



Geography – Coming Apart at the Seams?

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Rather than police the margins of the discipline, let's stretch them. Geography is an open, vibrant and exciting place to be.

(Adam Tickell; RGS Newsletter, December 2002)

For most outsiders, an encounter with the discipline of geography may suggest that it studies everything, from global environmental change at one extreme to the minutiae of body-space at the other. It spans the physical, environmental and social sciences, and reaches into the humanities too. Nor might it look much like geography as they understand the term and as it is promoted in other contexts. Closer inspection – a list of the modules on offer in most degree programmes, say – may further suggest a lack of coherence around either core themes or methods. Geographers study and write about a lot of different subjects sometimes with few apparent links between many of them. So, is there a specific discipline of geography or does it comprise a group of loosely related specialists?: is whatever once might have held together dissolving so that geography is now coming apart at the seams?

To address that question, this chapter explores the current diversity of geography and what, if anything, holds its practitioners together in an identifiable discipline.¹ Until fairly recently – certainly within my own academic career, now some 40 years long – geographers did proclaim themselves as having a distinctive perspective and substantive focus. During those decades, however, the perspective has fragmented and the focus has virtually disappeared. Having traced those changes, the chapter finishes by asking whether that matters, whether by its very current existence

and structure geography performs a valuable role within universities and their wider society. Is a core (an agreed set of basic concepts) necessary, or is a vibrant periphery without an apparent core viable – both intellectually and politically? Do geographers have to agree on a disciplinary mission statement in order to sustain their separate identity (the political project) as well as their academic coherence (the intellectual project)?

'Twas Ever Thus? Geography as a Series of Sub-disciplinary Communities

Has geography always been fragmented and incoherent? Not in its early decades, when those who created the discipline – many not trained as geographers themselves – sought to give it a clear rationale and coherence. The language of that coherence still characterizes much geographic writing, but more as rhetoric than reality.

Geography emerged as an academic discipline in the late nineteenth and early twentieth centuries as a subject bridging the physical and social sciences by studying the interactions between people and their environments. Demand for university courses came from a number of directions: some geographic subject matter was seen as desirable for students of geology and of economics, for example, and teachers were appointed to the relevant university departments. But the main demand, especially in Europe, came from the need for trained geography school teachers. Geography was seen as an important component of an education that promoted citizenship through national and self-awareness: people learned about themselves through contrasts with others. Knowledge of other lands was also used to promote notions of Western superiority, especially when it was linked to imperialism. (On the history of the discipline in several countries, see the essays in Johnston and Claval, 1984, and Dunbar, 2001.)

When established in universities, therefore, geography was promoted as an integrating discipline, bringing together scientific understanding of the natural environment with studies of the use of that resource, as illustrated by patterns of land use and settlement. The core concept which demonstrated this integration was the region, an area of relative uniformity according to selected phenomena: the earth's surface comprised a mosaic of regions, areas with separate physical and human characteristics (at a variety of scales) and the geographer's task was to define and account for that regional pattern.

To produce regional definitions and descriptions geographers drew material from other disciplines. Increasingly, they became interested in

that subject matter and started to study some of those topics as ends in themselves. Geography was then divided into two main long-recognized types of study: systematic geography, which investigated individual aspects of the earth's mosaic, such as climate and land use; and regional geography, which drew the various systematic studies together. The latter remained the core geographical concern according to many of the discipline's leaders: every geographer was expected to specialize on (and teach about) a particular region and the systematic studies were seen as secondary, as means to the end rather than as ends in themselves.

This view of the discipline was explicit in *American Geography: Inventory and Prospect*, a volume edited by Preston James and Clarence Jones in the mid-1950s which provided a grand summary of the state of the discipline (James and Jones, 1954). Although each chapter addressed a different systematic component of geography, the editors were certain that the true nature of the discipline was based on the unifying features of the regional concept and cartographic analysis. Some 40 years after this book, a further overview of American geography also contained chapters on systematic sub-disciplines in physical and human geography that again predominated (Gaile and Wilmott, 1989). This time, however, editors could provide neither a concise definition nor a clear synoptic view of the discipline. To them, Geography 'was not bounded' around a core, but held together by an integrative perspective.

Diversity and divergence had replaced disciplinary cohesion around a core focus over the preceding decades, despite attempts to promote unity through the concepts of place, space and environment. Human geographers had increasingly shifted their attention to the social sciences and humanities while physical geographers had built stronger links with environmental scientists – a 'schism [that] undermines the ability of geographers to meaningfully contribute to our understanding of nature–society interactions' (ibid.: xxxi). Meanwhile, 'geographers continue to ply their trade abroad and to attempt regional syntheses, albeit in diminished numbers' (ibid.: xl). But the region as the core concept had been subject to violent attacks from which it had failed to recover (for a review, see Johnston, 1997), and the search for alternative synthetic cores (as in Abler et al., 1992) had failed to either convince or deliver.

Academic Disciplines and Communities

Geography now comprises a wide range of systematic studies which have one or more of environment, place and space as their foundational concepts (or organizing themes) but whose external links to other

disciplines are sometimes at least as strong as their ties with other fields within their home discipline. As Heather Viles suggests in Chapter 2, the split between physical and human geography has widened in recent years, as physical geographers ally themselves increasingly with other environmental scientists and participate in large projects aimed at elucidating past, present and future environments through mathematical modelling and laboratory analyses of physical, chemical and biological processes allied to large collaborative data-collection programmes. Human geographers, meanwhile, have explored a variety of approaches within the social sciences and the humanities, employing a range of epistemologies, ontologies and methodologies which apparently have little in common with each other, let alone with those deployed by physical geographers. The discipline is divided into two very substantial, but separate, sub-disciplines, each of which is further subdivided into a number of separate fields. Many of these seem to operate quasi-independently within the holding companies provided by university departments of geography.

Appreciation of the nature of research within these sub-disciplines and their subsidiary fields can be approached by visualizing the discipline as a hierarchy of communities of practitioners. All academic activity takes place within established paradigms, blueprints which define what is undertaken through general agreement regarding both accepted knowledge – that accepted as (at least provisional) understandings and explanations of particular subject matter – and methods of extending that knowledge. Individuals join academic disciplines via socialization into those paradigms, through undergraduate and postgraduate training during which they learn about the accepted knowledge (the ‘facts’, or problems that have been solved) and the ways of advancing knowledge (methods for tackling unresolved problems). When they have joined the community – having served an apprenticeship and been accepted into it as somebody who will contribute to further advancement of knowledge – they undertake their own research, which is published and adds to the store of knowledge on which future generations draw.

These communities of scholars are hierarchically arranged. At the top is the discipline with which individuals have affiliated, and with which they both identify and are identified by others: most work in a university department of geography and their training involved gaining a degree in geography. Within that large community, however, they will specialize, having decided at some point in their training – almost certainly before they became a postgraduate – to be either a physical or a human geographer and, within each, to associate with a specialist sub-discipline, such

as geomorphology or economic geography. That will not have been the end of the choices, however: within their chosen sub-discipline they have elected for a particular field of activity – the study of manufacturing or service industries within economic geography, perhaps – and a mode of addressing problems within it. In that area of work there will probably be only a relatively small group of others addressing related problems, a community of cognate researchers (perhaps spread widely over space) interested in what the others are doing, in reading their research findings and sharing their own with them.

These small communities of researchers have been likened to villages by Clifford Geertz (1983). For many (even most) geographers, their intra-village research links may extend well beyond the formal boundaries of their academic discipline, and their interactions may be as much (if not more) with scholars affiliated with other disciplines as with their own: most geographers who emphasize space and place in the study of elections, for example, interact more with political scientists, sociologists and statisticians than with geographers working in other specialist fields. Many individual geographers belong to a number of overlapping research communities, participating in a wide range of conferences and other meetings and both reading and contributing to a broad conspectus of research literature. Some operate contemporaneously in more than one community; others move communities as their interests change. The communities themselves may wax and wane as interest in their work grows or declines. And there are continuing inter-community as well as intra-community debates over the best ways forward, on what should be accepted as useful knowledge and how research should be undertaken.

All disciplines are divided into such communities and sub-communities: geography is by no means peculiar in this regard. Where geography is distinct, perhaps, is in the breadth of its subject matter and the range of very different communities co-existing under the disciplinary umbrella. In part, this reflects its origins as a discipline whose subject matter embraced the natural and human environments and their interactions, and whose core concerns – space, place and environment – can be applied to a plethora of subject matter, all also studied in one or more other disciplines. The potential range of cross-disciplinary contacts for geographers is large and recent decades have seen an increasing number of them being realized, while links with their own disciplinary peers have weakened: for many geographers, the focus of their intellectual projects is outside the formal discipline of geography as constituted in the universities, but their political projects – their recruitment of students to sustain their activities – remain centred on departments of geography.

Contemporary Fragmentation within Geography

The advancement of both science itself and individual careers within disciplinary communities involves the conduct and reporting of research. Knowledge production is a shared activity: by publishing their findings (and their critiques of others' work) researchers contribute to the validation and extension of knowledge. The chosen media for publication – perhaps after less formal discussions in group meetings, seminars and conference sessions – are predominantly academic journals. Some of them – especially those published by the learned societies that promote disciplines as wholes – are relatively general, attracting papers from a range of specialisms within the discipline and relaying them to wider audiences. But most journals are specialized, aimed at workers within, at best, a few communities only: to reach the potential audience for their findings, researchers publish in journals that those with shared interests regularly consult. Communities have their own journals, so that the discipline's contemporary fragmentation is readily appreciated through investigating its journals.

A clear difference between human and physical geography is the general location of the journals they contribute to. Many of those favoured by human geographers contain geography in the title, for example, *Economic Geography*, *Political Geography*, or the *Journal of Transport Geography*: in most, the majority of papers are written by geographers, defined as those currently affiliated to a university department of geography. This does not mean that human geographers do not publish in inter-disciplinary journals, or in those dedicated largely to other disciplines – though examples of the latter are relatively rare, save in some specialized areas. But it does mean that human geography is to a considerable extent a relatively closed set of fields and associated communities. This is much less so with physical geography. Few of the journals they regularly contribute to are identified as geography journals, although a number are edited by physical geographers. Unlike their human geographer colleagues, physical geographers are much more likely to publish in inter-disciplinary science journals (many more of them American in origin), where their contributions form only a minority of the contents.

This difference between human and physical geography is further illustrated by Table 1.1, which lists the 23 most-cited journals by members of geography departments in the UK 2001 Research Assessment Exercise (RAE). This exercise is used to rate all departments on a seven-point scale for the allocation of unhypothecated government research funding.² All

Table 1.1 Journals with most papers published by geographers in nominations for the RAE 2001 evaluation.

Journal	Number of citations
<i>Environment and Planning A</i>	141
<i>Transactions, Institute of British Geographers</i>	102
* <i>Earth Surface Processes and Landforms</i>	97
* <i>Hydrological Processes</i>	90
* <i>Quaternary Science Reviews</i>	60
<i>Environment and Planning D: Society and Space</i>	59
* <i>Journal of Quaternary Science</i>	57
* <i>Geomorphology</i>	57
* <i>International Journal of Remote Sensing</i>	51
* <i>Holocene</i>	50
<i>Journal of Historical Geography</i>	49
<i>Regional Studies</i>	46
<i>Area</i>	44
<i>Urban Studies</i>	41
<i>Geoforum</i>	41
<i>Political Geography</i>	38
<i>Applied Geography</i>	34
* <i>Progress in Physical Geography</i>	33
* <i>Journal of Hydrology</i>	33
<i>Geographical Journal</i>	32
<i>Progress in Human Geography</i>	28
<i>Annals of the Association of American Geographers</i>	24
<i>Economic Geography</i>	20

Journals with a* preceding their title are identified here as nominated almost exclusively by physical geographers.

individuals identified as members of a department's research staff have to identify four publications which illustrate their best work in the preceding five years. Most of the items submitted by geographers (91 per cent) were journal articles, with a total of 3870 listed (for further details, see Johnston, 2003a.) The journals that were only cited by physical geographers are indicated by an *: very few of them published in the other journals – including the general geography journals (*Transactions of the Institute of British Geographers*, *Annals of the Association of American Geographers* and *Geoforum*).

Of the journals cited by physical geographers only one, *Progress in Physical Geography*, is an explicitly geographical journal, although only

67 per cent of the papers that it published in 2001 were authored by geographers (as defined above) as were 60 per cent in 2002. *Earth Surface Processes* was established by an Institute of British Geographers Study Group – the British Geomorphological Research Group – but again geographers authored only 67 per cent of its papers in 2001 (Volume 26). Both journals are in effect multi-disciplinary. The other six are explicitly so, and are journals in which papers from geographers form a minority.

Physical geographers, then, are putting their best work in journals outside their own discipline, sub-discipline or even field, aiming at audiences of topical specialists within the environmental sciences among whom physical geographers are a minority only. Human geographers, on the other hand, are placing much more of their best material in geography journals, whether those serving the discipline as a whole (within which human geography predominates), those aimed relatively widely within the sub-discipline of human geography (such as the *Environment and Planning* journals), or those aimed at a specific topical field only (such as *Journal of Historical Geography* and *Political Geography*).

Geography is divided into two separate sub-disciplines – human and physical – each of which is fragmented into a number of distinct fields. Each of those fields operates to a considerable extent as a separate academic community with its own norms, practices and debates; only occasionally do they come together in wider discussions beyond the initial training stages. In addition, physical and human geographers interact beyond their disciplinary boundaries in somewhat different ways. Thus it might be concluded that the academic discipline of geography is little more than a holding company for researchers who operate in quasi-independent communities, some of which are populated mainly by outsiders.

Why Fragment and with What Consequences?

The reasons for fragmentation within all academic disciplines are relatively straightforward to discern – and geography is by no means different in being divided into separate intellectual communities. The volume of knowledge is expanding, much more rapidly than the number of academics – in part because of the pressures for productivity and in part because of the major technological and other advances which have not only made some (especially technical) practices much easier but also facilitated questions being addressed that were previously unanswerable. It is impossible for individuals to assimilate that volume of knowledge – or even become generally acquainted with it, as were the polymaths of

old: today, they must specialize in just a section of knowledge if they are to keep on top of the amount published annually. Furthermore, in many fields within the sub-disciplines the amount of technical knowledge needed for state-of-the-art research calls for substantial periods of training: even then, in many cases no one individual can master it all (or have the needed technology available) so working in groups with a specialized division of labour becomes the norm. As a consequence, some become specialists in fields that are much wider than geography. This has especially been the case in the past 30 years with both remote sensing and GIS, technologies that facilitate many advances in geographic research, in which geographers have played leading roles in developing applications and for which geography departments provide much of the basic training for potential users. Both fields have their own learned societies, journals and conferences in which geographers are a prominent minority, with many of them identifying themselves professionally with those specialist fields rather than with geography, in whose university departments they work: their intellectual projects spread well beyond their political milieux.

Such reasons for fragmentation are common to virtually all disciplines, certainly in the sciences. There is, however, a further reason for fragmentation within human geography, which it shares with other social sciences though not the environmental sciences. In the latter, there is general agreement regarding the nature of science as knowledge production: they share a world-view which privileges observation and measurement, and defines additions to knowledge as statements regarding how the world works that can be validated and replicated by comparable experimentation. Although that world-view, with its associated epistemology and ontology, is shared by some human geographers, others of their colleagues reject it. For them, there is no 'reality' independent of the observers: their science involves studying, appreciating (but rarely explaining and never predicting), and relating the actions of knowing subjects. They deploy separate epistemologies and ontologies from those applied by both physical geographers as well as some human geographers – according to Sheppard (1995), the latter are divided into 'spatial analysts' and 'social theorists' – and, in general, study particular subject matter: cultural geography, for example, is predominantly the preserve of 'social theorists' in Sheppard's terms.

For these additional reasons, geography appears to be an even more fragmented discipline than many others, despite many claims that it has three basic concepts at its core – space, place and environment – and remains one of the few disciplines that provides such a wide range of teaching and initial professional training across the sciences and social

sciences. But, it is frequently claimed, there is no core, no integrating foundational concept with the disappearance of the region from that position – and of the map as the predominant geographical ‘tool’. Certainly there are attempts at integration: many physical geographers, for example, combine with others in building models of environmental systems, of especial value in assessing contemporary changes and their likely impacts. And the boundaries between fields are porous, at least for some workers. But the overall impression remains: geography is an umbrella organization with a lot of separate components having relatively little in common with regard to their research agenda, even though they form the parts of generally offered degree programmes.

What are the consequences of this fragmentation? One major associated problem is a lack of appreciation outside the discipline as to what geographers do, an issue perhaps more problematic for them than for those in some other disciplines (history or physics, say) because of the general association of geography with a particular subject matter that is now, at best, only on the margins of the academic discipline’s concerns. As noted earlier, in the 1950s two terms were key to geographers’ definitions of their subject matter and their approach – the region and the map. Although region is still commonly used by geographers, defining and accounting for regions are no longer the dominant activities: knowing what is where may be central to vernacular understandings of geography, but such background information is sometimes of only marginal relevance to fields within the academic discipline. Maps, too, have been marginalized: there is little training in map construction and use in geography degree programmes, and many pieces of geographical writing see no need for cartographic illustration. Map-making skills have moved from the field and drawing-board to the laboratory and keyboard, involving members of a separate profession using remotely-sensed imagery, geographical positioning systems and computers. So too have the production of maps to display patterns of interest to geographers: standard computer packages provide geographers with illustrative material without any deployment of pen and ink. (On the contemporary use of maps in geography – especially human geography – see Dorling, 1998; Martin, 2000; Wheeler, 1998.)

Political and intellectual projects

Given the absence of a core to the discipline and a definition that can embrace the great variety of activities now undertaken under geography’s academic umbrella, two potential, interlinked, problems arise. The first concerns political projects, and the second intellectual projects.

Regarding political projects, few academic disciplines can feel entirely secure within the rapidly changing map of knowledge: there is always the fear that their approaches will be rendered obsolete by developments elsewhere, that their utility (however defined) will recede, and that the demand for student places on undergraduate degrees and postgraduate programmes will decline. The discipline has to be seen – and must therefore portray itself – as ‘relevant’: the knowledge it produces must add value to the society that pays for it, and students must see the potential (for their careers as well as their roles as citizens) to be derived from obtaining qualifications in it. Geographers, like the members of all other disciplinary communities, must defend their territory and promote their importance.

Such a political project needs an associated intellectual project – or at least it probably has a better chance of success if it has one. To some extent, the existence of geography as an academic discipline with a presence in many universities is a self-sustaining enterprise – as long as students are enrolling, and then getting jobs (whatever the occupations and their relevance to having studied geography), the political project may be relatively unimportant. But complacency is rarely sensible. The discipline has to retain an appearance of vitality and relevance. How does it do that? How does it present an intellectual project that will sustain its political goals?

The answer to this varies from context to context, and can be briefly illustrated by three cases from different countries. In the United Kingdom, geography has been a strong discipline in the country’s secondary (high) schools for over a century, with large numbers of students studying it among their subjects in the public examinations that precede university entrance. For much of the twentieth century, university geography departments could readily fill their places with students who were well grounded in the discipline (as it was practised then), many of whom went back to the schools as geography teachers after graduation (see Johnston, 2003b). The flow of students remains fairly strong in the early twenty-first century, although few graduates now become school-teachers. But several departments have experienced recruiting difficulties recently and some have been closed. The political project to defend geography in the universities involves defending its presence in the schools. Without such a defence, the discipline may wither in the universities: fewer students means less income and decreased viability for geography departments (Cooke, 2002). This is the situation that has evolved over recent decades in Australia, where few independent departments of geography are now to be found in the universities. Instead, geography has been merged into multi-disciplinary programmes, from

which its name may be absent, and a small number of geographers are left with a difficult political task (Holmes, 2002).

If the political project faces no major problems regarding viability, an associated intellectual project may be less crucial. The flowering of so many quasi-independent fields within British geography departments in recent years (especially within human geography) may have been substantially facilitated by the ease of attracting students: academic geographers could follow their research agenda wherever they led them, irrespective of the impact on the discipline's coherence, because there were students ready to follow the lead. But where that is not the case, an intellectual project is necessary.

This has certainly been the situation in the United States where, in contrast to the British experience, geography has been weak in the country's high schools and is absent from a majority of the country's universities. Very few students have any experience of geography beyond basic classes in primary schools, and therefore do not proceed to university intending to read for a degree in the discipline. University geography departments thus have to attract students through the quality and perceived value of their courses. While the region was at the core of the discipline's scholarship, this was most commonly done by departments offering introductory courses in world regional geography, hoping to convince at least some of the takers to opt for more courses in systematic subjects, and perhaps proceed to graduate school for a full training in the discipline. More recently, the focus of the attractive force has changed. As Hill and LaPrairie (1989: 26) put it:

Americans, consummate pragmatists, will judge geography by what it proves it can do to help them improve their lives and their worlds, as they define them. Significant research will be the major criterion of status in academe. Teaching quality will count with students at all levels.

Increasingly, those high-quality courses are being offered in technical fields – notably Geographical Information Science – which offer skills in high demand in the labour market: students come to geography because getting those skills brings labour market advantages, and surveys in the mid-1990s showed that increasingly departments of geography are hiring individuals who can teach them (NAS-NRC, 1997). At the same time, geography is being promoted as a research discipline that deploys those skills in a wide variety of arenas, including studies of environmental processes and society–nature interactions, plus 'homeland security' (Cutter et al., 2003).

The existence of a political project – defending and advancing the interests of university departments of geography, and thus of geographers – thus stimulates thoughts about an intellectual project as a foundation for the political lobbying: geography needs to prove its relevance in certain arenas. The chosen intellectual project may not be supported by all, of course: there are contests over the technical focus currently deployed in the United States, for example, and the consequent down-playing of other activities, notably those involving ‘social theorist’ human geographers (Johnston, 2000).

Conclusion: Does Fragmentation Matter?

Contemporary academic disciplines are necessarily fragmented into specialist sub-disciplines and fields: without it, scientific progress would be substantially hindered. Fragmentation can create problems, however, since it can readily stimulate centrifugal forces that are much stronger than any countering centripetal forces. Individual academics – in our case, geographers – are drawn to work in small communities, many of which are relatively isolated from other communities within their discipline, and indeed may have more contacts without than within their parent discipline. When this happens, disciplinary cohesion declines. Individuals identify with it because it was the focus of their training and provides them with a career, but their scholarly interests mean they have more in common with people having other identifications than with members of their own discipline as defined in the academic division of labour.

Whether such fragmentation and centrifugal change are detrimental to a discipline, and whether this is a particular problem for geography and geographers, are moot points. For three physical geographers, such fragmentation within geomorphology has resulted in a very significant change in the nature of work in their field (Smith et al., 2002). The shift from denudation chronologies to process-related studies initiated in the 1960s was intended to provide a sounder basis for appreciating long-term landscape change. Instead, there has been what they term a ‘diaspora’ as various groups of physical geographers have ‘become more closely allied with other professions and increasingly distanced from the mainstream’ (ibid.: 414). Indeed, in their view the mainstream is drying up: work deploying process studies as the basis to landscape appreciation has resulted in ‘researchers certain that they know the answers, but possibly ignorant of the questions’ since they invariably start with the processes

they wish to understand rather than the landscape changes they wish to explain. For them:

If geomorphologists ignore their central role in the study and understanding of landscape, there is the danger that for all their short-term appeal, our new clothes might turn out to resemble those of the emperor. Moreover, as we discard our traditional garments, others are quickly coming behind, trying them on and finding that they fit quite well! (ibid.: 414)

Clearly, to them, a discipline – or sub-discipline – has to have a central purpose that distinguishes it from others, which for geomorphology should be the explanation of landscape change. Without that central purpose, fragmentation into specialist sub-communities is likely to lead to, at best, inter-disciplinary competition and, at worst, disciplinary decay: no core means, ultimately, no future because no distinctiveness.

At present, therefore, geography is considerably fragmented. It is a discipline that embraces a wide range of disparate intellectual projects which, whatever their separate value, do not apparently cohere around key disciplinary concepts and goals. One of geographers' long-established concepts, the region, has sometimes been defined as a whole that is greater than the sum of its parts, an organic unity that reflects the interacting diversity within places. The region may well have been a useful metaphor for geography itself for some time: it isn't now.

Geography as a fragmented academic discipline lacks a coherent intellectual project. Rather, it is a congeries of disparate projects that share a dwelling but not a home. Furthermore, geography as an academic discipline bears little resemblance to geography as recognized subject matter outside the universities. If the former discipline is healthy and vibrant, this may not be a problematic situation. But if it is under threat, then it needs a political project to defend it – which may call for an intellectual project which rejects some of the fragmentation and seeks to impose and imbue a common purpose.

But should that common purpose mean a coherent core and adherence to a dominant disciplinary project that is more constraining than enabling? Should geographers, as Clayton (1985) advised, restrict their range of activity – 'do less to do anything better'? Should such retrenchment, as Smith et al. (2002) argue, refocus on certain traditional concerns – defined as much as anything by the spatial scale of their investigations? Or should they, as Tickell suggests in the epigram to this chapter, continue to let as many flowers bloom as seeds are fertilized, to continue pressing against (even beyond) the sub-disciplinary research frontiers in order to

advance knowledge? For the discipline as a whole, if Clayton's advice were followed, this could be the prelude not only to interminable and unproductive debates about what is and isn't geography (thereby potentially limiting academic freedom) but also to disciplinary stagnation. For individuals, specialization is clearly absolutely necessary, and each university department will undoubtedly have to decide to concentrate its human, technical and other resources in order to reap their potential, but within those parameters Tickell's advice is surely the most sensible: researchers should develop skills and pursue research interests that they perceive as best for the advancement of knowledge, and which are recognized as such within wider intellectual communities. If topics like landscape change are ignored by geographers, then if they are important enough scholars will return to and reinvigorate them (and will it matter whether they are geographers?).

Will accepting this path mean the absence of a disciplinary core? Yes, certainly sometimes, and perhaps for most of the time. Some think that the current absence of a clearly defined, commonly agreed core is unfortunate with regard to geography's political project (for example, Martin, 2002). And yet there will always be elements of a distinctive core. To deploy another geographical metaphor, the practice of geography, like any other discipline, can be likened to a major river. All of the water it carries to the sea comes from defined catchments; in its middle reaches, the separate streams combine in a single channel; and in its lower reaches braiding is common, as different segments pursue their own course, occasionally recombining. For geography, the catchments are the origins of their students, the middle-reach channels are the undergraduate and postgraduate programmes within which new geographers are socialized into the discipline; and the lower-reach braiding reflects the specialist sub-disciplines and fields into which researchers migrate – occasionally recombining with those from other channels as their interests converge (for a time at least). Those braided channels form the contemporary intellectual project that continually renews the vitality of the degree programmes (a form of reverse flow unknown to hydrologists?!). The political project for geographers involves sustaining the health of the entire river basin.

ESSAY QUESTIONS AND FURTHER READING

- 1 Is fragmentation into specialized sub-disciplines a necessary consequence of geography's expansion in recent decades? Stimulating material for use in answering this question can be found in Clayton (1985), Gregory et al.

(2002), Dear (1988), Thrift and Walling (2000) and Thrift (2002). These authors address the issue from the perspectives of both physical and human geography. You might also reflect upon the organization of the course in your own department.

- 2 Is the future of geography its demise as a separate academic discipline? The same sources are relevant to this question. You could also follow the debate initiated by Thrift (2002) in a series of papers in the journal *Geoforum*.

NOTES

- 1 The original (pre-edited) version of this chapter contained illustrative material and quotations to sustain the arguments developed therein. Copies of that original can be obtained from the author at the School of Geographical Sciences, University of Bristol, UK.
- 2 An eighth point (6*) was added in 2003, without any further evaluation and three of the top-graded departments (5*) in 2001 were promoted to this new level.

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