The laws of geography

Peter Smith reflects on how he has overlooked some fundamental 'laws' underpinning geography and proposes a new one

his is a very public confession. After studying and teaching geography for some 40 years I remain humble enough to accept that there are vast areas of the subject that I am ignorant of: and that the ignorance is increasing steadily. Nonetheless, it was with something of a sense of shock that I realised that I had missed out completely on an article so basic to the subject, written originally in 1969, and never subsequently picked up by me. I immediately recognised the truth of what was written, and was devastated to realise that I had spent much of my career putting into words an alreadyinvented wheel.

The review article, in the Annals of the Association of American Geographers (Miller, 2004), revealed that in all the years I had been developing a better understanding of geography, there was a 'law' postulated ('invoked' was the word used) which encapsulated the fundamentals of geography. How did I miss it? What is this 'First law of geography', invoked by an American geographer, Waldo Tobler, in 1970?:

'Everything is related to everything else, and near things are more related than distant things'.

So obvious, isn't it? The very essence of geography! This is where the development of cybernetics and general systems theory had been taking us in the 1940s, 50s and 60s, its nomothetic (law-seeking) approaches in the post-Hartshorne world, its concepts, generalisations, principles, ideas (remember The Teaching of Ideas in Geography by HMI in 1979?), and now so simply expressed! With this first law as a guiding principle so much other geography can be better understood: it provides part of an intellectual skeleton on which to hang the flesh of what have been the overly content-led

curricula which geography students have had to study at all levels. It can provide the student and teacher with a framework to which much other work at local and global scales can be related.

From Tobler's 'First law of geography' links can be made to other cognate subject areas, for example the 'First law of ecology': 'Everything is connected to everything else'. How could I have missed reading Peter Gould's plaintiff cry in 1979 that 'if a graduate student is not aware of certain pieces of Tobler's research his/her own research abilities are jeapodised because he/she cannot gain a new and crucial perspective ... An innocent ignorance of Tobler's work now constitutes a constraint on the geographical imagination' [my emphasis added]. (Gould, 1979) Were you constrained? Had/have you heard of Tobler's 'law'?

In the 1980s the emphasis of the various school curriculum projects by the Schools Council, the Bristol project, the Geography for the Young School Leaver project, the textbook projects such as the Oxford Geography Project and others, offered a way of understanding many of the 'law seeking' approaches. The national curriculum for geography, from 1991 onwards in its various revisions, hardly built on these earlier approaches, and has encouraged an ad hoc way of studying geography, with an emphasis on content over an intellectual framework for understanding that content. Statements of attainment and the 'level descriptions' that replaced them are not a proper substitute for principles and generalisations to help students understand how things co- and inter-relate, and to provide them with a robust framework for analysis and understanding. The ground-breaking work of *Thinking through Geography* (Leat, 1998) and texts such as *Learning through Enquiry* (Roberts, 2004) are the beginning of the reaction to the strictures of the national curriculum as currently promulgated. They offer strategies for teaching about the complexities of a modern, rapidly changing world.

But, in the middle of the curriculum dogfighting of the 1990s, how did I miss the 'Second law of geography' proposed by Arbia *et al.* (1996), nearly 30 years after the first?

'Everything is related to everything else, but things observed at a coarse spatial resolution are more related than things observed at a finer resolution'.

Of course! The smoothing effects of aggregation! This captures exactly the significance of that key geographical concept, scale, the lens through which phenomena are 'seen'. Again so simply expressed. What next? I do not want to miss the third law of geography (or have I done so already?), so I put out a challenge to readers to propose and publish this and any others they think worthy of being 'laws'. What are the 'laws' you teach to your students to provide them with their intellectual coathangers?

For my part I am hoping that there might be a law postulated concerning the way in which globalisation results from the accumulation and inter-relationship of local processes and events, and *vice versa*. There is, surely, a law of geography that captures the significance of interdependence, as invoked by those who have urged us to 'think globally and act locally' as part of a sustainable world. Could this be expressed as a 'law', using a new word to bring together the global and local, such that:

'Glocalisation realises the interdependence of universal global processes with local knowledge and interpretation.'

Yes, an ugly word, 'glocalisation', but is this what you have been teaching without realising it might be a 'law'? How do *you* express it?

References

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