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Introduction

Experts have come in for a great deal of criticism of late. The turning point was probably the 2008 financial crisis which was seen as a failure of mainstream economists as well as of the "establishment" more generally who had previously touted the benefits of a system that came crashing down on the heads of ordinary people. Another wave of expert skepticism followed the Eurozone crisis, perceived by some as an elite project that had painful consequences for the public at large, especially for countries in the southern periphery. This was compounded by a conduct crisis as scandals broke out over mis-selling, currency manipulation and LIBOR rigging in the financial sector which only strengthened the suspicion that the system is rigged in favour of the rich and powerful. "Experts," who were regarded as the handmaiden of this system, were seen as responsible for many of these ills and skepticism about their credibility loomed large in the debate about Brexit.

In addition to experts having been seen to have "got it wrong," their monopoly on opinion has been weakened by technology. Social media and the internet have contributed to a disintermediation of experts as information has become more widely available, news has become more targeted to individual interests and preferences, and as people increasingly choose who to trust and follow. Who needs experts when you have Facebook, Google, Mumsnet and Twitter? Better to rely on oneself and one's network of friends over a set of experts in the pockets of corporations, political parties and banks.

I want to explore these developments because I think they speak to some of the most important issues of our time. They will determine the quality of politics and policy in the future, who is trusted and why. There are also some important lessons for policy makers as well as for universities which are the factories for producing experts and the place in which a great deal of expert debate occurs.

What have the experts ever done for us?

Recall the scene in the Monty Python skit, the Life of Brian, in which a group named the People’s Front of Judea is organizing a rebellion against the Roman empire. They work themselves up into a righteous frenzy culminating in their leader, Reg, yelling "what have they [the Romans] ever given us?" Although the question is intended to be rhetorical, after a short pause one of the rank and file gingerly points out that the local aqueduct has been useful. Several others then feel obliged to chip in with other helpful innovations from the Romans, until finally Reg has to restate his question as "Apart from the sanitation, the medicine, education, wine, public order, irrigation, roads, a fresh water system and public health, what have the Romans ever done for us?!"
And what have the experts ever done for us? We have gained about 20 years of life expectancy since 1950\(^1\) as a result of advances in water, sanitation and healthcare. Millions used to die of easily treatable illnesses like diarrhea or influenza. Polio used to paralyze 350,000 people annually as recently as 1988; today it has been virtually eradicated\(^2\). Average world incomes have risen over twentyfold - from $446 to $10,057 in current US$\(^3\) - as a result of improved economic policies, particularly in developing countries. The proportion of the world living in poverty fell from 44% in 1980 to 11% in 2013\(^4\). And while the global population has grown from about 5 billion in 1990 to about 7 billion today\(^5\), the number who go to bed hungry has fallen from about a billion to 795 million\(^6\). The application of expertise has given us not just aqueducts, sanitation, roads, education and wine, but much, much more.

With these achievements in mind, it is not surprising that many decisions have been delegated to experts – by which I mean those who have invested time to develop a deep knowledge of a particular subject, usually with credentials and ongoing professional development to maintain their skills. Since the time when Caesar introduced the Julian Calendar based on expert advice to prevent the pontifex from manipulating the dates to favour their political allies, politicians have turned to experts to help them make better decisions.\(^7\) The mechanisms for doing this have varied: trusted advisors; independent commissions tasked with solving a particular problem; expert witnesses appearing before parliament or the courts; or creating expert institutions with well-defined mandates to deliver a policy objective. A well-known example of such technocracy in action in the UK is the National Institute for Health and Care Excellence (NICE) which is tasked with making the difficult trade-offs around which treatments will be funded by the National Health Service. This ensures those decisions are made on the basis of medical science and rigorous cost benefit analysis, and insulates politicians from lobbying by different interests.

Another important example of delegation to experts has been the creation of independent central banks to decide on monetary policy to deliver an inflation target set by government. Frustration with high inflation in the 1970s made many countries move towards de-politicizing decisions about monetary policy and interest rates. Research suggested that political pressure led to an ‘inflation bias’ in policymaking, which could be solved by delegating responsibility for price stability to independent central banks.\(^8\) The following decades

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\(^1\) Source: Ourworldindata.org
\(^2\) Source: World Health Organisation
\(^3\) Source: The World Bank
\(^4\) Where poverty is defined as living on less than $1.90 a day at 2011 prices. Source: World Bank (http://data.worldbank.org/topic/poverty)
\(^5\) Source: World Bank
\(^6\) Source The Food and Agriculture Organisation (FAO) of the United Nations
\(^7\) Until 46 BC, the calendar used in the Roman Empire consisted of 12 months of a total of 355 days, with the intention that an additional month would be added in some years so as to keep the calendar in line with the solar year (of 365½ days). The pontificates had some discretion over the calendar, meaning they could use it for political advantage by lengthening or shortening the terms of Roman magistrates who were supposed to serve for a calendar year. This led to considerable confusion for ordinary citizens as to what date it was. Moreover, by the 40s BC the Roman calendar was three months ahead of the solar calendar. In response, Julius Caesar introduced a calendar of 365 days, with a leap year every 4 years, based on expert advice from the Alexandrian astronomer Sosigenes, to insure that the civic calendar remained aligned to the solar one without any human intervention.
\(^8\) Kydland and Prescott (See “Rules Rather than Discretion: the Inconsistency of Optimal Plans”, Journal of Political Economy, 1977) highlighted issues related to the ‘time inconsistency’ that arises when the plans that policymakers would like to implement in future are different to the policies they prefer to use when the time actually comes. Barro and Gordon (See “Rules, discretion and reputation in a model of monetary policy”, Journal of Monetary Economics, 1983) analysed these issues in the context of monetary policy to show that
saw a trend towards greater independence. According to one widely used index, 85% of central banks had a moderate degree of independence by the early 2000s, compared to less than 40% in the 1970s and 80s. There is considerable evidence that countries that have given central banks greater independence have been more successful at maintaining low and stable inflation.

Similarly, many countries have tried to insulate fiscal policy from the political cycle. When I was at the IMF, we often observed countries running large fiscal deficits in the run up to an election to win votes from key constituencies, only to be followed by a crisis thereafter when budget austerity and monetary tightening would be necessary to restore stability. To dampen this cycle of boom and bust, many countries introduced fiscal councils to provide independent assessments of fiscal plans and performance and produce macroeconomic and budgetary forecasts. A review of international experience found that fiscal councils improve outcomes when they are operationally independent, have strong public engagement and have an explicit role in monitoring compliance with fiscal policy rules.

But experts have also gotten things wrong. Such as, not warning about the risks that resulted in the financial crisis of 2008. During a visit by the Queen to the London School of Economics in 2008, she asked why no one had predicted the credit crunch? The answer, in the form of a letter signed by 33 distinguished economists, admitted that “the failure to foresee the timing, extent and severity of the crisis and to head it off…was principally a failure of the collective imagination of many bright people, both in this country and internationally, to understand the risks to the system as a whole.” The letter ends by noting the importance of candor in dissecting the lessons learned and applying them in future.

Sometimes expert systems for quality control also fail. One of the most infamous is the 1998 study based on just 12 children published in the Lancet claiming there was a link between the MMR vaccine and autism. Uptake of the MMR vaccine subsequently dropped to under 80% nationally, and mumps reached epidemic levels in Britain in 2005. It later transpired that the lead author of the article had failed to disclose his role as a paid adviser in a lawsuit claiming MMR had harmed children. He was struck off, later studies have failed to establish a credible link between vaccines and autism, and the Lancet has fully retracted the article.

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13 In a recent speech, my colleague Andy Haldane also argues that economics needs to draw more heavily on approaches and models used in other disciplines. See Haldane, A The Dappled World Speech at the GLS Shackle Biennial Memorial Lecture
Another catastrophic example is South African President Thabo Mbeki’s rejection of consensus expert opinion on the treatment of HIV/AIDS in favour of the views of a professor at the University of California who argued it was caused by malnutrition rather than a virus. Mbeki’s refusal to believe and fund mainstream treatments for HIV resulted in 300,000 lives lost and the birth of 35,000 HIV positive children whose infections could have been avoided. 14

These failures underlined the importance of experts being subject to challenge and having rigorous processes for differentiating good experts from bad ones. Historically, some of the best challenge has come from the process of scientific discovery and from other experts through peer review. Karl Popper argued that in a world of uncertainty and complexity, we cannot know the truth, we can only make increasingly better guesses by weeding out falsehoods. 15 Scientific progress occurs as evidence is accumulated through better and better guesses – hence the importance of putting in place processes for challenge to avoid the tyranny of misguided ideologies. In academic life this process is based on principles like the need for researchers to be “disinterested” and have no material stake in the outcome, subject themselves to peer review, and (in many disciplines) make their data available to enable replication of their results16.

The changing landscape of information, opinion and trust

Today, however, experts are facing a new challenge in the form of the dilution of their monopoly over authoritative opinion. Technology has changed the amount of information people have access to, the way they get it and how they form their opinions. According to a report by the Reuters Institute for the Study of Journalism here at Oxford University, half of people with online access use social media as a news source (the number having doubled in the US since just 2013).17 Young people are particularly reliant on social media, with 28% of 18-24 year olds saying it is their main source of news, putting it ahead of television (Chart 1). Media has always been open to the criticism that it tells people what they want to hear rather than the difficult truth18. But the selection and delivery of news by algorithms which guess users’ preferences based on content they have previously read and liked would seem to dramatically increase the risk of living one’s life in an informational echo chamber.

The digitization of knowledge and the fact that it is usually freely available has been hugely democratizing and empowering of people to get information to shape their views\textsuperscript{19}. Individuals can go to the doctor better informed about their illnesses and alternative treatments. The wisdom of crowds can generate restaurant reviews, ratings of products and services, and alternative perspectives on a wide range of issues. And trust can be built based on studying the “likes” and “dislikes” or reading the reviews of thousands of individuals.

But there has been a downside – people can be overwhelmed with information that is difficult to verify, algorithms create echo chambers of the like-minded who are never challenged; fake news distorts reality; “post-truth” fosters cynicism; anonymity bestows irresponsible power onto individuals who can abuse it; a world in which more clicks means more revenue rewards the most shrill voices and promotes extreme views.

Experts, who sift through all the information and make informed judgments, are just one of many voices in this cacophony. And the inaccessible language they use often renders them the least heard. Experts define themselves through “boundary work” that separates them from non-experts. This can include credentials, jargon, control over journals and control over training the new experts.\textsuperscript{20} But this boundary work can also reduce their effectiveness, especially in a world where there are many alternative sources of views. A recent blog post by Bank of England staff compares the linguistic complexity of our publications to other sources of information and finds they require a level of reading comprehension which makes them accessible to only one in five people (Chart 2).\textsuperscript{21} For example, at the Bank of England we have learned that talking about “prices and jobs” is far more effective than economists’ jargon of inflation and employment. And in preparing this speech I was pleased to discover that linguistic analysis found it was at an “intermediate” level of linguistic complexity – equivalent to a political speech or a tabloid newspaper.

\textsuperscript{19} Papacharissi, Z. (2002) The Virtual Sphere: The Internet as a Public Sphere, New media & society, 4(1), 9-27
\textsuperscript{20} Rifkin and Merton (1997), Negotiating Expert Status.
\textsuperscript{21} Fullwood, J (2016) “A cat, a hat and a simple measure of gobbledygook: How readable is your writing?”, blog on Bank Underground (https://bankunderground.co.uk/2016/10/04/a-cat-a-hat-and-a-simple-measure-of-gobbledygook-how-readable-is-your-writing/)
Chart 2: Level of reading comprehension required for various publications

% of population proficient at each level

- Mark Twain

- Tabloid Newspaper
- Political Speeches
- This Speech

- Bank of England publications
- Commercial bank T&Cs
- Broadsheet newspapers


Literacy grade level and % of population proficient at each level are based on US data.

Experts’ attempts to make themselves heard is also made more difficult by the changing landscape of trust. The age of deference is certainly over. The Edelman Trust Barometer for 2017 finds that in two-thirds of countries, less than 50% trust mainstream institutions of business, government, media and NGOs to do what is right. It is important to note that measuring trust is perilous because reliable longitudinal data is scarce and when available does not show a clearly declining trend in all areas. The current “crisis of trust” is often attributed to the Great Recession of 2008 and has been compounded by the adverse side effects of globalization and technology as well as numerous high profile examples of untrustworthy behavior by politicians, banks and various institutions. The response to this lack of trust in institutions has been to look elsewhere. “A person like yourself” is now as credible as an academic or technical expert, and far more credible than a CEO or a government official – reflecting a shift in trust toward family and friends that we have witnessed on social media.

An agenda for rebuilding trustworthiness

We need expertise more than ever to solve the world’s problems. But we are in a time where confidence in experts is at an all-time low. Many are trying to think of ways to restore trust in experts and institutions. In her very thoughtful Reith Lectures, Onora O’Neill was skeptical that requiring ever greater transparency (“it seems no information about an institution and profession is too boring or routine to remain unpublished”) and

imposing ever more box ticking accountability would work. Transparency is not good enough if information is inaccessible and unassessable. Instead, we should focus more on increasing trustworthiness. Societies have two ways of doing this: (1) legislation, regulation or guidance that set standards often accompanied by requirements to check compliance and (2) providing information that empowers individuals to assess trustworthiness for themselves.

What could this look like? In this final section I will sketch out the elements of an agenda that could enhance the trustworthiness of experts.

1. Experts should embrace uncertainty

As was once so eloquently put by Mervyn King, experts must resist the pressure for “an illusion of certainty.” Bertrand Russell once said, “The whole problem of the world is that fools and fanatics are always so certain of themselves, but wiser people so full of doubts.” So much of public debate today is painted in black and white when the reality is normally multicoloured. In most fields of scientific enquiry - from economics, to medicine, to climate change - we make progress by making progressively better guesses. We are uncertain not only about whether our models are calibrated correctly, but even about whether our models are the right ones to be using at all. Rather than pretending to be certain and risk frequently getting it wrong, being candid about uncertainty will over the long term build the credibility of experts. As Andre Gide said, “Trust those who seek the truth but doubt those who say they have found it.”

A good example of that is the use of “fan charts” in forecasts produced by the Monetary Policy Committee (MPC) which show the wide range of possible outcomes for a given set of initial circumstances.

However, conveying uncertainty increases the complexity of a message, making it increasingly difficult to do in a world where short form is paramount. For example, it is a lot easier to tweet “BoE forecasts growth of 2%” than it is to tweet “If economic circumstances identical to today were to prevail on 100 occasions, the best collective judgment of the MPC is that the mature estimate of GDP growth would lie above 2% on 50 occasions and below 2% on 50 occasions,” even though that would be a more accurate description of the true meaning of the fan charts. In short, the modern challenge for experts is how to communicate with brevity, but without bravado.

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27 Another example is the Chicago Booth IGM Experts Panel, in which economists are asked not only for their responses, but also how confident they are in their answers. When collated responses are then presented raw, and weighted by confidence.
28 A particularly famous example of good and clear communication of a complicated message is Feynman Diagrams, which are pictorial representations of the behaviour of subatomic particles.
2. **Good practices need to become more widespread in the media**

Good standards and practices are important given the vital role the media plays in any democracy and in mediating the views of experts – and they exist in many places. But the economics of the industry has created a dangerous trend where the unwillingness to pay for content means that financial pressures squeeze out higher quality reporting. Many news organisations have to rely on “native advertising” (whereby a product is promoted under the guise of a news story) to generate income. Perhaps as a result, trust in mainstream media has plummeted more than any other institution and is now distrusted in more than 80% of countries.29 This has been exacerbated by the rise of fake news and the phenomenon of “false equivalence” whereby, in the name of balanced reporting, news organizations give equal time to credible and less credible sources. How can producers of information and expertise balance the need for reliability with allowing different views to be heard? What is the balance between freedom of speech and the media’s duty to inform?30

Few institutions value freedom of speech more than universities. The academy has a special role in the ecosystem of ideas by providing an independent place where different perspectives are heard. But as well as being heard, these views are also subjected to scrutiny and challenge, and judged by rigorous standards. Universities have well established principles governing what is valued as an intellectual contribution. These principles are enshrined in things like the Haldane principle which states that the subjects of research should be chosen by academics and not by politicians.31 Practices such as peer review, competitive processes for funding research, requirements to publish data and transparency about conflicts of interests in publications are well established in the academic world.32

Perhaps some of those standards and principles widely used in academia need to be adapted and applied more widely to the world of think tanks, websites and the media? For example, should think tanks have to report transparently about where their funding comes from? Should journalists and bloggers be exposed for reporting or recirculating falsehoods or rumors? Should digital platforms take greater responsibility for their content as part of their duty to inform and to protect their own brands? The debate on standards and good practice has just begun, and is very welcome.33

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30 An example of this question in action is the criticism that online video companies have received for making available an anti-vaccine documentary that was directed by the author of the discredited Lancet study on the link between the MMR vaccine and autism.
31 This important principle has been reaffirmed with the creation of UK Research and Innovation. Government is fully committed to the principle that funding decisions should be taken by experts in their relevant areas and [...] have ensured this is reflected in the design of UKRI. DfE Higher Education and Research Bill: UKRI Vision, Principles & Governance.
32 These principles also underpin the MPC in which independent experts debate the issues and vote on interest rates based on their best professional judgment.
33 Germany, with a long tradition of prosecuting hate speech, is considering imposing a fine on those that transmit fake news. As a result, Facebook is putting in place a process to flag dubious stories to a fact checker, during which they will not be prioritized by news feed algorithms. Facebook, Google, Buzzfeed and others have joined an industry initiative called Crosscheck which aims to verify content circulating online, with a particular focus on the upcoming French presidential election.
3. **Provide the public with tools to assess trustworthiness**

It is hard to imagine a return to an age when large media companies controlled the flow of information, a small number of political parties dominated the political discourse and professionals of all sorts were trusted almost unquestioningly. Therefore it is even more important for citizens to be able to assess the quality of the flood of information and opinions they receive and to differentiate facts from falsehood. The online commerce world has developed many tools to inform judgments about who to trust such as ratings provided by other consumers, feedback on the reliability of other users, and data on performance measures such as timeliness of delivery. What tools might be relevant for the world of ideas?

In some instances, traditional institutions have evolved to meet this need. NHS Direct and the National Institute of Heath Information for the Public websites are good responses to the phenomenon of patients coming to surgeries armed with reams of data and views from the internet. These authoritative websites provide a reliable source of information to discerning patients who would otherwise have to sift through sometimes contradictory information from multiple sources. In other instances, non-traditional sources of judging the quality of information have emerged. Fact checking websites (who appraise the veracity of claims made by public figures) are one example and have some similarities to peer review in academia which lends credibility (or not) to news and statements made by individuals. Fact checkers have also developed a code of conduct to enable users to assess the veracity of their work.  

There have also been examples of new institutions being created to enhance trustworthiness in areas where trust has been eroded. In the wake of the series of misconduct scandals around misselling of financial products, LIBOR and foreign exchange rigging, two institutions were established. The first, the Banking Standards Board, is focused on improving conduct standards in banks. The second, the FICC Markets Standards Board, seeks to pre-empt future problems by establishing acceptable standards of practice in wholesale financial markets. These initiatives will take time to bear fruit, but are illustrative of trying to rebuild trustworthiness when it has lapsed.

Schools and universities will have to do more to educate students to be more discerning consumers of information, and public awareness campaigns on media literacy may be warranted. In a striking piece of research based on testing of thousands of students across the United States, the Stanford History Education Group concluded that young people's ability to reason about information on the internet could be summed up as “bleak.” They tested students on whether they could distinguish an ad from a news story or whether they noticed that data came from a political lobbying group. “At every case and at every level, we were taken aback by students’ lack of preparation. At present we worry that democracy is threatened by the ease at

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34 The International Fact Checking Network’s code of principles includes a commitment to non-partisanship, transparency, openness about funding sources, methodology and honest corrections. See www.poynter.org/fact-checkers-code-of-principles.

35 See for example Copeland, P (2016) *How to Make Media Literacy Popular*, The Legatum Institute
which disinformation about civic issues is allowed to spread and flourish. In a world where information is plentiful, the future of education will be about critical thinking and creating citizens with an ability to learn and make judgements.

4. **Listen to the other side**

Humans are prone to “groupish righteousness” argues Jonathan Haidt in a thoughtful book about how people come to moral judgments about important issues. Social media exacerbates this tendency by providing the ability to communicate exclusively among the like-minded and with the shrillness enabled by anonymity. But we can all make an effort to engage with views that are different from our own and resist algorithmic channeling into an echo chamber. Perhaps there could even be algorithms that enable such bubble bursting?

At the end of the day, even when all of the facts are truthfully established, differences of opinion can legitimately exist, even amongst experts. Institutions like the Oxford Union were established “as a forum for discussion and debate at a time when the free exchange of ideas was a notion foreign to the restrictive university authorities.” Arguably we need such institutions in all parts of society more than ever where thesis can meet its antithesis and hopefully create a new synthesis. All of us as individuals have a responsibility to be more open and to engage respectfully with different views if we are to have a constructive political debate about the issues that matter to all of us.

5. **Manage the boundary between Technocracy and Democracy carefully**

How can we get the balance right between that which needs to be decided by experts versus politicians? Not surprisingly, the growth in the space occupied by experts, in part because many decisions are increasingly technical, can foster resentment of unelected individuals making decisions that have huge social consequences. Problems often arise when experts try to be politicians or when politicians try to be experts. Clarity about these roles and accountability to reinforce that clarity are essential.

I have spent much of my career managing that boundary. In the UK civil service, there is the Northcote-Trevelyan principle which ensures that recruits are selected on merit and not through political patronage and the well-established practice that “civil servants advise and Ministers decide.” At both the World Bank and the IMF, the job of the “expert” staff was to provide the best technical advice and if there were political trade-offs to be made, they were done at the level of the Board, which represented the 189 member country governments. If experts cross that line, they undermine the credibility of their expertise and

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36 Evaluating Information: the Cornerstone of Civic Online Reasoning, Stanford History Education Group, pp 4-5.
38 A good example is the recent debate on whether or not migration was the cause of the fall of the Roman Empire between Mary Beard, a well-known historian, and Aaron Banks, a UKIP supporter (see here for more details).
their accountability to their professional standards. And if politicians cross that line, they risk misleading the public who elected them to look out for their interests.

Independent institutions such as the civil service, central banks, and universities have a special role in mediating expertise in the public interests, but technocracy can only ever derive its authority from democracy. For that reason, there has been an exponential increase in mechanisms to hold experts to account as more decisions require technical input. Michael Power describes the proliferation of such activity – not just financial audits but audits and reviews of boards, research quality, process reviews, environmental impact, independent evaluation offices, parliamentary inquiries, etc. Critics argue that such “bean counting” is costly, results in risk aversion, and diverts resources from important work. Having been on the receiving end of a great deal of this “checking,” I think it is a small price to pay to legitimize expert input to democratic decision making.

Conclusion

So what have the experts ever done for us? The application of knowledge and the cumulation of that through education and dissemination through various media and institutions are integral to human progress. So the question is not how to manage without experts, but how to ensure that there are mechanisms in place to ensure they are trustworthy.

More humility and candour about the limits of expertise is a starting point, as is clearer communication. More rigorous assessment of ideas will generate better solutions. Better tools to allow the public to differentiate among ideas are also needed, as is the need to encourage more genuine listening to others’ views. Managing the boundaries and accountabilities between experts and politicians better will help maintain the balance between technocracy and democracy. Getting this right is vital for determining whether our futures are shaped by ignorance and narrow-mindedness, or by knowledge and informed debate.

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