Where have all the burglars gone?

TALLINN

The rich world is seeing less and less crime, even in the face of high unemployment and economic stagnation

THE Old Town in Tallinn, the capital of Estonia, does not look like a den of thieves. On a summer afternoon, herds of elderly tourists—American, Japanese, British—wander between the gift shops and sip lagers at pavement cafés beneath the gothic town hall. In a park, teenagers chat and smoke cigarettes in the sun.

Valdo Pôder, a local police officer, remembers when it was quite different. In the mid-1990s curtains rose at the city's theatres at six o'clock so that the audience could get home before sunset. Young men hung around selling bootleg vodka. The streetlights were always smashed. Pointing to one smart-looking bar Mr Pôder says he would have needed a team of at least ten officers to raid it. "We'd have to put everyone inside on the floor," he says. "Or else we might get shot at."

Crime in Estonia has fallen precipitously. Since 1995, the country's murder rate has dropped by 70%, and robbery and car theft have fallen almost as far. Even as the country entered a deep recession in 2009, which pushed unemployment up to 19%, the crime rate kept falling. But though the magnitude of this trend sets post-Soviet Estonia apart, its direction does not. Across the developed world, the crime wave that began in the 1950s is in broad retreat (see chart 1 on next page).

Both police records (which underestimate some types of crime) and surveys of victims (which should not, but are not as regularly available a source of data) show crime against the person and against property falling over the past ten years in most rich countries. In America the fall began around 1991; in Britain it began around 1995, though the murder rate followed only in the mid-2000s. In France, property crime rose until 2001—but it has fallen by a third since. Some crimes are all but disappearing. In 1997, some 400,000 cars were reported stolen in England and Wales: in 2012, just 86,000.

Once upon a time in America

Cities have seen the greatest progress. The number of violent crimes has fallen by 32% since 1990 across America as a whole; in the biggest cities, it has fallen by 64%. In New York, the area around Times Square on 42nd Street, where pornographers once mingled with muggers, is now a family oriented tourist trap. On London's housing estates, children play in concrete corridors once used by heroin addicts to shoot up. In Tallinn you can walk home from the theatre unmolested as late as you like.

What is behind this spectacular and widespread improvement? Demographic trends are an obvious factor. The baby-boom in the decades after the second world war created a bubble in the 16- to 24-year-old population a couple of decades later, and most crimes are committed by

men of that age. That bubble is now long deflated. In most Western countries, the population is ageing, often quite fast.

But demographics are not everything. Mark Simmons, a deputy assistant commissioner for the Metropolitan Police in London, points out that the number of 18- to 24-year-old men in the city has been increasing in recent years, and yet the decline in crime has continued. The sheer magnitude of the improvement in places such as New York and Los Angeles, where the incidence of some crimes has fallen by as much as 90%, cannot be explained just by a young-person deficit.

Steven Levitt, an economist at the University of Chicago, has argued that the legalisation of abortion in the 1970s cut America's crime rate by reducing the number of children growing up in inner-city poverty and thus predisposed to criminality. But that cannot explain why rates have kept falling long after such an effect should have tapered off, or why crime rates in Britain, where abortion has been legal for longer, began falling later. Jessica Wolpaw Reyes, an American researcher, has argued that the cognitive effects of exposure to lead were a primary determinant of violent crime, and unleaded petrol is to thank for the improvement. But the causal link is far from proven.

Could more criminals being locked up be the answer? The number of people be- ▸▸

‣ hind bars has grown substantially in many countries over the past 20 years. In Britain the prison population doubled between 1993 and 2012; in Australia and America, it almost doubled. But several countries, including Canada, the Netherlands and Estonia, have reduced their prison populations without seeing any spike in crime; so too have some American states such as New York, where crime rates have fallen fastest. Prison takes existing criminals off the streets. But in many places, the drop in crime seems to be down to people not becoming criminals in the first place. Between 2007 and 2012 the number of people convicted of an offence for the first time in Britain fell by 44%.

Better policing is a more convincing explanation than bigger prisons: the expectation of being caught undoubtedly deters criminals. In New York and Los Angeles, where crime has fallen further and faster than almost anywhere, Bill Bratton, a former police chief of both cities, is often credited for the turnaround. Partly, that is thanks to higher standards. Today's LAPD is a far cry from the racist, corrupt and scandal-ridden force of the 1990s. But tactics have also changed.

Hot fuzz

A combination of officers talking to the people whose neighbourhoods they police and intensive targeting of crime "hotspots" has transformed the way streets are protected. In the 1990s, Mr Bratton embraced data-driven "CompStat" policing, targeting the most blighted districts with huge numbers of officers. The biggest subsequent crime drops were extremely localised: for example, in the area around Canal Street in Lower Manhattan, the murder rate fell from 29 per 100,000 residents in 1990 to around 1.5 by 2009.

According to Lawrence Sherman, a criminologist at the University of Cambridge, such tactics have now worked in places as different as Sweden and Trinidad and Tobago. In Chicago, where crime has been slower to fall than elsewhere, local politicians this year thanked hotspot methods for the lowest murder rate in half a century. Technology has improved the effectiveness of detective work too. The advent of DNA testing, mobile-phone location and surveillance cameras—which have spread rapidly, especially in Britain—have all increased the risk of getting caught.

Some broad social changes have probably helped. In most countries young people are increasingly sober and well behaved. They are more likely to live with their parents and to be in higher education—across the European Union 28% of adults aged 25-34 still live at home. In Britain, the current generation of 18- to 24-year-olds is a lot less likely to have tried an illegal drug or to drink than those ten years older were at their age, and the same is true

Going down for a stretch
Crimes, G7 countries, 1995=100

Sources: Eurostat; FBI; Statistics Canada; Statistics Japan
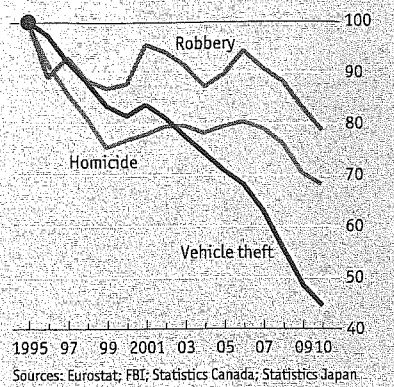
in most European countries. In most countries wife-beating has become more stigmatised and less common: since 1994, self-reported domestic violence has fallen by three-quarters in Britain and two-thirds in America.

In America, the end of the crack-cocaine epidemic in the 1990s is widely credited with reducing crime. In Europe, the explosion in heroin use that accompanied the high unemployment of the 1980s has largely receded, even though hard economic times are back. Junkies are older and fewer; in Rotterdam, there is now a state-sponsored hostel for elderly heroin addicts. A lot of people in the rich world still take illegal drugs, but they tend to be drugs that they pay for out of what they earn, not what they steal.

The repopulation of inner cities is probably also a help. A middle-class exodus to the suburbs of the 1950s and 1960s often left behind inner cities blighted by derelict properties and concentrated poverty. George Kelling, the American criminologist who first developed the idea that seemingly small signs of dereliction—such as broken windows—can encourage more significant criminality, points out that inner-centre neighbourhoods such as Harlem in New York, or Amsterdam's Nieuw-

markt district, have been reclaimed by the well-off. The windows have been mended. Gentrifiers may not always be popular, but they set up neighbourhood watch meetings, clean up empty spaces and lobby politicians to take crime more seriously. They may be a consequence of falling crime that lowers crime further.

The last category of explanations is perhaps the most intriguing: that criminals simply have fewer opportunities. Jan van Dijk, a criminologist based at Tilburg University in the Netherlands, points out that in the 1950s and 1960s millions of people across the Western world acquired cars, televisions, record players, jewellery and so on for the first time; rich pickings for those who would steal them. In the decades since, those same people have added burglar alarms, window locks and safe deposit boxes. Between 1995 and 2011, the proportion of British households with burglar alarms increased by half, to 29%. And some things once worth stealing from people's homes have become less valuable. There is little point in burgling a house to steal a DVD player worth $30.

Bellman and true

Shops have invested heavily in security, installing clever gates and tags to deter shoplifters and employing ever more guards. In fact, private security is booming in many places. The number of guards employed in Europe has increased by 90% over the past decade, and they now outnumber police officers. Security vans are now harder to knock off and are often followed by police cars. Fewer businesses handle lots of cash. Those that do keep less on the premises.

Armed robbery has been particularly hard hit by reduced opportunities. In 1950s London, professional criminals—often exservicemen—used explosives to crack the safes of factories and banks. When safes toughened up, the hard men moved on to holding up banks. As banks put up shutters and alarms, bulletproof partitions and surveillance cameras, they turned to robbing less secure building societies. By the ►►
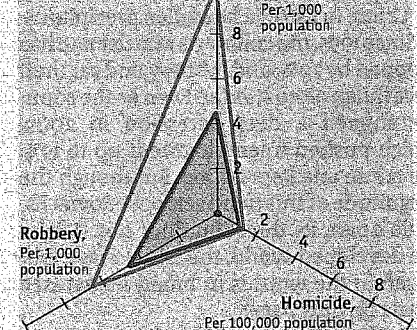

Less offensive
Annual rates, selected crimes

△ 1997 △ 2010

United States
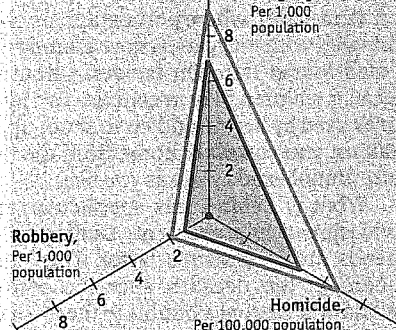
England and Wales

Source: FBI; Office for National Statistics; World Bank

1990s it was betting shops and off-licences (liquor stores). Now there are few armed robberies at all. As Roger Matthews of the University of Kent puts it: "You might make a thousand pounds and you'll get caught. What's the point?"

Armed robbery may have fallen for another reason too: robbers typically relied on stolen cars for their getaways. But thanks to central locking, alarms and circuitry immune to hot-wiring, stealing a car is far harder than it was. In New York City the annual number of car thefts has fallen by 93% over the past 20 years. According to Graham Farrell, of Simon Fraser University in Canada, reducing car theft may have had broader knock-on effects than just restricting getaway options. Stealing a car for a joyride used to be a "gateway crime", which would lead teenagers on to other crimes; now such escalation is restricted to Grand Theft Auto games (which, at least one study suggests, may themselves be reducing crime by keeping feisty young men occupied).

Not all crime is falling. Sexual offences, which often go unrecorded, may be becoming more or less common. Bank fraud, money-wire scams and trade in personal information may well have a lot of growth potential. Organised crime may be less violent in the rich world, but it is still a scourge in many places. Even in countries where crime overall continues to decline rapidly, such as Britain, certain types of property crime—such as pickpocketing and shoplifting—have risen with unemployment (the lure of mobile phones, not yet as hard to steal as cars, doubtless plays a role). Violent crime recently ticked up ever so slightly in the United States, and is rising in a few other places, such as France. And in many places police numbers are now falling, which may bode ill if policing has done a lot to drive down crime.

But the sheer scale of the drop—and its broad persistence in the face of the deepest economic depression in a century—make a new crime wave seem unlikely. Policing is still improving; heroin and crack-cocaine consumption continue to fall; and no one is likely to reintroduce lead into petrol. The period of rising crime from the 1950s through to the 1980s looks increasingly like an historical anomaly.

There are still criminals, but there are ever fewer of them and they are getting older. When the global economy recovers, there will be fewer still. In Tallinn, the police are having to come to terms with the implications of lower crime. "Nowadays we have a new problem," jokes Priit Pärkna, one of the local police chiefs. "If we want to arrest someone, we need much more evidence than we did." At the moment, he is worried about the pickpockets that the city's new-found tourist trade attracts. As problems brought on by progress go, it is not the worst. ∎

Predictive policing
Don't even think about it

It is getting easier to foresee wrongdoing and spot likely wrongdoers

THE meanest streets of Kent are to be found in little pink boxes. Or at least they are if you look at them through the crime-prediction software produced by an American company called PredPol. Places in the county east of London where a crime is likely on a given day show up on PredPol's maps highlighted by pink squares 150 metres on a side. The predictions can be eerily good, according to Mark Johnson, a police analyst: "In the first box I visited we found a carving knife just lying in the road."

PredPol is one of a range of tools using better data, more finely crunched, to predict crime. They seem to promise better law-enforcement. But they also bring worries about privacy, and of justice systems run by machines not people.

Criminal offences, like infectious disease, form patterns in time and space. A burglary in a placid neighbourhood represents a heightened risk to surrounding properties; the threat shrinks swiftly if no further offences take place. These patterns have spawned a handful of predictive products which seem to offer real insight. During a four-month trial in Kent, 8.5% of all street crime occurred within PredPol's pink boxes, with plenty more next door to them; predictions from police analysts scored only 5%. An earlier trial in Los Angeles saw the machine score 6% compared with human analysts' 3%.

Intelligent policing can convert these modest gains into significant reductions in crime. Cops working with predictive systems respond to call-outs as usual, but when they are free they return to the spots which the computer suggests. Officers may talk to locals or report problems, like broken lights or unsecured properties, that could encourage crime. Within six months of introducing predictive techniques in the Foothill area of Los Angeles, in late 2011, property crimes had fallen 12% compared with the previous year; in neighbouring districts they rose 0.5% (see chart on next page). Police in Trafford, a suburb of Manchester in north-west England, say relatively simple and sometimes cost-free techniques, including routing police driving instructors through high-risk areas, helped them cut burglaries 26.6% in the year to May 2011, compared with a decline of 9.8% in the rest of the city.

For now, the predictive approach works best against burglary and thefts of vehicles or their contents. These common crimes provide plenty of historical data to chew on. But adding extra types of information, such as details of road networks, can fine-tune forecasts further. Offenders like places where vulnerable targets are simple to spot, access is easy and getaways speedy, says Shane Johnson, a criminologist at ▶▶

University College London. Systems devised by IBM, a technology firm, watch how big local events, proximity to payday and the weather affect the frequency and location of lawbreaking. "Muggers don't like getting wet," says Ron Fellows, IBM's expert. Jeff Brantingham of PredPol thinks that finding speedy ways to ingest crime reports is more important than adding data sets. Timelier updates would allow Pred-Pol to whirr out crime predictions constantly, rather than once per shift. Mr Fellows enthuses about sensors that detect gunshots (already installed in several American cities) and smart CCTV cameras that recognise when those in their gaze are acting suspiciously. He promises squad cars directed by computers, not just control centres, which could continually calculate the most useful patrol routes.
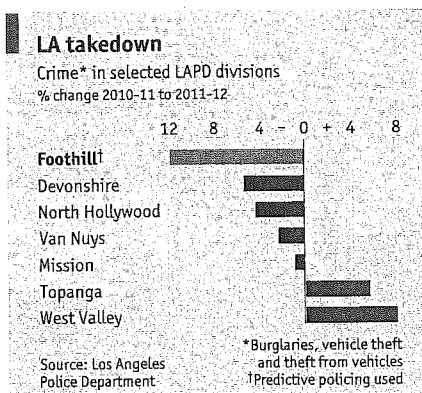
Minority report

Predicting and forestalling crime does not solve its root causes. Positioning police in hotspots discourages opportunistic wrongdoing, but may encourage other criminals to move to less likely areas. And while data-crunching may make it easier to identify high-risk offenders—about half of American states use some form of statistical analysis to decide when to parole prisoners—there is little that it can do to change their motivation.

Misuse and overuse of data can amplify biases. It matters, for example, whether software crunches reports of crimes or arrests; if the latter, police activity risks creating a vicious circle. And report-based systems may favour rich neighbourhoods which turn to the police more readily rather than poor ones where crime is rife. Crimes such as burglary and car theft are more consistently reported than drug dealing or gang-related violence.

But mathematical models might make policing more equitable by curbing prejudice. A suspicious individual's presence in a "high-crime area" is among the criteria American police may use to determine whether a search is acceptable: a more rigorous definition of those locations will stop that justification being abused. Detailed analysis of a convict's personal history may be a fairer reason to refuse parole than similarity to a stereotype.

Technology may also sharpen debates about what people want from their justice systems, and what costs they are willing to accept. For example, software developed by Richard Berk, an American statistician, which is credited with helping to cut recidivism among paroled prisoners in Philadelphia, requires the authorities to define in advance their willingness to risk being overly tough on low-risk offenders or to under-supervise nasty ones.

This sort of transparency about what goes on in predictive systems, and what their assumptions are, may also be a par-

LA takedown

Crime* in selected LAPD divisions
% change 2010-11 to 2011-12

Division	% change
Foothill†	
Devonshire	
North Hollywood	
Van Nuys	
Mission	
Topanga	
West Valley	

*Burglaries, vehicle theft and theft from vehicles
†Predictive policing used

Source: Los Angeles Police Department

tial solution to worries voiced by Andrew Ferguson, a law professor in Washington, DC. Mr Ferguson fears that judges and juries could come to place too much credence in the accuracy of crime prediction tools, jeopardising justice. If transparency is a good counter to this, it will be important to preserve it as prediction becomes a bigger business and gets further from its academic roots.

It is as prediction moves from places to people that it becomes most vexed. Police attending domestic disturbances in Los Angeles have tried out a checklist, derived from much data-crunching, to determine whether the incident presages violence. Mr Berk is working with authorities in Maryland to predict which of the families

known to social services are likely to inflict the worst abuses on their children. Federal officials aim to forecast potential health and safety infringements. America's Department of Homeland Security is seeking to perfect software which scans crowds or airport queues to detect nervous behaviour such as fidgeting, shallow breathing and signs of a swift heartbeat.

So far, predictions have mostly been made about people who have already had contact with the justice system—such as convicted criminals. The growth of social media provides a lot of crunchable data on everyone else. Firms that once specialised in helping executives measure how web users feel about their brands now supply products that warn police when civil unrest approaches, and help them closely follow crises. Cops in California admit to trawling social networks for early warnings of wild parties. ECM Universe, an American firm, offers software that crawls sites "rife with extremism" to identify people who deserve closer attention.

The legal limits on using social media to fish out likely wrongdoers, or create files on them, are contested. Most laws governing police investigations pre-date social networking, and some forces assert that all information posted to public forums is fair game. But Jamie Bartlett of Demos, a British think-tank, says citizens and police forces need clearer guidance about how to map physical-world privacy rights onto online spaces. He thinks gathering information about how someone behaves on social sites ought to require the same clearance needed to monitor them doggedly in public places. Officers who register anonymously or pseudonymously to read content, or send web crawlers to trawl sites against their owner's wishes, would require yet more supervision.

Identifying true villains among the oddballs and loudmouths found by social-media searches is tricky. Most police efforts are embryonic. Evgeny Morozov, an academic and technology writer, thinks the privacy-conscious have more to fear from crime detection algorithms cooked up by social networks themselves. Some of those firms already alert investigators when they suspect users of soliciting minors. Unlike the cops they employ clever coders who can process private messages and other data that police may access only with a court order.

These projects make life difficult for many criminals. But smart ones use the internet to make predictions of their own. Nearly 80% of previously arrested burglars surveyed in 2011 by Friedland, a security firm, said information drawn from social media helps thieves plan coups. Status updates and photographs generate handy lists of tempting properties with absent owners. It does not take a crystal ball to work out what comes next. ■