CREATION—"SCIENCE" AND FUNCTIONAL ILLITERACY:
SPECTRE OF A CHRISTMAS PAST OR YET TO COME?

(AN EDITORIAL)

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"I just want the religious alternative to evolution taught in the schools, and to be taught as science."

Maryland Legislator Patrick Scanello

"We are part of the first great age of the world whose cultured inhabitants will never seem quaint, superstitious, or silly to their descendents."

David Ehrenfeld

"History repeats itself. That's one of the things wrong with history."

Clarence Darrow

Pragmatic insect behavioral ecology, an attempt to put modern knowledge of evolutionary theory into service; to get insect biologists to think simultaneously (and creatively) about the basic, theoretical, and utilitarian aspects of entomology; and to promote an understanding of our science by the public, meets the abominable, creation—"science" snowjob head on.

To competent biologists, biology itself is scarcely more than the study of evolution. Evolution is, for all practical purposes, fact. Natural selection, though it may be tautological and philosophically a poor theory in the various ways it is usually stated (e.g. "survival of the fittest"), and perhaps not even capable of being falsified, is nevertheless profound and axiomatic (C. Harris 1981). It provides the most useful insight for problem solving that biological science has, and is the heart and soul of behavioral ecology.

But, the word evolution is a "red flag" to fundamentalists: "Scopes II" occurred in Arkansas "because we had the temerity to insert the word evolution into the discussion of biology" (Mayer 1981). I can imagine biology being taught in public schools without mentioning evolution—in a "big lie" of another sort we honor Columbus there, and he was a villain, driven by personal ambition for extreme wealth and a hereditary title, and while demanding impossible tributes of gold and other negotiables, managed to kill or export as slaves 80% of the people of Hispaniola within 15 years of the time he "discovered" them (Wilcox 1977)—but it wouldn't be science, instead merely an arbitrary collection of facts. What is seen as important or necessary depends upon one's standards, sacred cows, and priorities, and don't you "know" intuitively that there are many more coaches teaching biology than there are biologists coaching football across the U.S.?

The Press called the Arkansas trial "Scopes II." Never! Thirty years of worldly TV, lasers, gene-splicing, heart transplants, defeat of small pox and "infantile paralysis," and a walk on the moon made Darrow and Bryan as ancient as Pugnax the Gladiator and Ben Hur. In Dayton, plain, God-fearing
folks didn’t want to and wouldn’t be made to entertain thoughts that their ancestors were apes; in Little Rock, affluent, lettered men of free will made monkeys of themselves. Little Rock was a Monkeyrama, not a “Scopes II.” Was it part of the democratic degradation of science that H. L. Mencken predicted (Bode 1969)?

What I can’t understand is where were the Press, the Scientific Societies and Institutions, and the wiser and concerned religious leaders, before this matter got out of hand? Were there no individuals like Mencken and T. H. Huxley, stiff-jawed, combative hell-raisers to carry their message into the tents and shake it under people’s noses, in a manner of speaking? If Muhammad Ali had been going to fight D. T. Gish, a CRS leader, he’d have been heard! In my mind’s ear I can hear him:

We’re gonna take up his views on creation;
It’ll be heard all across the Nation.
I’ll fix him, and his sixes,
Put an end to his truckses,
You’ll see a Darwinian demonstration!

The confrontation between science and creation—“science” has been a floating pea-and-shell game. Until Little Rock the issues themselves were seldom if ever honestly or squarely met. For example, when attention was focused on their Sacrament of Created Fixity of Species, and it was pointed out that the man-selected differences between, say, St. Bernard and Pekinese dogs would merit species-level distinction, except for the genetic continuity possible along the whim-cline of breeds between them, the creation—“scientist” evolved his species into kinds and made his kinds open-ended taxa, maybe genera, maybe families... Who could take their stuff seriously? Look at discussions of the second law of thermodynamics, to disprove phylogeny. If true, then we are only imagining ontogeny and embryology! And probability? There is only one chance in 4 billion (world population) that it is I sitting in my office (writing this editorial), and this must be multiplied by the probability that my office should occupy the spot on the Earth’s surface that it does, to calculate the chances that I would be here—the statistics of course show that it is impossible for me to write this in my office, and I haven’t even dealt with the actual writing yet! And this is the nature of the arguments about probability and the origin of life.

Augustine probably considered the Genesis story, authority for creation—“science” “knowledge,” too naive for serious consideration (C. Harris 1981). Harris quotes comments of a ninth century bishop that are appropriate: “Things are believed now by christians of such absurdity as no one ever could aforesight induce the heathen to believe.” Only four years ago Ehrenfeld (1978) lightly dismissed contemporary belief in the Bible story as fact, with the sentence I quoted at the head of this paper, proceed by the following: “God created the world and all its creatures in the year 4004 B.C. We have this on the assurance of the late Bishop James Ussher, who had many supporters in the seventeenth and eighteenth centuries... Now, educated people know more, and therefore must know better... Old myths have wilted in the heat of scientific evidence... Time and knowledge have made the good bishop merely quaint.” Today I suspect Ehrenfeld must feel more
like the critic of Spiritualism 100 years ago who lamented, "What would I have said six years ago to anybody who predicted that before the enlightened nineteenth century was ended hundreds of thousands of people in this country would believe themselves to be able to communicate daily with the ghosts of their grandfathers?" (Moore 1977). One can view Spiritualism as fun, nonsense, entertainment, or harmless superstition, like not stepping on a crack, and so what? But, creation-"science" strikes me as a mischief, that is not altogether innocent, and maybe even ominous.

The Creation Research Society is the organization that has raised the most Cain, and, according to C. Harris (1981), has "more than 600 voting members, all with graduate degrees in science"! Harris observes that this Society "is unique among organizations with scientific pretensions in its insistence upon homogeneity of thought among its members. Every applicant [read supplicant, JEL] for membership must attest to his orthodoxy on the following doctrines: . . . The Bible is the Word of God, and . . . all of its assertions are historically and scientifically true in all of the original autographs . . . This means that the account of origins in Genesis is a factual presentation of simple truths . . . All basic types of living things, including man, were made by direct creative acts of God during Creation Week as described by Genesis . . . The great Flood described by Genesis . . . was an historical event. . . ."

In other words, while CRS members sport the apparent credentials of science to promote their religion, they carry insurance that any threatening findings of real science can't penetrate and displace the beliefs they intended to "prove," Science? "Science."

In one of their standard tactics creation-"scientists" deliberately confound the meaning of the word theory, taking as its meaning only the trivial, vulgar usage of "speculation" or "guess." Now, their bishops have standard dictionaries and access to evolution texts, and know very well that by evolutionary theory "we mean not mere hypotheses that life has evolved or that natural selection is a major mechanism, but the body of interconnected statements (often expressed in mathematical form) that describe the general processes by which variations arise and are altered in frequency to cause changes of the kind documented by paleontology and systematics" (Futuyma 1979). Interestingly, in California a year ago the judge said that science teachers must stress that evolution is "theory" not dogma. I wonder what he meant by that?

Creation-"scientists" have even equated their position with that of Galileo, and argued that evolutionists protect their own orthodoxy and dogma by not letting them publish, in professional, scientific journals, studies that would disprove evolution. Poppycock! When this came up in Little Rock testimony Judge W. Overton pressed the witness for an example and none could be given (This will come up again). This ridiculous argument could only convince someone outside of science. As you well know science is intensely competitive, and publication space, grant support, legitimate scientific ideas and citations are scrambled for and squabbled over. If anyone could get convincing scientific evidence in support of anybody's creation notion he would publish (we all have a deep personal interest in any factual evidence relating to who, why, where, and if we are; that's why the study of evolution upsets fundamentalists so much); if he could get evidence in sup-
port of the story advocated by creation-"scientists" he would not only publish, but would quickly submit a grant proposal to the keepers of the funds that Christian* Fundamentalists mail in to support their radio and TV preachers, hospitals, and other "good work" that is advertised in their media. If a creation-"scientist" submitted solid evidence for a Genesis creation story, certainly he would get the normal bruising we all get when we submit papers to refereed journals, but I suspect, on the basis of reading history, and bitter experience, and with my tongue only slightly in my cheek, that the following would also happen: someone would look up similar and remotely related papers, add a thought or two, and publish a review, thus "stealing" his citations; someone would look into the old literature trying to find who might have said something of the same sort first, because such a finding carries prestige (see also C. Harris 1981); someone would look into his own old papers and publish something to demonstrate that he had said it earlier; someone would try to publish the same thing, in a different way, making it look like he hadn't seen the original and had an independent discovery; and someone else would publish something similar but mixed up, because it is better to appear confused than not to appear at all. If a scientist discovered evidence of one of the Genesis Creations he could even go on a lecture tour, taking in a lot of churches and money, be an instant celebrity (and rightfully so, and impossible to beat as an evangelist), and perhaps even go into preaching, opening a new niche for unemployed biology and geology graduates.

There are many other false and dead issues that creation-"scientists" have resurrected that could be discussed (for examples see Alexander 1978), but a major point and conclusion is, that, because of the nature of individual scientists, not only from their own personal concern an lonely, finite humans, and their near-universal idealism and "nobleesse oblige," but also because of their private, free enterprise for personal scientific gain, there can be no thought of conspiracy. If evolutionary theory or any of its parts are to be disproved, it will be these biologists that will do it, and eagerly. I am sure that the bishops of creation-"science" know this, and that their less-than-honest tactics themselves were their acknowledgement aforesaid of a losing cause, but I cannot fathom their goal or purpose. Sooner or later, they must have known that even if they were at first successful in their ruse to pass religion off as science (an approach used by Spiritualists a century ago, Moore 1977), they would eventually arrive at a forum that would require form and substance; and that deception—though it worked in early skirmishes staged in provincial kangaroo courts or on their private media for crowds that seems to have changed little since those that cheered the burning of heretics like Giordano Bruno, or Joseph Priestly's study, or the libraries of Alexandria and Constantinople—would not prevail.

As we have seen, Dave Ehrenfeld (1978) seems to have been wrong in his judgement about contemporary intellectual sophistication in America. But was he wrong in this statement about the critics of humanism (he is a critic himself, but read his book): "Periods of ferment and creativity have always provided opportunities for evil, which has its own inventive genius. And then a reaction occurs: 'saintly and ascetic' preachers arise and flourish.

* Mention of a particular religion does not constitute an endorsement by IFAS, USDA, or USA.
for a while, gaining popularity as they criticize not only the vices but also the creations of others, and as they prophesy doom. Such criticism is generally short-lived; the public cannot tolerate it for long, for this kind of self-denying reform soon becomes wearying, then boring, then irritating, and ultimately threatening. At this point the . . . preachers are rejected . . ."

Because of the attention it has gotten, will creationism finally be examined in detail and dismissed, generally, permanently, and forgotten? Or, is what we have seen a glimpse of a spiritual climate we can look forward to? C. Harris (1981) says that “only a dull wit can fail to imagine the dawn—or dusk—of a new Dark Age as the result of energy shortages, famine, pollution, and so on.” Colvinaux (1980), in his biological theory of history, suggests that because in America we are gradually filling up our niche spaces, laws will become more restrictive and oppressive, and limiting of individual freedom. In fact, he suggests that the Russians, with their vast real-estate, may ultimately have more individual freedom than we do! And Melvin Harris (1977), in his examination of the relationship of cultures and the ecological circumstances that have led to their development and form, also sees us coming up on a period of transformation, and with thinly veiled pessimism ends with advice not unlike that given to a mouse that has fallen into a vat of milk—keep swimming and kick harder and maybe you will churn up a lump of butter to climb out on. He observes that “Most people are conformists. History repeats itself in countless acts of individual obedience to cultural rule and pattern, and individual wills seldom prevail in matters requiring radical alterations of deeply conditioned beliefs and practices.”

The creation-“science” phenomenon is part of a larger cultural happening. Dayton was as far from Little Rock as it was from New Salem, but Little Rock showed us that something was the same. Something hasn’t changed at all, and that same something will have a dominating influence on a number of decisions that are about to be confronted.

I think we are talking about Functional Literacy. Florida public schools administer literacy tests to their students by direction of the State Government, and require them to demonstrate that they can perform essential, everyday skills that are necessary for today’s living—balancing a checkbook, filling out an application, reading a map or bus schedule, etc. That Little Rock occurred, that Legislator Scamello said what he did, that a top American leader said what he did (and a conservative, public intellectual squinted along his upraised, patrician nose and said, “Ah, but it’s true.”), that the national press didn’t get the whole creation-“science” matter laughed off the stage at its genesis, that some charismatic TV dean of news-time philosophy didn’t do a special on it, that the poll that “demonstrated” that some group of Americans wanted a “democratic” treatment of a non-existent “choice” wasn’t jumped on by critics, that the Arkansas Governor and Legislature passed their bill, unread (that is not an evolutionarily stable explanation), that their State’s Attorney didn’t tell whoever needed telling that the whole thing smelled more like Lysenko’s Russia than America, that . . . Any number of events and actions tell us that a lot of people, and worst of all leaders, professional gadflies, and public intellectuals, have failed an adult, functional literacy test. And, the questions they missed were not merely on biology, or evolution, or astro-physics, astronomy, geology, archaeology, anthro-
ology, or science philosophy and practice, but also on the Constitution, human nature, leadership, history, ethics, journalism, and even, and especially, theology and objective Biblical history.

"... so the gods
godmade man as he looks
looking like the gods
they godmade them
prick and hole
they godmade them

and the gods blessed them
and the gods said to them:
BREED A LOT AND FILL THE EARTH
AND TAKE IT OVER . . ."

(Hebrew P Document, Genesis 1.1-2.4a; Doria and Lenowitz 1976) (at least five individuals or groups, known as J, J', E, D, and P, separated by centuries, contributed to Genesis and the four other books of the Pentateuch; C. Harris 1981)

It is absurd to think that scientists must inform their legislatures that if they require schools to teach Biblical creation as fact (if they teach evolutionary theory) that it will be equally legitimate, actually necessary by law, for our schools to teach (at least in a thought experiment that dispenses with the Constitutional separation of church and state) every other Biblical myth, story, parable, and miracle as fact, and somehow deal with the internal contradictions. They should know without being told. And they should also know, that if such works are to be used as a data base for science, then the credibility of the sources themselves must come under very close and critical scrutiny.

But! . . . , just perhaps this is exactly what is needed! Perhaps it is necessary for an educated electorate to be informed of the historical evidence for their beliefs and "universal truths," since these historically have had a major influence on rationality. If most Americans will cast their votes (on crisis issues that will be developing) on the basis of theological information from various religious instruction, without objective study of the history of their culture's religious origins—study that takes into consideration contemporary ecology, demography, philosophy, politics, mythology, contemporary views of key personalities, and legal systems, and that has been obtained and analyzed using the rules of evidence developed and established by modern historians—then it is time for an enlightenment, a gnostic reformation.

An analysis of the religio-scientific data base would include close examination of parables, myths, and prophesies, the intents of their authors, and their homologues and analogues in other cultures; as well as mutual contradictions within prime sources, alternative translations and interpretations of the same original material; and the analysis of the psychology, motives and personalities of key actors, and the degree to which early writers adjusted and embellished their accounts, and, of course, their purposes for
doing this. Grant (1977) and Smith (1978) have some interesting information and insights along these lines.

Such an examination of the new, double-speak, science data base must especially focus on information that forms the substance, and essence of modern Christianity, which seems, on the basis of the discovery of a number of gospel-type documents in Egypt, to exclude equally legitimate, contemporaneous experience and interpretation that only became heretical post facto, after the power politics of the second century A.D. From a historian who analyzed the "Gnostic Gospels," "It is the winners who write history—their way. No wonder, then, that the viewpoint of the successful majority has dominated all traditional accounts of the origin of Christianity. Ecclesiastical christians first defined the terms (naming themselves 'orthodox' and their opponents 'heretics'); then they proceeded to demonstrate—at least to their own satisfaction—that their triumph was historically inevitable, or, in religious terms, 'guided by the Holy Spirit.' But the discoveries at Nag Hammadi reopen fundamental questions. They suggest that Christianity might have developed in very different directions—or that Christianity as we know it might not have survived . . ." (Pagels 1979).

At the end of World War II Japan underwent a major religious change, and set aside an ancient tradition (at the insistence of the Allies). Such things may be necessary for the cultural evolution and survival of a modern nation—a punctuation in the evolution of self knowledge.

Each participant has reprints of his own paper. Paper-bound reprints of the entire Symposium—81 are available from some participants and in quantity from E. O. Painter Printing Co., DeLeon Springs, Fla 32948 ($5 at $8/2.00). (Reprints of previous Symposium—79 are also available.)

At the annual fall meeting of the Society in 1982, there will be another symposium on insect behavioral ecology.

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LITERATURE CITED


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Symposium Participants

