

# THE CASE FOR INSTANT EVOLUTION

By

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## Introduction

While it is true that evolutionary changes went on for millions of years, it does not follow that those transformations occurred gradually. Evolution involves genetic change. One might ask – is there such a thing as a gradual genetic change? All genetic alterations take place with time constants on the order of seconds, whether they are point mutations, deletions, duplications, or chromosomal inversions, fusions or translocations. The very notion of a gradual genetic change is meaningless. Yet that is precisely the position which the Darwinians have taken. I know of not a single instance, fossil or recent, demonstrating the gradual transformation of one diploid species to another. All experimental attempts to produce such transformations have failed (Davison 1998) The Darwinians claim that such transformations take too long to be observed, a position that renders the notion of gradualism untestable. Also, there is no compelling evidence that evolution has resulted from the accumulation of point mutations (base pair substitutions). The vast majority of such mutations are deleterious and those that have accumulated may very well be of neutral character, not affecting the active site of the molecules involved.

## Chromosome reorganization

If one examines the karyotypes of related species such as *Homo sapiens*, and his close primate relatives, one sees that structural chromosomal differences distinguish the various primate genera (Davison 1998) These differences are precisely those postulated by Goldschmidt over 60 years ago (Goldschmidt 1940). The reorganization of a chromosome is an all-or-none event for which intermediate or gradual stages are inconceivable. Karyotype analyses place the chimpanzee as our closest living relative, followed by the gorilla and the orangutan, in full agreement with the conclusions from both comparative anatomy and molecular biology. Schindewolf (1993) fully supported Goldschmidt based on the evidence offered by the fossil record where intermediate forms are conspicuously absent. Schindewolf even claimed that we might as well stop searching for missing links as they never existed! That is especially evident for many marine invertebrate series that are often very complete yet lack transitional forms.

## Is Evolution in Progress Now?

There is also no evidence that macroevolution is still in progress, a view proposed by Robert Broom who claimed that a new Genus has not appeared in the past two million years. Curiously, Julian Huxley reached the same conclusion in *Evolution: The Modern*

Synthesis (Huxley 1942), a book presumably summarizing the Darwinian evolutionary perspective! (Davison 1998). Huxley got this idea from Robert Broom as a result of a private correspondence between them (Broom 1933). Huxley further maintained that new genera or species either remained stable or became extinct. Huxley's conviction that evolution is no longer going on has been completely ignored by the neoDarwinians. Grasse (1977) maintained that all we see today is the substitution of alleles. I agree. It is obvious that one cannot evaluate a mechanism that is no longer in operation. Since the vast majority of extant diploid species reproduce sexually, that mode of reproduction can thus be questioned as a macroevolutionary device. It was considerations like these that led me to postulate the semi-meiotic hypothesis (Davison 1984) as an evolutionary mechanism. The first meiotic division is a perfectly valid form of diploid reproduction. Since the sister strands invariably remain together during this division, this single cytological event retains the original genotype at the same time that it can produce a new structural genome in homozygous form. The only requirement for this result is the presence of a chromosomal structural modification in heterozygous form in a cell or cells destined to become ova. One half of the products will be like the original karyotype, one half will be a homozygous novel karyotype, in principle a new species (Davison 1998). It should also be noted that there is no evidence that the restructuring of a chromosome necessarily involves the introduction of new genetic information. The simplest explanation is that the restructuring of the chromosome has resulted in the derepression of information already present in the chromosome structure. I return to this matter in a subsequent section. The semi-meiotic hypothesis has been recognized by Phillip L. Engle in his recent book "Far from equilibrium" (Engle 2002).

### **What We Do and Do Not Know About Evolution**

It is revealing to summarize what we really know about evolution, that most mysterious of all biological phenomena. First, most serious scientists are convinced that it did occur although there are still some who adhere to a strict creationist scenario. When it comes to how it occurred, we are still virtually entirely in the dark. We have no idea how life originated or even how many times it originated. There is no evidence for an organic soup, and the more we learn about the molecular and structural complexity of even the simplest life forms, the less likely it seems that life could have arisen by chance. The Cambrian explosion should give any serious scientist pause before proposing the mechanisms responsible for the transformations of such discretely separate and unique body plans.

### **Ontogeny and Phylogeny Compared**

There are several parallels between embryonic development (ontogeny) and evolution (phylogeny). Both are irreversible processes. Both involve the expression of genetic information. In the case of ontogeny, that information is obviously present at the onset of development. I recently (Davison 2000) suggested that the information for evolution might also be present from very early in the evolutionary process. This idea was first presented by Leo Berg (1969) in his remarkable book "Nomogenesis: or Evolution According to Law". Berg presented several examples of the premature appearance of

advanced phyletic features. He called it *phylogenetic acceleration*. I prefer to call it *evolutionary derepression*, thereby indicating that the information for evolution is preformed just as it so obviously is for ontogeny. Another similarity resides in the fact that each process has the intrinsic capacity to terminate (self-limitation). I have suggested that a primary role for sexual reproduction is to bring macroevolution to a halt, thereby stabilizing the species. (Davison 1998). This provides a reasonable explanation for the stability of fossil species as Huxley (1942) had concluded. In support of this proposition, it has yet to be demonstrated that any diploid organism, reproducing by obligatory sexual means, is capable of exceeding the subspecies level. This perspective also remains compatible with the discrete nature and stability of the vast majority of all species, both recent and fossil. I propose that they are discrete from one another for two reasons. Firstly, because they can no longer evolve, and secondly because they were produced by instantaneous all-or-none devices (chromosome restructurings) which, by definition, can have no intermediate states.

## Conclusions

We are left with an unavoidable question. Where did the information for phylogeny and ontogeny come from? One cannot escape the conclusion that something or someone had to put that information in place. Robert Broom believed that evolution was the result of a plan. He also, along with Julian Huxley and Pierre Grasse, thought that evolution is no longer in progress. The evidence favors both of his propositions. Leo Berg insisted that chance played no role in either ontogeny or phylogeny. If not chance, then what is the alternative? These considerations raise an interesting question. What was the last mammalian genus and species to appear? It would seem that *Homo sapiens* is a likely candidate, since there is no evidence of his presence prior to about 100,000 years ago. In summary, it would seem that a sufficient factual body now exists to warrant serious consideration to the proposal that there has been, as Robert Broom had suggested, a teleological origin (plan) for biological information and its evolutionary expression. Needless to say, the realization of this prospectus will have a profound effect on the way in which man regards his position in the universe.

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## **Abstract**

All genetic alterations occur in a matter of seconds. Accordingly, there is no reason to assume that evolution has been a gradual process. On the contrary, the fossil record demonstrates that major changes took place over very short time intervals. All attempts to transform species through selection of point mutations have failed. Chromosome rearrangements characterize the differences that exist between ourselves and our primate relatives. Such differences could not conceivably occur gradually. I have proposed, with Leo Berg, that phylogeny (evolution) has involved the derepression of preformed information which was present from very early in evolutionary history. I also agree with Julian Huxley, Pierre Grasse and Robert Broom that macroevolution is no longer in progress. *Homo sapiens* is apparently the most recent mammal to have evolved, suggesting that there has been a plan, as proposed by Robert Broom. Such a teleological view of evolution can have profound consequences on the way in which man views his place in the universe.

## **Running Title**

Instant evolution