

At a time when most of the popular books on palaeoanthropology are preoccupied with fossil discoveries, reconstruction of human phylogeny, or simply the personalities involved in research on human evolution (and gossip about them), it is a delight to be able to read a book which deals with processes that produce evolutionary change. Following the high standards of popular writing set by his scientific hero, Thomas Henry Huxley, Jeffrey McKee excels as both scientist and educator. If he were alive, Huxley would love *The riddled chain*.

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MARKS, JONATHAN. *What it means to be 98% chimpanzee: apes, people, and their genes*. xiii, 312 pp., table, illus., bibliogr. London, Los Angeles: Univ. California Press, 2002. £19.95 (cloth)

Chimpanzees are 98.44 per cent human, whereas daffodils are hardly human at all – just 35 per cent. Harold Marks's highly readable book is about the meaning of such authoritatively scientific facts. The style is chatty and informal, the chapters well organized, and the documentation and referencing very useful. The author is evidently in full scholarly command of his material.

If you specify mitochondrial instead of nuclear DNA, writes Marks, chimpanzees turn out to be 10 per cent different from humans, although mtDNA mutations have no discernible effect. Turning to human nuclear DNA, 70 per cent of the genome is 'intergenic', the sequences having no known function. Inside each gene, 95 per cent of the DNA again has no apparent function. The remaining sequences do seem to specify proteins. But Marks's book is designed to explode what he calls 'the central fallacy of molecular anthropology' – the notion that 'deep down', humans are 'nothing but' chimpanzees.

Essentialism long antedates modern genetics. According to Linnaeus, writing in 1758, Red Indians are by nature 'irascible', Europeans 'vigorous', and Asians 'melancholy'. Asians, the same text continues, are ruled by 'opinion', Europeans by 'law', and Africans by 'caprice'. Marks uses this and similar notions as a backdrop to more recent genetic work, much of which undermines the whole idea of 'race'. About 85 per cent of detectable genetic variation in the human species is between individuals in the same population. Another 9 per cent is between populations conventionally assigned to the same 'race'. 'Interracial' differences constitute only about 6 per cent of the genetic variation in the human species. 'Racial variation', Marks concludes,

'has been shown to be scientifically, mathematically trivial' (p. 82).

But genetic determinism lives on. Born in 1939 in Ohio, two identical twins were reared separately and reunited decades later. Both had been named Jim. Both had first wives named Linda, second wives named Ann and dogs named Toy. Backed with a £1.3 million grant from the Nazi-sympathizing Pioneer Fund, Professor Thomas Bouchard went on to study yet more identical twins, with similarly amazing results. The score seems to be Nature 1, Nurture 0 (pp. 149–50).

In 1996, Marks responded to all this with a plenary talk to the International Congress of Human Genetics. 'How many of you', he asked, 'think that the name you give your dog is under some kind – any kind – of genetic influence?' Not a single hand went up. Stories about genes for pet names are just logically impossible – on a par with beliefs about crop circles or communion with the dead. Like the existence of God, they fall into the category – familiar to social anthropologists – of absolutely true social facts.

I loved this book, but was also disappointed. The author keeps denouncing Richard Dawkins as if he, too, were an idiotic genetic determinist – which he is not (he is actually the inventor of 'meme' theory – a 'strong' version of cultural determinism). Railing on against Dawkins, Marks completely misses the point about modern 'selfish gene' Darwinism. But then so do virtually all politically correct folk these days – unaware, it seems, that just as it is logically absurd to imagine a gene specifying pet names, so it is logically impossible and absurd to imagine a gene for 'unselfishly' replicating competitor genes at its own expense.

Unfortunately, Marks is unable to feel passionate about getting such matters right. Putting politics first, he thinks science is just one culturally determined narrative anyway. Invoking 'other systems of knowledge' including 'humanistic knowledge' (p. 288), he leaves these categories lamentably unexplained and unanalysed. Could apes, naked or otherwise, have either 'science' or 'ideology'? If not, why not? What role do our genes play (or not play) in enabling us to do distinctively human things – such as use language to weave self-serving myths? Neither Noam Chomsky nor Steven Pinker feature anywhere, the debate about language genes being simply avoided. Marks appears uninterested in human biological or social origins, ignoring the topic apart from a few badly aimed jibes against his pet hate – 'molecular anthropology'. In a book on what it means to be human – or chimpanzee – gaps on this scale seem to me somewhat unfortunate.

The outcome is a basically negative contribution. Marks denies that our genes make us apes. But there he stops. The inquisitive

general reader must surely ask: If we are not apes, then who or what are we? How, when, why, and in what sense did our ape-like ancestors cease to be apes? What – concretely – does it mean to be a ‘human’ as opposed to an ‘ape’? And how does an understanding of genetics help us in answering any of these questions? On these issues, the author is frustratingly silent.

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Language and linguistics

DALBY, DAVID. *The Linguasphere register of the world's languages and speech communities*, vols. 1, 2. 300 pp.; 738 pp., bibliogr. Hebron, Wales: Linguasphere Press, 1999

This immense work, the fruits of the efforts of Dalby, formerly of SOAS, his contributing editors David Barrett and Michael Mann, and numerous volunteers, sets out to list and classify all the languages of the world spoken in 2000. The motivations are redoubtably humanist: Dalby wishes to draw readers' attention to the diversity of human languages and to the contribution which each human voice makes to an understanding and celebration of such diversity. This is achieved in two volumes, the first being largely taken up with an alphabetical listing of 70,000 language names, which are then cross-referenced to the relevant section in the second volume.

Underpinning the conceptual framework of this book is the idea of connectedness, in which individual speakers form networks which then form greater nets of dialects, which can then be subsumed under greater superordinate labels. This approach lays its emphasis on the linguistic commonalities (viewed by Dalby mostly in terms of shared items of lexicon) which connect people who operate in speech communities.

The system which is used to classify the slightly fewer than 5,000 ‘outer languages’ and 13,000 ‘inner languages’ which Dalby recognizes draws upon genetic affiliations, but also upon geographical data. Each language is provided with its own alphanumeric code-sign built up on easily comprehensible principles. Dalby recognizes ten sectors, five of them genetically based (to give them their customary names: Afroasiatic, Austronesian, Indo-European, Sino-Tibetan, Niger-Congo) and provided with odd numbers, the other five (Eurasia, Africa, Australasia, North America, South America) representing a classification based on where the language in question is

spoken, and the first number of each of these sectors is even. The reason for this division is that, although certain huge language families cover a great amount of territory, there are other parts of the world in which the highest genetic nodes so far recognized consist of lots of small language families and not a few isolates; the Americas constitute the most striking example of this. Page 300 of volume 1 presents the capsule summary of the ten sectors and the ten parts into which each is subdivided (some of these 100 subdivisions include only one language, such as 57, ‘Armenic’, of which Armenian is the only member), and the endpapers furnish a useful map. After each pair of numbers a hyphen precedes a three-letter code presented in capitals, after which there is usually another hyphen and a further two-letter code in small letters.

In volume 2, the name of each language is placed under the label of the particular genetic node to which Dalby has assigned it, together with a listing of alternative names for the language, sometimes also some information about the history of the language or details of the languages which have exerted influence upon it, its geographical location, and a number indicating the ‘number of coices’ (Dalby's term for the scale for the number of voices starting at 1 for fewer than 100 speakers to 9 for a billion or more). The coinage of terms is extended to language and language-group names, too, producing labels such as ‘Aframic’ (code number 96), which indicates certain groups of closely related West African languages such as the Gbe and Akan groups. Under this scheme the standard Twi language is coded as 96-FCC-bca. The basic criterion which Dalby has taken for classifying languages together has in many cases been the percentage of items of shared vocabulary (one assumes that Swadesh list scores were used here), although this does not always give the best results, which would have been provided by the use of cladistic techniques. For instance, Utsat, the Austronesian language of Hainan, may appear to be a primordial branch of Cham-Utsat, but its relatively low lexicostatistical scores are misleading, since it is probably a second-order split from an early form of Coastal Chamic which has replaced a certain amount of its pan-Chamic vocabulary with loans from Hlai and various Chinese languages.

This book contains what is probably the most extensive listing of language names in existence, and the classification of the languages seems to be almost complete. Indeed, one would only have needed to add a few hundred more entries for the book to serve as a catalogue of every language which had ever been known to exist. Quibbles about individual cases of classification can certainly arise, although it would be churlish to