

Public Intellectuals and the Natural Sciences

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In a way, we're here this week to celebrate Niels Bohr's debut as a public intellectual. He didn't start out as one. Although he devoted a great deal of time and energy in the early 1940s to trying to persuade Roosevelt and Churchill to understand the game-changing significance of the atomic bomb, he did so exclusively within the charmed circles of power and of trusted insiders – those who were in on the Manhattan Project.

But the Open Letter to the United Nations was a completely different kind of project: it signalled that Bohr had made a transition -- from a scientist whose eminence in his chosen field gave him an elevated status in the corridors of power, into an

intellectual who drew on that eminence to try and change the public's mind. That was a significant shift for him; but it was also an important shift for the world because it highlighted the need for people who could explain to their fellow-citizens the challenges that scientific – and technological – ingenuity would present them with. And if that need was urgent in the 1950s, then it is even more urgent today.

The concept of the “public intellectual” has a chequered and confusing history. It was coined in 1988 by Russell Jacoby in his **book** *The Last Intellectuals: American Culture in the Age of Academe*, but arguments about what it means have often attained theological dimensions. The *Oxford English Dictionary* **definition** – “an intellectual who expresses views (especially on

popular topics) intended to be accessible to a general audience” – is next to useless because it would include even the most clueless media pundit. Various other concepts of the public intellectual – dissenter from received opinion, revealer of hidden truths, thinker, expert, media superstar or gatekeeper of knowledge – have likewise been tried and found wanting.

Stefan Collini, in his **book** *Absent Minds*, tried a different tack. He saw the role of the public intellectual as performance in a particular role for which four **qualifications** were required: certified expertise in a domain of expert knowledge; access to popular media; the ability to communicate with a general audience; and – most demanding of all – having interesting things to say!

When definitions fail, we often turn to exemplars. And here we also run into trouble, because the people conventionally regarded as exemplary public intellectuals turn out to be infuriatingly difficult to pigeonhole. They include **people** as diverse as George Orwell, Bertrand Russell, Arthur Koestler, John Dewey, Arnold Toynbee, Max Weber, AJP Taylor, Hugh Trevor-Roper, Isaiah Berlin, Jean-Paul Sartre, Simone de Beauvoir, Andre Malraux, Edmund Wilson, Hannah Arendt, and Susan Sontag. The only things they have in common is that they all come from a Humanities background. And they're all **dead**.

This last point is important, because another aspect of the discourse about public intellectuals is what I would call declinism: this is the view that the Public Intellectual has become an endangered

species, that its greatest days are behind it. This is the theme, for example, of an engaging **book** by one of the United States's most eminent – and still living – public intellectuals, Richard Posner. Its title: *Public Intellectuals: a study in decline* tells it all. Posner attributes the decline mostly to the fact that today's public intellectuals (at least in the US) tend to be tenured academics, and tenure requires specialisation, which directly undermines one of the prime requirements for a working public intellectual, namely the ability to communicate with a non-specialist public. In this context I am reminded of the famous story about the sociologist **Daniel Bell** being asked by an annoying university provost what his specialism was. "Generalisations" replied Bell, without a moment's hesitation.

Why are public intellectuals important? Basically because modern industrialised democracies are complex and some of the issues which face them are beyond the comprehension of the average citizen. That's what lay behind Walter Lippman's formulation of the role of mass media in democracies. Decisions about complex matters have to be made by those who understand them -- in other words, experts. The function of the press was to explain experts' decisions to the public in such a way that they would give their consent to decisions made in their name. Lippman's term for this was "**engineering consent**". Noam Chomsky later updated it to "manufacturing consent" .

But what if the media that are manufacturing this consent are corrupted -- either by the

commercial interests of their proprietors, or by ideology? The sociologist Steven Lukes famously defined power as coming in **three varieties**: the ability to compel people to do what they don't want to do; the ability to stop them doing what they want to do; and thirdly, the capacity to shape the way they think. This last is the power that mass media have. And it's the reason that democracies need public intellectuals, by which I **mean** individuals who have demonstrated their intellectual calibre by mastering a particular discipline, who take an active interest in matters of public debate for which their expertise and experience is relevant, who have an independent cast of mind and who can communicate effectively to non-specialist audiences.

Neils Bohr's Open Letter was important because it tried to explain three difficult ideas to a non-specialist audience: that atomic weapons were not just bigger bombs; that conventional notions of military secrecy were inoperable in the face of such knowledge-intensive munitions; and that nothing but harm would result from trying to keep the secrets from mankind. As the editor of *Politiken* pointed out the other night, Bohr's letter failed to achieve its objective. And yet it was right on each of the three counts. So one lesson we might draw from it is that being right is a necessary but not sufficient condition for achieving change.

Nuclear weapons were the first man made development which represented an existential threat to humanity. We now live in an age where

we have several such developments, of which global warming is just the most alarming. But there are others. As my CRASSH colleague Martin Rees **puts it:**

“Who should access the 'readout' of our personal genetic code? How will our lengthening life-spans affect society? Should we build nuclear power stations -- or wind farms -- if we want to keep the lights on? How can the world support 9 billion people by mid-century? Should we use more insecticides, or plant GM crops? Should the law allow 'designer babies'?”

These choices, Rees says, “can't -- and shouldn't -- be made just by scientists. They need wide public discussion. But for debate to rise above mere tabloid slogans, everyone needs a 'feel' for

science, for our environment, and a realistic assessment of risk.”

What links all of these areas is the inability -- and perhaps also the unwillingness -- of conventional media to inform citizens about them. The result is populations that are astonishingly ignorant about some things. In the UK, for example, the average person believes that 24 per cent of the population are Muslims when the actual figure is 5 per cent. In the United States, 46 per cent of the population prefer creationism over evolution as an account of human development. As a *New Yorker* writer **observed**, “It took a few hundred years for the Copernican revolution to go mainstream. At the

present rate, the Darwinian revolution, at least in America, will take just as long.”

What these and other surveys suggest is that electorates in our democracies have difficulty handling complex technical, evidential or ethical questions. Which is why there is such an urgent need for intellectuals who understand the relevant sciences and technologies and are willing to engage in the public sphere.

That’s on the demand side. What of the supply? And here we run into a problem. On the face of it, it might seem that we have plenty of scientifically- and technologically literate public intellectuals: television and other mass media are awash with media superstars like **Brian Cox**, the rock-musician-turned-physicist who has been

wowing British TV audiences for what seems like an eternity. Other cultures doubtless have their own equivalents.

The problem is that scientists like Cox are not really public intellectuals, because what they are doing is just explaining their disciplines to a general audience rather than engaging with the thorny public issues that science and technology now poses. What they do is important and often delightful in its way, but it's not the heavy lifting that needs to be done.

A very good example of this heavy lifting is the work done by Caspar Bowden in unravelling the real nature and implications of NSA surveillance. This is difficult and often unrewarded labour but it's what democracies need. And it's only when

one sees what's involved that one really appreciates why people might settle for the comfortable option of media stardom rather than getting down and dirty in the public marketplace of ideas.

A cautionary tale in this regard is what has happened to **Susan Greenfield**, a distinguished British neurophysiologist who works on Parkinson's disease and Alzheimer's, two of the great public health problems of our day.

In addition to her normal scientific research, Greenfield has taken an interest in what is by any standards an important public issue, namely the impact of computing technology, gaming and social networking on child and adolescent development. These are not areas in which she

has done any sustained scientific research, but on the other hand as an eminent neurophysiologist one might think that her views would carry as much weight as the amateur pundits who also write about these matters.

As it happens, I am sceptical of Professor Greenfield's views on these matters, but I admire her courage in raising them. What concerns me is that she has paid a pretty heavy personal price for daring to trespass on this territory, which powerful commercial interests view as their fiefdoms. She has, for example, been subjected to abuse and ridicule, and her **private life** has been investigated by British tabloid journalists. Her scientific reputation and **even her professional expertise** have been called into question.

She has, in other words, shouldered some of the responsibilities of a proper public intellectual -- that of challenging the conventional wisdom or questioning the dominant narrative -- but in the process has suffered for it. Small wonder, then, that other -- younger, less eminent and less secure -- scientists, seeing what has happened to her, might decide to opt for a quieter life -- in the ivory tower, the laboratory or the pages of *Nature* rather than in the vicious hurly-burly of the public sphere. And if that happens, then -- as Niels Bohr understood -- our democracies will be poorer, and more dangerous, places.

