the first part—of the book is illustrated and written on a basic level. The appendix—or second part—is much more detailed and has an extensive bibliography.

Both parts of the book are divided into six corre-

sponding sections:

- 1) The Origin of the Universe 2) The Earth, a Young Planet? 3) The Origin of Life
- 4) The Origin of Species5) The Origin of Mankind
- 6) The Fossil Record

There are 47 illustrations, from Archaeopteryx to our supposed ancestral tree. The appendix is divided into 318 subsections with titles such as "Suggested Sources for Information on Problems with Darwin's Interpretation of the Galapagos Finches" and "The Earths Magnetic Field."

Either of the two parts of the book even by itself is a valuable resource. Having the two bound together with an index and cross reference makes this book of even greater value. Paul Taylor has done an excellent job of explaining origins from the creationists' perspective and compiling the evidence for that position. The Origins Answer Book contains the most information on the subject in one concise package that this reviewer has ever seen.

INVITED PAPER

THE IMPACT OF MODERN THEORIES OF EVOLUTION **UPON WESTERN INTELLECTUAL THOUGHT***

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Abstract

The two major theories of evolution today are Darwinism and cosmic evolutionism. Because of the major scientific difficulties besetting both theories, neither can offer reliable guidance to man's thought and action. As a result, radically different and mutually contradictory movements and social action programs have arisen from these two theories.

In her extensive discussion of Darwinism's impact upon politics and society Gertrude Himmelfarb speaks of Darwinism's "inadequacy as a social theory" and points out that "In the spectrum of opinion that went under the name of social Darwinism almost every variety of belief was included." Jacques Barzun found that from about 1900 through World War I all political parties in every European country, no matter how mutually antagonistic, "invoked Spencer and Darwin." Robert C. Bannister reports that already in the 1880s the phrase "social Darwinism" meant "brutal individualism" for some, and at the same time a rationale for social reform and class struggle for others (Bannister, 1979, p. 4). This ambivalence and resulting confusion led Eric F. Goldman (1955, p. 71 ff) to distinguish between "social" and "reform" Darwinism. Both laissez faire, individualist free market economists as well as socialists have leaned upon Darwinism or related evolutionist world views for "scientific" support. Thus evolutionism, rejecting fixity of species and of the nature of man himself, led to confusion of human thought in politics and economics.

Numerous commentators agree that there was ample room for divergent interpretations of Charles Darwin's Origin of Species and Descent of Man. This was evident already in Darwin's own generation. Thus Thomas H. Huxley, "Darwin's Bulldog," thought that Darwinian natural selection undergirded state socialism since nature provided examples of socialism in

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the societies of bees and ants. Alfred Russell Wallace on the other hand saw sharp differences between animals and men so that in his opinion natural selection did not even apply to man (Bannister, 1979, pp. 31-32; Brackman, 1980, p. 346). Barzun (1958, pp. 74-86) has shown in meticulous detail that such differences were compounded by the lack of clarity in Darwin's writing style, by Darwin's hedging and self-contradiction, and by his vacillation over and modification of his theories in successive editions of *Origins*.

Darwinian evolutionism is a materialistic world view; its hypothesis is that all things are ultimately descended from one single unit such as the hydrogen atom. Leading New Age thinkers reject this materialism, including its alleged "scientific" mechanisms (Roszak, 1975, p. 99; Ferguson, 1980, p. 159; Rifkin, 1983, first four chapters). Nevertheless "materialistic" Darwinism and "spiritual" New Age pantheist mysticism agree on the essential oneness of all things. Loren Eiseley recognized this monistic New Age element (though not by that name) in Darwinism when he praised Darwin for "one of the most tremendous insights a living being ever had." It was the vision of man's and animals' "origin in one common ancestor we may be all melted together." Eiseley (1962, pp. 351-52) commends this "statement of almost clairvoyant perception" and regrets that "very few youths today . . . are capable of saying to themselves, 'We are all one—all melted together'." Today many youths share Darwin's "tremendous insight."

Both imperialism and pacifism before World War I claimed Darwinism as their rationale as Bannister (1979, Chapter 12, pp. 226-42) and Richard Hofstadter (1955, Chapter 9, pp. 170-200) have shown. Hofstadter (1955, p. 200) reported that William Jennings Bryan,

^{*}Editor's Note: The topic of the influence of the theory of evolution on modern intellectual thought has been covered by many creationist writers in the past. Yet it is a vital pursuit and Ellen Myers' article offers some fresh perspectives. For a recent Quarterly article on the subject, see Carson, C. B. 1988, Naturalistic outlook. *CRSQ* 25:16-24.

troubled about the social implications of Darwinism, said after reading Darwin's Descent of Man in 1905 that Darwin's teachings would "weaken the cause of democracy and strengthen class pride and the power

Modern racism and its sister movement, eugenicism, which flourished between the 1880s and 1940s and is resurgent again today through the contemporary push for "euthanasia" ("medical treatment" by starvation or outright killing of the severely handicapped, comatose and the infirm aged), is also rooted in Darwinian evolutionism. The founder of eugenicism was a cousin of Charles Darwin, Sir Francis Galton (1822-1911). Mark A. Haller (1963, pp. 3-4) writes that "eugenics was the legitimate offspring of Darwinian evolution, a natural and doubtless inevitable outgrowth of currents of thought that developed from the publication in 1859 of Charles Darwin's The Origin of Species. Galton "claimed that eugenics was practical Darwinism. His intention was . . . 'to see what the theory of heredity, of variations and the principle of natural selection meant when applied to Man' " (Jones, 1980, p. 99). Galton states that:

There is nothing either in the history of domestic animals or in that of evolution to make us doubt that a race of sane men may be formed, who shall be as much superior mentally and morally to the modern Europeans, as the modern European is to the lowest of the Negro races (quoted in Howard and Rifkin, 1980, p. 44).

Eugenicism spread all over the western world including America where it was spearheaded by Harry H. Laughlin and birth control pioneer Margaret Sanger. Its "finest hour" arrived in 1924 when Congress passed an immigration law restricting immigration to two per cent of the foreign-born from each country according to the 1890 census in order to preserve a "nordic" balance among the American population. This law remained in effect until 1965 (Howard and Rifkin, 1980, pp. 66-70). Eugenic sterilization laws were also passed in 30 states between 1907 and 1931, Canada, all Scandinavia and Iceland, and of course in Nazi Germany. The Nazis considered themselves the most forthright enforcers of Darwinian evolutionism, as especially Daniel Gasman (1971) has incontrovertibly

The acceptance of Darwinism by Karl Marx and his followers is well documented. Marx praised Darwin's Origin of Species because "the death blow [is] dealt here for the first time to teleology in the natural sciences" (quoted in Himmelfarb, 1962, p. 421). Gasman (1971, p. 107) perceptively comments that Marx discovered in Darwinism:

a scheme of development, similar to his own, which excluded the intervention of both God and man. For Darwin, nature evolved inexorably and alone, free of outside interference. For Marx, the course of history was determined largely by the unconscious operation of the forces and relations of material production.

Marxist-Communists were not alone in adopting evolutionism and importing it in Russia. Vladimir Solovyov (1853-1900), Russia's greatest philosopher, preached a New Age-type world view permeated by

Darwinism as well as pantheist-gnostic concepts until shortly before his death when he completely reversed his views and returned to orthodox Christianity. He expressed his earlier enthusiastic and somewhat mystical acceptance of evolution out of primeval chaos in his influential paper "Beauty, Sexuality, and Love" (Schmemann, 1977, pp. 73-134, especially pp. 80-84 and pp. 94-95). The artists, poets and writers of the famous Russian Silver Age of art and literature before World War I deeply imbibed Darwinian as well as "New Age" type cosmic "spiritual" evolutionism from Solovyov and also directly from the West, where the "vitalist evolutionism" of Henri Bergson (1859-1941) and George Bernard Shaw (1856-1950) was then winning many followers. Pierre Teilhard de Chardin (1881-1955), the apostate French Jesuit priest who may have been involved in the Piltdown Man fraud, was a student of Bergson and became a chief developer of the New Age evolutionism of our own day. Teilhard is a sort of cult hero of the New Age movement as is evident from New Age leader Marilyn Ferguson's seminal work The Aquarian Conspiracy. "Scientifically" speaking, Ferguson along with other New Agers like Roszak and Rifkin (see above) rejects Darwinism. Instead she endorses the Gould-Eldredge evolutionary model of "punctuated equilibrium" because "it opens us up to the possibility of rapid evolution in our own time, when the equilibrium of the species is punctuated by stress" (1980, p. 159). Ferguson (1980, p. 162) speculates that mankind's imminent evolutionary leap may lead to a community like a Kenyan flattid-bug colony which "is, in a sense, a single individual, a single mind, whose genes were influenced by its collective need." This speculation is akin to the collectivist utopianism of Marxists, socialists and communists. It is adopted almost verbatim from vitalist evolutionist British author Colin Wilson's book The Occult (Wilson, 1971, p. 128). Its enormous influence especially among young people today cannot be overestimated.

In conclusion, the influence of evolutionism in both its modern Darwinian "materialist" and its New Age style "cosmic-spiritual" forms has been powerful and all-pervading. Mutually antagonistic movements sprang from evolutionism which is unable to offer unambiguous guidance for human action. Evolutionism has spawned such scourges of Western society as social Darwinism, racism, eugenicism, Nazism, socialism, Communism, and related collectivist trends. Though "cosmic-spiritual" evolutionists often reject Darwinian evolution mechanisms, they join the still powerful Darwinists in denying creation as the explanation of origins. The modern creation movement offers the only consistent alternative to evolutionism in both forms.

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LETTERS TO THE EDITOR

Genesis and Genetics

In his letter "Genetic Variability" (1989), Raymond Bray criticizes conclusions drawn by Dr. Walter Lammerts, but then draws some unwarranted conclusions of his own. He suggests that the word "perfect" (Genesis 6:9, KJV) means that Noah was genetically perfect. However word meanings should be drawn from their usage in Hebrew, not what the English might be taken to mean. Given Bray's meaning, would we then conclude that the sacrifices offered at the temple were all "genetically perfect" (Leviticus 22:21), or that Israel was commanded by God to be "genetically perfect" (Deuteronomy 18:13)? (Compare 1 Kings 8:61.) The word *tamim* when applied to human beings is better translated "blameless" and refers to the kind of lifestyle that flows from a consistent walk with God. We need to be careful not to impose OUR imagined meanings on the Biblical text.

It is also less than certain that "the human stock had been contaminated by the genes of fallen angels" (Bray, 1989, p. 67). That is one, but not the only possible interpretation of Genesis 6:4. Bray assumes his interpretation to be fact. Bray's other points may well have some value.

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More Thoughts on Relativity

Since my paper on the Special Theory of Relativity, STR, (Benton, 1988), I have received several letters from readers questioning my quotation of Michelson rather than Einstein and my use of the terms "actual" and "apparent." I unashamedly admit to preferring Michelson's explanation of the STR to Einstein's own. First, I believe Michelson to be more objective than Einstein when defending his own theory. Second, Einstein was not known for being particularly consistent or sequitur in his logic. Michelson, on the other hand, was known for being meticulous in these matters.

Third, I think it important to consider the STR objectively, as a scientific theory and to separate it from its philosophical baggage, which is a separate issue. I believe Michelson to have approached it in this way. I have never seen any evidence to suggest that Michelson and Einstein ever collaborated on anything. However, Einstein's theory would not be remembered were it not for the work of Michelson.

As to my use of "apparent" vs. "actual," the best way I can think of to explain this is with an analogy. I

see the STR as being analogous to the Coriolis force discussion. To the observer walking about on an iceberg or carousel there "appears" to be a force acting mutually perpendicular to the rotation and velocity. "Actually" there is no such force. What "appears" to be a force is "actually" a component of the total acceleration, a bias of the moving observer. The most basic statement that can be made about the STR is that it is an attempt to relate the bias of one moving observer to that of another.

I think it is necessary to approach the STR on two levels: scientific and philosophical. It is important to make a distinction and to address each. I have not attempted to address all of the philosophical implications of the STR. Furthermore, I do not consider it an inescapable conclusion that all of the philosophical baggage which the STR has collected over the years is confirmed simultaneously with any and every high energy particle experiment which might agree with the mathematical formulae. Specifically, if I choose to employ the formulae in a numerical model of a plasma, this does not mean that I do so without reservation or that I also accept such things as the Twin Paradox.

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Granite Intrusions

I followed with interest the arguments between Wise (1989) and Gentry (1989), but I felt I should comment on Gentry's hypothesis that granite bodies intruding Flood-deposited Phanerozoic strata were emplaced cold and solid by tectonic processes and not as hot 'crystal mushes.' Several logical predictions can be derived from this hypothesis, some of which I will enlarge upon here since Gentry seems to be unaware of the gravity of these criticisms. If Gentry's hypothesis is correct then:

- 1. Granite bodies should be fault-bounded blocks (i.e. they should exhibit faulted contacts with the surrounding country rock).
- 2. Granite bodies should not exhibit chilled margins, since chilled margins form by rapid cooling of the magma upon contact with a relatively cold country rock.
- 3. Granite bodies should not contain any xenoliths of surrounding country rock, since these could only be incorporated into the granite if it were still fluid. Unfortunately, numerous cases of direct field evidence conflict with each one of these logical progressions from the initial hypothesis.