

Michael C. Corballis, *From Hand to Mouth: The Origins of Language*.

Princeton and Oxford: Princeton University Press, 2002, xii + 257 pages.

Reviewed by Robbins Burling (University of Michigan)

In this brief but spirited book Michael Corballis offers his version of the not entirely new argument that manual language came before spoken language. He is aiming for a wide audience and writes in a lively and accessible style. He surveys the broad range of topics that are relevant to the evolution of language, and presents them in a way that should carry along readers who have little or no background. All this is admirable, but Corballis also wants to offer a serious argument in support of early gestural language. On this, in my judgment, he fails.

In quick summary, his argument runs as follows: The vocal tracts of apes are under weak voluntary control and poorly designed to produce speech sounds. This, along with the ease of using the hands to make iconic and indexical gestures, the advantages of silence, and the heavy use of “locational signaling” (pointing) mean that the earliest language was probably gestural (99). He believes that *Australopithecus* could already use some sort of manual proto-language, but he is not clear whether this was like the proto-language that has been attributed to some captive apes, or as versatile as a modern pidgin language. He gives syntax to *Homo erectus*: “. . . a group of hominins, perhaps a million years ago, may well have achieved a form of language with the full grammatical range and expressiveness of the modern signed languages of the deaf” (108). He believes this signed language could have been supplemented

with some vocalizations, but autonomous vocal language came only with *Homo sapiens* as recently as 50,000 years ago. It was spoken language that freed the hands for technology, and the result was the burst of new cultural products that we find in the Upper Paleolithic.

In developing this scenario, Corballis reviews an enormous range of evidence. At some point, he mentions most of the topics that have been of interest to students of language origins: primate communication, human fossils and bipedalism, stone tools, mitochondrial DNA and the African Eve, pidgins and creoles, cheater detection, the vocal tract and the brain, the theory of mind, and much else. Since he is advocating a gestural theory of language origins, of course, he deals at some length with human gestures and sign language, but he is not always clear about the differences between various types of gestures.

Only occasionally does he hedge enough to describe some point of view as controversial. More often the reader is left with the impression that all proposals and theories are valuable. He accepts, uncritically, the claim that the Neanderthal vocal tract was incapable of producing human language. He tells us, without qualification, that Alex the African grey parrot uses “more than one hundred words to refer to objects and actions and can give simple commands and answer simple questions about the locations, shapes, and even number of objects that are shown to him” (25). He is an enthusiast for motor neurons and for the aquatic theory of human origins. He says, mistakenly, “. . . there is fairly general acceptance that Indo-European belongs to a superfamily known as Nostratic . . .” (131). He does admit to more controversy about Proto-World, but he then goes on to associate Proto-World with our African Eve, and it is clear that he would really like us to believe in a Proto-World. I do not mean to dismiss

these theories as nonsense. They deserve to be taken seriously. Still, Corballis owes a warning to his non-specialist readers that they remain minority viewpoints.

Along the way, Corballis has a surprising ability to confuse matters, and I need to give a few examples to suggest the flavor of the book. On page 140 he says “These changes [including the lowering of the larynx] would have occurred gradually in evolution . . . perhaps reaching completion in *Homo ergaster* or *Homo erectus*, nearly 2 million years ago.” Three pages later he says “The fossil evidence shows that our Neanderthal cousins did not have flattened faces like ours; they had long mouths, more like those of apes. Since the flattening of the face had apparently not occurred in the Neanderthal, we can reasonably assume that the lowering of the larynx had also not taken place, or was at least incomplete” (143). He identifies Khoisan as the oldest of the four African language families. If he really believes in Proto-World, from which Khoisan, like all other languages, would have descended, this should make no more sense to Corballis than it does to me. He has a fondness for migrating bands that emerge from Africa to exterminate their predecessors. I’ve always found migration tales suspect and felt that “oozing” might better describe population expansions. Starting from lake Victoria a million years ago, and advancing at the blistering average pace of one kilometer per year *Homo erectus* could have comfortably reached Java by 985,000 bp, even allowing for a few side trips along the way. Populating the world requires nothing we would have noticed as a migration, had we been there to watch. Corballis does not even seem to grasp that everything we are and do results from the interaction of environmental influences on our genetic potential, for he sometimes writes as if traits can be

caused by just one of them: “Many human characteristics clearly depend not on the genetic code but on the culture we happen to be part of” (15); “. . . speech is sometimes regarded as . . . a ‘meme’, rather than a biological instinct. I think there may be some truth to this . . .” (107).

He sometimes badly misinterprets his sources. He writes “. . . [duality of patterning] has . . . been described as ‘one of the most difficult problems of language evolution’” (114), and later: “Well, as I anticipated earlier, signed language might hold the answer to the mystery of duality of patterning.” (123). In my naiveté, I had not realized that duality of patterning was either a “mystery” or “one of the most difficult problems of language evolution”, so I sought out the inner quote. A fuller version reads as follows: “The relation of visible signs to social behavior, vision, movement, and brain function can explain one of the most difficult problems in language evolution, the quantum change from naming to language; that is, from words to sentences.” (Armstrong, Stokoe, and Wilcox 1995, 156) This mentions words and sentences but does not refer to the duality of patterning, half the duality of which is phonology. By a misleading quotation Corballis creates his own mystery, which he then proceeds to “solve.”

He gives a long quotation from Terrence Deacon who expresses doubt about signing coming before speech. Had it done so, Deacon says, he would expect manual gestures to show evidence of Baldwinian evolution, while in fact “. . . the vast majority of Baldwinian evolution has taken place with respect to speech” (155, from Deacon 1997: 362). In the next paragraph Corballis says “. . . the selective pressure may not have been toward language, as Deacon seems to

imply, but rather toward speech itself” (155). Corballis simply misstates what Deacon says here, and probably does not understand him.

The sticking point for the gestural theory has always been how to get from visual to audible language. Once visible language got started, it should have been cemented in by Baldwinian evolution and then have had such a head start that no language in a different medium would have had a chance. Corballis struggles with this problem. He trots out the familiar point that speech is better in the dark, and he says it is useful for calling someone’s attention. He also likes to remind us that speech is produced by vocal gestures, which are supposed to ease the switch, since the change is merely from one kind of gesture to another. However, vocal gestures are largely invisible so we have to detect them by the sounds that they make, and a switch in modality from sight to sound is not so trivial that it can be disposed of by calling them both “gestural.” He also makes the novel suggestion is that speech is superior because it is less iconic. Gestures that are too iconic could result in similar objects, such as *dog* and *wolf*, having signs that are hard to distinguish. This is simply silly. Gestures can be iconic but they are not required to be, and existing sign languages easily distinguish things like *wolf* and *dog*. Corballis also says “Speech is perfectly adequate to convey syntax . . .” (191). Does this mean anything? I had supposed that syntax was a tool that promotes efficient transmission of messages. Does it need to be conveyed?

So, Corballis cites the many advantages of spoken language just as he had earlier cited the many advantages of signed language, and the real problem is that he never makes clear why signed language could stay in the lead for several million years, until 50,000 years ago when the alternative advantages of

spoken language suddenly triumphed. Both mediums have their advantages, but I see no reason why one set of advantages should suddenly yield to the other.

I cannot skip past two final sources of annoyance: First, the text is repeatedly punctuated with sentences that begin “My own view is that . . .” (88), “It is likely that . . .” (91), “My guess is that . . .” (169). Arguments by guess and opinion do not stand up well against facts and logic. Second, Corballis bombards his readers with puns and cute little jokes, and with literary references, many of which are only tenuously connected to the topic under consideration. Some readers may laugh at his puns and feel a warm glow of sophistication by sharing his literary references, but I met the former with growing irritation, while the latter seemed intended mainly to flaunt erudition.

I am sorry that Corballis did not use his genuine talents as a writer to give us a book that we could recommend to our friends and offer to our students. We badly need good popularizers. Sadly, this is the kind of book that gives popularizing a bad name. Corballis is careful with his sentences but careless with his ideas.

References

Deacon, Terrence W. (1997). *The Symbolic Species: The Co-evolution of Language and the Brain*. W. W. Norton: New York and London.

Armstrong, David F., Stokoe, William C., & Wilcox, Sherman E. (1995). *Gesture and the Nature of Language*. Cambridge: Cambridge University Press.

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