: metal theft, the built environment and the dark side of the global recycling market' *Environmental Law and Management* 20, 176-183 (2008). At the time I intended to develop the draft into a companion piece to that paper, but other projects distracted my attention. Accordingly this draft paper is a little dated in its focus upon pre 2008 examples, however its conjectures on the nature and motives of metal thieves may still be worthy of some attention. I therefore offer this paper to public view on an 'as is' basis. If anyone finds my comments of interest then I would be glad to receive any comments and might thus be spurred to update the treatment and examples featured in the present draft.

1. Introduction

Take a walk along many urban or suburban pathways and, if you pause and look carefully, you are likely to see them. There, on the ground, a twist of redundant rubber and a few shards of burn out machinery. They are human droppings and they have a story to tell. These discards are the remnants of a very lucrative and rational activity. An activity that has its own multi-million pound global infrastructure. These are signs of a market that is having a very damaging effect on the physical world around it. There is a whole human ecology at work here. Let's explore.

These discards are signs of metal theft. Impromptu bonfires are lit near to the neglected buildings and structures from which the copper cabling has been ripped. The flames are a quick and cheap way to get through the rubber or plastic coating to the glittering prize beneath. That prize is copper.

A bunch of copper gathered in this way fetches a very good price at a local scrap yard as raw stock for recycling. Better still rip out lightning conductors, copper plumbing and gas pipes or steal whole cable reels from stock yards - no need for bonfires then. And while in the area why not strip the local roofs of their lead flashing too?

Meanwhile, 5000 miles away in China, the finishing touches are fixed to the Olympic stadium and attendant developments that mark the 1.22 Billion Euros¹ investment in built environment and new infrastructure that is the 2008 Olympics².

¹ Online article dated 29 January 2008, quoting vice mayor of Beijing (source: pro-Chinese government website www.radio86.co.uk (accessed 11 March 2008))

Popular wisdom (even in public administration circles) has it that much of the UK originating copper (and lead and other valuable non-ferrous metals like aluminium and brass) forcibly "recycled" by these means now form the power cables, electrical components and architectural finishes of these new Chinese buildings³:

"The copper is going through larger scrapyards, then to smelters and then by ship to China, which has an incredible demand for copper, particularly with the Beijing Olympics coming and the demand for telecoms infrastructure," (Andy Trotter, Deputy Chief Constable of the British Transport Police)⁴.

2. Why is metal theft happening?

The world price of copper has risen 180% since mid 2003, to sustained record heights. Warehouse stocks of copper on the international metal markets are at very low levels.⁵ Against such a background the demand for copper has fuelled a conspicuous rise in the pillaging of the built environment around the World.

3. The impacts of metal theft

What is happening locally?

The following are a cross section of incidents occurring in the South Yorkshire sub-region in the past 12 months:

- May 2007: Sheffield - spate of theft of lead from roofs from schools and community facilities⁶
- Over two nights in July 2007 lead flashing was stripped from 12 homes in one Sheffield street⁷
- In November 2007 a 23-year-old man believed to have been attempting to steal copper from an electricity substation near Retford, north Nottinghamshire was left in a critical condition with 25% burns in a Sheffield hospital after suffering a 33,000 volt electric shock during the break in.⁸

² Non-official analysts assess the overall Olympics related real estate investment as much higher - see for example an 26 January 2006 article in US publication MoneyNews which estimated the total development investment at \$160Billion: source www.newsmax.com (accessed 12 March 2008)

³ According to a 16 January 2008 press report in China Daily, the 6.93 tons of copper required for the minting of the 2008 Olympic medals is being sourced direct from the "the diversified minerals and medals sponsor", mining transnational corporation BHP Bilton, who will supply the copper direct from their mines in Australia and Chile. According to: www.beijingolympicsfan.com Copper is required for both the gold and bronze medals.

⁴ Quoted in the Guardian, 28 May 2007

⁵ "Copper Fundamentals Still Bullish": an investment report (March 2008) published by www.goldworld.com

⁶ The (Sheffield) Star, 17 May 2007

⁷ The Sheffield Star, 6 August 2007

⁸ Newspaper report: Sheffield Star, 27 November 2007

- In just the first two months of 2008 Sheffield Homes (the City's main social housing provider) was notified of 40 houses on their Firshill estate that had been targeted by metal thieves and had their external copper gas pipes stolen.⁹
- In February 2007, two men aged 41 and 34, both of Bentley, South Yorkshire were jailed for 30 months and 21 months respectively, after over two-and-a-half miles of copper cable from Yorkshire's railway network was found in their back gardens. The cable cost around £150,000 to replace.¹⁰
- In December 2007 thieves stole a lorry and its cargo of metal piping and cable from an Industrial estate near Doncaster. The vehicle was later found empty and abandoned in West Yorkshire.¹¹

The wider impacts

Internet web pages from local and national newspapers, utility companies, solutions providers and law enforcement authorities reveal a catalogue of pillaging around the world: and have provided the source material for much of this paper, key UK impacts include:

- Copper theft is thought to have been the cause of the demolition of a bungalow in Bradford on 22 May 2007. The unoccupied house exploded after copper gas pipes on the outer walls were fractured, apparently by someone trying to rip them out. Police were reported to be looking for two boys, aged 10 and 11, in relation to the explosion.¹²
- Copper theft caused more than 240,000 minutes of delays for train passengers in 2006 after a near-fivefold rise in robberies at tracks and depots.¹³ On 21 November 2007 cable theft caused rush hour chaos as 71 trains were cancelled due to the theft in Greater Manchester¹⁴. British Transport Police claim that:

"after the threat of terrorism, the theft of cable is one of BTP's biggest challenges"¹⁵.

- In January 2006, The Three Watchers, a bronze sculpture, was stolen from Roehampton University's campus. The sculpture's value as art was £300,000 - but Police fear that its was stolen for its scrap metal value: a mere £1,000¹⁶

⁹ The Sheffield Star, 10 March 2008

¹⁰ Source: Doncaster Star, 20 June 2007

¹¹ Source: Doncaster Star, 15 December 2007

¹² Source: the Guardian, 28 May 2007

¹³ Source: the Guardian, 28 May 2007

¹⁴ Source: Manchester Evening News, 21 November 2007

¹⁵ British Transport Police press report, 10 July 2007

¹⁶ Source: The Guardian, 26 January 2006

- Such is the demand that (pre 1992 edition) 2p pieces are more valuable if they are melted down for their 97% copper content.¹⁷ (the Royal Mint estimates that there are more than eight billion pre-1992 1p and 2p coins still in circulation)¹⁸
- The impact upon Churches has been particularly pronounced, and the reaction of the main insurer, Ecclesiastical Group, particularly prominent. Ecclesiastical spokesman, Chris Pitt has said:

"The problem of theft of metal from churches is nothing short of an epidemic. We've never seen a trend of theft which is so widespread and taken hold so quickly."¹⁹

Claims statistics from Ecclesiastical (who insure over 95% of Anglican churches in the UK) show claims for metal theft rising from £300,000 (85 claims)²⁰ for the whole of 2005 to £7.6Million (2,200 claims) for the first nine months of 2007²¹.

- The impact of metal theft reverberates across the insurance industry, for example:

"You can't put copper on an open trailer any more, and insurance premiums are shooting up," said Simon Paynton, head of the International Wrought Copper Council.²²

- Scrap metal yards have themselves been targeted by metal thieves and have had to invest in increased security, in one raid on a yard in Shropshire a stolen lorry was used to smash a way into the locked yard²³.

With little search effort it is possible to find contemporary (English language) metal theft stories in the full spectrum of countries around the World, for example USA and Canada, France, Italy, Israel²⁴, Malaysia²⁵, Jamaica²⁶, Australia²⁷, South Africa and Micronesia²⁸.

¹⁷ Source: the Guardian, 28 May 2007

¹⁸ Source: BBC News online report, 27 October 2007

¹⁹ Newspaper interview, Wales on Sunday, 30 December 2007

²⁰ Source: the Daily Telegraph, 22 January 2008

²¹ Ecclesiastical Insurance Group website, accessed 19 March 2008:

<http://www.ecclesiastical.com/theftofmetal/index.aspx>

²² Quoted in the Telegraph, 13 May 2006 (www.telegraph.co.uk: accessed 12 March 2008)

²³ Shropshire Star, 15 June 2007

²⁴ "Image System Will Protect 100,000 Square-Meter Israel Assembly Plant and Enhance Loss-Prevention Pro." By: Larkin, John, Automotive Industries, 10994130, Apr2006, Vol. 186, Issue 4;

²⁵ "Lorry drive hijacks own vehicle carrying scrap metal" New Straits Times, 1 January 2008

²⁶ "Alleviating Shortage of Cement, Basic Food Items and Regulating Scrap Metal Trade Dominated Activities of Industry Ministry" Jamaican Information Service 28 December 2007

²⁷ "Pair charged with \$1 Million copper theft" ABC News report (on line), 3 March 2008, which reports the widespread transport disruption that is being caused by a wave of railway cable theft in Australia (<http://www.abc.net.au/news/stories/2008/03/03/2178773.htm>) accessed 20 March 2008

²⁸ See 21 November 2006 article "Global copper thefts on rise" at: www.energybulletin.net/22790.html (accessed 20 March 2008)

4. Exploring the rationality of metal theft

This paper will now consider how far available data enables a picture of metal theft and metal thieves to emerge, with the aim of understanding why metal theft is happening - and what can be done to tackle it.

"Think Global; Act Local"

At the United Nations Conference on Environment and Development held in Rio de Janeiro in June 1992, 178 nations signed up to Agenda 21, the Rio Declaration on Environment and Development (UNCED 1992). Much of the post 1990 swollen body of national and international environmental law has its origins in the Rio Declaration. The declaration set out 27 principles of good global environmental governance. Principle 7 (along with many of the others) acknowledges the importance of international collaboration and resource protection:

"States shall cooperate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth's ecosystem. In view of the different contributions to global environmental degradation, States have common but differentiated responsibilities. The developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command."

The declaration emphasised the inter-dependency between economies and nations and the tensions over access to natural resources that development brings.

The Rio Declaration was also taken home by delegates with an additional message - that environmental action needs to be implemented locally (i.e. within communities and places) for there to be any prospects for sustainable development on any larger stage. In the UK local authorities embraced the shorthand "think global; act local" as a rallying cry for the self-worth of such local action.

Metal theft in the developed world, given its apparent influence by global development factors (as expressed by the rising world price for such metals) is an equally rational fusion of the micro and macro. As Rennie Short (2001, p13) observes "the local [is] shaped by the global".

That is not to suggest that each perpetrator thinks of the development needs of China when planning a metal raid, it can't be the case that many people have read up on China's non ferrous metal needs and resources at their local library and noticed that:

"Not all reserves are abundant. China's output of zinc, copper and lead are, as yet, only moderate, in relation to the country's present and future needs."
(Money (1990))

But rather it is to emphasise that the abstract, far away, "foreign" issue resonates in localities like Barnsley, Worksop and Rotherham because of the global nature of the metal markets and the international infrastructure that exists by which a bundle of copper in, say, Dudley can readily find its way on a boat to China without too many miracles required along the way.

As British Transport Police's Deputy Chief Constable notes:

"You have only got to look at the rising copper price on the metal market and the theft of copper matches that rise almost absolutely."²⁹

In this context it is perhaps interesting to note that the first recorded use of the "think global; act local" slogan arose not in a political or legal text but in a business context (and it does not appear at all in the text of the Rio Declaration). Waters (1995, p70) traces the origin of the expression to a paper by Theodore Levitt on "the Globalization of Markets" first published in the Harvard Business Review in 1983.

Much has been written about the concept of "globalization" and this paper seeks to glide past that debate. But suffice to say that there is nothing new in the notion that pressure for resources can have all sorts of impacts in other far flung parts of the world. Perhaps the oddness, what makes the impact of Chinese demand for copper remarkable at all, is that it bucks the trend of the last 400 or so years, a period during which resource flows and their consumption have unequivocally been from East to West. The flow of surplus or stolen copper to the East from the West is a novel reversal of the tide. For a change it is the turn of the West to experience the impacts of someone else's hunger for natural resources. The pillaging of our built environment may be an extreme example, but it is but yet one more sign of the "global shift" (Dicken (1998)) in manufacturing and resource consumption from the West to the East.

The cultural gear shift that such phenomenon require in the Western mind is neatly summed up in the following quote from the editor of Country Life, writing in the Daily Telegraph:

"When I visited Kenya 15 years ago, I was charmed by the copper trinkets that were made on a cottage industry basis." Telephone wires," said an old Africa hand, with a smile. You could afford to smile, if you came from a country such as Britain: a place so prosperous and stable that infrastructure generally stayed put."³⁰

The shock expressed here is the realisation that our infrastructure is no longer sacrosanct, that our local world is being pillaged as a consequence of another country's industrialisation.

There are two established sources of copper: (1) the mining of copper ore (Chile, Australia and the US have the largest share of mining output) and (2) recycling copper that already exists (i.e. as scrap metal). Whilst the mines may be largely in

²⁹ Source: the Guardian, 28 May 2007

³⁰ Clive Aslett writing in The Telegraph, 22 January 2008

the global South, the (North) West presents an abundant harvestable commodity. Copper doesn't grow on trees - but it sits readily accessible on buildings and structures, waiting to be picked off by those who wish to see the (illegal) opportunity.

Metal theft from the built environment is attractive (for perpetrators) on many counts: ease of accessibility to materials (often they are on the exterior of the buildings - you don't need to enter). They are of relative high value, easy to sell and hard to trace. Some may be attracted by the perception that such crimes are "crimes without victims" (others may simply not care about whether or not there are any victims). Perhaps most importantly, there is an existing market and infrastructure for the recovery of such materials back into the materials supply chain. Whereas personal possessions stolen through burglary need careful "fencing" to integrate them back into the "legitimate world" and thereby realise their market value (see, for example Walsh (1977), McIntosh (1976)), stolen metal can be directly sold into the mainstream recovery cycle with relative ease.

Patterns of distribution

Is it possible to identify patterns of distribution for metal theft in the UK? Is it concentrated in certain areas?

Data is patchy on this. Metal theft is not logged as a specific type of crime. Accordingly press reports and insurance claim data are the only illumination.

British Transport Police state that trackside copper cable theft is a major problem in north-east England, accounting for nearly two-thirds of the delays related to metal thieves in the UK³¹. Nationally there were 1000 reported instances of cable theft in 2007. BTP's Deputy Chief Constable is reported as having conjectured that the regional bias of the problem may reflect the north-east's industrial heritage, stating:

"The north-east has a tradition of heavy industry and of people who know how to deal with copper and metals. There are also lots of people who know how to trade in it."³²

Church insurers, Ecclesiastical Group, have stated that their claims profile for metal thefts from churches shows:

"Sheffield, Manchester, Bristol and London are being particularly hard hit because they are industrial centres."³³

³¹ BBC News - Tees, web report dated 26 November 2007.

³² Source: the Guardian, 28 May 2007

³³ Ecclesiastical Insurance spokesman, Chris Pitt quoted in an article dated 12 December 2007 on online journal, Recycling & Waste Management News & Information (www.rwm.info) accessed 11 March 2008.

Ecclesiastical report that from a total of almost 1800 church buildings insurance claims during 2007 (at a total cost of £5.8million) over 400 of the claims related to the three cities of Sheffield, Nottingham and Manchester.³⁴

But matching occurrence to "industrial centres" doesn't really get us very far in. Is it that these are urban areas with a high population (i.e. greater density of the criminally minded?) or does it reflect socio-economic factors (i.e. relative disadvantage in communities that "drive" persons to these crimes?). Does a metal trades industrial heritage provide a spur? Alternatively is the shaping force the relative accessibility of scrap metal yards in urban areas?

It is interesting to note the absence of Birmingham / the West Midlands from Ecclesiastical's list. A review of local press reports, local constabulary press releases and television media reports suggests that the Black Country's engineering heritage and metal recovery infrastructure has been causing problems there too (Ecclesiastical's observation, of course, derives from church lead thefts - it is possible that there are many "sub-patterns" within the metal theft arena).

Evidently the problem is felt deeply in other (non industrial) areas too: for example a press report from a local newspaper in Northamptonshire, shows that one in three churches in that county were targeted by lead thefts in 2007³⁵ and the Church of Wales has suffered a steep rise in lead theft related insurance claims between 2006 (£5,600: 7 claims) and 2007 (£118,000: 22 claims)³⁶. Another press report, also drawing on Ecclesiastical data claims:

"One of the worst affected regions is Norfolk and Suffolk, where 40 [churches] have been targeted this year [2007], up from one in 2006."³⁷

Further systematic analysis would be needed to determine with any certainty whether there are geographical patterns to the occurrence of copper and lead theft.

There is some evidence to suggest that stolen materials are moved significant distances before being presented to scrap yards for sale - for example church bells stolen from Tavistock in Devon in August 2007 were discovered in a Greater Manchester scrap yard in October 2007³⁸.

Postulating "types" of metal thief

It would appear simplistic to assume that metal theft is a homogeneous occurrence - always manifesting with the same degree of sophistication, modus operandi and participant profile. But what is the evidence for this gut feel?

Again, data is patchy. Globally there appears to have been little research to date on the criminology of metal theft - and none identified in the UK. But a review of

³⁴ Quoted in BBC News on-line article dated 12 November 2007, www.bbc.co.uk (accessed 11 March 2008).

³⁵ Chronicle and Echo (Northampton), 7 December 2007.

³⁶ Wales on Sunday, 30 December 2007.

³⁷ Daily Mail, 12 December 2007

³⁸ Manchester Evening News, 23 October 2007.

the existing studies, available press reports and interviews with stakeholders the following typifications appear plausible:

- **organised regional / national crime:** For example, highly organised "theft to order" of copper cable reels at depots and construction sites. Such raids require heavy lorries to be supplied by the villains (or hijacked) and may involve offensive weapons and harm to site personnel. There is some evidence of direct export of such materials (i.e. bypassing the scrap metal market)³⁹⁴⁰⁴¹⁴²;
- **premeditated but localised crime:** stealthy and systematic stripping of a series of targets - local churches, railway cabling, targeting whole streets for lead flashing removal or copper piping removal. Such attacks require careful planning, plant and machinery and a degree of technical knowledge about both the removal techniques and the relative marketability of adjacent materials; and
- **opportunistic and localised crime:** opportunistic theft of "one off" items, perhaps driven by a certain desperation (given the risks run in undertaking the scavenging): for example, removal of live cabling from electricity substations, or one-off theft of lead flashing from readily accessible buildings.

This crude typology reflects Walsh's (1977) typology of burglars in the US - a sequencing running from highly organised "professional" criminals through local novices to opportunistic "junkies".

Given the criminal nature of the activities the ability to study and understand the nature of the perpetrators will be incomplete. The obvious irony being that the most successful perpetrators will be the ones who don't get caught and therefore cannot readily be profiled.

An unpublished assessment by Knox (a US Sheriff) examines patterns of metal theft from construction sites in Brevard County, Florida USA. Knox cites increased population, a local construction boom and increase in copper prices as the causes

³⁹ See for example the November 2006 seizure of "dozens of sea containers filled with stolen copper coils parked in the port area ready for shipment. Local media reported the intended destination had been China." (source: Davies (2007) p7)

⁴⁰ Indeed there is evidence of organised criminal activity aimed at stealing copper direct from copper mines - see for example a Reuters news release dated 2 November 2007 concerning the arrest of three Chinese ex pats in Zambia charged with stealing \$1million worth of copper cathodes and concentrates from a local copper mine. (source: <http://uk.reuters.com> accessed 11 March 2008)

⁴¹ large scale theft of telecoms and electricity distribution cabling is common in South Africa, and the scale of the attacks require significant logistics and resources, for example a crime analyst reported in The Cape Times 14 June 2007 (source: www.int.iol.co.za (accessed 12 March 2008) stated in relation to rural cable thefts of up to 8km of line at a time:

"The amount of cable stolen in some incidents is so huge, that the operation is clearly well organised. It takes specialised skills to uncover or cut, transport and dispose of such large quantities of cable in the short time they take to perform these tasks."

⁴² An article in the Telegraph, 13 May 2006 (www.telegraph.co.uk: accessed 12 March 2008)

"Scrap thieves in France ransack TGV rail lines for copper" reports the hijacking of two lorries carrying 50 tonnes of nickel in 2006 in Le Havre (estimating the value of that haul at over £1 Million.

of a spate of copper theft from construction sites. Her assessment focused in on Zone 43, an area located within the County's Western Precinct, and area which Knox (p3) describes as:

"the fastest growing zone of Brevard County, where roads are being built faster than maps can be produced...factors that make it extremely difficult for the Sheriff to effectively staff and patrol these particular areas".

This area had the highest rates of metal theft from construction sites (the thefts comprised stripping out electrical cabling and air conditioning units from part built new houses). In 2006 134 metal theft incidents were recorded in the County. 79 of these occurred within Zone 43. Four arrests were made - but the Sheriff's office doubts that these perpetrators accounted for all 79 incidents. Knox notes the evidential difficulties faced given the lack of any distinguishing features within the copper items to enable their origin points to be traced. Knox also postulates that some of the incidents may have been "inside jobs" by sub-contractors returning to fitted out houses to steal the wiring that they or fellow contractors had just installed.

Copper theft can sometimes be part of a wider crime wave targeted at construction sites. A report of one building site robbing gang in Louisiana, showed how successful that gang had been in targeting post Hurricane Katrina reconstruction sites, stealing power tools, roller shutters, cookers along with copper wiring reels. A haul of \$100,000 of gear was found by investigators in the lock-up garage. The gang, numbering over a dozen, was based at a single house. The stolen materials were then driven to Texas or Mexico and sold to the highest bidder. The gang's total haul over its 2 year spree was estimated at \$500,000.⁴³

Certainly the role of technical knowledge (i.e. about how to locate and reverse install wiring and piping) may be significant factors in metal theft. Roofers, plumbers, builders and electricians all have an intimate acquaintance with these materials and have the physical means (vehicles, tools and legitimate reason for having in their possession "spare" (or scrap) metals). A good example is a reported overnight attack on the construction site for an Ontario school⁴⁴ - the raid occurred the day after the copper plumbing and wiring had been installed. Over 500 lbs of material were systematically stripped out and then power - hoisted over the perimeter fence onto the get away lorry. The site contractor, commenting upon the scrap value of the materials, noted the black market for re-sale of such piping:

"...unscrupulous contractors might pay \$150 for piping that would wholesale at \$500...the real value is to reinstall it".

This is not, however, to suggest that all such tradesmen are involved in metal theft - but rather to suggest that they comprise a natural constituency from which a criminal element might well emerge in times of elevated value for these materials.

⁴³ Article in St Tammy News, Louisiana, 18 January 2008

(<http://www.slidellsentry.com/articles/2008/01/20/news/news01.txt>) accessed 16 March 2008.

⁴⁴ 9 March 2008, Orilla Packet & Times, Ontario:

<http://www.orilliapacket.com/ArticleDisplay.aspx?e=935306> (accessed 15 March 2008)

A rare glimpse into the identity and nature of UK metal thieves was provided by the September 2007 conviction of three men (aged 33, 39 and 41) for attempting to steal a BT underground telephone cable in a rural land in North Wales⁴⁵. The men had travelled there from Newcastle-under-Lyme in Staffordshire. When the police arrived to investigate, the gang (armed with van, yellow fluorescent jackets and road signs) sought to reassure the Police that they were contractors replacing old copper line with fibre optic cable. But an absence of any paperwork gave the game away. By the time the police intervened 20m of cable had been pulled out of the access manhole (with a scrap value of £590). In sentencing the gang the judge described the gang's raid as "careful, pre-planned and audacious". The Judge in his sentencing remarks noted that the gang leader was "of clean character" and that he had previously worked for contractors to BT. It emerged that the van had been hired by the gang, and that other equipment taken with them had been "acquired illegally".

The gang members were each given nine month prison sentences, suspended for 12 months. The gang leader and one assistant were each ordered to do 150 hours unpaid work (whilst the third - already the subject of a separate community service order - was (according to the BBC) "placed on 12 months supervision and sent on a course").

In an unrelated case, Walsall Magistrates Court imposed a 15 months imprisonment sentence upon a trackside cable thief convicted in August 2007 for stealing 40 metres of cable from a railway junction.⁴⁶

Evidence of rationality / prior planning is evident in the systematic area attacks and in the repeat targeting of the same premises (although the latter may also be a signifier of the local orientation of the perpetrator and may not necessarily be the most rational tactic when it comes to maximising the chances of not getting caught). There are many instances of repeated targeting of the same church or group of churches: for example St Nicholas' in Bawtry, South Yorkshire - targeted three times during Summer of 2007⁴⁷. Repeated targeting of premises is a common aftermath of initially opportunistic burglaries committed by locally based offenders (see, for example Bowyers & Johnson (2005)).

A link to drugs and/or alcohol dependency was found in a study of 8 intruders fatally electrocuted between 1981 and 2001 at electricity substations in one US county studied by Taylor et al (2003). A link to attempted metal theft was inferred in each case by the presence of equipment likely to assist such theft (e.g. ladder, cable cutting tools and the like). The average age of the deceased was 33 years, five of them were found to be intoxicated (either with cocaine or alcohol). Whether this study can reliably give insight into the character of sub-station raiders in the UK is a moot point. However it would, at least, appear to be credible evidence to support the view that attempting to steal cable from sub-stations is particularly dangerous whilst intoxicated.

⁴⁵ BBC News report dated 21 September 2007 (accessed 16 March 2008)
http://news.bbc.co.uk/2/hi/uk_news/wales/north_east/7007344.stm

⁴⁶ British Transport Police press release 1 August 2007

⁴⁷ Doncaster Star, 31 July 2007

Will the metal theft continue?

There is some evidence to suggest that metal thefts are cyclical, matching the rise and fall of the target metals, for example in an 1998 article entitled "*Thieves find some scrap not worth stealing*" Roggio notes the demise an earlier metal theft boom era:

"The California Metal Investigators Association was formed in the 1960s in response to material thefts at power, communication, and transportation companies. The group is finding now that some metal prices are so depressed that incidences of scrap theft are down considerably."

However metal theft from the built environment is likely to remain a significant issue for the foreseeable future - partly due to the fact that increased World demand for copper is unlikely to tale of dramatically for the foreseeable future, but also because (as Atwood (2004) observes from his study of the impact of modern day tomb raiding in Peru):

"once pillage has been introduced into a local economy, it is, like other illicit industries, difficult to exterpate." (Atwood (2004) p29.

Atwood's study focuses on the global impact of the discovery of the Royal Tombs of Sipan in Peru by five local grave robbers on 6 February 1987. He charts the impact of that find upon the local community, the global antiquities trade and ultimately the international regulation of circulation of looted artefacts around the world. The discovery's local impact was to steadily convert local (initially opportunistic) peasant looters' attitudes towards their task:

"When you start doing this, it makes you nervous...digging up bones, you think you are going to incur a curse. But after a while it becomes easy. You don't even thing about it." (Atwood (2004) p32)

It is to be feared that a habitual stealer of copper from electricity sub-stations or high speed rail track will come to deny the existence of safety risks by the same mental leaps.

The looters also came steadily to rationalise their new occupations:

"Around here there is no other kind of work. I used to work at the dairy factory but it closed. There is no work but looting" (Atwood (2004) p32).

Whether in Peru or South Yorkshire there is also a process of "commodification" involved, coming to see the built environment as a place of plunder - and viewing everything in terms of its sale value, rather than by any other measure, aesthetic or otherwise⁴⁸. Modern societies have deployed their infrastructure in a manner that assumes that the public will not steal them. Many assets by their nature must lie in remote unguarded locations (e.g. railway lines and cables). Fencing or other exclusion or enclosure will never be fully effective to the determined raider. Where

⁴⁸ See "*As another bronze is stolen, police fear treasures are going for scrap*" The Guardian 25 January 2006

such "commodification" sets in completely plunder will have no limits (whether physical, moral or cultural). A parallel can be drawn with those who burgle their own local community, rejecting even respect for the property of their own kind (in contrast to the "professional" burglar who may target more affluent premises away from his own, and rationalise that accordingly as revenge against the "other").

Adamson (1996, p18 - 19) writing on the relationship between industrial decline and criminality upon poor South Wales housing estates notes the ways in which those estates have changed through loss of the mining and steel heritage that provided traditionally a collectivistic value system that had previously "ensured that crime [was] not generally committed against the home community":

"The politics of possessive individualism which have characterized Britain since 1979 have inevitably devalued traditional collectivist ethos of working class communities. The consequence is that the vast majority of property crime is experienced by the poor as a result of neighbours and peers (Wells 1995). The young working class male perpetrates the majority of his crimes against his own community."

Applying this logic more broadly (and beyond the confines of those housing estates) if this move away from a collectivistic orientation to civic life permeates the whole of society then it becomes little surprise that manhole covers⁴⁹, road signs⁵⁰, church bells⁵¹, gates⁵², station clocks⁵³, flood defence structures⁵⁴, statues⁵⁵, memorial plaques, cabling and building fabric are stolen without regard by the perpetrators for the social or economic consequences of their actions. Indeed it starts also to give insight into a range of other anti-social property crimes (theft of life buoys⁵⁶ and the bombing of traffic speed cameras⁵⁷ to name but two).

As one commentator notes:

⁴⁹ Newham Council in London is said to spend £60,000 replacing manhole covers each year: The Daily Telegraph, 21 January 2008. Drain cover thefts have also been reported by the BBC in Kent, Hertfordshire, Berkshire, Surrey, Sussex, Cambridgeshire, North Lincolnshire and Doncaster (BBC News web reports 22 November 2006 and 26 and 31 January 2008)

⁵⁰ BBC News web report (22 November 2006) reports, quoting Local Government Association sources that "more than 75 road signs have disappeared costing North Lincs and Powys councils £12,000 each."

⁵¹ Christian Today, online article 27 August 2007, describing theft of a church bell from bell tower at a church in Kent

⁵² Kettering Evening Telegraph, 12 March 2008

⁵³ Theft of two railway station clocks in East Sussex is reported in an article dated 12 September 2003 http://www.24hourmuseum.org.uk/nwh_gfx_en/ART18066.html (accessed 20 March 2008)

⁵⁴ In June 2007 Sheffield and its local region were hit by major flooding. Metal flood defence gates installed at Doncaster to protect homes from future flooding were stolen in January 2008 (source: BBC News online report dated 24 January 2008). During the July 2007 floods in Worcestershire the Environment Agency had staff mounted guard to prevent deployed demountable aluminium flood defences at Bewdley, Worcestershire being stolen.

⁵⁵ There are many reports of copper, bronze and brass statues being stolen and then cut up and sold for scrap, see for example: "Stolen bronze statue worth \$1 million sold to a junk shop for £4,000" 29 December 2007 AHN news agency report of statute theft in Vermont, USA

⁵⁶ BBC News report of thefts of life buoys on Eastbourne promenade 17 January 2007.

⁵⁷ BBC News report online, 4 February 2003

"...Prices have risen to the point at which it is worth thieves pinching objects that previously we had left lying around, "out in the middle of the street", as Trollope's Miss Jemima Stanbury described the pillar box, "with nobody to look after it". (And how long will they remain safe?)"⁵⁸

Whilst there is no available evidence to prove this, it is worth conjecturing that the current wave of metal thefts originated in the "steady" (i.e. always present) low level scavenging of lead, copper and other "scrap" from derelict (and semi-derelict) premises during the deindustrialisation of the last 30 years. Such activity would have created (or maintained) a small scale distributed "know-how" within the underclass that might then infect / skill-up (depending on your perspective) others to enter this "trade" when the pickings became truly rich once metals prices started to hit their record high levels it in the early part of this decade. If that were so then metal theft may have grown out of a mentality / rationalisation based upon a perception that such crimes were (at worst) "victimless" and (at best) contribute towards the tidying and regeneration of derelict sites.

One can see the ways in which rising price levels would lead to more entrants to join this scavenging market, with pressures on supply and the lines between (genuine) scrap and pillageable (but non derelict) sources of metals then becoming increasingly blurred. By such a process (and with "trickle down" of half-understood awareness of the opportunities in and techniques for successful metal theft to young and junkie entrants) the imperilling of the perpetrators and the occupants for the sake of a few pounds gained by snipping off "live" exterior copper pipes from poor housing becomes, at least, contextualisable. There may also be some evidence to support a view that at the "late entrant" or inexperienced end of the market perpetrators are stealing metal items of little value, perhaps as a result of craze or "fashion" factors taking over (a kind of bandwagon effect). As one municipal official with responsibility for replacing stolen drain covers in Michigan observes:

"They must be selling them for scrap. There can't be any real value - they may be getting a couple bucks a piece - but they cost me more than 100 bucks a piece to replace."⁵⁹

Furthermore a plumber interviewed in a BBC news report⁶⁰ following an attack involving the crude stripping of live exterior copper gas pipes from six West Midlands homes noted, the value of material obtained (approximately 2 metres of copper pipe per house) netted the robbers only about £2, even at currently inflated copper prices, risking injury to themselves in the process.

Indeed there may be some recent signs that deployment of SmartWater to protect churches and targeted campaigns to protect railway and power infrastructure may

⁵⁸ Clive Aslet, The Daily Telegraph, 21 January 2008

⁵⁹ "Grate crime wave stalks county" by Charles Slat, 18 January 2008 in Monroe News (Michigan, USA): <http://www.monroenews.com/apps/pbcs.dll/article?AID=/20080118/NEWS01/302672689/-1/NEWS> (accessed 19 March 2008)

⁶⁰ Report by Ashley Blake, BBC Midlands Today 26 November 2006 on thefts at Tividale, Oldbury (the TV report can be viewed at: http://news.bbc.co.uk/player/nol/newsid_6170000/newsid_6178400/6178498.stm?bw=bb&mp=wm&news=1&nol_storyid=6178498&bbcws=1)

be altering metal theft profiles, as the Chairman of Northamptonshire West Neighbourhood Watch Association observed in March 2008:

"By pushing the SmartWater technology, there has been a decline in the number of churches being targeted and the general impression was that thefts were dwindling because of the publicity about metal thefts. But what we are seeing more of now is opportunists who go around and pick up stray bits of metal from front gardens or bits and pieces they can lay their hands on. The recent information we have is that farm gates and fencing have been taken, and bits of machinery which are left in fields"⁶¹

There is some anecdotal evidence to support a theory that accords a role to prior experience of host communities to lay off and site closure as a precursor to metal theft, suggesting that appropriate local knowledge can lay dormant until prompted by price or other incentive to mobilise in support of metal theft. For example: an metal theft raid upon a former munitions storage site in North Wales - the use of metal detectors to target runs of underground cabling suggested a sophistication in the intruders - but the site's considerable size and the quick pinpointing efficiency of the attackers implied a degree of local knowledge, searching "blind" for such cabling, even with metal detectors, would have taken many days.

The modern role of local scavengers as informal waste collectors has been given little research attention in the developed world - and tends to be thought of as a "third world" phenomenon. Such micro economies are indeed very important in such countries - for both the economic well being of the urban poor, but also for the efficient operation of recycling markets (see for example, Medina (1997) and McLean (2000)), but scavenging has its contribution to culture, economics and resource flows in the developed world too. Yet McLean's following description of a Durban scrap metal collector could equally apply (with no adjustment) to itinerant scrap collectors readily observable operating today within modern British cities:

"It is not uncommon to see a collector pushing a trolley loaded with old car exhausts, refrigerator doors, other car parts, or even old lead pipes to a scrap metal merchant" (McLean (2000) p17)

and also familiar is her observation that:

"Of particular concern...is the continued and rapid disappearance of items such as steel manhole covers and bridge railings, presumably removed for their worth as scrap metal" (McLean (2000) p17).

5. Addressing the issue

Areas flagged by this investigation as in need of further research in order to inform the search for solutions to the metal theft problem include:

⁶¹ "Metal thieves target new areas for thefts" Kettering Evening Telegraph, 12 March 2008
<http://www.northantset.co.uk/news/Metal-thieves-target-new-areas.3869808.jp> (accessed 20 March 2008)

- Exploration of the perception that metal theft is an "industrial north" problem - and that its patterns of occurrence match areas of deprivation, metal work heritage and/or metals recycling infrastructure. This would require systematic investigation and plotting of local patterns of copper and lead theft incidents to identify regional patterns;
- Micro-level phenomenological investigation of how locals come to learn about the opportunity of metal theft, how requisite criminal and technical skills are passed on and laundering networks developed;
- Exploring the relative contribution of various types of suspected perpetrators to the metal theft phenomenon e.g. (i) "men with vans" and environmental crime (fly tipping and gate and architectural salvage theft), (ii) tradesmen and "inside jobbers", (iii) career criminals, (iv) opportunists: junkies and children, (v) burglars, (vi) vandals;
- Investigate vulnerabilities and emerging defence strategies upon commercial and residential estates, and promote best (and cost effective) practice;
- Study how the courts deal with metal theft - and how they could be encouraged to send stronger signals that the anti- social and economic costs of their pillaging will not be tolerated;
- Study risk vs reward perception amongst sub-station raiders; and
- Understand community support of metal theft and the ways in which this might be better harnessed to de-motivate potential metal thieves.

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