‘The great challenges of the 21st century are geographical in their formulation, analysis and consequence, and they transcend the physical/social divide’

To study the Earth, its biodiversity and humans as part of that, is to study geography.

A few decades ago, our discipline was in the academic doldrums. Split between the science of the physical world and the social science of humanity, it was accused of being a subject without a core: no more than a bunch of disparate interests and maverick academics gathered under the banner of place and space, teaching undergraduates of middling ability who were often set on a career in banking.

In the UK, the phrase “geography teacher” remains a term of abuse. It has been used to disparage the manners, attitudes and even sartorial elegance of individuals as disparate as Labour Party leader Jeremy Corbyn and musician Jarvis Cocker. Yet geography has never been more important than it is now. Humans have never been more networked, and we have never known so much about the natural world, its biodiversity, its chemistry, the flows of its energy that we capture and put to work and the consequences of our actions on a dynamic biosphere. The linking of all these things is the essence of geography, and the subject is enjoying a renaissance.
In 1971, US biologist Barry Commoner set out four laws of ecology in his book *The Closing Circle: Nature, Man and Technology*. These were: everything is connected to everything else; everything must go somewhere; nature knows best; and there is no such thing as a free lunch. Some might think this is all rather New Age and glib, but unpick these simple homilies and you reveal the origins of modern geography. It is indeed a scavenger discipline, picking up ideas from fields as diverse as ancient philosophy and modern biology and sticking them together. But connections lie at the heart of globalisation; nature is at the root of sustainability; and that lack of a free lunch is linked to the importance of equality.

This is because our well-being is based on mutual interdependence with each other and with the natural world. When the comparator countries' overall levels of affluence are similar, people in more equitable countries tend to consume and pollute far less than they do in those where inequality is higher. If everyone on earth behaved, consumed and polluted like the citizens of the US, we would need four planets to live on. If we all lived as the far more equitable and ecological Japanese live, then we would need only two. Unfortunately that is still one planet more than we have.
Those three core concepts – globalisation, sustainability and equality – sit at the heart of 21st-century geography. This is arguably true regardless of whether it is focused on the physical processes of the natural environment or the less predictable complexity of human lives, states, wars and trade. These are the three areas of knowledge – conjoined with a humanistic philosophy – that acknowledge the pre-eminence of physical constraints on human endeavour. The future of geography includes developing a toolbox for transformative change. It is an action subject: geographers not only do fieldwork, they also become involved in activism, policy and advocacy.

The great challenges of the 21st century are geographical in their formulation, analysis and consequence, and they transcend the physical/social divide. These include climate change; accommodating 10 billion humans (which means coping with population ageing); maintaining biodiversity (slowing the rate of extinctions); enabling food production to rise (and eating less meat); managing increasingly diverse and growing urbanisation (and diaspora); and understanding the globalised flows of capital that undermine the concepts of the nation-state and democracy.
Geography has always been at the heart of trying to understand both the world humans inhabit and what it is to be human. Literally meaning Earth-writing, it is much older than the ancient Greeks who coined that term. It stretches from the earliest cave paintings depicting the animals that roamed the world and the very first field systems, to the design of new warped maps of our modern world: highly detailed gridded cartograms that portray the incidence and distribution of populations, their habits and their environments.

In Europe, we still remember Thales of Miletus, the philosopher and mathematician who, in the 6th century BC, used trigonometry to calculate distance and height and strove to explain the natural world without recourse to mythology. Today, we are learning (many of us for the first time) that a long geographical tradition was being developed in China at the same time. Gridded maps and complex inventories of places and resources – and the connections between them – were increasingly important knowledge for successive centralised Chinese states to exert power and control.
In the UK too, geography was traditionally the subject that every colonial officer needed to know. Modern-day geography remains strongest in places that still have imperial ambitions and/or legacies. In many other countries, the academic subject hardly exists, and few resources are found for its study. The US is still the nation with the most geographers, but the UK has the most per capita. More than 80 UK universities offer geography courses, according to the Royal Geographical Society. These are being taken by almost 30,000 students, of whom almost 3,000 go on to undertake postgraduate study in geography. Those numbers are rising, as are the number of schoolchildren taking GCSEs and A levels in geography.

The world of wilderness: areas larger when further away from people. Map by Benjamin D. Hennig

The breadth of knowledge, perspectives and skills that go into a geographical education are increasingly applicable in a complex and continuously evolving labour market. The phrase “nexus thinking” is bandied about in the business world. What is meant by this is really geographical thinking, where phenomena, people, places and processes are all interwoven to create a fuller, more rounded understanding and, hopefully, an enhanced ability to make better choices about the future.
Geographers can’t claim pre-eminence for their subject. Memories of the mocking we received in the recent past helps to keep us in our place – and to understand geography is to understand that politics, economics, sociology, history, languages, chemistry, biology, physics and philosophy also matter very much. Nevertheless, no other subject so boldly ranges as widely across other disciplines: that is geography’s strength, not its weakness.

The world shaped by people showing the migration of humanity. Map by Benjamin D. Hennig

We can only marvel at the memories for arcane geographical facts displayed by the teams of students competing on the BBC television quiz programme *University Challenge*. But the real essence of geography isn’t “the facts”, but the ability to join them together to create something greater than the sum of the parts. Geography is about feeding the imagination that is required to join up all the disciplinary dots and to survey the planet that is our only home in the round: to reveal what our actions are doing to it – and to us as part of it.

No one can actually see the whole of the Earth’s surface at one time. You have to unwrap and unroll it to see it. As every geographer knows, that is the beginning of the process of making a map.

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