REVIEW, for *Journal of Linguistics*
Andrew Lock and Charles Peters (Eds) 1996 *Handbook of Human Symbolic Evolution*, Oxford Science Publications, Clarendon Press, Oxford.

1 Summary

The following excerpts from the editors' Preface indicate what they set out to achieve.

> Our primary purpose is to provide the reference materials that would help in developing a clearer picture of *what* has occurred over time in the performance and elaboration of human symbolic abilities. We see this as a necessary pre-requisite to any theorizing as to *how* that elaboration is to be explained. ...The number of disciplines that contribute, either directly or indirectly, to this area of inquiry is such that no single investigator can reasonably hope to judge all the sources of evidence that bear on the topic. This is one of the motivating factors behind this volume: to have evaluated and make accessible as much of this material as possible. We hope, then, that *ex post* this volume, a palaeoanthropologist, for example, will be better able to invoke the role of, say, linguistic factors as important in hominid evolution, and to do so in a more informed way. (vii-viii)

This *Handbook* is somewhat richly illustrated, with two 'photogalleries', in black-and-white, one of fossil skulls, and another of contemporary hunter-gatherer rock art. There are also ample line-drawing illustrations and many summary tables and charts. The *Handbook* contains many individual articles that are interesting in themselves, often well written or cogently argued, in some cases written by acknowledged world experts in the specialism concerned. Overall, however, from the point of view of Linguistics, the *Handbook* is a disaster, a view which I will defend later below. But first, I turn to some of the *Handbook*'s good points.

2 Good points, and some neutral ones

The editors have clearly put a lot of work into this edition. This shows in the level of detail at which they intertwine the various contributed chapters with their own editorial introductions, commentary and appendices. There are substantial editorial appendices to several of the articles, which typically seek to relate the content of article in question more generally to the themes of the handbook. In addition, the editors are themselves, apparently, responsible for writing the abstracts to some of the articles. They have also provided several informative sections of summary of the principal established facts in some subfield (such as the hominid fossil record or hunter-gatherer rock art, often in the form of a 'photogallery'. The guiding and conscientious editorial hand can also be seen, I believe, in the unusually high number of summary tables, often running to several pages, which many of the contributors have incorporated into their chapters; if one takes the appropriate precautions about interpreting the typical simplified one-or-two-phrase entries that such tables, by their nature, consist of, these tables are potentially very useful.

The difficulties faced by the editors poke through in several places. One planned, and important, contribution, on the evolution of the vocal tract, was not forthcoming, and the editors made a valiant attempt to plug the gap themselves from notes supplied by the would-be contributor; this is not very satisfactory. But any work of encyclopedic proportions is prone to such problems. In general, it seems clear that this handbook has been a long time in the making. Though published in late 1996, one contribution mentions 'completion of the main manuscript in ...1993' (50). Very few of the entries in any of the individual lists of references come from the 1990s. Indeed, many of the chapters survey work that dates predominantly from the 1970's and early 1980's. This is perhaps justifiable, in that the reader of a handbook wants to know that the results summarized have stood the test of time and are not just recent fashions. On the other hand, many of the fields reviewed are developing very fast and it would be surprising if there were not more interesting and important results and theories to report from the early 1990s.

At least six of the 35 contributors to the *Handbook* are or have been at the University of Lancaster, where Lock once taught. This might suggest that personal acquaintance played an important role in selecting contributors. Not all of the contributors associated with Lancaster are obvious choices as authoritative figures, on the basis of their scholarly records in the field. For four of the contributors, private, non-institutional addresses are given, possibly indicating retired status.

The *Handbook* is divided into four major parts, entitled 'I: Palaeoanthropology', 'II: Social and socio-cultural systems', 'III: Ontogeny and symbolism', and 'IV: Language systems'. This arrangement looks promising, as it seemingly recognizes the central place of ontogeny in accounting for modern human adult capacities, as linguists recognize the central place of language acquisition in a theory of language. And, promisingly to a linguist, just under half of the tome falls in the 'Language systems' part. I will discuss the preceding parts first.

The first major article, 'An outline of human phylogeny', by Bernard Campbell, is straightforward, clear and duly cautious, outlining a story no doubt already familiar to those with an interest in human evolution. As with many such summary articles in this collection, its functional equivalent could have been found elsewhere (e.g. in Richards (1987), but the material was worth recapitulating in a collection with the goals of this volume.

A second major article, 'Evolutionary trees of apes and humans from DNA sequences', by Peter J. Waddell and David Penny, brings us fairly well and nearly up to date (once its epilogue is read) on a topic that is often hard for linguists to penetrate. Its conclusions are worth quoting:

> We conclude that, despite recent controversies, these and other molecular data are consistent with the hypotheses that *Homo sapiens sapiens*:

1. is a very recent species (less than 200 000 years old);
2. originated in a localized region in Africa; and
3. close to 100 000 years ago spread out of Africa to replace all other hominids living in Europe (Neanderthals) and Asia (for example, the Solo specimens).

(p.54)

The DNA field moves very fast, and there is now exciting new work (Krings et al. 1997), dating the *sapiens sapiens/ Neanderthal* split to around 600,000 BP, earlier than previously estimated; this work also confirms Waddell and Penny's conclusions, quoted above, on the dating of the emergence of *Homo sapiens sapiens* and our spread out of Africa.

Thomas Wynn is a leading authority on hominid stone tools. His chapter on 'The evolution of tools and symbolic behaviour' is informative, systematic and clear. He draws duly cautious, but still suggestive conclusions, such as

> By 300 000 BP, ... tool geometry required an essentially modern intelligence. ... While tools tell us little about language, they do inform us about other aspects of semiotic behaviour. The use of tools in display, especially in the social maintenance displays of chimpanzees, is an indexical use of tools. (p.284)

Mainstream linguists generally ignore Saussure's view that linguistics is a branch of the wider field of semiology. Wynn's paper, like many others in this volume, reminds us of a wider perspective which we linguists, who stand so close to language, tend not to see.

The editors' view of symbolic behaviour takes in a panorama which includes a lot of material on art. There is Margaret Conkey's 'A history of the interpretation of European "palaeolithic art" ', a photogallery of contemporary hunter-gather rock art, Gavin Bremner's 'Children's drawings and the evolution of art'. Art is a relative newcomer on the human scene, and the emphasis laid here on art is consistent with a view which pervades the *Handbook*, that the modern complexities of language are also relatively recent products of elaborated human cultures. Significantly, the final major chapter in the book is 'Social and cognitive factors in the historical elaboration of writing', by David Barton and Mary Hamilton. Art and writing are seen as the culminations of a continuous evolutionary process, of which an early phase was the emergence of language.

One contribution stands out from the others in espousing an autonomous, modular view of language systems, and facing up to the implication of at least some discontinuity in the evolution of language. This is the chapter entitled 'Symbols and structures in language acquisition' by Carolyn Johnson, Henry Davis amd Marlys Macken. This chapter is one of the most detailed and linguistically well-informed contributions to the *Handbook*, showing, in 50 pages, an awareness of much of the detail of language structure, touching phonology, lexical semantics, syntax and pragmatics. Thus, one of the *Handbook*'s better chapters on language is at least somewhat at odds in its general view of language and its evolution from that which pervades the collection as a whole, the view held by the editors. This chapter barely gets a mention in the editors' introduction to the part which contains it.

The idea that the modern complexities of language are relatively recent products of elaborated human cultures is, on the other hand, stressed fairly strongly by the editors, both in their own commentary and in their choice of contributions. If we accept, following the DNA evidence quoted above, that our species is only about 200,000 years old, the question arises as to how long it took for fully-fledged languages of modern type to appear. This is a legitimate question, which the editors are right to emphasize. The suggested answer of this *Handbook* is found mainly in chapters which I will discuss in the section on 'Bad points' later below.

In addition to the thoughtful and useful editorial introduction on phylogeny and ontogeny, there are good individual chapters on the evolution of human socio-cultural systems (by Randall K White); theories of symbolization and development (by Chris Sinha, though this article says more about the theories of the past century than about evolution); the relation between speech and sign (Margaret Deuchar); the gestural origins hypothesis (Gordon Hewes); and animal language and cognition experiments (Carolyn Ristau).

3 Bad points

To understand the evolution of the language faculty and of languages, one needs to know what they are, and in some detail. Noone can seriously embark on speculation about the evolution of language without mastery of at least the amount of material contained in good introductory linguistics textbooks. Just as this *Handbook* gives us basic syntheses of the facts about the hominid fossil record, stone tool technology, DNA classification of *Homo sapiens*, and the social structures of great apes, at least as much space should have been devoted to separate surveys of the phonetics, phonology, morphology, syntax, semantics and pragmatics of languages. Little hint of the kinds of rich patterning that linguists have found in languages emerges from this collection. Even an incomplete sketch of the grammar of a single language can take, as we linguists know, hundreds of pages. One would also have liked a handbook such as this to have included a hefty chapter or two on language typology, of the kind that, for example, Bernard Comrie or William Croft might have provided.

The dominant paradigm in theoretical linguistics is still generative grammar. Any serious attempt to relate generative grammar to the evolution of language is important. In the last decade, there have been several such important attempts. The most influential paper is undoubtedly Pinker and Bloom (1990), while Newmeyer (1991) also provided a valuable detailed discussion of the issues raised when evolutionary theory meets generative theory. These papers, central to the topic of the *Handbook*, and available well before it went into print, are not mentioned anywhere in its 900-odd pages.

As noted above, the question of how quickly fully modern languages emerged after the rise of our own species about 200,000 years ago is a central one, correctly raised by the editors. In one of their editorial introductions, they briefly discuss the most well known proposal in this area, namely Bickerton's (1990, 1995, 1998) suggestion that full human language appeared in a single step from protolanguage. As one of the most salient proposals in the field, one would have expected it to have received some fleshing out, perhaps in a chapter by Bickerton himself, or in a contribution by another author critically discussing it. It is certainly an idea which needs some critical analysis. But, rather than present the reader with extant controversies, the editors have chosen to fill this gap with several very speculative chapters by authors who have made no previous impact on the field, Mary Foster and Len Rolfe.

In her chapter, 'The reconstruction of the evolution of human spoken language', Mary LeCron Foster starts with a relatively unobjectionable survey of historical linguistics and its methods of reconstruction, and then embarks on her own idiosyncratic brand of speculation. In her own words:

> Since I am the only linguist who to my knowledge has published on the subject of reconstruction based on an assumption of monogenesis, I will in this section rely solely on my own experience of thirty years work in this area. (p.762)

Clearly, this material should not have been included in a handbook claiming to present reliably representative introductions from scholars in particular disciplines to scholars in others. The later part of Foster's chapter is indeed not the kind of thing I have seen anywhere else in linguistics, historical or synchronic.

4 Conclusion

I regret that I find the whole of this *Handbook* to be less than the sum of its parts. If some linguist, as opposed to a psychologist or an anthropologist, had had the vision and ambition that Lock (a psychologist) and Peters (an anthropologist) had when they embarked on this enterprise, and had been prepared to devote as much effort to it over almost a decade, the result could have been very different. Such a (now hypothetical, alas) handbook could have much more accurately represented **what languages are**, in all their many-layered complexity of use and structure, and given a perspective which is sorely lacking in this *Handbook* as it now stands, and as it will probably be consulted by non-linguists in the decade to come.

But, at the time, where was there a linguist with any such vision, ambition and energy? And where are they still? A linguist might take the view that such psychologists and anthropologists are fools who rush in where angelic linguists fear to tread. Lock and Peters themselves are aware that their enterprise might have been premature and that things might look very different ten years from now. One might argue that any linguist who decided not to attempt the kind of overview and synthesis that Lock and Peters have attempted was actually right not to have tried, because there was not yet enough relevant material to gather together. But the very existence of Lock and Peters' *Handbook* testifies against that cautious view. Their *Handbook* will be picked up from library shelves and taken as representing the state of the subject of language evolution as of the mid-1990s, but there is a gaping hole in it where Linguistics should be[1].

We can't leave language to psychologists, anthropologists and others — they don't know enough about it. On the other hand, we linguists can take valuable lessons from neighbouring disciplines, which can provide carefully thought-out discussions of many relevant matters, including the relation of phylogeny to ontogeny, the relation of language use to theory of mind, the dissociability of elements of human cognition, the comparative structures of human and ape societies, and the comparative neurology of human and ape laterality and handedness, to mention only several. Evidence on the evolution of language and the language faculty is indeed sparse, but (a) other disciplines are now providing much more hope of data that could lead to a fruitful synthesis than was the case even twenty years ago, and (b) within Linguistics, we have been conspicuously (and laudably) unafraid of theorizing about matters where the data is either sparse or hard to interpret (e.g. the psychological structure of the modern human language faculty, or the shape of long dead ancestral languages). It is vital that linguists engage in the enterprise of building up a sensible picture of how the language faculty might have evolved, and subsequently how whole languages themselves then emerged, as linguists are the specialists who, better than anyone, know what languages are and what the language faculty is. It is also vital for the health of the science of language itself that, moving forward from the isolating idealizations of this Saussurean and Chomskyan century, linguists give due thought to how the human language faculty and the individual complex systems we know as languages are related to their evolutionary context.

5 References

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[1]To exemplify the real danger, we have to hope that the first clause of that last sentence doesn't get dishonestly quoted out of context by the book's publishers.

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