

Richard Goldschmidt's monster

A.W. (Bill) Mehlert

Fifty years ago one of the leading evolutionist authorities of the day, geneticist Richard Goldschmidt, recognized internal inconsistencies in the evolutionary paradigm, inconsistencies that remain unresolved today. Goldschmidt put forward two major objections. Firstly, that virtually 'all known orders and families appear suddenly and without any apparent transitions' in the fossil record. Secondly, that the mechanism for evolution is fundamentally flawed: according to neo-Darwinism, the evolutionary process works 'uphill', i.e. higher taxa (families to phyla) are created from lower taxa (species and genera) by speciation events; but based on the fossil record, it works 'downhill', i.e. the higher taxa radiate down into lesser taxa. A naturalistic, mutation-driven process that could produce new, viable genetic information (evolution from, e.g. ape-to-human, reptile-to-bird, etc.) has never been demonstrated or observed, as Goldschmidt also pointed out. Only a Biblical framework of creation is capable of supplying a credible alternative to the question of origins.

Half a century ago, German-born geneticist Richard Goldschmidt (1878–1958) exposed what appeared to be fatal flaws in evolutionary theory, defects which have even to this day never been satisfactorily resolved.¹ His tough questioning of neo-Darwinism raised many scientific eyebrows at the time, but the matter was soon put on the back burner by the scientific establishment because no adequate rebuttal of his arguments had come to light. But the points he made in 1952 are just as relevant and important today.

It should be noted at the outset that the evolutionary establishment is divided into two hostile camps. The great majority are neo-Darwinists led by such eminent figures as Richard Dawkins, George Williams and John Maynard Smith. They are strongly committed to a theory of slow and gradual evolution (phyletic gradualism) by a combination of mutations acted upon by natural selection. They hotly oppose the theory, held by some paleontologists, that evolution has proceeded rather by sudden spurts of change following long periods of stasis. That is, little or

no change for millions of years, followed by the relatively sudden (in conventional geological terms) appearance of new species. The leading proponents of this version of evolution (known generally as Punctuated Equilibrium) include such notable figures as Niles Eldredge, Steven Stanley and Stephen Jay Gould.²

This division within the transformist (evolutionist) camp must be kept in mind as we examine the Goldschmidt case. Both groups insist that the fossil record supports their views and discredits the opposing party's case. Neo-Darwinism has generally ruled from the early 20th century to 1972, when Eldredge and Gould published their important work, *Punctuated Equilibrium, An Alternative to Phyletic Gradualism*, which was based on observation of the fossil record. Speaking in evolutionary terms, the rocks show that the new species almost always appear abruptly, and replace previous forms.

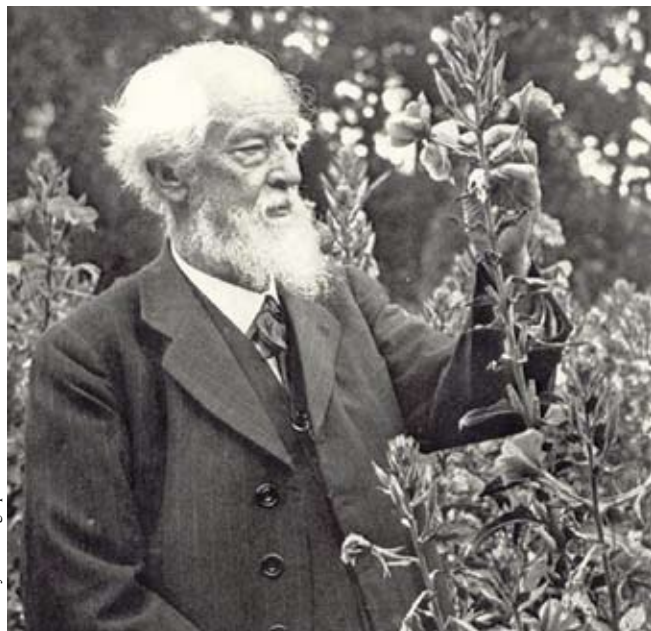
Goldschmidt's case

Despite being an ardent evolutionist himself, by 1952 Goldschmidt had become increasingly disillusioned by the failure of science to present a credible mechanism for evolution. He put forward two major objections to neo-Darwinism. Firstly, '... practically *all* known orders and families appear suddenly and without any apparent transitions' (emphasis added).³ One of his chief opponents, America's renowned paleontologist George Gaylord Simpson, acknowledged this defect throughout his 1944 book.⁴ In 1991, paleontologist Niles Eldredge made it quite clear that he agreed thoroughly with Goldschmidt and Simpson about the sudden emergence of large groups of organisms such as families, orders and classes.⁵

Secondly, Goldschmidt objected that the mechanism for evolution as advocated by neo-Darwinists is fundamentally flawed. He forcefully pointed out that evolution would be going in the *wrong direction* under the gradualists' paradigm.⁶ His argument is summarized as follows:

Most evolutionists believe that a macro change (the origin of new types or 'kinds' of organisms) occurs through the slow and steady accumulation of relatively minor mutations in the gene pool, including point and gene mutations, which are acted upon by natural selection. It is assumed that this principle, operating at the subspecific level, and described as microevolution, is also at work in macroevolution. Goldschmidt says: 'This means that species, genera, families, orders, classes, and phyla, are also produced by the slow accumulation of small mutants ...'.⁷

A corollary of this view is the assumption that subspecies are incipient species, that species are incipient genera, and that genera are incipient families, and so on up to the level of phyla. The neo-Darwinian belief is based mainly on the belief that the slow and steady accumulation of many micro-mutations is a satisfactory explanation for major change which could transform a non-cat into a cat, or a



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Hugo de Vries, 1848–1935, originally proposed the theory that new species could arise via a single macro-mutation, and wrote *The Mutation Theory* (1901–1903). Actually his evening primrose mutants turned out to be polyploids, i.e. with whole extra entire sets of chromosomes, giving a misleading idea about typical mutations. Recognising the lack of fossil evidence for transitional forms, and echoing the idea of de Vries, Richard Goldschmidt (1940) later proposed that evolution rather occurred through larger mutational jumps. This idea became popularly referred to as the ‘hopeful monster theory’. Both theories were scientifically flawed and were soundly rejected (from Taylor).¹⁹

reptile into a bird, and so on. (The punctuated equilibrium theory is only applicable to the origin of new species of the same kind—lions, tigers, pumas, jaguars, leopards, etc. or wolves, jackals, coyotes, dingoes, domestic dogs, etc.—where interbreeding within the type occurs. It is not applicable to the emergence of *new* life forms.) Gradualist theory therefore holds that subspecies gradually become species, species become genera and families, which in turn lead to new orders, classes and phyla, all by the slow and steady accumulation of micro mutations.

This is how Goldschmidt describes the dilemma⁸—some unknown subspecies of reptile gradually changes into a new species, followed ‘uphill’ by a new genus, a new family and so on. In the end, the first bird evolved, creating a new vertebrate class. But here we strike a major problem—no new phyla (the basic body plans of organisms) have arisen since the Cambrian system, allegedly 530 million years ago! If the gradualists are right, each Cambrian phylum should have had a long string of species leading up to it in the rocks, yet not a single such lineage is known. Each phylum (e.g. Chordata, Arthropoda, Mollusca, Coelenterata, Bryophyta, etc.) just ‘appears’ in the Cambrian rocks out of the blue, with no fossil history.

Here, as Goldschmidt points out, a massive contradiction is evident. On the one hand the evolutionary process works

‘uphill’, i.e. new major taxa are created from speciation events, which is the neo-Darwinian view. But on the other hand it works ‘downhill’, i.e. the higher taxa radiate down into subsets, or lesser taxa, which is Goldschmidt’s position, based on the fossil record. Evolutionists cannot have it both ways.

As Goldschmidt shows, the ‘fossil record’ confirms his case. The ‘historical fact [the fossil record] tells us that the big categories, [families to phyla] existed first, and in time they split in the form of the genealogical tree into lower ... categories’.⁸ Thus the members of a particular higher taxon always appear *after* (higher in the rocks) than the *first* appearance of that high taxon. Every single species of plant or animal alive today still belongs to a phylum which itself first appeared in the Cambrian rock system. The phylum to which humans and other creatures with backbones are assigned (Chordata/Subphylum Vertebrata) appeared not as a result of a gradual improvement from some supposed species or generic lineage going ‘uphill’, but complete in its basic *bauplan* (‘blueprint’, basic body plan) in one hit, and then diversified into separate classes, orders, families, etc. How then could micromutations working gradually on subspecies be the cause of major categories as neo-Darwinists claim? Goldschmidt pointed out that the neo-Darwinists teach the very opposite of what the rock records show. Diversification always *follows* the appearance of major new kinds; the radiation of cats and dogs in the middle Tertiary, for example.

Goldschmidt and other transformists of course, are working in the context of evolutionary geology which creationists reject. But the rock record does show that the examples of specimens belonging to major taxa, such as phyla through to families, always appear *lower* in the stratigraphic record than the full range of lesser taxa belonging to such phylum or family. Thus, examples of all animal phyla appear without precursors in the Cambrian rock system, followed vertically upward by the full gamut of particular classes and lower taxa which constitute each phylum. Consequently, neo-Darwinian theory is in direct conflict with the rock record, even under the uniformitarian paradigm. As Goldschmidt rightly points out, micro-mutation-driven evolution therefore cannot work uphill to produce one major category.

Goldschmidt’s solution examined

How is the contradiction resolved? Goldschmidt declares that ‘... it is evident that *something besides* the neo-Darwinian tenets is needed to explain ... macro-evolutionary processes. The difficulties *already encountered* on the specific and generic level seem to be *insuperable* at the level of *families*, orders, classes and phyla’ (emphasis added).⁹ What is that ‘something besides’?

The emergence of new kinds, such as horses, elephants, angiosperms, fishes, whales, bird families, dinosaur families and the human family, absolutely demands a completely

different explanation. Since families/subfamilies always appear abruptly, and since this taxon is the least inclusive of all the major taxa (containing only organisms of the same kind, e.g. felines, equines, etc.), the answer should be pretty obvious. Yet, having rejected the Divine, Goldschmidt is bound to only 'naturalistic' options.

Every 'new' major taxon in the stratigraphic record involves the *simultaneous* emergence of both lesser and higher taxa. That is, when the 'first' bird fossil is found in the rocks, not only is there a new vertebrate class, but also a new order, a new family, and a new species. Only a Biblical framework can resolve the contradictory nature of evolutionary thinking. God created groups of *like* organisms according to His will, each of which contained in its gene pool all the necessary genetic variability potential to deal and cope with the inevitable environmental fluctuations which God foresaw would occur in real life. Reproductive isolation, usually the result of a mutation, is not uncommon between species of a family, but that is not evolution. Speciation, selection and hybridization, operating from a base of built-in genetic material supplied by a creator, is sufficient to explain the process of adaptation, but only within the kind.

The origin of the hopeful monster idea

Goldschmidt's suggested solution to the evolutionists' dilemma, that a dinosaur laid an egg and a bird hatched out—colloquially referred to as the 'hopeful monster' theory—is quite reckless, being driven by desperation brought about by the inability of evolution to account for the abrupt appearance of major taxa. He states, 'In spite of the immense amount of paleontological material and the existence of long series of intact stratigraphic sequences with perfect record for the lower categories, transitions between the higher categories are missing.'¹⁰ (We remember that the Punctuated Equilibrium model proposed by Eldredge and Gould applies only at the level of species and below, not at the grade of families or higher taxa.) He proposes as a possible solution that '... it may be assumed that major departures of the rank of higher categories are attained initially by single large mutational changes ...'¹¹ Goldschmidt was not completely correct: new species of fruit flies have been produced in the laboratory—new strains which do not breed with the parent strain. However, although by definition a 'new' species has been created, the mutation involved is simply a case of reproductive isolation and the fruit fly remains a fruit fly.

Thus the basic *bauplan* of a new family or a new complex organ may be established

by a single macromutation. Afterwards, such a new group '... may be improved, perfected and diversified in the Darwin manner if a proper environmental niche presents itself'.¹² Goldschmidt had very few supporters for this line of thinking in 1952, and his idea is likewise rejected today. To produce a successful 'monster' by drastic 'beneficial' macromutations on the off chance of generating a viable new kind is the stuff of science fiction. Macromutations can result in freaks or monsters, such as fruit flies which have suffered the transposition of various appendages like legs, antennae, and wings, and Goldschmidt's critics soon ridiculed him by labelling such freaks as 'hopeful monsters'.¹³ The claim that either micro- or macromutations can make evolution work is based purely on assumptions, not empirical evidence.

Goldschmidt was initially puzzled about how macroevolution could occur without leaving connecting fossil lineages in the stratigraphic record. He listed seventeen examples of alleged major change and challenged his critics to explain how they came about by the standard evolutionary theory of the time. They include the appearance of hair/fur in mammals, feathers, the exoskeletons of invertebrates, blood circulation, compound eyes, and the poison apparatus in snakes.¹⁴ So far, nobody has been able to adequately respond to his challenge, in spite of far-fetched attempts by ardent neo-Darwinists like Richard Dawkins.^{15,16}

Conclusion

Two other statements in Goldschmidt's article deserve comment. The first reads as follows: 'Gene mutation is the only (or almost only ...) way of producing hereditary variation'.¹⁷ The second is found a few pages later:



After realising the deficiencies with the slow-and-gradual model of evolution, Goldschmidt proposed that evolution may have occurred in large steps (saltations). However, saltational evolution has many problems. For example, macromutational changes in sexual organisms require parallel changes in both sexes at the same time, as well as compatibility with the biology and behaviour of parents and siblings!

'Incessant repetition of this *unproved* claim, [i.e. the belief that small variations at the subspecific level must also apply to the higher categories], *glossing lightly over the difficulties*, and the assumption of an arrogant attitude toward those who are not easily swayed by fashions in science, are considered to afford the scientific proof of the doctrine' (emphasis added).¹¹

Goldschmidt allows no role for a creator, which surely is also just as arrogant an attitude in view of the incredible specified complexity of even the simplest cell, which demands a designer, but he is certainly right in highlighting the enormous problems facing the phyletic gradualists. It is a pity he did not apply this type of thinking to his own equally hopeless and desperate solution.

In attempting to explain the phenomenon of living things, there is no need to invoke godless, man-made theories such as evolution, which today is riddled with the same severe defects that have plagued the theory ever since Darwin's day. Each type reproduces 'after its kind' just as the Bible says. Darwin's finches remain finches and always will. Descent with modification is a concept we share with our evolutionary opponents, but it is always strictly limited, and nobody has ever come up with a successful theory which goes beyond that limit. Because of the experience gained through artificial breeding, hybridization, and the observation of natural speciation in the wild, most creationists conclude that the created kinds mentioned in Genesis gave rise to today's families or subfamilies in most cases. As far as I can discover, there has been only one case of a successful cross between species belonging to different families—the domestic chicken (Phasianidae) and the turkey (Meleagrididae).¹⁸ However this case should be treated with caution, because the fact the two birds could successfully cross indicates that the classification is wrong. Successful hybridization strongly indicates that both belong to a single family (and the same 'biological species' by definition).

Subsets of genetic information were created when the tiger and the lion split in nature, and the same applies for the artificial breeding of the various varieties of dogs, cats or horses. 'Speciation' in this manner simply results from the sub-sampling of DNA originally supplied in the created kinds.

References

1. Goldschmidt, R.B., Evolution as viewed by one geneticist, *American Scientist* 40:84–98, 1952.
2. Eldredge, N.J. and Gould, S.J., PE, An alternative to phyletic gradualism; in: Schopf, T.J.M. (Ed.), *Models in Paleobiology*, Freeman, Cooper, San Francisco, 1972; Batten, D. Punctuated Equilibrium, come of age? *CEN Tech. J.* 8(2):131–137, 1994; Batten, D., Did creationists 'hijack' Gould's idea, *TJ* 16(2):22–24, 2002.
3. Goldschmidt, Ref. 1, p. 97.
4. Simpson, G.G., *Tempo and Mode in Evolution*, Columbia University Press, New York, 1944.
5. Eldredge, N.J., *Fossils: the Evolution and Extinction of Species*, Aurum Press, London, p. 171, 1991.
6. Goldschmidt, Ref. 1, pp. 90–92.

7. Goldschmidt, Ref. 1, p. 90.
8. Goldschmidt, Ref. 1, p. 92.
9. Goldschmidt, Ref. 1, p. 91.
10. Goldschmidt, Ref. 1, p. 98.
11. Goldschmidt, Ref. 1, p. 94.
12. Goldschmidt, Ref. 1, p. 93.
13. Gish, D.T., *Creation Scientists Answer Their Critics*, ICR, El Cajon, p. 93, 1993.
14. Goldschmidt, R.B., *The Material Basis of Evolution*, Yale University Press, pp. 6–7, 1940.
15. Dawkins, R., *Climbing Mt Improbable*, Viking Press, London, 1966.
16. Sarfati, J., Book review of *Climbing Mt Improbable*, *CEN Tech. J.* 12(1): 29–34, 1998.
17. Goldschmidt, Ref. 1, p. 86.
18. Marsh, F.L., *Variation and Fixity in Nature*, Pacific Press Publishing Co., Mountain View, California, p. 34, 1976.
19. Taylor, I.T., *In The Minds Of Men*, TFE Publishing, Toronto, 1991; pp. 161–164.

A.W. (Bill) Mehlert has a Diploma in Theology and lives in Brisbane, Australia. He is a keen student of Flood geology and the fossil record, including the supposed fossil evidence for human evolution, and has written a number of important articles on these topics in the *Creation Research Society Quarterly* and *Creation Ex Nihilo Technical Journal* (now *TJ*).

Evolutionist drama

The clash between fossil and molecular historians provides one of the great dramas of modern biology. Biologists have not quite decided what to make of the incompatible dates. Some (mainly molecular biologists, surprise, surprise) argue that the fossils are wrong. Others (guess who) argue that the molecular clock is wrong. Yet others have suggested ways of reconciling the two lines of evidence.

Ridley, M.

Research that evolves from fossils to genes

Times Online

<www.timesonline.co.uk/article/0,,923-89601,00.html>

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