



Winning Entry

Shame

By Carolyn Roberts

It's not a long walk home from the cinema: just fifteen minutes or so. Long enough to be pleasant, not so long as to be tedious. Dave and I chat about the film we've just seen, holding hands and enjoying one another's company.

I see the man before he sees us. He's hunched over a sports bag, sitting on the ground by a small patch of grass. His hair is scruffy and blonde, and he's wearing a thin jacket over dirty jeans. He is turning his head slowly from side to side, a confused expression on his face.

I know how I should react. My first thought ought to be "Hello, something's wrong here, looks like this guy needs my help".

But it's not. Shamefully, my first and only thought is "Oh no, please don't talk to us, just let us go past, it's cold and late and I want to get home".

We keep walking. I don't know if Dave has seen the man too, and we're too close for me to ask without being overheard. I don't look at him as we pass, but it doesn't stop him speaking.

"Guys, can you gies a hand here please?"

His voice is thin and sad. It's the voice of someone who needs far, far more help than a couple on their way home can possibly give, the voice of someone who will be absolutely fine, if only you can get him a house and a decent childhood and an education and a tiny bit of self-belief. But we stop, because no matter how cold-hearted you are, no matter how much you want to get home and shut the door and pretend people like this don't exist, it's hard to ignore someone who's asking you directly for help.

The man's explanation is slow and halting, and the wind is cold around my legs.

"My name's Ian. I need tae get tae the hostel I'm supposed to be stayin' in. They won't let me in efter midnight, but I cannae remember where it is."

It's an impossible problem, particularly since it is past 11pm already, but we're involved now and Ian seems to feel he has wrapped up the difficulty and handed it over to us. So we ask questions, busily, efficiently.



“What did it look like?”

“When were you last there?”

“What’s its name? What letter does it start with?”

“Is there anyone we can phone who would know?”

To each of these, Ian shakes his head and smiles hopelessly. “I cannae remember. I jist cannae remember” he sighs. However, I have a notion that there is a hostel not far from here, so in the absence of any better ideas, we decide to go there. There seems to be no question that we will accompany Ian: he has adopted us as thoroughly as a puppy might a butcher, and I’m not heartless enough to walk away. He stands up and pulls helplessly at his sports bag. “I’ve been carrying this a’ day, I don’t think I can manage it any more”.

Dave picks it up without complaint, and I mentally add that to the already extensive list of reasons to love him. “Come on then.”

On the way, we establish that Ian has been to his sister’s for a meal. He is, he admits, an alcoholic, but he is trying to come off the drink. To this end, his sister has sent him off with a stack of non-alcoholic beers, which Dave is now lugging in the bulging sports bag.

Initially I am energetic, certain that we can speedily deliver Ian to his hostel and get home for a rum and coke, which will taste all the better for being garnished with a salvaged social conscience. However, it is not turning out to be so easy. The hostel I know of is closed, and anyway Ian swears blind he’s never been there before in his life. He’s happy that he’s found someone to help, and seems to feel that his role is to provide the banter while we sort out his predicament. He tells us about his mum, his chaotic life, his ex-girlfriend. In the meantime I have flagged down a taxi, in what I feel is a stroke of genius.

Taxi drivers know everything. This one will, therefore, know where the nearest hostel for homeless people is. The driver confirms that he does, so I get Ian to climb in, I shove a tenner in his hand and stand back, relieved.

The taxi driver looks at me, then in his rear view mirror at Ian.

“Nope,” he says decisively.

“What?”

“Nope, I’m not taking him. No’ unless someone else comes with him. He’s steamin’ drunk, he’s not goin’ anywhere in my cab.”



Neither Dave nor I are up for a potentially bankrupting tour of the city by cab as Ian rules out each of the city's hostels in turn, so he climbs out, displaying a healthy indignation. "He thought I wis drunk!"

He did, what an unbelievable slur on your character, I thought but did not say. By this time it is half past eleven, my helpfulness is vanishing and I'm beginning to feel I've done my bit. Dave, meanwhile, is weighed down by a bag of boozeless bevvy. He doesn't look impressed either. At the back of my mind, I am wondering how we can get out of this without feeling obliged to invite Ian home with us: a step I am not prepared to take. How quickly my social conscience decides it's time to put its feet up. I've only got one more idea.

"We'll have to go to the police. The station's just round the corner."

Ian laughs, a dry unhealthy sound. Then he realises I'm serious.

"I'm no' goin' to the filth. You can leave me here if you want but I'm no' going. They'll jist stick me in the cells."

We argue for a while, and then reach a compromise. I will go to the police by myself and find out where the nearest hostels are. I march off purposefully, and am immediately hit with shock. I have just left my boyfriend with a homeless man whom neither of us know. Am I going to come back to find Dave stabbed and robbed? Could this whole situation be an elaborate scam? Is this the stupidest thing I've ever done?

I keep going, because I don't know what I'd say if I went back now. The police station is big and desolate. It feels like the reception of a dingy youth hostel, in which you might find yourself at the end of a particularly joyless hen weekend somewhere cheap and overseas. Eventually, a policeman emerges who looks as if he's seen and heard everything, twice. He stands in the reception, which is, weirdly, several feet above where I'm standing. It is as if he is standing in a pulpit, about to give a sermon. I explain and he regards me wearily.

"Look, hen, if he's got himself drunk and forgotten where his digs are, that's his problem. Don't you involve yourself, you might get hurt."

I explain that I am not alone, that my boyfriend is with me. I don't tell him that I have abandoned said boyfriend to a possibly horrific fate, and my story reassures the officer enough for him to tell me where the nearest hostel is - not far off, as it turns out. Which is lucky, as it is now ten minutes to twelve.



I leg it back and am relieved to see Dave and Ian chatting just where I left them, with no sign of any stabbings or other unpleasantness. We run to the hostel and Ian wheezes joyfully when he sees it.

“That’s it!” We sag with relief. I loiter outside (alone, in the dark, outside a hostel for homeless men, what on earth has happened to my common sense this evening?) while Dave goes in to check that Ian does indeed have a bed for the night here. No-one comes near me, which is a relief both for the obvious reasons and because I wouldn’t like to have to explain to my dad how I’d ended up in this situation.

Dave emerges and we walk up the road. For an hour or so, we’ve experienced the confusing chaos of living on the streets. I’ve learned that people who look poor can’t get taxis, that police stations are intimidating at night, and that for all my liberal inclinations, I don’t actually want to get involved in sorting out people’s problems. I’d rather pay my taxes and leave it to someone else. It’s a hard admission to make, and I think I’m going to like myself a bit less after tonight. I’m not sure whether we did the right thing. I’m not sure what else we could have done. I’m not sure whether Ian went out and did exactly the same thing the following night.

Catching A Sight of Sound

By Eilidh McEwan

The chill of the morning air bites. Dashes of luminescent red and orange leaves are splattered in brushstrokes across the pavement like serrated paint clumped on canvas. Low tree branches overhang the metal park railings, edged with glittering frost. Sprurts of mist drift as people gather, muffled in heavy coats and bright scarfs, their murmured words framed in sprays of white breath. Scott hears the ice crack beneath his boots. As he picks his way carefully along the pavement, a mixture of pain and euphoria sift in his guts, emotional shards of crushed glass.

Scott's nostrils flare and the cold air burns through his nose and throat. Today the last stage of the MRI scanning will be complete. The head frames used to measure and create an image of vocal patterns and tongue movement have been so effective. This research conducted by Seeing Sound has the potential to transform speech therapy completely by allowing fuller visualisation of vocal processes. Scott's mind shifts to tomorrow, when he has the 3am commute to the airport. Winter might be his favourite season but nothing beats three weeks of Christmas sun visiting family in Cape Town and spending days at the beach with his nephews, walking his sisters' dogs and surfing. He pictures the suitcase lying half-packed in his south side flat, the lock he fastened before he left. That will be three padlocks again soon when he arrives back in Jo-burg for good.

His phone rings. It's his colleague.

'Iona, are you already at the lab?'

'Yep, a few of the reporters are already here. That's everything more or less in order. Where are you?'

'Ya, I'm nearly there. I will see you in five minutes.'

Scott pulls his scarf tighter around his neck and lengthens his stride. The teams' research is finally complete. All those diagrams, all those stacks of academic papers and phonetic research, those back-breaking hours hunched over the computer analysing green and blue screens. The flickering on-screen haze has been translated into an actual tangible result. His throat is dry and as he walks he hopes the cold air will help clear his mind.

Twenty minutes later, at the lab, Scott is sitting next to Iona, and prepared statements are in front of them. A group of reporters are clustered in the room. Scott finds his eyes fixing on their faces as they speak. The empty echo between mishearing and understanding, between seeing and being, flares and rings in his ears. Iona says,



'Yes, our research is central for linguistic researchers, for teachers, for people learning English as a foreign language, for actors looking to perfect an accent. This new MRI scanning offers us a visualisation of the workings of the tongue in speech and a closer glimpse into the nimble dexterity behind word formation.'

Scott can see why this research will be pivotal. He watches the shape of words traced out by flickering lips, the leap of a journalist's question across the void. He can feel that shadow on him, sitting in that darkness between speech and sign. As he watches Iona talking, he realises how slight the line is for him between confusion and clarity.

He wonders again why he has so insistently chased a life in this aural minefield where planted bombs of miscomprehension lie buried, where the threat of an explosion is continually imminent, metallic fragments the sole clue, hidden in the dust. Memories of his childhood assail him.

Memories of life in the township before he turned fourteen. His years still had some idyllic quality then, when he spent hot dusty days sitting in the shade of the tin-roofed huts, kicking a football about with the other boys. Then the rioting years, that he had tried to shut his eyes to as a child, the screaming crowds, surrounded with the stench of burning. Crouching with sixteen year old Marlon, his sole white friend, sheltering behind a rusted car from tossed rocks and the burst of gunfire and the all-consuming fear.

A year later a beating from one of the boys about walking out with a girl. That beating smashed his nose. It was soon followed by more. When his skull was crushed by a brick, his hearing gradually deteriorated. Those gaps and sifting silences that he was not aware of at first. And then the drift, the splinter that began to chisel through every conversation that he had. His relations changed. There was a new sensation. An awareness of something missing, something that won't disappear no matter how much you apply yourself, how tenaciously you cling to every sentence's facet, like a climber does on a crumbling sandstone rock face.

And then, two years later, he, his brothers, his family got out from that part of Jo-burg. A new white house with a locked gate, located in the suburbs to the cities' west. He got a scholarship, moved to Cape Town to go to university. Floating about in this new silence of a different city.

And new friends in Cape Town that taught him other ways. That instinctual joy as people spoke to him through gesture, as people let his eyes watch meanings drawn in the air rather than struggle to follow swelling waves of noise that bashed back and forth between people's mouths. His girlfriend Kira placing his hands on her throat, on his lips as she taught him a new language of flickering palms.



Scott watches the sparring words of journalists' backlit by rare frosty blue Glaswegian skies. Memories of balmy, sun-lit African streets call to him. The grief that first assailed him here in Glasgow, the irrational sadness that he had to fight whenever it welled up behind his face and threatened to slit his tear ducts open dispersed a few months after he arrived.

And now, three years later, his research is done. The faces of other people with hearing loss float across his mind, their sounding out of words through the iron head frame, comprehending with their eyes. A child who pronounces 'ch' for the first time, the black spot of a cochlear implant clear on their left side. Scott allows himself the indulgence of a faint twinge of pride, as he shuts the office door behind him at 6pm.

Along Jamaica Street the light is deepening, darkening from yellow into a deep russet gold. He turns his eyes upon every passing face, and the peripheries blur as people start to speak. The edges thin. The spaces between sight and sound shiver and collapse.

He'll be home soon, back in South Africa. The lights of the Gala Casino are beginning to shine on the water of the River Clyde. Reflected light shifts across the river, as a train crosses a bridge. Beneath the mechanical clatter of its wheels, a slower reverberation brushes against his soles, the faint murmur of ancient stone. There are waves rollicking gently in his ears, in time to his thumping heart. As the water shimmers from moonlit silver to black, Scott feels his breath catch. This is a new promise that sings to him and a million others, a promise that crackles through the air whispering of a new social grace.



Smile

By Eva Moreda

Smiling: that's the true universal language. That's what they tell you anyway. Across frontiers, across cultures, the communicative power of a smile is irresistible.

Only it's not.

She put on her coat, her desk impeccably tidy after a long day. The article would be submitted first thing tomorrow morning, and, although the standards of that particular journal were exacting, she had no doubt that it would be accepted and that it would be widely read and cited after that. For her personally, it could mean her way to promotion, or to a better job. But, as she locked the door to her office, she had a feeling that the article - the culmination of two years of work, the first project she had led- was more than that. Perhaps not in a good way.

She found the building empty on her way out, but bumped into a postgraduate student -not one in her group- as she was about to open the Psychology building's main door. The student seemed caught by surprise and smiled at her timidly, perhaps insecure about what is one supposed to do after nearly crashing with a member of staff. She didn't smile back. She noticed that the student kept her gaze low and understood that she had probably spotted the bump, but neither of them said anything.

(A European person arriving at the seashores of Africa, America, Asia, seeing for the first time a person who doesn't look like them, who doesn't look like anyone they've met before. She could picture them in her head as she made her way out of the campus, her thoughts about the study slowly morphing into their faces. It's 1269 or 1492 or 1624. Did they look into each other's eyes and instinctively smile? Did they feel that the enormous distance which separated them was overcome, at least by a bit? Did they feel they were off to a good start? And did any of the two later on regretted having made such assumptions on the basis of a smile?)

Daniel wasn't at home; in the last few weeks, he had taken to working late - the same as she, although she at least had a good reason: being the principal investigator of such an ambitious project surely demanded more than forty hours work a week. With Daniel, she wasn't so sure. It seemed as if he was avoiding their home - not her, which was, in a way, a relief. But on weekends he always insisted on going shopping -which he had never been very interested in until one year ago-, on attending the most ridiculous events and gigs, on going for a walk even if it was raining - all because he didn't want to be in that house, their house. Not that he had ever told her so, but she could sense it. During her first pregnancy, he was always insisting that she get rest, even if she assured him that she was perfectly okay. He

would even be the one to get up to fetch stuff whenever they were sitting in the kitchen eating supper.

This time, it was different. It was not that he was inattentive - 'absent' would be a better word. It was not that he was not happy. Although he hadn't smiled a lot lately. He hadn't smiled even when the doctor placed the transducer on her bump, the face of their baby forming in the monitor for the first time. The doctor himself was smiling, but turned serious when he saw that Daniel was not. She wasn't sure now how she had reacted then, whether her mouth had curved upwards. Maybe it had - and not out of joy, but of insecurity, of uncertainty, of fear.

(A Neanderthal male, bumping face to face into a Cro-Magnon male in the forests of present-day Romania, both of them chasing a herd of wild horses. The Neanderthal man moves the corners of his mouth upwards, his teeth showing. Does the Cro-Magnon man think he is smiling? Does he smile back? Does the Neanderthal man assume that, by showing his teeth, the other male is threatening him, and how does he react? Does he run away? Does he respond to what he thinks is a provocation with a blow of his axe? Is the blow more painful because it comes after what the other man had interpreted as proof of sympathy and goodwill?)

She walked into the nursery, rummaged through the wardrobe, moved the cot across the room. She had done this nearly every day for the last few months and she was never satisfied with the results. The first time round, he would have opposed her doing so, making such a big effort - but not anymore. Not that he didn't care about her - it wasn't that. But why bother? They had done everything right the first time round, and yet.

(Sophia at four weeks old, smiling in her cot before going to sleep, the corners of her little rosy mouth curved upwards, her eyes closed. "Sophia is smiling", she had told Daniel. It wasn't the first time Sophia smiled. It wasn't the first time either that Daniel shook his head and replied: "Nah, she's too young for that. It's just gas. Babies so young cannot smile yet." And then he had added, "You are the scientist. You should know that." But he was smiling as he said that, not at her, but at Sophia, smiling back at his daughter).

She undressed slowly, perhaps hoping that Daniel would come home before she got into bed. He didn't. She forced herself to lie on her back, closed her eyes, forced herself to think of the morning ahead. The article would be submitted first thing in the morning, and all those years of work would make sense.

That night, she dreamt that she gave birth to a baby with no face. And, in her dream, she felt strangely comforted by the fact that the baby could never smile.

The Elephant in the Room

By Mary Tatner

If you were to visit the Hunterian Museum, among its many and various objects, you might see the right and left tusk of an elephant. The tusks, which are absolutely huge, seem to float in mid air, and are suspended incongruously over a stuffed Horned Screamer (a bird from French Guayna) and rows of shells, corals and insects. This is all that remains of the elephant, once owned by Queen Charlotte, wife of Mad King George the Third, which died in 1776. They appear quite forlorn and forgotten, but behind every object in the museum is a story of when, how and why that particular object came to reside in the Hunterian in Glasgow, and of the many people who were involved in the journey to its final resting place.

The Hunterian Museum, the oldest museum in Scotland, was founded in 1807 and was initially housed in a specially constructed building off the High Street in the centre of the city of Glasgow, where the University itself was located at that time. The original museum was designed by the architect William Stark, and the collection was then moved to the Gilbert Scott Building at Gilmorehill in 1870. It was William Hunter, Queen Charlotte's "accoucheur" or male midwife, who bequeathed his vast collection of objects to Glasgow University in 1783. William Hunter was born in East Kilbride and briefly studied at the University before heading off to London to make his fame and fortune. He eventually became very wealthy, as midwife to the aristocracy and became the foremost anatomist and obstetrician of his day. He spent most of his considerable fortune in acquiring his collection, which also included Roman coins, shells, books and paintings.

But it was in London that William made his mark and it was (our) good fortune that his collection came to Glasgow, rather than stay in London as William had originally planned. As his collection grew, William had built a house at 16 Great Windmill Street to house it, which also included his living quarters and a lecture theatre. The house was designed by the Scottish architect Robert Mylne, who incidentally married a sister of William's sister-in-law. William paid more than £8,000 on this building, and remained in it until his death in 1783. Glasgow's good fortune came about as William's request to Lord Bute's Government of the time for a piece of publicly owned land to build his museum on was refused; Oxford University also declined his offer, so as Glasgow was his alma mater (having granted William the degree of Doctor of Medicine in 1750, followed by the City of Glasgow making him a Burger in 1764), William donated the entirety of his collection to Glasgow University. William was not above settling old scores though, as he deliberately shunned Edinburgh University, having had several academic disputes with Professor Munro, the Professor of Anatomy there.

But how did the elephant become part of the collection? Queen Charlotte arrived in London from Mecklenberg in 1761, and on the 8th September of that year, married King George the Third. The next year, William Hunter delivered her first born, the future King George IV, plus another six sons and four daughters. Queen Charlotte was a keen amateur botanist, and took a great interest in the development of Kew Gardens. Both she and the King were avid collectors of all sorts of objects and she established a menagerie, to which came 2 elephants. When they died, she donated them to William for his Museum. The elephants were dissected by William and his younger brother John, a famous anatomist and surgeon, in 1776, as reported in the Saint John's Chronicle of that year. The two brothers had an uneasy relationship; John was elected a Fellow of the Royal Society a few months before William, and founded his own anatomical collection, which was acquired by the Government after his death in 1793 and given into the care of The Royal College of Surgeons in London. What remained after the bombing raids of World War Two now forms the basis of the Hunterian Museum in London.

The 18th century was a golden age for science in Britain; it was the time of the voyages of Captain Cook and Sir John Banks, of new and exciting species being transported on long sea journeys to be unveiled to wondrous audiences. Can you imagine how amazing it must have been to see an elephant or a giraffe for the first time? And the Hunters and other collectors, such as the physician Sir Henry Sloane whose vast collection formed the basis of the British Museum, were eager for all the public to be able to see and wonder at these marvels of nature.

The task of transferring William's collection from Great Windmill Street in London to Glasgow was undertaken by Professor Lockhart Muirhead, who was the University Librarian and lecturer in Natural History at Glasgow University, as well as the first Regius Professor, an honour bestowed on him by King George III in 1807. His many letters home to his wife Anna are preserved in the University Archives and give fascinating details of his endeavours; on June 6th, Muirhead was "engaged with the Orang Outgang", whereas on another day, he managed to "dispatch three baboons without neglecting exercise". It was a huge task, but eventually the collection was ready for dispatch. The larger items were transferred by sea up the east coast in three vessels, arriving at ports in the Firth of Forth, and then along the Forth and Clyde Canal to Port Dundas. The collection of coins, however, was transported by wagon, under armed guard!

The Museum on the High Street proved to be very popular with students and visitors alike. Visitors were charged a small entrance fee (which attracted much criticism) and they were required to sign a Visitors book and be shown around the Museum by the resident Keeper. Between August 1808 and June 1810, 10,000 people were given a conducted tour of the collection, including many visitors from abroad and several Royals. The elephants were located in a basement room, called "The Hall of the Elephants"; at the top of the steps

leading down to this room was located the Egyptian Mummy, and then as now, the elephants and the mummy were some of the most popular exhibits. Visitors would often write accounts of their experiences, with one such describing the elephants as looking “rather disconsolate”.

In 1813, Captain John Laskey, a member of the Wernerian Society of Natural History in Edinburgh wrote “A General Account of the Hunterian Museum Glasgow: including historical and scientific notices of the various objects of Art, Literature, Natural History, Anatomical Preparations, Antiquities etc in that celebrated collection”, which was published by the Glasgow booksellers John Smith and Sons. This is the oldest museum guidebook in Scotland, and its bicentenary has just been commemorated in a recent exhibition at the Hunterian, “This Unrivalled Collection: The Hunterian’s First Catalogue”, which ran from March to August 2013. In his guide book, Laskey takes the reader on a step by step tour, describing the exhibits in every cabinet, in every room and every floor. By this time, Queen Charlotte’s elephant was reduced to just the tusks. The Museum suffered badly from the cold and damp, and the elephant’s skin was deemed to be a disgrace and the Keeper authorised to have it destroyed.

It became a huge and very expensive task to keep all the exhibits in good condition; further objects and specimens poured in and the lack of space became acute. In 1870, it was decided to move the Museum to Gilmorehill, then a leafy enclave to the west of the city centre. It was housed in two halls forming the north side of the East Quadrangle of the University. Once again, Hunter’s collection was packed up for transportation to a new home, this time on to horse drawn wagons. Jemina Blackburn, a noted watercolourist and wife of the University’s Professor of Mathematics painted a charming picture showing a polar bear, a lion, a tiger, a zebra and other stuffed animals being loaded up onto a wagon; how the remains of the elephant were transported is not depicted, but transported they were, and they have remained in their present location ever since. When we now look at them and similar exhibits, we should wonder not only at them for their own sake, but in gratitude for the enthusiasm, foresight and determination of the many people who have preserved them for future generations, so that they and their stories can live on.



A Man of Vision

By Chris Sinclair

The life of a parlour maid at the turn of the 20th century was tough. Endless time spent kneeling to scrub the floors and light fires took its toll. 'Housemaid's knee' was often the result - a painful inflammation behind the kneecap brought on by relentless hard work.

One such parlour maid, let's call her Ruth, was working in a house in Glasgow's Bath Street when she became an unexpected participant in a remarkable moment in history. The exact year doesn't matter, but let's say Queen Victoria had only a couple of years left to live. Ruth's workplace on Bath Street wasn't just a house, it was also a doctor's surgery. And it wasn't any old surgery, it was a place to be seen. It was a destination for the great and the good, for actors, singers, aristocrats and celebrities to go to get the best possible medical attention. Who knows whom Ruth might have glimpsed while dusting the stairs? Who might she have brushed shoulders with while sweeping the hall? Author Joseph Conrad and man-of-science Thomas Edison were known to attend the surgery. But these weren't the men involved in Ruth's moment in the spotlight.

Ruth had a very special employer. He was man with vision and talent. He was the man who the celebrities came to visit and receive treatment from. No ordinary doctor - a pioneer who pushed back the frontiers of technology, who took cutting edge developments and applied them quickly, putting Scotland at the forefront a brand new field of science and medicine. He was John Macintyre and it was he who secured Ruth's small spot in history. But to learn about Ruth's moment of glory we first have to travel few years back in time to 1895 and briefly away from Glasgow, over the North Sea to Germany.

On the 8th November 1895 Wilhelm Röntgen (a man who's achievements are easier to recognise than his name is to pronounce) was experimenting with various coils, electrical apparatus and glass tubes when he noticed that a nearby screen lit up when he passed current through the apparatus. When he put cardboard in the way it still lit up. In fact, the invisible rays passed through most materials, including his hand. Röntgen had discovered x-rays. This was exciting. And just as is usual for a man with exciting news, he wanted to tell his friends.

As it happened, one of Röntgen's friends was Lord Kelvin, perhaps Glasgow's most celebrated scientist of the time. Röntgen wrote to Kelvin from Germany to tell him about his new discovery (including an x-ray of his wife's hand in the envelope). Kelvin was impressed but sceptical. He wrote a polite letter back to Röntgen on 17th January 1896 sending his congratulations but withholding outright praise. But that isn't all Kelvin did. Kelvin was a hugely important figure and highly influential. Recognising the potential of this new discovery he forwarded Röntgen's results onto several of his own colleagues one of whom

happened to be his nephew. This was a piece of luck for our hero John Macintyre who heard about the new x-rays from Kelvin's nephew. Macintyre was a man poised to make the most of the information in an astonishingly short period of time. But who was he and how did he come to be the lucky recipient of Röntgen's news?

John Macintyre was born in a slum area of Glasgow in 1857. He trained as an electrician before beginning to study medicine at Glasgow University at the age of 21. There can't be many people who are both skilled electricians and doctors but Macintyre was one of them, putting him in a position to make a unique contribution. The second half of the 19th century was the hey-day for the new field of domestic electricity and John Macintyre invented a career for himself as a medical electrician. He established the Department for the Application of Medical Electricity in Glasgow in 1887 and brought electricity to the wards of Glasgow Infirmary in the same year, making it one of the first electrified hospitals in the world.

Macintyre had a special set of skills and an ability to make things happen. And make things happen he certainly did. When Röntgen's work on x-rays reached him via Lord Kelvin he set about making quick work of building his own apparatus to replicate Röntgen's results. It did no harm that Lord Kelvin happened to be unwell during this period, giving Macintyre full reign to forge ahead with his work on x-rays without undue interference and to embark on perhaps the most productive year of his life.

Macintyre established a medical x-ray unit at Glasgow in February 1896. Given that Röntgen first observed x-rays in November of 1895 this was prodigiously fast work. It seems almost inconceivable today that anyone could establish a new hospital department in the space of a few weeks, based on technology that didn't even exist a few months previously. But Macintyre was not a man to be put off by small matters of practicality and his new unit grew from strength to strength. During 1896 alone Macintyre published 18 scientific papers on the applications of x-rays in his role as a lecturer at Glasgow University.

By 1903 Macintyre's Electrical Pavillion (as it had become beautifully known) was making over 2000 x-ray studies per year. Glasgow was at the forefront of translating this new technology into medical practice, having been involved in several firsts including the making the first x-ray of a kidney stone. Unlike many other x-ray pioneers of the time, Macintyre recognised the harmful effects of x-rays and took steps to protect his staff and patients from overexposure and burns. He was truly at the forefront of establishing x-rays in medicine.

As a specialist throat doctor Macintyre also established a successful medical practice in Bath Street where his singers and performers came for special treatment. Ever the lover of new technology, Macintyre had a phonograph recording machine which he used to make recordings of his patients' voices on wax disks as souvenirs. One of Macintyre's patients in



Glasgow was aristocrat James Graham, the 6th Duke of Montrose. Graham shared Macintyre's love of new technology and he obtained a cinematograph for making short films which he gave to Macintyre. It is likely that Macintyre used this cinematograph to make the first x-ray film of a frog's leg, which he presented at London's Royal Society in 1897.

On the occasion of one of the Duke's visits to the surgery he and Macintyre needed a volunteer to help them with a new project. Frogs legs were old news and it was time to make a moving film of a human subject. Perhaps Ruth was eagerly on hand to help out or perhaps she had a bad case of 'housemaid's knee' and needed some medical attention. Either way, in keeping with his many other novel achievements, the first ever moving x-ray film of a human body part was made by Macintyre and Graham using the cinematograph. What was the body part in motion? The parlour maid's knee.

X-ray technology went on to become hugely important in medicine and industry in the century that followed and is still a core part of many modern medical scanners. John Macintyre died in Glasgow in 1928 but the technology he helped to pioneer lives on.



Jewel Thefts: Unmasked

By Karishma Porwal

Frosted winds hurled down University Avenue on a quiet morning in Glasgow. A lone man, dressed in creased overalls, walked heavily down to the Hunterian Museum. As the conical crowns of the building rose over the horizon, his steps hastened, as he didn't want to be late for his shift. Approaching the door, he fumbled in his pockets for the keys and made his way in. He found his cleaning supplies and began his work of making the museum spotless. Upon finally arriving where the gemstones were kept, his attention was caught by a piercing glimmer against the dull floor. Advancing towards it, he was baffled to find that it was a jewel. He went on to gingerly pull back the fabric that was draped over the cabinets and found that the cases had been opened and the jewels inside were gone.

The question of how one masters the art of theft has been a subject of fascination over centuries, being the impetus for many celebrated authors, poets and, of course, Hollywood. Gemstone and jewellery robberies are notoriously reputed to be the supreme act of larceny. In 1962, alarm systems and motion detectors were nonexistent and relied primarily on security guards. The advanced systems today are immune to the wandering levels of focus of the human mind or the intoxication of slumber and are sharper in their detection. So it seems as if in 1962 the common man could get his hands on some jewels, untrained. However, despite being up against some of the most advanced security systems and detection devices, gemstone heists are not unheard of today. The question is thus posed, how do gemstone heists still happen now, against the proliferation of progressing technology?

Take a hypothetical aspiring gem thief, for example. Technology is often the greatest rival yet equally the greatest ally for him. In order to effectively breach a security system, this purloiner- to- be must first assiduously study and dissect the mechanics of the technology he is up against. First, he looks into a revolutionary form of alarm system: the motion detector. Hairs stand on his neck, as he assesses this formidable hurdle. There are two types, and he knows how they work: motion detectors actually operate by sensing heat; humans and animals will all emit infrared energy and will be significantly warmer than their surroundings. If the detectors sense an abnormally high level of infrared energy they use a photo detector to convert this into electrical currents and trigger an alarm system. There is a second type of motion detector that emits infrared rays and senses abnormalities in them as they are reflected back. Most buildings however, use heat sensing ones.

Heat. The word colonises his brain and impels him to hunt for some means of tricking the system. An ardent and ambitious heister such as himself will have accumulated a wealth of information and expertise on ways of evading detection, he delves into the profusion of experience gained either from fellow thieves or from personal experience drawn from smaller 'practice' crimes. Simply put, the way to fool a heat sensor is to be cold. Taking a dangerously cool bath beforehand makes the body temperature plummet and is surprisingly effective for a quick robbery.

He weighs up the odds and considers other technology that may pose as an impediment. CCTV cameras: a powerful deterrent for small time crooks. The conventional way of getting

past this is either to cover the lens or to mask the face. He, however, was not a small time crook and needed something a little more sophisticated. Matured in the world of thieving, he knows to keep abreast of emerging technology that will aid him in performing the robbery as well as what will hinder him. He lifts up his desktop and finds his shield against video footage identification: the I- R.A.S.C. headset. He examines it; it resembles a gym sweatband, adorned with small LED lights. If he were to wear it during the robbery, the LED lights (emitting infrared rays) would interfere with the surveillance and a circle of light would block out his face on footage. He will remain unknown.

Many heisters such as this will be well equipped with ways to beat the system and remain undetected. However, the methods outlined here are ways to outsmart basic security systems. Museums showcasing items of high value will have high sensitivity alarm systems to match. Furthermore, with an ever- advancing policing and forensic technology, no gem heists can be successfully effectuated right? Wrong.

In December 2002, museum officials for the Museon Museum of Science in The Hague were shocked as they found that 6 out of 28 reinforced glass cabinets holding \$12 million worth in jewels were empty. It was then revealed that nobody knew anything of the robbery. The crime supposedly took place on Sunday night and the Museon staff was blissfully oblivious to it until Tuesday as the building is shut on Mondays. Despite the gemstones being under 24- hour CCTV surveillance, within the range of a premium motion detection system and protected by 24- hour security guards, the heisters left no trace of entry apart from a broken window.

Experts over the globe have probed into the crime and though lacking any steady connection between the staff and the robbery, deem it to be, most probably an inside job. If one of thieves was/had a link to museum staff, the advantage is invaluable. An inside link would have provided an indispensable wealth of intelligence and minutiae.

This was an example of a very smooth, adroitly administered theft. Another well- known and efficacious method of carrying out a crime is, of course, with guns and ammunition. This was the method used by a trio of armed robbers who, in broad daylight, to the cacophony of incessant gunfire, plundered the Carlton Hotel in Cannes of \$60 million worth in jewels in 1994. The jewels were never recovered and the culprits were never caught. What the detectives did find however, that there were no bullet- holes anywhere. They had been firing blanks- a perfect facade.

As more heists transpire, authorities build upon their knowledge of how they happen and what techniques are used. There was a certain heist however, that enriched the minds of international intelligence and had the world in awe of its ingenious design. On Monday, 17th of February 2003, the Diamond Center in Antwerp was robbed of diamonds worth \$100 million.

Leonardo Notarbartolo and his accomplice, under the sobriquet of Speedy, drove down a freeway leading out of Antwerp. In the boot, they had bags full of diamonds that they had looted from a vault underneath the Diamond Center. Notarbartolo smiled, creasing the crow's feet on his wheatish Italian skin. His mind was cast back over his plan. For two years



his eyes had been fixed on this prize and finally, he had accomplished the feat. Glancing over at Speedy, he thought of the rest of his masterly teammates, with the monikers: Monster, The Genius and the King of Keys. The Genius: a master of disabling alarm systems. He was the one who used an aluminum slab to pull the magnetic sensor's field away from the vault door. The Monster: the one who taped over all the light detectors and made them useless. The King of Keys: the one who obtained keys for the 10- layer security and made copies of them all. He smiled again; they had actually pulled it off. He reveled in the crafty components of his design: two years spent in the pretense of a diamond trader, the visits to the vault where he photographed the details with a minute camera installed inside a pen. He reminisced about the triumph when the combination was discovered for the vault door by filming a security guard opening it; when they sprayed a film of hairspray over a heat sensor to insulate it and hamper it's detection; when they inserted counterfeit tapes into CCTV footage.

Speedy looked disconcerted; Notarbartolo saw beads of sweat gather on his neck as he peered at the bag of trash in the back seat. Speedy proposed throwing the bag of trash out of the car window. Initially, Notarbartolo refused but after seeing the unsettled state his friend was in, he acquiesced. Speedy flung the bag out and let a sigh of relief escape him. Little did they know that it was something as insignificant as their DNA on a salami sandwich in this trash that would lead to their eventual capture.

This was by far regarded as the largest and most proficiently executed gemstone heist in history and though the jewels were never recovered, the robbery was an eye- opener for international intelligence and policing strategies worldwide. As technology advances, it raises the game for both robbers and authorities. Gemstone heists will always remain heinous yet fascinating crimes because the prizes will be increasingly coveted and the adversity forever strengthening. Thus the battles continue between the heister and the defense.