The compilation involves selective dissection of about 30 or so named maps and snippets from others. The compilation assembly is depicted with a frightening mosaic at the side of the map proper. The mosaic within the compiled map is also apparent to those familiar with geologic cartography; the different map-making styles are quite lucid and contrast sharply with one another. Although the mosaic should serve to apportion responsibility, there is blurring where more than one map is accredited to one area. In some areas there would appear to be a confusion of whose work is compiled; for example, Fontan and Schouppe (1995) seem to be credited for much of the Greco and Spencer (1993) compilation (whose compiling sources, incidentally, are not named). In the case of the editors' own mapwork, it is interesting to see where modifications have been chosen. For example, from the map that accompanied Searle's (1991) Karakoram text, imbricate thrust slices have been retained in preference to tight, south-verging folds to explain the repeated marble bands in the southern Karakoram Terrane in Hunza valley. Additionally, the Stack fault at the eastern margin of the Nanga Parbat–Haramosh massif is still shown as trending ~N–S although it is now well-recognised to trend more NW–SE. Changes include a boldly drawn, ~N–S normal fault on the western margin of the massif, structurally below the MCT.

On the map, the lithological divisions are broadly grouped within traditional Himalayan 'terranes' (Hindu Kush, Karakoram, Kohistan, Nanga Parbat–Haramosh, Himalayan, Sub-Himalayan and 'Granitics') of which, strangely, only the Himalayan Terrane section (not the largest) enjoys a paragraph of general introduction. There is an attempt to put the Himalaya and Sub-Himalaya sections into stratigraphic order, with unconformities drawn for the latter. The lists of lithologies that make up the groups are very dense and unrevealing of the nature and contrasts of the field geology. There could be more acknowledgment of who has described what, and what has been assumed in matching lithologies amongst the source maps. For example, the editors have (sensibly, in my view) opted for the Greco *et al.* (1989) Mesozoic re-interpretation of Wadia's (1931) Precambrian Salkhala formation, but surely the debate is not over so quickly.

For readers of this journal, the main interest probably lies in the cross-sections. There are three cross-sections which together approximate a section through the Pakistan Himalaya. The editors have again made the most of the English Ph.D. theses here, in choosing where to run the cross-section lines. Other cross-section locations might have been W–E across the Hazara or Nanga Parbat areas. It would also have been helpful to extend line "E–F" (the northern section) into Kaghan and Neelam valleys to overlap more with the middle section. Additionally, the lines of section could have been indicated on the mosaic key. The editors have, perhaps wisely, not drawn the northernmost section deeper than 5–10 km below sea level. It is with the drawing of cross-sections that one assumes the editorial input has been strongest. A 'round robin' cross-section is rarely practical ("your bit goes *here*"), so it is disappointing that an absence of structural measurements on the map leaves the reader in a poor position for criticism of the sections. For example, the evidence for the blind thrust structures in the Salt Range is unclear. Large faults receive "thrust, normal or wrench" classification and antiformal and synformal axial traces (plunge direction) are sometimes shown. Without outside knowledge there is little room for re-interpretation in what should be the most thought-provoking part of any map; hence here the editors must be believed blindly. Perhaps local stereoplots could have used the space occupied by Searle's tourist photographs, possibly keyed to specific parts of the map.

The overall impression of the map is that it is an orphan, or somewhat anonymous. There is neither a date nor a publisher's name in some familiar corner. The anonymity prevails in the lack of accompanying text; i.e. the highly-misplaceable guidebooklet to which we have become accustomed. Such a text could have been used to introduce the geology of areas and basic histories concisely. For example, ideas for protoliths seem essential in such areas of polymetamorphism. Here, the editors might have expressed degrees of certainty or acknowledgment of controversy over particular structures, locations of contacts, or ages of units. Here, references for geochronologic ages, preferred interpretations, popular alternatives and even the "also rans" would find a good home, and much of the anonymity would be dispelled. Indeed, there may have been the space for a stereoplot or some other presentation of measurements leaving more opportunity for the 'draw your own' cross-section. The limited text is reserved for the shopping list of rocks types, mineral assemblages and formation names; all likely of little use to general readers of this journal. It is then maybe unclear for whom the map is intended. The uninitiated may be turned away by the lack of any introductory text leaving readers to fend for themselves here in the murky depths of the Himalayan syntaxis. This may be good, in that there is a danger some may regard the map as definitive state of knowledge. It certainly is not, bearing in mind its omissions and necessary judgement in disagreements over observations.

Despite all these criticisms, I wish to take nothing away from the excellent initiative displayed by the editors. They have produced a highly-impressive first canvas that captures much data hitherto scattered amongst desks of Europe, the U.S.A. and Pakistan. The map therefore will provide a good starting point for questions, arguments, revised maps, and most obviously, a return to the field. Any compilation is subjective and, as here, can involve a strong editorial hand. It is the discerning eye of the reader that must be critical. I would strongly recommend this map for workers in the Pakistan (or other) Himalaya for whom it can serve as a framework. It is certainly a nice colourful map that I will put on the wall to be rapidly marked by comments, changes and sketches, helping the next version to roll from the press.

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Geology for all

J. L. Dickey, 1996. *On The Rocks: Earth Science for Everyone*. John Wiley & Sons, U.K. 252 pp. £12.99 (Paperback).

I think this a very welcome book. Its sub-title, "Earth Science for Everyone" is too modest. The book rather amounts to an introduction to science for everyone. Here, of course, the approach is through questions about the Earth. We are shown that the examination of a historical science provides an antidote to the view that science pretends to provide infallible answers to problems posed. It is made evident that often we do not possess the data we should like to have. We see too that it is not enough when attempting to explain historical events merely to throw general laws at them (Frodeman, 1995). Geological science is not just the sum of the physics, chemistry etc. deployed.

The text is arranged in twelve chapters. The first is entitled "Gathering stardust" (Dickey is a meteoritics man). The succeeding seven chapters are concerned with atoms, crystals and rocks, melting, metamorphism, and Earth structure. The ninth tackles questions of the supply of energy and raw materials, as well as the disposal of radwaste. The concluding chapters introduce the reader to the Earth as a planet. Equations appear where they usefully sum up the matters concerned. The need for the stringent testing of hypotheses is a constant issue.

Through an essentially historical approach to a historical science, the very human nature of the enterprise is made clear. Hypotheses are children of their time. Failure is as likely an outcome of enquiry as success. The part that argument through analogy plays in historical science is illustrated. Uniformitarianism, the most famous example, naturally is discussed, and Lyell's unwillingness to face the awkward question of a start to Earth history noted. Perhaps Dickey could have usefully added here that Kelvin in 1868 published a fierce condemnation of this weakness of what he termed "British popular geology"

(Geikie, 1908). Kelvin may have been wrong in his estimates of the age of the Earth, but as one of the founders of thermodynamics saw, events had to have a start. Dickey recognises the place of J. T. Wilson (1965) as a pioneer of plate tectonics. Would not his achievement have seemed the greater, however, if it had been pointed out that only six years earlier, a book he had helped write describes the mid-ocean fracture-system as one of the primordial features of the Earth (Jacobs, *et al.*, 1959, 347).

In my view Dickey's text is an admirable introduction to both thinking and doing in science in general, and not geology alone; although, of course, it does the latter very well. Clearly in one small book much is omitted. Enough is said, however, to provoke the reader to further enquiry. Addressed to the dilatante and not "... the serious student....", I find it difficult to believe that even the most hardened professional scientist, whatever the field of specialisation, could fail to profit from reading it.

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