

across studiable history lend no compelling support to this theory. Intelligence confers no clear breeding advantage upon its possessors: many of us manage our biological business quite adequately without enjoying a high IQ. As to the envisaged romantic and/or marital meeting of minds, one recalls the rueful observation of the Canadian prime minister, Lester Pearson: "Behind every great man there stands an astonished woman." Rather more seriously, the authors do not reflect that mind-reading capacities would be of no evolutionary advantage unless and until there were some passably interesting minds to read: the logical fallacy of attributing our intellectual descent to 'mind-reading' appears to be that of *petitio principii*.

Most strangely, despite their preference for a 'social' view of intelligence, Evans

and Deehan offer no evolutionary hypothesis as to why people differ so much in intelligence. Could it be that intelligence differences are maintained in human communities because they enable social stratification, hierarchy, leadership and division of labour? Such a hypothesis may not seem so friendly, but it is just as 'social' in its way, and singularly congruent with our distinctive human organization into tribes, nations and firms that require and provide for people of very different levels of mental ability. Here, at least, in whether human patterns of intelligence are crucial to *Homo hierarchicus*, is a question to which Evans and Deehan could usefully devote their next survey of off-the-cuff, expert opinion. □

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## One of the crowd

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**Biochemistry** By C. K. Mathews and K. E. van Holde. *Benjamin Cummings*: 1990. Pp. 1096. £24.95.

TO REVIEW a textbook of general biochemistry (which in this case comprises 1,129 pages) is never an easy task. In the short time allowed for perusal only a superficial judgement can be reached concerning the quality of the product and, inevitably, certain sections are subjected to a more detailed scrutiny than others. Here, an immediate and sincere response is one of unqualified admiration for the two authors who have somehow found the time, dedication and patience even to contemplate the idea of writing this book.

What were the driving forces behind their decision? There is no doubt that Mathews and van Holde can reap rich financial rewards if their text becomes recommended in even a few of the many scientific departments throughout the world. But the competition is fierce. Already, excellent textbooks of biochemistry abound, for example, *Biochemistry* by Voet and Voet published this year by Wiley. Furthermore, the 3rd edition of *Biochemistry* by Stryer (Freeman) — a consistently first-class text — appeared as recently as 1988. Mathews and van Holde claim that a motivation to write in their case arose from a desire to produce an ideal, contemporary biochemical text for teachers. Ultimately, of course, the success or otherwise of their effort will be judged by the response of the student population itself.

The text is very readable throughout and the facts are, in the main, presented

with commendable clarity. The style is fresh and enthusiasm for the subject abounds. Purists will undoubtedly cringe at phrases such as "freeways on the metabolic road map", "on-ramps from the highways and byways of stage 1 and stage 2 metabolism" and "The mitochondrion — scene of the action". Nevertheless, the authors make the points in question with refreshing clarity, and students seem unlikely to protest.

The diagrams are generally very good and there is a pleasing combination of computer graphics with more traditional illustrations. Indeed, some of the figures are outstanding. I particularly liked the use of 'swinging arms' to clarify the functioning of the pyruvate dehydrogenase complex — always a difficult mechanism for undergraduate students to digest. The organization of the text shows much thought and there is successful inclusion of the essential concepts of physical biochemistry and a generally well-balanced integrated coverage of biosynthetic and degradative reactions.

Without doubt, one of the real successes is the inclusion of a series of excellent sections on "tools of biochemistry". Far too many science undergraduates (and graduates for that matter) fail to appreciate or understand the experimental basis underlying the development of sophisticated biochemical concepts. It is far too easy to take facts for granted. The methodology sections are real plus points and help to generate much more interest from the main text. They will aid students in their overall comprehension of biochemical facts, both simple and complex, and they will reinforce too the often-neglected point that progress in science increasingly depends upon the development of new techniques, many of which display exquisite applications of simplicity and logic.

Despite my overall enthusiasm for this textbook, I do have some criticisms. In-

evitably, some sections are stronger than others and certain chapters fail to excite despite their soundness. The index entry for pyruvate carboxylase directs the reader to one page only, where activation of the enzyme by acetyl-CoA is dealt with. One has to look up "anaplerotic sequences" in the index to locate the (different) page that discusses this important enzyme in more detail. Commendably, the authors discuss ribozymes and correctly consider that RNA molecules might, and indeed do, have catalytic functions. This is a really exciting research field and I would have liked Mathews and van Holde to have developed it in relation to ribosomal RNA, which might well turn out to be the main determinant of ribosomal functions.

Reflecting my own research interests, I was disappointed to find only a superficial coverage of antibiotics, although a short section entitled "the uses of biochemistry" stresses therein the exciting prospect of creating designer drugs. Penicillin flickers briefly in the text but I could find no reference to penicillin-binding proteins. It is a pity too, in my opinion, that Mathews and van Holde did not end each of their chapters with a summary section. From my own experience of teaching, I find that the average biochemistry student likes to be told in as concise a way as possible what are considered to be the main points in a given subject area.

All in all, however, *Biochemistry* is an excellent effort and I have enjoyed reading my copy. I wish the authors every success and I certainly expect to see a copy of the text on our library shelf. It will be interesting to see if our biochemistry students adopt this book for their main source of reference. □

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### New Journals

This year *Nature's* annual new journals review supplement will appear in the issue of 11 October. Publishers and learned societies are invited to submit journals for review, taking note of the following criteria:

- Journals which first appeared after June 1988, and which issued at least four separate numbers by the end of April 1990, will be considered for review. The deadline for submission is the end of June.
- Journals covering any aspect of science are eligible, though those dealing with clinical medicine, engineering and pure mathematics are excluded, as are publications of abstracts.
- Frequency of publication must be at least three times a year.
- The main language used must be English. Translation journals in English are eligible.

When submitting journals for review, please send at least four different issues (the first, the most recent and any two others) of each title as soon as possible and before the end of July to: Book Review Editor, *Nature*, 4 Little Essex Street, London WC2R 3LF, UK.