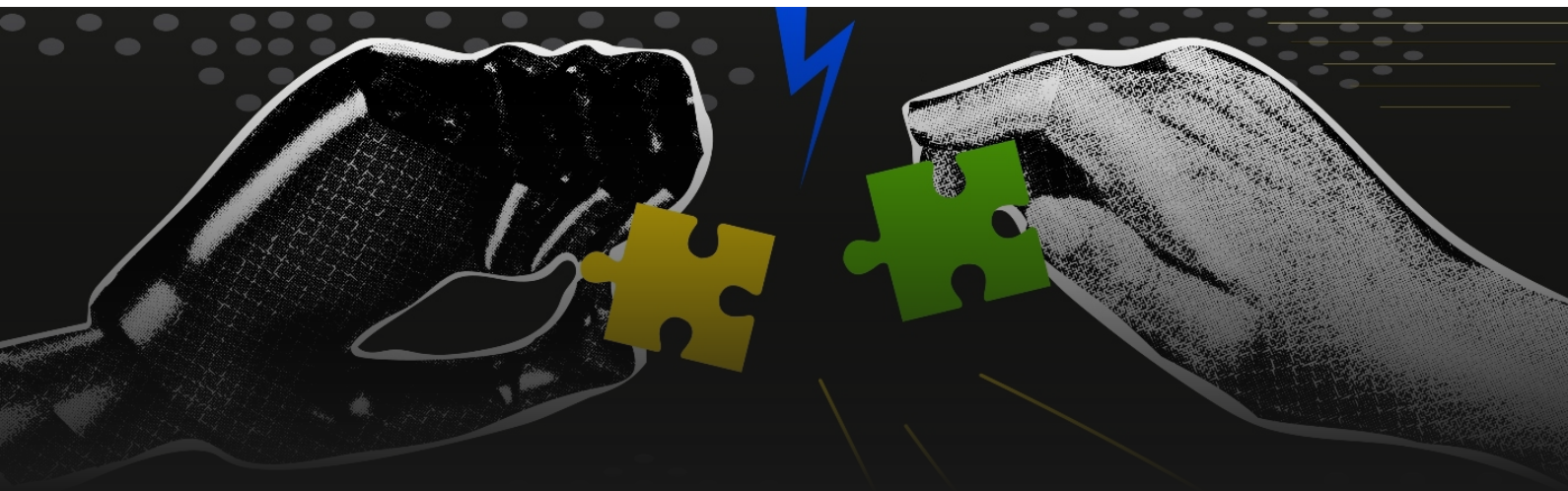




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Why AI needs social science

Humans are at the centre of the AI revolution. Helen Margetts and Cosmina Dorobantu make the case that AI needs to be shaped not just by computer science, but by social science – the study of humans and their systems of organisation. At the same time, AI can help revolutionise social science, much like it has the natural sciences.

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The most sophisticated AI models are about people. They are trained on trillions of tokens that capture human communication, behaviours, and interactions. And AI development matters in so far as it will improve or endanger our ways of living and being. AI is already changing our economies and societies, [our interactions](#), our institutions, how we live and [how we learn](#), [how we find love](#) and [how we make war](#). As we navigate this technological transformation, we must remember that people created AI, data from people fuel it, and AI impacts people. We are at the core of the AI revolution.

If people are central to AI, the social sciences must play a key role in AI advancement. The social sciences offer us the academic lenses through which we can study and understand people, from individual behaviours to the complex socio-economic systems that we create. The social sciences shine light on how economies and financial systems function, how politics, governance, and law guide the world that we inhabit, and on what drives societies and human behaviour.

The social sciences are the only way we have to understand ourselves. This understanding is as important to AI development as technological expertise.

What is the relationship between AI and social science?

When we think about the intersection of AI and the social sciences, there are three key questions.

First, how can the social sciences make AI better? We are moving towards a world where AI agents will increasingly manage our affairs and populate our workplaces, schools, and health care systems. For that world to work well, the design of these agents should rely on the decades of scholarship that we have about individual, collective, and organisational behaviour. We should be drawing on what we know about the patterns that emerge in situations of competition, coordination, collective decision-making, and co-operation. Reward functions play a key role in many AI models, so building in an understanding of incentives and incentive structures that is grounded in social science theories could have a massive influence on the outcomes of agents' actions and interactions. Recent research on ongoing sustained social engagement with AI (as opposed to transactional interaction) urges a focus on **socio-effective alignment** which uses notions of basic psychological needs to design AI systems that support rather than exploit our fundamental nature as social beings.



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Second, how will our world change as a result of AI? AI already has a profound impact not just on our economies and societies, but also on us, as individuals, on our children: on how they learn, socialise, interact with the world around them. To navigate this changed world, we need to rethink long-held theoretical and conceptual frameworks. AI in the workplace will give rise to new questions ranging from the structure of organisational hierarchy to potential job losses, and the **meaning of work** in an AI-powered world. In politics, we will need to understand what AI means for the logic of collective action, the power of political persuasion, or the transaction costs of voting. Without a new way of thinking about the role of the state, our economic and education systems, we risk technological advancement that will not lead to human flourishing. We need to renew social science for an AI-powered world.

Third, what can AI do for social science? The hard sciences are heralding **a new era of AI-driven scientific discovery** – from **impressive improvements in AI's abilities to tackle math problems** to **accelerating materials science**, and **solving the 50-year grand challenge of protein structure**

prediction. Yet despite the enthusiasm for and the potential of AI for scientific discovery, there are as yet no concerted efforts to bring in an era of AI-driven discovery for the social sciences.

Tackling these three questions would allow us, as social scientists, to guide AI advancement, understand our emerging AI-powered world, and usher in an era of AI-driven discovery for the social sciences.

How to get there?

We need to build social science for AI. We need cutting edge social science research that demonstrates the importance and value of social science insight to the technology world. The research labs of the tech giants driving AI development have tended to focus only on the mathematical and physical science disciplines traditionally associated with AI; engineering, statistics, mathematics and computer science (with the possible exception of Microsoft research in New York). But things are starting to shift, with Mustafa Suleyman, CEO of Microsoft AI, proclaiming 2025 as the “**year of the social science hacker**”, where LLMs widen access to technological expertise and social scientists can bring a creative mentality and alternative perspectives to those that the traditional AI disciplines offer. To make social science a key component of AI advancement, social science researchers will need to overcome their traditional wariness of “big tech” and build collaborations with the leading AI companies. Social scientists need to be embedded in the teams and organisations that are pushing the frontier in AI development and use.



AI will generate a whole range of social and policy questions requiring the attention of social scientists, from the effects of large language models on education to the impact of AI on labour markets.



We need a social science of AI to understand – and improve – AI’s impact on society, economy and democracy. Social scientists, at times, were slow to recognise the importance of successive generations of technology. Political scientists followed social commentators in proclaiming that the ‘revolution will never be tweeted’ even after the first uprisings of the Arab Spring, for example, and lack of data meant that it took a while for economists to understand the importance of the platform

economy. But the impact of AI will generate a whole range of social and policy questions requiring the attention of social scientists, from the effects of large language models on education to the impact of AI on labour markets. Government can play a key role here, setting aside research funding targeted at answering these questions, as exemplified by the AI Security Institute's programme on societal resilience, or the possibility (as raised by Geoff Mulgan) of an [Aria for social issues](#). These programmes must have direct feedback loops into policy and incentivise collaborations that cross departmental and disciplinary boundaries. The AI age demands not only that social scientists find ways of working alongside scientists, but also that we improve the way in which different social science disciplines work with each other.

Finally, **we need to develop AI for social science**. Social science research that makes the most of AI-powered tools and methodologies is challenging for social scientists, requiring the incorporation of technical expertise and working in multi-disciplinary teams that go against the lone scholar model. Another challenge is that the social sciences currently lack the foundational datasets and benchmarks needed to create effective AI tools. For an age of social science rediscovery analogous to the revolution currently underway in science, we need concerted efforts to develop a frontier corpus that will establish the training datasets, evaluation benchmarks, and performance metrics tailored to the questions and methodologies of social science inquiry. A 2017 *Science* article [The AI Revolution in Science](#) pointed to how pioneers were developing AI to design and carry out scientific experiments as well as interpret the results, and that these "tireless apprentices" might move to become "full-fledged colleagues". By February 2025, Google introduced the "[AI co-scientist](#)", an multi-agent AI system to help scientists advance their research. Working with AI developers, social scientist researchers must lead efforts to develop AI co-social scientists, too.

In summary, the relationship between AI and social sciences is three dimensional. Social sciences can improve AI systems, a new kind of social science expertise is essential to understanding AI's profound impacts, and AI can transform how we conduct social science research. The only way we have to shape an AI future that serves humanity is by building bridges between AI and social sciences along all three dimensions.

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Cosmina Dorobantu is Professor in Practice at LSE's Data Science Institute (DSI). She co-founded and co-directed the world's largest programme of research on AI for the public sector at The Alan Turing Institute. Her extensive policy influence includes serving on the Mayor of London's Data Advisory Board, advising on data strategy and the development of the Data for London platform; the Bank of England and Financial Conduct Authority's AI Public-Private Forum, advising on the benefits and challenges of AI deployment in financial services; and the Department for International Trade's Trade and Economy Panel, advising on digital trade and AI's impact on global commerce. She has also held advisory roles for the Cabinet Office and Government Office for Science on long-term strategic thinking, and served as an expert witness to UK Parliamentary committees.

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