



SCIENCE, PEOPLE & POLITICS

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AND FROM BRITISH COURTS

BUILDING BRIDGES
BETWEEN SCIENCE AND
THE HUMANITIES

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where Egypt, Israel and Jordan meet. © Clarification 20.2.2016

I would like to thank
Dr Cynan Ellis -Evans for
lending his name to this enterprise, and
understanding the potential of a
scientifically-literate humanities quarterly.

Helen Gavaghan

Highlights from the executive summary of the Iraq War Inquiry, chaired by Sir John Chilcot

One reporter's report, comment and proposal

By Helen Gavaghan

“339.

At the time of the Parliamentary vote of 18 March [2003], diplomatic options had not been exhausted. The point had not been reached where military action was the last resort.”

439.

The Charter of the United Nations vests responsibility for the maintenance of peace and security in the Security Council. The UK Government was claiming to act on behalf of the international community “to uphold the authority of the Security Council”, knowing that it did not have a majority in the Security Council in support of its actions. In those circumstances, the UK's actions undermined the authority of the Security Council.

Paragraphs from “*The Iraq War Inquiry*”, chaired by Sir John Chilcot, Executive summary, p47(339) and p63(439) of the pdf on the Inquiry website

The Inquiry into the Iraq War comes from the heart of the British establishment. It pulls no punches, as the two extracts at the top of this article show. The authors have competence, experience, access, integrity, and the authority of the State. If there is something which gives the lie to this report, then it can only be something they do not know.

Up front, let me draw attention to the URL where the executive summary, as well as the full report - with its annex about Iraq from 1583 to 1960 - can be found.

Go to: <http://www.iraqinquiry.org.uk>

Numbers in brackets in this article are to that paragraph in the executive summary,

and each point in the summary is supported by foot notes, and supporting evidence is on the Inquiry website. This is a report knocking Ph.D theses into a cocked hat. If you catch yourself saying, oh that would be over my head, then you are probably wrong.

Trenchant insight follows trenchant insight in the 911 points comprising the summary of the million-word, multi-volume work. Published on 6th July, 2016, the report was seven years in the making. It was commissioned by then UK prime minister, Gordon Brown. Five years, 2 months and 16 days have also passed since departure of the last UK naval training team from Iraq.

If you are in the first year of a Ph.D now you were most likely at primary school on the 19th/20th March, 2003, the night British troops went in to action, storming through Iraq in a coalition, not backed by the United Nations, with the intent of regime change and toppling Saddam Hussein from power.

The report's first paragraph states the situation baldly, "In 2003, for the first time since the Second World War, the United Kingdom took part in an opposed invasion and full-scale occupation of a sovereign State - Iraq."

The verb of choice is not "liberate". The sentence doesn't mention "war in self-defence", nor "war in defence of another in the NATO alliance", nor, "within a coalition endorsed by the United Nations". Britain invaded. Britain occupied. Parliament backed the action.

It is almost painful to read in paragraph 438, knowing as we know now there were no weapons of mass destruction, that "— If the matter had been left to the Security Council to decide, military action might have been postponed and, possibly, avoided."

By the time parliament came to vote on invasion on 18th March, 2003 many opportunities had been missed by the machinery of government to scrutinise the quality of the evidence which was driving Britain to War.

We've had a good idea about this since the 2004 review by Lord Butler. This report leaves no wiggle room for avoiding responsibility. In the run up to the War no UK interpretation was accepted but that Iraq was non-compliant with the United Nations, and a regional and global threat which must be forcibly disarmed. Yet on reading The Iraq Inquiry there is plenty to suggest the dogs or war could, perhaps should, have been reigned in, and that hindsight was not needed for that conclusion.

Former Halifax MP, Alice Mahon, who wrote for this magazine in 2009 about the

need for a fully open Iraq War Inquiry, gets, in this report, some, if not all, of what she wanted (See: The Iraq War Inquiry, by Alice Mahon. Science, People & Politics, Issue 4, Volume I, Volume II, published 6th July, 2009.

<http://www.gavaghancommunications.com/sppmahonandiraqwarinquiry.html>

The atmosphere at the time was dreadful, she told me. She and her colleagues were lobbied hard by Tony and Cherie Blair, and Alice, though not a pacifist, was called in to see Mr Blair in person because of her opposition to the War. She maintained that opposition. The Inquiry was told (see paragraph 437) that if parliament had voted on 18th March 2004 not to go to War, it would have been possible not to do so. Parliament thus needs more power over government, so that its votes are truly telling.

We know now from this report that assessment of the threat posed by Iraq was an exercise in Chinese whispers. Nor was credence given to Iraq's protestations that it had no weapons of mass destruction. It does not seem to have crossed anyone's mind to explore if there was a non-threatening reason behind some of Iraq's reservations about UN inspectors. Something it couldn't say. And what was the quality of uranium (yellow cake) that Iraq was supposedly trying to get from Niger? The answer is probably buried in the supporting material or behind a redacted section of the evidence. But how could Britain, with its own history of developing nuclear weapons and nuclear power, possibly have been more worried about a lump of radioactive material than about centrifuges?

In paragraph 837 of the summary of the Iraq Inquiry we read, " --- As can be seen from the Joint Intelligence Committee Assessments quoted in, and published with, this report, they contain careful language intended to ensure that no more weight is put on the evidence than it can bear. Organising the evidence in order to present an argument in the language of Ministerial statements produces a quite different type of document."

With the prime minister convinced of threat and that Iraq was in material breach of its post Kuwait obligation to the UN - and with proper discussion and scrutiny, as in a jury room, his thinking and perception and understanding might have shifted - the outstanding question at the time was, would use of force be lawful?

The answer needed an opinion from the Attorney General. Paragraphs covering the topic begin at number 431. See also Box 1: UN Security Council Resolutions.

In paragraph 432 the executive summary's general view is that,

"The circumstances in which it was ultimately decided that there was a legal basis for UK participation were far from satisfactory."

From Britain's perspective the UK's policy toward Iraq and weapons of mass de-

struction altered in spring 2002 from containment to a goal of regime change. The executive summary points out that for Britain, regime change was not the primary goal, but a means to disarm Iraq. The US, by contrast, was spurred by the attack on the Pentagon and the World Trade Towers to consider Iraq in the context of its own global war on terror.

Both nations backed UN Security Council Resolution 1441, adopted on 9th November 2002, which called for immediate, unconditional and unrestricted access by UNMOVIC and IAEA weapons inspectors. The resolution considers Iraq to be in material breach of its disarmament obligations as imposed in resolution 687 of 1991, following the First Gulf War. Resolution 1441 warns of serious consequences if Iraq does not comply, but in its second article, resolution 1441 gives Iraq a final chance to comply with the disarmament obligations imposed in 1991.

<http://www.un.org/Depts/unmovic/documents/1441.pdf>

It is UNSCR 1441 around which legal debate circled in 2002 and early 2003. In December 2002 the Foreign and Commonwealth Office told the Attorney General his opinion on the lawfulness of war with Iraq would be needed. That opinion, given shortly before the invasion, was that for an invasion to be lawful without an additional resolution from the Security Council, Britain, namely the prime minister, would need to be sure that,

“--- there were strong factual grounds for concluding that Iraq had failed to take the final opportunity offered by resolution 1441. (paragraph 454)”

That legal opinion makes the criticism in the Iraq War Inquiry of government evaluation of evidence all the more telling. However, Jack Straw, then Secretary of State for the Foreign and Commonwealth Office, asks a cogent question when he queries why Iraq was so unwilling to admit inspectors when they knew - and the rest of the world did not - that they genuinely had nothing to hide.

It's not that additional scrutiny would, or necessarily should, definitely have changed Mr Blair's mind, but there might have been greater confidence in Britain that the decision to invade Iraq was correct, irrespective of United Nations' opinion. Parliament could have had more to question. Confidence and mutual trust between government and governed could well have opened up creativity and co-operative engagement with the government, which could have made the War successful, or avoidable in an unexpected way.

POST CONFLICT

Planning for the aftermath of conflict is also criticised by the Inquiry Sir John Chilcot chaired. According to the report, British officials had identified there would be post-conflict problems (632). On the day the invasion would begin Mr Blair told parliament ongoing discussion for post conflict issues was underway. Yet even as he spoke, there were no agreements in place. The UN secretary-general, Mr Kofi

Annan, told Sir Jeremy Greenstock, the UK's ambassador to the UN, that he (Mr Annan) did not want to see arrangements “subjugating the UN to coalition activity” (600).

Credit: Photograph copied from the Iraq Inquiry Website.



By 2009 (792) Iraq, says the report, “--- did not meet the UK’s objectives as described in January 2003: it (invasion and regime change) fell far short of strategic success.”

Paragraph 603 notes improved co-ordination across government from the winter of 2002-2003, but that no, “ --- body carried sufficient authority to establish a unified planning process across the four principal departments involved - the Foreign and Commonwealth Office (FCO), the Ministry of Defence (MOD), The Department for International Development (DFID) and the Treasury - or between military and civilian planners.”

The report gives examples of information which should have been shared among responsible departments, but wasn't, and of unclear demarcation of responsibilities, with no-one taking ownership for various tasks.

Once the invasion had taken place the US took the lead in establishing mechanisms for the transfer of power.

The summary says,

“664. The UK took an early decision to concentrate its effort in one geographical area rather than accept a national lead for a particular element of the Coalition effort (such as police reform). However, it was inevitable that Iraq’s future would be deter-

mined in Baghdad, as both the administrative centre and the place where the power shift from minority Sunni rule to majority Shia rule was going to be most keenly felt. Having decided to concentrate its effort on an area some distance removed from the capital, the UK's ability to influence policy under debate in Baghdad was curtailed."

A little later the report says,

"666. The pre invasion focus on a leading UN role in Iraq meant that little thought had been given to the status of UK personnel during an occupation which followed an invasion without (my emphasis) Security Council authorisation."

That lack of Security Council authorisation in an exercise touted as being in defence of UNSC authority surely must be one of the most significant issues facing the United Nations and world development today.

Article 24 of the United Nations Charter outlines the powers and the functions of the UN Security Council. Since its foundation the UN General Assembly has endorsed an increase in UNSC members, but the UNSC's role remains the same,

" --- United Nations, --- confer on the Security Council primary responsibility for the maintenance of international peace and security, and agree that in carrying out its duties under this responsibility the Security Council acts on their behalf."

Two nations, even if they are two of the founding permanent members, do not call the shots. Or they should not.

AMEND THE UN CHARTER

There is nothing to stop Sovereign States responsibly exercising their military Sovereignty other than through the United Nations, which makes sense to me. But perhaps the UN Charter needs amending to make explicit that just because law officers in one country think a resolution gives authority for use of force, that force may not be used in the name of the UN, or with expectation of UN involvement in cleaning up after the action, if there has not been a vote with requisite majority to say "go ahead". That is not the same thing as a resolution, any more than a parliamentary endorsement of the use of force is Statute.

In that gap between a country's legal officers agreeing the use of force is lawful from their perspective, and a UNSC vote saying "go ahead", much common sense and human ingenuity from people of good will could insert itself, and in a formalised way. What internal strife might face a country?

For example, I was in a northern Crown Court recently, as a journalist, waiting for a jury to return a verdict, and sitting during routine Court business next to a family who came as refugees to Britain from Iraq in 2002. One of them was being sentenced for knife crime. The young man next to me, a relative of the young man to be sentenced, was muttering "lies, lies", and I wondered, but did not ask, what he thought was a lie, what he thought of The report into the Iraq War, and how these

young people came to be so disenchanted with life that one of them thought knives were the answer.

POWER VACUUM

I wasn't among those on the nationwide stop-the-war marches on 15th February, 2003, though I saw the one in Manchester, where I was making a necessary career transition by taking a post graduate research degree. In both my professional and academic life the security forces play and have played a part - inevitable if one is an international journalist and author, who has written and writes for publication, as I have and do, in part about the second half of the twentieth Century.

I passed through Check Point Charlie only days after the Wall came down, on my way to the annual meeting of The International Astronautical Federation, held in Dresden that year. At the time I was on the staff of *New Scientist*, as Washington correspondent. MI6, whose intelligence is significant to issues explored in the Iraq War Inquiry, were and are to me real human beings I'd interacted with as a journalist and, in some cases, as a friend. They were not TV spooks. I had no reason to doubt their competence or that of their organisation.

What I did not know was the conflation and conversion of interpretation of observation into facts which was taking place. Intelligence was interpreted to fit the narrative, then called fact to support the narrative. Even Parliament did not know, though they and/or their committees should have squawked until they did. Holding government to account is in their job description. Especially when the people are marching. Not all marches are opposition to policies by the party one didn't vote for. Some are because the people know something those elected do not know. Iraq might have faced sanctions, but it was not living in an isolation bubble. Traders, scientists, migrants, families even, would have had snippets of what was happening. Perhaps that, not only pacifist principle, made people march that day in February 2003.

I had pinned my belief to what I was being told about security force intelligence. It could be that others knew that that intelligence was not being assessed and presented properly. My fellow citizens might have been trying to convey that message on 15th February, 2003. If so they are now vindicated by The Iraq War Inquiry.

Can the same trap be avoided in future? I suggest yes, and that the power vacuum which should matter to Britain is within our own systems. We are not a Republic, and we have made our commander-in-chief the commoners' prisoner. We need to free the Sovereign to protect our version of democracy and Sovereignty, and elect a president - a partisan politician - who would take on the role of signing off the legislation, once it has passed through both Houses of Parliament. Someone with a term limit and political skill, leaving the Sovereign free to be commander-in-chief, acting through the officers obeying the will of the people. The prime minister, with

access to the Sovereign's advice, and the President of both Houses of Parliament, would need to find a *modus vivendi*. As things stand the commander-in-chief's only current redress in protest at war or unjust law is abdication. With a political president in place, the Sovereign could exercise all powers, other than signing off legislation, and could protest war or unjust law other than by abdication.

Box 1: UN Security Council Resolutions below accessed 26th August, 2016.

UN Security Council Resolution 660 (1990) Iraq and Kuwait.

2nd August, 1990, passed the same day that Iraq invaded Kuwait. It calls on the two powers to resolve their difference, condemns Iraq, and demands Iraq's immediate withdrawal from Kuwait. Yemen did not participate in the vote.

<https://documents-dds-ny.un.org/doc/RESOLUTION/GEN/NR0/575/10/IMG/NR057510.pdf?OpenElement>

UN Security Council Resolution 678, on the 29th November, 1990.

Iraq and Kuwait. Reinforcing UNSCR 660. Yemen and Cuba voted against. China abstained.

<https://documents-dds-ny.un.org/doc/RESOLUTION/GEN/NR0/575/28/IMG/NR057528.pdf?OpenElement>

Articles 8 to 13 of **UN Security Council Resolution (687 - 1991)** are about disarming Iraq in the aftermath of the first gulf war, and the Special Commission set up for that purpose (Article 9 b (i) (ii) (iii)). In general, the resolution is about the boundary between Kuwait and Iraq, and compliance with Geneva Protocol of 1925, and the 1972 Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction. It was adopted 3rd April 1991.

<http://www.un.org/Depts/unmovic/documents/687.pdf>

UN Security Resolution 1284 (1999)

Establishment of the United Nations Monitoring, Verification and Inspection Commission [UNMOVIC] to replace the Special Commission established in the aftermath of the first Gulf War in 1991, which liberated Kuwait from its occupation by Iraq.

Thus the debate moved from Iraq in relationship to Kuwait to Iraq in relationship to weapons of mass destruction. Britain's policy was one of containment. The body which UNMOVIC replaced had been set up by resolution 687 (1991). This resolution [1284] authorises unrestricted and unconditional access by UNMOVIC inspectors to all facilities, paperwork and personnel UNMOVIC thinks necessary to fulfilment of UNMOVIC's mandate.

<https://documents-dds-ny.un.org/doc/UNDOC/GEN/N99/396/09/PDF/N9939609.pdf?OpenElement>

TALKING POINTS STEMMING FROM THE FEATURE**About the Iraq War Inquiry****Published 6th July 2016**

Overwhelmingly the executive summary of The Iraq War Inquiry, reported below, comes across as the story of a War which should never have happened. It is heart breaking that it did.

Two structures - not their output, but their structures and relationship to one another - I argue, are in need of examination and reform in order to prevent problems identified in this report from happening again. These structures are the Charter of the United Nations and the British Constitution. The first proposal would have as its aim strengthening the authority of the Security Council, so that nations cannot claim their Sovereign actions are in defence of the Security Council's authority if the UN Security Council does not want to endorse their action. The second proposal is that the British Constitution establish a political president to sign off on UK legislation, while leaving all other current Sovereign powers with the Sovereign, including advice to the Prime Minister. That would protect the Sovereign from being brought into disrepute by parliamentary human error. These are governance balance of power issues. A subsidiary point is that Britain needs to recognise that The American War of Independence really did happen, and The United States of America can stand on its own two feet in the families of nations to which it belongs. Their castle is not our castle, nor vice versa.



An illustration created by Helen Gavaghan© to illustrate a feature written by Alice Mahon, former MP for Halifax, for publication in 2009 in Science, People & Politics. Issue 4, July-August, 2009.

ESOF 2016: High level panel discusses pandemics - names priorities

Helen Gavaghan, Manchester UK, 25th July 2016

Big pharma is talking with world governments about new ways of doing business in the event of a pandemic. Sir Andrew Witty, chief executive officer of GlaxoSmithKline, this afternoon told delegates at the biennial Euro Science Open Forum (ESOF) that there is now an energy to this process, which began 18 months ago. In a future pandemic GSK won't engage in the way it has for the last few outbreaks of contagious diseases (such as, the 2014 ebola outbreak)," he said.

Each big pharma is suggesting its own ideas to governments for responding to pandemics. GSK is offering half the IP in vaccines developed, and a percentage baseline fee, which is neither for profit nor gain, said Witty. What seemed certain from Witty's comments is that business as usual is not a corporate option in the event of a future pandemic. "The irony (panelists were talking in light of past contagious outbreaks causing deaths in the order of tens of thousands)," said Witty, "is that about five countries and three companies carry the bill for the world. We are looking for a less stressful way of responding."

John Watson, deputy chief medical officer for the Department of Health, said the UK is one of those five. "We need countries other than the usual suspects in the discussion." He said also, "Effective communication is an integral part of healthcare response. What works in Edinburgh won't work everywhere. The message must be locally appropriate."

Other panelists included lawyer, Laurie Garrett, senior fellow on global health at the independent US think tank, the Council on Foreign Relations, and Paul Stoffels MD, vp and chief scientific officer for Johnson and Johnson.

Asked if we are more at risk of a pandemic than ever before, Dr Stoffells said increased urbanisation and travel adds to the threat, and that for many there is a poor healthcare infrastructure for responding to outbreaks like the ebola virus in 2013/14.

Garrett's view was that there has been no change in response over the years. Poor epidemiology remains a problem, not knowing who is and was infected, and there is a lateness in response, with failures to mobilise politically. "We don't have global governance for epidemics," said Garrett.

Garrett also mooted some "what if?" scenarios: imagine the index person for an outbreak is an immigrant in London, or someone from the Middle East. How could we counter the social and verbal response feeding in to existing social narratives about, for example, terrorists? Other questions she tabled included: How do we prevent containerised shipping becoming a disease vector? And, how can we create sustainable funding for the flawed institution of the World Health Organisation, creating true 'buy in' by all nations?

Stoffells and Witty each spoke of a need for an effective dialogue with regulators. Other problems they noted included how to scale not only vaccines, but also diagnostics. In a pandemic, said Witty, one would need not only a billion vaccine doses, but also a billion glass vials. There simply are not that many glass vials in the world, he said, and what if the glass-vial factory is in a country where there is an outbreak and the vials can't be shipped. "No-one is thinking about these issues," said Witty.

From Witty's perspective liability is also a problem. For the 2014 ebola outbreak GSK took a vaccine from animal to human in nine months, he said, a development process which for good reason usually takes 15 years. It would be naive to think one can simply strip out all the checks of a 15-year development, argued Witty. Thought is needed about what would be an acceptable risk in the event of a pandemic.

Professor John Watson said that better surveillance for disease outbreaks and infrastructure for development are needed. But perhaps Stoffells gave the best summary of the situation facing our globalised, urbanised world, "We need to get organised for early detection, prevention, vaccination and detection (of a contagious outbreak with potential to become a pandemic)," he told the ESOF 2016 audience.

The forum continues tomorrow and Wednesday, with scientific sessions and discussion panels and an exhibition. Professor Luke Georghiou, vice president for research and innovation, at the University of Manchester, one of the two legal entities running ESOF2016, said the event is costing about £3.5 million and that the UK government contributed £800,000. An official for the European Commission said the European Union had also contributed about £800,000.



ART TAKES NO PRISONERS

Exhibition: "The Body Extended: Sculpture and Prosthetics"
21st July - 23rd October, 2016, The Henry Moore Institute, Leeds.

Medicine may have to be circumspect, coy even: art does not.

Take one central exhibit. Its individual parts could not be understood to be head, feet or entrails,

but when taken as a whole there is little room for misinterpretation. Interestingly this body's proportions are satisfying - as one would expect from artwork - yet they are probably not governed by "The Golden Ratio".

Running through autumn, the exhibition - "Sculpture and Prosthetics" - , from the prosthetic devices at the beginning, complete with elegant and polished wooden presentation boxes, through to the cartoon film at the end, explains clearly what medicine might find difficult to put into words. I doubt that was the intent, because, to labour the point, this is an artistic exhibition: humanity through an artist's eye - not the eyes of a medical illustrator, but the eyes of artists and art curators.

On loan from the Annet Gelink Gallery in Amsterdam and Sommer Contemporary Art, Tel Aviv, is a cartoon film entitled "Degenerate Art Lives", by Yael Bartana. It begins in understated fashion, and builds to encompass an army steadily moving forward. As though panning out with Google World, the individuals, pushed in wheel chairs and dragging themselves across the screen on prosthetics, to the steady sound of mechanical movements, merge to an indistinguishable and uncountable crowd.

To reach the corner of the gallery showing the film one must move through and around the rest of the exhibition spaces. They are elegant. Clean, white and satisfyingly proportioned, with lovely lighting - so much so that as I look back at my experience yesterday afternoon I cannot recall whether it was natural or artificial lighting. Sculptures, paintings and glass-encased medical exhibits, on loan from such places as The Thackray (medical) Museum in Leeds, are positioned to make an artistic whole greater than the sum of each individual piece.

Finger extensions - which one can but hope were not used to correct such genetic conditions as Dupuytren's contracture - sit near artwork depicting the beautiful extended lines made by ballerinas. Imagine a photographic exhibition, and this is sculpture not photography, comprised of photojournalism, photo sociology, photo history and fine art photography, and one gains a sense of what the curatorial layout intent may have been.

Those who have both an abstract and relentlessly literal side to their nature will probably find satisfying this art exhibition, which as a whole is, to my mind, itself a sculpture. Helen Gavaghan, 21st August, 2016.

REVIEW OF THE THACKRAY MEDICAL MUSEUM

The story of Mary Bateman, convicted of murder at York Assizes in 1809, is told on the second floor of The Thackray Museum, right after a short film of an amputation - without anaesthetic - in 1824. Mary's is a disturbing tale, because it seems from the

the exhibit her skeleton might still be somewhere in the University of Leeds, or its medical school. Whether the conviction was sound, or, rather than commit murder she had overstepped the mark of her competence, is hard to say without sight of the trial transcript, but, having been hung, the surgeons, after the fashion of the time, dissected her body publicly, and charged the audience.

Medical ethics would, I hope, forbid that practice now anywhere on Earth. And I think medical ethics should now see the bones of Mary Bateman respectfully disposed of, with a proper funeral - if that has not already happened. I have no problem with the Human Rights Act being retrospective.

Odd to start a museum review with such a comment, but the anecdote springs to mind because fascinating as the museum is - and it really is - I am disappointed not to have seen an exploration of medical ethics. Medical history practically begs for such discussions.

Public health advances in Britain and medical developments in the nineteenth century dominate the exhibits. Downstairs a recording tells how Louis Pasteur vanquished with his theory of germs the idea of spontaneous generation as the cause of disease. Upstairs we learn how filthy surgical conditions killed those patients who survived the trauma of brutal surgery without anaesthetic.

Of course in the early part of the nineteenth century the connections among disease, filth, overcrowding and excrement in the street had not been made. We learn from the museum how small pox, whooping cough, measles and fever killed so many. When cholera broke out in 1870 in China it reached India by 1896, and en-route killed 8 million people. In Leeds doctors noted, as they did around the country, that when cholera strikes it is the labouring classes who are hardest hit. They were the people living cheek by jowl with slaughterhouses and sewers, and no piped water. Nineteenth century British prosperity built on squalor and suffering. Children as young as six and seven working 12 hour days, six days a week.

In fact the first part of the exhibition takes the visitor into dark uneven streets, with slaughterhouses, dwellings and filthy Inns for travelling workers. I trod warily, because my brain and monovision contact lenses were not doing a brilliant job of processing the input.

Almost half of all deaths in 1840, assert the museum exhibits, were children under five. In 1845 those who could escape the "miasma" of the city did so. Unfenced machines caused horrific accidents.

We learn how in 1854 medical geography revealed that cholera was waterborne. By 1900 - which would be just before the Labour Party we now know was being

born - the horrors of death by infectious and contagious disease in Britain were drastically reduced. Travel had been recognised as a problem in the spread of some disease. Legislation in the 1870s enforcing small pox vaccinations for the public good, and better standards of living were helping ratchet down infection and contagion related deaths.

Oddly enough, given the grim nature of the subject matter, the visit engrosses rather than grosses out. A few Mums and Grandmas told me their young charges were not distressed. Some hadn't liked the operation without anaesthetic or the dim dark streets of mid nineteenth century Leeds, but they were not distraught.

Possibly I, rather than the youngsters, was more disturbed by the medical vaccination equipment of 1880 to 1960, though the thickness of needle would not be unfamiliar to a diabetic today. And luckily the prospect of any of the 11-year olds at the Thackray today finding themselves having their limbs amputated with filthy equipment and no anaesthetic is so remote that it has no visceral connection to their life.

The Thackray Museum opened in March 1997. It was visited earlier this year by The Princess Royal, and the building was used in 1916 as the East Leeds War Hospital for the wounded in World War I. Helen Gavaghan, 15th August, 2016.



The goal is a world-leading technology University

In the week after the five-month international public review opened into the names of four new atomic elements, it was reassuring to see posters for the periodic table of the elements on most of the walls in the Analytic Centre at the University of Bradford.

I and other business people (journalism, science writing and editing are business, as well as vocation!) were today touring the Schools and Centres of the University's Faculty of Engineering and Infomatics. The day was the initiative of the business member organization "Your Connected Future".

Case studies took up most of the morning, while in the afternoon we were treated to an impressive amount of high-powered academic time. Perhaps because the University's 10-year strategy (2015-2025) has the stated goal of making Bradford "a world-leading technology University". Its strategic academic themes are: advanced healthcare, innovative engineering, and sustainable societies.

We were introduced to the technology one would expect: NMR (400 and 600 MHz), scanning electron microscopy, scanning tunnelling electron microscopy, mass spectrometry, X-ray crystallography, a highly sophisticated and expensive anechoic chamber, engine test beds, break test-beds, stress tests, concrete mixers, gravi-

metric tests, geotechnical facilities with ability to test, for example, soil in ambient conditions or under controlled conditions of temperature and humidity.

How can such equipment and expertise help business, be that business an SME, or international in reach? By, for example, developing process and certification to take the creator's Intellectual Property to market. Or helping shape an observed phenomenon, such as analgesia or antimicrobial activity of a substance, into a marketable product. Perhaps the insoluble needs to be made soluble, or the distasteful odour of someone's brainchild needs to be made less offensive.

Among the business people touring the University's extensive engineering facilities were S.M.E.s, national and international companies.

Academics who outlined some of their department's key recent work included: Dr Richard Telford, project scientist at the University Analytic Centre; Y. Fun Hu, professor of wireless communications engineering; and Raed A. Abd-Alhameed, professor of electromagnetics and radio frequency engineering.

In discussing her work Y. Fun Hu described research in aeronautical communication, exploring among other things quality and security issues. Partners have included Inmarsat.

The Analytic Centre provides a facility for departments across the University, as well as for industrial collaboration.

Prospective students might like to know there are discrete and private coffees shops buried in the University. While businesses might wish to contact Dr John Steele, Business Partnerships Centre Manager. He is an MBA and Ph.D chemist, and works for the University's Research and Knowledge Transfer Support.

Helen Gavaghan, 16th June, 2016.

FROM BRITISH COURTS

Tribute to Jo Cox, Member of Parliament

At 10.22 this morning I was tucked in the corner of a "press" box at Bradford Crown Court. Routine business, bound by common law and statute, was about to begin.

It is this which parliament and the armed forces defend.

Other than the clerk I was, as yet, the only one in the room. Then members of the probation service arrived, leaving papers scattered on a bench in front of the row of

in front of me.

A solicitor advocate wandered in and chatted with the clerk, who was near her keyboard, at the level below where the judge sits.

Next came the defendant, as solicitors for the defence and prosecution took their seats. This defendant, having nothing to do with the headlines dominating front pages of British newspapers this morning, and who was soon to be arraigned, and who was soon to enter not guilty pleas, entered the dock. Another solicitor advocate, the one acting in the case management hearing about to get underway, took a seat. Counsel for the prosecution took hers. At 10.32 -- by the analogue clock -- we had a judge. Proceedings were underway.

Within an hour or so, in two of the 8 courts ringing the atrium at Bradford Law Courts, I heard one judge and one recorder (not the recorder of Bradford) explore in a number of cases the matters of whether there were applications for hearsay, or special measures, or interpreters, or third party disclosure etc... Dates were set for prosecution disclosure, defence statements, and trials.

When all was done clerks dismissed until Monday morning all having business before Her Majesty's Crown Court. We stood as their honours rose, and waited as they left the bench. And the lights were switched off, and the doors to the Courtrooms locked. HG 17th June, 2016.

Pakistani citizen told he will be sent home after serving sentence for assault and robbery

Earlier today His honour Judge Burn, sitting in Bradford Crown Court, sentenced Mr Hamid Mahmood (29), a Pakistani citizen and former business student in Birmingham, to concurrent 7 and 5 year sentences for, respectively, assault and robbery. On release from prison Mr Mahmood will be deported to his country of citizenship.

Mr Mahmood, who had an Urdu interpreter with him in the dock, found himself as an "overstayer" in this country, because his business course did not turn out as expected.

Without access to benefits or accommodation Mr Mahmood found himself "below the radar", and became addicted to Crack Cocaine and Heroine. In a sustained assault with a knife Mr Mahmood did harm such that his victim needed surgery, and suffered defence wounds. Mr Mahmood had first met his victim at Bradford Interchange, and the two had formed a relationship. The robbery was because Mr Mahmood wanted money for drugs.

After sentencing Mr Mahmood was taken from the dock to serve his time, minus time already served. Mr Khan, Mr Mahmood's counsel, told me afterwards the case is a tragedy. Helen Gavaghan, 20th June, 2016.

Judicial dilemmas

The conundrum for the judge was how to sentence a woman with a chequered history of serious offending, a previous destabilising and temporary post-natal depression, previous compassion from the Court for a serious offence, current persistent offending, and diagnosed now with "emotional unstable personality disorder". The solution was 18 months in prison.

Next came the question of how to deal with a 44-year old man with a 24-year drug habit and string of convictions for dishonesty; one being conspiracy to supply Class A drugs.

From the dock the man interjected to say his veins were collapsed, and that he was topping up his prescription of 90mgs of methadone with a £20 per day heroin habit.

Briefly the judge stood down the case to allow an exchange between probation and the convicted man. Afterwards the judge said, "No-one could blame me for sending you to prison for 5 years". Yet, instead, he told the convicted man that 90mg of methadone was sufficient for him, that he would not send him to prison, but was making a community order with a strict rehabilitation programme. The judge was clear that this was a last chance. That drugs ruin lives.

If after one month the man does not test negative for heroin and cocaine etc... he will, said the judge, be sent to prison for 5 years.* The nature of the sentence would give the next sentencing judge, if there is one, that leeway. Cemetery or prison face the convicted man if he does not clean up his act now, said the judge.

Concern had been raised that a dose of 120mgs methadone, which was an option the judge did not take, could lead to death if that was topped up. There was concern about habituation.

Remaining problems focussed on defendants who turned up in Court without their solicitors, having either lost phones, misunderstood messages, or not understood what was being said. A charge faced by one of these men is serious enough that if found guilty there will be a term of life in prison. Each was sent away, and told to knock on the door of those who had been their solicitors of record or had become their solicitors of record. Helen Gavaghan, 4th May, 2016.

*Professional opinion from a currently UK-registered MBCB (Bachelor of Medicine and Bachelor of Surgery), a degree held by some British GPs, is that cocaine and heroin can be detected up to two weeks after ingestion.

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