

A PROPOSAL FOR A NEW CREATIONIST DISCIPLINE

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It is suggested that it may be useful to formalize some ideas, which have hitherto been largely implicit in many Creationist writings, to a greater extent than has been done. Especially is this so of parts of genetics, which are of great importance to Creationism.

Introduction

One of the interesting aspects of creation studies is that they are not without rich theoretical content. To illustrate consider the analytical studies in geology concerning the Deluge, glaciation and the water canopy; in astronomy concerning the age of the universe and solar system, the structure of stars and galaxies; and in physics in the cases of the electromagnetic field, the nature of light and a mathematical model of the electron. Although many aspects of these studies cannot be proven in a strict scientific sense they are, nevertheless, of great value for they demonstrate the reasonableness and credibility of the general creationist position, that it fits the known data quite well and that it is in harmony with all the established principles of science.

It is also observed, however, that there is no comparable theoretical content for creationist biology and some may claim that none is needed. Yet in an area in which so much favourable evidence for the creation viewpoint has been brought to light, one might expect some sort of rigorous framework to correlate and interpret data and make predictions. Such a framework would be centered on a core discipline like genetics but would have sufficient breadth to be the basis for research and experimentation in several branches of biology. After all what is closer to the heart of the creation/evolution controversy than biology, especially genetics? Why then should biology be without a comprehensive theoretical framework?

In this paper it is suggested that creationists' wide-ranging biological results be formalized into a general yet basic theoretical structure. Such a new perspective would not only help discredit evolution, but more importantly would be beneficial to the overall creation model and thus to science.

The Central Feature of the New Model

If it is granted then that such a model would be desirable, what form would it take? What would be its chief characteristics? To determine this it will be appropriate to sample recent creationist literature to discern, if not a pattern, at least some common denominators.

H.R. Siegler¹ reprinted Fleeming Jenkin's criticism of Darwinism, maintaining that that critique is still valid today. Briefly, Jenkin likened the basic kind to a sphere with an original stock or type at the center; out of this center radiated the variations in all directions. He noted that a "tendency of reversion" (throwbacks) becomes

increasingly stronger as the surface of the sphere is approached, thus preventing attainment of the limit by deflecting the variations in all other directions, particularly toward the center. (The reader is almost tempted to refer to the "tendency of reversion" as a *principle* of reversion and in fact F.L. Marsh has formally labelled this fundamental fact as the Principle of Limited Variation.²)

In a later paper Siegler³ proposed a creationist taxonomy, one using the existing categories but with the addition of *baramin* (from the Hebrew *bara*, create and *min*, kind; coined by Marsh). He further gave criteria for defining or identifying the created kinds. The *baramin*, then, would be the unit of interest.

Howe⁴ wrote about the biogeographical studies to help identify the created kinds in the conventional taxonomic categories, and suggested how the created kinds formed sub-taxa in different geographies.

Lammerts⁵ examined the probability of recombining recessive mutations using a mathematical argument from evolutionary population genetics. Assuming Hardy-Weinberg equilibrium, he showed that the probability of such a recombination to produce a presumably "good" feature is exceedingly small.

Poettcker⁶ catalogued seventeen genetics problems facing the modern evolution model and noted that the data fit better into the concept of a created kind with variations.

Finally, Ouweneel⁷ outlined the weaknesses of the two major theories of population genetics and established that creationists have much to hope from theoretical genetics.

The examples could be multiplied but these suffice to suggest a trend, or at least a commonality, of researchers focusing increasingly on the created kind with its variations and fixity, rather than examining specific organisms, mutations or natural selection *per se* and that diverse arguments, including those of population genetics theory, are brought to bear on the matter. Certainly emphasizing "basic kinds" is not new to the creation model, indeed it is foundational to it; but the arguments fall short of proposing what is proposed here, namely, *baramin genetics* or creationist population genetics. This new discipline is the counterpart of evolutionary population theory in which the base unit is usually the species to which the *assumed* principle of (macro-) evolution, i.e., unlimited variation, is applied. On the other hand the central feature of *baramin genetics* is that the created kind is the base unit of investigation to which the *observed* principle of limited variation is applied.⁸

Why has this not been proposed before? There are at least two reasons: 1) there has not been general agreement about the criteria to be used for identifying

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baramin; and 2) it is quite difficult to recognize baramin in the conventional taxonomic categories. Yet with the recent contributions from creationists, such as those mentioned above, at least the process of clarifying can be started. Perhaps not all baramin can be identified but it is expected that many members from many baramin can be determined at the very least. Research in baramin genetics should help facilitate and stimulate needed research in taxonomy and other related areas.

Some Definitions and Other Features

Having provided the basis for the new discipline one may now begin constructing the rest of the framework by a careful definition of terms and by noting some other features.

In baramin genetics the created kinds are viewed in a dual fashion. First, they are seen as biological units in terms of chromosomes, genes and DNA; but, secondly, they are viewed as sources of genetic information. Although viewing the gene as a source of information is not new, creationists have not made much use of this approach. Bass⁹ reports that Lewontin has shown from mathematical genetics that the information content of the genome cannot increase! Surely such an argument as this can be exploited more fully. For example, can it be shown that the information content of the genome, or baramin, actually decreases? By approaching the study of baramin genetics in terms of information, the door is opened to measuring the entropy of the system (baramin) since in a very real sense such information is isolated from that of all other systems. Thus an important part of creationist biology can be linked to physics via information theory.

Having observed this duality, the following terms are defined: A *baramin* is a group of organisms capable of true fertilization.^{10,11} Also, it is a group of organisms capable of exchanging information with one another; the gene pool constituting such a group is a pool of information which is mixed or combined. *No exchange of (genetic) information can ever occur between baramin.*

A *variation* is a different way of combining the genetic make-up of the original stock (basic type) so as to produce a novelty. In terms of information content it is the number of distinct ways of combining units of information (alleles) of the original stock.

There are four different kinds of variation:

- a.) A *new variation* (or variant) is a combination of alleles (units of information) not currently found in the baramin.
- b.) An *old variation* (or variant) is a combination of alleles other than the original stock which is currently found in the baramin.
- c.) A *positive variation* is a non-mutant variation, i.e., any mutations it may have are recessive. It is phenotypically "wild" type.
- d.) A *negative variation* is a mutant variation, i.e., one or more mutations are dominant or co-dominant. It is a mutant phenotype.

The *environment* is the set of restrictions facing (or imposed on) the baramin.

Natural selection is the interaction between the environment and the genome of the organism resulting in

the removal of unsuitable variants. In this paper such a result is called *differential elimination*.

Adaptation is merely the other side of the coin of differential elimination. That is, after all the variants incapable of living in the environment have been removed, the baramin is said to be "adapted to its environment". Adaptation, then, is the condition of the population (baramin) after all unfit variants have been eliminated.

Degeneration is the loss of variation (or potential for variation) within a baramin. Also, it is the loss of information or the inability to exchange information.

A *point mutation* is a genetic accident, an error of the DNA and is further defined in terms of its biochemistry. Also, it is a *change* of information. Thus a "good" mutation results in an increase of the information content of the baramin; a "bad" mutation results in a decrease of the information content; and a "neutral" mutation results in no change of information. Since there is no compelling evidence for a "good" mutation, and since the notion of neutral mutations is a moot question, the creationist may view point mutations as random noise, an interference of the signal, increasing entropy. It is an example of degeneration.

Evolutionists maintain that a mutation is not good or bad *per se*, but is good or bad depending on the environment. The famous peppered moth is frequently cited as such an example. Whether or not the difference in colouration is really due to a mutation is a point that can be challenged. Yet by defining mutations in this manner, the evolutionist is also challenged to show not merely that the alleged mutation survives, but more importantly that it has increased the information content of the organism or population *regardless of environment*.^{12,13}

Using the above definitions and features of the model, how might a baramin geneticist describe the history and present condition of the created kinds? What general picture or impression is given?

In the beginning God created at least one original stock for each baramin. Each of these stocks was endowed with the capacity for genetic variation, though some were given a greater capacity than others. Each baramin was intended to move toward maximum variation, i.e., to fully realize its genetic potential under the perfect Edenic conditions. In such an environment there was no differential elimination and therefore no adaptation. Nor were there any negative variants. Only maximum positive variation was to be achieved. Variation was, then, limited to *within* a created kind and could never occur *between* them. An unbridgable genetic gulf separated them.

With the Fall and the Curse, though fixity remained unchanged, realization of maximum variation became more difficult if not impossible. Negative variations began appearing due to the degenerative process of an imperfect world. Some degree of differential elimination and adaptation began. Degeneration of the genome, and hence of the gene pool, was most likely quite slow in the near perfect conditions of the antediluvian world. After the Deluge, however, the environment became even more restrictive and differential elimination and adaptation more pronounced. But the capacity

for variation was sufficient for most baramin to permit at least one variant (in most cases many more) to survive. This variational process did not require great spans of time but occurred rapidly as baramin dispersed from the ark throughout the world.

Today baramin are well distributed and in great variety. Their ability to adapt to a wide range of environments, despite increased degeneration, is a testimony to the wisdom and foresight of the Creator.

Some Advantages of the New Model

Are there any advantages to baramin genetics over its evolutionary counterpart? There are at least three such general improvements.

First, evolutionist population geneticists have not demonstrated, even theoretically, that populations evolve into higher, more complex groups.¹⁴ This is directly due to their application of the assumed principle of unlimited variation. Creationists need only show that baramin have limits and have already shown that to some extent¹⁵; that is, they apply the observed principle of limited variation. It would seem that the latter approach is also more testable and to that extent more scientific.

Second, the evolutionist population geneticist must try to find some way of reconciling evolution with entropy. (Although, this writer knows of no such serious effort.) Creationist population genetics is not only fully consistent with the Second Law, but actually formally includes that law by means of information theory.

Third, there are two major but rival theories in evolutionary genetics: the Balance Theory (BT) and the Neo-Classical Theory (NCT). Among other things the proponents of these two theories disagree on the role of "natural selection" (differential elimination). The former asserts that variation is destroyed by it. Surely part of the problem is philosophical, namely, the belief that populations "evolve" ever upward. This requires a strong causative agent and therefore the BT theorists turn to "natural selection" while the NCT theorists depend more on genetic drift; both must look, at least to some degree, to mutations as a positive source of change. The roles of these agents are predictably inflated.

The baramin geneticist does not encounter this problem; rather he predicts that both will happen. Though some positive variants may be filtered out, the negative variants are mostly the ones who are differentially eliminated. Such destruction of (negative) variations is predicted by the proponents of the NCT yet in so doing the population is driven toward (positive) horizontal variation as expected by the BT proponents.

Discussion

How should the baramin genetics model be developed further? What questions need research? It is hoped that the following suggestions will prove fruitful not only to baramin geneticists but to experimental creationists in general.

Is it not time for a creationist taxonomy? Need creationists be bound by the conventional categories and criteria? These points deserve serious evaluation and

clear answers from creationist biologists if progress is to be made. As Siegler stated:¹⁶

"Until we as creationists demonstrate that our concepts are applicable in practice, other scientists will have reason or at least excuse to ignore our findings.

One area in which creationism will eventually have to stand or fall exists in the field of plant and animal taxonomy."

How does the magnetic field affect baramin today? How did a stronger magnetic field affect them? What are the effects not only between baramin but within baramin? What are the combined effects of a higher pre-Flood atmospheric pressure with a stronger magnetic field?

Howe¹⁷ has recently reviewed a book on Dooyeweerd's scientific philosophy. Apparently Dooyeweerd had reason to believe that the cytoplasm is a complementary source of information to the DNA and in fact thought of the living cell as controlling its molecular substructure ("enkapsis"). Dooyeweerd's ideas warrant further consideration and experimental investigation. Indeed, the whole area of non-chromosomal heredity could be researched and utilized more fully by creationists than has heretofore been done.

Since baramin genetics is a mathematical discipline, researchers will require information on such matters as the rates of divergence, the rates of increasing variation and increasing reversion (throwbacks) which appear to be inversely proportional, and the functions describing these systems. (For a simple mathematical treatment of variations and fixity, the reader is referred to the appendix.)

Theoretical and experimental input from other non-biological areas could be used such as those from systems and computer engineers. An example would be the development of computer models to describe the behavior, distribution and variation of baramin. From physics more information on the nature of "proton tunnelling"¹⁸ in an electromagnetic field is required. From paleogeology questions pertaining to the identity and distribution of baramin in the pre-Flood world need answers. Biochemists may be able to recognize baramin chemically, i.e., molecular taxonomy.¹⁹

There are undoubtedly many useful results from population genetics that can be incorporated into this model. Promising areas of research include population equilibrium, stability, segregation, migration, fixation of mutations and so on.

Summary

A new model has been proposed, baramin genetics, that embraces and formalizes the most fundamental concepts of scientific creationism. The central feature of the discipline is that the created kind is the unit of investigation and applied to that unit is the principle of limited variation. Among its other features is a sort of dual character: results from biology in the form of genetics can be used and results from physics by means of information theory can be used. The created kinds are seen as diverging from their original perfect state, as degenerating from their initial capacity for maximum

variation. Baramin genetics already offers some advantages over its evolutionary counterpart but much more development is required. Suggestions for such improvement have been offered which involved results from several disciplines and which thereby demonstrated the utility of the model.

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Appendix

A mathematical description of variation and fixity must conform to the biology of the matter. The biological descriptions emphasize an initial rapid generation of new variants followed by increasingly slower production of new variants until no more significant variations occur as the fixity, or limit, of the baramin is approached. Figure 1 is a graph of the function $f(x) = k[1 - \exp(cx)]$, where k is the limit, c is a negative constant characteristic of that particular baramin and x is the generation which represents the amount of genetic "mixing" or allelic combinations that has occurred within the baramin. This assumes, of course, a very large population with continuous random mating. By changing c the "speed" with which the function approaches its limit is changed. The higher the absolute value of c , the quicker the limit is approached; the smaller the absolute value of c , the slower the limit is approached. Figure 2 gives three different graphs for three different values of c .

If the shaded area of Figure 3 is taken to be the amount of old variants (throwbacks) and the dotted portion the amount of significant new variants, then the proportions of the total population constituted by the old and new variants can be ascertained. This is done by choosing a line $x = a$ after which no significant new combinations occur. That is, after a generations only trivial variations arise. The area occupied by the old variants is found by integrating $f(x)$ from 0 to a with respect to x which yields:

$$F(a) = ka - k/c(\exp(ca) - 1).$$

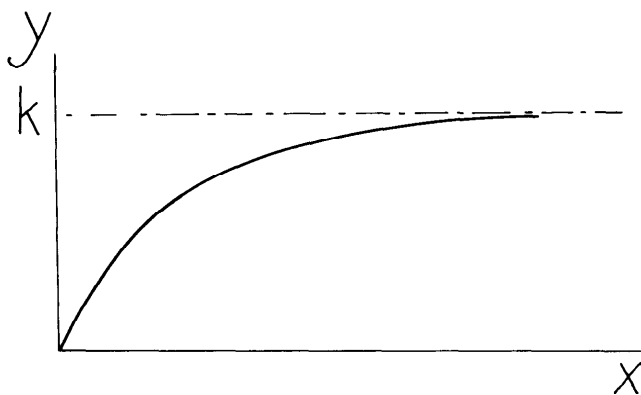


Figure 1. The function $y = f(x) = k[1 - \exp(cx)]$. Here k and x are greater than zero; c , less. The asymptote $y = k$, which the function approaches, is shown by a broken line. The applications of these mathematical expressions to the questions of genetics are discussed in the Appendix.

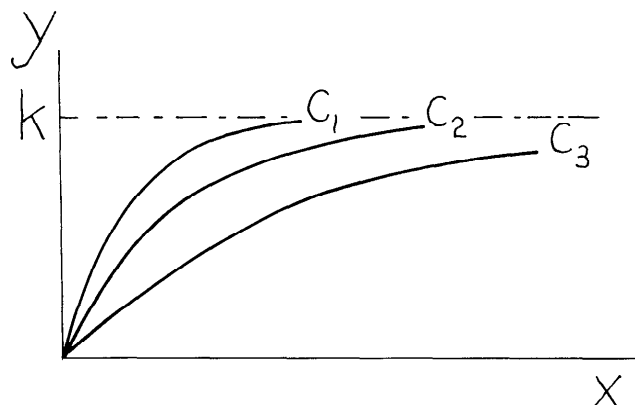


Figure 2. The function $y = f(x) = k[1 - \exp(cx)]$ for different c 's: $i = 1, 2,$ and 3 . The greater the absolute value of c is, the more quickly the curve approaches the asymptote.

To be specific let $k = 1, a = 1$ and $c = (-3)$. Then,

$$F(1) = 1 + \frac{1}{3}(\exp(-3) - 1) = 0.68.$$

The proportion of the total area occupied by the old variants is determined by dividing $F(1)$ over the total area, A , which is given by $af(a)$. Hence,

$$F(1)/A = .68/(1 - \exp(-3)) = .68/.95 = .72$$

This means that 72% of the new generation are old variations while 28% are new. Furthermore, it suggests that this baramin will quickly exhaust its variational potential.

For a second example let $c = (-1)$ and all other values remain the same. Then,

$$A = 1 - \exp(-1) = .63$$

$$F(1) = 1 + 1(\exp(-1) - 1) = 1/e = 0.37$$

Hence,

$$F(1)/A = .37/.63 = .59.$$

Therefore, 59% of the new generation are new variants while 41% have arisen previously. This baramin is ex-

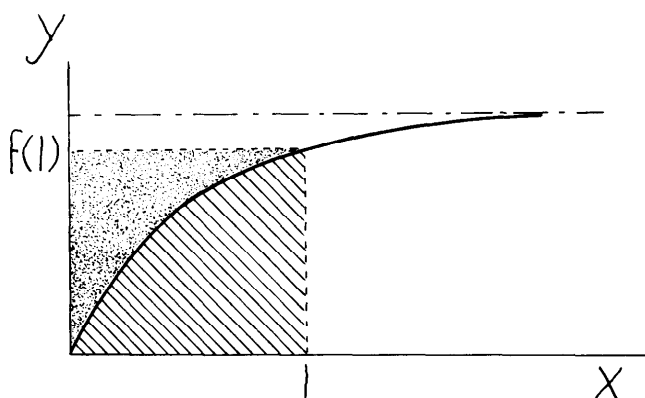


Figure 3. Populations are here represented by areas. The total population, being the sum of the new and the old variants, is indicated by the area of the rectangle bounded by the axes and the lines $x = a = 1$ and $y = f(1)$; so the total area involved is $a \cdot f(a) = 1 \cdot f(1)$. The shaded area, representing old variants, is bounded by the x axis, the line $x = a$, and the curve $y = f(x)$. The dotted enclosed area, representing new variants, is bounded by the y axis, the line $y = f(1)$, and the curve $y = f(x)$.

ploiting its variational potential much more slowly than the one of the first example.

In addition to finding proportions of the population, the equations with $f(x)$ and $F(x)$ could also be used in the solution of problems dealing with the formation of intra-baramin taxa, dispersion, and adaptivity but only in connection with other equations which reflect some specific knowledge of baramin stability, equilibrium and so on. Much of the theoretical progress, then, will depend on research into baramin biology.

Finally, it should be realized that the foregoing is meant only to illustrate, in a simple and intuitive way, that creationist concepts pertaining to the created kind are susceptible of mathematical treatment. Many questions arise, such as the interpretation of the variable x and the calculation of the characteristic of variation c , which are properly the subjects of future research.

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EVOLUTION, RACE, AND EQUALITY OF INTELLIGENCE

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Social scientists today almost universally believe that essentially, the races of men are largely equal in regard to intelligence. Although there is some disagreement, nonetheless, even among those who disagree, it is agreed that there is not more than approximately one standard deviation difference in the mean of intelligence between any two races. This fact though, is contrary to the basic assumptions of evolution. In order for selection to take place, differences must exist between individual organisms. Selection would then cause races to develop, a process which is called in Darwinian terms, speciation. The lack of important differences between races, especially in the crucial difference between men and "lower" forms of life, viz. intelligence, is seen as a serious difficulty for the evolutionary theory. In addition, the theory of evolution can also be seen as having been an important factor in the extreme forms of racism that existed at the turn of the century and for several years beyond, especially racism against blacks and Jews.

The theory of evolution teaches essentially that random mutations cause slight changes in the gene pool of a species. If random mutations produce a phenotype which confers upon the organism a slight survival advantage compared to species without it, the environment will affect the population in such a way that the organism (or organisms) with the slight advantage will have a greater chance of surviving and reproducing, and thus passing this characteristic on to its progeny.

Conversely, organisms without the advantageous characteristic will be less likely to survive so as to reproduce, and thus less likely to pass this characteristic on to its offspring. The result is that, in time, the organisms with the advantageous characteristic will increase in numbers, and the organisms without the advantageous characteristic will numerically decrease. Eventually the composition of the gene pool will

change, altering the characteristics of the population as a whole.

The key to the evolution theory, therefore, is *differences within the species*¹. If every member of a population had an identical genotype, evolution could not occur because evolution purportedly results from nature's selecting from *existing differences*. Without differences, one organism could not have an advantage over any other, and thus survival would depend totally upon fortuitous factors and not upon any innate advantage that the structure of the organism itself confers. For an organism to have an innate survival advantage compared to others, structural differences must exist. These differences are the key to current evolutionary theory. Of course it is possible that a mutation could occur in a population which is homogeneous for a trait, but this would, if the trait produced from this mutation was favorable, then begin to change the population. Because it would take a long time for the population to again become homogeneous for that trait, variety in

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