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Madness, Eugenics and Statistics with Theodore M. Porter



"The insane asylums were interested in the inheritance of insanity 80 years before eugenics became a movement"

Dr. Theodore M. Porter (University of California, Los Angeles) gave a talk entitled "Eugenic Madness: Asylums and the Data of Heredity" within the colloquia series of the Catalan Society for the History of Science and Technology (SCHCT) for the 2013-2014 academic year, and in collaboration with the Centre for the History of Science (CEHIC-UAB).

Porter is an expert in the history of statistics and quantification in science. In this interview he explains the relationship among insane asylums, statistics of heredity and eugenics, and reflects upon the division between natural science and social science and the relationship among history, history of science and philosophy of science, and between science and politics, among other topics.

Theodore M. Porter is distinguished professor of the Department of History at the University of California, Los Angeles. He graduated in History (1976) from Stanford University and earned a PhD in History (1981) from Princeton University, with a thesis on what he called "statistical thinking". He teaches various topics pertaining more or less directly to history of science.

Among other publications, he is author of several books. The first one, *The Rise of Statistical Thinking* (1986), focused on the development of statistical ideas and methods in fields ranging from the social science of statistics to biological evolution and thermodynamics. This interest in the relations of the natural and the social is also central to his second book, *Trust in Numbers: The Pursuit of Objectivity in Science and Public Life* (1995). His last book, *Karl Pearson: The Scientific Life in a Statistical Age* (2004) is a biographical study of a scientist who was in revolt against the confines of this or any other professional identity. Currently, he is working on a new book about the history of human heredity, and more particularly on how insane asylums and related institutions became important sites for recordkeeping on conditions regarded as hereditary, and for research on their presumed inheritance.

Last Friday you gave a talk in Barcelona called "Eugenic Madness: Asylums and the Data of Heredity". How would you summarise its main argument?

The main argument is that the history of eugenics, which is normally thought to begin with the theory of evolution and with the work of Francis Galton - Charles Darwin's cousin - is actually associated with institutions such as insane asylums, where the people who were often the object of eugenic intervention were housed.

When eugenics became a movement, which is about 1900, it was above all directed against people who were taken to be defective, not adding credit to the population, not helpful for national efficiency, and often expensive to support. I would say that those people were precisely the insane being held in asylums.

Often, the story is told of a movement of eugenics of evolutionary origin which was then taken up by the institutions that held all the insane people. I would rather say that the institutions that held the insane people were interested in their heredity 80 years or more before eugenics became a movement, and that by the 1840s these institutions were actively keeping data on patients and talking about the possibilities of reducing insanity not only by namely curing them, but by keeping them from breeding, that is, in a eugenic way.

How does this change conventional views of the history of biology?

It is very much a story about the history of human science, human biology. The history of genetics is usually associated especially with plant and animal breeding, with scientific research on plants and animals. One of the main developments of that history over the past few decades is to see how closely that was associated with practical agricultural topics like plant and animal breeding. But beyond this experimental, breeding, agricultural history there is a medical side to the history of genetics.

I think we should notice that in our own time, eugenics has become overwhelmingly a medical topic. So, in some way, genetics is today taken to be at the heart of medical research. But I want to emphasise that medical genetics or eugenics has attracted a lot of attention for 180 years, thus putting the medical side into the history of genetics along with the experimental side of plants and animals.

How does that relate to your previous work?

I was first interested in the uses of numbers and data in statistics from all the way back to my doctoral dissertation. But this story is about the belief of ordinary people as well as doctors in the inheritance of all kinds of human conditions, especially insanity. This belief is older than all the actions and the history that I'm trying to tell.

I don't know when those ideas become common, but they are already common in the time of my story, 200 years ago. Then, a more systematic attempt to gather and analyse the data occurs. And that kind of statistics - of gathering and analysing data, of drawing conclusions and using them for intervention or for decisions involving politics, government and medicine - is an old theme for me.

My dissertation was about what I called the *Rise of Statistical Thinking*, beginning with the great increase in state activity to gather censuses and to keep records of all kinds of practical topics. So, in a way, this is one more practical topic, a medical topic, which became important statistically about the same time as a period that an old historian of statistics called the *Era of Statistical Enthusiasm* and Ian Hacking, the philosopher and the historian of statistics, called the *Avalanche of Numbers*.

In insane asylums, in studying the insane, there is a kind of avalanche of numbers: both actually counting the people in the insane asylums and also conducting censuses of them outside of the institutions.

In this story, what is the relationship between the human sciences and the natural or hard sciences?

First of all, the divide between hard and human sciences doesn't seem as clear as it once did. Secondly, one thing hard sciences are supposed to imply is the use of mathematics and statistics, and the topic of asylums is a very data-oriented topic. In that sense, it is a hard science. The mathematical content is very low at first and it becomes more serious in the 1890s and the 1900s. And then, it links up with another one of those realms that seem so central to the growth of statistical knowledge in the nineteenth century: insurance mathematics and demographic knowledge, i.e. population mathematics, and which is very much a part of this story as well.

The human sciences participate widely in this mathematical, statistical, demographic and quantitative side, at least as much as the hard sciences do.

It really doesn't work to say that natural sciences are hard and human sciences are not hard. The sciences of the human are sometimes natural sciences! Similarly, in our own time there is again a huge emphasis on trying to link the social sciences to the brain, and in a way, this is only loosely connected with brain research, but it is very much connected with the biological sense of the human and how we are products of our medical condition as well as of our social worlds.

How would you say this work challenges common views about science and politics held by the general public and by the scientists themselves?

One way is to see to what extent political views were involved in the history of genetics from the 1830s. Insane asylums expanded beginning around the 1820s, promising to cure their patients. And actually their statistics showed great numbers of cures. The idea was that they would open the asylums, they would cure most of the patients, and perhaps they wouldn't even need the asylums anymore. So asylum managers and administrators offered that as a fond hope, but instead the asylums grew and grew and no matter how many patients they thought they were curing, asylum populations got larger and more expensive.

There is another important transition moment, in France in 1830, in England in 1845 and in America and in Germany at different times, with new legislation stating that every county, state, jurisdiction or city should have an asylum and should provide for those who can't pay for it. Then, asylums filled up with pauper patients, poor people, people without funds. And many of them became life-time patients. So instead of curing patients, asylum administrators think more and more that their business is simply to care for these residents.

The origin was medical, but it soon turned to maintenance instead. The promise of a way of solving this terrible moral problem of people with a temporary loss of their mental faculties, who have no way of protecting themselves, had vanished by the 1850s-1860s.

It looks as if the contribution of asylums to this political problem is not very successful. So administrators began to emphasise other contributions they thought to be making. They emphasised two things: one looks like the origins of welfare states, and it is that they take care for these poor patients and keep them from dragging their whole families down into poverty. The other thing they say more and more is that insanity is a hereditary condition and by keeping people in the asylums they won't reproduce their condition.

Thus, I think insanity is very much connected to the change of the functions of the state, the increase of the things that states do, and what we call the welfare state. But because so many patients couldn't be restored to health and made productive citizens, they were only being kept aside. A set of political issues linked with this ambition to cure and the failure to do so emerge along with the shift from curing to maintaining patients.

How do you think your contributions to the history of science changed the general view of what science is?

I think one of the most interesting things that the history of science has done is to undermine the idea that science is cut off from the world. Not that people thought that it was completely cut off, but that science is a quite specific thing practiced by people with a very specific education, working in disciplinary communities.

So, the revolutionary thing just before I entered this field was Thomas Kuhn, who very much emphasised the special character of sciences as disciplined knowledge produced among people who were sufficiently specialists to form a set of agreed ideas that everybody would share. Especially in the past 25 years historians of sciences have been more and more interested in the way that science penetrates into the society, so you find something like scientific activity in many places, not just in universities but in all kind of institutions like hospitals and insurance companies.

I would say that statistics and quantification are among the tools of science which are extremely widely diffused, that can't be isolated to university disciplines made up of people with PhDs, whose main body is neutral or pure or basic research. Not only the use of knowledge but the production of knowledge is happening in this context of use, of application. This would be one very important change in the history of science that my work has participated in, joined and contributed to.

Could you say something about the relationships of history of science to philosophy of science?

As a student I was in a programme in history and philosophy of science, and there was actually very little contact. We met on Wednesdays and drank nominally sherry, actually beer. And talked delightedly; but there was very little overlap.

The philosophers who are interesting to historians are those who move beyond talking about science as sets of statements which might have some truth value, to looking at science as work that is done by researchers and all kinds of people who are in the institutions where the real scientific problems are studied. Then philosophers perhaps bring perspectives that are different from the historians'.

There is a field in history of philosophy of science and there are other efforts to bring the fields of history of science and philosophy of science together, and they have been somewhat successful, but they remain mostly separate fields.

And what about the relationship of history of science to history more generally?

For me history of science is a part of history. This doesn't mean that every kind of history has to dissolve into some universal history. Because nobody is just a historian, everybody works on some kind of topic. Certainly I choose topics that I think are significant for a range of all kinds of historical fields. A topic like quantification happens not only in university research but in administrations and bureaucracy, in everywhere in business and the professions and medicine, in engineering, in technology. It penetrates a huge range of human activities and ought to be very much a part of mainstream history.

Environmental history is another topic at the intersection of history and history of science and

history of technology, of course. So, there has always been a certain distance of the fields, and history of science has looked for alliances. Now there's a lot of interest in history of science and art history; although historians who are not historians of science have tended to like art history better than history of science, because historians are people who generally don't like science in the first place.

There are also moves of history of science that are not in the direction of general history. There remains a certain kind of separation but it's diminishing, rather than increasing. For me, I don't see how one can cover history sufficiently without regarding the history of technology and science and medicine as a serious part of what historians do.

Do you think there are values in the sciences? If yes, what is their relationship to moral values?

A common position among scientists, if not universal, is stressing that science produces knowledge, which is a good thing, so if there is a value in science, it is exactly that of expanding knowledge. And then what society or politics decide to do with science is where the moral questions come in.

There are certain special exceptions, almost universally recognised and certainly very well institutionalised, such as how the subjects of research might be hurt by science. That's especially an issue for medical research and for human subjects; but we historians are forced to treat human subjects with these issues in mind. As I mentioned in my talk, I had to get permission to study the records of the asylum patients who were a hundred years dead, as if I were doing a double blind study on living patients, to show that the benefit of my studies was greater than any possible damage. I said the benefit of truth was better than any effect my research could have on them, and that these patients would like to know the truth, because it benefits everyone to have historical truth. Scientists recognise quite widely certain categories of exceptions for which they acknowledge values to be part of research from the onset. For instance, it is generally agreed that in building weapons for a state scientists should determine the moral character of that state when deciding whether to serve in military research.

In contrast to this common view, I think the history of science tends to see science as more closely engaged in real technological and policy changes and it emphasises the philosophical rhetoric of science. That makes those problems of value more systematic and more integral to science. But I don't say either that scientists need to ask every time they start a project.

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