Robotics, automation, and society

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Abstract

In many parts of the contemporary social world, there is a growing expectation that the development of robotic technologies will significantly transform many aspects of people's lives. Some predict that the contemporary robotics revolution will lead to widespread unemployment, greater social isolation, and other harmful social outcomes, while other social commentators predict that robotics will produce societies that are healthier and more socially dynamic. In this presentation, Dr. Eric L. Hsu explains how a sociological analysis of robotic technologies is urgently needed to better understand their social consequences and drivers. He focuses on three emerging strands of sociological research on robotics which are especially important for us to consider. The first concerns the social acceptance of robotics, which raises questions about the commonplace tendency to think of robotics in technologically determinist terms. The second significant area of sociological research on robotics that Hsu covers revolves around the ways in which the development and uptake of robotic technologies have a multitude of transformative potentials. And the third dimension of sociological research on robotics explored by Hsu has to do with the matter of social division. Sociology has the capacity to help illuminate how robotics reproduce, intensify, or create new forms of social inequalities. Hsu draws from research that he is currently undertaking with colleagues in Australia and Japan on robotics in aged care and driverless vehicles to illustrate these three sociological facets of robotics research. His presentation ultimately seeks to develop greater recognition of the value that a sociological perspective brings to our understanding of robotic and AI technologies.

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Biography of Dr. Eric L. Hsu

Dr. Eric L. Hsu is a Lecturer in Sociology at the University of South Australia (UniSA), where he also leads the 'Community Reactions to Disasters' (1.6) research node at the Hawke EU Centre for Mobilities, Migrations and Cultural Transformations. He currently sits on the Editorial Board of *Palgrave Communications* and is on the Editorial Team of *Applied Mobilities*.

Hsu is a noted international expert in the sociological study of sleep, the social theory of disasters and globalization, and the social analysis of time. He is editor, most recently, of a 4-volume major works series set on *Sleep: Critical Concepts in Sociology* (Routledge, 2017) and co-editor (with Anthony Elliott) of *The Consequences of Global Disasters* (Routledge, 2016). His work has been published in leading international journals such as in *Sociology*, *Time & Society*, *Journal of Sociology,* and *the Journal for the Theory of Social Behavior*.

More recently he has begun to study the social aspects of robotics, artificial intelligence, and automation. He is part of a research team led by Professor Anthony Elliott at the University of South Australia, which is studying robotic and automated technologies through a sociological and mobilities perspective (www.robotic-futures.com). These studies have received funding from the Australia Research Council, the Toyota Foundation, and the European Commission and they examine phenomena such as driverless vehicles and robotics in aged care.

In 2017, Hsu co-authored a submission to an Inquiry into the 'social issues relating to land-based driverless vehicles in Australia' run by the Australian Federal Government's Standing Committee on Industry, Innovation, Science and Resources. The submission was accepted by the Standing Committee and subsequently Hsu and other project members were invited to give evidence at a public hearing at the Australian Government Parliament House in Canberra, Australia. More information about Dr. Hsu's research activity and profile can be found on his website: www.ericlhsu.com.

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Biography of professor Anthony Elliott

Professor Anthony Elliott, the leader of the research team that Dr Hsu is a part of, can be found here: www.anthonyelliott.org. Professor Elliott is Dean of External Engagement at the University of South Australia, where he also holds the posts of Director of the Hawke EU Centre and Research Professor of Sociology. He holds a BA Honours degree from the University of Melbourne and a PhD from Cambridge University, where he was supervised by Lord Anthony Giddens, architect of Third Way progressive politics. Professor Elliott holds various international research fellowships and professorships, and is currently Visiting Global Professor of Sociology in the Graduate School of Human Relations, Keio University, Japan and Visiting Professor of Sociology at University College Dublin, Ireland.

Professor Elliott is a prominent social theorist, sociologist and public intellectual. He is the author and editor of some 40 books, which have been translated or are forthcoming in seventeen languages. His work has been favourably reviewed in publications such as the *Times Literary Supplement*, *Los Angeles Times*, *The British Journal of Sociology*, *British Medical Journal*, *American Imago* and *Choice*. Professor Elliott also contributes to media worldwide: amongst others, he has been recently been interviewed by the BBC World Service, The Sunday Times, ABC Radio National, The Australian, BBC Radio 4, GMTV Sunday as well as European and North American radio and television networks.

Professor Elliott is currently working with his research team on artificial intelligence, robotics, machine learning and global transformations. His research on AI and robotics is funded by the Australian Research Council, the Toyota Foundation, the European Commission through Ersasmus+ Monnet Actions and other agencies. In 2017, Professor Elliott was appointed by the Office of the Chief Scientist to the Australian Council of Learned Academies as a Panel Member of the Expert Working Group on Artificial Intelligence and Machine Learning. His next book is titled *The Culture of Artificial Intelligence*, published by Routledge in 2018.

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