

5 Language as an evolutionary curiosity

One conception of evolution sees species as evolving in definite directions. It sees hominids as species which evolved towards ever greater complexity and intelligence, until they turned into human beings with their necessary accompaniment of language. It is a mistaken conception. At most, we might be able to see our own species as rather original, but that is a value judgement. As Stephen Jay Gould has shown, the appearance of new species follows no pre-established tendency, a fact that is as true for our species as it is for those which preceded it.

5.1 Evolution's directionless advance

By way of explanation of the fact that language and intelligence, though apparently extremely advantageous for the survival of individuals, did not appear earlier in the evolution of species, one may be tempted to believe that it was all a matter of time. The evolution, through natural selection, of complex characteristics requires an accumulation of many advantageous elementary variations which all contribute to the forming of those characteristics. By definition, such variations are rare; and many of them get lost among the random hazards of selection. A view quite commonly expressed by some people who are impressed by their status as human beings is that the human mind is the most complex thing in the universe.¹ That being the case, it should not be at all surprising that evolution took

¹ Such a statement is based no doubt on a belief rather than on any calculation. It is easy to calculate an upper bound of the algorithmic complexity of the brain, or at least of its innate genetic base: about 100 megabytes, a figure based on the useful genetic information contained in our cells. This amount of information corresponds to the complexity of a random sequence of that size, of which many can be found in nature. As genetic information is highly redundant, the actual complexity of the brain must be much lesser.