“The more you can increase fear of drugs and crime, welfare mothers, immigrants and aliens, the more you control all the people.”

Noam Chomsky
Geography and crime might not seem obvious companions, but there are many academics and practitioners helping to record and interpret crime in all its various forms; after all, crime invariably has a location, as well as a time and a reason. Understanding the underlying patterns helps to show where crimes are most likely to be committed, to combat crime, and to design areas to be more crime-proof. But in order to understand the patterns, it helps to understand the various classifications and types of crime.

Typically, patterns of crime are difficult to categorise easily. This difficulty of definition can lead to complex groupings of types of crime, and can also make statistics between jurisdictions too variable to compare. There is also a big difference between the incidence of crime and the reporting of crime to the police. Not every crime is reported, so it is helpful to look to analyses such as those by the Scottish Crime and Justice Survey for a more accurate portrayal of people’s experience of crime.

From the Scottish Government’s key summary statistics, it is reassuring that most people do not experience crime year to year, but a disproportionately small number of people experience a disproportionately high incidence of crime – less than 5% of adults experience more than 50% of all crime, and this is more likely to be the case if you are young, male or living in a deprived area. The overall risk of being a victim of crime in Scotland is falling nationally, although this is not true for everyone, and those in deprived areas are just as likely to be a victim now as they were five years ago.

There is also a difference in the way the media portray different types of crime. Last year in particular, one high-profile example was the reporting of ‘hate crime’, particularly in light of the European Union referendum. The police in England & Wales reported that racially or religiously aggravated offences were 27% higher in 2016 than in 2015; only Surrey and London saw significant (7%) reductions in reported hate crime. In Scotland, hate crimes reportedly fell by 15% over a similar period. Imperfect though some of these statistics may be, they do evidence a significant increase overall in reported hate crime in the UK as a whole. Some of this is undoubtedly from an increase in incidents; however, there is also a subjectivity to the reporting of hate crime which needs to be given perspective too.

It is no surprise that many geographers, using modern data analysis and geographical information systems, are playing an ever-increasing role in explaining, understanding and attempting to prevent crime.

We are grateful to all of our contributors, and most especially Professor Nick Fyfe of the University of Dundee and Dr Gerry Mooney of the Open University, for their help in compiling this edition of The Geographer.

Mike Robinson, Chief Executive

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RSGS: a better way to see the world
The Young Geographer

We recently launched our very first Young Geographer magazine, *The Future We Want*, at an event in the Scottish Parliament. The editorial team presented a copy to the Cabinet Secretary for Environment, Climate Change and Land Reform, Roseanna Cunningham MSP.

With the help of Young Scot, we had drawn together a small team of talented and interested young people. We asked them to decide what issues they most wanted to focus on and how they wanted to deliver the project, and we enabled them to edit, design and produce this magazine in its entirety. This team sought articles from a wide array of people ranging in age from 12 to 25 years old. Our job at RSGS was simply to facilitate giving them a voice, by encouraging and training them where necessary to refine and develop the articles, and by utilising our networks to help amplify their voices.

We are grateful to the Gannochy Trust, the Hugh Fraser Foundation and Young Scot for their help and assistance in developing this project, and we would like to thank the editorial team for their time and unending enthusiasm in producing this magazine.

Having provided this platform, we will now make every effort to ensure the young people’s opinions get an appropriate audience, and to help them to be heard. We hope you will help, by taking the opportunity to read and share this special-edition magazine, available to read for free online: follow the links on the RSGS website or on our social media channels. Hard copies are also available to pick up at Inspiring People talks or from RSGS HQ.

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The Polar Academy

**Craig Mathieson**, RSGS Explorer-in-Residence

With only weeks to go until the next Polar Academy team leaves for the Arctic, excitement is almost fever pitch, with a touch of nervousness thrown in.

The training of the team has gone very smoothly over the past few months. However, there was the usual shock to the system when they were introduced to our endurance weekend training, which consists of dragging extremely heavy tyres up and over various hills in the Trossachs for six hours.

Everyone has also been very busy on the fundraising side of matters. A few weeks ago, we held a fundraising challenge day in Edinburgh. The general public could match themselves against the Polar Academy team by hauling a two-tonne truck. At the end of the day we managed to raise a fantastic £900 – of course the Polar Academy team could not be beaten.

Looking at the satellite ice maps of the Arctic, the sea ice in East Greenland is looking very favourable for our expedition. This year we are linking up with universities in Edinburgh and Austria, looking at measuring the level of pollutants in Arctic snow. As I always say, it’s not an expedition unless there is a heavy element of scientific and educational study.

Weather being well, we’ll arrive in Greenland on 22nd March; to track our progress, please log on to www.thepolaracademy.org or our Facebook page.

Many thanks again to all the RSGS members who continually support what the Polar Academy achieves for our young people each year.

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New RSGS Fellows

Dr Lorna Philip and Dr Tim Mighall of the University of Aberdeen have been presented with RSGS Honorary Fellowships, in recognition of their efforts and achievements in successfully editing the Scottish Geographical Journal over a period of six years, establishing it as a timely and professional journal, working well ahead of schedule, and lifting the five-yearly citation levels to their highest in recent decades.

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Fair Maid’s House 2017

“Wonderful”, “fascinating”, “a hidden gem”, “braw”: just some of the comments from visitors to the Fair Maid’s House last year. Come and see for yourself! Discover the history of RSGS and view a selection of our maps. Learn about topical issues in geography and explore the geology of the Earth with our interactive globe. Become your own explorer by immersing yourself in our books and atlases in the atmospheric Explorers’ Room.

The RSGS visitor centre in Perth will reopen for the 2017 season on Saturday 8th April. As in previous years, the opening hours will be 1.00pm to 4.30pm, Tuesday to Saturday.

Our guides (“lovely, knowledgeable people”) are all volunteers and we are always keen to welcome new recruits. Please contact Anne at RSGS HQ on enquiries@rsgs.org or 01738 455050 if you are interested in joining the team.

Fair Maid’s House Opening Times 2017

1.00pm to 4.30pm • Tuesday to Saturday • 8th April to 30th September
Eildon Mid Hill geographical indicator

The summit of Eildon Mid Hill is marked, along with an OS Trig point, with a granite pedestal topped by a bronze plate, erected in 1927 at a cost of £140 raised by public subscription. The Border Telegraph reported “The indicator on the Eildon Hills has now been erected, and has proved a source of great interest to the people of the district. On the chart of the dial – for which Mr John Mathieson, of the Geographical Society, was responsible – nearly 90 places are indicated, including most of the scenes famous in Border history, from the Lammermuirs in the north to the Cheviots in the south, and from the hills of Ettrick and Yarrow to the bounds of Berwick.”

John Mathieson FRSE FRSGS was a Scottish surveyor, explorer, and RSGS Scottish Geographical (Gold) Medalist, who was also responsible for viewpoint charts on the tops of Corstorphine Hill, Bathgate Hills (Knock), Ben Lomond, East Lomond, the Braid Hills and Dumbarton Rock.

Since 1927, the engraved detail on the chart has suffered from wear and the weather, and parts had become completely illegible. After several visits up to the summit of the hills, an RSGS member has successfully managed to clean off 90 years of accumulated grime to reveal most of the geographical detail, allowing it to continue to act as an aid to all who ascend the middle Eildon!

Polar Medal for Edinburgh Geographer

Professor Pete Nienow, of the University of Edinburgh’s School of GeoSciences, has been awarded the Polar Medal for his pioneering work in the Arctic. A glaciologist specialising in how glaciers and ice sheets respond to climate change, he has been on more than ten expeditions to the Greenland Ice Sheet; firstly to undertake fieldwork to help calibrate the European Space Agency’s CryoSat-2 satellite, and more recently to improve our understanding of the links between ice melt, ocean circulation and how ice masses will respond in a warming world.

During the two decades that he has been working in the Arctic, the ice masses there have been losing ice at an increasing rate as a result of global warming, which is amplified in the Arctic regions. Professor Nienow’s work is focused on improving our understanding of the processes that are driving this ice mass loss and in enhancing our ability to predict future ice volume and thus sea-level change.

A fine financial example

Former RSGS Finance Officer Marie Hainey (left), who now works for Perth & Kinross Council, took advantage of the council’s ‘Dress Down Friday’ charity collection days to raise some much-needed finance for RSGS. Marie was allocated the month of January, and by baking some delicious New-Year’s-Resolution low-sugar cakes, she encouraged her new colleagues to donate £150 to support our work. She popped into RSGS HQ to present a cheque (and some extra cakes!) to RSGS Events Officer Anne Daniel.

Police Scotland sick days

Recent reports have shown an increase in the number of sick days, for both physical and mental health, taken by police officers in Scotland. In Tayside, for example, there was a 23.8% rise in the number of sick days taken in comparison to the previous year. In the past three years, mental health issues resulted in 141,230 days being lost among front-line police officers in Scotland.

SAGT Honorary President

Dr Charles Warren, Senior Lecturer in the University of St Andrews’ School of Geography & Sustainable Development, and Co-Editor of RSGS’s academic publication the Scottish Geographical Journal, has recently been appointed as Honorary President of SAGT for the next two years, taking over from Dr Andrew Black of the University of Dundee.

Great response to The Great Horizon

Thank you to all who pledged to buy a copy of our Writer-in-Residence Jo Woolf’s book, The Great Horizon, and thank you to The Patron’s Fund for their charitable gift (derived from generous donations and profits from last summer’s Patron’s Lunch which celebrated the 90th birthday of our Patron, Her Majesty The Queen).

We are delighted to confirm that, after such a wonderful response, the project is now able to go ahead! We have received over 300 pledges for copies of the book, and we will be contacting people soon to request their payments. Jo told us, “I’m thrilled and delighted at the response – I want to thank everyone who has pre-ordered a copy, and I can’t wait to share these stories with you.”

Jo is working on the text now with a Sandstone Press editor and design team, and is seeking images and permissions for three exciting plate sections that cover the duration of RSGS’s history. We expect to publish the book in early November, in plenty of time for Christmas.

Sandstone Press Managing Director Robert Davidson said, “We grow increasingly excited by this book. Stories are as much the essence of literature as tunes are the essence of music, and The Great Horizon will be stuffed full of fascinating characters, thrilling adventures, and voices from earlier times that deserve to be remembered.”
Perthshire art exhibition

As part of Perthshire Creates, a city-wide celebration of the arts, Perthshire Visual Arts Forum will be staging an exhibition in the Fair Maid’s House from Saturday 25th March to Saturday 1st April. Please note that some areas of the Fair Maid’s House will not be open during the exhibition.

School visits

We are always pleased to welcome school parties to the Fair Maid’s House; January saw a visit from class P3/4 of Forgandenny Primary School, looking for information to help with their project on ‘natural disasters’. As you can see, they found lots more to explore and discover! Please contact RSGS HQ if you would like to arrange to bring a school group on a visit.

Lured by Mountains

RSGS Edinburgh Committee Member M A Harper has just published a fascinating autobiography, looking back over a life that included bringing up two boys, dealing with a mother who had Alzheimer’s, yet leading people into the mountains of Russia, Nepal, Tibet and Morocco as a trek leader at the same time. She also found time to climb the Matterhorn and Mount Kenya, and to walk the John Muir Trail in California and the Wind Rivers in Wyoming, amongst others. Throughout, there is a feeling of loving the space of the mountains, and deriving strength and pleasure from the simplicity of the hills.

Corryvreckan

You may remember that our Chief Executive was unable to complete his swim of the Corryvreckan (between Jura and Scarba) last August, as a force eight gale was busy blowing an oil rig onto the Western Isles and the trip was cancelled. Despite advice from everyone sensible that knows him, he has re-scheduled and will be attempting the time-limited crossing this summer. If anyone wishes to sponsor him (for RSGS) in his endeavour, please get in touch with Susan or Anne at HQ. Alternatively, if you wish to write in and explain why it’s a really bad idea, that would also be welcome.

New School at St Andrews

In January, the former Department of Geography & Sustainable Development at the University of St Andrews achieved the status of a fully-fledged School within the university. The constituent parts of the old School of Geography & Geosciences now constitute two new separate Schools – the School of Geography & Sustainable Development and the School of Earth & Environmental Sciences. This change reflects the notable successes of Geography & Sustainable Development in recent years in the REF, the NSS and national league tables, and its ‘promotion’ to being a School in its own right will raise its status and influence within the university and beyond.

The School has announced plans for The Bell-Edwards Centre for Geographical Data Visualisation and Analysis. The centre will supply staff and students with the tools and skills to be able to exploit high-resolution satellite imagery and predictive computer models. Phase one of the centre will see the construction of specialist research spaces next to the School’s existing IT lab. The centre is being made possible due to a generous legacy pledge by Mr Tony Edwards.

RSGS social media

We have really enjoyed seeing all your tweets from our Inspiring People talks this season, and are happy to see so many of you sharing and reacting to our news on Facebook too. RSGS is very active on Twitter and Facebook; you can always find our latest news and updates there. We also have a blog for our longer articles and link our monthly E-blast newsletter to the latest posts. If you don’t already follow or like us on social media then please join us; you can also sign up to our E-blast on the homepage of our website.

National Cyber Security Centre

In February, Her Majesty The Queen officially opened a new centre that will enable generations to navigate the Internet safely and be protected from the growing threat of online attack. The National Cyber Security Centre (NCSC, www.ncsc.gov.uk) is part of GCHQ, and is tasked with using the best data, skills and capabilities to make the UK the safest place in the world to live and work online.

NCSC Chief Executive Ciaran Martin said, “We want to be at the centre of a new era of online opportunity and help people to feel as safe as possible when using technology to its fullest potential.” The NCSC will work closely with law enforcement and the wider public sector, including the National Crime Agency to support cyber security awareness campaigns.

Habitat, Heritage, History: a geographical glimpse

We will be hosting an evening event at 7.30pm on Wednesday 17th May at our HQ in Perth, as part of Perth and Kinross Heritage Trust’s Archaeology Year. Don’t miss this very special chance to view some original items from our captivating and wide-ranging collections, including maps and artefacts, and to gain an insight into their history from expert members of our Collections Team.

Please email enquiries@rsgs.org or phone 01738 455050 to reserve tickets, which will cost £10 each. For space reasons, numbers will be limited to 25 people, so book early so as not to be disappointed!
RSGS Medallists

We were delighted to present Medals to three very worthy recipients in a single celebratory evening in February. Sir David Hempleman-Adams received the Scottish Geographical Medal for his dedication to furthering our understanding of the planet, and of course geography, over a lifetime of exploration and adventure. His list of ‘firsts’ is remarkable, and his recent Polar Ocean Challenge has shown that he is still finding new ways to explore and to raise awareness of the vital issues facing us all, with a new focus on climate change. Sir David has been an RSGS Vice-President since 2006, and has been a vocal and effective supporter of our work, for which we are very grateful.

Dr Andrew Hein received the WS Bruce Polar Medal (jointly awarded with the Royal Society of Edinburgh). Described by colleagues in the field as a ‘pioneer’, Andrew has conducted fieldwork in Antarctica for three seasons and his work is already changing the research agenda for the West Antarctic Ice Sheet. He has been able to chart changes in the thickness of the ice sheet over millions of years, with implications for multiple scientific disciplines, helping to further our understanding of the ice sheet and its interactions with our oceans, the atmosphere and global sea levels.

Jon Rathjen received the RSGS President’s Medal for his determination to improve Scotland’s environmental performance and to make a real difference on a global stage. Through his work for the Scottish Government, Jon was instrumental in establishing the Climate Challenge Fund and in building the Scottish Climate Justice Fund. He has also driven the innovation and recognition of Scotland as the Hydro Nation, a global leader in water-related expertise, and has helped deliver a number of practical initiatives to build and secure this international reputation.

Research and Knowledge Exchange Committee

In February, we were delighted to host the newly reconfigured Research and Knowledge Exchange Committee of RSGS, bringing together Heads of Geography or other representatives of each major university in Scotland, and chaired by our Geographer Royal for Scotland, Professor Charles Withers.

The RSGS Chairman said of the committee, “We are at the beginning of a new journey, and hope that we can make a real impact in the public arena in promoting geography and the high calibre of academic geographers based in Scotland, and can also build the links between schools and universities and the wider geographical community.”

Outdoor Education and Learning

David Girling, Perth College UHI

We are pleased to announce the first Outdoor Education and Learning honours degree, available from September 2017. Professor Pete Higgins, Personal Chair in Outdoor and Environmental Education at Moray House School of Education at the University of Edinburgh, said in 2014 that very few people became accredited teachers of outdoor education “because there is no standard teaching qualification within Scotland, so there is nothing for the GTCS to compare with.” There is also an identified need to connect and link the Outdoor Education and Outdoor Learning worlds.

We at Perth College UHI felt we could create a degree course that would link the chain. We consulted widely to create the structure of the degree, and partners are now helping lecturing staff to write modules that relate to their particular specialism; RSGS, for example, is helping to write modules on Exploration, Nature and Geomorphology. Every module is forward-facing, is relevant to the field, and has employability at its core.

So, if you wish to have direct personal experiences in the outdoors, a critical understanding of the psychology and philosophies of Outdoor Education and Learning, practice rooted in the pedagogy of using the outdoors, and practical delivery experience and fieldwork, then this is the degree for you. See www.perth.uhi.ac.uk/courses/ba-hons-outdoor-education-and-learning for more information.

Tropical peatland

Dr Ian Lawson from the University of St Andrews’ School of Geography & Sustainable Development was co-author of a study, published in Nature, which has discovered 145,500km² of previously unmapped peatland in the Central Congo Basin. The area is the most extensive peatland complex in the tropics.

Rob Hain, artist

Mike Robinson, RSGS Chief Executive

I have been a fan of Rob Hain’s work for some time, as I love the lively colours, the character, and the sense of fun and excitement he captures in his wonderful portrayals of Scottish towns and cities. Indeed, recently my wife and I were so charmed by North Berwick that we bought a limited edition print of his wonderful townscape.

I contacted Rob last year to ask if he would consider doing an original painting of Perth, as he had not attempted the subject before, and there are almost no paintings with the Fair Maid’s House in them. With Perth’s bid for City of Culture 2021, maybe this was a good time to consider rectifying this.

My original hope was that somebody would commission Rob to paint the 6ft x 6ft original, and that RSGS would sell limited edition prints to raise money for the charity. However, even though I haven’t yet found an individual or company to pay for the initial commission, Rob has kindly agreed to proceed with the painting and to allow us to sell prints to raise funds. If you are interested, please keep an eye on our Facebook page for updates of Rob’s sketches and images of the painting as it develops.

University News
**Due North: Alaska**

Adventurers and RSGS Patron Members Luke and Hazel Robertson are counting down the days to the start of their next big challenge. The husband and wife team are aiming to become the first people to travel the full length of Alaska by human power. Due North: Alaska, as the low-carbon expedition has been named, will see the couple kayak 600 miles, cycle 700 miles and run 800 miles. Hazel is an endurance athlete who, in 2016, ran a 140-mile Ice Ultra on snowshoes in Arctic Sweden. In the same year, Luke became the youngest Brit, the first Scot, and one of fewer than 20 people in history to ski 730 miles solo and unsupported to the South Pole, all whilst using an artificial pacemaker and less than two years after undergoing brain surgery.

To find out more about Luke and Hazel’s adventure, visit duenorthalaska.com or search “Due North Alaska” on Facebook.

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**Legacies**

Mike Robinson, RSGS Chief Executive

I have served on several charity and corporate Boards, have advised or directly worked for dozens of charities, and am experienced in all forms of fundraising, so I understand that the opportunities for fundraising fluctuate over time. Over the past ten years they have been ever more meagre. ‘Core’ and ‘earned’ income remain crucial for the stability and longevity of any charity, but for many, one of the most long term and valuable funding sources is legacies.

At RSGS, we are not alone in seeking or hoping for this type of income. Occasionally over our long history, legacies have been fundamental, providing stability and allowing RSGS to thrive and prosper. Two of our previous offices and most of our maps and books and artefacts were gifted to us in legacies, and our move to a stable home in Perth was possible in part because of legacy donations.

The remarkable thing is how few legacies we receive, as we have one of the most long-standing memberships I have ever seen. Unfortunately, when some members feel they are unable to come to talks any more, even if they have been members for ten or 20 years, they withdraw from the Society and our relationship ends. But we want to persuade them to consider supporting us in the future with a charitable legacy.

In this current time of uncertainty and change, we think it is ever more vital to have continuity and familiarity (which RSGS, with its rich heritage, can deliver in spades!) and in these straitened times legacies are more important than ever. Every little counts, and as a small charity our needs are relatively modest, so legacies can make even more of a difference; a recent legacy of £32,000 was extremely welcome as it will significantly improve our finances.

Ultimately, maybe we will be left another property, or a very large sum of money. I hope so. Having settled in Perth and built strong foundations for the charity in the 21st century, I genuinely believe that if we could accrue and invest around £1m, we could secure RSGS’s future for the next 50-100 years, allowing us to focus on the positive promotion and development of geography. And our members leaving legacies, however large or small, are probably our best chance of ever reaching that goal.

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**My favourite place in Scotland**

**Kenmore, John Andrews**

My favourite place in Scotland is Kenmore, at the eastern end of Loch Tay – especially as seen from the two hills which flank it. If you can take the trouble to follow a neither long nor steep path to the summit of Creag an Fudhair, otherwise known as Kenmore Hill, on the southern side of the village, you will be rewarded with stunning views in several directions, firstly of extraordinary Taymouth Castle nestling in the valley to the east, then of the village directly below you, and finally, best of all, over and along Loch Tay towards Ben Lawers and its companion hills.

Head in the opposite direction, ascending steadily through the woods on Drummond Hill, and you will discover a lofty viewpoint from which the seemingly tiny buildings of the village and its surroundings have the appearance of an elaborately crafted model.

Thank you to everyone who has submitted articles and pictures for ‘My favourite place in Scotland’. We are always keen to see more of your favourite places, so please get in touch by contacting media@rsgs.org.

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**Climate Change Delivery Plan**

The Scottish Government released its draft Climate Change Delivery Plan at the end of last year, and has been seeking consultation responses. Although much of it is similar in scope to the previous RPP2, and it lacks certain detail in how some actions will be delivered, we were pleased to see a stated support for measures around reduction of reactive nitrogen, an increase in ultra-low-emission (electric) vehicles, and a number of other key proposals that fell out of the Bitesize conference and featured in the winter 2016-17 edition of The Geographer. We were also hopeful that it could form the blueprint with which to challenge all sectors of Scottish society to achieve our emissions reduction ambitions, but this would be greatly aided by the introduction of a formal ‘carbon literacy’ – a wider understanding of climate change and emissions in middle and senior management, and something RSGS is considering ways to deliver with our many partners and contacts.

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**Burn-Murdoch Globe**

We are pleased to report that the Burn-Murdoch Globe has returned to us after its successful restoration by a specialist globe restorer in London, Sylvia Sumira.

The globe belonged to William Burn-Murdoch and sat in his Edinburgh home in the early decades of the last century. As friends and acquaintances visited, he asked several to sign the globe (Nansen, Amundsen, Bruce and Trolle, amongst others) but then layers of coal dust from his open fire built up, obscuring the signatures and the map underneath. The glass of the compass had also broken.

Back in 2012 we ran a Spring Clean Appeal which gave us the funds to repair this damage, although it took a while to find an available specialist who could help. Over the last two years, Sylvia has done a terrific job of gently and painstakingly removing the many layers of coal dust, being careful to retain and isolate the signatures.

Thank you again to those of you who helped make this restoration possible. Anybody wishing to see the globe can view it at RSGS HQ in Perth.
Reshaping the geography of policing in Scotland

Professor Nick Fyfe, Geography, University of Dundee

For those looking for evidence of a policy area that most clearly illustrates differences between Scotland and the rest of the UK, then the changes to policing initiated on either side of the border in 2011 provide an excellent example. In England and Wales, legislation that year introduced 43 locally elected Police and Crime Commissioners with responsibility for each police force budget and holding chief constables to account. In the same month, the Justice Secretary stood up in the Scottish Parliament to announce the merger of Scotland’s eight regional police forces to create a ‘single police service’, Police Scotland. The contrast between a commitment to localism in policing in England and Wales and centralism in Scotland could not be more stark. The changes to the structure of policing in Scotland mark one of the most radical public sector reforms for a generation, and arguably the biggest change to the policing of Scotland since the 19th century.

The history of modern policing in Scotland has, of course, always been punctuated by periods when local constabularies have been merged to create larger regional police forces. In the 1850s, for example, there were over 90 local forces in Scotland, but only half this number 100 years later. By the early 1970s the number of forces had halved again to 22, and by 1975 there were just eight forces, aligned with the boundaries of new regional authorities. Given this trajectory, the merger of these eight forces to create a single national police force in 2013 might seem like the inevitable end point in an unrelenting process of force amalgamations. Yet such an assumption would be misjudged. The need for the most recent reform was very much driven by concerns about the economic crisis of 2007-08 and the depth of public spending cuts required in Scotland. The expectation within Scottish Government is that the creation of a national police force can not only deliver significant financial savings but also improve local services despite a decreasing budget, create more equal access to specialist support to tackle major crimes and incidents, and strengthen the connections between police and communities.

Not surprisingly, the creation of Police Scotland has sparked important debates about the nature of the relationship between police, politics and communities in contemporary Scotland. But at the core of many of these debates are issues of geography and in particular the balance between centralism and localism. Both in the planning of police reform and in its implementation, there have been anxieties about a national structure and concerns that it would draw resources away from more rural and remote areas and concentrate these in the Central Belt. Partly in response to these concerns, the legislation that established Police Scotland also made ‘local policing’ a statutory requirement at the level of the 32 council areas. Each area has a local police commander with responsibility for preparing a local policing plan and for consulting with the local council over this plan. But this hasn’t prevented disagreements developing between local communities and what they see as over-centralised decision making with Police Scotland. One notable example concerned the decision that firearms officers were to carry their weapons while on routine patrol rather than these being kept within a locked compartment in a police vehicle until they were needed. This caused particular concern in northern Scotland, which has the lowest recorded crime rates in the country and where the decision was opposed by local councillors, the local MSP and local MP. Although initially these local concerns were dismissed by both the police and Scottish Government, increasing pressure from a number of bodies did prompt Police Scotland to change its policy back to only deploying armed officers to incidents where there was a threat to life rather than carrying their weapons while on routine patrol.

Scotland is not alone among European countries in undertaking major structural reform to policing. The combination of financial pressures and increasing threats from transnational crime have prompted several jurisdictions to follow a similar path in terms of merging police forces or police areas to create larger organisations. In 2013, the Netherlands brought together 25 regional forces to create a national police service, while Norway has recently reduced the number of police districts within its national force from 54 to 12. In these countries, as in Scotland, there is now much debate about the balance between centralism and localism in policing. We therefore very much live in an era of police reform, but one which has issues of geography at its core.
Beyond the ‘thin blue line’: an investigation into Dundee’s Community Warden Scheme

Dr Donna Marie Brown, Senior Lecturer in Applied Social Sciences (Criminology), Durham University

In recent years there has been a renewed interest in community safety amongst policy makers, practitioners and academics alike. Improvements in community safety are routinely associated with a diverse range of positive outcomes for citizens, such as a better quality of life, economic advancement and social cohesion. Given the complex and varied nature of community safety issues it is perhaps unsurprising that a range of professionals are deemed necessary to address them. Nowhere is this more apparent than in community policing, where new policing auxiliaries are becoming part of an ‘extended policing family’. One key example of the pluralisation of policing within the Scottish context is the introduction of Community Wardens.

In Scotland, Community Wardens are employed by local authorities and defined as a “uniformed semi-official presence in a residential area with the aim of improving quality of life.” The Wardens were introduced in 2003 with funding from the Scottish Government as part of its Building Strong, Safe and Attractive Communities programme. This funding has supported over 500 Wardens across Scotland’s 32 local authorities largely on the basis of levels of deprivation and size of population. Typically these Wardens are engaged in a mix of activities, which include: providing high visibility patrols to deter crime and antisocial behaviour; working with the police and other agencies to promote community safety; acting as a link between the community and local authority departments; working with vulnerable groups; and tackling environmental issues by reporting graffiti and vandalism. In order to accomplish these tasks some Wardens are provided with a range of general and site-specific training, the importance of their personality, in terms of how approachable and friendly they are, was considered as more significant by the young people involved in the project.

My research aimed to investigate the role, responsibilities and effects of Dundee’s Community Warden Scheme, which employs over 50 Wardens. Over 50 participants were interviewed, including Community Wardens, police officers, social workers, youth leaders, young people, community members and local authority employees. These are the key findings of the research.

• Dundee’s Community Warden Scheme provided a highly valuable and alternative form of policing that complemented, as opposed to contradicted, the aims and ambitions of police officers involved in community policing initiatives.

• Dundee’s Community Wardens worked very closely with the police, and a range of other agents and institutions involved in community policing; the joined-up partnership approach, based upon intelligence sharing and open communication, provided a highly effective model for targeting low-level crimes and incivilities.

• Dundee’s Community Wardens were generally viewed very positively by the communities in which they patrolled, not least because of their dedication in responding to pressing local problems and their ability to establish longer-term relationships with community members.

• The visibility and regular presence of the Community Wardens was considered as highly significant in reducing crime and the fear of crime by the Community Wardens and the community members alike.

• Whilst the Wardens were provided with a range of general and site-specific training, the importance of their personality, in terms of how approachable and friendly they are, was considered as more significant by the young people involved in the project. This was carefully considered in the recruitment process.

• When the Community Wardens came into contact with ‘problematic young people’, they were well positioned to target the causes rather than the symptoms of their behaviour, be that through personal intervention or the referral of the young person to a relevant professional. This goes some way in reducing social problems as opposed to simply displacing them.

• Relationships between young people and Community Wardens took time to develop as the young people were initially suspicious about the role of the Wardens.

• It was generally believed that it would be detrimental to increase the powers of the Community Wardens as this would negatively influence their relationship with the local communities they work with.

• While statistical evidence of their direct impact on levels of crime and disorder at a national level remains open to debate (not least because of the real difficulties of drawing a simple cause-and-effect relationship between a policing intervention and crime rates), Wardens do appear to be having a positive impact.

• While Wardens are not a panacea, their presence embodies a response to the low-level incivilities and conflicts within communities which recognises the importance of local knowledge, partnership working, and the search for long-term solutions rather than quick fixes.

FURTHER READING

Brown D M (2017) Beyond the thin blue line? A critical analysis of Scotland’s Community Warden Scheme (Policing and Society, 27:1)

Brown Donna (2013) Young people, antisocial behaviour and public space: The role of Community Wardens in policing the ‘ASBO-generation’ (Urban Studies, 50:3)

Brown Donna (2012) Out on patrol: Maintaining the strengths and addressing the weaknesses of Scotland’s Community Warden Scheme (Crime Prevention and Community Safety, 14:4)
Crime in Scotland
Scottish Crime and Justice Survey (SCJS)

The SCJS is a large-scale social survey which asks people about their experiences and perceptions of crime. The survey is important because it provides a picture of crime in Scotland, including crimes that haven’t been reported to, or recorded by the police and captured in police recorded crime statistics. The findings from the SCJS are used by policy makers across the public sector in Scotland to help understand the nature of crime in Scotland, target resources and monitor the impact of initiatives to target crime.

HOW much Property Crime was there?

502,000 property crimes were committed against adults in 2014/15
Since 2008/09 Since 2012/13

31% 13%

- All motor vehicle theft related incidents
- Other theft (e.g. bicycle)

173,000 40,000 158,000 103,000

- Vandalism
- Housebreaking
- Personal theft (exc. robbery)

Around half of all property crime resulted in financial loss for the victim.

In 90% of property crime where items were stolen, the value of stolen items was under £1,300.

HOW much Violent Crime was there?

186,000 violent crimes were committed against adults in 2014/15
Since 2008/09 Since 2012/13

41% no change

- Attempted Assault
- Minor Assault with no/ negligible injury

33,000 8,000 23,000 7,000

- Serious Assault
- Minor Assault with injury

The most common injuries sustained were minor bruising or a black eye (61%) and scratches or minor cuts (28%).

48% of violent crime resulted in some degree of injury.

Most violent crime is minor assault that resulted in no/ negligible injury.

Fear of crime

74% of adults feel safe walking alone after dark.

67% of victims of crime felt safe walking alone after dark.

42% of people living in deprived areas feel safe walking alone after dark.

64% of females were less likely than males to feel safe walking alone after dark.

Worry about crime

People were most worried that someone would use their credit card or bank details (94%) or that their identity would be stolen (45%).

However, people thought that they were more likely to experience crime than they actually were.
Disability hate crime

Dr Ed Hall, Geography, University of Dundee

‘Hate crime’ has become, in the last decade, the given term for the long-standing harassment and violence perpetrated against disabled people. A significant minority of disabled people are subjected to violence and abuse, in a range of settings – in their neighbourhoods, city centres, even in their homes – by members of the public, care staff, ‘friends’ and sometimes family. All disabled people can be affected, but people with learning disabilities and mental health conditions are most at risk.

The number of reported hate crimes against disabled people has been steadily rising in Scotland; in 2015-16, 201 charges were reported with an “aggravation of prejudice relating to disability,” 14% more than in 2014-15. However, the Crown Office and Police Scotland recognise that there continues to be under-reporting, in comparison to other forms of hate crime. Reports by disability organisations have revealed the many instances of harassment and violence experienced by disabled people.

However, it is striking that most of these reports begin with powerful accounts of extreme violence, torture and, in some cases, murder of disabled people. Disability hate crime has become associated in the popular imagination with such horrific stories, in large part due to graphic media reporting. The deaths of Fiona Pilkington and her daughter Francecca Hardwick, who had learning disabilities, in 2007 after months of harassment in their Leicester neighbourhood, was headline news and arguably became the ‘defining moment’ for disability hate crime. Their deaths, and the inadequate police response, had powerful echoes of the racist murder of Stephen Lawrence in 1999, and the subsequent Macpherson inquiry. It was a ‘wake-up call’ for both the public and the police. Since then, police forces in England and Police Scotland have engaged in a range of initiatives to encourage and support disabled people to recognise and report hate crimes; ‘Protecting people at risk of harm’ is one of Police Scotland’s core priorities.

However, that disability hate crime has become so narrowly equated with violence is arguably problematic. Violent attacks do occur, and have a lasting and significant impact on the individual and also engender fear amongst other disabled people. However, far more prevalent are ‘minor’ acts of intolerance: name-calling, teasing and taunting, pushing past, and ignoring. Whilst these acts sometimes escalate into violence (as with the Pilkington case) in most instances they are, for many disabled people, part of ‘normal’ everyday life (although clearly unacceptable). To convince people to report such everyday experiences as hate crimes – which, by definition, many of them are – can sometimes be challenging for the police and disability organisations.

In a current project, funded by the Scottish Institute for Policing Research (SIPR) and in collaboration with Dr Ellie Bates, University of Edinburgh, I am studying in detail the everyday experiences of people with learning disabilities when they are out and about in Dundee city centre (the project is being supported and facilitated by the learning disability organisation, Advocating Together) to try and gauge the extent and nature of disability hate crime. Through ‘walk along’ interviews in the city centre, and follow-up discussions, we have mapped the places in the city centre where people with learning disabilities feel ‘safe’ and ‘unsafe’. It is mostly a positive story: no-one have spoken to has been attacked or seriously harassed whilst in the city centre; a small number have felt uncertain or afraid on a few occasions. Most of the city centre was thought to be safe (and all the evidence shows this to be the case) but some areas were avoided, especially after dark. Most significantly, whilst all knew what ‘hate crime’ was, the term was rarely used; the people we spoke to tended to refer to a small number of sites in the city centre where they would be welcomed, and where people would know them; these include the central library, and certain shops and cafes. The language of disability hate crime can potentially overshadow the everyday concerns and experiences of many disabled people; of greater importance for many is their feeling of inclusion within the city centre, and other places.

These research findings are contributing to the Dundee Safe Places initiative, a three-year project launched in September 2015. It is a collaborative project, led by Advocating Together, in partnership with Police Scotland and Dundee City Council, and funded by the Rank Foundation. The mapping of ‘safe’ and ‘unsafe’ spaces will help to identify a network of ‘Keep Safe Places’ in the city centre, which will offer safety, reassurance and support to people with learning disabilities, and other disabled and older people, who have lost their purse or wallet, are in fear or need some assistance, and in some cases to support the reporting of a hate crime. In 2017, the initiative will also identify ‘safe people’, such as city centre ‘Ambassadors’ and shop assistants to offer advice and support; and Keep Safe Places will be set up across the whole of Dundee. The research project will continue, to support this expansion, and will also work with Police Scotland to develop a better understanding of disability hate crime, and how best to respond.
Hate crime in the UK: a perspective

Civitas

In the aftermath of the EU referendum there have been many reports of an increase in hate crime in the UK. However, what exactly constitutes a ‘hate crime’ and to what extent has the reported rise in hate crimes been based in reality or influenced by social media?

Defining hate crime

The government’s definition of a hate crime is “any crime that is motivated by hostility on the grounds of race, religion, sexual orientation, disability or transgender identity.” This definition is also the one used by the police and the Crown Prosecution Service. One of the chief criticisms of hate crimes is that they are rooted in perception. This introduces an element of subjectivity, with the victim essentially determining whether it is a hate crime or not; people may see what they want and add a hate crime motivation to what may be an everyday crime or incident. Many of the incidents that fuelled press reports of increasing levels of hate crime were based on incidents logged in forums like Worrying Signs, often by an individual with no independent corroboration or context.

Reporting hate crime

During the EU referendum campaign there were media reports about a rise in hate crime, but the frequency of the reports increased in the days following the result. The following are examples of some of the headlines in the days after the vote: “Racist incidents feared to be linked to Brexit result” (The Guardian); “Brexit: Wave of hate crime and racial abuse reported following EU referendum” (The Independent); “Police on alert as reports of hate crimes increase following EU referendum” (ITV News).

Many incidents came to prominence because they had been logged online, in forums such as the Facebook group Worrying Signs, the Twitter account PostRefRacism and the website iStreetWatch. Just four days after the referendum, the Worrying Signs group already had over 7,500 members and had logged dozens of hate crimes. The incidents logged by the group were widely picked up on in the national and international press.

The vast majority of the incidents logged were verbal insults, many being ‘racist’ or ‘xenophobic’ conversations overheard in public. It is unclear how many of these anecdotal reports were reported to the police.

One of the most widely reported incidents was the graffiti left on the Hammersmith Polish Social and Cultural Association on 26th June. The incident, widely covered in the press, was tied to the referendum and it was inferred that the graffiti was xenophobic or racist in nature. However, the exact wording of the graffiti (usually omitted in press reports) was “F*** you OMP”. The OMP is a centre-right Polish think-tank that was pro-Brexit and welcomed the referendum result. There have therefore been suggestions that the graffiti was written by a member of the Polish community angry with the OMP think-tank for its stance on Brexit, rather than it being a xenophobic or racist attack.

Hate crime statistics

The first official statistical press release was on 27th June by the National Police Chiefs’ Council (NPCC), with these statistics showing a 57% increase in hate crimes during the four-day period 23rd-26th June. However, these statistics were released with the clear caveat that they did not show an overall national increase in hate crime but an increase in reporting through one mechanism – the True Vision website which provides an online form for people to anonymously report hate crimes. This self-reporting is problematic because anybody could log a hate crime, even if it did not happen, and it would still be recorded. The NPCC statistics were widely reported in the media, usually as a national increase in hate crime, and did not include the NPCC’s full caveat.

Conclusion

There was a rise in reported hate crime incidents in the immediate aftermath of the EU referendum, mostly in the form of verbal harassment. Precisely what this signified, however, is open to question. The police definition of a hate crime is one that is “perceived” by the victim to have been based on prejudice; this means that in the strictest sense the surge in reported incidents only represents a surge in perceived prejudice and it is almost impossible to prove a causal link to the EU referendum. This is an important caveat usually ignored in media coverage.

It is indisputable that reported hate crime has been trending upwards for the last few years, long before the EU referendum campaign began. Does this reflect a widespread increase in intolerance towards certain minorities? Or does it reflect the rising profile of hate crime as a category of offence and the opportunity to report it via, for example, True Vision? It is difficult to say with any certainty, but there is no objective barometer signalling rising intolerance. Similarly with the surge in reports in the aftermath of the referendum. There may have been an increase but it also seems likely that reports of hate crime were being fuelled by the perception and media reporting of a rise of intolerance.

“There is no objective barometer signalling rising intolerance.”
The symbolism of ‘corporate manslaughter’

Professor Steve Tombs, Professor of Criminology, The Open University

In 2007, the Corporate Manslaughter and Corporate Homicide Act 2007 (CMCHA) was rolled out across the three jurisdictions of the UK, ostensibly designed to facilitate the prosecution of large, complex organisations for occupational death(s). Previously, companies could be convicted under common law manslaughter (or, in Scotland, homicide) but only a handful of cases had succeeded, all against very small companies. So far, the new Act has failed dismally. In force for almost eight years, and thousands of deaths later, by the end of 2016 there had been just 20 convictions under the Act. Moreover, all of the companies successfully prosecuted thus far have been small or medium-sized enterprises which could have been successfully prosecuted under existing common law. Thus, the large, complexly-owned companies for which the new law was ostensibly designed, have so far evaded its reach.

Second, the level of fines passed at sentencing has been low. Following the passage of the CMCHA, sentencing guidelines stated that fines should be “punitive and... seldom be less than £500,000 and may be measured in millions of pounds.” In fact, of the 20 convictions thus far, only four had attracted a sentence which reached the putative minimum figure of £500,000, albeit that in the case of one of these, the company, Sterecycle (Rotherham) Ltd, was fined £500,000 despite the fact that, by the time the trial had begun, it was in administration, while in the case of another, Monavon Construction Ltd, the £500,000 amounted to £250,000 for each of two deaths.

For sure, sentencing guidelines for offences under the CMCHA have recently been revised. From February 2016, successful prosecutions under the Act should generate fines in the range £180,000 to £20 million. Given the limited use of the law, and the fact that levels of fines under the previous guidelines failed to reach minimal suggested levels, it is tempting to view these guidelines as pure symbolism.

As a final observation on the effect of the 2007 Act, amongst the 20 convictions thus far, not a single one has occurred in a Scottish court. And this despite the fact that, as Richard Baker MSP correctly observed in a 2014 consultation paper on a Culpable Homicide (Scotland) Bill in 2014, “we have known for a long time that statistically a Scottish worker is more likely to be killed at work than an English worker is” – to which he might have added, more likely also to sustain a major injury.
Crime and anti-social behaviour (ASB) are frequently considered in academic and media discourse to be an urban problem, with urban-based solutions. Yet, 94% of Scotland’s space is classed as rural, and it is important to understand the way that ASB manifests itself in this environment and the most effective ways of responding to it. This can help us to gain some insights into broader rural social processes and to argue that the rural context is a key consideration when thinking about the way that the policing of ASB is carried out throughout Scotland.

Until recently, the policing of ASB in rural areas has been entirely absent from academic and policy debates. Policing rural Scotland can be challenging, not only because the police are often located remotely from the communities that they serve, but also because of the sheer size of rural policing beats. Yet, the rural context offers opportunities for the police to respond in local, context-dependent ways which often amount to a ‘softer’ policing response than that in urban areas. My research suggests that the rural context impacts on policing in a number of ways.

Firstly, rural police officers tend to negotiate the maintenance of order in response to ASB in rural communities, at both macro and micro scales. The large areas involved in their beat mean that officers often have little choice other than to negotiate order, because back-up is a long distance away and transporting detainees to the nearest police cells takes a long time.

Secondly, at the micro scale, rural police officers frequently live and work in the community that they police, which means that many officers have an embedded knowledge and understanding of the community they police and the associated challenges.

Thirdly, the added ‘situated’ knowledge often enables a softer policing response, whereby community solutions are sought to deal with low-key ASB in a more fundamental manner than in urban locations. One of the ways that ‘softer’ policing happens is through the use of discretion, where the police, because of the geography of rural Scotland, are required to make complex resourcing decisions. Although it is imperative not to fall into idyllic notions of rural policing, back-up and custody are often long distances away which means that there are distinct spatial challenges associated with arresting an individual.

Contrary to much of the public perceptions of rural space, it is important to remember rural Scotland is not a uniform space and therefore there are different geographic challenges associated with policing different rural communities. In particular, different communities require different policing responses depending on informal community structures already in place. In remote rural communities with active community groups, for example, the policing response to ASB varies from that in accessible rural communities with a high percentage of social housing. The use of discretion and negotiated order maintenance therefore relies on police-community relationships and knowledge in rural communities. This is impacted upon by the type of rural community and the length of time the officer has been policing the community and consequently the intimate knowledge that they have of the community.

Given the subtle but important differences between urban and rural crime profiles and communities, rural communities present greater opportunities for the police to respond in less formalised ways to ASB, negotiating order and using their discretion to a greater degree. There is a tendency to view the rural as monolithic and lacking in diversity; however, this research shows that it is important the police differentiate between communities and apply different tactics and skills in different rural environments. The diversity of rural ASB highlights some of these differences and challenges, where an understanding of the complexities of policing over large areas is necessary. The introduction of Police Scotland has provided a number of opportunities, particularly in relation to standardising policing delivery at a national scale, yet it has in some ways diluted the influence of local communities in decision making. The new Police Scotland Strategy 2026 calls for a larger degree of local input into national policing structures. Given the large proportion of Scotland that is considered rural and the complexities of policing over large rural policing beats, it strikes me that rural policing should be considered a core part of the skill set of Scottish police officers. Adapting rural policing styles to the urban environment, rather than vice versa, would be a sensible way of improving local police-community relations nationally.
Curriculum for Excellence: the misunderstood child of Scottish education?

Erica M Caldwell, Chair, RSGS Education Committee

The original documents setting out Curriculum for Excellence (CfE) were seen as a breath of fresh air. CfE, if properly implemented, will have international recognition. So how have we journeyed from a clear vision for the future of Scottish education to the current anxieties around misunderstandings, lack of confidence and box ticking?

In the years since these documents first appeared, CfE has been variously interpreted, misinterpreted, deconstructed and reconstructed: the forward thinking ‘Rubik’s cube’ of CfE has been well and truly scrambled.

The interpretation for many secondary schools, whether by their local authority or by schools themselves, has resulted in implementation which may, unintentionally, disadvantage our young people. From early years, covering nursery and Primary 1, pupils work through levels described in Experiences and Outcomes (Es and Os). The first three years of secondary cover the third and fourth levels, Broad General Education (BGE). It is here that much of the confusion occurs.

In many schools, the challenge provided by discrete subjects like Geography, delivered by specialist teachers, is being lost to timetabling and staffing expediencies. The ‘interdisciplinary’ aspect of CfE is often interpreted as something quite separate from the intended aim of ‘working more closely together’, resulting in the creation of ‘integrated courses’ where the loss of specialist teaching is most acutely felt. Secondary pupils, already well taught in BGE courses in primary schools, are ready for, and respond well to, the challenge of working in specialist departments.

BGE in secondary schools, therefore, should be seen as a proper base for work in the senior phase in S4-6. If well done, BGE will maximise the opportunity for pupils to be ‘ahead of the game’ for the courses to be chosen in S4, allowing more than six subjects to be studied at National. Why? Because pupils will have had a thorough grounding and have the knowledge and the skills which they can capitalise on in their career aspirations. Working with Professor Charles Withers, the Geographer Royal for Scotland, we are forging closer links with university Geography departments and in turn, linking universities more closely with schools.

What can be done to redress the original intention of balance in CfE?

- Weed out the huge volume of paperwork to allow teachers time to teach and pupils time to learn, at all stages from early years on.
- Attach real value and rigour to BGE by seeing it as valuable groundwork for National courses.
- Make sure the elements of BGE are taught by subject specialists, and begin to build towards National 4 and 5.
- Use the resultant ‘freed-up time’ creatively to allow eight subjects at National level.
- Ensure that the revisions to the National qualifications are robust.

RSGS continues to fight the corner for Geography and for all the other subjects suffering a downturn in uptake as a result of this ‘misunderstood child’!

RSGS last met the SQA in early February, and is working with a wide range of bodies to continue to represent the case for Geography.

“CfE has been variously interpreted, misinterpreted, deconstructed and reconstructed.”

This includes removing the current mandatory requirement for unit assessment at National 5 and Higher and replacing it with enhanced course assessment. This will include a strengthened final examination and coursework to ensure course coverage.

More detailed information for individual subjects will be available from SQA in April, but the current information shows, for National 5 Geography, a larger total mark for the exam to allow the assessment of the full content of the course, with the assignment mark remaining the same but becoming, as a result, a smaller percentage of the total.

Concerns about aspects of Higher, as you may have seen reported in the media, are also being addressed. Changes will be developed to compensate for the removal of units, but also to address too narrow a sample of the course being covered in the examination, and to tackle issues related to the assignment for the 2018-19 diet. This strengthening of the examination should ensure Highers are as valued as ever for university entrance.

RSGS continues to work with the Scottish Association of Geography Teachers and SQA to address specific issues relating to the examination and the assignment, including the impact of removing the Unit Assessments on National awards to ensure that all pupils have awards which meet their career aspirations. Working with Professor Charles Withers, the Geographer Royal for Scotland, we are forging closer links with university Geography departments and in turn, linking universities more closely with schools.

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RSGS Manifesto for Geography in Scottish Education

How Geography can fully support key government priorities for education

1. Promote curriculum models in secondary schools that offer greater breadth and choice, in line with the principles of CfE, to ensure Geography is more available for study at National 4/5 levels, and that Geography is available in more than one option choice column.

2. Promote more teaching of Geography by subject-specialist teachers in Broad General Education, and limit BGE to S1-S2 only or strengthen the specialisms within S3.

3. Ensure Geography is a core element of the curriculum, taught as a discrete, identifiable subject, whilst valued for its ability to connect and contribute to developing responsible citizens.

4. Ensure there is a realistic volume of assessment and associated workload for pupils and teachers.

5. Increase funding for resources / classroom materials to support ongoing curriculum change.

6. Ensure assessment and structure of exams is subject-appropriate and specific to the requirements of Geography as advised by specialist teachers and consistently understood.

7. Promote an element of compulsory fieldwork and outdoor learning, integrated into courses.

8. Retain a focus on knowledge and application of skills in context.

9. Ensure Geography courses retain the full breadth and balance of suitable physical and human content and the connections between the two components.

10. Ensure the content of Higher and Advanced Higher Geography prepares students for university courses and facilitates natural progression between school and FE.

11. Build bridges between all sectors of educational delivery to see more co-ordination and better articulation between primary, secondary, examined and university level Geography.

12. Enhance links between Geography, business and industry to support the delivery of Developing Scotland’s Young Workforce.

13. Provide CPD opportunities for classroom teachers on understanding change, standards and guidance, to ensure a greater understanding of how the principles of CfE can be delivered in practice, and to increase consistency in its implementation.

14. Provide CPD opportunities which exemplify and reinforce Geography’s ability to contribute to inter-disciplinary learning and which keep up to date with current issues, knowledge and skills.

15. Provide opportunities in Initial Teacher Education programmes for primary teachers to develop a specialism in the teaching of Geography.

16. Introduce an Earth Sciences qualification at Higher, to replace Geology.
In June 2012, inter-communal violence broke out in Rakhine State, Western Myanmar between the Buddhist Rakhine community and the Muslim Rohingya community, the largest stateless population in the world. This violence displaced approximately 147,000 people, of whom 94% were of Muslim ethnicity, into Internally Displaced Person (IDP) camps across the state.

The Rohingya ethnic minority have since suffered from institutional discrimination, disenfranchisement from rights and services, and heavy movement restrictions placed upon them, including not being able to directly access state health care facilities. In the IDP camps of Sittwe Township, where the majority of the IDP camps exist, non-governmental organisations, both national and international, collectively run static clinics to provide primary health care to the residents of the camps who cannot directly access the state health facilities.

Since 2013, the International Rescue Committee (IRC) has been running 22 static health clinics across two townships, of which five are in the Muslim IDP camps of Sittwe Township. This programme supports approximately 43,000 patients every year.

The need to innovate

Prior to 2016, the inability to track patient history was a significant issue within the clinics, especially with the high patient volume. With some clinics receiving over 100 patients per day, the resulting record-keeping burden was substantial. Consultations were documented on paper forms and stored in situ in the individual clinics in locked filing cabinets. Data was aggregated and reported daily to the State Health Department in hard copy to provide real-time data for their surveillance reporting system. With the aggregations of data, the ability to track individual patient record history was therefore lost.

Another factor contributing to difficulties in patient tracking was a lack of documentation. Specifically, anyone born before 1982 may not have official civil documentation. Furthermore, some of the documentation that once existed was lost in the 2012 violence, when a significant number of Muslim homes and businesses were burnt down through co-ordinated arson attacks. Subsequently, for various reasons, patients often arrive at clinics with no form of personal identification. Without a streamlined system of identification (no ID numbers, inconsistent spelling of names, etc) and with reliance on a bulky paper-based filing method, it was difficult and time-consuming to locate files when looking for patient records.

Development and implementation

In the camps there is an address system that is based on the camp design by UNHCR, with individually numbered shelters, known locally as longhouses. Each longhouse is on average home to eight to ten families. Conditions are extremely overcrowded, with many of the longhouses falling below emergency Sphere Project standards, where affected individuals should have an initial minimum covered floor area of 3.5m² per person.

New patients at the clinics are registered by community health workers before any consultation takes place. At the time of registration, all data, including a unique patient ID number, age, gender, village/camp name and longhouse number, are recorded on a tablet with a specifically-built mobile application that is saved on a password-protected database.

The doctors and nurses in the clinics also use tablets to record information in the Clinical Consultation Database, making it possible to join the two datasets via a relational database to which only the IRC team have access.

Outcomes

The immediate outcome of this innovation is that the clinical teams have much quicker direct access to patient record history. In addition, by
This system has another benefit, in that it provides the ability to map out common morbidities across the camps, such as diarrhoea and infections, which are commonly caused from cramped living conditions. Consequently the community health teams can use these maps to inform and redirect their health education sessions and community awareness campaigns based on where the common and preventable morbidities are coming from within the camps.

Lessons learnt

The clinical teams reported that it was very useful to have immediate access to patient record history, and it saved time compared with trying to understand patient history from the patient, especially when the use of a translator was necessary. It also gave the clinical teams better access to more technical details about previous examinations. The health teams noted that the coding of the patient to recording location, it is now possible to better understand the clinics’ catchment areas. This has enabled the teams to realise that people from villages adjacent to the camps are also using the camp clinic facilities, which increases the clinics’ catchment areas and thus increases the population being serviced.

The health teams noted that the coding of the patient to a location (to village/camp level and also to longhouse) was very beneficial as it provided awareness of the spatial variations of access to the health clinics, which has helped to better understand health-seeking behaviours and blockages to health access across the different camps.

“Chile has an unfortunate geography whereby the entirety of the country lies above an active subduction zone.”

The reaction to an earthquake

Bruce Gittings, Institute of Geography, University of Edinburgh

Perhaps an earthquake is not what those of us from the UK would expect on Christmas morning, but that’s what happened in Chile today while I was visiting. A large quake hit to the south-east of Chiloé, a large island with a population of around 150,000 and rolling hills not unlike parts of Britain, which was visited by Charles Darwin in 1834-35. The quake was of magnitude 7.6 – large but not unexpected in a country as seismically active as Chile, where the second national drink is the teremoto and where an earthquake of this size occurs at least once a year. I was 1,300km to the north in Santiago and felt nothing, but the national reaction here has been remarkable. Wall-to-wall television coverage since this morning on all channels, reporting what would seem to be a great national disaster. Every expert that could be found was pushed in front of a camera, and mobile phone footage of swaying light fittings and products falling from supermarket shelves was shown ad nauseam. My Spanish-speaking colleague here at the Metropolitan University of Technology assures me that no-one was killed, only a very few houses were seriously damaged, and a short section of road was rendered impassable. Yet, a tsunami warning was issued for 2,000km (1,240 miles) of coastline, which remained in effect for about one and a half hours, and the media were keen to report that thousands of people were evacuated as a result. In most cases this involved little more than walking up the nearest hill or a short distance inland. No tsunami occurred.

So why all the fuss? Earthquakes and tsunamis are undoubtedly dangerous, but difficult to predict. Chilean authorities were right to issue a prompt tsunami warning – a sluggish warning in 2010 of the tsunami that followed a magnitude 8.8 quake is said to have cost the lives of the majority of the 525 killed. The Valdivia earthquake of 1960 which was the strongest ever recorded worldwide killed 1,655, again mostly as the result of a tsunami, while a prompt evacuation warning in 2015 after a magnitude 8.3 quake undoubtedly limited the number of casualties (15 people were killed).

Chile has a long coastline of more than 6,000km (3,700 miles) and an unfortunate geography whereby the entirety of the country lies above an active subduction zone, with the Nazca and Antarctic Plates being pulled beneath the South American Plate, causing earthquakes along the entirety of this zone. Despite earthquakes being imprinted on the national psyche, and while small earthquakes are a weekly occurrence, the big dangerous ones may only be felt in one part of the country once in a generation. Thus the Chiloé quake was a ‘big deal’ for local residents, and this reaction, transmitted by social media, encouraged a frenzy within the more traditional media. One might argue this is a good thing as it keeps people alert. However, I cannot help but think that the media reaction will ‘cry wolf’ and the result will be the exact opposite of what might have been intended, because there would seem to be no higher state of media frenzy possible beyond that I witnessed today.
Geography is used daily within Police Scotland, not least when it comes to deploying resources in the most efficient and effective manner possible to ensure the public get the service they expect and deserve. Police Scotland have developed an in-house suite of products known as the Business Intelligence Toolkit (BIT) to assist in deploying our resources in the right places, at the right times to keep our communities safe from harm. The BIT automatically collates and analyses ‘big data’ from a number of sources, including our corporate Crime, Incident and Vulnerable Person databases as well as third-sector data from Scotland’s largest Registered Social Landlord. The BIT utilises these spatially-enabled data to provide in-depth analysis at Multi-Member Ward and Datazone levels at the touch of a button.

The BIT’s ‘Ward Tracker’ conducts statistical analysis on the geocoded datasets at Multi-Member Ward level. It does this by considering the trend experienced in each ward over the last six months in respect of serious violent crime, minor violent crime and antisocial behaviour. Ward Tracker thereafter compares each ward’s trend for the respective crime type against the other 352 wards in the country, determining if it is of ‘statistical significance’ or in line with the rest of the force. The information gleaned from Ward Tracker enables the National Violence Prevention Co-ordination Unit to prioritise Multi-Member Wards for further analysis and deployment of resources.

More detailed analysis is facilitated through the second BIT product, known as ‘Datazone Tracker’. The Datazone Tracker makes use of Police Scotland’s geocoding to drive built-in dynamic mapping, thereby enabling officers to quickly pinpoint locations of crimes and identify hotspots without having to task analysts. By presenting the information in an easy-to-understand, filterable dashboard, it provides police officers with a wealth of information such as: what specific crimes are occurring; repeat locations; key days and times for specific offences; whether it occurs in daylight, darkness or twilight; and even whether it occurred in public or private space. The benefit from having this underlying context cannot be overestimated, as the tactics used to prevent private space antisocial behaviour are entirely different to those used to address knife carrying in public spaces for example.

The Datazone Tracker also risk-assesses hotspots according to crime/incident volume and trend as well as socio-economic status using the Scottish Index of Multiple Deprivation dataset. This not only allows Police Scotland to give consideration as to where to deploy, but can also be used to promote dialogue with community partners and in Multi-Agency Tasking and Co-ordination (MATAC) settings.

Although initially set up to look at Violence, Disorder and Antisocial Behaviour, the BIT was extended in 2015 to include acquisitive crimes such as housebreakings and theft of motor vehicles in response to a specific problem being encountered in the force at that time. Since then, other uses for the BIT are being identified on a regular basis, none of which would be possible without the underlying spatially-enabled data. The BIT has undergone extensive internal and external peer review by analysts, statisticians and crime science experts, including Police Scotland’s Analysis and Performance Unit (APU), the Scottish Institute for Policing Research (SIPR), and University College London’s Jill Dando Crime Institute. Numerous forces in the United Kingdom and beyond are now in conversation with Police Scotland as to how they can emulate the success of the BIT within their respective forces, as they recognise the significant benefit that the geographic and temporal analysis tools can bring to policing from both prevention and demand management perspectives.

Geography and geospatial technology are exceptionally important in modern-day policing, and the BIT is just one way in which Police Scotland utilise existing and emerging technologies to ensure our resources are deployed as effectively as possible to ‘Keep People Safe’.

“Geography and geospatial technology is exceptionally important in modern-day policing.”
Police Scotland’s stated purpose is “To improve the safety and wellbeing of people, places and communities in Scotland” with a focus on ‘Keeping People Safe’. Little wonder then that the role of geography is of the utmost importance in what Police Scotland do and how we conduct our business. In almost every aspect of policing, location is critically important to the effective operation and delivery of service to the public, whilst the breadth of policing functions means that the use of maps as a means of communication and the application of geospatial data and analysis is very varied and undoubtedly interesting to the wider community of geographers.

Contact, Command & Control (C3) Division are by far the biggest users of digital mapping and geospatial data in Police Scotland. Gazetteer information is vital to accurately locate callers and incidents and respond as quickly as possible. Automatic Resource Location (ARL) technology (which tracks the real-time location of officers and vehicles) allows the nearest available resource to be deployed in an emergency. A host of geospatial data is used in support of C3, including CCTV camera locations, motorway junctions, gantries, SOS telephones, etc. To support specific events, additional information can be sourced or created and made available as required; for example, the 2012 Olympic Torch Route, Glasgow 2014 Commonwealth Games Queen’s Baton Relay Route, or major events such as The Open Golf Championship, where temporary structures and road restrictions imported from CAD systems are overlaid on existing maps and combined with ARL.

A prime example of this is in support of policing ‘T in the Park’ which attracted 70,000 revellers in 2016 and became Scotland’s fifth largest ‘town’ for one weekend. CAD drawings of the layout were supplied from organisers and then georeferenced to be displayed on C3 mapping systems. This enabled the creation of a temporary gazetteer of locations such as camping zones, rendezvous points, arenas, stages, food outlets, toilets, bus stops, etc, within the wider venue and surrounds. This was essential to effectively police an event of this scale where normal location descriptors (streets, addresses, postcodes, shops) are absent, and existing maps or aerial photos show only fields and woodland.

The second key area of business which relies heavily on geospatial data and GIS is the Analysis and Performance Unit (APU). The APU are responsible for all types of analysis within Police Scotland and use GIS for spatial analysis of a range of business data such as Crimes, Incidents, and Road Accidents. Statistical and Performance data is routinely generated for specific geographic units such as Police Beats and Local Authority Multi-Member Wards. In-house databases are spatially-enabled wherever possible so that statistical reporting can be conducted at any required geographical level and different business data can be combined spatially to provide more in-depth analysis. A recent example of this has been the development of an internal analysis product called ‘GridView’. Developed internally to monitor and improve the use of Stop and Search, GridView is used to review use of this tactic in terms of ‘Right Place - Right Time’ as a preventative measure against violent crime. Using a simple set of grids of varying resolution, and combining public space violence data with Stop/Search data, it provides a simple visualisation and empowers decision makers with the information they need to deploy resources and tactics in a more informed way.

Finally, an area of business where recent GIS developments are set to improve efficiency and effectiveness is that of Missing Persons. Police Search Advisors (PoISAs) are specially trained in a range of search techniques and strategies. Missing Person searches commonly involve multiple agencies (Mountain Rescue, Coastguard) as well as multiple police units (Dive & Marine, Helicopter, Dog Branch, PoISA). Co-ordinating time-critical searches over varying terrains can be extremely challenging. For search co-ordinators it is imperative to have an accurate overview of a search operation to monitor progress and plan next steps. A new application has been developed internally to provide this by enabling all search information to be stored in one place and visible on a single shared map. The search co-ordinator is able to plan a search based on known information about the missing person, plot radii and sectors on the map. They then define search areas by drawing on the map, and task these to the relevant teams who can update the map when a task is completed with details of anything found. If the missing person has a mobile phone, and cell site coverage information is available from network operators, then this can also be added to the map in order to narrow the search area. Police Scotland respond to over 30,000 Missing Person incidents per year, so the importance of conducting searches effectively and efficiently is clear.

Above are just some examples of how important geography and geospatial technologies are to support modern policing. In 2016 the Scottish Police Authority (SPA) and Police Scotland embarked upon a piece of work aimed at developing a long-term vision and strategy for policing over the next decade. The work identifies four key areas of focus: Protecting the Public; Localism and Serving Diverse Communities; Creating a Sustainable Operating Model; Culture and Performance. Effective application of geography underpins all four of these areas for an organisation responsible for policing the diverse communities of modern Scotland. Advances in geospatial technology afford exciting new opportunities to improve efficiency and effectiveness of policing in the next decade and beyond.
There are many things that can be said about Brexit, but for advocates of youth justice reform one surprising conclusion evident from a review of the law and statistics is this: Brexit will all but eliminate life sentences for children in the European Union. This cruel and counter-productive practice will be virtually eradicated. Once Brexit is finalised, there will remain one prisoner in Ireland and one prisoner in France serving sentences of life for crimes committed when they were under 18.

France has now banned the practice of sentencing children to prison for life and, although it has only been used in France and Ireland, it is also legal in Cyprus and Luxembourg. The law on the matter is unclear in Malta, but there is no evidence of any children serving life sentences there.

With only two life-sentenced children in the rest of the EU, the vast majority of the Union’s children serving life sentences are in the UK. But what a majority it is. When the UK leaves the EU in March 2019, the number of children serving life sentences in the European Union will fall from hundreds, to just two. Put simply, the UK has been doing almost all the legwork on child life sentences.

Of course we don’t call it a ‘life sentence’ when we impose it on a child. In Scotland it’s called ‘detention without limit of time’ (DWLT), in Northern Ireland it is known as ‘detention during the pleasure of the Secretary of State’, and in England & Wales it is ‘detention during Her Majesty’s pleasure’.

As well as not giving it a proper name, we also make it difficult to count the numbers of children on life sentences in the UK. Firstly, each of the three criminal jurisdictions (Scotland, Northern Ireland, and England & Wales) has its own legal framework and prison service. Prison services, understandably, want to blur the numbers. Once children transfer into adult prisons they are treated the same as adults in terms of sentence planning and serving their time. Their age at the time of the offence is just a number to be ignored.

As the UK’s justice departments don’t keep a publicly available tally of children on life sentences, we can only gauge the numbers circumstantially. The best figures available in Scotland are further confused by the fact that figures for DWLT prisoners include those under the age of 21. We do know that between 2001 and 2011 the sentence was imposed 113 times. Research on DWLT sentences imposed between 1965 and 1996 shows that they last ten years five months on average. In Northern Ireland, the best available figures show that there were three children detained at the Secretary of State’s pleasure in 2004. In England & Wales, statistics are again muddled, but we do know that between 1995 and 2013 some 361 people were sentenced to remain in prison at ‘Her Majesty’s pleasure’.

Alongside these prisoners, the MOJ has stated that 325 people received indefinite detention for public protection. In effect these are life sentences imposed on those who have committed lesser crimes than would traditionally have merited such a sentence. The practice has been a disaster, clogging the system with minor offenders and trapping many in hopeless cycles of permanent detention. The indefinite detention for public protection sentence was repealed in 2012, although those sentenced before repeal must serve their original sentence.

However, this is not the only reason for the staggering disproportion. Part of it derives from an inherent punitiveness built into British notions of justice. It is of note that three of the four remaining states where the penalty is lawful (Ireland, Cyprus and Malta) have strong historical links with Britain in the formation of their justice systems. Punitiveness has also been linked to neoliberal economic orders which place significant emphasis on individual responsibility.

Whatever the reasons for this veritable child gulag, it is a sad indictment on the UK justice system. If one thing is to be kept from the legal alliance with our European cousins, perhaps it should be their refusal to give up on children, even when they have committed serious crime.

See the Child Rights International Network’s website (www.crin.org/en/home/campaigns/inhuman-sentencing) for further information on child life sentences.
Dungavel, Scotland’s only immigration detention centre, has arguably embodied everything that Scottish Government have come to contest in British approaches to border controls. Spatial isolation, loss of liberty, prison-like surroundings and, perhaps more crucially, the physical manifestation of centralised Home Office policy – all of which are inherent to its very existence. Whilst Westminster has continuously implemented excessive and harsh punitive control measures and created a ‘hostile environment’ for migrants, many prominent Members of the Scottish Parliament have openly contested this and called for a humane management of migration. Similarly, for over a decade, refugee and migrant rights advocates in Scotland have openly argued against confinement in Dungavel, arguing it is a symbol of oppression, injustice, racism and xenophobia. In September 2016, it was announced that the centre was going to close its doors in late 2017. In the same week, Scotland welcomed its 1,000th Syrian refugee (perhaps not a huge number in European terms, but proportionately greater than its English counterpart). Both the announcements were widely celebrated, seen as welcome steps in the promotion of human rights.

Suspicions rising

As the year progressed, the overall objectives of Dungavel’s closure became murkier. Rather than ending detention in Scotland, and finding suitable ‘non-custodial’ alternatives, the Home Office wanted to replace it with a “short-term holding facility” near Glasgow Airport (replicating the one near Manchester Airport). People would be based at the key point of exit – more easily and expeditiously moved down to England and less able to obtain support from networks like the Scottish Detainee Visitors, Scottish Refugee Council, Unity Centre and legal advisors. It became obvious that the Home Office was not focused on finding non-coercive community-based approaches to ‘managing’ migrants and people seeking asylum, but rather making them easy to move. Once shifted to south of the border, migrants are out of the Scottish jurisdiction, which makes it extremely difficult to keep up with legal aspects of the case; as one asylum support worker put it, “In England it would be impossible for people to get a Legal Aid lawyer. In Scotland we still have a strong Legal Aid system... if you are returned to Dungavel you can get your lawyer to do stuff... in England you have to go down the private route.” The private route is expensive, which people in the system simply cannot afford. Also, since people seeking asylum are pushed into destitution and abject poverty by the immigration system, the private route is not an option, and refugee status is ever more diminished.

The question here is, were the fears and suspicions of migrant and refugee advocates well-founded? The answer arguably came with the publication of the Immigration Minister’s announcement that planning permission from Glasgow Airport was not granted, and therefore Dungavel would no longer be closing. The same announcement indicated that an internal review of ‘detention needs’ in Scotland would be undertaken, with no plans to publish the findings.

The Trojan Horse

This news reveals precisely the concerns that were raised in the aftermath of Dungavel’s closure: the Home Office had offered the Scottish Government a Trojan Horse. The objective of ending detention in Scotland has not been, and never was, the act of humanitarianism that it was initially interpreted as. Last year showed an increase in Immigration Removal Centre (IRC) detainees across the UK (almost 33,000 people in 2015, a rise of 7% on the previous year) with no evidence of slowing down. The Home Office objective was not to end detention in Scotland or find community-based approaches: it was to increase quicker deportations and maintain detention across Britain.

Another example would be that of detention of children. Scotland announced that it would stop detaining families with children on its soil in 2010. Home Office simply substituted the detention of children by moving them to England, as one refugee woman mentioned: “One morning there was a raid (ie, enforcement visit)... officers just walked into my apartment... they asked me to pack my belongings... my children were not allowed to go to school... not even to say goodbye to their friends... we were moved to Edinburgh Airport... from there to detention in England (since Scotland does not detain children)... mentally, it was very hard... my children were very upset.”

So where should campaigners go from here? Should individual centres in Scotland or elsewhere be targeted for closure, or do we cast our net wider? However different the objectives of the Home Office and Scottish Government may be, the fact remains that detention is incredibly harmful for those who face it. Emotional and psychological health is often affected, which is evidenced by increased rates of suicide attempts in IRCs. Sexual violence and deaths in custody are further indicators of the degradation that such centres cause.

For such harms to be avoided, immigration detention needs to end. If Dungavel ever closes its own doors, let’s make sure it is not so that others can open.
Cybercrime: threat or opportunity?

Dr Ian Ferguson and Dr Natalie Coull, Security Research Group, Division of Computing and Mathematics, Abertay University

What do you think of when you hear the word ‘cybercrime’? Identity theft? Hacking? Murder? Murder? Surely that isn’t cybercrime? Maybe it is if the perpetrator googled the word ‘strychnine’ in the previous 24 hours. In short, there is no such thing as cybercrime: it is not a useful classification. As technology becomes pervasive, there are few crimes that do not have some ‘cyber’ element: the advance of mobile computing means that everyone who has committed a crime or been a victim of crime will have left a footprint in the digital flowerbed. It is very likely that they will have been captured on CCTV or their mobile phone will have left its trace across the phone mast network that could be used to identify their location.

The reality of the Internet of Things (IoT) is just around the corner: an era in which all manner of devices will be online. Internet-enabled toasters, fitness watches and even toothbrushes are available with high-tech features offering an improved user experience. However, these devices can also be misused. The internet suffered the largest Distributed Denial of Service (DDoS) attack on 21st October 2016. This is when a service is bombarded with data, usually in the form of webpage requests which are far out with the normal network traffic that a service is able to manage. During the attack, it is estimated that DYN (a Domain Name Service provider) was hit with up to 1.2 terabytes of data per second (equivalent to 12.2 million episodes of EastEnders being sent to the DYN server every single second). The attack brought down websites like Twitter, Netflix and Spotify. The volume of traffic required to carry out a DDoS is significantly more than can be produced by a handful of computers. Usually, hackers are able to execute these attacks through a ‘botnet’, a collection of computers which have been infected with malware that allows them to be controlled remotely by a hacker, and used to send out data on the hacker’s behalf. Interestingly, analysis of the DYN attack shows that the devices responsible for sending the excessive traffic were not part of a normal botnet made of up of home PCs, but a collection of IoT devices that had been infected with malware. The number of devices involved in the DYN attack was relatively small given the number of IoT devices known to be vulnerable to malware. Misuse of these devices has the potential to bring the internet to its knees.

While poor configuration of these systems leaves them open to misuse from hackers, the data generated from these devices offer tremendous value to a forensic investigation. A recent investigation involved the seizure and analysis of a ‘smart fridge’ that was able to tell investigators that the door had been open at a particular time, establishing that someone had been present in the house at that time. As technology becomes more pervasive, so the possibility of reconstruction of people’s actions increases.

One oft-repeated claim is that the internet has eradicated time and distance, but this freedom from time and distance has opened up opportunities for the criminal. They can steal the identity of someone in Kilmarnock, using a server based in South America whilst they are in Chechnya.

For them, rather than shrinking, the world has grown more complex. The evolution of technology presents its own difficulties. The ever-increasing capacity of storage devices means that investigations take longer simply because there is more data to analyse. The use of encryption, ostensibly to protect privacy, can completely prevent the analysis of devices thus protected. The ‘golden age’ of digital forensics, when technology circles. When the UK Government introduced the Regulation of Investigatory Powers (2000) Act, a limitation of 28 days on the length of custody was introduced, a choice influenced by the speed with which a typical computer of the time could be analysed. Technology has rapidly moved on, but the debate on how to handle it struggles to keep pace. As many of the digital services that we interact with become increasingly globalised, there is a need for frameworks, legal processes and policies to recognise and deal with these tensions.

The full text of this article is available from the November 2016 edition of the Scottish Justice Matters Journal, on Cybercrime and Cybersecurity: scottishjusticematters.com/the-journal/cybercrime-cybersecurity-november-2016.
Given the non-random spatial distribution of crime, understanding geographical processes and behaviours – or place-making – is central to its explanation and address. Advances in the geographical interrogation of crime have been made through a multi-disciplinary dialogue. To date, economics and sociology have played significant roles. Economic explanations of the spatial patterning of crime have centred on offender decision-making, as bounded by daily routines and the environmental qualities of locations, inclusive of mechanisms of formal and informal social control. Sociological explanations of the spatial patterning of crime have centred on an appreciation that the quality of social cohesion or ‘collective efficacy’ of communities can exacerbate or ameliorate crime, irrespective of wider societal forces. In essence, economic and sociological explanations have drawn attention to the importance of place in understanding the spatial patterning of crime.

Set against this backdrop, researchers and policing analysts alike, aided by the growing availability of geocoded crime data and advanced quantitative and data science methodologies (including Geographical Information Systems), have moved to plot and interrogate the spatial manifestation of crime at increasingly finer units of aggregation, from the city to the district, neighbourhood and street segment. The potential value of such analysis rests in the finding that a disproportionate volume of crime manifests at a small number of localities, enabling the optimal targeting of crime prevention resources, an insight masked and opportunity missed when larger spatial units are examined. Indeed, multiple evaluations of such ‘hot spot’ policing have championed its efficacy. But, has theoretical explanation progressed hand in hand with such methodological and practical advance?

The endeavour to advance theoretical explanation of crime patterning faces significant challenges. At the conceptual level, multiple questions emerge. Do micro-geographies hold ontological meaning? Do geographical processes and behaviours exhibit such fine-grained spatial operation? How do processes and behaviours spanning wider geographies interact with those operating in micro-geographies? To date, though this is of course a caricature of the field, researchers have selected independent variables deemed indicative of both economic and sociological theory and moved to plot association. However, finding robust association is far removed from proof of causal relation. Relatively scant attention has been paid to the specification and interrogation of causal process. Researchers have lacked the methodological requirements (inclusive of software) and data resources to simultaneously calculate the causal effect of processes operating at different spatial scales over different time periods.

Enter ‘big data’. Technological advance has served to generate new forms of data that can be characterised according to their volume, velocity and variety. Alongside the emergence of new data come new techniques, delivered through progress in computing and data science. Researchers now possess the resource to deploy exploratory methods in the search of association within and between data sets. For some, this heralds the ‘death of theory’. But, is this necessarily the case? Does big data offer the opportunity, at least in prospect, of supporting theoretical advance in the interrogation of space, place and crime?

Certainly, big data enables us to slice, dice and splice space in multiple ways, offering the empirical flexibility to probe properly theorised lines of geographical inquiry. That said, it might also enable strident empiricism, where data is tortured for ‘patterns’ that hold no intrinsic meaning. Researchers can employ methods that generate results but have no theoretical explanation for the findings. In reality, just like traditional forms of data and technology, big data is simply a resource; it is for geographers to decide how to utilise it. If we commence from the presumption that big data does not obviate the need for theory, this new resource opens up opportunities for the creation of rich databases capable of advancing the understanding of causal mechanisms, and the conceptual challenges currently faced in the interrogation of space, place and crime.
Crime hotspots

Dr Ellie Bates, AQMeN Research Fellow in Criminology, University of Edinburgh

Do crime hotspots exist? Probably, yes.

David Weisburd, reviewing a body of evidence, has suggested there may be a ‘law of crime concentrations’ with 50% of crime concentrated in around 2-6% of street segments in urban areas, year in, year out, over periods as long as 15 years. In addition, a number of places appear to suffer from repeat victimisation.

Hotspots are typically mapped using kernel density estimation (KDE). A range of techniques have been developed which enable analysts to highlight and identify statistically significant crime clusters. M Short and colleagues, using mathematical simulation models, treating offenders as foragers, produce models of crime hotspot generation, suggesting there may be two distinct types of hotspot: supercritical smaller spikes in crime, creating smaller dynamic hotspots, eg housebreaking or vehicle theft; and subcritical one or more larger spikes in crime, leading to larger more stable hotspots, eg open-air drug markets.

So if hotspots exist, and can be modelled, can they be predicted? To some extent, yes, but it is complex and challenging to do.

Mohler and colleagues, using a method based on self-exciting point processes used in earthquake modelling, have managed to predict 4.7%, 6.8% and 9.8% of crime, compared to analysts who predicted less for the same locations in Kent (2.1%, 4% and 6.8% respectively).

A key problem remains the lack of a definitive list of risk factors known to directly cause crime at places. Factors can be split into 1) ecological/opportunity-based factors, with certain places acting as crime attractors, for example bars, shopping centres, residential homes with poor security; and 2) structural factors such as concentrations of poverty, racial and/or social segmentation, and poor social control (or low collective efficacy). Which of these factors are most relevant, and at what spatial scale they operate, remains unclear.

Given this uncertainty, research has mainly focused on how to predict crime for small areas, for a week or month ahead, using information about previous levels of crime alone. Taylor and colleagues suggest, for yearly prediction, structural demographic factors plus previous crime may be better.

Can crime be reduced by police focusing on (predicted) hotspots? Maybe yes, maybe no, and care is needed to retain police legitimacy.

Hotspot policing has been around for well over a decade: an analyst or predictive algorithm identifies a likely ‘hotspot’; police are then directed to concentrate policing resources on it. Whilst a recent meta-analysis of randomised control trials by Braga and colleagues into hotspot policing found significant reductions in crime, it is still unclear what type of intervention works best and what long-term impacts are. In Philadelphia, initial research found foot patrols worked best; however, later research found foot patrols and problem-oriented policing approaches not effective in reducing crime, whereas offender-focused patrols were.

Whilst most experiments find limited evidence of this, a concern remains that crime will just be displaced around the corner and not reduced; the simulations discussed above suggest this may be a greater problem for supercritical rather than subcritical hotspots. A further challenge is keeping police officers engaged; as crime reduces, police may leave hotspots, ‘foraging’ for criminals to arrest, shifting from ‘crime prevention’ to ‘crime fighting’; a solution may be much shorter-focused patrols in hotspots. An important concern, still to be addressed, is whether this approach leads to certain places being over-policied (perhaps aggressively) potentially harming communities and undermining police legitimacy.

FURTHER READING


Weisburd D, Telep C (2014) Hot Spots Policing: What We Know and What We Need to Know (Journal of Contemporary Criminal Justice, 30:2)


These zonal crime maps are based on Scottish Government open source data. My process for creating the maps was:

• download the SIMD latest data on crime counts;
• download the new data zone boundaries (as a shapefile);
• join the crime count statistics to the data zone boundaries using QGIS;
• clip the data zone area crime count statistics using OpenStreetMap;
• style the ‘building crime count’ dataset in QGIS using a suitable colour ramp;
• add a basemap, using a QGIS plugin to add a web-based MapBox tile layer, before zooming to interesting areas to export these maps as images.

I will pull this whole map together as a web map, available from my website geogeoglobal.com, and I am also working on a 3D visualisation version.
Geographies of the prime meridian

Professor Charles W J Withers, Institute of Geography, University of Edinburgh, and Geographer Royal for Scotland

The prime meridian is the line and the point at which the world’s longitude is set at 0°. Both longitude on the one hand, and time’s measurement on the other, are based on the prime meridian. Since 1884, it has been fixed at the Royal Observatory, Greenwich. Global space has been universally and cartographically regulated from that moment in time, and Universal Co-ordinated Time set from that point in space. Greenwich’s position as the world’s 0° baseline is the result of the International Meridian Conference, held in Washington DC in 1884. The aim of the Conference was “to create a new accord among the nations by agreeing upon a meridian proper to be employed as a common zero of longitude and standard of time throughout the world.” It was, the Conference Chair stressed, now understood by the scientists and governments of the world “that it is desirable to adopt a single prime meridian for all nations, in place of the multiplicity of initial meridians which now exist.”

Washington 1884 and recommendations over Greenwich as the world’s prime meridian was seen as the solution – but to what? What, precisely, was the problem? To answer this, we need to recognise that what are often taken-for-granted features of the world’s geography – even its measurement – have a history and a geography.

All meridian lines are lines of longitude, geographical conventions designed to delimit and to measure the Earth. The positioning of the prime meridian is in one sense wholly arbitrary: it may reflect an individual’s choice, or an agreed-upon national political decision. In another sense, as delegates to Washington knew and as was understood for centuries, the choice of the “prime”, “first”, or “initial” meridian (the terms were interchangeable) was far from arbitrary.

There are two principal conceptions of prime meridians, the cartographic or measured prime meridian is that meridian, either point or line, marked on a map as 0°, “zero degrees of longitude.” These initial meridians may become convention by repeated usage, or, equally, might be replaced by the adoption of another cartographic first meridian reflecting a different purpose. An observed prime meridian is based upon an astronomical observatory and is associated with the publication by that observatory of an ephemeris, an astronomical calendar in which the predicted positions of the principal celestial bodies were listed as an aid to astronomy and navigation. In the past, this distinction was often blurred in practice since astronomers and surveyors might refer equally to the “local” meridian in making use of measurements from their initial base point. Similarly, navigators used the term loosely or interchangeably (where they referred to it at all), and early modern geographers commonly referred to the “prime” meridian in positioning longitude as east or west of a certain point which, the user was invited to assume, had been determined by observation when it had not.

In the ancient world, Classical geographers and some Islamic scholars took the prime meridian to be the Canary Islands. The French formally acknowledged this position by royal edict in 1634, defining that nation’s prime meridian from Fero, the westernmost of the Canaries. The French also reckoned from a different prime meridian, Paris. The Dutch based their prime meridian on the Canaries, but from the “Pike” (peak) of Teneriff (Tenerife). The British differed again, taking their prime meridian either from different islands in the Azores, or from London (by which was usually meant, before about 1770, St Paul’s Cathedral, not Greenwich). From 1850, and until 1912, the United States employed two prime meridians: Washington for topographical and astronomical purposes, Greenwich for maritime navigation and, after 1883, for the regulation of its railways.

By the late 19th century, then, contemporaries were everywhere encountering and living with numerous prime meridians, each a reflection of the political authority and established scientific practices of a different nation. What the problem of different prime meridians highlighted was that there was no universal standard point against which to measure space and time. The problem was not just that different prime meridians in different countries were used differently by different scientific, nautical, geographical, and other parties. The issue was compounded by there being no standardisation of time.

There was no universal time or agreed-upon civil day until the recommendations of 1884. Furthermore, different metrological standards were at work, the imperial and the metric, especially in linear and areal measurement. Here, too, long before Washington in 1884, appeals were voiced over the need for a single global standard for the world’s measurement. Debates set national perspectives against proponents of a common cosmopolitan good.

Establishing a single prime meridian was about choosing the appropriate place, and the appropriate methods, against which to regulate time and space in a world of difference. Even after the recommendation of 1884 that Greenwich be the world’s single prime meridian – the choice being determined on practical grounds rather than on any intrinsic scientific merit – different 0’s continued to be employed. There is a continuing ‘afterlife’ to that moment and place of global regulation.

“What the problem of different prime meridians highlighted was that there was no universal standard point against which to measure space and time.”

There was no universal time or agreed-upon civil day until the recommendations of 1884. Furthermore, different metrological standards were at work, the imperial and the metric, especially in linear and areal measurement. Here, too, long before Washington in 1884, appeals were voiced over the need for a single global standard for the world’s measurement. Debates set national perspectives against proponents of a common cosmopolitan good.

Establishing a single prime meridian was about choosing the appropriate place, and the appropriate methods, against which to regulate time and space in a world of difference. Even after the recommendation of 1884 that Greenwich be the world’s single prime meridian – the choice being determined on practical grounds rather than on any intrinsic scientific merit – different 0’s continued to be employed. There is a continuing ‘afterlife’ to that moment and place of global regulation.

Sandford Fleming, Scots-born Canadian railway engineer, argued that “the establishment of an initial or prime meridian as the recognized starting point of time reckoning by all nations affects the whole area of civilisation, and conflicting opinions may arise concerning its position. Its consideration must therefore be approached in a broad cosmopolitan spirit, so as to avoid offence to national feeling and prejudice.” His proposal (shown here) was for the world’s prime meridian to be sited in the Bering Strait. Source: Sandford Fleming, Longitude and Time-Reckoning (Copp, Clark & Co, Toronto, 1879).

Professor Withers is the author of Zero Degrees, our Reader Offer this quarter; see back page for details.
In the winter edition of The Geographer, Hazel Buchan Cameron penned a very interesting article on the Innerpeffray Library near Crieff. At once I wanted to go there and spend hours, if not days, pulling books off the shelf and reading sections of them on a hundred different subjects. However, being thousands of miles away (as I now live in Florida), the best I could do was to make a note of this little gem of a library, hidden away off the beaten path. A visit to this library is a goal for a future visit to Scotland.

Since I could not immediately visit this place, and being in a nostalgic mood both for old books and for Scotland (also being almost unable to move due to a back injury), I decided to go back in time to a different type of peaceful place. Around 1980 I was given eight of the first 13 bound volumes of The Scottish Geographical Magazine (SGM). I decided to take out the oldest one I have, Volume II/1886, and see what it contained. It has been several moves and a couple of decades since I have given this volume a close inspection.

I started off by looking at the Council list, which reads like a Who’s Who of the Scottish Peerage and great academics of the time. Too many to list, but it is well worth a look – many of the names will bring back memories to anyone who has studied Geography, Geology or History, among other subjects.

Then I started to go through some of the articles. In January 1886 there is a section called ‘Obituary, 1885’, and one of the most notable was the death of General Charles ‘Chinese’ Gordon in Khartûm. His death, supposed to have taken place a year before, was as yet still unconfirmed. This was only one of the deaths noted, but all were interesting.

As my hobby is the study of African exploration, I then skimmed the 12 issues for any articles about that subject. I took note of a few, not only for their subjects, but also for their authors. Joseph Thomson wrote a couple of articles on East Central Africa, while R W Felkin had one on the position of Dr Emin Bey (Emin Pasha). Fascinating contemporary writings.

One other major article was by Ferdinand de Lesseps, on the Panama Canal. Professor James Geikie, also a Vice-President of the Council, might be the most famous academic who contributed articles, but there is also one by George G Chisholm (on Guernsey).

To a Geographer and book/map collector such as myself, this volume is amazing in so many ways. Needless to say I loved the maps themselves, but each month has a review of ‘new’ maps and books that were recently published. And yes, as a collector I do admit to wanting one of each book and map.

This volume, and so many of these early volumes, contains so many contemporary notes that it is an excellent source of primary research material. However, since I no longer do research I can simply let these stories transport me back to the late 1800s, when exploration was still going on and a new, young geographical society was starting, from its very beginnings, to make a name for itself.

Not everyone can go to a small, beautiful, out-of-the-way library like Innerpeffray Library, nor can they own early editions of the SGM, but these volumes are available in many other places in Scotland, and online. I suggest that other Members of the Society read, or reread, some of these early volumes.
In 1917, when Wilfred Thesiger was only seven, he witnessed the return of the Emperor’s army into the Ethiopian capital of Addis Ababa, blood-stained and jubilant after a ferocious battle. It left him in awe, and from that day he felt a burning desire to spend his life amid the “colour and savagery” of the desert.

Educated at Eton and then at Oxford, Thesiger never quite fitted into the stereotypical role of a well-to-do Englishman’s son. For the first seven years of his life he had lived in Ethiopia, where his father had a diplomatic posting, and he was brought up on tales of big game hunting and tribal warfare. He watched camel trains trekking across the desert and absorbed the essence of the place into his soul. No wonder he found “comradeship more easily among races other than my own.”

In many respects, Wilfred Thesiger was an enigma. He described himself as an incurable romantic, but in reality he was as hard as nails. He yearned for a life of simplicity, untrammelled by the trappings of modern convenience, where men observed a noble but harsh moral code and took pride in their ability to withstand the harshest conditions. In the deserts of Arabia, he found it.

“I was exhilarated by the sense of space, the silence, and the crisp cleanness of the sand. I felt in harmony with the past, travelling as men had travelled for untold generations across the deserts, dependent for their survival on the endurance of their camels and their own inherited skills.”

Aged 20, Thesiger was honoured with the only private invitation to the coronation of Ethiopia’s Emperor, Haile Selassie. After the ceremony, he travelled deep into the dangerous Danakil desert, where other explorers were known to have perished; but Thesiger was made of sterner stuff, and the month that he spent there, tracing the little-known Awash river while depending on his wits for survival, seemed to set a clear course for the rest of his life.

1935 found Thesiger living in a thatched hut in the remote Kutum district of the Sudan, where he had joined the Political Service; and in 1938 he made a 2,000-mile return journey across the Sahara to Tibesti, which was the first of its kind from the east. When the Second World War called him into action, he declared that he would rather die of thirst in the Arabian Desert, than submit to the soft options of modern living. His collection of over 30,000 photographs, which are now housed in the Pitt Rivers Museum, testify to the mutual respect and affection which he enjoyed with the Arab people – a rare privilege and an affirmation of trust. They called him “Al Auf” woke us again while it was still dark. As usual bin Kabina made coffee, and the sharp-tasting drops which he poured out...”

Thesiger’s travels with the Bedouin were followed by several years spent living with the Marsh Arabs of southern Iraq; one summer he trekked across the Hindu Kush, the formidable mountain range in Afghanistan, and later he made many camel safaris to Lake Turkana in Northern Kenya. Distressed by the way in which oil companies were destroying the traditional Arabian way of life, at the age of 70 he moved to Maralal in Kenya, and here he spent most of his remaining years.

As he grew older, Thesiger came to hate all the trappings of the modern world, describing the motor car as an ‘abomination’. He declared that he would rather die of thirst in the Arabian Desert, unhindered by possessions, than submit to the soft options of modern living. His collection of over 30,000 photographs, which are now housed in the Pitt Rivers Museum, testify to the mutual respect and affection which he enjoyed with the Arab people – a rare privilege and an affirmation of trust. They called him “Mubarak bin London” — the blessed one from London”.

Wilfred Thesiger died in 2003; he had never married, and by all accounts had lived a celibate life. His books, including Arabian Sands, were received with acclaim, but the only standards by which he judged himself were those of the Bedouin, “a people whose spirit once lit the desert like a flame.”

“He was loyal, generous, and afraid of nothing. He was a wonderful man to travel with,” said Salim bin Ghabaisha.

Wilfred Thesiger was awarded the RSGS Livingstone Medal in 1962, with the presentation being made by Dr Livingstone’s grandson, Dr Hubert Wilson.
With soaring sand dunes, modern cities, spectacular mountains that reach up to 10,000 feet into the sky, warm hospitality, frankincense-covered uplands, a coastline that stretches for more than 1,800 miles, and a rich culture and heritage that goes back some 5,000 years, Oman is a geographical paradise. Almost all of the major desert expeditions in Arabia, undertaken by the great explorers such as Wilfred Thesiger and Bertram Thomas (both RSGS Livingstone Medallists), started in Oman.

A haven of peace in a region of turmoil, and with a refreshing culture of non-intervention in the affairs of others, Oman is a nation with strong connections to East Africa, and especially Zanzibar... and Scotland. On completion of his training at Sandhurst, the current Sultan was posted to The Cameronians (The Scottish Rifles), stimulating a long-standing affection for Scotland that sees a bagpipe band regularly provide the half-time entertainment at the national football stadium, whilst sporting the Qaboos Pipers Plaid, a tartan commissioned by His Majesty. More recently, he personally funded the restoration of a series of artefacts at St Mary’s Episcopal Church in Hamilton.

In the mid-1980s, the Royal Geographical Society undertook the most intensive research study of an arid environment in the Wahiba Sands of Oman. A total of 30 top scientists spent three years exploring and studying more than 15,000km² of desert, where the ancient dunes reach over 100m high. They discovered more than 16,000 species of invertebrates, and 150 species of native flora, fed by a regular fog and dew that provide the equivalent of 0.5mm of rainfall each night.

In late 2017, exactly 30 years after that research ended, Oman will open its first purpose-built Centre for Outdoor Learning in the same sands, a centre that will act as a hub both for arid environment research, and for the operations of Outward Bound Oman. An automatic weather station will provide 24/7 data to students and researchers anywhere in the world, and the centre will provide simple accommodation and classroom facilities for visiting groups.

To encourage the spirit of innovation amongst teachers in Scotland, and instil in young Geography students the value and excitement of fieldwork, the Discovering Oman educational project has recently been launched.

Funding is available for a fully-funded, week-long fieldwork visit to Oman in late 2017, for two innovative Geography teachers from Scotland, one P6/P7 and one S1/S2, each accompanied by an outstanding young geographer from their school. The aim is to use that week to gather data to create a series of innovative, curriculum-linked online resources and lesson plans for use by teachers in Scotland, and in Oman. The following winter will see similar opportunities for teachers and pupils in S4/S5 and in S6.

See rsgs.org or contact RSGS HQ for more details on the Discovering Oman project, and on how teachers can enter the competition. The closing date for applications is Saturday 6th May 2017.

Arabia’s vast Rub’ al Khali desert, the biggest sand desert on Earth, is one of the world’s most extreme and inhospitable environments. In 1930 the race was on to become the first European to cross it; 85 years later, another team took on the challenge.

Mark Evans is the author of Crossing the Empty Quarter, a large-format celebration of the journey. Combining extensive archive and contemporary photography with an authoritative yet highly readable text, this book is a unique exploration of the region as it was more than 80 years ago, and as it stands today.

In late March, Mark Evans will be speaking about the journey to RSGS audiences in Aberdeen, Dundee, Dunfermline, Glasgow and Edinburgh, in a talk titled Into the Abode of Death.
**Hebrides**

Peter May, with photographs by David Wilson

*Quercus Books, September 2013*

The landscape of the Outer Hebrides, with its stark cliffs, ghostly mists and lonely beaches, has become a definitive character of Peter May’s Lewis trilogy of crime novels. In *Hebrides*, readers will accompany him on an odyssey in prose and images, through a history of the islands and reflecting his own deep personal connection. Travelling as if alongside his protagonist Fin Macleod, he describes the island life – as bewitching as it is treacherous – his encounter with the bird-hunters of Sula Sgeir, the savage seas of Ness, and the churches of Eriskay. With extracts from the trilogy and specially commissioned photographs, this book places his writing and characters within the land that gave them form.

**The Thin Green Line**

*Wildlife Crime Investigation in Britain and Ireland*

Alan Stewart

*Argyll Publishing, September 2009*

From the author of the bestselling *Wildlife Detective*, this book presents a wide-ranging survey of the scale of modern wildlife crime in Great Britain and Ireland, and how the forces of law and order attempt to combat it. With the help of his police colleagues, Alan Stewart presents fascinating case studies and recounts how the effect of international crime manifests itself on these shores. Crimes against wildlife of all kinds, from water voles to elephants, from rare bulbs to Indian tigers, are told with his customary wit and in his own earthy style.

**The Skeleton Road**

*Wildlife Crime Investigation in Great Britain and Ireland*

Alan Stewart

*Arcturus Publishing, September 2013*

With the help of his police colleagues, Alan Stewart presents fascinating case studies and recounts how the effect of international crime manifests itself on these shores. Crimes against wildlife of all kinds, from water voles to elephants, from rare bulbs to Indian tigers, are told with his customary wit and in his own earthy style.

**Zero Degrees Geographies of the Prime Meridian**

Professor Charles W J Withers

*Harvard University Press, March 2017*

Space and time on Earth are regulated by the prime meridian, 0°, based at the Royal Observatory, Greenwich. But before the 19th century, more than 25 different prime meridians were in use around the world. Professor Withers guides readers through the navigation and astronomy associated with diverse meridians and explains the problems that these cartographic lines both solved and created. He shows that as science and commerce became more global, and as railway and telegraph networks tied the world closer together, the multiplicity of prime meridians led to ever greater confusion in the co-ordination of time and the geographical division of space. This book is a study in the geographies of accuracy and of modernity – why one point on the Earth’s surface became the world’s baseline and why we should not take for granted the ways we measure the world.

Readers of *The Geographer* can purchase *Zero Degrees* for only £19.16 (RRP £23.95) with FREE UK P&P. To order, please contact John Wiley & Sons Ltd by post (European Distribution Centre, New Era Estate, Oldlands Way, Bognor Regis, West Sussex, PO22 9NQ), telephone (01243 846291) or email (cs-books@wiley.com), quote the code ‘H0265’, and enclose a cheque or credit card payment. For non-UK sales, please contact John Wiley & Sons for postage and payment details.