

Tanner Report 2020

We were delighted to welcome Professor Jonathan L. Zittrain of Harvard University as our 2020 Tanner Lecturer. Jonathan Zittrain is George Bemis Professor of International Law at Harvard University, Professor of Computer Science, Harvard School of Engineering and Applied Sciences and Professor, Harvard John F Kennedy School of Government. His theme was *Gaining Power, Losing Control*.

The first lecture was entitled 'Between abdication and suffocation: three eras of governing digital platforms'. It mapped three eras of governance for online platforms. The first started around 1995, and was an era of rights; much of the discourse around online platforms focused on the risk of censorship and control by external forces, whether governmental or corporate. By 2010, a new era of public health had dawned, weighing the priorities of the rights era against the various concrete harms arising from the platform's use and abuse, such as disinformation, or campaigns against vaccination. Today – in 2020 – we're still not sure how to balance the rights and public health frameworks; there is a need for a new 'process' era of internet governance centred around frameworks for managing clashes between them.

The process era is not yet in full swing. The computer giants have worried about ethical issues, but progress has been halting. Google created an external ethics board and abolished it within a week. On one occasion Facebook deleted 865 million unsatisfactory posts, with little transparency as to their content. But ambitious efforts seem to be close on the horizon. Mark Zuckerberg has expressed discomfort with the power he wields, and is championing Facebook's new independent oversight board, which promises to delegate key content moderation decisions to bodies outside the firm. As technology companies move into an era of process, in which institutions such as Facebook's oversight board might be more commonplace, a major question for all of them is: when does 'can' imply 'ought'? Or, in other words, when do technology companies' growing powers and capabilities constitute an imperative to intervene against the problems and harms they facilitate?

The second lecture was entitled: 'With great power comes great ignorance: what's wrong when machine learning gets it right?'. Much of the lecture focused on the notion of intellectual debt. We can discover what works without knowing why it works, and then put that information to use at once, assuming that the rationale will be worked out later – answers first, explanations and theories later. Thus aspirin was discovered in 1897, but no-one explained how it worked until 1995. In some cases we pay off the intellectual debt immediately; in others we let it compound, relying for decades on partial theoretical knowledge.

Intellectual debt has so far been confined mainly to medical areas amenable to trial-and-error validation. But that is changing as new techniques in artificial intelligence such as machine-learning increase our collective intellectual credit line. Machine-learning systems are essentially correlation-statistical engines – most cannot uncover underlying causal mechanisms. They can identify patterns in vast oceans of data more quickly and accurately than any human operative, and they can offer answers to open-ended questions.

Professor Zittrain gave examples of machines programmed to recognise human faces, distinguish cats from other non-feline objects, and, given access to medical records, predict a new hospital patient's likelihood of dying. However, he claims 'intellectual debts don't exist in isolation. Answers without theory, found and deployed in different areas, can complicate one another in unpredictable ways.'

In the management of intellectual debt, universities have an important part to play, and the illusion of control must be denied to governments. We can just say 'no' or, better, 'know' – and try to understand the underlying theories and not just the answers.

Three decades of advances in digital technology have made humanity more capable, while stirring the sense that we are somehow becoming less free. We must come to terms with new forms and allocations of technological power, ranging from the manipulative possibilities of digital platforms to the potentially corrosive bounties of machine learning. The world of cyberspace must become more humane and fair, and it must pay more attention to the human values which the Tanner Lectures affirm. The three traditional learned professions of Divinity, Law and Medicine need to enter into dialogue with others, including the modern data scientist, to understand and manage the phenomenon of intellectual debt and other issues related to artificial intelligence.

The lectures were followed by responses from Professor Martin Rees, Dr Stephen Cave and Professor Sophia Roosth, and Professor Jonathan Zittrain drew the ideas together in his concluding presentation.

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