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Time for a makeover?

Examining the state of the social sciences, **Amanda Goodall** and **Andrew Oswald** conclude that researchers in stagnant, silo-bound subjects do not address mankind's most pressing issues and that the disciplines need a shake-up

A brave, intriguing and fiery op-ed article appeared last year in *The New York Times*. Written by Nicholas Christakis, it was highly critical of the way that modern social science is done. The headline – “Let’s Shake Up the Social Sciences” – captured its spirit, and it spawned grumpy postings on social science blogs across the world.

Christakis’ unusually cross-disciplinary range of expertise makes him well-placed to judge. He is a medical doctor and a sociologist, and currently heads the Human Nature Lab at Yale University, where he is Sol Goldman Family professor of social and natural science. He is famous particularly for

his work with James Fowler of the University of California, San Diego, which has promulgated the memorable idea that it is your friends who are making you fat (because they are fat too and you compare yourself to them

– not because they take you out to great restaurants). Christakis’ lectures are typically characterised by complicated modelling of social networks and starkly beautiful graphical representations of nodes and linkages. Not many people in the world have his track record, which includes lots of articles in prestigious scientific and medical journals such as *Nature*, *Science* and *The New England Journal of Medicine*, as well as publications

“What principally matters is whether social scientists are doing their job of helping humans to understand the world and improve life”

in fields such as sociology and economics.

So Christakis, who visits the UK later this month to present his research and debate his ideas on the state of social science, is an inter-



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esting man with an arresting CV. But does this make him right? We are inclined to believe that, broadly, he is.

The first thing to have in mind, as background, is the astonishing size of the social science literature. Few people appreciate this. The Thomson Reuters Web of Science database (which is by no means exhaustive of the entire global academic output) lists more than 3,000 social science journals. The journals classified as economics alone contained

approximately 20,000 articles last year. This implies that one new journal article on economics is published every 25 minutes – even on Christmas Day. This iceberg-like immensity of the modern social sciences means that it is going to be difficult to say anything coherent and truly general across them. Nobody walking the planet has read more than 1 per cent of their published output. Most of us have not read 0.1 per cent. Such facts should give all of us – whether or not we agree with Christakis – pause for modesty in our assertions.

But let us do our best to judge the state of the social sciences. One place to begin is with Christakis' view on what he sees as the disciplines' conservatism. In his *New York Times* article, he says that in his working lifetime he has seen the traditional titles of science departments transmute into innovative neologisms such as systems biology, neurobiology and molecular biophysics. These changes, in his opinion, have first reflected and then fostered interdisciplinary ways of thinking – which are still missing from social science departments.

"The social sciences have stagnated," he says. "They offer essentially the same set of academic departments and disciplines that they have for nearly 100 years: sociology, economics, anthropology, psychology and political science. This is not only boring but also counterproductive, constraining engagement with the scientific cutting edge and stifling the creation of new and useful knowledge."

This is an interesting and sharp claim. He is right, surely, about departmental nomenclature. A quick search of UK universities' websites shows that most have awfully tradi-

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tional departmental structures. We do not know of any universities that have departments of neuroeconomics, sociobiology, virtual experimental politics or behavioural geography.

Yet is that a problem? Descriptors do not matter much in themselves. The truly serious issue is whether immovable department names are a worrying signal of immovability of thought. Sadly, we suspect that, in the UK at least, they are. One of us did a social policy degree in the 1990s and is conscious that it contained nothing about the natural sciences. And one of us did a bachelor's degree in economics in the 1970s and is conscious that undergraduate economics is not very different in its content today – despite some efforts to change the curriculum following the financial crisis by economists such as Wendy Carlin from University College London.

UK social science undergraduates are, we believe, given essentially no teaching about modern brain science, the geophysics of climate change, the hormone cortisol, the biology of skin resistance, the genetic polymorphism 5-HTTLPR, the life-cycle happiness of great apes, the physiological effects of

oxytocin or the nature of herd behaviour in zebrafish. Yet students would be fascinated by these and the many other findings of the natural sciences that could form a vital adjunct to their knowledge of social scientific issues. If you do not believe us, type these phrases into Google and see how much they matter in modern social science research.

It is possible that waiting alone may solve the problem, that such topics will eventually find their way into undergraduate lectures and that Christakis' criticisms are just jumping the gun, and merely to be expected from a researcher who is impatient even with the frontier work currently being done in social science. But it is hard to know.

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world and improve life. Our instinct is that too much of social science is focused on minor issues. An important recent contribution to the assessment of the impact of the social sciences on public policymaking, business, the third sector and the economy was carried out by Patrick Dunleavy and his colleagues in the London School of Economics' department of government, Simon Bastow and Jane Tinkler. In their 2014 book, *The Impact of the Social Sciences: How Academics and Their Research Make a Difference*, they argue against the simple dichotomy of social versus physical sciences. Instead, they prefer to think in terms of three categories of disciplines: those concerned with, respectively, human-dominated systems, human-influenced systems and almost completely natural systems. They argue that the social sciences are increasingly important in the study of human-influenced systems, such as the planet's climate, and that we need substantially greater interaction and integration between science and social science subjects ("Use 'impact agenda' to prove value, social sciences urged", News, 9 January 2014). We agree, and so would Christakis. Climate change is an obvious social science concern, where the difficulty for Planet Earth is that, as individuals, people will not alter their carbon-consuming ways. This is ultimately a social problem.

It is not easy to understand why topics such as climate change would attract comparatively little interest from social scientists. Optimists will be able to point to some research on the topic, such as that by social scientist Katrina Brown from the University of Exeter, business school professors Andrew Hoffman from the University of Michigan and Ans Kolk at the University of Amsterdam, and economists William Nordhaus from Yale University and Richard Tol at the University of Sussex. But when weighed against the size of the problem for the human race, why does the UK, for example, have so few academics who do research on climate change in its most famous departments of sociology, economics and political science? Their scarcity is chastening.

There is worrying evidence that this letting down of humanity has as much to do with the selection habits of major social science journals as with researchers' narrow horizons. As one of us has previously shown, bibliometric

data reveal that, prior to 2008, most of the elite social science journals in economics, business studies, political science and sociology eschewed articles on global warming. There has been some improvement over the past few years, certainly in business and management journals, but, as a stark example, the highest-impact political science journal, the *American Political Science Review*, appears not to have published a single article on climate change or global warming. And the *American Sociological Review* has published only one. This seems extraordinary.

Instead, the empirical study of climate change by social scientists has appeared mostly

in specialist journals, such as *Energy Policy* and *Ecological Economics*. Sad to say, these journals are often viewed as less prestigious, so younger generations of social science scholars are subconsciously put off from working on this vital topic. Contrast that with the hard sciences. The highest impact-factor journals, such as *Science*, have published some of the pioneering research on rising carbon emissions and the melting of glaciers.

The journal system in the social sciences worries us a lot. This is not because we think that journals in natural sciences are flawless or that journal referees will ever be perfectible. But another salient fact about social science

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articles is their puzzling length. If journals such as *Nature* and *Science* can insist that their contributors keep it down to a few pages, why on earth do social science journals allow authors to rabbit on and on? The June 2014 issue of the *American Sociological Review* has an article called "Changing work and work-family conflict: evidence from the work, family, and health network". It is 27 pages long. The March 2014 issue of *Administrative Science Quarterly* has an article called "The price you pay: price-setting as a response to



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norm violations in the market for Champagne grapes". It is nearly 40 pages long. In the most recent (August) issue of *The Quarterly Journal of Economics*, the average article length is 48 pages: more than double the average length of papers in the equivalent issue 40 years ago.

At best, this is inefficient. All the detail of life can now be put into online appendices, allowing the articles themselves potentially to be shorter than ever. At worst, our darker hunch is that the long length of articles in so many elite social science journals has little to do with the quality of research ideas. It is fashion. More worrying, it is fashion that is driven in part by the conscious or unconscious desire of editors and referees to restrict the number of articles they publish.

Fashion and monopoly power are an especially unattractive combination. In many social sciences, youngish researchers publish only tiny numbers of journal articles per decade, meaning that the prestige of the journals in which they publish makes all the difference to their promotion prospects. Our concern would be that young researchers would be especially prone to follow the herd and work on ideas that referees will find conventional but that do not address mankind's most pressing problems.

Perhaps this would be improved by one type of shake-up. Social science journals could adopt the practice of a number of important science journals and employ full-time editors, who are social scientists but not regular academics. Conceivably, having professional editors helps journals such as *Science* and *Nature* – for all their imperfections, of which we are genuinely cognizant – to promote disinterested science and somewhat to resist fashion and monopoly power.

It is also worth saying that business schools seem to do a reasonable job of bringing different disciplines together under one roof. Many management journals, too, attempt interdisciplinarity, even if they do not always succeed. More probably has to be done, however, just to get political science to speak to a discipline like psychology, let alone to the biosciences. If we are not careful, the global expansion in the number of scientists of both the social and natural variety will lead to greater polarisation and deeper silos. Christakis is right that a bit

of shaking probably is in order. ●

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The issues in this article will be discussed further at a public debate, "Do we need to shake up the social sciences?", jointly organised by Warwick's department of economics and the Forum for European Philosophy at the London School of Economics on Tuesday 21 October at 6.30pm. Times Higher Education is media partner. Panellists will include Nicholas Christakis, Patrick Dunleavy, Amanda Goodall, Andrew Oswald and, in the chair, Siobhan Benita. Christakis is also presenting his research in public lectures at Warwick on 22 October at 5pm and at Cass Business School on 23 October at 6pm.

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