Radio astronomer, science and technology broadcaster and political thinker Marcus Chown discusses what, if anything, the forthcoming General Election has in store for the engineering profession.

Words and portrait by Nick Smith

MARCUS CHOWN is a man with strong opinions. But he is also a fair and equitable commentator on the state of affairs when it comes to the future of science, engineering and technology in the UK’s political space. With a look of barely-contained exasperation he describes how he doesn’t want to be unfair on any of the political parties vying for victory in the General Election on 7 May because, when it comes to safeguarding Britain’s engineering future, “they’re all without a single coherent policy in this matter, and they’re all as bad as each other.”

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The London-based British broadcaster and author of popular science books (including ‘What a Wonderful World’, ‘Quantum Theory Cannot Hurt You’ and ‘We Need to Talk about Kelvin’) is adamant that he’s not just responding to the question in the way that “a middle-aged bloke in the pub might.” He has decades of experience watching the way the political agenda has been skewed by party apparatchiks going on the Today programme and “basically lying to the public”. Fundamentally, Chown is a spokesman for the public understanding of STEM subjects, and from that angle he explains that there can be no differentiation when every party is “wedded to pretty much the same ideology, which is market-led, and they are all versions of the same thing. As with America, we are experiencing a convergence of party ideologies. In other words, they’re all doing what the financial markets will allow, and no one is willing to break out of that.”

The problem in trying to describe the relationship between technology and politics, says Chown, is that the issue sits under such a wide arc of vague concepts “that seem unrelated, but are crucial to reaching an understanding of what is really going on. The irony is that if anyone could stand up as willing to break out, there would be an earthquake in politics. We saw this in Scotland. Give people the merest sniff of political hope and the entire landscape changes. At the referendum there was 85 per cent of people voting? In the General Election this May there will be a historically low turnout.”

Not for the first time in our discussion, I try to rein a fully-flowing Chown back into making a definitive statement about what this could mean for engineering and technology. The problem, he says, is that no one has any idea what is on offer. “In the build-up to the election I haven’t heard technology, manufacturing, industry, engineering or science even mentioned. There’s no diversity of thought, nothing of any interest for the development of manufacturing, science and technology in the UK.”

Show me the evidence

Apart from being an author and broadcaster, Chown is formerly a radio astronomer at the California Institute of Technology in Pasadena. He’s also developed an app – ‘Solar System for iPad’ – that has sold 130,000 >
< downloads, winning him the Bookseller magazine’s digital innovation of the year prize. He is a man of big ideas, perfectly at home with high concept thinking. Where at the moment, I ask him, is the Big Thinking required to stimulate science and technology? What do we want our politicians to be saying at the moment? “It’s not a case of what we want them to say so much as the fact that what we want them to do is listen. They’re not listening to, and do not take the advice of, professionals: they don’t listen to teachers, doctors, scientists or engineers. Further to that it would be unbelievably important – and it would transform British politics – if these people did things that were evidence-based.”

Chown illustrates his point by bringing in one of his bugbears: the current state of the NHS. (In 2014 Chown stood as a candidate for the European Parliament for the National Health Action Party). “The current government is privatising it, basically – and to be fair, a Labour government would do the same. All the evidence, however, points to the outcome that privatisation leads to a less efficient and more expensive system that is worse for patients. The reason you get a worse service is because private providers cherry-pick the profitable sectors, while the chronic things get left to the rump of the NHS. It’s estimated that 10 per cent of the NHS budget is now going on administering the internal market. All the evidence points to the system we already have, although not perfect, to be the better than the one the government is moving it to. Politicians ignore the evidence and lie to us.”

He extends his theme by launching into a discussion about how frequently politicians manipulate figures such as the budget deficit or national debt to suit their own agendas. At this point I ask Chown if he’d like to be rendered in print as accusing the Prime Minister of lying. He replies in the affirmative, developing his thought by highlighting the existence of the Office of National Statistics, which constantly challenges statements made by politicians. “When the Prime Minister goes on the radio and says that he’s increasing the budget for whatever organisations, they are empowered to say ‘that’s not true.’ The ONS has reprimanded Mr Cameron, but they are unable to force politicians to tell us the truth.” What Chown would like to see is an “organisation with teeth that could force politicians to do is listen. They’re not listening to, say so much as the fact that what we want them to do is listen. They’re not listening to, and do not take the advice of, professionals: they don’t listen to teachers, doctors, scientists or engineers. Further to that it would be unbelievably important – and it would transform British politics – if these people did things that were evidence-based.”

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Short-termism isn’t the answer

Great Britain was once the cradle of the industrialised world, the boiler house of heavy industry, and the catalyst for global economic development. Engineers such as Isambard Kingdom Brunel and Joseph Bazalgette were household names as our transport and sanitation networks became the envy of the world. As the 20th century progressed, we watched humans walk on the Moon, commuted to the United States via supersonic flight, and developed the Internet. The benefits to humanity that have come from engineers and technologists seem to have no limit. So why, I ask Chown, isn’t the Prime Minister of social advancement on the tip of every politician’s tongue? “I can only talk in generalisations, because of this arc of mediocrity that seems to reach over every aspect of society. The short-termism of market-led ideology is the big problem here. And that seems to be inconsistent with our politicians coming up with a vision for our future investment in science and technology. Here the problem is that our government thinks that private money is the way to support engineering projects. But when you think about it, even companies such as Apple were supported initially at least by government money.”

Chown draws my attention to a classic example of a government supporting science and technology in South Korea, where during the 1960s and 70s many traditional manufacturing companies were pushed by the state in directions they would not naturally have taken. The electronics giant LG Group was banned from pursuing its desired market penetration into the textile sector and forced to concentrate on the less profitable electric cable industry. The rest is history, but according to Chown “this is a great example of what can be done when politicians have a long-term vision of decades over where you want the country to go. As we can see today, that vision has been responsible for an economic miracle.”

Chown explains that this example is taken from the South Korean economist Ha-Joon Chang’s book ‘23 Things They Don’t Tell You About Capitalism’: “We’re led to believe that small, lean, fleet-footed companies are where innovation’s at. But that’s not always true. Certainly not true in South Korea at least. Our politicians need to come up with visions like this, thinking in terms of supporting industry. As, if you’re one of these fleet-footed companies, your mind is taken over by constantly wondering where your next year’s funding is coming from, you can’t embark on substantial projects and you can’t produce the next Brunel. Most countries seem to have a strategic vision. But we don’t and we’re left with our best idea being to keep our fingers crossed and to hope for the best.”

Chown argues that the current political agenda has evolved to produce debates that come low on the list of what concerns the electorate. “There’s a big question over Europe at the moment, but what voters really want to know about is their job security, their kids’ education, public health, and their domestic energy costs. In other words, people are being ignored, and in that statement I include expert professionals such as engineers too.”

The TTIP of the iceberg

Chown is just warming up. For him, the biggest issue at the moment is the new free-trade agreement between the United States and the European Union. Called the Transatlantic Trade and Investment
Marcus Chown says a proposed free-trade treaty between the USA and the EU ‘will lock in NHS privatisation for ever’

Partnership (TTIP), its supporters claim that it will allow multilateral economic growth, while its opponents say it will basically put governments such as the UK’s in the pockets of American big businesses. Whether the agreement will work in the UK’s economic favour is questionable; what annoys Chown is the process that is putting the treaty in place is being conducted in a clandestine manner “behind closed doors by the people we elected and without our knowledge.”

“Bizarrely, you have the current coalition government on the one hand saying that they want to grab back powers from Europe, while preparing to sign a treaty that actually gives away British sovereignty completely. It’s being sold as reducing the trade barriers in order to allow more money to be made. But the only practical way that can be done is to de-regulate European markets, because on the whole they are more tightly controlled than American ones. You can have genetically modified crops in pretty much any product in America with no restriction, yet there are restrictions all over Europe. What will happen is that the European legislation will be swept away. You may wonder how that can be, but what TTIP allows is for governments to be sued by international companies if the market is not free and open.”

Chown says that this will have a huge impact on environmental pollution controls, but is keenly aware that the biggest danger could be the future of the NHS. “The government may well be denying it, but it has privatised the NHS to the satisfaction of the WHO definition of what privatisation means. What TTIP will do – and this is the reason the coalition want to be in (and any Labour government would have done the same) – is that it will lock in that privatisation forever. Now, if it happened that at a later stage we wanted to un-privatise the NHS, there would be American companies contesting this legally under the TTIP agreement, saying that they must have access to that market.”

Chown describes TTIP as a “gargantuan piece of legislation that transforms everything”, that is steadily progressing onto the books despite opposition from almost all experts in the medical profession who had the opportunity to comment on it. The fact the media has generally failed to pick up on the implications of what such an agreement will mean is “a tragedy. These people – and I include every shade of political party in Britain at the moment – act against the advice of professional people. They have no policies of any note when it comes to the country’s technology future. If I were a professional engineer casting my vote purely on what the candidates will do for my profession, I wouldn’t have a clue which would be the lesser of the available evils.”

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