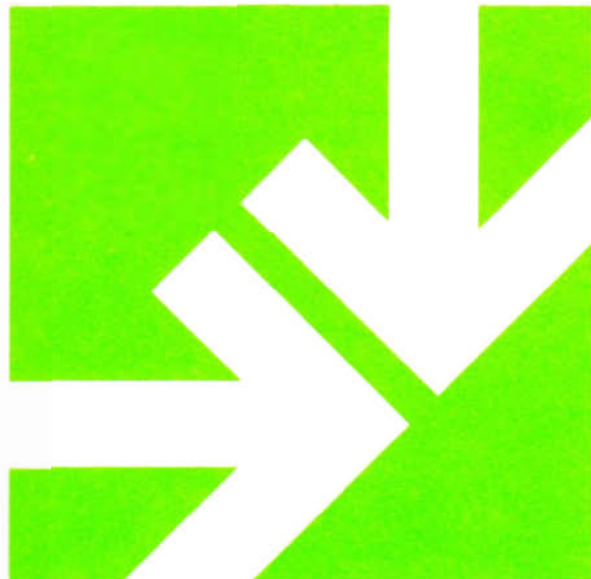


JOURNAL OF THE AMERICAN SCIENTIFIC AFFILIATION



An evangelical perspective on science and the Christian faith

(US ISSN 0003-0988)

inerrant, *adj.* Making no errors; unerring.

error, *n.* An act, assertion or belief that unintentionally deviates from what is correct, right, or true. *Synonyms:* error, mistake, oversight.

mistake, *n.* An error or fault.

correct, *adj.* Free from error or fault; true or accurate.

true, *adj.* Consistent with fact or reality; not false or erroneous.

... American Heritage Dictionary, 1975

"The fear of the Lord is the beginning of Wisdom."

Psalm 111:10

VOLUME 31, NUMBER 2

JUNE 1979

Editor

RICHARD H. BUBE, Chairman, Department of Materials Science and Engineering, Stanford University, Stanford, California 94305

Book Review Editor

BERNARD J. PIERSMA, Department of Chemistry, Houghton College, Houghton, New York 14744

Consulting Editors

Jerry D. Albert, Mercy Hospital Medical Research Facility, San Diego, California

Donald C. Boardman, Department of Geology, Wheaton College, Wheaton, Illinois

Dewey K. Carpenter, Department of Chemistry, Louisiana State University, Baton Rouge, Louisiana

Gary R. Collins, Trinity Evangelical Divinity School, Deerfield, Illinois

Owen Gingerich, Smithsonian Institution, Astrophysical Observatory, Cambridge, Massachusetts

John W. Haas, Jr., Department of Chemistry, Gordon College, Wenham, Massachusetts

Walter R. Hearn, 762 Arlington Avenue, Berkeley, California

Russell Heddendorf, Department of Sociology, Geneva College, Beaver Falls, Pennsylvania

D. Gareth Jones, Department of Anatomy and Human Biology, University of Western Australia, Nedlands, W.A., Australia

Robert D. Knudsen, Westminster Theological Seminary, Philadelphia, Pennsylvania

T. H. Leith, Atkinson College, York University, Toronto, Ontario, Canada

Gordon R. Lewthwaite, Department of Geography, California State University, Northridge, California

Russell Maatman, Department of Chemistry, Dordt College, Sioux Center, Iowa

Russell L. Mixer, Department of Biology, Wheaton College, Wheaton, Illinois

W. Jim Neidhardt, Department of Physics, New Jersey Institute of Technology, Newark, New Jersey

James A. Oakland, Graduate School of Psychology, Fuller Theological Seminary, Pasadena, California

Evelina Orteza y Miranda, Department of Educational Foundations, The University of Calgary, Calgary, Canada

E. Mansell Pattison, Department of Psychiatry and Human Behavior, University of California, Irvine, California

Bernard Ramm, Theologian-in-Residence, First Baptist Church, Modesto, California

Harold F. Roellig, Department of Earth Sciences, Adelphi University, Garden City, New York

Claude E. Stipe, Department of Sociology and Anthropology, Marquette University, Milwaukee, Wisconsin

Mary Stewart Van Leeuwen, Department of Psychology, York University, Downsview, Ontario, Canada

Edwin M. Yamauchi, Department of History, Miami University, Oxford, Ohio

Davis A. Young, Department of Geology, University of North Carolina, Wilmington, North Carolina

Concerning SUBSCRIPTIONS, changes of address, requests for back issues, and other business requests, address: Executive Secretary, American Scientific Affiliation, Suite 450, 5 Douglas Ave., Elgin, Illinois 60120. The SUBSCRIPTION PRICE: one year \$15.00, two years \$28.00. *Students*: \$7.50. *Institutional rate*: one year, \$25.00. *Gift subscriptions*: one year, \$7.50. Single copies may be purchased at \$4.00 each. Second class postage paid at Elgin, Illinois and at additional mailing offices. Postmaster: Please send POD form 3579 (change of address) to American Scientific Affiliation, 5 Douglas Ave., Elgin, Ill. 60120. Published four times a year in March, June, September and December by the American Scientific Affiliation. Telephone: (312) 697-5466. Back issues: \$2.50 per issue from 1974 to 1977; \$1.50 per issue from 1963 through 1973; \$2.00 per volume or \$1.00 per single issue before 1963; *Supplement* 1, 1976; \$3.00.

The pages of the *Journal ASA* are open to any contribution dealing with the interaction between science and Christian faith in a manner consistent with scientific and theological integrity. Papers published in the *Journal ASA* do not reflect any official position of the American Scientific Affiliation.

Concerning MANUSCRIPTS, address: Editor, *Journal ASA*, 753 Mayfield Ave., Stanford, California 94305. All manuscripts should be typed double-space on good quality 8 1/2 x 11 paper, with references collected at the end, and with an

Abstract of not more than 100 words. Duplicate copies of manuscripts are requested. Figures or diagrams should be clear, black and white line ink drawings or glossy photographs suitable for direct photoreproduction, with a caption provided separately.

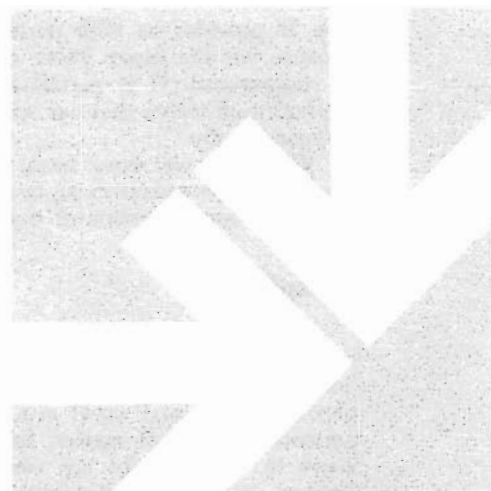
REGULAR PAPERS represent major treatments of a particular subject relating science and the Christian position. Such PAPERS should be at least 7 pages and not more than 20 pages long. Accepted PAPERS will be published within 18 months.

COMMUNICATIONS represent brief treatments of a wide range of subjects of interest to the readers of the *Journal ASA*. COMMUNICATIONS must not be longer than 6 pages. Accepted COMMUNICATIONS will be published within 9 months.

LETTERS represent correspondence received by the Editor which comments on previous publications in the *Journal*. All correspondence received by the Editor is deemed suitable for the LETTERS category, unless the writer expressly requests that his/her letter be not published. LETTERS will be published within 6 months of receipt.

Concerning BOOK REVIEWS, address: Book Review Editor, Dept. of Chemistry, Houghton College, Houghton, N. Y. 14744. To avoid duplication in reviews, prospective reviewers should notify the Book Review Editor of their intentions at an early date.

JOURNAL OF THE AMERICAN SCIENTIFIC AFFILIATION



JUNE 1979

PRINTED IN THE UNITED STATES OF AMERICA

VOLUME 31, NUMBER 2

THE RELATIONSHIP BETWEEN CHRISTIAN TRUTH AND THE NATURAL SCIENCES

What Is Truth?

Jesus said, "You shall know the truth and the truth shall make you free."

Pilate said, "What is truth?"

Misunderstandings of what is meant by "truth" underly apparent conflicts between Christian thought and the natural sciences, which have far-reaching consequences into other areas as well.

It is sometimes thought that truth is simple, easily understood, something to be known with the mind, capable of being grasped totally or not at all. I offer a simple definition of truth: that which conforms with reality. This definition assumes the biblical picture of God as Creator and Sustainer of a reality that exists independently of us, although we certainly play a significant role in it. It is a definition that upholds the validity of the concept of objective truth as opposed to relative subjective "truths"; it is a seeking for truth in what really is, rather than a manufacture of "truth" out of our own wills.

Truth is not necessarily simple. The profundities of the paradox of the sovereignty of God and the responsibility of man, and the challenges of the quantum theory or relativity push the human mind to its limits.

Truth is not necessarily easily understood. Some truths are beyond our human abilities to comprehend simply because we are finite and temporal creatures.

Truth is not necessarily an intellectual proposition to be grasped and remembered. Rather it is a principle to be embodied in living practice. Jesus also said, "I am the Truth," implying that truth has a profoundly personal content.

Partial Truth

Total truth is something that we seldom—that we really never have in our possession. What is commonly our lot is *partial truth*. We understand something of the nature of truth, but never the complete picture. There is no apology necessary for this limitation to partial truth; it is the nature of our existence. The one who claims that if we can know only partial truth, we can never lay claim to knowing truth at all (a common approach of both orthodox and liberal theologians), is mistaken.

Science, for example, is a kind of partial partial truth—(partial)² truth, if you

like. It provides us with partial truth about part of the world. It is partial truth, because we can never know everything, and even what we know is only in terms of comparisons. It is partial truth about part of the world, because the scientific method itself insists that our scientific truth be limited to descriptions involving natural categories only.

Whenever we move from what is known to what is unknown, we proceed by describing the unknown in terms of the known. Since this description can never be complete, our expression of truth can never be complete.

Metaphors

Another way of saying this is to state that in both science and Christian theology we are involved with the expression of metaphors. In science we have the models of our theories; these are metaphors pure and simple, attempting to describe the complexities of the real world in a framework of our mentally conceivable models of experience. Models of matter, for example, extend from a continuum view, to atomic views in which atoms are viewed progressively as small balls, miniature planetary systems, and charge distributions in space. We strive year by year to move closer to more and more accurate descriptions of reality, believing *as an act of scientific faith* that the more accurate the description, the more closely does the model correspond to the physical details of reality. We believe that the process of oxidation is more realistically described by chemical combination with oxygen than in terms of the phlogiston theory, that heat flow is more realistically described in terms of the kinetic theory of gases than in terms of a caloric fluid, and that an Einsteinian view of the universe is more faithful to the actual character of the universe than is a Newtonian view.

Scientific truth, however, is defined for today. It is what corresponds to today's understanding of how to describe reality. Tomorrow scientific truth may change. There is no apology needed; this is the essence of the scientific process, the ladder of scientific advance. Each transient model embodies some aspects of the total truth, of the nature of the actual reality; each is partially true, but none represents *the* true picture of the universe.

Also in theology we have models, metaphors if you will, to reveal to us the nature of God and His relationship to the world. These are divinely inspired pictures attempting to convey partial truth to us about that which transcends human apprehension by using terms and concepts familiar to us. Metaphors for God include: Father, King, Husband, Bridegroom, Hen. God is truly like a father but not wholly like a father; God is truly like a father, indeed, only if a father is truly like God. This metaphor loses some of its usefulness if offered to a child who has been the victim of abuse at the hands of his parents. Metaphors for salvation include: healing, wholeness, redemption, reconciliation, payment of legal debt, sacrifice, and victory over Satan. Because these biblical metaphors are divinely inspired, we are assured of their authority and their reliability; still our understanding remains partial and we do not understand the totality of divine reality. Effective metaphors also may change with time, and every Bible teacher is familiar with the problem of making Biblical metaphors (shepherds, vineyard keeper, slaves) convey to modern hearers what they were intended to do in the biblical revelation.

Using More than One Metaphor

Now it is traditionally a bad practice to mix one's metaphors. But using more than one metaphor is often essential if we are to convey as much of the partial truth as we have at our disposal.

We speak of electrons as particles *and* as waves. Yet we know that neither metaphor is able to handle the total observed activity of electrons. Choice of experiment decides which metaphor is more useful.

We speak of the sovereignty of God *and* the responsibility of man, even though we are not able to see through to the end the simultaneous application of these two concepts. Choice of perspective decides which metaphor is more useful.

We speak of the human being as a pile of inorganic and organic chemicals *and* as a creature made in the image of God, even though we are hard put to understand how our physiology and our spirituality fit together. Choice of category of description decides which metaphor is more useful.

Using more than one metaphor may be an attempt to cover up our ignorance. A

number of blind men trying to describe an elephant might be heard saying that an elephant was like a rope (its tail), or like a leaf (its ear), or like a column (its leg), but their confusion could be cleared up by recognizing the whole elephant as a large mammal. But sometimes using more than one metaphor is the consequence of our inherent limitations in trying to describe the indescribable in terms of the concepts we are used to thinking about. And sometimes more than one metaphor is demanded simply because we choose different kinds of categories for our various descriptions:

A painting is a collection of brush strokes *and* the Mona Lisa. Any attempt to view the painting in terms of the details of the brush strokes (as with a magnifying glass) will make it impossible to view the entire picture as a portrait.

A symphony is an assortment of musical notes *and* the rousing impact of Beethoven's Ninth. Love is a physiological phenomenon involving two persons *and* a profound interpersonal commitment.

These sets of descriptions are each a complementary pair; they cannot be *simultaneously* applied. Any effort to move into the frame of reference of one type of description automatically precludes seeing the phenomenon in the frame of reference of the other type of description. Yet both types of description convey significant partial truth about the matter being discussed.

We begin to see, therefore, how scientific descriptions and theological descriptions can be used together—in fact *must* be used together to bring out the richness of created reality on all of its possible category levels. If we have only the scientific description, our understanding is the poorer.

For simple aspects of reality such as atoms and electrons, our scientific description is broad and significant. Our theological description rests on the basis of Creation and Providence.

For complex aspects of created reality like human love, our scientific description in terms of physics, chemistry and physiology does not come anywhere near to showing the full significance of a relationship that must be seen in the full context of God as our Redeemer and loving Lord.

For spiritual aspects of reality such as regeneration, we still have a set of scientific descriptions, for it is corporeal human beings who are involved in regeneration, but now the theological description assumes major importance with its description in terms of forgiveness, eternal life and fellowship with God.

For all aspects of created reality, whether simple or complex, there are possible scientific descriptions and possible theological descriptions; the one in no way rules out the other.

The Basis for a New Freedom

What a sense of freedom flows from this simple realization! What an end to false dichotomies! What an opening up of vistas for scientific and theological integrity and authenticity!

No more the terrible pitting of the natural against the supernatural, of the world without God against the world with God, but instead the recognition of God's activity in all things. Seeing God's free activity in the blooming of a flower as well in resurrection from the dead, the former being an instance of God's normal and regular pattern of activity and the latter an instance of God's special revelatory activity.

No more the conflict between natural process and God's action, but seeing natural process as God's action. Recognizing that the discovery of a scientific description for a phenomenon does not exclude a theological description in terms of the activity of God.

No more the strangeness of God's intervention into His orderly universe to effect miracles (for what orderly universe is there except that state of matter maintained moment-by-moment by the free activity of God?), but instead the consistent working of God according to His intrinsic freedom both in the natural course of events and in the special course of events we recognize as miracles. No more the picture of God *using* natural law—for what natural law is there except our description of God's regular and normal pattern of activity?

No more the struggle between man as garbage, as machine, as animal, or as creature made in the image of God, but man, made a little lower than the angels: garbage, yes! machine, yes! animal, yes!—but . . . destined for fellowship with God, yes!

No more the inevitable strife between creation and evolution, as though one must of necessity choose between the two, but rather complete commitment to God the

Creator regardless of the activity He engaged in to create. Making clear the distinction between worldviews of biblical Creation vs atheistic Evolutionism, and the possible scientific mechanisms such as instantaneous creation or continuous process, which are our descriptions of God's activity.

No more the searching for evidence of God in the nooks and crannies of human ignorance and failure, but the welcoming of the Lord at the very center of life, ruling our knowledge and our ignorance, our strength and our weakness. Recognizing that the God-of-the-gaps, the God who depends for evidence of his existence on the gaps in human knowledge and understanding, is only a poor caricature of the God of the Bible, the Lord of Reality.

No more the dichotomy between body and soul or spirit, as though I had a body, a soul, and a spirit, the body being somehow natural, the soul betwixt and between, and the spirit being supernatural; but one whole person created by God who calls me into life and spiritual fellowship with Himself out of the very stuff of the earth.

No more an endless groping for fine distinctions, between choices that must be made either/or, of faithfulness to scientific investigation vs faithfulness to the Word of God; but instead a wholehearted embracing of both/and to the glory of God.

Understanding the Bible

Finally we are freed from that view of the Bible that would force it into a mold of our own conception—that it was not written to fit! The phrase "biblical inerrancy" has come to mean for many an *absolutely truthful* book, a book that tells the absolute truth in every conceivable category regardless of whether the authors of that book under divine inspiration were using that category or not. This is a view that develops from a faulty apprehension of truth; it does not recognize what we have tried to say about partial truth, but insists instead that partial truth is unworthy of God. Surely He must be able to convey the absolute truth to us, for is He not God? But even God cannot—and indeed will not attempt to—convey His revelation to us except in those forms with which we can relate; the unknowns must be described in terms of the known, even in a Divine Metaphor.

The indiscriminate claim that an inerrant Bible must be scientifically accurate is a claim that contains its own contradiction, for scientific truth is a transient and changing thing. A revelation given in the terms of one view of science during one period (then *the* scientific truth) must in all likelihood become scientific non-truth a few years later. To argue otherwise is to suppose that *the* scientific truth can be known and stated once and for all.

What we see instead is the revelation of God coming to man largely in terms of historical events witnessed by the authors and authenticated by their readers and hearers, interpreted by divine guidance and inspiration. In those special areas of revelation outside any human experience—the origin of all things and the final consummation of all things—revelation brings the authoritative and reliable Word of God to men through forms and concepts meaningful to those for whom they were written. As the book of Revelation can be considered a prophecy of the future, so the account of origins in Genesis can be considered as a prophecy of the past. Surely the truth (authoritative, reliable, partial truth) of the Creation can be completely seen whether revealed through the form of a three-story universe, a Ptolemaic universe with the earth at the center, a Copernican universe with the sun at the center, a Newtonian universe governed by gravity, or an Einsteinian universe with matter related to the structure of space-time.

To argue that an inerrant Bible must provide this revelation in terms of *the true theory* of the universe is to misunderstand the nature of scientific truth and scientific descriptions completely. It is, in fact, to give to scientific truth far more permanence and ultimacy than it possesses.

Epilogue

The partial truths of science do bring freedom: freedom from ignorance, superstition, powerlessness, and bondage to the natural forces of the world.

The divinely inspired truths of the biblical record do bring freedom: freedom to live in an imperfect and often apparently meaningless world, secure in God's forgiveness and love.

Relationship with Christ, the Truth, brings ultimate freedom: freedom from the desires of our own self-centered hearts, and freedom to live a life of meaningful service to God.

R.H.B.

This is the text of a Pew Lecture given at Grove City College, Grove City, Pennsylvania, on March 6, 1978.

The Ongoing Struggle Over Biblical Inerrancy



CLARK H. PINNOCK

McMaster Divinity College

Hamilton, Ontario L8S 4K1

Canada

The controversy amongst evangelicals over the extent of biblical errorlessness continues unabated and signs of serious polarization are beginning to appear. It is a sad spectacle to see fellow Christians, who agree on all of the great doctrines of the historic gospel message, dividing into factional parties over the issue of biblical inerrancy. Suddenly, a code-word, inerrancy, looms up in a position of great prominence, and is being used as an instrument of schism in the evangelical coalition. It is time for responsible evangelical leaders to recognize that polarization within can be far more injurious to the cause of Christ than attack from without. When the church is assaulted by external foes she very often responds with heroism and dignity, and becomes stronger in the process. But when she is rent asunder with internal dissension based on intolerance and a refusal to dialogue the result is inevitably disillusionment and disgust. In line with some earlier articles of mine,¹ and out of my desire to make peace amongst the brothers and sisters, I plead once more for an end to rancorous debating and mutual criticism between factions, and offer some further remarks which I hope will help to cool down the confrontation and lead us forward to greater amicableness and cooperation.

It is important to remember when discussing biblical inerrancy that it is only one aspect of a much wider and very serious debate about the authority of Scripture and should not be treated in isolation. For more than a century the Bible has needed to be defended against a powerful attack upon it from the direction of what could fairly be called "secular modernity." A great number of voices have been raised, often from within the churches, in radical criticism of the truth, relevance, unity, and power of the canonical Scriptures, and result has been a visible weakening of Christian conviction and sense of mission. Although I do not personally equate the inerrancy debate with the secular debate, and do not believe anyone should do so, nevertheless for a good number of evangelical Christians the inerrancy postulate and belief in biblical authority are inseparable, and therefore they interpret uncertainty about inerrancy with a declining respect for the Bible. Wrong they may be, but the fact that they do so is a crucial pastoral fact which goes a long

way to explaining why feelings rise so high on this issue. If we would pause to understand how deeply imbedded the inerrancy assumption is in our evangelical thinking and heritage, I think we would be more patient and understanding with those who dig in their heels on this matter. Many evangelicals cannot see how one can divorce biblical inerrancy from biblical authority, and it is the responsibility of those who honestly feel these are separate issues to help the rest understand it. There are two levels (at least) operating here: the surface conflict about inerrancy which has to be viewed within the context of an evolving "fundamentalist" movement, and the deeper struggle between classical Christian beliefs, including the authority of the Bible, and the framework of secular modernity.²

The Militant Advocates on Biblical Inerrancy

Critics of biblical inerrancy profess bewilderment about the omnipresence and stubbornness of this conviction seeing how the term enjoys no creedal or confessional status and preoccupation with it is a relatively recent phenomenon. But a little historical perspective should remove any mystery. What we have to realise is that one of the *defining assumptions* of American fundamentalism and of the "evangelical" movement that is its post-war successor and heir has been the inerrancy conviction. This came about through the interesting confluence of the premillennial prophecy movement with the Princeton theology of Hodge and Warfield, in which the Princeton doctrine of perfect errorlessness provided the scholarly basis for the kind of literalism and biblicism favored by the fundamentalists.³ A large percentage of evangelical literature dealing with the Bible is concerned explicitly with inerrancy, and the rest of it assumes it. Later on we shall have occasion to notice how this is changing, but the change is quite recent and at present in a distinct minority.⁴

Now it may be true, as a number are now endeavouring to show, that there are texts and moments in the classical traditions, for example, in Augustine, in Luther, in Wesley, among the Westminster divines, where the idea of inerrancy did not count for much and was even denied, showing that evangelicals today need not follow the Princeton-fundamentalist furrow.

Nevertheless, though I agree with them and believe such historical research useful, it is still true that in the ages before Princeton there is a good deal of inerrancy sentiment and conviction. It would be hard, for instance, to use Augustine or Calvin or even Luther to oppose inerrancy, as the militants know well. Augustine, when confronted with discrepancies in the Bible, went to very great pains to show to his own satisfaction that the difficult passages were not errors, so that to a large extent Augustine was like a fundamentalist and evangelical.

Therefore, it should surprise no one with any sense of history that a fierce struggle would ensue when the inerrancy assumption was questioned. It was entirely predictable. The inerrancy debate is on our agenda simple because it has been a defining assumption for most of our spiritual ancestors and lies close to the heart of how religious certainty has been understood. No wonder many people consider biblical inerrancy a watershed issue theologically, and why becoming disentangled from it is such a painful process for evangelicals. We simply must try to understand that neo-fundamentalists connect the truth issue with the inerrancy issue as the necessary bulwark against unbelieving scepticism, and consider a softening of the inerrancy conviction to constitute a diminished belief in the Bible itself. This fact, whether we like it or not, is a crucial pastoral reality, and no evangelical should pretend as if it weren't. There is no place for flippancy in the inerrancy debate since the issues for the militant side are fundamental and non-negotiable. The only way we can achieve reconciliation and healing in this matter will be through love, sympathy, and mutual affirmation. Above all we must understand why there are militant advocates of biblical inerrancy.

Advocates of Modified Biblical Inerrancy

The debate over inerrancy really began when evangelicals stopped making it an unquestioned assumption and started to look at it critically. I think it is true to say that the rise of evangelical biblical scholarship was responsible, because it brought to people's attention a more detailed acquaintance with the actual text of the Bible. Most fundamentalists and early evangelicals assumed inerrancy *a priori*, and did not seriously consider the possibility that there might be difficulties in the text which would require modification of the inerrancy assumption. The change first came about unconsciously, therefore, in relation to specific problems, and only recently in a self-conscious way. Even Warfield did not bother to take such difficulties as Henry Preserved Smith posed to him very seriously, but considered inerrancy so firmly established that no empirical evidence could be expected to overthrow it. For the fundamentalists too, biblical inerrancy was such a crucial cornerstone for their apologetic and religious certainty that suggestions of biblical difficulties were not taken seriously and met a largely defensive response. But this has now changed. Today there is a group of evangelicals trained in biblical studies and open to new ideas who cannot pull the rug over objective biblical phenomena and insist on either broadening the inerrancy category to accommodate them or on eliminating the term inerrancy itself. First, let us consider the advocates of modified biblical inerrancy.⁵

The reason most evangelical biblical scholars are opting for a modified and more flexible variety of biblical inerrancy is quite simple: the biblical text forces it upon us. Unqualified inerrancy makes good rhetoric, but impossible exegesis. There is no way to accommodate the semitic way in which the Bible speaks of the physical universe, for example, without broadening the concept of inerrancy to include it. How else shall we understand the serious discrepancies in the various lists in Chronicles other than attributing them to the sources used or to the special intention of the inspired writer? Inerrancy must be nuanced to allow for the obvious freedom in the way the synoptic evangelists exercise their right to rearrange events and reword sayings of Jesus in keeping with their purpose. As a result of these elementary scriptural facts it became simply mandatory, if inerrancy were to be retained, to define it in relation to the purpose or intention of the biblical writers, and allow that a modern standard of precision should not be the final test of truthfulness. Most evangelical biblical scholars, although they do not often openly explain what they are doing, do not affirm the perfect errorlessness of the Bible in an abstract and unconditional sense, but consider it inerrant in a vaguer, somewhat nuanced sense.⁶ In the Evangelical Theological Society, for example, this has been tacitly understood for years, but now that the debate has heated up in the wake of Lindsell's controversial book and Schaeffer's pastoral interventions the progressives are coming under suspicion, and fundamentalistic traits are resurfacing.

The moderate advocates of biblical inerrancy still believe there is merit in retaining this terminology, however, because they believe strong terms are needed for affirming our confidence in the absolute truthfulness of the Word of God written. They do not consider limiting the scope of inerrancy to the intentionality of the text is an unfair interpretation of the word, and feel comfortable in the evangelical coalition. In the next part of his *magnum opus* Carl F. H. Henry, leader of the new evangelicals as distinct from the fundamentalists, promises to come out in strong and extended defense of biblical inerrancy, because he is convinced that "if error had permeated the original prophetic-apostolic verbalization of the revelation, no essential connection would exist between the recovery of any preferred text and the authentic meaning of God's revelation."⁷ And when he does so I am certain he will do it in a way that broadens and nuances the concept of inerrancy.

But there are critics of this approach, on both the militant and more liberal sides. John W. Montgomery, ardent defender of biblical inerrancy, roundly condemns any effort to redefine inerrancy as making a farce of language and selling out at a crucial point,⁸ and from the liberal view it has been observed how much exegetical fancy foot-work is required once one is committed both to critical honesty and to biblical inerrancy.⁹ For those who like myself are sensitive to both these criticisms the appeal and attractiveness of the inerrancy category lessens considerably. It is held with less and less enthusiasm, and becomes more of a burden than a positive asset. Indeed, it may well be, that modified inerrancy will prove to be a temporary way-station on the road, not to apostasy as Lindsell darkly warns, but to a non-inerrancy position on biblical

inspiration. It serves at present as a momentary shelter for critically honest but cautious evangelicals who want to scrutinize the terrain just ahead before moving into it.

Evangelical Opponents of Biblical Inerrancy

Even more recently a group of evangelicals has surfaced at Fuller Seminary, but not only there, who do not find inerrancy terminology appropriate and decline to use it. Unfortunately for the militants we can count among their number some of the finest scholars which have yet emerged out of the evangelical movement: F. F. Bruce, G. C. Berkouwer, G. E. Ladd, R. P. Martin, David A. Hubbard, and others. They represent the noble tip of an iceberg which is much larger, I suspect, and whose views are beginning to surface. A full census of their number is sadly impossible because the heavy hand of the evangelical establishment, still quite militant on this subject, forces them to stay out of print on it. Nevertheless, I think I can with some confidence rehearse their reasons for dissatisfaction with biblical inerrancy.

First, and very important, is a basic critical honesty. The opponents of biblical inerrancy, while they appreciate the honesty of its moderate advocates in moving toward a nuanced view, remain unconvinced, and feel that the inevitable result of any kind of inerrancy assumption in biblical studies must be implausible harmonizations, allegorizations, and explanations. It is their concern for respecting the precise nature of the biblical text, ironically, which makes biblical inerrancy impossible for them. They simply cannot see the point of the mental gymnastics required of inerrantists when they have to perform such acrobatics as these: to prove that the "days" of Genesis 1 are not days, that there are actually gaps in the apparently tight genealogy of Genesis 5, that the 969 "years" in Methusaleh's long life were possibly not years, that two million Israelites could have wandered around the Sinai for forty years, or that the "thousands" do not mean thousands, that the brief list in Exodus 6 allows a 430 year interval, and so forth. The *only* reason evangelicals wrestle with such details in the Bible is because the inerrancy assumption requires it. Therefore, these progressives identify inerrancy to be the problem, and drop it. Recently, systematic theologian Berkouwer has come to their rescue by explaining that the desire for absolute precision in the case of the Bible is docetic in tendency and unbiblical anyway, so that a non-inerrantist theology of inspiration is starting to emerge from the ranks of the evangelicals.

At least one lesson should be learned from this concern for critical honesty—the experience of quite a number of undoubtedly evangelical scholars in biblical studies has been to find the inerrancy of the Bible to be a problematic conviction, and one that ought not to be heralded as our strongest point. Therefore a strategy for the defense of the Bible which leads out with an inerrancy plank is obviously a strategy which leads with its weakest foot. At the present there is a ten-year campaign being launched to set biblical inerrancy before the public and hold it up for public and scholarly scrutiny. One thing is fairly certain: at the end of ten years nothing will have become plainer than the fact that biblical inerrancy is a problematic

The Chicago Statement on Biblical Inerrancy

A 5000-word statement on biblical inerrancy was the product of a three-day conference during October 1978 sponsored by the International Council on Biblical Inerrancy. The 6-member executive committee for the 16-member decision making body consists of James Boice, Chairman, Norman Geisler, Harold Hoehner, Earl Radmacher, R. C. Sproul, and Jay Grimstead, full-time executive director. A Short Statement has been published summarizing the position, the text of which follows.

1. God, who is Himself Truth and speaks truth only, has inspired Holy Scripture in order to reveal Himself to lost mankind through Jesus Christ as Creator and Lord, Redeemer and Judge. Holy Scripture is God's witness to Himself.

2. Holy Scripture, being God's own Word, written by men prepared and superintended by His Spirit, is of infallible divine authority in all matters upon which it touches: it is to be believed, as God's instruction, in all that it affirms; obeyed, as God's command, in all that it requires; embraced, as God's pledge, in all that it promises.

3. The Holy Spirit, its divine Author, both authenticates it to us by His inward witness and opens our minds to understand its meaning.

4. Being wholly and verbally God-given, Scripture is without error or fault in all its teaching, no less in what it states about God's acts in creation and the events of world history, and about its own literary origins under God, than in its witness to God's saving grace in individual lives.

5. The authority of Scripture is inescapably impaired if this total divine inerrancy is in any way limited or disregarded, or made relative to a view of truth contrary to the Bible's own; and such lapses bring serious loss to both the individual and the Church.

Other statements in the full exposition suggest a somewhat more discriminating application of these affirmations than has frequently attended the defense of "inerrancy." In Article XIII of the "Articles of Affirmation and Denial," it is stated: "We deny that it is proper to evaluate Scripture according to standards of truth and error that are alien to its usage or purpose." Also in a later section called "Exposition," it is stated: "Scripture is inerrant, not in the sense of being absolutely precise by modern standards, but in the sense of making good its claims and achieving that measure of focused truth at which its authors aimed." R. C. Sproul has promised the Journal further clarification in the near future.

conviction.

Alongside the new critical consciousness there is growing a complementary conviction about what the Bible claims for itself. Warfield had of course maintained that the biblical doctrine of inspiration involved nothing less than the perfect errorlessness of the original autographs of the Bible. Now this is being scrutinised as well. People are beginning to doubt whether Scripture actually says anything of the sort. As Beegle had pointed out more than a decade ago, the Bible which Christ and the Apostles credited with inspiration

was the text available to the readers in their day, not some unavailable autographical text, and a text tainted by mistranslations and transcriptional errors at that, and therefore Warfield's thesis cannot stand.¹⁰ But if it cannot stand, why go on making the inerrancy assumption? Maybe the debate is based on a false problematic, the result of recent polemics.

There are other nuances too in the case against biblical inerrancy. First, there are evangelical historians such as Jack Rogers and Timothy Smith trying to document the thesis that evangelical leaders and groups in the past have not always been preoccupied with biblical inerrancy.¹¹ Second, there are others who interpret the whole debate in political terms, an attempt on the part of an evangelical establishment to ensure the social cohesion of evangelicalism by means of a special code-word.¹² Third, there are a group of "sojourners" who regard the struggle as a scholastic game which steals time away from the pressing need to obey biblical imperatives, the purpose for which the inspired Word was given. In sum, there is quite a coalition of evangelicals which refuses to accept inerrancy as a theological watershed, and protests its use as a defining characteristic of the movement.

The development of an evangelical non-inerrancy doctrine of biblical inspiration is certainly an event of some importance in the history of contemporary Christianity. Whether we see it as a healthy development or a dangerous shift from orthodoxy, it is a novel and significant adjustment in the evangelical theology of this century. As we noted earlier, the inerrancy assumption is very deeply imbedded in recent fundamentalist and evangelical thinking, and the sense of alarm and betrayal expressed in the Lindsell book is the perfectly natural response of large numbers of people. The retreat from inerrancy is one reflection of the theological and social change occurring within the evangelical movement, as it evolves from a closed, separatist stance to a more open and pluralist position. Social change when it occurs and affects the deepest convictions of a people creates a nervous and defensive mentality. Fundamentalism, in effect, is becoming open to aspects of modernity, in this case critical biblical scholarship, and there is great uncertainty how things will turn out, and the fear feeds on the fact that no one knows.

Developing the Non-Inerrancy View

What needs to happen now from within the non-inerrancy evangelical camp is the development of a more complete and adequate understanding of their point of view. After all, it is not enough to *oppose* inerrancy—sceptics of all kinds do that. A positive and compelling understanding of biblical authority has to be set forth which can command the assent and appreciation of God's people, who are anxious to know where and how the Bible can be trusted if it cannot be followed everywhere, and what are the limits that prevent a dismantling of biblical teaching in the name of "liberation from inerrancy." It is not unreasonable to expect answers to questions like these, and if these new evangelicals do not address them or if they answer them weakly they cannot expect to exercise much influence and leadership in an evangelical movement that badly needs their gifts and wisdom. It is not too difficult to

imagine a scenario in which the evangelical coalition hardens into a new form of fundamentalism and creative, innovative elements spin off into regions beyond evangelicalism. This can be avoided if the non-inerrancy evangelicals are able to formulate and demonstrate a solid understanding of Scripture.

We simply must try to understand that neo-fundamentalists connect the truth issue with the inerrancy issue as the necessary bulwark against unbelieving scepticism.

An initial difficulty faced in achieving this task has to do with a seeming softness of any non-inerrancy position as compared with the strict militant view, owing to the fact that the latter fits a certain image of scientific rationality, in its concern for factual precisions, whereas the former is less concerned with it. Although Berkouwer is right to call into question the relevance of this modern standard of inerrancy, and point out how unscriptural it really is, it still remains true that many people bring this assumption with them when they read theology, and feel instinctively cheated if it is not maintained. In a certain ironical sense, fundamentalism has an advantage because it is more modern, should we say modernistic (*sic*), than the so-called progressive view! This difficulty must be squarely faced, and a more biblical understanding of truth and error set forth.¹³

I suspect that the non-inerrancy view of inspiration should interpret itself, not in terms of a defection from inerrancy, but in terms of a movement toward greater *doctrinal simplicity* and pastoral responsibility. Doctrine has a tendency of becoming more and more detailed and abstract, remote from both the original scriptural intentions and the needs of ordinary Christians. When it does, a way to make progress may be to reverse the process, and instead of adding further complexities, to drop some. The inerrancy of the biblical autographs is after all a pretty theoretical belief, requiring considerable subtlety of mind to maintain and defend, whereas a simpler belief in the truth and the power of the Scriptures extant and in translation touches people right where they are. The practical effects of each approach are also different. The strict inerrancy position can make the length of Pekah's reign a matter of much greater concern than Paul's theology or Jesus' teaching because the whole authority of the Bible is suspended upon each detail, whereas the simpler non-inerrantist position allows believers to glory in the gospel of Christ without fuss and worry about the latest developments in genealogical researches. Thus, if the strict view has a certain technical advantage related to the ideal of strict precision, the non-inerrancy view surely enjoys greater practical relevance.

What will this new view look like? It will certainly stress the true humanity of the biblical writers and God's willingness to stoop to use real people in the writing of the Scriptures. New texts, unused previously

in the inspiration discussion, like II Cor. 10-13, will come into prominence, highlighting the "weakness" of a revelational vehicle such as the apostle Paul by his own profession, and yet his suitability for the message God wanted to convey. There will be greater emphasis upon the Bible's own stated purpose, to give knowledge of salvation through Jesus Christ, and resistance to substituting for that purpose such an extraneous ideal as factual precision. Stress will be placed on the competence of the Spirit to use Scripture in nourishing the church and his dependability in keeping believers in the truth. Certitude, rather than certainty, will be encouraged, certitude in the unbreakable validity of the gospel. Focus will be placed on the sufficiency of the Scriptures to meet our needs in the practical realm of Christian living. Validation of biblical authority will be sought, not in scholastic controversy, but in the effective preaching of the Word and in its proven relevance for decision making.¹⁴

With great themes such as these we may fairly hope for there to emerge a vital new expression of evangelical respect for the Bible. Even though the strict inerrancy assumption is lacking, there remains strong confidence in God speaking infallibly in the Scriptures, so that fears about unhindered drifting into heresy from this position should seldom be realized. (After all, the strict view also permits some driftage into heresy—e.g., the Jehovah's Witnesses.) I think we should respect this option as a possibility for evangelical believers and not surround it with dire predictions and sharp attacks. To confess the Lordship of Christ and the infallibility of the Bible to convey the knowledge of salvation, is certainly an *evangelical* conviction, and no one should denounce it as anything else.

The Broader Context

The evangelical debate over inerrancy should not be viewed in total isolation from the discussion about Scripture in the wider context of contemporary theology. There is after all a crisis of the Scripture principle, and a battle for the Bible. Intra-evangelical debating should not obscure this fact for us. Overshadowing our parochial disagreements there hangs a very real and not imaginary threat to biblical inspiration.

What defines evangelical Christians in my opinion is the orientation which they share with classical Christians of every age, namely, a respect for what we could call the didactic thought models of Holy Scripture as divinely given and inspired. Things are quite otherwise in much modern theology, where it is considered acceptable to dismantle and demythologise scriptural categories in order to bring the Christian faith into greater proximity with modern concepts. All evangelicals, including all those discussed here, deplore this undermining of the cognitive authority of Holy Writ. The church which no longer hears the message of Scripture, soon forgets who she is and what her mission is in the world. We are all disturbed by the recent trends in criticism and theology which cast fresh doubt on the unity, relevance, and authority of the Bible.¹⁵ We are appalled by Christians who seem to hear only divergent human voices in the Bible and not the Word of the Lord.

This is the context in which to view the evangelical debate over inerrancy. The militant advocates of inerrancy are aware of this threat from the liberal side, and perceive the non-inerrancy evangelicals in collusion with the effort to undermine the Bible's authority. Of course this suspicion reveals a profound lack of trust and relationships between the protagonists and should provoke wounded and pained objection, but nevertheless it is incumbent upon the objects of this suspicion to clear away all doubt by coming forward with an unmistakably strong and enthusiastic doctrine of the unique authority of the Bible, so that our preoccupation with internal infighting can give way to a more united and profound reply to the *real* battle for the Bible. A polarized evangelicalism cannot fulfil her God-given mission in the world.

We may not all agree on the appropriateness of inerrancy terminology in doctrinal definition, but can we not all agree that the Scriptures possesses unique authority, relevance, and power for our generation?

Ultimately the inerrancy debate will prove whether the evangelicalism in the last quarter of the 20th century in North America has room for a pluralism of opinion on the nature of biblical inspiration. I hope that it does, because the interaction between evangelicals who trust and affirm one another can be rich, exciting, and productive.

While the issue is resolving itself, all evangelicals need to pray for the leading of the Spirit in the community, so that despite the variety of human opinions on this matter God's truth will be preserved and proclaimed with power all the while. One senses a spirit of threat and fear, together with anger and recrimination, sometimes occurring in this debate, which does not suggest we are trusting in God for the future which he oversees. We may not all agree on the appropriateness of inerrancy terminology in doctrinal definition, but can we not all agree that the Scripture possess unique authority, relevance, and power for our generation, and pray together for a renewal of authentically biblical faith?

REFERENCES

- ¹Pinnock, "Inspiration and Authority: A Truce Proposal", *The Other Side*, May/June 1976, pp. 61-65; "The Inerrancy Debate Among the Evangelicals", *Theology, News, and Notes*, Fuller Seminary, 1976, pp. 11-13; and "Three Views of the Bible in Contemporary Theology," Jack Roger, editor, *Biblical Authority* (Waco: Word Inc. 1977) pp. 47-73.
- ²I find Langdon Gilkey most helpful in explicating the nature of this struggle. *Naming the Whirlwind* (New York: Bobbs-Merrill, 1969), pp. 3-106 and *Catholicism Confronts Modernity* (New York: Seabury Press, 1975), pp. 1-83.
- ³Sandeen's analysis provides full documentation of this widely recognized theological development. *The Roots of Fundamentalism* (Chicago: University of Chicago).
- ⁴This is demonstrated by James Barr in his scathing attack *Fundamentalism* (London: SCM, 1977) ch. 3, 5.
- ⁵I know them well because my own writings fit into this category, although they have been used by the militant camp as well. A careful reading of them would reveal that I have

- always advocated a nuanced version of the inerrancy assumption.
- ⁶cf. Pinnock, *Biblical Revelation: Foundation of Christian Theology* (Chicago: Moody Press, 1971), pp. 71-71, 75-81.
- ⁷Henry, *God, Revelation and Authority*, Volume II, *God Who Speaks and Shows*, Waco: Word, Inc. 1976), p. 14.
- ⁸Montgomery, "Whither Biblical Inerrancy?" *Christianity Today* July 29, 1977.
- ⁹I have in mind James Barr in the work cited earlier.
- ¹⁰Dewey M. Beegle, *The Inspiration of Scripture* (Philadelphia: Westminster, 1963), ch. 5. There is more detail in his revised edition of 1973 entitled *Scripture, Tradition and Infallibility* (Grand Rapids: Eerdmans, 1973).
- ¹¹Timothy L. Smith in a letter to *Christian Century*, March 2, 1977, and Jack B. Rogers, *Scripture in the Westminster Confession* (Grand Rapids: Eerdmans, 1967).
- ¹²Gerald T. Sheppard, "Biblical Hermeneutics: The Academic Language of Evangelical Identity", *Union Seminary Quarterly Review* 32 (1977) pp. 81-94.
- ¹³G. C. Berkouwer attempts to do this in *Holy Scripture* (Grand Rapids: Eerdmans, 1975).
- ¹⁴The beginnings of such a theology can be seen in Harry R. Boer, *Above the Battle? The Bible and Its Critics* (Grand Rapids: Eerdmans, 1977), H. N. Ridderbos, *Scripture and Its Authority* (Grand Rapids: Eerdmans, 1977) and David A. Hubbard, in *Biblical Authority*, Jack Rogers, editor, pp. 149-181.
- ¹⁵For example, C. F. Evans, *Is 'Holy Scripture' Christian?* (London: SCM, 1971), D. E. Nineham, "The Use of the Bible in Modern Theology", *Bulletin of the John Rylands Library* 52(1969) pp. 178-99, and James Barr, *The Bible in the Modern World* (London: SCM, 1973).

Another View: The Battle for the Bible



RICHARD J. COLEMAN

Durham Community Church

Durham, New Hampshire 03824

Using Harold Lindsell's book, The Battle for the Bible, as a springboard, this article asks if there is such a position as unqualified inerrancy. Almost all defenders of inerrancy have relied upon some kind of qualification to clarify their position: the demand for the original autographs, the use of secondary sources and personal observations, the utilization of certain literary forms, the distinction between direct and indirect revelation, cultural and incidental references, harmonization to explain inconsistencies, and finally the limited employment of the critical-historical method. What is the consequence of a qualified doctrine of inerrancy? Lindsell's position is one approach. Another, my own, is that the discussion on inerrancy must ask what is the essential character of Scripture: dogmatic or kerygmatic.

In the foreword to Harold Lindsell's controversial new book, *The Battle for the Bible*, Ockenga states, "As evangelicalism grows, it becomes more and more threatened with incipient division. The perplexing question of the inspiration of Scripture is endangering the unity of the evangelical movement." Ockenga continues by delineating two opposing stances. The first view considers all of Scripture to be infallible, including the historical, geographical, and scientific teachings.

The second view, labeled as "limited inerrancy," holds the Bible to be inerrant only when it speaks on matters of faith and practice (i.e., those truths necessary for our salvation).

I could not agree more with these two distinguished mentors that a division is growing within the evangelical movement. However, I cannot concur that the division is merely or simply between full and limited inerrancy. In the limited space of this paper, I attempt

to demonstrate that the defense of biblical inerrancy requires the admission of certain qualifications and that these qualifications do not endanger the orthodox position concerning inerrancy.

Fundamentalism vs Evangelism

It may be instructive to ask whether fundamentalism and evangelicalism reflect similar positions concerning inerrancy. Before the rise of neo-evangelicalism as a separate movement, the two were identical in their defense of inerrancy against the modern critics. In the minds of many it may still be assumed that there are few or no basic differences. It is clear, on the one hand, that evangelicals are more irenic in spirit. Lindsell's book is a good example. As much as Lindsell is hurt and disturbed by the breaking of ranks over biblical inerrancy, he still does not deny them Christian fellowship and still wishes to engage them in public debate (24, 25). Fundamentalism, on the other hand, is still characterized by meeting intellectual difficulties with appeals to obedience and faith rather than reason and evidence. But apart from an attitude is there a substantive difference? I ask the question because it goes a long way toward unpacking the complexities behind the issue. Since biblical infallibility is becoming the watershed issue, one would like to know if there is one standard orthodox position.

There appears to be a consensus among prominent evangelical scholars that the point of no return is over the word "intends." Is Scripture inerrant in all that it communicates or only inerrant in what it intends to teach as essential? Lindsell and others argue that any form of qualification, any restriction of inerrancy, leads to additional qualifications until Scripture is no longer the authoritative word for Christians. In his own phraseology, a qualification like "intends" is the beginning of an infection that spreads. Yet, if we permit no qualifications whatsoever, we become the defenders of a static literalism that isolates the individual text (i.e., proof texting).

Qualifications on Inerrancy

All reasonable defenders of biblical inerrancy allow certain qualifications. Warfield and Hodge, for example, limited inerrancy to the original autographs. This in itself is nothing less than a Catch 22. In fairness, though, it must be added that this qualification has not been overly abused. In addition Warfield and Hodge imposed two further limitations. We must be shown, they declared, that an error is the professed intent of the author, and that an error is indisputable and not open to further resolution.¹ We must ask ourselves immediately if these qualifications do not make the debate over inerrancy meaningless. To prove that an error is intentional involves the interpreter in a game of mind reading.

Pseudonymity is the extreme extension of this interpreter's dilemma. It would become necessary to show that if someone other than Peter composed or rewrote II Peter, he did so with the conscious knowledge of deceit. Deceit, of course, may have had a different meaning before the days of copyright laws. It would not necessarily have been fraud if the unknown author was trying to capitalize upon Peter's authority, since rabbinic tradition was based upon reference to previous

All reasonable defenders of biblical inerrancy allow certain qualifications.

authorities. If, however, the author used Peter's name to legitimize a heretical interpretation of the kerygma of Jesus, then he was guilty of deceit. But obviously the early Church did not find the material of II Peter to be heretical regardless of the name attached.

The interpreter must contend not only with determining which alleged errors were intended and original, but original in what sense. Very early in the debate, Warfield and Henry P. Smith disagreed whether inerrancy extended to the use of secondary sources and personal observations (e.g., I Cor. 7:6, "I say this by way of concession, not of command"). A fundamentalist might deny or reduce to minimal the use of secondary sources by the biblical authors, but most evangelicals willingly accept their vital role in the history of biblical authorship. It was none other than E. J. Carnell who declared that the Old Testament contains "infallible" accounts of historical errors that were lifted without correction from the public registers and genealogical lists.² The difficulties are compounded when we realize the great variety in the synoptic gospel materials. Many of the sayings and actions of Jesus are cast into different contexts, chronological order, and receive different emphases.³ There are a number of ways to account for this wide variation. One way is to cast it into an error vs. no error category, but not even the liberal critic feels that approach accurately describes the original process. It is more a question of adapting written or oral traditions to a new setting, or rewriting sections of a previously received Gospel, or recasting the same event from a different viewpoint. In any case the interpreter must decide, if the author is utilizing secondary material (written or oral) or adapting secondary material for his own theological purposes, whether it was conscious or unconscious and whether the differences in the written accounts were "original" or secondary in the sense of belonging to the biblical writer himself. This is a formidable task indeed for the exegete, but necessary if we are going to play the game of finding an "original" error.

Fundamentalists and evangelicals also agree that it is not fair to count as a proven error the various literary forms of symbols, figures of speech, hyperboles, etc. While this qualification seems slight, it is open to wide interpretation. There is sharp disagreement about what aspects of Genesis 1-2 are poetic and which are historical. Are references to the structure of the universe meant to be understood figuratively or literally, and how are we to understand woman's creation from the rib of man? We must know the intention of the author before we can answer. We must not only know his primary theological purpose, but determine if he (not the contemporary interpreter) assumed that the inner historical core was inexorably wedded to the literary (cosmic, anthropic) form. Warfield and Hodge, of course, believed it was always the intention of the biblical writers to teach truth (who would argue otherwise?), but it remains a matter of subjective judgment on our part to determine which figures of speech were poetic and which were historical.

Is All Scripture of Equal Value?

The staunch apologist for inerrancy grants another qualification: but here evangelicals and fundamentalists would probably part ways. Lindsell states that certain portions of Scripture were received by direct revelation (as in the Book of Revelation), while other sections reflect a process of reporting, researching, rewriting, or setting into written form oral traditions (30,38). This is not to deny the inspiration of Scripture *in toto*, only to point out that not all Scripture is of equal value.⁴ All of Scripture is profitable but some truths are central (Gospels) and some are peripheral (details of the history of the kings). This is a pragmatic observation to be sure, but the door is thus opened to make human verdicts about which truths are essential and which are not. Since the Bible is scarcely a book of formal doctrines and confessions, it is by no means obvious which truths are directly revealed. More than a few individuals have been denied Christian fellowship because they did not believe in the "right" form of millennialism. This qualification becomes a real thorn because there is not even unanimity whether the Bible teaches a *formal* doctrine about its own infallibility. The biblical writers themselves seemed to have no difficulty, when called upon, in making a distinction between what was authoritative because it came from God and what was authoritative when it came from a human source. Unfortunately it is not very often that they call attention to this distinction, and we the twentieth century interpreters are left to discern the revelatory from the semi-revelatory.⁵

It is freely recognized, due to historical criticism, that the biblical writers shared the cultural world view of their particular age. This is a seemingly harmless qualification filled with all sorts of implications. An accepted defender of inerrancy, Clark Pinnock, writes, "infallibility does not update the writers' view of the physical cosmos where this is unnecessary."⁶ Yet if the Bible is infallible on all matters, as Lindell argues, the Holy Spirit must have inspired the authors with supernatural knowledge on such matters as biology and astronomy in the creation account(s). Pinnock, however, qualifies himself by declaring the obligation to distinguish between what was *incidental* to the teaching intended. "We need to ask what is being *asserted* in this passage" (72). We are thus led back to where this discussion started. It is legitimate and necessary for the exegete to decide by some criteria what time-conditioned concepts were essential and thus corrected by the Holy Spirit and which were incidental to the author's intention and left untouched.

If one judges Paul's admonition for women to remain silent in church and to cover their heads (1 Cor. 14:34; 11:4-13) to be time-conditioned and relative, then by similar logic another interpreter may judge Paul's views on homosexuality to be illustrative of his contemporary situation. The difficulty is not really solved by reference to a broader biblical base (say the Old Testament), because the same time-conditioned attitudes are encountered. Certainly the Christian interpreter does not judge Scripture based upon his own cultural milieu, but he likewise should not feel bound by a particular historical condition of another age. The exegete is forced then to evaluate a specific passage in light of broader biblical principles, i.e., to peel away

a time-conditioned illustration from the fundamental theological intention of the author. No matter who does the evaluating, it is a subjective process repugnant to the idea of inerrancy.

In order to defend an unqualified inerrancy, a sufficient case must be made that Scripture teaches absolute truth in contrast to essential truth.

Plenary Inspiration

Integral to the consideration of *Weltbild* is that of plenary inspiration. Evangelicals do not believe in verbal dictation, but do believe the Holy Spirit so guided each biblical writer that he wrote what God willed. The Holy Spirit superintended their writing but not to the extent of obliterating their particular personalities, style, or language. So Warfield and Hodge conceded that

Inspiration does not suppose that the words and phrases written under its influence are the best possible to express the truth, only that they are an adequate expression of the truth. Other words and phrases . . . might furnish a clearer, more exact, and therefore better expressions. . . .⁷

The implication seems clear. If the words and phrases are only adequate as compared to unequaled, then the concepts and propositions can be only adequate as compared to perfect. The total and final result then is a Bible that is fully adequate for man's salvation but not inerrant in the sense of expressing the exact truth for all times.

Jacob Preus of the Missouri Synod seems to know intuitively that if Scripture is infallible then it must be verbally inspired, and if verbally inspired then it must give such verbal and conceptual expression that transcend historical and human limitations. Preus accordingly rejects the possibility that the biblical authors could have accommodated themselves to any erroneous ideas of their time, that the use of literary forms might have a bearing on the historicity of the content, that a text might have more than one meaning depending upon its various stages of precanonical history, or that the interpreter must take into account the intent of the passage when evaluating its truth.⁸ In order to defend an unqualified inerrancy, therefore, a sufficient case must be made that Scripture teaches absolute truth in contrast to essential truth.⁹ The latter tolerates a degree of development, but the former requires the author to have written in such a way that his vocabulary, grammar, style, and conceptualization transcended his own cultural milieu. In the one instance it can be said that Scripture in no way falsifies or misrepresents God's revelation of himself, while the other requires that Scripture presents the fullest expression of truth possible (i.e., one that can never be improved upon). The unqualified explanation of inerrancy leads us back to a fundamentalistic literalism. The other choice is to struggle with the implications of a qualified inerrancy.

The Natural Sense of Scripture

It is axiomatic among evangelicals that Scripture is to be interpreted according to its natural sense, unless the context of the passage dictates otherwise. Lindsell writes that "evangelicals have always agreed that the writers of Scripture penned straight history" (205). This Reformation principle acts as another qualification to inerrancy, because without it inerrancy would be reduced to either an absurd literalism or a form of spiritual allegory.¹⁰ But it is the literal sense of a text that causes the case for an unqualified inerrancy heartburn, because many of the frequently cited "problem texts" can be gotten around only by ignoring the plain sense. Lindsell undertakes to find solutions to a number of specific errors and what happens is that rather than reading the text as "straight history," he is forced to harmonize or contort the plain meaning of the author. Lindsell's handling of such problems as the measurement of the molten sea as described in II Chronicles 4:2, or the parallel conflict between Numbers 25:9 and I Corinthians 10:8 illustrates what Warfield and Hodge meant when they said that other words would have furnished a clearer, more exact meaning.

John W. Montgomery presents as one of his six principles of biblical interpretation: "Harmonization of scriptural difficulties should be pursued within reasonable limits, and when harmonization would pass beyond such bounds, the exegete must leave the problem open . . ." ¹¹ Harmonization is obviously another qualification since it detours around those passages where a straightforward reading raises many difficulties.¹² If we assume that the resurrection accounts are straight history, an infallible description, then the interpreter has no choice but to harmonize. It is then an open question whether Lindsell's citation of J. M. Cheney's elaborate harmonization of the different accounts of Peter's denial of Jesus is within reasonable limits. I suspect the answer depends upon one's philosophical and theological persuasions: a subjective matter to be sure.

Clark Pinnock finally resorts to a kind of Catch 22 qualification: Where the straightforward reading of a text does not support inerrancy, let the difficulty stand until it can be explained at some future date. Now, there is nothing illegitimate in asking for a little patience and leaving the door open for further evidence. Liberal critics are doing it all the time.¹³ Nevertheless, it is a necessary qualification to biblical inerrancy; and what is more, a qualification that can be just as easily abused as any other hermeneutical principle.

The issue becomes not whether we can harmonize or find a plausible solution to certain difficulties, but whether such a method is in accord with the purpose of the author.

The Critical-Historical Method

Finally, there is the qualification of the critical-historical method itself. In recent years a new breed of

evangelicals (*a la* Richard Quebedeaux) have made it evident that defenders of inerrancy have various degrees of commitment to biblical criticism. At the one end of the spectrum are the extreme fundamentalists who see the critical-historical method as entirely negative except for an occasional quip that it has provided helpful background information. At the other end are respected scholars such as Daniel Fuller, George E. Ladd, F. F. Bruce, and E. Earle Ellis who are wary about some of the rationalistic presuppositions behind the method,¹⁴ but have an open mind to some of the results of historical criticism. The Ladd's of evangelicalism do not propose any new qualifications; they only take more seriously the ones already mentioned. Furthermore, they realize that the exegetical process is not possible without hermeneutical principles. Evangelicals are rapidly being categorized as either proponents or opponents of full inerrancy. Not only is this division an oversimplification, it overlooks the other division between evangelicals who believe inerrancy can be defended *only* as "unqualified," and evangelicals who believe certain qualifications are necessary and desirable. In either case one group views the critical-historical method with mistrust (it has led us to disregard the divine nature of Scripture), while the other group sees the historical method as a key to understanding the true character of the biblical witness.

A More Flexible View of Biblical Infallibility

It was not my purpose to show that inerrancy has died by a thousand qualifications.¹⁵ The limitations I have cited are ones traditionally cited by all reasonable defenders of inerrancy, because they are necessary if the concept of inerrancy, is to maintain its integrity. I supported Lindsell in his contention that one limitation leads to another, but I disagree with him that "once limited inerrancy is accepted, it places the Bible in the same category with every other book that has ever been written" (203). Even the most innocent qualification illustrates the kind of interpreter's quandary that results. The logical conclusion, as I see it, is an alternative. Either we return to a non-qualified obscurantism of nineteenth century fundamentalism, or we accept a more open, flexible concept of biblical infallibility. I am aware that Lindsell and I are coming from opposite ends of the spectrum. He fears the danger from the left, namely, an unscriptural humanism that ignores the divine authorship of the Bible; while I fear the danger from the right, namely, an unbiblical literalism that stands upon the Bible rather than under it. Lindsell's defense, however, assumes that by limiting the qualifications, biblical inerrancy can be protected from the left without falling prey to the right. The assumption is naive, more like hopeful wishing than realistic expectations, and is indicative of trying to return to an era before historical criticism.

Dogma vs Kerygma

In addition it is unfortunate that once again Lindsell has chosen to make inerrancy a black and white issue of errors vs. no errors. The fence is much broader than this, as many evangelical scholars are poignantly conscious. The liberal critic who searches for that "one fatal error" is just as much a myth as the conservative who argues for verbal dictation. The heart of the

matter, if the discussion concerning inerrancy is going to progress,¹⁶ is not about errors but about the basic character of the biblical writings. If the essential character of Scripture is dogmatic, and if absolute truth is required to achieve this purpose, then inerrancy will be defended in one way. If the fundamental character of Scripture is kerygmatic, and if essential truth is necessary to achieve this purpose, then inerrancy will be defended in another way.

The polemicist asks, "Would God lie?" He attempts to harmonize the resurrection accounts, designs elaborate explanations for the measurement of the molten sea, and justifies the Chronicler's amending of II Samuel 24:1 (cf. I Chr. 21:1). This kind of debate has gone on for centuries and has changed the minds of very few people about Scripture's infallibility. Form criticism and redaction history, however, have been asking a different kind of question. They ask whether the Deuteronomist was more a theologian than an objective reporter, whether the author of Genesis 1 was a poet first and an astronomer last, whether the Gospels are historical biographies or post-Easter proclamations, or whether the book of Revelation is to be read as forensic predictions of the future or as warning and encouragement to Christians under distress. These are of course not either-or type questions,¹⁷ but they do reflect a different kind of probing. The biblical interpreter knows full well that the kind of question asked of the Bible will largely determine the kind of answer received. The issue becomes not whether we can harmonize or find a plausible solution to certain difficulties, but whether such a method is in accord with the purpose of the author. God, of course, does not lie; but that may be the proper kind of question to ask in order to discover the basic character of Scripture.¹⁸

Some years ago James Smart posed the problem as it needs to be discussed: Does Scripture embody a concept of inspiration that is dynamic or static?¹⁹ There has been so much attention paid to the doctrinal verses that nothing is said about the remarkable freedom with which the biblical writers reinterpreted and reshaped the "saving history" to each new context. James Smart points out the obvious:

The NT at a whole, however, is dominated by the OT attitude to sacred documents. The church was plainly untroubled by differences of detail in parallel traditions. The author of John's Gospel claimed for himself a very high degree of freedom in reinterpreting the traditions concerning Jesus in order to bring out clearly what he knew to be the truth of the gospel. A church in bondage to literalism could never have admitted John's Gospel alongside the three earlier ones that tell their story so differently. The lateness of its general recognition was most likely a consequence of the difficulties its character provided for those in the church who could not endure contradictions in sacred Scripture.²⁰

What is the basic character of Scripture? Is it dogmatic or kerygmatic? As the critic carefully compares the thousands of parallel accounts in Scripture, he does not conclude that they are the result of plagiarism or deceit. To be sure there are details that resist harmonization, but for the most part the differences are best interpreted as tensions resulting from a pattern of development. Various lines of research converge on the conclusion that the pattern of pre-canonical Christianity appeared in a multiplicity of forms rather than a single

primitive cast.²¹ If we accept the consensus of biblical scholarship that the Gospels were not written primarily as reportage but as kerygma,²² the issue of inerrancy is cast into a different light. Yet in the abundance (and redundancy) of words written about biblical inerrancy, it doesn't seem to matter what the critical-historical tells us about the fundamental character of the biblical witness.

Some readers of this article may conclude that I do not believe in biblical inerrancy. I would not agree with them. Their concept of inerrancy, however, is probably different from mine. I find the defense of an unqualified inerrancy strained and thin. On the other hand, a concept of qualified inerrancy does not mean a restriction of inspiration to certain kinds of subject matter. Infallibility is limited only by the intention of the author and the kerygmatic nature of the biblical message. As a Christian I trust Scripture as it faithfully presents the good news of God's grace and judgment. As a Christian historian, I see the Bible as the remarkable account of the historical acting out of God's love and man's response. The tensions, difficulties, and possible contradictions we encounter are not the blemishes of a system of doctrine and practice, but the natural result of writers who were compelled to preach the Gospel in the language and forms of their contemporaries.

REFERENCES

- ¹Archibald A. Hodge, Benjamin B. Warfield, "Inspiration," *Presbyterian Review*, II (1881), pp. 242ff. Actually there were two more qualifications: an error cannot be attributed to a difference in form as long as the same basic truth is conveyed; an alleged error must be shown to be incapable of being harmonized with other statements.
- ²E. J. Carnell, *The Case for Orthodox Theology* (Westminster, 1959), pp. 102-11. Carnell in this case was following another widely quoted scholar, James Orr, *Revelation and Inspiration* (Eerdmans, 1951), pp. 179, 216.
- ³For some of the best illustrations see Joachim Jeremias, *The Parables of Jesus* (Scribner's, 1963) or his *Unknown Sayings of Jesus*.
- ⁴W. A. Criswell in *Why I Preach that the Bible is Literally True* (Broadman, 1969) believes every line and word of Scripture is revealed and cannot be counted as secondary.
- ⁵There are those occasions when the prophet ("Thus says Yahweh") or Paul (Gal. 1:11ff.), for example, wish to demark God's authority as opposed to theirs. We have no right, however, to assume that those statements are more revealed than others. The history of biblical studies is one of the painful discovery of how difficult it is to separate the essential from the incidental.
- ⁶Clark H. Pinnock, *Biblical Revelation* (Moody, 1971), p. 72.
- ⁷Hodge and Warfield, *Ibid.*, 256. Another supporter of inerrancy at the time, professor Samuel C. Bartlett, wrote what has become a standard statement of verbal inspiration: "While there was not a universal dictation, there was such guidance as would prevent the use of wrong forms of statement, and in all passages of importance, whosoever the natural powers would not have supplied the befitting word of expression, there it was supplied by the real though probably unperceived influence of the Holy Spirit" (*Princeton Review*, Jan. 1880, 35-36.) The hermeneutical question is still unanswered. How does one decide where the Holy Spirit took charge?
- ⁸See the *Report of the Synodical President to The Lutheran Church-Missouri Synod* (1972), pp. 154-55.
- ⁹Writing in the *Journal of the American Scientific Affiliation* (June, 1972) its editor, Richard H. Bube, draws our attention to two types of errors. Type 1 is judged by the criterion of absolute truth, such as those derived from natural or scientific law. For example, the statement that "the sun rises." Type 2 is a false statement with respect to the criterion intrinsic to the Bible itself (e.g., a state-

ment that misrepresents God). While the standards for absolute truth are "relatively" fixed, they are by no means unchanging. Bube thus argues we do not need to defend Scripture against type 1 errors, because the biblical authors wrote under different standards for absolute truth than we often assume.

¹⁰Some would see as a new form of spiritual allegory Bultmann's program of demythologizing. G. C. Berkouwer certainly makes a valid observation that the Reformation doctrine of perspicuity was aimed at the message of Scripture and not at the words themselves. See *Studies in Dogmatics: Holy Scripture* (Eerdmans, 1975), pp. 274ff. The danger is in fact twofold: literalism and allegory.

¹¹John W. Montgomery, ed., *God's Inerrant Word* (Bethany, 1974), p. 278.

¹²At what point does a difficulty become an outright contradiction? A conflict in detail becomes a contradiction only when we know both authors are writing as eye witnesses or acting as historians in passing on the report of an eye witness. If, however, the author in question deals with the detail from a literary or theological viewpoint, as redaction history often claims to be the case, then it becomes very difficult to decide when a difference in detail is an error. The genealogies of Matthew and Luke illustrate the problem, not to mention the Gospel of John.

¹³Ernst Käsemann comments in the opening chapter of his *The Testament of Jesus According to John 17* (Fortress, 1968): "Not without irony, one could point to the history of exegesis as offering the proof that only occasionally has exegesis achieved lasting results. If true understanding had actually been realized, then the great problems of NT interpretation would not need to become the object of diligent research in each new generation" (p. 1).

¹⁴Namely, the *a priori* exclusion of miracles based upon a closed system, a humanistic philosophy that teaches the truths of Scripture are the result of a natural development of ideas, and the assumption that ancient man was not able to write accurate, objective history. Certainly one of the important changes since the nineteenth century is a reexamination of these presumptions by the modern critic himself.

¹⁵The phraseology belongs to the philosopher-linguist R. M.

Hare as quoted by John W. Montgomery, *ibid.*, p. 275.

¹⁶I have outlined elsewhere other issues that must be considered in order to avoid the mistakes of the past. Richard J. Coleman, "Biblical Inerrancy: Are we going Anywhere?," *Theology Today* (January, 1975), 295-303.

¹⁷A moment of decision comes when the interpreter is faced with a text that is both literary and historical. As in the case of Genesis 1 or John 6, there is both a primary and a secondary purpose, and only careful exegesis, and then only tentatively, will tell us if the theological-literary purpose so dominates as to influence and share the historical. The genealogies of Genesis 5 and 11:10-32, namely the life spans of the pre-flood ancestors, presents a typical interpreter's dilemma.

¹⁸In no way do I mean to imply the Christian interpreter is not concerned with the historical accuracy of Scripture. We are simply narrowing the hermeneutical question to what is the root idea of biblical truth. Is it the philosophical truth of subject-object correspondence or the Bible's faithfulness in presenting the saving God and His word to the people of Israel and then to the world? If the latter is more accurate, then errors in the observation of physical phenomena or the reporting of chronological events constitute no major difficulty for the believer, though they may for the historian. So much is admitted by the great evangelical scholars of the past when faced with a "minor" historical discrepancy.

¹⁹James D. Smart, *The Interpretation of Scripture* (Westminster, 1961), pp. 166-67.

²⁰*Ibid.*, p. 189.

²¹For example, James M. Robinson and Helmut Koester, *Trajectories through Early Christianity* (Fortress, 1971); and William G. Doty, *Contemporary New Testament Interpretation* (Prentice-Hall, 1972).

²²Or as Ernst Käsemann puts it: "History is only accessible to us through tradition and only comprehensible to us through interpretation." He balances his statement with the comment that the Gospel writers did not abstract their faith from history. See E. Käsemann, "The Problem of the Historical Jesus," and "Is the Gospel Objective?," in *Essays on NT Themes* (SCM Press, 1964).

If we are biblically oriented, then, we will have no reason to make a theological fuss about questions of the scientific explicability of man, or the other scientific issues that we have looked at. . . . What is special about each man is the role to which he is called. We will be quick to distinguish dignity in this sense from superiority, whether measured psychologically, physically, or in any other way. We will be equally quick to see that true dignity has no stake in the myth of 'equality' that denies any differences between people's basic abilities; rather will we learn, and encourage our fellow men to learn, how to prevent our inequalities from harming our dignity. We will find no threat to our true dignity in our creaturely dependence on God. Above all, we will be realistic from the outset about what we must leave behind at the end of the day, remembering that only those priorities which are eternal can survive.

Donald M. MacKay

Human Science and Human Dignity, Hodder and Stoughton, London 1979, p. 115

The Argument for Inerrancy: An Analysis



TIMOTHY R. PHILLIPS

Graduate School of Religion

Vanderbilt University

Nashville, Tennessee 37240

This paper is an attempt to explicate the contention that inerrancy is essential to biblical authority. The concern underlying such a primary focus upon inerrancy is identified as foundationalism, an epistemological argument which claims that one is able to obtain genuine knowledge only from a foundation of apodictic certitudes. Without such an indubitable and independent principium, the argument continues, what is attained is not absolutely certain and thus no longer knowledge as such. For that reason the biblical foundationalist contends that "without inerrancy . . . there is no solid basis for biblical authority and hence no sure word for theology or Christian living." After demonstrating exegetically that this underlying assumption is not biblical, three criticisms of foundationalism are outlined: (1) inerrancy ignores the Holy Spirit's role in grounding Scripture's authority, and such a disregard has historically led to a dead orthodoxy; (2) even granting the conservative results of evangelical Biblical scholarship, the Bible is still unable to assume the role of an indubitable and independent principium; and (3) due to hermeneutical problems, the biblical foundationalist's goal of absolutely certain knowledge is unreachable. One must conclude then that foundationalism is not a proper model for biblical authority.

After quietly smoldering for more than a decade, the tensions within evangelicalism are now aflame. In fact the intensity and bitterness of this dispute, which concerns the priority of inerrancy, threatens the hard won evangelical consensus itself. What is disturbing is not that the conciliatory attitude of the past is gone. To be sure, the attempts by Francis Schaeffer and Harold Lindell to tie a scholastic view of scriptural authority to evangelical identity have carried the polemic into a new arena. But did not the separatistic roots of evangelicalism in fundamentalism and the equivocal outcome of the historic Wenham Conference portend such a development? What is disquieting is that the issues are still being posed in categories reminiscent of the Briggs-Warfield or the more recent Beegle-Pinnock debate. Surely those controversies have shown us that when inerrancy is construed as "the

problem of scriptural authority," either dialogue is immediately short-circuited or debate centers on ancillary issues such as what constitutes an error, inerrancy's historical support, or purported errors in Scripture. Those arguments are secondary and even evasive because the very ground of the discussion, the inerrantist's precise framing of the issue of biblical authority, is not directly confronted. The fundamental issue rather is whether it is correct to assert that the most crucial problem facing theology is inerrancy, inasmuch as an inerrant Bible is "the foundation of our Christian thought and life, without which we could not . . . maintain the confidence of our faith and surety of our hope."¹ In other words, is inerrancy a first order doctrine and thus a theological watershed? Or, perhaps, does such a framing of the problem obscure an underlying and dubious presupposition? What follows is an

analysis of the logic which grounds the inerrantist's understanding of the problem of biblical authority.

The Logic Grounding the Inerrancy Thesis

Throughout the discussions on theological prolegomena in orthodox circles there has been a familiar ring to the argument for the necessity of an inerrant Scripture. From Gausson and Warfield through Edward Young to the more recent statements by the earlier Clark Pinnock and Harold Lindsell, this tradition has echoed the post-Reformation scholastics' contention that the acknowledgement of errors in the Bible "vitiates the authenticity and authority of Scripture, and by such an opinion the certainty and assurance of our faith are destroyed. . . . Unless we are made infallibly certain of the source of our faith, how can there be any *hupostasis* to our faith, any assurance of salvation, or even any peace of conscience?"² The pivotal crisis underlying theology is accordingly understood as being epistemological in nature. Specifically, does theology's authority, which is identified as Scripture, provide us with indubitably certain knowledge? If that is not the case, the argument continues, mistrust of one's theological conclusions invades matters as personally consequential as the character of God and the reality of one's own salvation. "If the source of theology is not entirely infallible, sure and certain, . . . then no theological conclusions are infallible and sure. . . ."³ An inerrant Scripture, by virtue of the fact that it alone provides an absolutely certain foundation for religious knowledge, is thus identified as theology's authority.

The philosophical underpinnings of this epistemic argument is *foundationalism*, the classic theory in western philosophy.⁴ It is derived from Aristotle's conception of science, which was modeled after Greek geometry.⁵ The goal of foundationalism is a knowledge free from all prejudice and conjecture, or what Francis Schaeffer aptly calls "true truth." More precisely, knowledge and belief are dualistically differentiated so that knowledge is knowledge only because it is absolutely certain. Anything possessing less than this unshakable certitude is not knowledge, but belief. In general terms, the foundationalist argues that this prerequisite is achieved when one begins with a foundation of indubitable certitudes and builds with the aid of logically precise methods an inferred body of knowledge. For then what is attained is as certain and as true as its ground. The most important aspects of knowledge, however, are those indubitable truths or principia which undergird knowledge with an apodictic foundation. As an indubitable foundation, they function as an Archimedean standpoint. That is, truth originates *a priori* from the principium. It alone determines what is true and without any necessary *a posteriori* verification. Consequently, a principium cannot be vulnerable to other measurements of the truth. In fact one of the inherent criteria of a principium, in addition to its indubitability, is its independence of or at least agreement with such extraneous truth judgments. Because truth originates solely from a principium, its relation to the body of knowledge which it logically affects is one-way. Originally the logic involved was that of deduction. For only in deduction is the conclusion a logically necessary inference of the premise. The foundationalist accordingly begins with an indubitable and independent premise and deductively infers a body of knowledge.

Is inerrancy a first order doctrine and thus a theological watershed? Or does such a framing of the problem obscure an underlying and dubious presupposition?

When it becomes apparent that the inerrantist defines the problem of biblical authority within the epistemological context of foundationalism, the unique stresses characteristic of inerrancy are illumined. For instance, because Scripture is interpreted as theology's principium, the character and range of its truthfulness is predetermined. As a principium, its primary goal is designated as providing knowledge; only at a secondary level is it specified as being in addition salvific. The implications of that logically necessary move are widespread. Since knowledge can be attained only from an indubitable foundation, the very possibility that Scripture could fulfill its soteriological end within the confines of an obsolete world-view is denied.⁶ Nor can the foundationalist analyze the gospel narratives in order to ascertain whether the authors were actually motivated by the ideals of modern historiography. Rather, the framework of foundationalism has already determined that an historically imprecise record would thwart the kerygmatic intent of Scripture. In other words, Scripture does not determine what constitutes truth and error. That has already been determined by foundationalism: Scripture's inerrancy is necessarily plenary and absolute.⁷ "Inerrancy pertains to everything written and asserted in Scripture. Not merely the substance of the doctrine and narratives in Scripture is truthful but also the statements or affirmations that appear to be non-essential, adjunct, or *obiter dicta*."⁸

Implicit in this normative assessment of knowledge—that knowledge ought to be indubitably certain—is a critique of anything less parading under the term "knowledge." Consequently throughout the literature a pressing question is posed to the opponents of inerrancy: once inerrancy is given up, what becomes the basis for deciding truth and falsity? How can an erring authority serve as the source or judge of God's revelation? This same dualistic separation of knowledge and belief underlies the ominous warnings so frequently predicted by inerrantists:

The authority which cannot assure of a hard fact is soon not trusted for a hard doctrine. Sooner or later . . . the authority of the Bible in doctrine and life is replaced by or subordinated to that of reason, or of the feelings. . . .⁹ Without inerrancy . . . there is no solid basis for biblical authority and hence no sure word for theology or Christian living.¹⁰

If the Bible is not infallible, then we can be sure of nothing.¹¹

The more precise argument is that by denying inerrancy, theology's indubitable foundation is dissolved. Everything in Scripture is relegated to the level of mere probability; the body of knowledge derived from it is likewise uncertain, and thus no longer knowledge as such. Consequently, theology is cast upon a "subjective sea of conjecture with no guiding light."¹² The argument for inerrancy is clear; and admittedly, if

foundationalism is true, there can hardly be any doubt concerning the importance of an inerrant Scripture for theology.

Exegetical Support for Inerrancy?

Thus far in our attempt to explicate the inerrantist's point of view, we have shown that the role an inerrant Scripture plays in guaranteeing theological knowledge accords with the epistemic logic of foundationalism. The argument for inerrancy however involves more than this extra-biblical rationale. In the classic arguments for inerrancy, whether by the post-Reformation scholastics or the later statements by Gausson and Warfield, the notion that Scripture provides absolutely certain knowledge is explicitly based upon a prior exegetical analysis of Scripture.¹³ But is foundationalism actually the consequence of their exegesis? This is a pivotal question. For much theological weight lies on the precise contention that inerrancy is biblical. To resolve this issue we analyze Warfield's argument, which most conservatives acknowledge to be the apex of the traditional exegetical defense of inerrancy.

Warfield's exegetical argument that inspiration entails inerrancy is found in "The Biblical Idea of Inspiration."¹⁴ The term inspiration is rooted in the Greek word *theopneustos* found in II Timothy 3:16, meaning God-breathed. However Warfield readily admits that this passage cannot bear the full weight of his defense. Two integral factors left unspecified by this passage suggest the direction of his argument. First, this passage does not determine how Scripture is God-breathed, that is, how God actually produced Scripture. Warfield contends that II Peter 1:19-21 does offer such an account. Secondly, even though Paul indicates that Scripture is spiritually useful in II Timothy, Warfield points out that he "does not tell us here everything for which the Scriptures are made valuable. . . . Whatever other qualities may accrue to them from their Divine origin, he leaves to other occasions to speak."¹⁵ John 10:31-38 is used to specify some of those qualities.

II Peter 1:19-21

Warfield explicates the divine origination of Scripture in light of II Peter 1:19-21, primarily the phrase, "no prophecy ever was brought by the will of man, but it was as borne by the Holy Spirit that men spoke from God." The contention is that "borne" cannot be understood as mere providential guidance, or direction. For that which

is "borne" is taken up by the "bearer", and conveyed by the "bearer's" power, not its own, to the "bearer's" goal, not its own. The men who spoke from God are here declared, therefore, to have been taken up by the Holy Spirit and brought by His power to the goal of His choosing. The things which they spoke under this operation of the Spirit were therefore His things, not theirs.¹⁶

The exact implications of this argument are vague; for the content underlying such terms as providential guidance, providential direction and divine bearing is unclear. Nor is the intent behind Warfield's very rigid interpretation of *pherō* as "to bear" apparent. In fact, it should be noted that the meaning of that Greek term normally extends far beyond Warfield's restric-

tive interpretation to include some quite figurative senses—for instance, those implying mere guidance, direction or leadership.

These ambiguities are elucidated through the following rhetorical question.

The production of the Scripture is . . . a long process, in the course of which numerous and very varied Divine activities are invoked, providential, gracious, miraculous. . . . When we give due place in our thought to the universality of the providential government of God, to the minuteness and completeness of its sway, and to its invariable efficacy, . . . what is needed beyond this mere providential government to secure the production of sacred books which should be in every detail absolutely accordant with the Divine will?¹⁷

Providential guidance is not enough, Warfield answers, because it carries one only as far as one's human powers extend. Guidance, even divine, is confined to the limits of man. "If heights are to be scaled above man's native power to achieve, then something more than guidance is necessary."¹⁸ Precisely because the authors of Scripture are "borne" by the Holy Spirit, the Bible possesses a superhuman, or divine quality. As a result, the limiting human characteristics of the writers do not impinge upon the pure Word of God. The reader does not have to "make his way to God painfully, perhaps even uncertainly, through the words" of the Bible.¹⁹ Rather here is an absolutely indefectible authority. The divine production of Scripture consequently brings about a principium; one simply listens "directly to the Divine voice itself speaking immediately in the Scriptural word to him."²⁰

In these distinctions and in the confining interpretation of *pherō*, we see Warfield's foundationalism in action. But do these verses actually support this analysis? Or has Warfield's foundationalism perhaps predetermined this interpretation, thereby concealing Peter's true intent? In II Peter 1:19 the prophetic word is likened to a lamp shining in a dark place. George Ladd insightfully points out that an ancient lamp was vastly different from modern electric lights.²¹ It gave at best only a limited light; it was merely a sufficient guide allowing the bearer to make his way safely through the darkened streets. Peter even contrasts its power to the full and absolute disclosure of truth which will occur when "the day dawns and the morning star arises in your hearts." Peter's point seems to be that while the lamp of Scripture may fail to clearly present what is among the shadows, God's Word does adequately disclose the path before our feet so that we will not stumble and fall. A better metaphor clarifying how Peter views the trustworthiness of Scripture could hardly have been chosen. According to Peter, then, Scripture is not a principium which *ipso facto* resolves every minute issue it touches. Rather, Scripture is construed as a perspective which provides a sufficient and reliable guide to God, even though the light it casts on the peripheral matters along this well-tread path may be dim. Consequently, Warfield's speculations on the type of divine activity necessary to effectuate a principium are far from Peter's mind when he uses *pherō*.

That Peter is not advocating a "divine bearing" in contrast to a "divine guidance" is additionally indicated by the very phrase on which Warfield concentrates so much focus. When Peter writes that "men moved by

the Holy Spirit spoke from God," we cannot ignore that Peter clearly says that men spoke. He conjoins what men spoke with what God spoke. If Warfield's interpretation had been Peter's intent, one would expect more of a contrast. In other words, would not Peter have indicated that the men spoke in a nonhuman, in fact a suprahuman manner? Warfield's overstatement is perceptively corrected by Michael Green's commentary on these verses:

Men spoke: God spoke. Any doctrine of Scripture will not neglect either part of this truth. Certainly those who are convinced of God's ultimate authorship of Scripture will take every pains to discover the background, life situation, limitations, education, and so forth of the human agent who cooperated with God in its production. For revelation was not a matter of passive reception: it meant active cooperation. The fact of God's inspiration did not mean a supersession of the normal mental functionings of the human author. The Holy Spirit did not use instruments; He used men.²²

These two elements in II Peter 1:19-21, the metaphor of the lamp and the conjunction of human and divine, reveal not only that Warfield's exegesis is biased but how far astray his foundationalism has led him.

In "foundationalism" knowledge and belief are dualistically differentiated so that knowledge is knowledge only because it is absolutely certain.

John 10:31-38

Through an interpretation of John 10:31-38, Warfield attempts to confirm his analysis of the divine production of Scripture *qua* principium. This passage begins with the Jews' charge that Jesus had conceived of himself as God even though he was simply a man. Jesus' defense against this charge of blasphemy centers on Psalms 82:6, "I said, you are gods," which is placed in even sharper focus by the aside that "Scripture cannot be broken." According to Warfield's exegesis, Jesus uses that Old Testament phrase, in which men had been called gods on account of their official function as judges, to point out that "it is not blasphemy to call one God in any sense in which he may fitly receive that designation."²³ Warfield interprets this argument as being merely an appeal to Scriptural authority. More precisely, he concurs with the analysis that Jesus' defense is a simple case of deduction from a principium.

Stated formally, His argument is as follows: Major—The Scripture cannot be broken. Minor—"I said ye are Gods," is written in your law, which is Scripture. Conclusion—"I said ye are Gods" cannot be broken. . . . He argues the infallibility of the clause on which He founds His argument from the infallibility of the record in which it occurs . . . "the Scripture."²⁴

In view of the apparently incidental and even indiscriminate character of this Old Testament phrase, Warfield concludes that "in the Saviour's view the indefectible authority of Scripture attaches to the very

form of expression of its most causal clauses. It belongs to Scripture through and through, down to its most minute particulars, that it is of indefectible authority."²⁵ According to Warfield, Jesus construed Scripture as a principium.

Undoubtedly the Old Testament was authoritative for Jesus. At issue is the nature of this authority. Specifically, does the Old Testament function as a principium for Jesus? Needless to say there are many different ways in which something is authoritative; it is not necessary that an authority be modeled after a principium. The influence of Warfield's foundationalism is evident inasmuch as this is the only option he seriously considers. However, something quite different is involved in Jesus' defense than simply an appeal to a foundational authority. Jesus does use Psalms 82:6 to contend that it is not blasphemy to use the term "God" of those for whom it is appropriate. But how can this defense against the charge of blasphemy be depicted as a conclusion deduced from that Scripture, as Warfield so hastily assumes? In the Psalm it is God Himself who argues that the term "god" appropriately describes judges. However, Jesus was not being opposed because He raised Himself to the level of a god. What the Jews considered blasphemy was His understanding of Himself as God with a capital "G."²⁶ In effect they are asking why the term "God" is an appropriate description of Jesus, or what is the basis of that insistence. Obviously Jesus cannot use this Psalm, which deals only with the term "god," to ground that claim.

Nor does Jesus attempt to resolve the blasphemy charge by appealing to Scripture. Rather, He uses Psalms 82:6 to strategically refocus the argument on Himself and His original claim that He is the Son of God. Jesus asks, if God Himself called men gods because they were representatives of God, why is it not permissible to apply the title of God to Him who is the Word of God?²⁷ Thus everything is made to depend upon whether that "is" applies to Jesus, whether He actually is the Son of God. Precisely because such a confession is in view, Jesus concludes His argument by challenging the Jews, "If I do not do the works of My Father, do not believe Me; but if I do them, though you do not believe Me, believe the works; that you may know and understand that the Father is in Me, and I in the Father" (John 10:37-38). In other words, Jesus attempts to absolve himself of the blasphemy charge solely through the contention that He is the self-revelation of God. Thus Scripture does not function here as a principium. The problem at hand was not immediately solved when Scripture was quoted. Rather Jesus used the Old Testament contextually, allowing it to function within the interpretive and more fundamental perimeters of His self-revelation as the Son of God.²⁸

Critique

By elucidating the oversights and distortions in Warfield's exegesis, it becomes evident that the presupposition of foundationalism and not Scripture's own self-witness is the basis for the inerrantist's construal of the problem of biblical authority. Once this ground is revealed, a more precise and fundamental critique of the various inerrancy defenses is possible. For in many cases the inerrantist's rationale is simply not compat-

ible with the logic of foundationalism. To give but one example, inerrantists frequently attempt to establish that inerrancy is the historic Christian position by quoting church fathers to the effect that the Bible is without error. But are those quotes really to the point? Admittedly, some church fathers did view Scripture as being without error. That specific confession however was a secondary concern; it was not at all connected with—in fact it was incidental to—the certainty of one's salvation or knowledge of God's character. It is only by totally ignoring the distinction between first order and second order doctrines that modern inerrantists can claim support from those church fathers. For modern inerrantists have an entirely different view of Scripture. They argue that it is only because Scripture is inerrant that we have certainty of our salvation and knowledge of God's character; accordingly for them inerrancy is a first order doctrine. If the inerrantists want historical support, they must show not only that the church fathers viewed Scripture as inerrant but more importantly were also foundationalists.²⁹ However, the purpose of this paper is not to instruct the inerrantists in the matter of argumentation. Rather we are attempting to determine whether inerrancy is the most basic issue facing theology as claimed. Having explicated the groundwork of the inerrantist's argument, attention must now be focussed on the viability and plausibility of foundationalism. Accordingly, a critique of foundationalism from various perspectives follows.

Foundationalism Tends Toward a Dead Orthodoxy

The effect of foundationalism on the vitality of Christianity is difficult to ascertain short-term. A disturbing trend, however, becomes apparent when one compares the Reformers with the post-Reformation scholastics. Absent from the Reformers' writings is the characteristic logic of foundationalism. Scripture's authority does not hinge upon such "definitions and devices of men."³⁰ Whether Scripture can be construed as an indubitable and independent principium is beside the point. "God alone is a sufficient witness of Himself in his word. . . ."³¹ Thus only an act of God within us—that is, the witness of the Holy Spirit producing saving faith by effecting a new life in Christ—can bring about the awareness that God is the real author of Scripture and thus the acknowledgement of its authority. However, as the post-Reformation scholastics became self-conscious of prolegomenous issues, an entirely different base developed: foundationalism. The Bible's authority was no longer understood as being interdependent with the work of the Holy Spirit in salvation. Rather, the scholastics relegate the certainty and truthfulness of the Spirit's work in salvation to a secondary position within the epistemological context of an inerrant Bible. That is to say, they confide more in the certainty intrinsic to a principium, than the personal and salvific certainty which accompanies the Spirit's witness. Quenstedt clearly admits that Scripture's role as a principium is actually the ground for its salvific efficacy: "Such an opinion [that there are errors in Scripture] vitiates the authenticity and authority of Scripture, and by such an opinion the certainty and assurance of our faith are destroyed."³² Paralleling this depreciation of the existen-

tial and soteriological reality of revelation was the quick deterioration of post-Reformation theology into a dead and sterile orthodoxy. It is this same predominating emphasis upon abstract epistemological issues among modern inerrantists which is so disturbing. In fact their over-concern with this epistemic construct which ignores the pivotal role the Holy Spirit plays in grounding religious authority may be prophetic.³³ For when a book like *The Battle for the Bible* is able to precipitate the present crisis, even though it fails to explicate the Spirit's crucial role in founding revelation's authority, is not the reality of the Holy Spirit already at stake? Is not evangelicalism on the threshold of a dead orthodoxy?

Is Foundationalism Compatible with Evangelical Scholarship?

If the foundationalist's thesis is correct—that without Scripture *qua* principium, there is no solid basis for biblical authority and no sure word for theology—it is absolutely essential that Scripture retain its epistemological role as an indubitable and independent principium. Recognizing that, the scholastics argued for a number of commitments which effectively delimit most critical enterprises by positing theology's principium above any possible destructive attack. The legacy of this rear-guard action, primarily the distrust of historical criticism, is still felt in some evangelical circles.³⁴ However Carl Henry's criticism of Lindsell, namely that he tends in an uncritical and unhistorical direction which cripples Christian faith by repudiating the historical-critical method as the deadly enemy of orthodoxy, clearly discloses the current state of biblical studies among evangelicals.³⁵ Yet in a sense, Lindsell demonstrates greater insight into the logic of foundationalism, even though neither he nor other modern inerrantists have fully come to grips with the fact that without other similarly reactionary commitments their principium is imperiled.

An analysis of the post-Reformation scholastics' view of the Old Testament reveals that the Bible's role as a principium cannot be sustained with simply the denial of higher criticism. Levita's findings nearly a century earlier that the Hebrew vowel points were not Mosaic, with which Luther, Calvin and Zwingli concurred, had established the credibility of textual criticism by the seventeenth century.³⁶ Nevertheless the scholastics generally rejected those findings and the method itself, clinging instead to the authenticity of the Masoretic text.³⁷ This reaction cannot be dismissed by attributing it to a precritical age. Rather foundationalism was at the heart of their critique. The scholastics perceptively realized that an unpointed text challenged Scripture's status as an indubitable principium, by undermining their certainty with regard to what the Bible teaches. As one such theologian argued,

If the churches permit the devil to establish this hypothesis, will not then all of Scripture become uncertain? But in no way should one admit that the Holy Ghost has placed before us such a dark and exceedingly inarticulately written doctrine about God, when He wanted it written just for this reason, that the doctrine could be clearly understood by the church . . .³⁸

Not only though does uncertainty about the content of Scripture explicitly question its indubitability. In addition, to the degree that the unpointed text is uncertain, no matter how minor the problem, critical deliberations and their incumbent uncertainties usurp Scripture's independence. As a Reformed confession of the period indicates, that was another motivation underlying rejection of textual criticism.

Therefore we can by no means approve . . . of those who . . . do not scruple at all to remodel a Hebrew reading which they consider unsuitable, and amend it from the Greek Versions of the LXX and others, the Samaritan Pentateuch, the Chaldee Targums . . . ; and furthermore, they do not acknowledge any other reading to be genuine except that which can be educed by the critical power of the human judgment from the collation of editions with each other. . . Thus they bring the foundation of our faith and its inviolable authority into perilous hazard.³⁹

The point is evident; lower criticism undermines Scripture's role as an indubitable and independent principium of theology by denying that the Masoretic text completely coincides with the original autographs. Insofar as textual criticism becomes the judge of the Bible, Scripture's authority and truthfulness no longer originates *a priori* from itself but is inferred. Even more devastating is that textual criticism does not bring about a new principium. For the results of any scientific endeavor are only probable, and never attain the apodictic certainty required by a principium. Recognizing those dangers, this confession insisted that the direction of textual criticism be reversed. To the standard of the Masoretic text "as to a Lydian stone, all extant versions, oriental and occidental, ought to be applied, and wherever they differ, be conformed."⁴⁰ This is not mentioned as an embarrassing anachronism but merely to illustrate the seriousness with which these scholastics held that their principium was actually available and present. Obviously that is indispensable to foundationalism; an actual text must assume this role. How else can that crucial epistemological link between the foundation of certitudes, an inerrant Scripture, and its deduced knowledge be maintained?

Even though these commitments are now recognized as erroneous, the scholastics must be appreciated for their penetrating comprehension of the demands inherent in the logic of their position. Where does one find such incisive reasoning among modern inerrantists? The problems of an unpointed text and lower criticism within the context of foundationalism are ignored. Inerrancy is attributed only to the original autographs, not to any existent text. The scholastics realized it would be epistemologically futile to argue on the one hand that an inerrant Bible is the principium of dogmatics, while on the other to locate this principium beyond reach! An epistemic gap remains even when it is argued that textual criticism is able to establish a text which "represents" the no longer existent autographs.⁴¹ For these results cannot assume the role of a principium; they are merely probable and not indubitably certain. Consequently, those foundationalists who contend that nonexistent original autographs are alone inerrant are ironically in as much an epistemic impasse as their theological foes! On the other hand, perhaps this acceptance by modern inerrantists of textual criticism should be interpreted as a hopeful sign. Have modern inerrantists recognized

James Packer has offered a promising model for biblical authority and a creative interpretation of inerrancy to correlate with this new context.

that absolute certitude is a human ideal and more appropriate to mathematical systems or analytic statements than to historical documents or personal truths? In either case, their argument for inerrancy is overthrown by the logic of their own position.

Biblical Foundationalism's Internal Difficulties

Even if these problems which arise when Scripture assumes the role of a principium were resolved, difficulties internal to foundationalism apparently remain. What is questionable is the foundationalist's claim that genuine knowledge is attained only through deduction from a principium. For it seems quite evident that Scripture is actually too rich a principium from which to derive such knowledge. The number of incompatible interpretations of the content of biblical truth even by inerrantists is simply too conspicuous. The debate between catastrophic creationists and progressive creationists over a proper understanding of Genesis is but one minor example. The problem is that even when all the proper exegetical methods are correctly applied, questions remain that concern all except the most primary interpretations of Scriptural teaching. One may even appropriately ask whether any interpretation of Scripture is indubitably certain.

This diversity of interpretation presents a recalcitrant obstacle to the foundationalist's search for absolutely certain knowledge. The admission that one's principium cannot be indisputably understood in all its respects obviously undermines its indubitability, since one cannot be absolutely certain of an unintelligible truth. In addition, if one's interpretation is problematic, what finally adjudicates between a deduction inferred from interpretation 1 or an alternative conclusion based on interpretation 2? The implications of this hermeneutical problem for foundationalism cannot be brushed aside with the comment that "to criticize an interpretation is one thing—to declare the scriptural text as errant is quite another."⁴² Both a problematic interpretation and an errant Scripture strike at the heart of foundationalism. In neither instance does Scripture provide us with indubitably certain knowledge. This interpretive predicament is not a modern discovery. It was decisively revealed to the scholastics when their presumptuous yet valid deduction of a Ptolemaic worldview was abruptly overthrown by the science of the day. Nevertheless, the deductive method remained unchallenged among inerrantists as late as Warfield.⁴³ Only recently have inerrantists seriously attempted to come to grips with this hermeneutical problem. At least two distinctive methods have been proposed to bridge this interpretive gap.

The prevailing theory among inerrantists is *falsificationism*.⁴⁴ Although beginning with deduction, it allows the inductive results from Scripture and science to negatively check false exegesis. That is, if a deductive

inference comes into conflict with "assured" data, one knows that it was not properly derived from Scripture. In a view of deductive foundationalism's disregard of the hermeneutical problem, this is a significant advance. However, does falsificationism adequately resolve the problem? A persisting and serious criticism of falsificationism is that conflicting data do not actually function as a negative check on scriptural inferences. The inability of discordant data to conclusively test even the historical knowledge inferred from Scripture is evident from the well-known mental gymnastics in which inerrantists take part, thereby avoiding the conclusion that Scripture errs.⁴⁵ The manner in which discrepancies confront more interpretive conclusions is even less direct. For instance, both sides of the creation debate presumably acknowledge the same data. However, because each places different interpretive values on the evidence in view of their basic presuppositions, their conceptions of creation are seldom if ever radically modified. While in some instances it may be necessary to set aside conflicting data by introducing an ancillary hypothesis, it is doubtful whether many inferences from Scripture will ever be firmly called into question through this method.

Even if one could determine through falsificationism which Scriptural inferences are based on false exegesis, has not one relinquished the foundationalist's goal of genuine knowledge in the process? In other words, are unfalsified inferences as true and as certain as their ground? While that is the deductive foundationalist's goal, it cannot be the falsificationist's. For this method admits that more than one plausible interpretation of a biblical passage is possible. Consequently two unfalsified yet conflicting interpretive inferences are possible. Moreover the coherence of an inference with present data does not ensure that in the future no falsifying observations will arise. An unfalsified inference thus is merely a necessary and not a sufficient condition for being considered as absolutely certain knowledge. That is, while only an unfalsified inference can be true, it is not necessarily true. There is a possibility that it may be false. Falsificationism is unable to determine which unfalsified inferences are unfalsifiable and thus genuine knowledge. Not only is falsificationism unable to resolve the hermeneutical problem, but it surrenders the foundationalist's goal of absolutely certain knowledge in the process.

A second option, *adduction*, which is beginning to circulate in evangelical circles has been proposed by James Packer.⁴⁶ As in the previous methods, the Christian theologian begins in conscious submission to Scripture, deriving from it interpretive doctrines. Packer however is more cognizant of the preunderstandings and hermeneutical assumptions underlying this whole procedure. From our analysis and criticism above it is evident that deductive foundationalism and falsificationism fail to decisively confront this whole complex of beliefs through which Scripture is interpreted. Instead of implicitly justifying these preconceptions, Packer contends that all inferences which purportedly are validly derived from Scripture—even those which involve our conception of the nature of Biblical authority and thus those which predetermine our very approach to Scripture—must be challenged:

theological theories, like the theories of natural science, have to be tested by seeing whether they fit all the relevant biblical data. If the data seem not to fit the theory, then the relation between them should be thought of as one of reciprocal interrogation; each calls the other in question. So, if particular texts, despite our exegetical coaxing, still appear to be out of accord with each other in some significant way, or to assert what is untrue, methodologically the first thing we have to do is to re-examine our concepts of biblical authority, and of the hermeneutic which we drew from it.

It would be a potentially serious over-simplification, as it seems to me, to ignore the fact that we may need to go around the one-way system of the exegetical circle very many times, revising our doctrine of Scripture and our hermeneutics again and again in the light of the various queries about both that the different classes of phenomena raise. . . . The truth is that neither our doctrine of Scripture, nor the exegesis can be in a healthy state unless they constantly interact, and each undergoes constant refinement in the light of the other.⁴⁷

Adduction's advance over the previous options lies in the fact that it does not perceive the direction from Scripture to inferred knowledge as being merely one-way. That is, deduced theories are not perceived as being necessarily true; nor are these inferences only negatively checked at a secondary level as in falsificationism. Rather, this method involves a hermeneutical circle which is traveled many times in the gradual and sometimes hesitating process of adducing models for theology. Thereby the data are allowed to continually challenge the interpretive theory and the theory is permitted to constantly rescrutinize the data in order to properly understand it.

How does this method thwart the devastating implications of the hermeneutical problem for biblical foundationalism? That difficult task, it is crucial to note, is side-stepped; for foundationalism is no longer conceived as the proper framework for biblical authority. Adduction does not conceive religious knowledge as originating from an indubitable foundation through which absolutely certain truths are derived. On the contrary, theological doctrines and even the confession of biblical authority within the context of adduction is more dependent upon Peter's image of an ancient lamp which casts only sufficient light or Paul's insight that we see through the glass darkly. For an authority utilizing the hermeneutical circle does not produce indubitable truths, but functions more as a perspective which is continually in the process of approximating the truth.

Corresponding to this new methodological context must be an equally innovative reinterpretation of inerrancy, if that term is to be retained at all. No longer can inerrancy be designated as a paramount or first order doctrine with the result that the qualities of Scripture necessarily parallel that of a principium, as is the procedure among biblical foundationalists. Such a conception of inerrancy, it has been pointed out above, is dependent upon an underlying foundationalism. That Packer subtly advances a reinterpretation of inerrancy which correlates with the method of adduction should then occasion no surprise. His divergence from the traditional definition is evident from the very fact that he allows this scholastic preconception of Scripture *qua* principium to be questioned:

If . . . we allowed ourselves to treat a pre-packaged, deep-frozen formula labelled "the evangelical doctrine

of Scripture" as a kind of untouchable sacred cow, we should . . . be showing ourselves more concerned about our own tradition than about God's truth . . .⁴⁸

This distinctive attitude becomes more conspicuous through the observation that Scripture *qua* principium does not ground biblical authority. The artificially precise standards intrinsic to foundationalism are in fact acknowledged as being alien to the biblical writings and distorting their true intent. Instead Packer follows the Reformers' insight, contending that Scripture's authority is grounded upon God's ability to speak through the Bible, whereby He discloses Himself and brings redemption. The scope and nature of Biblical truth consequently must be defined in conjunction with this salvific ground. The meaning of inerrancy thus is not predetermined in an *a priori* manner, but is formulated at a secondary level, one which is relative to the more primary intent and purpose of Scripture: salvation. For instance, Packer denies that Scripture can be manipulated to teach science; that it truly reveals all that is salvifically necessary, however, is affirmed.⁴⁹ In actual practice the meaning of inerrancy becomes quite elastic and is construed so that it actually fits the phenomena and purpose of God speaking through Scripture. Such a brief analysis can hardly reveal all the subtleties in Packer's proposal; nevertheless his departure from foundationalism is clear. In view of our critique of foundationalism, Packer has offered a promising model for biblical authority and a creative interpretation of inerrancy to correlate with this new context. Surely it deserves more recognition and scrutiny than it has received.⁵⁰

It is evident that foundationalism does not present a viable model for biblical authority either exegetically, theologically or philosophically. Key inerrantists in fact have implicitly admitted as much through their inadequate responses to those problems intrinsic to a biblical foundationalism. This denial of foundationalism however must be made explicit. Only then can the agenda for the evangelical theologian be directed from the current sterile and futile polemics toward completing this critique and opening up for discussion concepts which our tradition has ignored due to foundationalism's pervasive influence.

REFERENCES

- ¹B. B. Warfield, *The Inspiration and Authority of the Bible* (Philadelphia, 1949), p. 127, 140; see also 122-125, 212.
- ²Robert D. Preus, *The Theology of Post-Reformation Lutheranism* (St. Louis, 1970), p. 342. L. Gaussen, *The Inspiration of the Holy Scripture* (Chicago, n.d.), pp. 5-22, 200-204. Warfield, *op. cit.*, pp. 105-226. Edward J. Young, *Thy Word is Truth* (Grand Rapids, 1957), pp. 5-6, 76-79, 103-104. Clark H. Pinnock, *Biblical Revelation* (Chicago, 1971), pp. 11, 69-81. Clark H. Pinnock, *A Defense of Biblical Infallibility* (Nutley, New Jersey, 1967), pp. 1-10. Harold Lindsell, *The Battle for the Bible* (Grand Rapids, 1976), pp. 17-27, 203.
- ³Calov, *Systema*, quoted in Preus, *op. cit.*, p. 343.
- ⁴Nicholas Wolterstorff, *Reason Within the Bounds of Religion* (Grand Rapids, 1976), pp. 24-30. Preus, *op. cit.*, pp. 116, 339-362.
- ⁵Aristotle, *Posterior Analytics* I, 2, 72a 25-72b.
- ⁶This seems to be the point of contention between J. Barton Payne and Donald Lake which arose at the December 1977 E.T.S. meeting. See *Christianity Today*, XXII (January 27, 1978), pp. 39-40.
- ⁷Preus, *op. cit.*, p. 343. Preus admits that the scholastics did not derive their standard of truth from Scripture, however he does not realize the extent to which foundationalism influenced those discussions.
- ⁸*Ibid.*, p. 346.
- ⁹Warfield, *op. cit.*, p. 181.
- ¹⁰"Council Maps 10-Year Push for 'Historic, Verbal' Inerrancy," *Eternity*, XXVII (November, 1977), 10.
- ¹¹Young, *op. cit.*, p. 5.
- ¹²Pinnock, *A Defense of Biblical Infallibility*, preface.
- ¹³Most modern inerrantists merely assume that inerrancy is biblical. Carl Henry notes that Lindsell contends that inerrancy is Biblical but presents few relevant texts. Carl Henry, "The War of the Word," *The New Review of Books and Religion*, I (September, 1976), 7.
- ¹⁴Warfield, *op. cit.*, p. 131.
- ¹⁵*Ibid.*, p. 135.
- ¹⁶*Ibid.*, p. 137.
- ¹⁷*Ibid.*, pp. 156-7.
- ¹⁸*Ibid.*, p. 158.
- ¹⁹*Ibid.*
- ²⁰*Ibid.*
- ²¹George Eldon Ladd, *A Theology of the New Testament* (Grand Rapids, 1974), p. 605.
- ²²Michael Green, 2 *Peter and Jude* as quoted by Klass Runia, "The Authority of Scripture," *Calvin Theological Journal*, IV (November, 1969), 188.
- ²³Warfield, *op. cit.*, p. 138.
- ²⁴Robert Watts, "Faith and Inspiration," as quoted from *The Carey Lectures for 1884* by Warfield, *op. cit.*, p. 184.
- ²⁵Warfield, *op. cit.*, p. 140.
- ²⁶Raymond E. Brown, *The Gospel according to John* (Garden City, New York, 1966), I, 409-410.
- ²⁷*Ibid.*
- ²⁸This pericope in fact is a good illustration of the way Jesus and His disciples used Scripture. As this case reveals they do not, as Warfield asserts, "make their appeal indifferently to every part of Scripture . . ." Warfield, *op. cit.*, p. 140. For instance, authority is never attributed to the biological, psychological or chronological elements, even though such aspects are repeatedly found in the Old Testament. Rather it is the revelational content of Scripture which is used, and that—it is important to note—is always interpreted within the context of the New Testament revelatory framework, the self-revelation of God in Jesus Christ. To Jesus and His disciples the Old Testament was the revelation of God and His plan of salvation, and only as such did they use it. Runia, *op. cit.*, p. 187.
- ²⁹In addition, the remark found so frequently in the attempts by inerrantists to harmonize Scripture—that it requires an infallible critic to discover an error in Scripture—seems out of step with foundationalism. For it is the foundationalist's contention that knowledge can be gathered only from indubitables. Consequently, the pressure is on the inerrantist to demonstrate that his proposed solution to the tension in Scripture is indubitably correct. That is hardly ever the case, which perhaps is what accounts for this extenuating demand. On the other hand, the critic's only obligation is to show that this purported harmony of Scripture is not indubitable.
- ³⁰Calvin, *Institutes*, I, vii, 3.
- ³¹*Ibid.*, I, vii, 4.
- ³²Quenstedt, *Systema*, quoted in Preus, *op. cit.*, p. 342.
- ³³This is not true of J. I. Packer; however, as shown below he is not a true inerrantist.
- ³⁴Preus, *op. cit.*, pp. 355-57. Kurt E. Marquart, *Anatomy of an Explosion* (Fort Wayne, Indiana, 1977), pp. 112-117. Lindsell, *op. cit.*, pp. 200-11.
- ³⁵Henry, *op. cit.*, Harry Boer, *Above the Battle?* (Grand Rapids, 1975), pp. 47-50.
- ³⁶Preus, *op. cit.*, pp. 307-308.
- ³⁷Preus, *op. cit.*, pp. 306-309. Charles Briggs, *Study of Holy Scripture* (Grand Rapids, 1970), pp. 219-226. Philip Schaff, *The Creeds of Christendom* (Grand Rapids, n.d.) I, pp. 477-481.
- ³⁸Matthias Flacius, *Clavis Scripturae Sacrae* as quoted in Gerhard Maier, *The End of the Historical-Critical Method*. (St. Louis, 1977), pp. 68-9.
- ³⁹Helvetic Consensus Formula, III, as quoted in John Leith, *Creeds of the Churches* (Richmond, Virginia, 1973), pp. 310-11.
- ⁴⁰*Ibid.*, II, p. 310.

- ⁴¹Pinnock, *Biblical Revelation*, p. 74. John Warwick Montgomery, *God's Inerrant Word* (Minneapolis, 1973), pp. 35-38, 279.
- ⁴²Harold Foos, "The Word of God: why inerrancy is paramount," *Moody Monthly*, (January, 1978), p. 37.
- ⁴³Warfield, *op cit.*, pp. 201-208.
- ⁴⁴Roger Nicole, "Review of *The Inspiration of Scripture*," *Gordon Review*, (Winter, 1964-65), p. 106. Carl Henry, *Contemporary Evangelical Thought*, (New York, 1957), p. 272.
- ⁴⁵Pinnock, *A Defense of Biblical Infallibility*, p. 19.
- ⁴⁶James Packer, "Hermeneutics and Biblical Authority," *Themelios*, I (Autumn, 1975), pp. 3-12. The term adduction—taken from Arthur F. Holmes, "Ordinary Language Analysis and Theological Method," *Evangelical Theological Society*, XI (Summer, 1968), pp. 131-138, where a very

similar method is offered—denotes that deduction and induction are transcended by a process which involves a hermeneutical circle and concludes with proposals instead of absolutely certain knowledge.

⁴⁷Packer, *op. cit.*, pp. 7-9.

⁴⁸*Ibid.*, p. 9.

⁴⁹*Ibid.*, pp. 11-12. James Packer, "Fundamentalism" and the *Word of God* (Grand Rapids, 1972), pp. 94-101.

⁵⁰It is quite ironic that while Packer's method actually undermines foundationalism and its correlative notion of Scripture as an inerrant principium, he consistently links himself with the inerrantists. In actuality little separates him from such progressive evangelicals as Jack Rogers or G. C. Berkouwer, who confess the revelatory infallibility of Scripture but deny foundationalism and an inerrancy defined by that perspective.

The Behaviorist Bandwagon and the Body of Christ. II. A Critique of Ontological Behaviorism from a Christian Perspective



MARY STEWART VAN LEEUWEN

Department of Psychology

York University

Toronto, Canada

In the first part of this paper, we were primarily concerned with briefly describing what can be understood by the term "behaviorism." We pointed out that one can distinguish among (a) behaviorism as a total world-view ("ontological behaviorism"), (b) behaviorism as a convenient working assumption in the conduct of laboratory research into the behavior of animals and people ("methodological behaviorism"), and (c) behaviorism as a set of techniques for dealing with certain behavior problems encountered in the world at large ("applied behaviorism"). It was further pointed out that someone can embrace behaviorism in the senses implied by (b) and (c) without necessarily subscribing to the view of reality implied by (a). We concluded, however, by pointing out that since contemporary western man is largely bereft of belief systems to help him make some consistent sense of his world, he can be very susceptible to the message of ontological behaviorism when it is proclaimed by an apparently erudite and authoritative academic such as Harvard's B. F. Skinner. For this reason, the second part of the paper sets forth briefly some of the essential criticisms of ontological behaviorism, and tries to provide some guidelines from a Christian perspective for grappling

with their manifestations in contemporary society.

Ontological Behaviorism: Some Problems

The essential features of Ontological Behaviorism include determinism (that man is passively shaped by his environment and that free will is an illusion), "mental processlessness" (a complete psychological account can be given of man by studying his externally observable behavior to the exclusion of any supposed events taking place in his head), and *materialism* (even if man does appear to engage in mental or spiritual activities, these activities are merely the by-product of the physical and chemical activity of the brain and therefore need to be examined as legitimate, important phenomena in their own right.)

These assumptions are no more than faith assumptions that *precede* and *direct* the course of research, and are not decisively proven conclusions resulting from that research. Even Skinner himself, when closely questioned, admits that the state of research is still in no position to state unequivocally that man is no less determined than a pigeon (or a molecule) by his environment, but he *believes* that this is a "worthwhile scientific assumption"¹ which future experimental find-

ings will continue to validate. When the "faith nature" of this deterministic model of man is thus revealed, its scientific trappings should become somewhat less intimidating. We are dealing not with scientific conclusions written in stone (in fact, there are *no* such fixed conclusions *anywhere* in science) but instead with a *belief system* about the ultimate nature of man and his world which, while not devoid of supporting research evidence, goes well beyond it. In this respect it is no different from the faith of the Christian, or of the humanist, or of the Marxist or any other "true believer," all of whom appeal to a combination of faith plus empirical evidence to convince others of the truth of their position.

A close perusal of the writings of ontological behaviorists shows that they themselves find it difficult to be consistent in practising their determinist assumptions. This becomes evident when a curious exercise in double-think is uncovered in the writings of Skinner and others committed to a behaviorist view of man. On the one hand, it is suggested that man should resign himself to the realization that he, no less than the molecule, is totally determined by his environment, but, having thus stripped man of his autonomy, Skinner repeatedly suggests that man both *can* and *should* exploit his scientific knowledge of mechanized man to "raise himself to new heights of kindness, intelligence, and happiness."² How, we are forced to ask, can a totally-determined organism transcend his environmental determinism to take charge of the environment that totally determines him?

If everything about us (including our moral values) is environmentally determined, on what basis can *anyone's* (including Skinner's) injunctions about what we "should" do be taken as peculiarly binding on us? Presumably his concern for man to "raise himself to new heights" is no less the product of his environmental conditioning than my concern as a Christian for the salvation of souls. As such, neither value can be said to be "better" or "worse" than the other; each simply "is" the inevitable product of our respective reinforcement histories. And yet Skinner takes considerable pains to persuade us that his particular ultimate-value (the survival of the human race and of western civilization) is one that we "ought" to adopt. A brief glance into the history of ideas reveals that this kind of double-think is nothing new: from the time of the Enlightenment, western man (having progressively abandoned his faith in a Creator-God) has struggled to reconcile his faith in the unlimited potential of the natural-scientific method with an equally strong faith in the capacity of autonomous man to exploit this knowledge of a mechanistic universe for his own chosen ends. That these two ideals—the "science ideal" and the "freedom ideal"—are basically at odds with one another is one reason why Christian philosophers like Herman Dooyeweerd have maintained that their adherents must be basically misguided in their views of man and the universe.³

Implicit Appeal to "God"

Perhaps of greatest importance to the Christian is the observation that the ontological behaviorist, despite his insistence on a determined universe totally devoid of irreducibly mental or spiritual aspects, still ends up appealing to something like a "God outside the system"

in order to make his system work. This is clearly evident throughout Skinner's *Walden II*. A closer examination of Skinner's behaviorist Utopia suggests that it is not *everyone* who can or will transcend his environmentally-determined destiny in order to plan a more perfect environment, but rather a particular elite of planners who are experts in analyzing people's present response-reinforcement patterns and changing them in such a way as to yield more desirable behavior.⁴ This, as we pointed out earlier, is exactly what the professional behavior-therapist is doing when he helps a person to overcome a dog-phobia, or a chain-smoking habit. But while the average behavior therapist now sells his skills to a clientele who have come to him voluntarily and can leave him whenever they become dissatisfied with his product, Skinner envisages (yea, *pleads* for) the adoption of operant conditioning techniques as a matter of policy in all the institutions of society that one might care to name—the school, the family, the prison, the hospital, the market-place. His position boils down to a programme for the manipulation of human beings, whether or not they know about it, whether or not they consent to it, for their own supposed benefit and for the good of society as a whole. But the notion of manipulation implies that somewhere there is a manipulator, and (as many of Skinner's critics have repeatedly asked), who is to choose the Grand Manipulators of us all, and whence do they derive their authority to manipulate us without our knowledge? To be *wise* enough for such responsibility would require an omniscience of all short and long-term consequences of all possible shaping programs working singly and interactively in all possible places at once—a task which even our most sophisticated computer simulations cannot begin to solve. To be *pure* enough for such a task, even if we were to concede the possibility of *knowing* all the pertinent factors operating, supposes that the Grand Manipulator can be trusted always to use his infinite knowledge in our best interests. Either way, we are assuming the possibility that there exist (or can exist) human beings who have attributes (omniscience, moral perfection) which Christians, banking on the revealed-truth of Scripture, claim are exclusively God's.

Walden II: An Imagined Case History

That some such Nietzschean god-complex lurks in the background of Skinnerian thinking is suggested by the character of Frazier, the hero of Skinner's behaviorist Utopia, *Walden II*—a novel-cum-social vision which, thirty year after its initial appearance, is still being read in college courses all over the continent, and which has even been used quite seriously as the blueprint for at least one real-life attempt at setting up a commune on reinforcement principles.⁵ Frazier is an acknowledged genius in the estimate of those visitors to the commune who realize how successfully and perfectly he has used principles of reinforcement to arrive at a society where all negative emotions (such as selfishness, jealousy, and aggressiveness) have been shaped out, where technology and ecology, labor and leisure, have been perfectly wedded, and where charming, scintillating inhabitants go about their daily rou-

This is the second of a three-part series on behaviorism from a Christian perspective.

tines in near-perfect harmony. When problems do occur, their solution by an appeal to the laws of operant conditioning is automatic.

Towards the end of the book, Frazier takes one of his visitors (a fellow psychologist, Burris, who arrives as a skeptic, but ultimately is converted to the Walden II life-style) up to a high hill from which he can survey the entire community with a telescope. As he oversees Walden II through the glass, he comments that "Not a sparrow falleth. . . . I look on my work, and behold, it is good,"⁶ and, a little later, he adds that there is a curious similarity between himself and God—with this difference: "God's children are always disappointing him . . . (but my) original design took deviations into account and provided automatic corrections. It's rather an improvement on Genesis."⁷ To Burris' accusation that he has "a sizable God complex", Frazier replies, "Of course I'm not indifferent to power! And I like to play God! Who wouldn't under the circumstances? After all, man, even Jesus Christ thought he was God!"⁸ Skinner hastens to add that Frazier is not being the least bit blasphemous in all of this; in fact, he speaks of Jesus as an "honored colleague" who, we discover earlier in the book, Frazier feels stumbled on the essence of the principle of positive reinforcement when he told his followers to love (rather than hate) even their enemies. Frazier himself is by no means portrayed as perfect: he is arrogant, socially somewhat awkward, and personally sloppy. But, Skinner asks us, how could this be otherwise? How could he do other than suffer from his original, outside-world conditioning, not being a product of Walden II from birth? It is enough that he has set in motion, by his dedicated application of the laws of behavior, a system which *can* produce perfect people who, (unlike God's children) rarely if ever disappoint him.

And so we have, not a perfect messiah who vicariously redeems a sinful race, but an imperfect messiah whose technological innovations nonetheless result in a system which produces automatic and consistent sinlessness. He is furthermore an anonymous messiah; the "planners" and "managers" of Walden II have no special status; they get no more credit nor blame than anyone else for the jobs they do, and no one in the community accords Frazier, its founder, any particular dignity—indeed, few people even know who he is. But like the Deist's god, who was presumed to have wound up the clockwork of the universe and then left it go to its lawful, automatic way, Frazier has designed the perfect environment for shaping the perfect race, and is content to sit anonymously back and behold the goodness of his creation.

The weaknesses of exploiting this particular type of god-talk to persuade us, as readers, of the necessity of the mechanistic universe are precisely those cited previously. Firstly, to be able to apply so innovatively and perfectly the laws of conditioning to others, Frazier has to have been able to transcend his own conditioning in a way which releases at least one person from the confines of this mechanistic universe of which he simultaneously claims everything and everyone is a part. Hence autonomous man (or at least *one* autonomous man—or demi-god) makes a sneaky return through the back door of the clockwork. Secondly, to have used the laws of operant conditioning to produce

a "perfect" people implies a standard of perfection, a set of values against which man's behavior can be measured and the techniques of conditioning (themselves value-neutral) used to produce. That such standards (largely the product of Frazier's personal faith about what constitutes the "good life") abound in the novel is very clear—and, despite the novelty of the communal setting, sound to the Christian reader suspiciously like the protestant ethic (now secularized) under which Skinner himself was reared: people "should" be industrious, productive, content with a modest standard of living, individually creative and self-reliant, yet prepared to co-operate with others for the common good.⁹ Children do not have the same rights and privileges as adults, monogamy is considered preferable to promiscuity, and (despite certain feminist sentiments somewhat ahead of the time the book was written) women still take their husbands' names.¹⁰

Assumptions of determinism, "mental processlessness," and materialism are no more than faith assumptions that precede and direct the course of research, and are not decisively proven conclusions resulting from that research.

We may agree or disagree with this particular prescription for the "good life"—but the point still remains that, in a world where everyone's values are merely the inevitable product of past conditioning, there can exist no way by which Skinner's prescription can be declared the particular one to which we should all adhere. Frazier, an empiricist and a pragmatist like Skinner his creator, appeals to the evidence of the senses to convince us: look around you, Burris; Walden II really does *work*. It really *has* solved all those messy post-war social and political problems that the world at large has failed to grapple with. But Walden II is still a fictitious Utopia, an extrapolation of faith from Skinner's limited (and only vaguely-alluded-to) laboratory experiments to a world which he *believes* could operate on the same principles. It is a blueprint which he has personally never attempted to actualize, and those who have made such an attempt show as yet no sign of attaining the paradisaal state of Walden II.¹¹ Hence, what we are being asked for as we read the book is ultimately a faith-allegiance to a Utopian ideal—an allegiance which can be nourished and maintained only by faith in the superior competence and insights of its creator, to whose visionary extrapolations from the limited evidence of the laboratory we must necessarily ascribe the status of special revelation.

Furthermore, religious—specifically, biblical—language and metaphor are constantly being exploited in the novel to buttress Frazier's case for his operantly-conditioned society. Why?? Is it merely Skinner's attempt to make light of conventional religion in order to exorcise its remaining hold on his post-World War II readers? Or is it because he realizes that a quasi-

religious appeal is *needed* to bridge the gap between the limited findings of behaviorist research and the vision of the totally-planned society to which Skinner would like us to extend them?

Or again, are such images included to give the illusion of a ready-made value-system, without which we would have no guidelines for the application of a behavioral technology? For whatever reason, we do have Frazier admitting that, with people coming into Walden II from the outside, "we have to appeal to something like conversion."¹² We have the humble return of Burris, prodigal-son-like, to Frazier and to Walden II after his final, unsuccessful attempt to deny to himself its perfection.¹³ We have the "Walden II Code", a decalogue-like set of rules to which everyone agrees to adhere—not because they have been proved scientifically workable in the laboratory, but because the original planners of the community hypothesized (read: had faith) that they *would* be empirically shown, in the course of the community's development, to be the best slate of rules for living.¹⁴ The psychologists of the community are "our priests, if you like",¹⁵ who prescribe curative programs for members who are having difficulty adhering to the code. One is reminded of the way in which National Socialism in Germany made a similar appeal to a combination of technological power and religious zeal in order to achieve its ends. That the latter did so to promote the power of a single, so-called Master Race, while Skinner's *Walden II* is aimed at an egalitarian society does not alter the fact that each calls for an unlimited faith in the powers of science and the superhuman capacity of a certain person (or persons) to prescribe the ends to which such powers should be used. Our willingness to accord such faith unreservedly will be determined by even deeper faith-assumptions about the intrinsic fallenness or perfectibility of all men.

Is "Mental Processlessness" Valid?

Our final criticism of ontological behaviorism centers around its assumption of "mental processlessness." If the behaviorist image of man is correct, then neither our knowledge of, nor our consent or lack of consent to the conditioning process will affect the success of that process, since "knowing" and "consenting" are regarded by the ontological behaviorist as mythical, or at least irrelevant, internal processes which have no significant influence on behavior. The pigeon it appears, cannot reflect upon the conditioning process he is undergoing in any way that alters the efficacy of that process on his behavior, and man's apparent capacity for reflection should likewise be useless to alter the effects of the environmental program being imposed on him. But the realities of psychological research with human beings seem to contradict this notion: experimental social psychologists in particular have always realized that if a person in an experiment *knows* about the nature and purposes of the manipulations he is undergoing, he will react differently than if he did *not* know about them.¹⁶ The researcher's way of combatting this "ghost in the machine" has always been to *lie* (often quite elaborately) to his research subjects about what is going on in the study, on the assumption that, he will get a spontaneous, uncontaminated reaction to it by distracting their attention.

But quite apart from the ethical considerations surrounding the use of such duplicity,¹⁷ its practical consequences simply seem to reaffirm the capacity of human beings to "create their own internal environment" to add to (even if not totally negate) the effects of externally-imposed factors: for as the reputation of psychologists-as-liars becomes increasingly widespread, fewer and fewer subjects (at least among the student population and informed laity) enter the research situation prepared to believe what they are going to be told about it. Hence, while they may not get so far as to discern the *real* purpose of the study, they at least know what it is probably not what it is *said* to be, and may proceed to react in accordance with, not the experimenter's, but their own hypotheses about what is going on. This process in itself does not *eliminate* the effects of the experimental manipulation—but it does reduce them from the status of total determinants to mere influences.

Inconsistency of Ontological Behaviorism

We thus see that ontological behaviorism, with its assumptions that man's behavior is environmentally determined, uninfluenced by mental processes, and the product of a material, non-spiritual universe does not consistently live up to these assumptions. Determinism leaves no room for the moral pronouncements needed to guide the use of conditioning principles. Materialism fails to supply man's yearning for something to worship outside the world of the five senses. "Mental processlessness" ignores the fact that people even in an experimental situation can and do influence its outcome merely by the way they conceptualize it in their heads. Does this mean that the entire behaviorist enterprise is bankrupt, and has nothing good to offer to the Christian community? To answer this question, we need to turn to the area of *applied* behaviorism and examine its track-record. For, as we stated earlier, those applying the techniques of behavior modification may or may not do so in rigid adherence to ontological behaviorism? Our answer is a qualified "yes", and our elaboration of this answer constitutes the final major section of this paper.

REFERENCES

- ¹As interviewed in *Learning and Behavior*, A.A.A.S. films, C. 1958.
- ²*Ibid.*
- ³See Kalsbeek, A. N. *Contours of a Christian Philosophy*. Toronto, 1975. Wedge Publishing Foundation.
- ⁴See Skinner, B. F. *Walden II*, especially Chapters 8 and 29. (Note: all references to *Walden II* are from the 1968 MacMillan Paperback Edition)
- ⁵See Kinkade, K., *op. cit.* (in Part I of this article)
- ⁶Skinner, B. F. *Walden II*, p. 295.
- ⁷*Ibid.*, p. 297.
- ⁸*Ibid.*, p. 299.
- ⁹*Ibid.*, throughout the novel.
- ¹⁰*Ibid.*, especially Chapters 12-15.
- ¹¹Kinkade, K. "A Walden II Experiment", *Psychology Today*, January, 1973, and February, 1973.
- ¹²*Ibid.*, p. 162.
- ¹³*Ibid.*, Chapters 35 and 36.
- ¹⁴*Ibid.*, p. 196.
- ¹⁵*Ibid.*, p. 199.
- ¹⁶See Miller, A. N. (Ed.) *The Social Psychology of Psychological Research*. New York, The Free Press, 1972.
- ¹⁷For a discussion of the ethics of experimental deception in psychology from a concerned psychologist's point of view, see Kelman, H. C. *A Time to Speak*, San Francisco, Jossey-Boss, 1968.

Christianity and Culture

II. Incarnation in a Culture



KENNETH L. PIKE

Summer Institute of Linguistics, Inc.

Dallas, Texas 75236

Jesus was incarnate in a human body; incarnate in a human mind; and *incarnate in a human specific culture*. His beard-cut undoubtedly followed the local custom. His robe was of local pattern. His weeping was in local good taste. He walked with sandals; ate no pork; discussed local philosophical chestnuts; grew up within a kinship structure; planed lumber; and chose to die like a local criminal accused by the establishment. His incarnation in body is discussed frequently; His incarnation in culture, seldom.

He was courteous by their cultural criteria. He followed—with rare exceptions—the grass-roots local rule system. And His speech was incarnate in a *local*, low prestige dialect—that of Galilee—not that of Jerusalem. And when Peter was accused of being one of “his crowd,” it was this local dialect which marked him off. I once wrote a little poem about it.

Thy Speech Betrayeth Thee

How can I tell who you are?
Every idle word
marks your track
with private scent.
Every vowel, every tone, every “R”
gives a trace of your origin
and your bent from afar.

Clues to cronies and your works
are wrapped up in accent chirps
Little Bird!
Don’t you try to fly—
just deny
and squawk and cry
(and be prepared to die
Little Bird).

Character will out
just as softly
and as loudly
as you shout
or pout.

Cultural Ideals Fulfilled in Christ

Every culture has ideals which are positive (not merely a conscience against the bad). And God, as I hear Him speak to us in the Word, is in sympathy with these ideals, supports them; and we know that ultimately He is the source of these good things, since “every good endowment and every perfect gift” (James 1:17 RSV) is from the Father of lights—whether it comes by way of a genetic endowment, or from a cultural one. Good hopes, good dreams of helpful life, good aims incarnate in a culture have this as their point of origin.

For this reason, therefore, we conclude that Christ can meet, on their own terms, the good ideals of every culture. He can fulfill these dreams first in Himself, incarnating them as fulfilled in Himself, and eventually He can help the good dreams to be incarnated in us and, then, in our resurrection bodies when we are conformed to His image. And meanwhile, he can show men of all cultures that it is possible to approach toward their own ideals better by His strength and by His will infused in them. He thus *fulfills* their need, their moral longing, rather than tossing away this genuine but incomplete moral knowledge.

The Christian as a Model

Their wistfulness to be good, according to criteria which are related to God’s absolute character, is involved in drawing men to him. As part of the process, men are supposed to see us, and wish to imitate us—and are supposed to find in us an early approximation of that character of God which they wistfully wish for in themselves. With Paul we must be able to say, as he

Presented at the Annual Meeting of the ASA in 1977. Some of this material was given in an earlier version to the Missionary Conference of the Moody Bible Institute, October 1-3, 1975.

This is the second of a three-part series on Christianity and culture.

said repeatedly (II Thess. 3:7, 3:9, Phil. 3:17, I Cor. 4:16), "imitate me," as I imitate Christ, except for that residual mess which still binds us all. "We are on the way," we must be able to say, "come along!" By this criterion, they must be able to want to follow—not in our academics, not in our politics, not in our role or jobs in society, but in our path toward being conformed to Him.

Cultural Blocks to a Message

This cannot be seen readily across some cultural barriers. The signs of character can be culturally misread unless there is cultural incarnation by us into their system; i.e. unless we translate our actions into patterns which they can understand. But here are two problems:

First, we are still sinners. People can see that. Fortunately, however, by-standers watching a stutterer can see in some mysterious fashion that the "real" message does not include the stutter part; and in a profession, plus an attempt with partial success, people can to some extent differentiate the moral stuttering from the effort and from the general direction, and start on the same narrow path.

Second, however, some cultural differences can temporarily block a message. Attempts at friendliness may appear as being too forward. Or cultural bits may trigger wrong understanding, or may block understanding. For example, in a simple instance where life or death but no moral issue was involved, I heard that two of my colleagues of the Summer Institute of Linguistics were walking at night in northern Australia, where there are deadly snakes. One of the aborigines suddenly shouted out a warning: "Jump east!"—but which was east? There they had no word—no translation directly—for "left" or "right," they went by the compass (though having no compass!). "Doctor," they would on occasion say, "my south ear hurts;" or "Take the north cookie, it is nicer." (The universe may be more stable this way I suppose—it does not "revolve" with us when we turn! But for those of us who have not been taught directions this way by our culture, their warning may be missed.)

More puzzling was the reaction of Chief Tarii (whom I have mentioned before) when two S.I.L. women first were introduced to him. He thought that they "laughed in his face" and "tried to throw him to the ground." (Dangerous practices when dealing with a man used to taking heads!) Why? Cultural miscues, undoubtedly. My hunch: the women had been taught that they should be *friendly* to people in Latin America, to smile and to shake hands. But this was a jungle Indian culture, not Latin. And in some Indian areas a greeting may include a bow plus the lightest of touching of the hands—where a "warm handshake" involving unexpectedly heavy pumping could threaten to throw one off balance—either physically or socially. Furthermore, the kind of smile which is appropriate may be culturally conditioned. In Australia, for example, when greeting someone the lips often remain closed at the sides, and the cheeks crease close to the lips; when I have pointed out to Australian women that I could often guess whether pictures for ads in the magazines were taken there or in the U.S.A., because of the broad smile on the face of the American women, they replied: "Yes, it looks like a toothpaste advertisement." If such

There are universals of kindness and of courtesy which need translation—incarnation—into (emically patterned) cultural molds.

had been the case with Ta'iri when meeting the two friendly, smiling North American girls for the first time, he could have taken a "friendly smile" for a guffaw at his expense. Messages to be quickly and easily effective, then, must be culturally incarnate.

Universals of the Good Neighbor

Fortunately, there is something universal about friendship, something genetically transmitted which is deeper than culture, something which underlies kindly human relations in all cultures. And the evidences of individual kindness gradually filter across cultural and language barriers. Kindness is a universally recognized quality, given time; a kindly person speaking the language badly will eventually communicate more of the love of God than a harsh person who has the proper consonants. But just as in Part I we pointed out that there are universals of conscience which have variable manifestations, so here there are universals of kindness and of courtesy which need translation—incarnation—into (emically patterned) cultural molds.

By the parable of the good Samaritan (Luke 10:25-37) Jesus captured such a generalization about the universality of kindness. Philosophical argument could dispute definitions of it; His parable incarnated it in an irrefutable situation. This was a function of His parables; they forced attention to the incarnation of principles, where perception of their force could not be interrupted by sophisticated verbal blockade. The good neighbor is also the kind that a man wants to have when he himself must leave home, and wants someone near there who will take care of his wife, his children, and his riches. He wants that man to be honest. Yet I have seen the wish fail. My chief translation helper of the Mixtec New Testament, leaving home to work with me for a while, had some goods stolen by the close friend who was to watch them.

The Anti-Neighbor

Thus far I have been implying that in some sense there is a universal good neighbor, a universal ideal man (with etic variability around local emic structures). But one major difficulty with the suggestion must be met before we can feel at all comfortable with it, or use it as a basis for further encouragement as we seek to enter into other cultures. If we were to ask a person what he wants to be, he might answer in a way that suggests that he does not at all want to be kindly, or to be a good neighbor. It may be that he wants to *dominate* others. This is not the ideal neighbor—it is the ideal *tyrant*. And in a certain sense this is indeed the wish of all fallen men, i.e., of all of us. Even the disciples felt this way, and had to be taught that it was undesirable: "You know that the rulers of the Gentiles lord it over them, and their great men exercise authority over them. It shall not be so among you" (Matt. 20:25-26). Among the Gentiles, these kings are called

"benefactors" by the dominated ones (Luke 22:25). (How startled I was some years ago to land in Trujillo's capitol, only to be given an official pamphlet lauding him as "benefactor"—what an unexpected confirmation of human nature in literal terms!)

The Christian church is not exempt from such heady dreams. Diotrefes liked to "put himself first" (III John 9, 10), did not acknowledge the authority of John, and put men out of the church who did not follow his wish. But Paul taught us that to be like Christ we must not seek equality with Greatness (Phil. 2:6). And the urge for power through wealth, or status through position, or pride of place through role, or through dress, or high friendships, or smooth words, may trap us all, win or lose, succeed or fail. The particular individual emic structure of power-search may vary, but the underlying bad dream may persist.

How can we reconcile this (bad) desire for domination with the claim that there is a *good* ideal in all cultures? We must admit that there are clashing ideals: the clash between the ideal of the good neighbor versus the ideal of the man who for pride wants bigger farms at *someone else's* expense. My conviction: all men (with a few possible exceptions) have an underlying wistfulness to be good which may be deliberately overridden and ignored under the competing desire for dominance. (Even Judas, at the end, "repented and brought back the thirty pieces of silver . . . saying 'I have sinned'" (Matt. 27:3, 4).

Hidden Wistfulness Towards Goodness

I think of this hidden wistfulness, this ignored wish, as something like the green in the trees in Ann Arbor, before the maples have turned red. To turn the leaves red takes a chemical change. To turn them yellow, you have only to have the green chlorophyll decay; then the yellow which was *already* there becomes visible. I think that the moral structure is perhaps something like that. I have been told that a dying man, knowing he is dying, who confesses to a crime, is almost certainly telling the truth about it. Why? My hunch is that his wistfulness to be good had been overridden by the lust for safety and power. This wistfulness to be *decent* to his friends—rather than letting them be in jail for his crime is overwhelmed by the "chlorophyll of power madness." But when the power madness cannot work, when he is dying, and can no longer hope for power or find gain in safety, when he can no longer be put into jail, the wistfulness to be good shows up, and he may confess to that which has damaged his friend.

Christ as Competitive with Contrastive Cultural Ideals

But we return now to the claim that Jesus can compete with and best any man with his own weapons. This applies whether it relates to competition towards dominance, or competition towards meeting ideals of neighborliness. If it is via dominance that one wishes to issue a challenge, one can hear the message to Sena-charib: "The virgin daughter of Zion—she wags her head behind you . . . whom you have mocked . . . have you not heard, that I determined it long ago . . . I will put my hook in your nose, and my bridle in your mouth, and I will turn you back on the way by which you came" (II Kings 19:20-22); here we see that God

refuses to allow evil forces, in the long run, to win by dominating tactics. If the social ideal is meekness or pacifism, however, Jesus shows through competitively as the meek one who "opened not his mouth" (Isa. 53:7) in threatening, under the killing attack. Societies differ in their degree of aggressiveness or meekness. But in each instance, in some sense Christ is The Competing One relative to the good-neighbor ideals of that culture or to their negative dominating "anti" ideals.

This holds, whether it refers to small ethnic communities, or to very large ones. Thus, Ruth Benedict a generation or more ago (in *Patterns of Culture*, [1934] 1946 Pelican Books, New York), emphasized that the Zuni "value sobriety and inoffensiveness above all other virtues" (54), so that the fact "that white parents use [whipping] in punishment is a matter for unending amazement" to them (63); and "The ideal man in Zuni is a person of dignity and affability who has never tried to lead," and "Even in contests of skill like their foot races, if a man wins habitually he is debarred from running" (90).

On the other hand, on the northwest coast of America, where the "potlatch" or give-away is standard practice, the "object of all Kwakiutl enterprise was to show oneself superior to one's rivals. . . . It found expression in uncensored self-glorification and ridicule of all comers" (175); their "picture of the ideal man" (185) was in terms of contests to shame rivals, e.g., by giving away more property in conspicuous waste (174) but with controls against overdoing, lest one impoverish one's folks, (which was "phrased as a moral tabu" (180)), or by murder of the owner of prerogatives, taking "his name, his dances, and his crests" (194); but this kind of rivalry "is notoriously wasteful. . . . It is a tyranny . . . it can never be satisfied" (228). A hymn "of self-glorification" (177) could be extensive (e.g. 175-77), naming one's names:

. . . I am Yaqatlenlis, I am Cloudy, and also Sweid; I am great Only One, and . . . I am Great Inviter. . . . Therefore I feel like laughing at what the lower chiefs say, for they try in vain to down me by talking against my name . . . (176).

And in such a culture as the Kwakiutl we seem to have institutionalized the "anti-ideal-neighbor" of Matt. 20: 25-28, to whom, in competition, Jesus might refer to himself as the "Ancient of Days" on His throne (Dan. 7:13), not a mere upstart. (There can be seen a good component here, of a "tax" which in part distributes or equalizes wealth, but it is the pride component that I have focused on.) However, the One with the "name which is above every name" (Phil. 2:9) prefers to meet this competition by refusing to "count equality with God a thing to be grasped" (Phil. 2:6) and, in a curious "wrestling reversal", to win by taking the form of a servant. He can show Himself as potentially incarnate in all such cultures; and can in that sense (if we allow it) work through our personality development to show potential or actual incarnation of fulfillment of these goals. We in our turn should be living patterns of success in character structure, pointing to the possibility-in-embryo of reaching ideals that others have longed for but find themselves unable to reach by themselves. Here the wistfulness to follow us should be a pointer to following the Lord.

Just a year ago and in a larger cultural setting Josif Ton (in "The Socialist Quest for the New Man," *Christianity Today* 20, No. 3, 6-9, Mar. 26, 1976) helped us to appreciate the underlying ideal man of Marxist thought: the concept of the "New Man" (7a) as introduced for the future "Communist society which would be established as a result of the revolution" (7a); they thought that "since a man is only the product of his environment, one needs only to create a social system founded on justice and honor to produce a man of noble character, an honest, upright man" (7b); they had a "sincere, incensed desire to rid the working masses of exploitation" (7a). But "There are indications Lenin realized shortly after the revolution that his hope in the spontaneous appearance of the new man in socialism was not being fulfilled . . . corruption and dishonesty in the socialist administration became a serious deficiency" (7b). As one Party secretary, a teacher, told Ton: "I am sent in to teach them to be noble and honorable . . . to the point of self-sacrifice . . . [to] tell only the truth, and live a morally pure life. But they lack motivation for goodness" (8a). And the initiators of the movement felt that at the start, the revolution for its actions required "a desperate man, a bitter man without any hope in an after life, . . . without scruples, one who 'knew' that God does not exist to punish (or reward him)" (6b-7a). Then, the changed economic, political, social environment was supposed to produce the new man, with new character, automatically—but some current Marxists now see clearly "that socialist man's character has not changed. He has remained [in general—not for all] as he was in the capitalist society: an egoist, full of vice, and devoid of uprightness" (7a). But as for people like Ton, "God chose us to follow him from *within socialism*. . . . The divine task of the evangelical Christian living in a socialist country is to lead such a correct and beautiful life that he both demonstrates and convinces this society that he is the new man which socialism seeks" (9b).

And so, once more, we see that part of God's plan is for a kind of cultural incarnation by us into a culture where *at* some phase—not all of it—the good-neighbor ideal is wistfully known, even when over-colored by the "chlorophyll" of the power wish.

Incarnation in Language

Now we return to incarnation into a local language, as Jesus used the dialect of Galilee. Jesus emptied Himself of the range of communication accessible to the *Word* itself. Presumably, He babbled as a babe, such that "increasing in favor" (Luke 2:52) with His parents would have been in part through their delight at His language growth. He learned more than just sounds: He adopted a *system* of sounds—an emic system, with contrasts of kinds of consonants, a limited set of vowels in syllabic patterns. He learned a grammatical structure, and the patterns of story telling normal to that culture. He learned the vocabulary, organized into a system of taxonomic structural fields specific to that culture. All of these patterns are human—in one sense in part "man-made"—in that each culture may change, add, or drop words in accordance with its immediate interests. Each culture has a vocabulary sufficient, I think, to talk of anything which interested

Unconscious cultural arrogance is perhaps often expressed more directly through one's disinterest in another's language than through any other cultural expression.

its grandparents—and gaps in vocabulary are temporary, filled in by invention within the culture (as for *kodak*), or by borrowing (as for *chocolate* from Spanish in turn borrowed from Aztec.) And this freedom, I feel, is one which is God-designed, God-blessed, from way back when God told Adam to name the animals—and from there on *He* "played the game" by *man's* rules: "and [God] brought [the animals] to the man to see what he would call them; and whatever the man called every living creature, that was its name" (Gen. 2:19). That is, God, from the beginning, not only *allowed* man to develop his emic taxonomic language structure, but *Himself chose to work within man's emic language system in His relation to man*. That is, the incarnation of thought into man's language is not new to God; the need for it in the bodily incarnation of Christ did not catch heaven by surprise. It was part of the *original package*. And now *He calls on us in turn to speak the language of the people we wish to help*, insofar as in us lies. It is efficient, friendly; and it contributes to the *dignity of man as individual man*. Refusal to do so, when one *could* have done so (granted that one could not fault a person for simultaneously learning—say—ten languages in his immediate environment such as in a boarding school for various tribesmen) is an affront to that person's worth, as he may react to him.

Unconscious cultural arrogance is perhaps often expressed more directly through one's disinterest in another's language than through any other cultural expression. All the burden of intellectual effort to cross the communication barrier is loaded without consideration onto those who *appear* "inferior" as they struggle with the load to cross that barrier. Kindness to one's neighbor would take *that* burden on one's self and let the neighbor have the advantage of freedom of expression, while we (who because of cultural history, which is none of our doing, otherwise pride ourselves on presumed competence or cultural superiority) even out the load of communication from large to small culture.

But what are some of these cultural patterns of language, known to the linguist, but less known to others? What kind of range of emic structures is available currently to man, and clamoring for our effort to try to enter into them?

In pronunciation, those of us from an English environment find "tones" hard to speak, and even harder to analyze into emic systems; I myself put many years into this effort, in analysis first, and in teaching others to do the same kind of thing, second.

In the grammar of the inside of words, suffix sets may be very different from those we are accustomed to.

In the syntax of stories, the order in which the story must be told (in many of the languages of the island of New Guinea, for example), may be controlled by time sequence much more than in English, so that the *telling*

order and the *happening* order must in general be kept the same. The result: one cannot say *John ate his supper after he came home*; but must say: *John came home, then ate his supper*. It may be difficult or impossible to find in such a language words to translate easily *after, before—or if, while, but, because, since, therefore*; and the translated order may need to conform more closely to the original happening order of the story than to the order in which the story was told.

Illustrations of such problems—and many more—can

be found in the new text by me and Evelyn G. Pike (*Grammatical Analysis*, Summer Institute of Linguistics Publication in Linguistics No. 53, 1977). Here, however, I am not trying to show this detail, but to emphasize one point: It is the will of God, demonstrated in language at creation and at the birth of Christ into a specific language area, that we should follow the local patterns of communication, finding the emic structure of individuals or cultures, insofar as it is cross-culturally or morally appropriate.

Meditation: A Requirement



HELEN E. MARTIN

Unionville High School

Unionville, Pennsylvania 19390

A summary is given of some of the important studies investigating the reported physiological and psychological benefits of four types of secular meditation including Zen, Yoga, TM and the Relaxation Response. These are then discussed with respect to biblical principles and the command, purpose, content and values of biblical meditation are presented.

In recent days we have been hearing much about the benefits of meditation. It has been credited with reducing blood pressure, relieving inner tensions, reducing drug abuse, and improving the general well-being and health of the populace. Meditation is a term frequently used in Scripture to refer to a particular obedience to a command of God. With these considerations in mind, several areas for study present themselves:

1. The types of meditation studied by the scientific community and their reputed benefits.
2. The research performed by the scientific community verifying the benefits of the meditative technique.
3. The pitfalls the child of God might fall prey to while engaging in secular meditation.
4. The purpose of scriptural meditation.
5. The content of scriptural meditation.
6. The values of scriptural meditation.

Types of Meditation and Reputed Benefits

The most popular concept evoked by the term "meditation" is that of Transcendental Meditation (TM). Forem¹ reports that it "requires no discipline or control, nor is it emotionally demanding." Also, he states that it is not a philosophy or a religion but a technique and the Maharishi, the popularizer of this modern yogic technique, claims that its success lies in the fact that "it utilizes the powerful natural tendency of the mind to move always in the direction of greater happiness." It is claimed that if TM were accepted on a wide scale, it could "render suffering obsolete in this generation." Wallace, one of the first to study the claims of TM and who is presently serving as president of Maharishi International University in Iowa, reported that practitioners of TM had fewer colds, headaches, allergic reactions, exhibited improvement in hypertension, overweight, acne, asthma, ulcers, insomnia, mul-

tiple sclerosis and mental health. Francis G. Driscoll,² superintendent of schools in East Chester, New York, instituted a course in TM in the secondary schools. He was of the impression that it involved "no religious or philosophic conflict." He reported that students who began the practice of TM saw grades improve, relationships with family, teachers, and peers improve and drug abuse disappear.

In 1972 the House of Representatives of the State of Illinois was the first major legislative body in the United States to officially recognize the value of TM. According to James R. Greenfield,³ writing on the value of TM in the publication of the Philadelphia Bar Association, four United States Senators have endorsed TM in the *Congressional Record*, including Senators Tunney, Stevenson, Gravel and Schweiker. In the article, lawyers are urged to begin TM to become more alert.

According to the Stanford Research Institute, the number of TM practitioners has increased from a few hundred in 1965 to more than 240,000 in June 1973. The National Institute of Mental Health awarded an initial grant of \$21,540 to help train 120 secondary school teachers to teach TM in American high schools. Thus TM has become a very popular and well publicized technique making a wide variety of claims.

As TM began to be studied the results of the studies were compared with studies of Zen and more traditional Yoga practitioners. These studies were compared by Herbert Benson of Harvard Medical School who began to document the studies of Wallace and expand upon them. He developed a thesis that these were just ways to elicit a hypometabolic response which he termed the Relaxation Response. In his best-selling book, *The Relaxation Response*, he summarizes and carefully documents all of his studies and suggests that TM, Yoga and Zen are examples of what men and women have known throughout the ages. The repetition of the rosary by the Catholic, the repetition of the mantra by the TM practitioner, the concentration on an allogical problem termed the Koan by the Zen and even the prayer of any believer are basically the same in effect; they each elicit a relaxation response within the individual. This response is of great physiological benefit and can be elicited in a nonreligious way by meditating on any word one might choose for approximately 20 minutes twice a day.

Most of the scientific research that has been performed has been limited to basically four types of meditation, namely: Yoga, Zen, TM and the Relaxation Response. Yoga consists of meditation practices and physical techniques in a quiet environment. The goal is to achieve "union with the absolute" by meditation. Later the altered state of consciousness was sought by physical methods. Zen, developed from Yoga, is very similar to it and is associated with the Buddhist religion. In Zen meditation the subject is said to achieve a "controlled psychophysiological decrease of the cerebral excitatory state" by a crossed-leg posture, closed eyes, regulation of respiration, and concentration on the Koan (an allogical problem—e.g., What is the sound of one hand clapping?)⁴

TM is a widely practiced form of Yoga based on the Hindu religion. TM has been more widely tested than Yoga or Zen because of the uniformity of training of the practitioners and the good availability of subjects

There exists a level of consciousness into which one can remove himself for brief periods of time, which provides physiological and psychological benefits.

in the parts of the world where advanced experimental facilities are also available. The practice of TM involves thinking on a specific sound called a "mantra", purportedly a meaningless Sanscrit word of known beneficial effects.⁵ The mantra is chosen for each individual at the time of instruction. The subject does not know the meaning of his own mantra. According to the Maharishi's followers, only a TM instructor is trained to pick out the correct mantra for an individual and the would-be meditator should be checked periodically to ascertain that he is meditating correctly. There are several introductory lectures, a personal interview, a fee of \$125 and then four consecutive days of training. At some point the subject is required to bring a white handkerchief, some sweet fruit and some freshly cut flowers as an offering to the lectures which are conducted partially in Sanscrit.

Benson⁴ has distilled the similarities of these and other devices toward mysticism into four elements, namely:

(1) A mental device—there should be a constant stimulus—e.g., a word, or phrase repeated silently or audibly, or fixed gazing at an object. The purpose of these procedures is to shift from logical, externally-oriented thought.

(2) A passive attitude.

(3) Decreased muscle tonus.

(4) A quiet environment.

He believes that it is a wakeful, hypometabolic state. These aspects could lead to sleep so he postulates that over the centuries extreme positions of posture and kneeling became means to prevent the practitioner from falling asleep. He further suggests that any simple word can be used to elicit the response and that the Relaxation Response could be used twice a day for not longer than twenty minutes to produce the same effects as TM, Zen, Yoga or any other means of eliciting the response. He warns that it should not be practiced within two hours after a meal since the digestive processes seem to interfere with the desired response. Also, he has observed the development of hallucinations and withdrawal from reality in subjects who practiced it more frequently than suggested.

Research on Meditation

Woolfolk⁶ has prepared quite a complete survey of the literature concerning the physiological effects of Zen, Yoga and TM. Also, Benson⁴ has completed a comparison of various methods of evoking the relaxation response. Woolfolk and Benson differ in their evaluation of the data. Woolfolk observes that most research has not yielded thoroughly consistent results. He further observes that most research tends to indicate that it is a wakeful state accompanied by cortical and autonomic arousal. He sees the greatest relation-

ship between data on Zen practitioners and TM practitioners.

Benson believes in the existence of a wakeful, hypometabolic state characterized by decreased oxygen consumption, decreased carbon dioxide elimination and a decreased respiratory rate. He has noted that the electroencephalogram shows increased slower alpha wave activity and occasional theta wave activity, an increase in the forearm blood flow, a decreased heart rate and muscle tension and an increase in skin resistance and blood lactate. The changes, he hypothesizes, "result from an integrated hypothalamic response leading to decreased sympathetic nervous system activity."

Kasamatsu⁷ studied the effects of Zen meditation on 48 priests and disciples. From his study of the EEG patterns he concluded that Zen meditation produced a specific change in consciousness. He observed a decrease in oxygen consumption to a level of 30% below normal levels and a decrease in metabolism which could not be explained by the decreased respiratory rate.

In investigating the physiological effects of four yogis who claimed to be able to control and stop their heart beat,⁸ one was found to slow his heart rate as he claimed while three others were not able to stop the beat but were able to retard it through meditation and muscle control. EEG recordings showed persistent alpha activity with increased amplitude and modulation. Datey⁹ used "Shavasana," a yogic exercise, to treat 47 patients with hypertension of various etiologies and noted a significant response in 52% of the cases treated. But as Benson¹⁰ noted, these results are difficult to evaluate because the method of blood pressure recording was not described. Patel¹¹ reports treating 20 patients with a yogic technique and observing statistically significant reductions in blood pressure and postulates that this is accomplished by a lower sympathetic tone which is maintained by an altered, habitual interaction with the environment. These subjects were additionally helped with biofeedback and in a twelve month follow-up, antihypertensive therapy was stopped altogether in five patients and reduced by 33-60% in seven others. One even benefited indirectly by relief of migraine and depression.

TM has been studied the most widely and completely of all the meditative techniques. Consistently, physiological changes have been observed by several investigators.^{12, 13} These changes include decreased oxygen consumption and respiratory rate, alpha and occasional theta wave activity in EEG recordings. Rieckert¹⁴ observed increased forearm blood circulation and decreased finger circulation. There is no observed decrease in blood pressure during the meditation period.

Stress has been associated with urban living conditions and with an increase in hypertension in studies of Puerto Rican populations, as noted by Benson¹⁵, and Zulu populations.¹⁶ Yet stress is difficult to quantify and thus its effects are difficult to study. TM claims to relieve stress and reduce hypertension. Benson¹⁷ reports a study of 30 hypertensive subjects whose systolic blood pressure decreased statistically significantly from 150.20 ± 18.9 mm of mercury to 142.1 ± 20.4 mm of mercury after three weeks of meditation, to 140.1 ± 22.9 mm of mercury after six weeks of meditation,

to 135.2 mm of mercury after nine weeks of TM. He also notes that four weeks later nine stopped the practice of TM and their blood pressures returned to control levels.

Pagano¹⁸ in his study of the EEG's of five TM practitioners noted that meditation involved some sleep and that it gives rise to quite different states from day to day and from practitioner to practitioner. He questions whether the benefits are due to TM or to sleep. This question is also raised by Michaels¹⁹ who studied concentration of plasma, epinephrine, norepinephrine as well as lactate. In comparing twelve TM meditators and twelve subjects as controls who merely rested, he detected no statistically different results. His study of these catecholamines resulted because of their possible connection with stress. Pitts and McClure²⁰ conducted a double blind experiment demonstrating the production of anxiety symptoms and anxiety attacks by the infusion of the lactate ion in fourteen patients with anxiety neuroses and ten controls. The lactate ion produced fewer anxiety symptoms in controls than in patients, but those experiencing some symptoms were statistically significant. Their theory has been questioned²¹ but seems to have been accepted by Michaels and Wallace and others, and blood lactate was reportedly lowered by Wallace et al.²² In his study of TM, Wallace had suggested that this lowering of lactate had produced the subjective feelings of relaxation akin to those following exercise yet without the fatigue of exercise.

In a study of the respiratory system during TM, Allison²³ notes that the rate of respiration during TM is about half that during a resting state. By measuring the temperature of inhaled and exhaled air with the help of two thermistors one cm in front of each nostril and one thermistor located one cm in front of the mouth and by comparing mean thermistor temperatures, he concluded that the respirations are shallow.

As noted in an editorial in *Lancet*²⁴, findings of Wallace and Benson indicate that oxygen consumption is of the same order of magnitude as happens after some hours of sleep but is produced promptly when TM is put into action.

Seaman²⁵ studied the effects of TM on self-actualization as measured by the Personal Orientation Inventory. He concluded that the practice of TM for a two month period had "a salutary influence on a subject's psychological state." The TM group scored significantly higher than the control group in "ability to express feelings in spontaneous action," "acceptance of aggression and capacity for intimate contact."

A report of a retrospective study by Benson²⁶ indicates that TM affects drug abuse. In this study 1950 subjects received questionnaires and 1080 men and 781 women responded. The number of drug users in all categories (including marijuana, LSD, alcohol, cigarettes and the like) decreased markedly after the start of TM so that after 21 months, most of the subjects had stopped completely. Benson goes on to warn that this was a retrospective study without controls and that a prospective study is needed to verify the conclusions. Yet there does seem to be some relationship between the practice of TM and the abuse of various kinds of drugs.

In yet another study Benson²⁷ tested the use of TM to treat migraine headache patients. These results suggested only limited usefulness. Six of the seventeen patients treated were considered improved and one was considered to be in a worse state than before the use of TM.

The Relaxation Response, or the non-religious meditation technique, consists of four elements including a mental device, a passive attitude, relaxed muscle tonus, and a quiet environment. It has been tested by Benson with some results similar to those shown in various TM studies. In a study with Beary, Benson²⁸ observed decreased oxygen consumption, carbon dioxide elimination and respiratory rate. In another study¹⁰ of 22 borderline, hypertensive subjects who used the Relaxation Response, the subjects averaged a control blood pressure of 146.5/94.6 mm of mercury and during the experimental period a blood pressure of 139.5/90.8 mm of mercury. Benson reports that this could have been a placebo effect, but regardless of the mechanism this suggests that TM is an effective means of lowering borderline hypertensive blood pressure. Benson³⁸ also demonstrated the efficiency of the Relaxation Response in the reduction of premature ventricular contractions (P.V.C.s) in ambulatory patients with proven stable ischaemic heart disease. Frequent P.V.C.s are associated with increased mortality in such patients. These beats reportedly decrease during sleep in patients with and without heart disease and it has been hypothesized that this is due to lessened sympathetic tone.²⁹

Encouraging the mind to be open, passive and boundless in an altered state of consciousness for definite periods of time each day is a disobedience to the Word of God.

Thus over and over again results seem to indicate some decreased sympathetic nervous system activity and possibly an increased parasympathetic nervous system activity and this in turn is related in some way to an integrated hypothalamic response.^{4, 30}

The results do not indicate that the subject is in a hypnotic state for metabolic processes during a hypnotic state correspond to those of the suggested state.³¹ Nor do most experimenters believe the state is one of sleep entirely. Benson¹⁵ points out that at the onset of TM there is a sudden decrease of 10-20% in oxygen consumption while in sleep it is more gradual, requiring four or five hours for an 8% decrease. Also, he notes EEG alpha waves found in meditation are not found in sleep and he notes a decrease in blood lactate which is not similar to sleeping patterns. He concludes that it is a hypothalamic response which is characterized by decreased sympathetic activity. Woolfolk's objection is that he is not as convinced of the mechanism and he suggests a shift to new techniques which would allow for the systematic isolation and investigation of technical

and extratechnical factors that are active in producing psychophysiological change.⁶

The Pitfalls

It seems then that investigators are beginning to admit that there exists a level of consciousness into which one can remove oneself for brief periods of time and that this level of consciousness provides physiological and psychological benefits, some of which are more well documented than others. But all four methods for entering this level of consciousness provide serious problems for the Christian.

The Christian is a sinner who has been regenerated by God's mercy and who believes the Bible to be the only inspired and infallible word of God to man. He is not perfect in this life, yet he endeavors by God's grace to live a life pleasing to God as defined by the Scriptures. Thus, each activity of his must be evaluated in the light of the Word of God.

Of the four methods described in this paper and studied by the scientific community, two are directly and obviously in opposition to the declared Word of God. Zen and Yoga are forms of Buddhism and Hinduism respectively and thus to practice either form for physiological benefit is a direct violation of the first and second commandments as defined in Exodus 20, namely, "Thou shalt have no other gods" and "Thou shalt not make unto thee any graven image." Both Hinduism and Buddhism are polytheistic and must not be practiced by the Christian.

TM is a bit more subtle in its presentation to the enlightened, educated individual in today's society. It claims to be unrelated to any religious belief and prospective converts are told that they may continue in their present beliefs and still practice TM. But TM is a yogic technique and is derived from the Hindu religion.³² Practitioners are required to bring the handkerchief, fruit and flowers and are repeating words they do not understand. Thus to involve oneself in the practice of TM is to deliberately disobey the first and second commandments. Not only are offerings made but the goal of TM, as it is with Yoga and Zen, is to achieve "union with the absolute."³³ In endeavoring to accomplish this the practitioner is denying the distinction between the creature and the Creator. The belief that man has a tendency to move always in the direction of greater happiness denies the Christian's belief that because of sin, man is totally depraved. The Maharishi also states, "Life is not a struggle. It is bliss." This is a direct contradiction to Romans 7. A federal lawsuit was filed in New Jersey to halt the teaching of TM in public high schools under a federal grant. The basis for the suit was the separation of church and state. On October 19, 1977, a federal judge declared that TM was religious in nature and was constitutionally barred from public schools.

Thus, the only remaining technique to be evaluated is the Relaxation Response. What must be considered is not only the apparently beneficial results but the method used to obtain the state of better health. An individual is not merely relaxing but is entering an altered state of consciousness by maintaining a passive attitude and using some mental or visual device to keep his mind in this frame. The child of God is clearly instructed in Philippians 4 concerning the boundaries

he is to draw around his thought processes. He is commanded to think on things which are true, honest, just, pure, lovely, things of good report, virtuous things, and things worthy of praise. He is promised in verse 9 that if he will carefully select and restrict his thoughts, the God of peace will be with him and (in verse 7) that the peace of God will keep him, his heart and his mind. Isaiah 26:3 also promises peace if the mind is kept on God. Therefore, encouraging the mind to be open, passive and boundless in an altered state of consciousness for definite periods of time each day is a disobedience to the Word of God.

However, if truly secular and sinful endeavors produce some mechanism which in turn produces favorable physiological changes, there must be a Scriptural counterpart. The only logical correlate to secular meditation is meditation in the biblical sense of the word, which, however, is entirely different from any of the aforementioned activities in object, in method and in goal.

The Purpose of Biblical Meditation

Meditation is a practice commanded by God in Scripture. Isaac meditated, and when the law was recorded in Deuteronomy, it was also commanded that believers meditate. (Deuteronomy 6:6, 7) In Joshua 1:8 the word meditate is preceded by the two words "thou shalt" and Psalm 119 deals almost entirely with meditation. Thus, Scripture commands and assumes that the child of God will meditate.

The purpose of meditation defined in Scripture is that of obedience to God and His Word. If one loves his Creator, he endeavors in all his imperfections to be obedient as the book of James states so clearly. Thus in order to be obedient, one must meditate; in this way he will begin to delight in the Word so that he will not sin against God. (Psalm 119:10) The godly man described in Psalm 1 delights in the law "and in his law doth he meditate day and night. . . . The ungodly are not so."

The actions of the child of God are qualitatively different from those of the wicked. (II Corinthians 5:17, Romans 8:10). The goal of the Christian is obedience; thus, the Word becomes so much a part of him that he will recognize sin and be kept from it. Hence, the object of the meditation is not a meaningless word or an allogical problem but the Holy Word of God.

The Content of Biblical Meditation

Charles Bridges in his exposition of Psalm 119 quotes Bishop Horn's definition of meditation and states it

is that exercise of mind, whereby it recalls a known truth, as some kinds of creatures do their food, to be ruminated upon, until the nutritious parts are extracted, and fitted for the purposes of life.³⁴

Thomas Manton, a seventeenth century Puritan expositor, states that

meditation is not a flourishing of the wit, that we may please the fancy by playing with divine truths . . . , but a serious inculcation of them upon the heart, that we may urge it to practice.³⁵

Meditation, as the Bible defines it, is solely on the Word of God and under the tutorship of God. The mind is not blank nor is the mind at rest, for it is working out a thorough and complete understanding of the Word of God so that the Word will become part of the person, so that the person will be obedient to God. It is a diligent, careful analysis of the thought expressed by the Word.

From the foregoing statements it might seem that meditation is a very arduous process and can be entered into only by hard work. For the natural man, who is engulfed by his own sin, this is true and yet as this natural man is regenerated by God's grace, his desire is to be obedient and to please God. At first the process of biblical meditation may prove difficult, but as it is practiced the child of God begins to feel increasingly relaxed as he delights in God's law and meditates therein day and night. At times it is very difficult work, but if one loves his heavenly Father, delighting in Him and His Word becomes sheer pleasure and God's Word begins to draw boundaries around his thought processes even when he is not wrestling with the intent of a particular phrase of Scripture. Thus, obedience becomes a fruit of meditation.

The purpose of Christian meditation must always be that of love of God. If it becomes a desire to reduce blood pressure or to achieve a mystical experience, it is not Christian meditation but humanism.

The Values of Biblical Meditation

The values of meditation are explained in Psalm 1. The ungodly shall perish but the godly man, whose delight is in the Law of the Lord and who meditates therein day and night, is promised that whatsoever he does shall prosper. It is also interesting to note the other comment the psalmist makes concerning the ungodly in Psalm 1, for he is likened to the "chaff which the wind driveth away." He is one who is at the mercy of change and change produces stress which in turn has been related to hypertension and other diseases.^{15, 36} The godly are not like the chaff but have inner stability which is dependent upon the sovereign God, the Creator and Sustainer of the Universe (Hebrews 13:8, Luke 16:17).

Thomas Manton also notes that meditation

helpeth to prevent vain thoughts. The mind of man is restless and cannot lie idle; therefore it is good to employ it with good thoughts, and set it at work on holy things; for then there will be no time and heart for vanity.

David prayed that his meditations would be acceptable in the sight of God in Psalm 19.

However, there are several admonitions that the child of God must take very seriously. The purpose of medi-

tation must always be that of love to God. If it becomes a desire to reduce blood pressure or to achieve a mystical experience, it is not meditation but humanism. Also, there must be consistent dependence upon the Holy Spirit to retrieve to mind that truth which is needed. Christians should also be reminded to suit the truth to the occasion. (e.g., When overwhelmed by a sinful state, one should not meditate upon man's total depravity but upon Romans 8 that there is no condemnation to those in Christ.)³⁷ A man has some control over what thoughts he is involved in and his thoughts betray his concerns, affections and goals. The Christian is told to control his thoughts (II Corinthians 10:5).

Conclusion

Secular meditation, which makes a host of claims and is extremely popular, does in fact produce some sorts of apparently good physiological changes. Yet the Christian must evaluate not only the good results of an activity but the means by which those good results are attained. Every good and perfect gift comes from God (James 1:17), yet the problem of ungodly means producing healthier bodies arises. This apparent contradiction is noted in Scripture where it is stated that the just and the unjust benefit from the sunlight and the rain (Matthew 4:45), and Paul confronts the problem of unjust activities encouraging the goodness of God (Romans 5 and 6) by noting that "Where sin abounded grace did much more abound." He then asks the rhetorical question, "Shall we continue in sin that grace may abound?" and responds, "God forbid." The Bible clearly teaches that Christians are to lead holy lives and if any means to achieve better physical health result from activities of disobedience to the Word of God then the Christian cannot involve himself in those activities. The practice of Zen, Yoga and TM constitutes disobedience to the first and second commandments. In the cast of the Relaxation Response the mind is encouraged to enter into an altered consciousness and a boundless state of thought not permitted by Philipians 4.

God is the originator of all that is good and has defined the boundaries of the mental activities for His children. He has also commanded a particular mental discipline defined as biblical meditation and those involved in scientific investigations are aware that there exist sound biological reasons for many commandments such as those to ancient Israel concerning diet. Man, created in the image of God, was ordained to be like Him and through biblical meditation the child of God is not only obedient but also complete physiologically and psychologically.

ACKNOWLEDGMENT

The author wishes to thank Pastor James Hufstetler of Grand Rapids, Michigan, who through direct discussion and correspondence helped her to formalize her thinking in the area of biblical meditation.

REFERENCES

- 1J. Forem, *Transcendental Meditation* (E. P. Dutton and Co., Inc., New York, 1974).
- 2F. G. Driscoll, *Phi Delta Kappan* LIV, 236 (1972).
- 3J. R. Greenfield, *The Shingle* XXXIX, 67-80 (1976).
- 4H. Benson, F. J. Beary, and M. P. Carol, *Psychiatry* 37, 37-46 (1974).
- 5J. D. Mook, *A. D.* 1976 V, 16-20 (1976).
- 6R. L. Woolfolk, *Archives of General Psychiatry* 32, 1326 (1975).
- 7A. Kasamatsu and T. Harai, *Folia Psychiatrica et Neurologica Japonica* 20, 315-336 (1966).
- 8B. K. Arand, G. S. Chline, and B. Singh, *Electroencephalography and Clinical Neurophysiology* 13, 452-456. (1961).
- 9K. K. Datey, S. N. Deshmukh, C. P. Dalvi, and S. L. Vinekar, *Angiology* 20, 325-333 (1969).
- 10H. Benson, B. A. Rosner, B. R. Marzetta, and H. M. Klemchuk, *Journal of Chronic Diseases* 27, 163-169 (1974).
- 11C. H. Patel, *Lancet* i, 62-64 (1975).
- 12R. K. Wallace, H. Benson, and A. F. Wilson, *American Journal of Physiology* 221, 795-799 (1971).
- 13H. Benson, *Journal of the American Medical Association* 227, 807 (1974).
- 14H. Rieckert, *Arztliche Forschung* 21, 61 (1967).
- 15H. Benson, *The Relaxation Response*, William Morrow and Company, Inc. 1975.
- 16N. A. Scotch, *American Journal of Public Health and the Nation's Health* 53, 1205-1213 (1963).
- 17H. Benson, B. R. Marzetta, and B. A. Rosner, *Journal of Clinical Investigation* 52, 8a (1973).
- 18R. Pagano, R. MiRose, R. M. Stivers, and S. Warrenburg, *Science* 191, 308 (1976).
- 19R. R. Michaels, M. J. Huber, D. S. McCann, *Science* 192, 1242-1243 (1976).
- 20F. N. Pitts, Jr., J. N. McClure, Jr., *New England Journal of Medicine* 277, 1329-1336 (1967).
- 21H. J. Grosz and B. B. Farmer, *British Journal of Psychiatry* 120, 415-418 (1972).
- 22R. K. Wallace, H. Benson, A. F. Wilson, M. D. Garrett, *Federation Proceedings* 30, 376 (1971).
- 23J. Allison, *Lancet* i, 833-834 (1970).
- 24(editorial), *Lancet* i, 1058-1059 (1972).
- 25W. Seeman, S. Nidich, and T. Banta, *Journal of Counseling Psychology* 19, 184-187 (1972).
- 26Anonymous, *Journal of the American Medical Association* 219, 295-299 (1972).
- 27H. Benson, H. P. Kleinchuk, J. R. Braham, *Headache* 14, 49-52 (1974).
- 28J. F. Beary, H. Benson, *Psychosomatic Medicine* 36, 115-120 (1974).
- 29B. Lown, M. Tykocinski, A. Garfein, P. Brooks, *Circulation* 48, 691 (1973).
- 30S. M. Hilton, *British Medical Journal* 22, 243-248 (1966).
- 31H. Jana, *Journal of Applied Physiology* 20, 208-310 (1965).
- 32D. Haddon, *Christianity Today*, March 26, 1976, pp. 15-18; April 9, 1976, pp. 17-19.
- 33G. Lewis, *What Everyone Should Know About Transcendental Meditation* (Regal Books, Glendale, Calif. 1975).
- 34C. Bridges, *Psalm 119 An Exposition* (reprinted by Banner of Truth Trust, Edinburgh, Scotland, 1974).
- 35T. Manton, *The Complete Works of Thomas Manton, D.D.* 22 Vols. (reprinted by Maranatha Publications, 1975).
- 36A. Toffler, *Future Shock*, (Random House, New York, 1970).
- 37J. Hufstetler, "Meditation", A sermon delivered at the Reformed Baptist Family Conference, Harvey Cedars, New Jersey, June, 1975, and available in tape cassette from Trinity Pulpit, box 277, Essex Falls, New Jersey 07021.
- 38H. Benson, S. Alexander, C. Feldman, *Lancet* ii, 380-382 (1975).



ACCEPTANCE ADDRESS FOR THE TEMPLETON PRIZE 1978

THOMAS F. TORRANCE

Professor of Christian Dogmatics

Edinburgh University

England

"The objective of the Templeton Foundation Prize is to stimulate the knowledge and love of God on the part of mankind everywhere . . . there has been a long departure, at least in Western culture, from the last synthesis when religious knowledge and scientific knowledge were organically related. . . . The Templeton Foundation Prize serves to stimulate this quest for deeper understanding and pioneering breakthrough in religious knowledge by calling attention annually to the achievements that are being made in this area." (From "The Objectives," Program for the Sixth Presentation of The Templeton Foundation Prize for Progress in Religion at Guildhall, London, March 21, 1978.)

The donor of the Templeton prize is John M. Templeton, a member of the ASA since 1975, a graduate of Yale in economics and of Oxford in law. He holds honorary degrees from Beaver College and Wilson College. An elder in the United Presbyterian Church, Dr. Templeton lives in Nassau, Bahamas.

The Templeton Prize for 1978 was awarded to Professor Thomas F. Torrance, Professor of Christian Dogmatics at Edinburgh University. Professor Torrance is the author of Theological Science; Space, Time and Incarnation; and God and Rationality, all published by Oxford University Press; Eerdmans published a collection of his works in Space, Time and Resurrection. In August 1979, the University of Virginia Press in Charlottesville, Virginia 22903, will publish The Ground and Grammar of Theology. On October 16, 1978, Professor Torrance spoke at Princeton Theological Seminary on "Christian Theology in the Context of Scientific Revolution" and at a Forum sponsored by the American Scientific Affiliation and Oxford University Press.

In order to acquaint the readers of the Journal ASA with Professor Torrance, we reprint here his acceptance speech for the Templeton Prize.

Your Grace, Dr. and Mrs. Templeton, Eminent Judges of The Templeton Foundation, My Lords, Ladies and Gentlemen, I stand before you greatly honoured and humbled by the judgment which makes me the recipient this year of The Templeton Foundation Prize for Progress in Religion. No one engaged in thinking out the interrelations of theological science and natural science could be more encouraged than I am by this international recognition of what I have been trying to do, although I know that my work falls short of what it ought to be. But the award in the area of human inquiry into the relation of the creation to the Creator focuses the spotlight on the point where before the astonishing nature of the universe as it is revealed in scientific inquiry I am overwhelmed with awe and wonder of a profoundly religious kind in which



Professor Thomas F. Torrance accepting the Templeton Prize.

my prime thought is of praise and glory to God the Father Almighty, the Maker of heaven and earth and of all things visible and invisible.

When I look at the sky, which you have made,
at the moon and the stars, which you
set in their places—
what is man, that you think of him;
mere man, that you care for him? (Psalm 8:3, 4)

How often those words from the ancient Psalm of Israel have echoed in our thoughts as the incomprehensible immensity of the universe began to be disclosed to the inquiries of our astronomers! Vast as our solar system is, the sun is only one star among the 100 thousand million stars that make up our own galaxy which we call The Milky Way. The Milky Way is so

immense that light travelling at the rate of approximately 186,000 miles a second would take 100,000 years to pass from one end of it to the other. But the Milky Way is only one galaxy among at least 100 million similar systems of stars far beyond it. But what is also staggering is that this universe comprising all these galaxies, is expanding at the rate of more than 160,000 miles a second. What is man, mere man, in the face of this incomprehensible immensity, that God should think of him and care for him?

And now, as if in answer to that question, our astronomers have come up with something which to me is even more breath-taking in its implications: the narrow margin of possibility which all this allows for the rise of intelligent life anywhere in the universe. I refer here to the F. W. Angel Memorial Lecture delivered by Sir Bernard Lovell in Newfoundland in October 1977, in which he asked: Why is the universe expanding so near the critical rate to prevent its collapse? If the universe had begun to expand in the first few minutes after the explosion of its original incredibly dense state by a rate slower than it did by a minor difference it would have collapsed back again relatively quickly. But if the expansion of the universe had been different only by a tiny fraction one way or the other from its actual rate human existence would evidently have been impossible. 'But our *measurements*', Sir Bernard declared, 'narrowly define one such universe which had to be that particular universe if it was ever to be known and comprehended by an intelligent being.'

All this seems to say two things. First, this vast universe is the kind of universe it is because it is necessary for the existence of man: somehow man and the universe are profoundly bracketed together. Many years ago when Einstein first formulated the theory of general relativity Hermann Weyl pointed out that since all things, bodies in motion and space and time, are ultimately defined by reference to light, light occupies a unique metaphysical place in the universe. But now even from the way that astrophysical science is developing it appears that man occupies a unique metaphysical place in the universe. It is in this direction that science was pointed by Professor John Archibald Wheeler of Princeton in a lecture he gave in 1973 in commemoration of the 500th anniversary of the birth of Copernicus, which he entitled 'The Universe as Home for Man'. And it is much the same theme which Sir John Eccles has taken up recently in his Gifford Lectures in Edinburgh.

Secondly, the fact that the universe has expanded in such a way that the emergence of conscious mind in it is an essential property of the universe, must surely mean that we cannot give an adequate account of the universe in its astonishing structure and harmony without taking conscious mind into account, that it, without including conscious mind as an essential factor in our scientific equations. That is a point that Schrödinger made as long ago as 1958 in his Cambridge lectures on 'Mind and Matter', and which Sir John Eccles took up in his work 'Facing Reality' in 1970. If this is the case, as I believe it is, then natural science is on the verge of opening itself out towards higher levels of reality in a movement of wonder and awe in which our increasing awareness of the limitations of science—the theme of Sir Bernard Lovell's Presidential lecture to the British

Association for the Advance of Science in 1974—is matched by our awareness that as we probe into the intrinsic order of the universe we are in touch with a depth of intelligibility which reaches indefinitely beyond what our finite minds can comprehend. I cannot but recall here those sentences of Einstein in which he spoke of 'that humble attitude of mind towards the grandeur of reason incarnate in existence, and which, in its profoundest depths is inaccessible to man' (*Out of My Later Years*, p. 33), and of 'the rapturous amazement at the harmony of natural law, which reveals an intelligence of such superiority that, compared with it, all systematic thinking and acting of human beings is an utterly insignificant reflection' (*The World as I See It*, p. 28).

To all this theological science presents a complementary account, for this universe of space and time explored by natural science, far from being alien, is the universe in which God has planted us. He created the universe and endowed man with gifts of mind and understanding to investigate and interpret it. Just as he made life to reproduce itself, so he has made the universe with man as an essential constituent of it, in such a way that it can bring forth and articulate knowledge of itself. Our scientific knowledge of the universe as it unfolds its secrets to our human inquiries is itself part of the expanding universe. Regarded in this light the pursuit of natural science is one of the ways in which man, the child of God, pursues his distinctive function in the creation. That is how, for example, Francis Bacon at the outset of our modern scientific era understood the work of human science as a form of man's obedience to God. Science properly pursued in this way is a religious duty. Man as scientist can be spoken of as the priest of creation whose office it is to interpret the books of nature written by the finger of God, to unravel the universe in its marvellous patterns and symmetries, and to bring it all into orderly articulation in such a way that it fulfils its proper end as the vast theatre of glory in which the Creator is worshipped and hymned and praised by his creatures. Without man nature is dumb, but it is man's part to give it word, to be its mouth through which the whole universe gives voice to the glory and majesty of the living God.

Space and Time

This is the universe of space and time through which God has also revealed himself personally to man in historical dialogue with the human race, which has involved the establishment of communities of reciprocity in which his Word is intelligibly mediated to us and knowledge of God becomes communicable through Holy Scriptures. But since all this takes place within the created universe of space and time, and space and time are the bearers of all rational order within the universe, it is in and through this universe as its orderly connections are unfolded under man's scientific investigations that we are surely to develop and express our knowledge of God mediated through his Word. The natural scientist and the theologian are both at work within the same space-time structures of the universe and under the limits of their boundary conditions. The natural scientist inquires into the processes and patterns of nature, and man himself is a part of nature; and the theologian inquires of God the Creator of na-

ture and the source of its created rationalities, to which man also belongs. Thus theological science and natural science have their own proper and distinctive objectives to pursue, but their work inevitably overlaps, for both respect and operate through the same rational structures of space and time, while each develops special modes of investigation, rationality and verification in accordance with the nature and the direction of its distinctive field. But since each is the kind of thing it is as a human inquiry because of the profound correlation between human knowing and the space-time structures of the creation, each is in its depth akin to the other.

Regarded in this way natural science and theological science are not opponents but partners before God, in a service of God in which each may learn from the other how better to pursue its own distinctive function, how better to be natural science or how better to be theological science. This is a relationship which is not onesided but mutual, for natural science has actually learned far more from theological science than is generally realised. In a lecture I gave last July in New York to the International Institute of Theoretic Sciences I showed how three of the most basic ideas of modern natural science, which have come very much to the front since general relativity, go back to definite roots, and indeed derive from Christian sources in Alexandria as Greek theologians from the fourth to the sixth century thought out the relation between the Incarnation and the Creation and reconstructed the foundations of ancient science and culture. But let me give you today a different example, taken from James Clerk Maxwell, whose death a hundred years ago we commemorate this year. The distinctive idea which he used in developing his celebrated field theory which has had such a powerful impact on modern science, not least upon the thought of Einstein, Clerk Maxwell gained as a student in Edinburgh University not so much from his classes in physics but from Sir William Hamilton's lectures in metaphysics, an idea which had a theological as well as a philosophical root. It is cross-fertilisation of this kind which is to be found behind some of the most outstanding advances in human knowledge. But the great day for creative integration between apparently separate or opposing disciplines such as natural science and theological science, lies not behind us but ahead of us. This kind of dialogue and exchange in thought is now possible in a new and exciting way because of far-reaching change that has been going on in the foundations of knowledge in which both science and theology have been sharing in different ways.

Since it is this deepening co-ordination in understanding between natural science and theological science that I have tried to serve, and which the Templeton Foundation has so handsomely recognised, it may be of interest if I indicate briefly how I regard this change in scientific activity which makes such co-ordination possible.

Fundamental Principle

The fundamental principle that I have been concerned with is a very simple one, but its implications are deep and far-reaching when worked out consistently over the whole range of human knowledge. We know things in accordance with their natures, or what

they are in themselves; and so we let the nature of what we know determine for us the content and form of our knowledge. This is what happens in our ordinary everyday experiences and knowledge, when, for example, we treat trees in accordance with their nature as trees and not as rocks, or treat cows in accordance with their nature as cows and not as horses, or treat human beings in accordance with their nature as persons and not as things. Science in every field of our human experience is only the rigorous extension of that basic way of thinking and behaving. This is a way of understanding scientific activity which is much more appropriate to the complexity and richness of nature as it becomes disclosed to us through the great advances of the special sciences, than that to which we became accustomed within the compass of a mechanistic universe and its rigid instrumentalism. This is particularly evident in the field of biology where advance has been obstructed through reduction of organismic relations into mechanistic concepts. Nature must be respected and courted, not imposed upon. We must let it develop and flower, as it were, under our investigations if we are really to know something in accordance with what it is in itself, and not simply along the lines of its artificial reaction to our tormenting distortion of it. Science is not, therefore, something to be set against our ordinary and natural experience in the world, but on the contrary a development and a refinement of it, with a deeper penetration into the natural coherence and patterns already embedded in the real world and already governing our normal behaviour day by day.

All this applies as much in our relations with God as in our relations with nature or with one another. There is no secret way of knowing either in science or in theology, but only one basic way of knowing which naturally develops different modes of rationality in natural science and in theological science because the nature of what we seek to know in each is different—and that is a difference which we are rationally and scientifically obliged to respect. Thus it would be unscientific to transfer from one field to another the distinctive mode of rationality that develops within it. Just as it would be irrational to try to know a person by subjecting his physical existence to chemical analysis or to treat a chemical substance as though it were a human being and try to talk to it and listen to it, so it would be irrational to look for God through a telescope or treat him like a natural process, as irrational as it would be to use God as a stop-gap in the formation of some hypothesis to explain a set of physical connections in nature. In each field of inquiry, then, we must be faithful to what we seek to know, and act and think always in a relation of relentless fidelity to it. This is why we cannot oppose natural science and theological science as though they could or had to contradict one another, but rather regard them as applying the one basic way of knowing faithfully to their respective fields and seek to co-ordinate the knowledge they yield through the appropriate modes of inquiry and thought they develop.

Changes

In recent years the increasing fidelity of science to the nature of things has resulted in a number of changes which are proving to be highly significant for the

unification of knowledge in overcoming the split between the natural and the human sciences and between both and theological science. Let me refer to four of these changes.

1. Science has been leaving behind its abstractive character, in which through a predominantly observationalist approach it tended to tear the surface pattern of things away from its objective ground in reality, as though we could have no knowledge of things in themselves or in their internal relations but only in their appearances to us. That abstractive method involved the damaging bifurcation in nature with which the deep splits in our modern culture are associated. But now all that is being cut back, as in sheer faithfulness to things as they actually are in themselves science is concerned to understand the surface patterns of things in the light of the natural coherences in which they are actually embedded, and therefore operates with the indissoluble unity of form and being, or of theoretical and empirical elements in human knowledge. Here we have a reconciling force in the depths of scientific knowledge which cannot help but heal the breaches that have opened out in our culture. This is a reconciliation in which theological science can not only share but to which it can make a creative contribution.

2. The great era of merely analytical science is now coming to an end, for the new science, if I can call it that, starting from a unitary approach operates with an integration of form which transcends the limits of analytical methods and their disintegrating effects. Atomistic thinking is replaced by relational thinking—nowhere is that more true than in the development of high energy physics and particle theory, in which many of the so-called particles are not discrete particles but energy knots in the fields of force between the stronger particles. Here we have a model of onto-relational thinking with which Christian theology has long been familiar, out of which, for example, there came the concept of the person. But let us look at the change in another way. Merely analytical science has had great difficulty in coping with the problem of how to think together being an event or the geometrical and the dynamic aspects of nature, such as the particle and the field in light theory or position and momentum in quantum theory together. Although Einstein failed to develop a unified field theory which would transcend the divergent corpuscular and undulatory theories of light, he insisted that any real description of nature in its internal relations must involve the unity of the particle and the field, as indeed Faraday had already indicated in the last century. As I understand it this is the stage which high energy physics has now reached. But in Christian theology this stage had already been reached by Karl Barth 40 years ago when with herculean effort he brought together the ancient emphasis upon the being of God in his acts and the modern emphasis upon the acts of God in his being, and thus integrated in a remarkable way the whole history of Christian thought. It is integrative thinking of this kind, whether in natural or in theological science, that is bound to have the greatest effect in the future upon all our human knowledge.

3. One of the most startling developments in recent science is the success with which scientists like Katsir and Prigogine have wrestled with the problem of how

to relate the so-called random elements in nature to the laws of thermodynamics which as classically formulated hold only within closed systems. Katsir tragically lost his life in the Lodz airport massacre a few years ago, but Prigogine has recently been given the Nobel prize for work in which he has applied the laws of thermodynamics to open or non-equilibrium systems. It is difficult to grasp all that this means, but what does seem clear to me is that the old way of thinking in terms of the couplets chance and necessity, uncertainty and determinism must now be replaced by a new way of thinking in terms of spontaneity and open-structured order, for what is revealed to us is an astonishing spontaneity in nature which yields a dynamic kind of order with an indefinite range of intelligibility which cries out for completion beyond the universe to our natural scientific inquiries. Theologically speaking, what we are concerned with here is an understanding of the spontaneity and freedom of the created universe as grounded in the unlimited spontaneity and freedom of God the Creator. Here natural science and theological science bear closely upon one another at their boundary conditions, and what is needed is a more adequate doctrine of creation in which knowledge from both sides of those boundary conditions can be co-ordinated.

4. Science has been moving away from a flat understanding of nature to one that is characterised by a hierarchy of levels or dimensions. Science of this kind is concerned to discover the relations between things and events at different levels of complexity. It has the double task of penetrating into a new kind of connection and of lifting up the mind to a new level where we can apprehend and bring that new kind of connection to appropriate formulation. The universe is not flat but is a stratified structure, so that our science takes the form of an ascending hierarchy of relations of thought which are open upward in a deeper and deeper dimension of depth but which cannot be flattened downward by being reduced to connections all on the same level. The old-fashioned science that tried to reduce everything to hard causal connections in a rigidly mechanistic universe damaged the advance of knowledge in all the higher levels with which we are concerned in our culture, but that is now going and the new science gives ample room for the human sciences and the sciences of the spirit, and all sciences concerned with living connections, within the framework of an open-structured, dynamic universe in which the human person is not suffocated but can breathe freely transcendent air, and yet be profoundly concerned with scientific understanding of the whole complex of connections that make up our universe. No one has pioneered this way of heuristic thinking in science more than Michael Polanyi whose thought reveals an unrivalled subtlety and delicacy in showing how the different levels of human understanding are coordinated in such a semantic focus that meaning is brought back to our world with new force and direction, for here instead of fragmenting in disintegrating specialisations the whole enterprise of science recovers in depth and breadth an uplifting unitary outlook that begins to match the character of the universe itself, and indeed the relation of the universe to God its transcendent Creator and Sustainer.

It is more and more clear to me that, under the providence of God, owing to these changes in the very foundations of knowledge in which natural and theological science alike have been sharing, the damaging cultural splits between the sciences and the humanities and between both and theology are in process of being overcome, the destructive and divisive forces too

long rampant in world-wide human life and thought are being undermined, and that a massive new synthesis will emerge in which man, humbled and awed by the mysterious intelligibility of the universe which reaches far beyond his powers, will learn to fulfil his destined role as the servant of divine love and the priest of creation.

*Notes on "Science and the Whole Person"—
A Personal Integration of Scientific and Biblical Perspectives*

Part 10

Human Sexuality (A) Are Times A'changing?



RICHARD H. BUBE

Department of Materials Science and Engineering

Stanford University

Stanford, California 94305

Our previous discussion of the significance of being human contained one major omission: the simple fact that humanness is inextricably bound up with being male and female. Sexuality is one of the major characteristics of humanity, which, if not unique in form since it is shared also with other animals, comes to particular expression for human beings simply because they are human beings. Every life starts with a sexual act, every environment in which a child grows up either has the security and positive features of a family in which human sexuality is appreciated or it does not, development of personhood requires acceptance and understanding of one's own sexuality, and historical examples abound on the relationship between the social health of a society and its sexual practices and attitudes. Christians are often charged with being so concerned about personal sins like those involving sex that they are completely unconcerned about gross social sins like racial and sexual discrimination, and exploitation of the poor. Although a fair measure of this criticism may often be justified, to carry it too far is also a critical error. Sexual ethics may well not be the last word in Christian ethics, but it should probably be among "the top ten." Throughout the Bible we have the sexual relation between man and woman held up as an illustration of the relationship between God and His people; in the Old Testament idolatry is compared to whoredom, and in the New Testament the Church is described as the Bride of Christ. As we

seek for ways to describe the relationship between the Christian and his Lord, time and again we are driven back to the relationship between man and woman in marriage as the most appropriate metaphor available to us.

It is evident to all that a revolution in sexual ethics has taken place in our lifetimes—at least a revolution in comparison with recent generations. This is not to imply that in previous times people were sexually pure and today they are corrupt, but rather that the public acceptance of pornography, sex-as-advertising, and sex-as-fun without commitments is a modern phenomenon in our society. Our tolerances are constantly being stretched and our moorings are shifting so slowly and surely that we are hardly aware of the fact that our attitude toward sexual relationships is daily being eroded by our culture, the theater, the television, our literature, and the lives and examples of our relatives and friends.

Non-Christians have quite commonly advocated a more "liberalized" view toward sex. Dr. Albert Ellis,¹ starts with the thesis that all guilt feelings are illegitimate, and goes on to defend pre-marital sex and "civilized adultery," and to condemn "religious claptrap" and monogamous marriage. In group sex experiments, Dr. Ralph Yanev² reported to the California Medical Association that couples obtain "a greater sense of gratitude and self esteem" and that the relationship between couples is improved and made warmer and

closer when each views the other having sexual relationships with a third party. Such examples could be multiplied endlessly. It is not surprising that non-Christians, starting from presuppositions about the nature of the human being from nonbiblical inputs (and supported primarily by a humanistic evolutionism rather than any sound empirical data), should come to such conclusions.

The type of changes we see taking place today, however, cannot occur without having a profound effect on Christians' thinking as well. There is a general movement to reinterpret Christian attitudes toward human sexuality on every front so that they are brought more into line with "new perspectives" on human living. It is this kind of movement with which we are particularly concerned in this installment.

Biblical View of Sex

Sex is hardly a peripheral aspect of life, and sex is not a peripheral aspect of the biblical revelation. The biblical basis and development of the significance of human sexuality appears immediately in the first two chapters of the Bible. Genesis 1:27 teaches unmistakably that "mankind" is both male and female. The same chapters teach that sex existed before the Fall, that sex is therefore part of the good creation, and Genesis 3 indicates that sex, like every other aspect of life, was affected by the Fall. The greater and more blessed the gift of God in the context of His good creation, the baser and more destructive the abuse and perversion of this gift in the context of sinful human beings. Genesis 2:23-25 sets forth the nature of the sexual relationship between man and woman when uncorrupted by sin,

This at last is bone of my bones and flesh of my flesh; she shall be called Woman, because she was taken out of Man. Therefore a man leaves his father and his mother and cleaves to his wife, and they become one flesh.

Both man and woman are made in the image of God. Their total sexuality is defined in such a way that they complement each other in every aspect of life. Both are to help each other and to forsake all other human relationships at the same level at which they give themselves wholly to each other, so that as a new unity they can go forth together to serve God in the world.

Subjection and denigration of women as persons has called forth a deserved reaction in modern women's rights movements. As usually happens, however, the pendulum tends to swing too far. One symptom of this is the growing consideration of marriage as the affiliation between two individual persons who contract equally to meet each others needs. Commonly used

There is a general movement to reinterpret Christian attitudes toward human sexuality on every front so that they are brought more into line with "new perspectives" on human living.

wedding ceremonies warn about the dangers of living too closely together as one, and call for a careful preservation of individual rights within their looser marriage affiliation. It is, of course, possible to enter into a marriage relationship without seeking the unity of the marriage as the principal goal. The biblical model promises the greater marriage blessings, however, when the individual persons and rights of husband and wife are consciously and willingly subjected to the unity and joint rights of the married couple. This is another example of the large number of possibilities in which human beings can choose to live at a level less than that which is God's best.

The Ten Commandments, that summary of what it means to live humanly in the way intended by the Creator, are not silent on sex. The same commandments that Jesus said could be summarized as "Love the Lord your God with all your heart and soul and mind, and love your neighbor as yourself," also state "You shall not commit adultery," and "You shall not covet your neighbor's wife." It is not stretching the argument to claim that Jesus is saying that to love your neighbor *means* not to commit adultery and not to covet his wife.

In the New Testament we call attention to a few passages to which we refer in later discussion. In Matthew 19:3-6, Jesus refers back to the "one flesh" concept of Genesis 2, and adds, "So they are no longer two but one. What therefore God has joined together, let no man put asunder." In I Corinthians 6:16, Paul invokes the "one flesh" argument to show the complete impropriety of a Christian engaging in sexual relationships with a prostitute. After the general words concerning a Christian's walk in love in Ephesians 5:1-5, together with the acts and attitudes that are ruled out if one is truly in Christ, Paul goes on in verses 21-33 of the same chapter to set forth one of the most exalted views of the creation-intended character of human marriage: to be representative of the relationship between Christ and His Church.³

Arguments for a Revision of Sexual Mores

Three main arguments are advanced by advocates of a sexual revolution who claim Christian support for their position. They may be summarized briefly as follows:

1. Modern scientific understanding and changes in living styles make traditional (non-scientific, pre-modern) approaches to sexual ethics untenable for the Christian today.
2. Biblical teachings on sex are either unclear and/or not applicable to modern life.
3. The authentic application of the Gospel to modern life calls for a response dictated by Love, not by Law, and hence for radical changes where Love overrules Law in the modern situation.

This continuing series of articles is based on courses given at Stanford University, Fuller Theological Seminary, Regent College, Menlo Park Presbyterian Church and Foothill Covenant Church. Previous articles were published as follows. 1. "Science Isn't Everything," March (1976), pp. 33-37. 2. "Science Isn't Nothing," June (1976), pp. 82-87. 3. "The Philosophy and Practice of Science," September (1976), pp. 127-132. 4. "Pseudo-Science and Pseudo-Theology. (A) Cult and Occult" March (1977), pp. 22-28. 5. "Pseudo-Science and Pseudo-Theology. (B) Scientific Theology," September (1977), pp. 124-129. 6. "Pseudo-Science and Pseudo-Theology. (C) Cosmic Consciousness," December (1977), pp. 165-174. 7. "Man Come of Age?" June (1978), pp. 81-87. 8. "Ethical Guidelines," September (1978), pp. 134-141. 9. "The Significance of Being Human," March (1979), pp. 37-43.

Basic to all these arguments is the conviction that empirically valid data describing life in the world today have been scientifically obtained, and that these data demand changes in sexual ethics if we are to be responsive to the way things really are and to the goals of Christian living. Whether or not such data really exist should be the subject for objective analysis. Christians should not fall victim to the common syndrome of accepting "scientific authority" without question.

Most discussions of these "scientifically valid data" are stated in quite general terms. For example, the church's preoccupation with "technical virginity" is criticized because.

there is little medical or psychological evidence that pre-marital coital experience between persons who subsequently marry is necessarily damaging either to their emotional health or to their personal adjustment.⁴

It is difficult to evaluate "little . . . evidence," and even more difficult to evaluate the conditions under which it was obtained. How does one test the overall psychological effect of pre-marital intercourse on a future life? Can one measure scientifically what that same life would have been like without this experience? Can one tell whether the particular individual has been forced to settle for third, fifth or tenth best in life, rather than the best and most fulfilling relationship? Do astronomically increasing divorce rates in a sexually permissive society say nothing of empirical significance to judge whether these practices damage "emotional health" or "personal adjustment"?

Note also the hedge words in this particular quotation: "little," "persons who subsequently marry," (but this same result will certainly be used to justify all pre-marital intercourse), "necessarily." If it is not "necessarily damaging," does that mean it is permissible? Of even more crucial significance is the almost universal ignoring in "scientific data" of this type of the spiritual dimensions of the lives involved; should we expect to find the same dimensions of human experience between two non-Christians as between two Christians? To pose such a question is to risk being labelled a bigot or a medievalist—but to ignore it is to deny *a priori* the significance of the Christian claims. What might be a totally destructive practice if carried on by two persons who have committed their lives to God in Christ, might be of only transient importance in the lives of two persons with no relationship with God, whose primary concern might be the satisfaction of their own rights and needs. Human beings can be so scarred and insensitive as to lower themselves to live sexually like many animals for whom fornication, adultery and marriage do not exist.

Again, it is suggested that the biblical concept of "one flesh"—the central concept of the unity of marriage—is not useful any longer because

Modern psychology makes it difficult to accept the "one flesh" concept at least as it was construed by Paul and by many others in the Christian tradition until recent times.⁵

Modern human beings (always assumed to be so different from their ancestors) must be recognized, it is argued, as constituting essentially a "new species" in view of the possibilities of completely controlled con-

ception, personality influencing drugs, the problem of extra leisure time, an increase in the frequency of male/female contacts, the high public level of sexual stimulation, the vanishing of the family as a reference group, the inclusion of explicit sex language in our culture, and the advertising of sex as fun without reference to marriage.⁶ So unique is our modern situation that we can no longer believe that it is the best practice to limit sexual relations between a married couple only:

The data are from history and modern sociology, and from conversations with half a dozen persons with some theologically informed self-awareness who have been part of a co-marital relationship. . . . The flat assertion that no man can have good deep relationships including sexual intercourse with more than one woman at a time is patent idiocy.⁷

This same pursuit of empirical data reports that such data "on studying the entire gamut of reported practice in which husbands and wives, by mutual agreement, are both involved in sexual relations with other partners"⁸ indicates positive benefits:

The reports on the experience are so favorable—including a great deal of unanimity on the improvement of the marriage as a result of such experience . . . a new and real warmth of gratitude toward the spouse . . . an actualization of freedom.⁹

Finally, scientific experimentation on these matters is held up as our only guide if we are to avoid simple subjective responses in the future:

Only from experimental data can we learn how various patterns of sexual behavior . . . fit the requirements of living as followers of Christ in our own day and situation. . . . We have no doubt that individual Christians and groups can be found to volunteer to try controlled experimental patterns of all kinds.¹⁰

The difficulty of carrying out authentic scientific investigations to establish cause and effect in the area of personal relationships is well known. How does one choose a control group for comparison, and how does one choose the experimental group itself without prejudging and predetermining the outcome of the investigation? We have all too often seen supposed scientific findings in psychology or sociology advanced as the last word—only to be overturned in a few years when the next wave of enthusiasm for a new approach rolled in.

Perhaps of even greater importance is the implicit assumption in these arguments that scientific investigations of sexual aberrations can be morally carried out, and that the investigations themselves will not have immoral consequences for the participants. H. B. Rubin carried out a research program on the effects of marijuana on the sexual stimulability of males by exposing males to pornographic movies after ingestion of marijuana, while penile volume was measured as an indication of sexual stimulation.¹¹ The whole debate that followed was concerned with whether or not marijuana had effects that would warrant its legal restriction; no one appeared to be concerned with the human rights and dignity of those participating in the research program, or of the morality of subjecting human beings to immoral practices, harmful to them, for the

sake of scientific understanding. But, of course we "know" that exposure to pornography is not harmful! By direct and indirect implication this approach to scientific research reduces the potentially unique sexual expression of love relationship between two whole persons to a simple matter of tumescence. It is an example of scientific reductionism at its worst, and a warning to any who would like to carry on scientific research to provide the clear light for sexual ethics.

Good science (science that is faithful to the real world as it is) and good theology (theology that is faithful to the biblical revelation) must ultimately agree even about human nature since there is only one Truth. Unfortunately it is easy to come by both bad theology and bad science, and both of these enter discussions of the sexual revolution. Bad theology does not take full account of the biblical revelation concerning unredeemed human nature; it either neglects the creation-intended redemption-restored potential goodness of human nature, or it neglects the fallen and sinful nature of man living in the world today. It is this neglect of man's sinful nature that permits the fabrication of sexual Utopias (no less than political Utopias) based on the presupposition that human nature is essentially good and capable of self-perfection. Bad science underestimates the problem of assessing the character of reality and attributes to limited empirical surveys ("half a dozen persons with some theologically informed self-awareness") significance beyond their merit. Bad theology and bad science are combined when it is concluded that *because* it appears that people can do something without serious harm, it follows first that all *may* do it, and then finally that all *must* do it. This is the familiar "is-ought" fallacy we discussed earlier,¹² which attends any and every attempt to derive a system of ethics from empirical investigations.

The biblical model offers the greater marriage blessings when the individual persons and rights of husband and wife are consciously and willingly subjected to the unity and joint rights of the married couple.

I believe that we are justified in viewing the results of such "scientific investigations," therefore, with a good deal of healthy skepticism. The opportunities for overlooking vital parameters, of mistaking our subjective involvement with objective investigation, and of neglecting the whole man in favor of a view that is at least partially if not totally reductionistic, are all so great that it is generally impossible to prevent the subjective orientation of the investigator from dominating the interpretation of the data.

If our previous arguments are sound,¹³ i.e., that the experiential realization of humanness is a progressive one from conception through to a restored relationship with God through faith in Jesus Christ, then it is essential that a distinction be made between different levels of humanness. Presumably the goal of the Christian is to live in such a way as to bring to fruition the

purpose of God's good creation in which man was formed in order to live in relationship with God. In the pursuit of relevant scientific data it cannot be simply assumed that a person's relationship with God is an irrelevant variable. It is possible for human beings to live on various levels, each achieving some degree of the humanity potential for human beings, but choices made carelessly may limit the levels on which it is possible for an individual to live. Gardner reminds us,

There are those who point out, correctly, that other societies have different patterns of relationships between the sexes, patterns which often approve of pre-marital intercourse, and sometimes permit multiple partners. What they do not go on to point out is that the quality of family life in these societies is inferior, both as far as the status of women is concerned, and in romantic love to our ideals. I write from experience of having worked among both polygamous and polyandrous peoples. Our traditional ideal of virginity before marriage and chastity within marriage can only be replaced by practices which are not only lower on an ethical standard, but yield less satisfaction to their practitioners.¹⁴

I think it essential that we view these last two phrases, "not only lower on an ethical standard," and "but yield less satisfaction to their practitioners," not as two independent aspects that happen to coincidentally both be present, but as complementary ways of saying the same thing: in God's created order, to be lower on the ethical standard is to yield less satisfaction.

Proposed Difficulties with the Biblical Record

A second reason commonly offered in favor of a sexual revolution acceptable to Christians is that the Bible does not really serve us well in providing reliable guidance about these issues. When Ecclesiastes says that there is nothing new under the sun (1:9), "Ecclesiastes is dead wrong. In America today, nothing could be farther from the truth."¹⁵ Traditional sexual morality is useless,¹⁶ the sex ethics taught by the Church are only the ethics of a past society,¹⁷ "much of what Christian authority passed off as God's revealed truth was in fact human error with a Pauline flavor,"¹⁸ modern man repeatedly verifies by his own experience that the Church's "eternal verities" are false,¹⁹ commands like "Thou shalt not commit adultery" are "Divine fiats" arising from "conflicting texts written for nomadic societies two or three thousand years ago."²⁰ Such claims sound like propaganda or subjective bias related to a rejection of biblical inspiration and authority; what evidence are they based on?

There are many examples, it is argued, in the Old Testament law with which no Christian would any longer agree, as for example the death penalty for fornication in Deuteronomy 22, or the exclusion of eunuchs and bastards from the assembly of the Lord in Deuteronomy 23.²¹ In the context of the system of Old Testament law, that dealt with what is worn, property laws, lending laws, and dietary regulations, the commandment against adultery should be seen as a commandment against "cheating or stealing from the third party (partly connected with property and inheritance rights)," which does not apply to many totally different situations today such as those in which there is a "genuine acceptance of the third person into a relationship by husband or wife; mutually 'open marriages,' or even the honest 'swinging' of the Houston

apartment houses."²² Since all these arguments fail to make the biblical distinction between the content of the moral law, which is a description of what it means to live in a human way as a result of the way in which human nature is created (and which is clearly reinforced by Jesus himself in Matthew 5:27-30), and the Old Testament ceremonial or civil law, which was a law prescribed for a time for the nation of Israel and which was done away with after the death and resurrection of Christ, they carry little weight in arguing for the unreliability or irrelevance of the biblical revelation on sexual ethics.

Another approach to removing the biblical testimony from the area of relevance is to call into question the real meaning of the original Greek words translated "fornication," "adultery" etc. in the New Testament, and to claim that these terms applied primarily to "pagan practices of cultic and commercialized prostitution,"²³ or to invoke "modern scholarship" as the basis for stating

The many New Testament injunctions, therefore, against "fornication," in AV and RV . . . cannot with certainty be construed in the traditional sense as explicitly forbidding all extra-marital intercourse.²⁴

Amazement is expressed that the "typical American" could still believe that the Bible clearly indicates that God's law includes monogamy, premarital chastity and proscription of adultery; the appeal is to "scholarship":

Infinitely better scholars than we have established that one cannot find any literal or simple connection in the Bible claiming that the above statements were God's law or will. . . . There are no laws of sexual behavior consistently spelled out in the Bible.²⁵

Unfortunately for this kind of argument, which is really an appeal to authority—just a different authority than that appealed to by a traditional biblical interpretation—"biblical scholarship" is, if anything, less concrete even than psychological or sociological scholarship. What passes for biblical scholarship is often heavily weighted by presuppositions that determine the conclusions reached quite independently of the biblical data. Historian Gary Ferngren has commented,

The currently dominant schools of New Testament scholars (who are mostly theologians and not historians) have limited themselves unnecessarily by allowing the intrusion of improper philosophical presuppositions into their work and by the use of hypercritical methods of research that are applied in no other area of history.²⁶

The argument that we cannot accept what the Bible appears to be saying because some biblical scholars say we cannot must also be treated with considerable skepticism.

Finally the claim is made that exegesis of biblical passages cannot be done to produce clear ethical guidance for today. For example,

Problems of exegesis make it very difficult to reach assured conclusions about what, if anything, Jesus actually taught to Jews about the morality of specific sexual acts . . . the question whether the details of sexual morality fall within or outside the range of revelation.²⁷

Attempts to develop sexual ethics based on the "one flesh" concept are criticized because Matthew 19:3-6 represents only an *ad hominem* argument by Jesus against the Pharisees and cannot be universalized beyond its context, and because Paul's use of the "one flesh" idea in I Corinthians 6:16 "is questionable exegesis on his part and seems to involve the logical absurdity of a Casanova's being 'one flesh' with a multitude of women simultaneously."²⁸ The Ephesians 5 passage relating human marriage with the relationship between Christ and the Church has been misunderstood,

The Pauline analogy to the union of Christ and his Church was surely used in reverse; i.e., Paul used the human experience of marriage to explain to his readers by an analogy *his visions* of Christ's relation to the Church. Regrettably the imputation of sacred tones to ordinary human sexuality, caused by repeating the erroneous reading of this passage has caused trouble for hundreds of years.²²

Those who argue for a sexual revolution have exegetical problems because they do not accept an authoritative and reliable Scripture given by inspiration of God.

Investigation of these arguments soon reveals that what is at stake is *not* problems in exegesis, but rather two quite different views of the nature and authority of the biblical revelation. Those who argue for a sexual revolution have exegetical problems because they do not accept an authoritative and reliable Scripture given by inspiration of God. Confronted with any statement that appears to contradict their extra-biblically constructed position on sexual ethics, they are constrained to throw up their hands and bemoan the difficulty of interpretation.

The Christian can welcome any genuinely authentic scientific investigation of the questions of human sexuality that does not already import conclusions into its methodology or its interpretation. Confronted with apparent data that contradict the biblical revelation, the Christian should not reject them in some non-rational outpouring of indignation, but should instead demand to see how the canons of authentic scientific inquiry have been followed throughout the study under consideration. What the Bible teaches about human sexuality and marriage is so plain, often repeated, and illustrated in the biblical text that it should be readily testable provided only that authentic scientific frameworks are designed to test it.

Divorce

The reader may feel that we are getting far off base by inserting a discussion of divorce at this point in our discussion. We cannot avoid it, however, for advocates of a sexual revolution regard the historic changes in the Church's attitude toward divorce as a *prima facie*

HUMAN SEXUALITY

case with which all others must be compared. Their related attempts to draw analogies between changing attitudes toward appropriate foods to eat and changing attitudes toward the appropriate place of sex in life²² may be once again discounted as a misunderstanding of the difference between the moral and ceremonial or civil laws. The case of divorce, however, appears to be a rather more difficult one.

Hiding behind comfortable legalisms is one such artifice. For hundreds of years the Church used what is the most explicit Biblical material in the whole area of marriage and sex, i.e., the proscription against divorce (Mark 10:2; Matt. 19:3-9), to foil what was empirically obvious: That in some cases the loving thing for all, was to permit divorce (and re-marriage). Today everyone has forgotten that this was the cutting edge of the "moral" issue a century ago. If you don't believe me, try to find a legal loophole for divorce as practiced by tens of millions of Christians every year.²²

The attitude of a majority of Christians toward divorce has changed over the years. If, however, the implication of the above quotation were valid, the response of the evangelical Christian should not be to look for other regions where the biblical injunctions can be disregarded, but rather to rethink current attitudes towards divorce and bring them back into line with the biblical pattern. The question we must consider is whether the changing attitudes toward divorce do constitute an actual disregard of biblical teaching, and whether the situation is truly parallel to that dealing with adultery and sexual practices.

Although adultery and sexual purity are mentioned in the Ten Commandments, divorce is not. Examination of a concordance shows that there are a total of 26 verses in the entire Bible in which any mention of divorce is made; just for comparison, there are 66 verses mentioning adultery. Although divorced persons are mentioned earlier (Numbers 30:9; Leviticus 21:7, 14; 22:13), the introduction of divorce as a practice does not appear until Deuteronomy 24:1, 3, where permission is granted to a man to put away his wife in divorce if "he has found some indecency in her." This is the thrust of the attitude toward divorce throughout the Bible; in this context Joseph considered divorcing Mary, when he knew that she was pregnant but did not yet know the cause (Matt. 1:19). For a woman to receive a bill of divorce was a mark of impurity on her life, and this situation was used as a symbol of Israel's unfaithfulness to God in the Old Testament (Isaiah 50:1; Jeremiah 3:1,8). Malachi 2:6 says, "I hate divorce," says the Lord God." When a man married a woman, he took responsibility for her life and welfare; if he put her aside by divorce without the most severe cause, he was doing her a grave injustice, for she became an outcast in society and barred from community life.

By the time Jesus was teaching on earth, the practice of divorce had been distorted as so many other practices through the years. The responsibility of the husband for his wife was no longer regarded seriously, and wives were put away in divorce for reasons that did not justify it. One of the strains of Jesus' teaching was that God is not satisfied with the external observation of regulations by his people. He points out that the sin of adultery does not require the actual act, but

starts in the heart with its indulgence in lust (Matt. 5:27-29).²⁹

Insight into Jesus' attitude toward divorce can be gained by looking at Matthew 19:3-9, where the Pharisees came to Jesus with another in their long list of puzzle questions, designed to trap him; his response is to show the creation-intended purpose of marriage. The Pharisees ask, "Is it lawful to divorce one's wife for any cause?" It is evident that marital fidelity was part of Jesus' consistent message to those who would be his followers; the Pharisees hope to trap him by forcing him into a contradiction of the Mosaic custom. Jesus responds initially, therefore, not to their specific question, but to a clarification of the creation-intended purpose of marriage, an understanding of which is essential for a discussion of divorce. He points out that when men and women live in the way intended by God's good creation purpose (when they are *fully* human¹³), the union between man and wife is full and complete. Under these conditions divorce is irrelevant. Here then we learn the ideal situation, the situation applying to those whom "God has joined together" because they belong to him. Such a situation can apply in only the most indirect way to a non-Christian husband and wife, of whom it would be foolish to say that their relationship represents in any existential form the relationship between Christ and the Church.

The Pharisees press on, hoping to close their trap, by asking how it was that Moses "commanded" that a certificate of divorce be given. Jesus immediately points out that it was not a matter of "command" but of "permission" because of their "hardness of heart." In an imperfect world, account must be taken of these imperfections in dealing with daily life. Although divorce is neither intended nor necessary if men and women live in a fully human way as God's people, in the actual contingencies of life divorce may become a necessary recourse. But then Jesus adds his final words as a warning against the contemporary custom of abusing divorce to indicate that a man's responsibility to his wife was so great that only infidelity was an appropriate grounds for divorce. The Pharisees had asked him if there were *any* cause that would justify divorce; Jesus replies that *any* cause is insufficient—only marital infidelity is of a grave enough nature to justify a man's treating a woman in that way. The question Jesus was responding to is, When can a man put his wife away? His answer is, Under no conditions can he subject his wife to this judgmental action except if her own actions have already destroyed the marriage unity.

Our next task is to consider the application of these principles to life today. We have already pointed out that neither the permission of nor the commandments against divorce are a portion of the moral law, as is the commandment against adultery. Divorce is a practice admitted to deal with the imperfections of mankind; it is therefore in the nature of an exception to be tolerated, not a guide to be advocated as a general panacea. The person who jumps from spouse to spouse to satisfy his/her own self-indulgent whims, is indeed guilty of sequential adultery. Nothing has changed; the law still holds.

If conditions exist today comparable to those that existed when Jesus discussed the question, i.e., if divorce involves a husband cutting off support of his wife and ruining her reputation, while she still desires

to be with him and has not been unfaithful, then divorce today is just as reprehensible as it was then. It is also essential, however, that we take note of changes in the social customs and conditions since New Testament days. If it is not a question of "a husband putting away his wife," but of two persons agreeing that the marriage is dead, the situation is quite different. If it is not a question of a woman being disgraced, thrown out without support, and effectively disenfranchised from her place in society by the capricious acts of her husband in a male-dominated society, but of two people agreeing to part with each sharing part of the burden of divorce, the requirements are not at all the same. In an imperfect world the best course may well be to make divorce legally possible so that each partner to the broken marriage may be free to seek to build a better life independently. Such a conclusion does not invalidate the basic reality that an unbreakable union between husband and wife, each living in close relationship to God and fulfilling as nearly as possible the creation-intended structure of marriage, is still God's best. But it recognizes that to attempt to impose "God's best" upon those both unable and unwilling to experience it can so distort "God's best" that it ceases to be that at all.

Paul points out in Romans 7:2 and I Corinthians 7:39 that death frees the surviving husband or wife from the commitments of the marriage relationship. It may be argued that this is the reason that infidelity is sufficient grounds for divorce even in Old Testament times; infidelity is an act that marks the death of the marriage commitment. Repentance, confession and forgiveness are all necessary for the resurrection of the marriage. The severity with which infidelity is judged both in the Old Testament and by Jesus and other authors in the New Testament is additional testimony to the non-biblical nature of arguments for the relaxation of sanctions against it. There are other acts or conditions, however, that also mark the death of a marriage; when a marriage is recognized by both husband and wife as being dead, divorce may be justified on the same grounds as those justifying infidelity as the grounds for divorce. This is not the time to attempt to fix blame, to define guilty and innocent parties, or to indulge in legal efforts at retribution for real or imagined wrongs; this is the time for a quiet burial of the marriage with grief, and for the picking up of new lives.

Divorce, although an exceedingly difficult and chal-

lenging problem to treat in general terms, does not provide a useful analogy for those who would argue for the abolishment of "adultery" or the encouragement of open sex. In many ways, a consideration of the biblical context of divorce heightens the sanctity of marriage and the basic roles of sexuality in human relationships.

FOOTNOTES

- ¹Albert Ellis in talk sponsored by the Center for Creativity and Growth, Palo Alto, California, June 23 1972, as reported in the *Palo Alto Times*.
- ²Ralph D. Yanev in talk to California Medical Association convention at Anaheim, California, as reported in the *Palo Alto Times*, March 12, 1973.
- ³The biblical concept of "one flesh" in marriage expresses a unity that does no violence to the individual personalities involved, but rather frees them to be truly themselves in what must be described as a genuine and mystical union.
- ⁴*Sexuality and the Human Community (SHC)*, a report of a Task Force of the Council on Church and Society of the United Presbyterian Church (1970), p. 29.
- ⁵1969 Report of a Study of the Faith and Order Commission of the Canadian Council of Church, "The Biblical and Theological Understanding of Sexuality and Family Life," p. 44.
- ⁶R. and D. Roy, *Honest Sex*, Signet (1968), pp. 27-36.
- ⁷*Ibid.*, p. 115.
- ⁸*Ibid.*, p. 122.
- ⁹*Ibid.*, p. 123, 124.
- ¹⁰*Ibid.*, p. 200, 201.
- ¹¹See, for example, *Science* 192, 1086 (1976).
- ¹²R. H. Bube, "Science Isn't Everything," *Journal ASA* 28, 33 (1976).
- ¹³R. H. Bube, "The Significance of Being Human," *Journal ASA* 31, (1979).
- ¹⁴R. F. R. Gardner, *Abortion: the Personal Dilemma*, Eerdmans, Grand Rapids (1972), p. 256.
- ¹⁵R. and D. Roy, *op cit.*, p. 26.
- ¹⁶*Ibid.*, p. 15.
- ¹⁷*Ibid.*, p. 17.
- ¹⁸*Ibid.*, p. 60.
- ¹⁹*Ibid.*, p. 17.
- ²⁰*Ibid.*, p. 24.
- ²¹SHC, p. 9.
- ²²R. Roy, "Is There a Christian Basis for a Sexual Revolution?" *Journal ASA* 26, 76 (1974)
- ²³SHC, p. 27.
- ²⁴*Ibid.*, p. 44.
- ²⁵R. and D. Roy, *op. cit.*, p. 68.
- ²⁶G. B. Ferngren, "The New Testament and Historical Criticism," *Journal ASA* 26, 46 (1974).
- ²⁷SHC, p. 41.
- ²⁸*Ibid.*, p. 44.
- ²⁹By these comments Jesus does not abolish the law against adultery, as some have contended, but instead intensifies its relevance by showing that it is not only an act of adultery which is an offense against God, but the attitude of lust that precedes and nourishes the act.





BIBLICAL AUTHORITY edited by Jack Rogers,
Word Books, Waco, Texas (1977). 196 pp. Paperback.
\$4.50.

THE DEBATE ABOUT THE BIBLE by Stephen T. Davis, Westminster Press, Philadelphia Pennsylvania (1977). 149 pp. Paperback. \$5.45.

These are two examples of the flurry of books that have appeared in recent years both before and especially after Harold Lindsell's *The Battle for the Bible*. The issue is the relationship between such fundamental and traditional concepts as inspiration, authority, and inerrancy.

Biblical Authority might be described at least partially as Fuller Seminary's reply to Lindsell, Fuller Seminary having been one of Lindsell's prime targets. It includes six quite diverse chapters by Jack Rogers, Clark Pinnock, Berkeley Mickelsen, Bernard Ramm, Earl Palmer and David Hubbard. It features a Foreword by Paul Rees, Vice-President-at-large of World Vision International, who argues on behalf of the authors of the book that biblical authority need not rest upon a particular interpretation of "total inerrancy."

. . . is it not right to say that there is a difference between the *evangelical attitude* toward the Bible and an *evangelical's views* about the Bible? Go back to Warfield and Berkouwer. Their views of how to construe the Bible's matchless revelatory quality and authority are not precisely the same, just as Luther's and Calvin's were not. But their *attitude* toward the Bible is identical—God's Word that shines in our world's darkness, the unerring pointer to the One . . . (p. 13)

Personally I found Rogers' historical analysis of attitudes toward inerrancy both fascinating and illuminating. He traces the Platonic emphasis that faith precedes reason and the Aristotelian emphasis that reason precedes faith through the church fathers. He sees "a significant shift in theological method . . . from the neo-Platonic Augustinianism of Luther and Calvin to the neo-Aristotelian Thomism of their immediate followers." (p. 29) Of particular significance is the thought of Francis Turretin (1623-1687), who might be called the father of modern "total inerrancy;" his writings were the principal textbooks in systematic theology at Princeton University from its founding in 1812 to 1872 when Charles Hodge wrote his *Systematic Theology* to replace it, but firmly based upon it. While A. A. Hodge and B. B. Warfield refined this

approach still further, the neo-Platonic Augustinian tradition of reformed theology was kept alive through such theologians as James Orr, Herman Bavinck, Abraham Kuyper, and G. C. Berkouwer.

Pinnock argues for the need to "maintain with equal force both the humanity and the divinity of the word of Scripture." (p. 71) Ramm regards the efforts to make a theory of inspiration the most important doctrine in theology as a theological oddity; he presents several arguments to support this view. Palmer feels "that the greatest dangers to biblical interpretation today are the various grid systems we superimpose upon the text ahead of time and through which we then demand that the text be read." (p. 140) Hubbard

Books Received and Available for Review

(Please contact the Book Review Editor if you would like to review one of these books.)

- Anderson, *Theological Foundations for Ministry*, Eerdmans (1979)
- Brown, *Perception, Theory and Commitment: The New Philosophy of Science*, Univ. of Chicago (1979)
- Bruce, *The Time is Fulfilled*, Eerdmans (1978)
- Craigie, *The Problems of War in the Old Testament*, Eerdmans (1978)
- Damsteegt, *Foundations of the Seventh-Day Adventist Message and Mission*, Eerdmans (1977)
- Drake, *Galileo at Work*, Univ. of Chicago (1978)
- Feinberg, *Consequences of Growth: The Prospects for a Limitless Future*, Seabury (1977)
- Geroch, *General Relativity from A to B*, Univ. of Chicago (1978)
- Guelich, *Unity and Diversity in the New Testament*, Eerdmans (1978)
- Hammond, Macinko and Fairchild, *Sourcebook on the Environment*, Univ. of Chicago (1978)
- Kaye and Wenham, *Law, Morality and the Bible*, InterVarsity (1979)
- Kuhn, *The Essential Tension: Selected Studies in Scientific Tradition and Change*, Univ. of Chicago (1979)
- Lindberg, *Science in the Middle Ages*, Univ. of Chicago (1979)
- Robinson, *The Future of Science* (1975 Nobel Conference), Wiley (1977)
- Swanstrom, *History in the Making*, InterVarsity (1978)
- Thompson, *Christ in Perspective* (On the theology of Karl Barth) Eerdmans (1978)
- Verkuyl, *Contemporary Missiology*, Eerdmans (1978)
- Wells, *The Search for Salvation*, InterVarsity (1978)
- Westbury and Wilkof, *Science, Curriculum and Liberal Education*, Univ. of Chicago (1978)
- Williams and Houck, *Full Value: Cases in Christian Business Ethics*, Harper & Row (1978)

also strives for a middle-ground perspective.

The questions, as I hear them, do not turn on whether the Bible is errant or not. Biblical errancy is not an option for most evangelicals. The questions are (1) Is inerrancy the best word to use to describe the Bible's infallibility and truthfulness? (2) If inerrancy is to be used, how do we define it in a way that accords with the teachings and the data of Scripture? That is an important agenda, but one far too limited for use to divide over. (p. 178)

A Foreword for *The Debate About the Bible* is provided by Clark Pinnock who starts by questioning why he, "an evangelical theologian committed to the position of Biblical inerrancy which Dr. Davis is endeavoring to overturn," should write a Foreword on its behalf. His answer is that "We need to listen to Dr. Davis, who strives to present a sturdy concept of Biblical authority without employing the category of inerrancy in it." (p. 11) Davis is willing to apply the term "error" to areas not crucial to faith and practice, and is willing to sidestep the authority of the Bible in those exceptional instances where he finds "good reason" to do so. What Davis does is to consider the three main arguments in favor of "inerrancy": (1) the Bible claims to be inerrant, (2) if the Bible is not inerrant, we have no sure word of God, and (3) the denial of inerrancy is part of a domino process that leads inevitably to the denial of other evangelical doctrines, and to attempt to show the insufficiency of each of these arguments. This he does carefully and systematically in a manner that is instructive regardless of one's personal conviction. Davis' arguments might be even more persuasive except for evidences of "softness" in his overall theology—apparent loopholes that Davis has plugged but which may easily spring leaks in the hands of others.

In a sense, the whole community of Christian believers helps me to decide what I will believe, whether or not there is compelling reason to reject some Biblical claim. For me this does not occur often, but it does occur occasionally. It has never yet occurred on a matter of faith or practice, and . . . I hope it never will. (p. 76) I believe that the Bible is or ought to be authoritative for every Christian in all that it says on any subject unless and until he encounters a passage which after careful study and for good reasons he cannot accept. . . . Reason must help determine what the Bible says and ultimately, whether or not what it says is acceptable. Those who deny that this is their procedure, I argue, are only fooling themselves. (p. 117)

It is easy to denounce these statements of Davis as the typical apostasy that follows a rejection of "total inerrancy." They need to be considered fairly, however, within the context of Davis' total position. We need to consider *our own* reasons for "rejecting" what the Bible says on the grounds that it is obviously culturally conditioned (an activity true of even the most conservative defendant of "total inerrancy"), and perhaps we need to temper Davis' language a little with a more complete understanding of the guidance of the Holy Spirit and of the distinction between traditional interpretations of biblical passages and the authentic intent of divine revelation.

Reviewed by Richard H. Bube, Department of Materials Science and Engineering, Stanford University, Stanford, California 94305.

HEALING AND WHOLENESS by John A. Sanford, New York: Paulist Press, 1977, 162 pp., \$5.95.

What does it mean to be ill? What does it mean to be healthy? John A. Sanford, Jungian analyst and Episcopal priest begins this book on *Healing and Wholeness* with these questions. He has used a composite of many sources, enriched by the sufferings and discoveries of the people who have consulted him, the insights obtained from his teachers, and from the fruit of his own personal search for healing, to write this book. He includes understanding of healing from the Ancient Greeks, the lore of shamanism, the American Indian, early Christianity and the psychology of C. G. Jung.

Chapter I, "Journey toward Wholeness," begins with the definition of illness, "something that results in a malfunction of consciousness." The center of consciousness, he states, "is the ego, the 'I' part of us that does the willing suffering, choosing in life; the part of us of which we are most immediately aware. If this part of us is not able to function, it would seem that we are ill." Sanford then shows how the aim of wholeness cannot be met in the idea of adjustment, peace of mind, or adaptation of personality. The book firmly stands upon the movement toward wholeness as the individuation, the process that moves one to become a complete, unique person, as the source of all true health. This means, he states, a "synthesis of the conscious and unconscious personalities, and the establishment of a relationship between the ego, as the center of consciousness, and the Self, which is the whole personality and which functions like our inmost center." Consequently, he deduces that unless our conscious personality develops and increases and becomes a channel for the life of the whole person to flow through, the process of individuation cannot take place. Then the life's energies that seek to bring about wholeness are dammed and thwarted and may turn against us. Herein lies the potential for illness.

Throughout the book the emphasis is not upon physical or spiritual wholeness but that real wholeness of personality can come only from integration of the unconscious with the conscious. Examples of this integration of personality are taken from the cult of Asclepius of ancient Greece and Rome, which he feels people who are ill today can follow as they pursue their own healing; and all the widespread phenomenon of Shamanism. "All the major religions of the world are all shamanistic at their core for they teach the need for a death and rebirth of the faithful, and all proclaim in addition to the boxlike world of ego consciousness, there exists another dimension to reality," Sanford claims. Illness, therefore, can be a form of initiation into our own process of individuation. Unless the meaning of our illness is made conscious, our healing will not be complete and its intended goal will not be renewed. Moreover, in all of us, the price of continued health is the continued development of consciousness.

In later chapters the author emphasizes that the psyche is a self-healing organism when the conditions for such healing are present. Sanford establishes the basis of his concept of wholeness in *Healing in the Psychology of C. G. Jung* in chapter V. Here he explains what Jung described as the different archetypes of the collective unconscious. For psychological healing

to occur there must be a relationship between the ego and the forces of the unconscious, which is achieved primarily through becoming conscious of the contents of the unconscious. The optimum psychological health occurs when the ego completely represents the Self, for then the whole range and potentiality of the personality is expressed in consciousness. Yet, this ideal state cannot ever be realized perfectly, he admits. For this reason, he claims, the key to psychological health does not lie in achieving a certain state of consciousness and holding on to it, but in achieving a relationship to one's Self.

The last chapter, *Healing Ourselves*, provides the steps in our search for wholeness: developing relationships, keeping a Journal, healing through the body, meditation, active imagination, and dream analysis. Sanford concludes by saying,

Just as individuals are more complete if they relate to their dreams, so a culture will be more whole if it becomes a dream culture. Our culture needs dreams badly. We are a spiritually deprived people. Our souls are hungry, and if we are not filled with the right food we will fill ourselves with the wrong food. Man cannot go empty for long. It is a marvelous thought that every night the Spirit sends us food for our souls in the form of dreams. Man does not live on bread alone but on every word that comes from the mouth of God, Jesus once declared, (Mt. 4:4) and dreams may be the most frequent and important way in which the Word of God is spoken.

In the final analysis it seems to me that Sanford writes more from the psychological perspective than the Christian. Wholeness entails more than trying to heal ourselves. Wholeness centers upon God who through Jesus Christ reconciles us to himself. Even if we could completely bring about a state in which our ego completely represents our Self, we still would need the inner cleansing of our soul that can be accomplished only by a dynamic relationship with God through His grace and our faith.

Reviewed by Kenneth E. Schemmer, General Surgeon, and Clinical Professor of Pastoral Counseling, Anderson School of Theology, Anderson, Indiana.

MEDICAL/MORAL PROBLEMS Robert Heyer, editor, New York: Panlist Press (1976), paperback, 64 pp., \$1.75.

Recently, newspaper headlines around the world heralded the birth of the first "test-tube" baby, formed from a human ovum fertilized by human sperm outside the body and then placed several days later into the uterus of the mother for further growth and development. The day the news broke I was in attendance at a scientific meeting where we discussed, among other matters, questions of genetic screening and approaches to the diagnosis and treatment of metabolic disorders. The talk is no longer in the realm of "What if . . .?"; the biological revolution is here, is real and opens new doors both for scientific advancement and for knotty moral problems.

Consideration of various aspects of medical ethics often takes place under one of two sets of circumstances: (1) a dry, remote, impersonal discussion of what can be done with careful, balanced analysis, often leading to

fine moral prescriptions that give little thought to the humanness of those involved, or (2) an emotional, sometimes fearful look at the evil that science is foisting off on an unsuspecting mankind in the name of progress. *Medical/Moral Problems* takes a middle ground, perhaps because several of the writers are involved on a day-to-day basis with the problems and with the emotional, physical and spiritual impact these problems have on the individual. Many of the writers wrestle constantly with the questions raised in this book because they are expected to provide answers and make decisions, not in isolation, but in the context of real humans, real needs and real dilemmas. Most of the articles are quite personal and are more telling because of this personal involvement.

The writers come from many backgrounds: Eunice Kennedy Shriver, actively involved in the care of the mentally retarded; Frank Iula, a physician who tries to achieve both physical and spiritual healing for his patients; Samuel Natale, psychotherapist, and others. The articles give brief overviews of many basic questions being asked today. The issues discussed are not those to be resolved primarily by professionals, but are issues that each of us must find answers for. One limitation of the discussion is an overwhelming reliance in several instances on Roman Catholic teaching and church law; this emphasis limits the value of the book to non-Catholic readers. The issues are not dealt with in depth, but do allow a "feel" for some of the complexities involved. An especially interesting feature is the "Adult Education Program" at the end of the book, a series of discussion programs that allow for profitable group study. *Medical/Moral Problems* can serve as a useful introduction to the field of medical ethics and a means of making us all more sensitive to some of the very real human issues with which modern science confronts us.

Reviewed by Donald F. Calbreath, Department of Laboratory Medicine, Durham County General Hospital, Durham, North Carolina 27704.

FIRE IN THE FIREPLACE: CONTEMPORARY CHARISMATIC RENEWAL by Charles G. Hummel, InterVarsity Press, Downers Grove, Illinois, 1978, 275 pages, \$4.95.

Among the books written to evaluate the present-day charismatic renewal, Hummel's *Fire in the Fireplace* is the most ironic I have read. His title comes from an analogy likening revival to a fire around which an organization, a fireplace, is built to best utilize its energy. In time the flue becomes clogged and the flame dies down. The fireplace needs a cleaning, yet its custodians resist. So the kindlers of the flame may move out onto the floor where either the fire rages out of control or dies for lack of a hearth. "The best place for a fire is in the fireplace. But it should be cleaned and, if necessary, remodeled." (p. 16)

The book is divided into four parts. The first sketches the author's own encounter with the charismatic renewal and its development in the twentieth century. The second and third parts review the doctrine of the Holy Spirit given in the Luke-Acts narrative and the Pauline letters, respectively. Lastly, from this biblical groundwork Hummel addresses contemporary issues

concerning the charismatic renewal.

Unlike most revival movements in the past, the charismatic movement cannot be traced to one human leader. It is a pattern of Christian experience which the twentieth-century churches find springing up near-spontaneously within and without their ranks. While we always need to evaluate our subjective experiences according to Scripture, nevertheless the experience of life in Christ throws light on poorly understood texts and can demand a remodeling of one's theology. "Experience lies at the heart of biblical faith" (p. 171). Hummel found himself in this position when in 1962 he, as an InterVarsity executive, witnessed the charismatic experience revitalizing the Yale (University) Christian Fellowship. In 1970 he, then as president of Barrington College, encountered the spiritually-thriving Word of God community in Providence, Rhode Island, which profoundly influenced his thinking.

In this first section Hummel cites three broad streams flowing through this basically spontaneous phenomenon. *Classical Pentecostalism* arose early in this century, and borrowed language from the nineteenth-century Methodist-holiness groups to describe their experience. They believed there is a "second blessing" which follows conversion, called "baptism in the Holy Spirit." The Pentecostals were the first to link "speaking in tongues" with this "second blessing." *Neo-Pentecostalism* began to flow in the mainline denominations in the late 1950's. Unlike Pentecostalism it did not become separatist, but stayed within the churches. In varying degrees it drew upon the language of Pentecostalism to describe its experience. *Catholic Pentecostalism* which arose in the late 1960's remained even more closely knitted to the church community. The great divide between classical and Pentecostal theology is the latter's doctrine of the baptism with the Holy Spirit as "subsequent to conversion, experienced through the fulfillment of requirements and initially evidenced by speaking in tongues" (p. 61).

Can this position find adequate support in Scripture? Turning to the biblical material, Hummel examines the references to the Holy Spirit in Luke-Acts to conclude that Luke's intent is to portray the Holy Spirit as inaugurating a new age of prophecy and proclamation, empowering the mission of the church. Hummel disagrees with those who derive doctrine from only the didactic passages in Scripture and not the historical. But he affirms historical passages have only the doctrinal value the author *intends* for them to have (p. 107). No normative model for Christian growth can be derived from Luke-Acts (*contra* Pentecostalism) because Luke does not intend to provide one. He is concerned with the mission of the church, not inner life (p. 109). The presence of the Spirit in Acts "is 'charismatic' in the sense of directly manifesting his power," but his empowering is always for proclamation which he inspires with "initial and repeated [his emphasis] fillings with the Spirit" (p. 95).

For Paul, Hummel continues, the essential activity of the Spirit in a believer's life is cultivating Christlike character, the "fruit" of the Spirit. Spiritual gifts are given to promote this fruit within the church. Their purpose is to serve others, not the recipient. All believers are given spiritual gifts, though not all the same, for the strengthening of the church. To fulfill its mis-

sion the Christian community today needs the full range of spiritual gifts which were not limited to the first century. Prophecy, as it strengthens and encourages the church, will always be needed. Paul gives it priority in public worship over *uninterpreted* "tongue-speaking" which nevertheless has a valid place in private devotions. As in Luke, the phrase "filled with the Spirit" connotes for Paul not a settled state but a repeated activity. But, whereas in Acts "baptism in the Spirit" is a clothing with power for witness, for Paul the phrase is synonymous with "incorporation into the body of Christ."

What implications does this biblical material have for today? Western Christianity has become institutionalized and individualized, and ministry has become an office rather than a *charism*. The resurgence of spiritual gifts as actions initiated by the Spirit through *all* the members in the body reverses this over-specialization of religious professionals, returning the locus of ministry to the body of Christ. Hummel rejects the doctrine of a second experience distinct from conversion as not taught in the New Testament (p. 183). What people experience is either conversion, rededication or a new openness to the Spirit's manifestation. Neither can "speaking in tongues" be taken as *the* sign of an inner spiritual development. It is but one of many gifts, though "as a form of prophecy it is an evidence of the Spirit's . . . empowering the church for witness" (p. 197). "Speaking in tongues" is also a rebuke to our rationalistic age whose intellectual pride affects even the church" (p. 204). The heart of the charismatic renewal is not a second experience or "speaking in tongues," but "is commitment to the full range of charisms as manifestations of the Holy Spirit to meet the needs of the Christian community," (p. 229) a range not adequately expressed by the categories of classical theology. "The Lord is renewing his church by many means. One of them is the charismatic renewal which was not humanly conceived, planned and organized" (p. 236).

Hummel deals quite fairly with all sides of this embroiled issue. His notes embrace a most inclusive bibliography on the subject. His parts two and three survey Luke-Acts and First Corinthians quite comprehensively, and one wonders if all this material was needed. His exegesis and interpretation of "filled" and "baptized" with the Holy Spirit would not satisfy all neo-pentecostals (cf. Howard Ervin's *These Are Not Drunken As Ye Suppose*), nor does his (and Gordon Fee's) hermeneutical principle regarding "intent of the author" find universal acceptance (cf. Philip Payne, "The Fallacy of Equating Meaning with the Human Author's Intention," *Journal of the Evangelical Theological Society*, Vol. 20, No. 3 (Sept, 1977), p. 243). I feel there needs to be a better understanding of the initial charismatic experience people have than either the concepts "second blessing" or "rededication" give us. I recommend Thomas Smail's book *Reflected Glory* as a more satisfactory treatment of this point. *Fire In the Fireplace* gives us a very fair and broad introduction to a complex subject from a viewpoint as willing to be instructed by the evidences of the Spirit's movement among us today as to criticize from an established theological position.

Reviewed by Bruce Hedman, Candidate in Mathematics, Princeton University, M. Div. Candidate, Princeton Theological Seminary, Princeton, New Jersey.

BOOK REVIEWS

CHARISMATIC SOCIAL ACTION: REFLECTION/RESOURCE MANUAL by Sheila MacManus Fahey. New York: Paulist Press, 1977, 174 pp., \$4.95.

Charismatic Social Action is intended primarily as a resource manual designed to provide charismatic communities and prayer groups with some practical guides to Christian social action. The book opens with an introductory chapter which presents an orientation to Christian social action. The next nine chapters deal with individual social issues including: the aged, correctional reform, drugs and addiction, the environment, hunger, the media, mental illness, poverty, and race relations. Each chapter contains a general introduction to the issue, a small study bibliography, a reflection on the issue from a Christian perspective, questions for reflection and discussion, and a list of suggested actions. In addition, it contains an appendix which includes an address list of key organizations which may be relevant for a social action program.

The opening chapter leaves one with a curious sense of anticipation. While it recognizes the importance of prayer and personal experience, it asserts that a consequence of this experience is a concern for social evils. The book is disappointing, however, in two respects. First, it treats issues with such vague generalities that one is left wondering what the issues really are, and what the appropriate Christian response should be. This is, of course, inevitable given the territory which the book attempts to cover.

But what is even more disappointing is the almost unconditional acceptance of stereotypes and common sense conceptions of the social problems discussed. Alcoholism, for example, is discussed as a disease, warranting treatment, not punishment. While this is certainly the prevalent paradigm adopted by treatment programs, it is by no means universally accepted. It is particularly important to question it seriously from a Christian value orientation which stresses personal responsibility.

The discussion of correctional reform is no less problematical. For example, Uniform Crime Report statistics are used to support the argument that our correctional system isn't working and that what is needed is a more "humane" correctional system that will be more effective in reforming the criminal. It has been well documented that UC Reports are more a function of funding maneuvers than of actual incidences of crime. Use of these statistics is hardly convincing evidence. Furthermore, Fahey places the New Testament covenant in opposition to the Old Testament covenant in her argument for correctional reform from the Christian vantage point: "Grace and law have two different meanings in the Old and New Testaments." (p. 33). In fact, in both the Old and New Testaments God's law must be met, and in both it is ultimately met by the initiative of God through grace. Fahey's argument hardly provides a theological basis for the kind of correctional reform she is advocating. Indeed, the argument has been made that one's dignity as a human is most recognized when his personal responsibility for wrong-doing is affirmed and he is punished accordingly. (e.g. C. S. Lewis)

The remaining issues are treated in the same less-than-rigorous manner. In short, the issues are glossed

A Devastating Trap

One consequence of limitless options is that for the large segment of the population economically above the poverty level in our own society, few impediments remain to vaulting aspirations and limitless expectations of new experience.

All the glittering promises of the modern world have diminished our sense of man's limitations. Somehow the idea has gotten around that there are virtually no limits to the possibilities for human achievement and joy, even ecstasy, provided we're sufficiently enlightened.

All of this has turned out to be for many people, a devastating trap. Every child can't grow up to be a brain surgeon or a novelist. Every adult can't be an ecstatic human being. All too many people today are trapped between society's assurances of limitless achievement and the real limits set by their own potentialities or by circumstance.

Some accept society's assurances and flog themselves down the road to inevitable failure. Others give up altogether. The lucky—or sensible—ones arrive at some workable accommodation between their aspirations and what is possible.

Fortunately, many people achieve such an accommodation. But for others under the lure of limitless possibilities, the ego expands pathologically. It no longer recognizes boundaries. It accepts what it takes to be the assertion of our culture that there are no limits to what you can do or experience.

You can win the world's adoring regard, perform legendary deeds, be anything, do anything. The consequence for some is an insatiability, a Faustian hunger for experience that leaves the individual haggard in spirit if not in visage.

It is interesting that in the circles where expanded egos congregate, there is much talk of liberation from sexual, familial, political, and religious constraints in the name of the free intellect, the free senses, the free spirit. But no one mentions the force that most often rages for total freedom: the insatiable ego.

Every constraint becomes an affront. Why have I not achieved great things? Why have my great potentialities not made themselves felt? Why have all the experiences not fulfilled me? Have I missed something? There must be more. Must I travel still further, acquire more material possessions, find still other sexual partners, seek newer forms of therapy?

In such an atmosphere, it's hardly surprising that we encounter individuals who nurse a deep grievance: life owes them something—if only some kind of recognition—and has not yet delivered. And it may explain in part, as other observers have pointed out, instances of apparently ordinary individuals, loners as a rule, who burst out of obscurity to perform some spectacular act (stand on a skyscraper ledge, point a gun at a president).

We are not very good at communicating to our children that life has always been hard and always will be, that the world was not designed for our personal enjoyment.

John Gardner

Former Chairman of Common Cause and Former Secretary of the Department of Health, Education and Welfare.

"Options Unlimited" in *Morale*, W. W. Norton

over with such vague generalizations and with a naive acceptance of prevailing stereotypes that the book's resourcefulness as a Christian guide to action is questionable. In essence, it represents a liberal orientation to society, couched in misapplied theological concepts.

We do not, however, want to overlook the contribution the book does make. Particularly of value to the

BOOK REVIEWS

socially concerned and action oriented Christian is the relatively extensive list of agencies provided in the appendix. Nearly 100 agencies and addresses are listed which are certain to be of value to a social action program. Probably more importantly, the book does represent a response on the part of the Charismatic community to the needs of the world around them. In a literature so pre-occupied with the value of the charismatic experience for the individual, it is refreshing to see in print an argument for the necessity for an orientation to service as a fruit of this experience.

Reviewed by Charles E. Faupel, Department of Sociology, University of Delaware, Newark, Delaware 19711.

ALL TRUTH IS GOD'S TRUTH by Arthur Holmes, Grand Rapids, Michigan: Wm. B. Eerdmans Publishing Co. 1977, 145 pp. \$3.95 (pb).

Professor Holmes' book is a sort of preface to a Christian worldview and concerns itself with questions of "truth," "reason," "justification," "error," *et cetera*, as these relate to the hope of constructing and defending a philosophical system within the parameters of a Judeo-Christian tradition.

The division of sacred and secular is regarded as artificial. On the hypothesis that God sustains to the world the relation that the above tradition affirms, the impress of deity must of necessity be upon all reality: a consideration certain to have positive implications for a Christian liberal arts college. Even the mission effort must transcend the narrower concept of evangelism and relate God's cosmos to his Great Commission. As our author remarks, "... if truth is one, are not other matters connected?"

The problem of error is regarded as virtually an inevitable consequence of man's finiteness and freedom. *Error* and *evil* exhibit privations from *truth* and *the good*. Evil is an almost intractable problem, one which perpetually challenges the assumption *that God is good*. I think that Holmes shows that this problem is not utterly unmanageable. The doctrine that error and evil are privations is doubly strengthened by the considerations that (1) we do intend something meaningful when we use these words and (2) there is nothing substantively real in either error or evil as such. The remaining possibility (3) is that these words refer to a positive good that has missed the mark of its essentiality. The "privation" position provides an interesting reply to the contention of Epicurus that evil is incapable of being reconciled with the omnipotence and total beneficence of God in that *the very meaning of evil* implies the good from which it is a departure. Without the norm of good, evil would have no meaning at all. At the practical level, God permits the possibility of error and evil that man might learn about truth and the good from the baffles imposed by these privations.

Professor Holmes would hold a high view of truth and reason. He deplores the loss of truth, the loss of a worldview, the loss of meaning so characteristic of much of the thought of our day. "We simply cannot avoid reasoning. . . there is no other way to grasp truth than by using the rational powers God created in us." And Holmes does not hesitate to use reason as a

tool—indeed, *All Truth Is God's Truth* is throughout a reasoned statement—but as for a justification of reason, whether in its pure form of rationality or in its applied form of induction, Holmes finds that there is an inevitable circularity that leaves us with no alternative but to settle for a "practical necessity" in lieu of the "logical necessity" that cannot be demonstrated. Reason, in its purest form, rests upon the principle of non-contradiction and in its applied form adds the assumption of nature's uniformity. But the "proof" of reason must be reasonable and no psychological expectancy generated by nature's behavior justifies the claim to a theoretical insight of necessary uniformity. Thus: either circularity or a step down to "practical necessity."

Professor Holmes is entirely right in sensing that in these momentous matters, we are at the far-flung edges of epistemological empire. As a result, "proof" and "justification" take on a somewhat different aspect than that involved in the more limited proof of a geometric theorem or the acceleration rate of a freely falling body. However, the account of reason in terms of "purposes," "practical demands," "practical necessity," etc. strikes me as an unnecessary compromise. I would think that "Those underlying principles" [of reasoning] depend on something essential to the nature of reason itself rather than as Holmes says, "on the purposes of reasoning." Even at the level of experiencing our participation in rationality, it would appear that rationality's nature is that of an overarching norm to which we appeal. And we do so appeal because it is of our essence that we can do nothing else. Herein, then, lies the peculiar nature of a "proof" of reason or rationality: *an alternative cannot be thought!* For to attempt to say that there is no rationality or that the rational is a product or effect of the non-rational is itself a statement with rational form and is intended to speak a truth which re-admits rationality in the stating of it. And, interestingly, even the uniformity principle is not without its rational overtones. The only ultimate alternative to uniformity must be complete randomness. But again, the mind cannot even conceive of an utterly non-structured state of affairs.

The next step in apologetic effort would be that of rendering explicit the nature of a world in which reason is thus so necessarily displayed. And those repeated cautions against "autonomous" reason, "autonomous" ideals, "autonomous" rationality: might it not be more fruitful to search out the ground of such autonomies and thereby take firm steps towards the necessary inclusion of God in epistemological concerns?

Reviewed by Charles W. Mason, College of Arts and Science, University of Delaware, Newark, Delaware 19711.

RELIGIOUS ORIGINS OF MODERN SCIENCE by Eugene M. Klaaren, Wm. B. Eerdmans Publishing Co., Grand Rapids, Michigan (1977). 244 pp. Paperback. \$5.95.

This book by Dr. Klaaren, on the faculty in the Department of Religion of Wesleyan University, Middletown, Connecticut, is subtitled, "Belief in Creation in Seventeenth-Century Thought." His purpose is to emphasize the primary role played by the presupposition of Creation in the development of modern sci-

BOOK REVIEWS

ence. His approach is to document carefully the thought of several 17th century scholars, particularly that of Johan Baptist von Helmont and of Robert Boyle.

Klaaren sees three principal theologies of creation as having played a basic role in classical Christian thought: Creator as Divine Being, Creator as Spirit, and Creator as Will. Of particular significance for Klaaren is the development of a voluntarist tradition.

Central to this tradition was the insistence that the efficacy of God's will, His power in action, was more important than God's foreknowledge and final purposes in creation. (p. 47)

Klaaren selects von Helmont as an example of the Spiritualist theology of Creation: "simultaneity of time and history, and of all kinds and orders of genuine thought, vision, and practice, is the distinguishing mark of Spiritualism." (p. 58) Out of this approach came an exaltation of empirical investigation into the nature of "things themselves," rather than following the classical devotion to reason and the method of analysis and synthesis. However, Spiritualism's complete emphasis on wholistic judgments deprived it of the powers of discrimination typical of a voluntaristic approach.

More modern trends typical of Bacon, Boyle and Newton are also traced in some detail. Boyle's achievements in particular are noteworthy.

He differentiated chemistry and medicine, developed a carefully delimited experimental chemistry, including the distinctive genre of the laboratory report, differentiated a critical reflective philosophy of science, and advocated the distinct integrity of empirical knowledge. (p. 116)

His theology emphasized neither the Reformation concern with redemption, nor the medieval confidence with Being, but expressed the greatness, power and love of God through a primarily optimistic involvement with creation. It is relatively easy to see how such emphases led on to Deism and to a rejection of a well-balanced biblical perspective among Boyle's successors. It is somewhat anachronistic to read of Boyle's triumph in formulating the "clockwork" image of the world and God as Clockmaker, in which he made the giant step of breaking away "from traditional organic views of nature." (p. 155) Now the cycle has reversed and we are daily impressed through areas such as ecology with the importance of a wholistic and organic view of nature!

Rich in historic detail, I think the casual reader will find the scholarly density of this text hard going. The text ends with 37 pages of explanatory notes, an Appendix of 30 works by Boyle cited in the book, an 8 page index of subjects, and a 3 page index of names.

RECONCILING MAN WITH THE ENVIRONMENT by Eric Ashby, Stanford University Press, Stanford, CA (1978). 104 pp. \$7.95.

Lord Eric Ashby, a Fellow of the Royal Society and recipient of 21 honorary degrees recognizing his contributions both as a plant biologist and as an educator, delivered the Leon Sloss Junior Memorial Lectures in Humanities in 1977 at Stanford University, with

this book resulting as the text of these three lectures.

It is Ashby's thesis that primitive man identified himself with his environment through animism, and that modern man is proceeding to reestablish such an identification through the evidences of modern science. His argument starts with a curious aside in which he cites the interpretation of Genesis as "a license to exploit the environment" and then quotes twice from Cicero to show the effect of such a belief!

Ashby is dissatisfied with environmentalists who tell what "must be" done without telling how to do it. He sets forth a three stage "chain reaction" which he sees bridging the first realization of an environmental hazard to the final political solution leading to its removal: (1) public opinion has to be raised, (2) the hazard has to be examined objectively, and (3) this objective information has to be combined with the pressures of advocacy and with subjective judgments to lead to a final political decision. Ashby sees a growing questioning of whether we ought to do anything we can do, as a sign of human reconciliation with nature.

Particularly helpful is his analysis of the meanings of the term "value;" value can indicate (1) cost, (2) usefulness, (3) intrinsic worth, or (4) symbolic significance. Ashby argues effectively for the importance of concentrating on intrinsic worth, as opposed to only cost or usefulness. He offers many helpful suggestions and analyses of real economic and political questions, as well as technical ones. His contention is that "The idea of man as lord of nature is, in the minds of scientists, replaced by the idea of man in symbiosis with nature." (p. 83) Sadly I do not think that Ashby's humanistic morality is able to pull off the task he assigns to it when he calls for an environmental ethic with the premise "that respect for nature is more moral than lack of respect for nature."

NATURE AND MIRACLE by Johann H. Diemer (1977). Paperback. 37 pages.

REFLECTIONS ON THE TECHNOLOGICAL SOCIETY by Egbert Schuurman (1977). Paperback. 66 pages.

Both published by Wedge Publishing Foundation, Toronto, Canada.

These two very brief booklets expressing the perspective of men from the Netherlands who are involved with the thought of Herman Dooyeweerd, who himself wrote a memorial for Diemer's book, provide some challenging and stimulating reading.

Diemer's book is described as having been conceived over 30 years ago, but it is still very much relevant to the question of how God interacts with the world. It rejects the category of "divine intervention" in favor of a model in which God is constantly active in the world. Martyred in the Second World War at the age of 41, Diemer made a beginning at "reformed science in the area of biology." Some of his pithy statements will provoke immediate reaction:

BOOK REVIEWS

(The days of creation in Genesis) are basically dateless and cannot be measured by any human standard of time measurement. (p. 3)

To say that the beginning of a new phylum is grounded in creation means in no way that God created in a supernatural way by intervening in independent natural events. (p. 5)

the miracle of creation lies in the spontaneous appearance of the structural principles within which the generations of creatures pass and through which the existence of these creatures becomes possible . . . the miracles of its creation is continually present also. (p. 10)

The fall brought no change in God's design because the fall was included in the design as a possibility even before the creation began. (p. 12)

When we explain the miraculous by the supernatural, the miraculous is in fact denied. (p. 21)

I leave to the reader many other such statements that either strike a responsive chord or raise the theological hackles. Whether or not Diemer has indeed made a beginning at a "reformed science of biology"—or whether in fact such a "reformed science" is possible—are topics that are not easily resolved.

Schuurman, Professor of Christian Philosophy at the Delft and Eindhoven Institutes of Technology, tackles a Christian evaluation of modern technology and provides a Dooyeweerdian parallel to the criticisms of Jacques Ellul on the same topic. Schuurman differs from Ellul, however, by arguing "that autonomy is not inherent in technology but that it is the religious-spiritual assumption of post-medieval modern man." (From Foreword by Bernard Zylstra) He sees at the two extremes the technocrats on the one hand, who believe that what is good for technology is good for all culture, and the revolutionary utopians on the other hand, who dream of a revolutionary overthrow of technocratic society. Schuurman strives to show how each of these polar extremes can be avoided in a Christian assessment of technology. He sees the controversy between technocrats and utopians as a family feud within the context of humanism, guided by the concept of human autonomy.

. . . the thinking of technocrats and revolutionaries actually approaches two rival forms of nihilism. . . . The nihilism of the lifeless mechanical order of the technocrats has its obverse in the nihilism of revolutionary turmoil and chaos. (p. 16)

Arguing that it is indeed the pretension to human autonomy that lies at the root of the problems of our time, Schuurman offers a Christian analysis of science, planning and the meaning of technology. He chooses environmental pollution as a specific area within which to illustrate his approach.

While stressing that the root cause of trouble lies in man himself, Schuurman does stray off from time to time to point a particular finger at the engineer as the one who is "inspired by the idea of technology for its own sake," who contends "that whatever can be made should be made," (p. 33), who "emerge from their training naively engrossed with the idea of permanent progress brought about by technology," (p. 41), and as exemplars of "the imperative of technological perfection. . . . Whatever can be made and perfected must

be made and perfected." (p. 52) Such a leaning on the engineer *per se* may move away from an indictment of a human pretension of autonomy toward the raising up of a scapegoat, and needs to be avoided. In fact, elsewhere Schuurman does point out that

Engineers are now asking questions which were not posed until recently. Reflection on those questions should be part of the prescribed programme of the engineering student. (p. 42)

It may be cogently argued, however, that what the engineer needs is not so much to be less naive about technology, as to be less naive about human nature and the political process. Certainly we can agree with Schuurman that a beneficial addition to most technological curricula would be an authentic opportunity (as opposed to an establishment defense of *status quo*) "to reflect philosophically on the technological-scientific culture." Whether such an addition is possible, and how to bring it about are not simple questions.

Reviewed by Richard H. Bube, Department of Materials Science and Engineering, Stanford University, Stanford, California 94305.

TEXTBOOKS ON TRIAL by James C. Hefley, Wheaton, Illinois: Victor Books, 1976, 212 pp., \$6.95. Available from: Educational Research Analysts, P.O. Box 7518, Longview TX 75601 \$5.00 (prepaid).

Just at the point when I was beginning to doubt that any child takes his textbook very seriously, my 9th-grade son came in with an announcement. He solemnly revealed that his history text in commenting about an ancient Tigris River flood declared that, "the story of the Flood described in the O.T. was probably based on this *actual* flood in Mesopotamia." When asked if he habitually scours his texts for accuracy, he replied, ". . . only when it contradicts what I know is true."

With this recent personal introduction in mind I picked up *Textbooks on Trial* with some degree of interest. The reader soon discovers the primary targets of Mel and Norma Gabler's battle: textbooks encouraging increased centralized government with a corresponding de-emphasis on free enterprise, sexual promiscuity, "doctored" history, new math and "phoney" phonics, and biological evolution.

Jim Hefley got inside the story and sharply etched the fascinating tenacity of the Gablers who, beginning in 1961, fought against great odds to become the textbook conscience of America's conservative Christians. It is a dramatic story which Hefley lets "happen" right before the reader's eyes. The issues repeat themselves in great detail over every chapter, but rather than exhaust the reader, the reoccurring battlegrounds become symbols of a consistent press for improvement in the target areas of reform.

Mel and Norma become such familiar personalities that it is quite disappointing that there are no photographs of these people. In fact, what is now a proper, tightly written narrative filled with Texas textbook hearings, could have been a journalistic "spectacular"

with snapshot coverage of the main events. Perhaps one cause for the conservative rendering is the awkwardness which Victor Books (Scripture Press, Sunday School Curriculum Publishers) may have felt in tip-toeing into "controversial" reporting.

The caution was well-advised. The possibility for over-statements and even extremism in the political, social and religious issues portrayed is ever present. But only in the Foreword by former Arizona Congressman Conlan and in the slight overdoing of "conspiracy" thinking elsewhere was there a problem. As concerned as we all are about the impact of bad textbooks on youth, few would go so far as the Congressman's declaration that bad textbooks ". . . will ultimately destroy the family (and) decent social standards. . . ."

On the positive side is the clear impression that the Gablers' mission was not to put down all unacceptable texts, but to bring alongside the current renderings alternative historical, social and biological viewpoints more rooted in Christian values. The approach is seen most clearly in the case of evolution where Mel and Norma fought for the inclusion of a creationist alternative to exclusive evolutionary teaching.

The conservatism is very complete in this Texas arena: the adversary is big government, black activists, Vietnam protesters, values and education and new math. But regardless of the reader's politics, the Gablers' story chronicles an inspiring manual of how persistent, committed people can get inside the system and move it back towards the people.

Reviewed by Dirk Nelson, Professor of Christian Education and Acting Dean of Students, Melodyland School of Theology, Anaheim, California.

SCIENCE TEXTBOOK CONTROVERSIES AND THE POLITICS OF EQUAL TIME by Dorothy Nelkin. Cambridge, Mass. and London: MIT Press, 1977. xi, 174 pp. \$12.95.

The author is Associate Professor in the Cornell University Program on Science, Technology, and Society and Department of City and Regional Planning. In this book she seeks to explore the motives and perceptions that underly contemporary criticisms of science as expressed in the area of public education, and as illustrated primarily by the textbook controversies over creation/evolution and *Man: A Course of Study*, a year-long course of study for the fifth and sixth grades dealing with fundamental questions about human beings. Her approach is to provide a partial historical overview of some of the details entering into these controversies, and then to attempt an analysis of the basic causes of the conflict.

One of the most perceptive parts of this book appears in the final chapter on "Science and Personal Beliefs." Here she pinpoints some of the attitudes of scientists that contribute to the confusion: (1) scientific values are "founded on a view of science as an autonomous system distinct from its political, personal, or social context;" (p. 145)) (2) "that 'value-free' truths can be derived from an accumulation of evidence;" (p. 147) (3) reliable scientific guides for behavior are sometimes exaggerated by scientists "who sometimes claim excessive territory for the concepts and

tools of their disciplines;" (p. 147) (4) problems in the communication of science in which science is frequently represented as "authoritative, exact and definitive;" (p. 148) (5) loss of the tentative nature of science so that "in the process of simplification, findings may become explanations, explanations may become axioms, and tentative judgments may become definitive conclusions;" (p. 148) (6) an incomplete image of science in textbooks that "seldom includes analyses of the organization of research, the personal motivations of scientists, or the relationship of science to cultural and social attitudes;" (p. 149) (7) the presence of "dogmatism" (p. 149) in textbook treatments of contemporary research; (8) a tendency for scientists to respond to criticism by non-scientists "with their own kind of fundamentalism . . . apparently forgetting that science itself is approximate and metaphoric." (p. 149, 150) Such all too common attitudes on the part of scientists do little to prepare the ground for meaningful interaction with non-scientists who do not understand the workings of authentic scientific inquiry and who are seeking to assert their own values and power through the often misguided processes of "populist democracy." (p. 152)

I must confess that this concentration on the final eight pages of the book does not constitute a comprehensive review, but I have proceeded in this way to highlight the insight of the author that is often missing in the main body of the text. Here all too often she appears to support, or at least imply three main fallacies or facets that obscure the issues under discussion. First, Nelkin makes no effort to define the meaning of either "evolution" or "creationism" while using the terms extensively as if their meanings were self evident. She fails to point out the crucial distinctions between currently observable genetic change (micro-evolution), a general historico-scientific theory (macro-evolution), and a philosophy or worldview based on evolution (evolutionism), and she does not appear to realize that every Christian must be a believer in Creation (hence some kind of "creationist") even if he accepts evolution as a scientifically viable model. Second, Nelkin does not adequately make clear (until that last chapter) that the real issue joined with science often involves scientific *reductionism*, i.e., the non-scientific philosophical assumption that science provides the whole and only picture, and not authentic science itself. Thirdly, Nelkin often writes as though she accepted the myth of scientific objectivity (until that final chapter again) in which it is maintained that scientific theories are derived from objective "fact" without subjective inputs from the scientist or the scientific community in which he/she works.

Detailed comments on the creation/evolution and the MACOS debates would take us beyond the scope of this brief review. As one intimately involved in the textbook controversy in California, however, a few comments on Nelkin's treatment of this question may be justified. Following many commentators, she focusses on "fundamentalist" opposition while running through such names as Oral Roberts, Herbert W. Armstrong (who is the founder of his own church), Carl McIntire (noted for his schismatic excesses), and Billy James Hargis (an extreme right wing personality), while failing to pay any attention to authentic evangelical Christians whose perspective is less garish but

far more typical; she even includes Jehovah's Witnesses with their opposition to evolution as part of the same movement. Therefore it is easy for Nelkin to draw a caricature of such textbook watchers as "antiliberal, often anti-intellectual, and certainly anti-establishment," (p. 56) without coming to grips with the authentic intellectual defenders of evangelical Christianity and their reactions to these issues.

Highly commendable is the inclusion of Table 8 on pages 98-100, comparing original statements in science textbooks with the suggested changes by our committee, thus allowing the reader to judge the understatement in Nelkin's remark, "Most changes were basically unobjectionable and, indeed a few did correct some unnecessarily dogmatic statements." (p. 96) Again it is very helpful when on pp. 108 and 109, Nelkins lists some of the objections that were raised against the MACOS curriculum, so that the reader can perceive more completely the nature of the objections raised.

Chapter 8 on "Social Sources of Textbook Disputes" is also helpful in developing the three main themes characterizing the textbook debates: "1. disillusion with science and technology as threats to traditional values; 2. resentment of the authority represented by scientific expertise as it is reflected in public school curriculum decisions; 3. defense of the pluralist and egalitarian values that appear threatened by modern science." (p. 128) These are helpfully summarized in Table 11 on p. 139. All those concerned with the communication of authentic science would do well to ponder the lessons of Nelkin's book and plan to act in accord with them.

This review is a partial reprint from the Journal of Library History, Vol. 14, No. 1, Winter 1979, published by the University of Texas Press.

Reviewed by Richard H. Bube, Department of Materials Science and Engineering, Stanford University, Stanford, California 94305.

CREATION AND THE FLOOD: *An Alternative to Flood Geology and Theistic Evolution*, by Davis A. Young, Grand Rapids, Baker Book House, 1977, 213 pp., \$6.95.

Davis Young is one of the few writers in evangelical and fundamental circles who has studied the geological sciences to the degree that he is worth listening to in the natural sciences-biblical religion dialogue. His undergraduate work in geology was at Princeton. He received a M.S. in geology at Pennsylvania State University and his Ph.D. at Brown University. These schools are all highly regarded as centers of geological education and research by professional geologists. At the time of writing Young was an Associate Professor of Geology at University of North Carolina in Wilmington. His credentials are above reproach. On the other hand, he is somewhat hampered in writing this book in that he is a "hard rock" geologist, a specialist in igneous and metamorphic rock. "Soft rock" geology, such as sedimentology and paleontology, is obviously not his strength, and his book shows a certain lack of understanding especially of the fossil record. Young mainly takes up two topics in his book, theistic evolution and flood geology. He disapproves of them both.

The most powerful part of the book in this reviewer's opinion is that which decisively refutes neo-catastrophic flood geology. From his own field of igneous and metamorphic petrology alone Young is able to show how foolish it is to ascribe the origin of the fossiliferous strata to the Noachian flood. On the basis of the cooling rates of magmas, radiometric dating, metamorphic terrains, and of plate tectonics he shows the utter impossibility of ascribing fossiliferous strata to the flood.

In another sense, however, Young's arguments are undoubtedly an exercise in futility. Anyone with even just a limited background in geology understands the complete ridiculousness of viewing the fossil record as a result of the Genesis Flood. The Noachian Deluge couldn't account for one tenth of one percent of the fossiliferous strata as it is known, measured, and mapped today. This being the case, those who promulgate flood geology just aren't serious scholars. They are not interested in the pursuit of science for knowledge and insights gained, but rather as a source of evidence that can be twisted to support preconceived dogmatic formulations. No amount of reason or data will convince people who are basically propagandists to the uninformed.

Another purpose of Davis Young's book is to take issue with those who would espouse theistic evolution. Young agrees that living organisms may evolve in a limited way, but he feels that a proper understanding of Genesis 1 and 2 does not permit the view that God used the evolutionary process as His way of bringing the present life on this planet into being.

Young argues that Genesis 1 and 2 are historical accounts and that to interpret them poetically or parabolically is to allow sources of knowledge outside the Bible to color our interpretation of the Bible. On the other hand, when he argues his case for regarding the days of creation as being long periods of time rather than twenty-four hour days he states,

Mature creationism is incompatible with sound geology and therefore it is less acceptable than the alternative interpretation of Genesis 1 that we will develop in chapters four through six.

It seems inconsistent that geology can influence his interpretation of parts of the creation story but not his interpretation of the creation story as a whole.

It also seems strange that Young can argue that he can take the references in the Old Testament regarding the earth being held up by pillars in a poetical sense, but he would deny a similar interpretation to those who believe that there is good reason to interpret Genesis 1 and 2 poetically or parabolically. There is an ancient hermeneutical principle that says that we should take the meaning of a biblical text in a literal sense unless we have a very good reason for taking it in a symbolic sense. The record of His activities that God has preserved for us in the fossils of the earth give us very good reason for taking Genesis 1 and 2 in a symbolic sense.

Young's greatest problem, however, is his very sketchy understanding of the fossil record. His discussion on page 109 of "Genesis 1 and Paleontology" is rather unsophisticated. When he writes concerning paleobotany on page 128,

BOOK REVIEWS

There is nothing that says that grasses could not have come first, followed by herbs at some later time, and followed by fruit trees at some later time,

he shows no understanding of the place of grasses either phylogenetically or in the fossil record.

His arguments that because of the wording concerning God's activity in the fifth day of creation that "Sea creatures and birds are in any interpretation not directly related to one another" is one that no paleontologist who knew the fossil record would want to make. But if his attempt to make the order of the appearance of life on the earth as known from the fossil record correspond to the sequence of the six days of creation is to succeed, such statements and other labored reasoning are in order.

Davis Young's obvious lack of familiarity with more than the roughest outline of the content of the fields of paleontology is the greatest weakness of the book. He should not have attempted to write concerning a field with which he is so plainly at sea.

His lack of success in dealing with the fossil record does not mean that all his comments concerning theistic evolution are in vain. If Davis Young wants to believe in a punctuated creationism in regard to fish, birds and man, etc., that can be a matter of belief for him and can never really be proved or disproved in a way that would absolutely compel assent. In Roman Catholicism, for example, the papal encyclical *Humani Genesis* takes this approach. On the other hand, the Roman Catholic paleontologists I have known are rather embarrassed by the encyclical. The fossil record, which from any understanding is a record of God's activity in history, just does not lend itself to the interpretation of punctuated creationism.

So read the book for its easy demolition of flood geology from the point of view of a "hard rock" geologist. Davis Young is obviously a master of igneous and metamorphic geology. He is also to be commended for his evident concern with relating the world of knowledge and the world of faith.

Reviewed by Harold F. Roellig, Department of Earth Science, Adelphi University, Garden City, New York 11530.

In the preface to his book Young states:

I believe that it is possible to combine good theology and good geology by having a truly Biblical view of geology. To do this, one needs to reject both the flood geology and theistic evolutionism. It is imperative that theologians . . . and Christian lay people have this Biblical perspective on science if they are to avoid undermining Christianity itself and if they are to avoid detracting from the gospel of Jesus Christ by adding to it the human foolishness of pseudo-science. This book seeks to develop such a Biblical perspective of geology through a fresh reexamination of both Biblical and geological data.

Young is well qualified for his task because he is both a professor of geology and the son of the late Edward J. Young, professor of Old Testament at Westminster Theological Seminary in Philadelphia. He cites

his father's work frequently in the book, and, as we shall see, accepts his father's interpretation of "yom" (day).

In the opening chapter Young states his aims: to do justice to divine revelation in the Scripture and to geological theory. He feels there is no conflict between Scriptures and science, but the message of the Scriptures must never be twisted to suit scientific theories. The second chapter is a critique of theistic evolutionism which, Young feels, accepts the thrust of the biblical narrative but in its interpretation of Genesis elevates scientific theory over Scripture.

Chapter three discusses topics connected with "apparent age" and "mature creation," and briefly summarizes pertinent geological theories. Young is of the opinion that "young earth" theories which hold that creation was instantaneous and devoid of process are on a collision course with the findings of modern geology.

Young attempts to analyze what the first chapters of Genesis do, and do not, say. He asserts that the concept of creation, as it is used in the Old and New Testaments, does not rule out processes over long periods of time. The word "yom" (day), as it is used in Genesis, would permit this theory, according to Young. He feels that exegesis of Genesis should not put burdens upon scientists and laymen which the Scriptures do not require. Thus, the processes observed by modern geologists, he feels, are not contradictory to the historical facts revealed in Genesis.

Although Genesis would not prevent taking a similar view of the origin of man, Young states in chapter seven that other passages, especially Romans 5, have convinced him that man was "directly created by God." If this causes disagreement between geology and Scriptures, Young is willing to accept this conflict rather than making interpretation of Scriptures subordinate to a (temporary?) scientific theory.

Although he is critical of "flood geologists" and theistic evolutionists alike, Young states that his book is a response to *The Genesis Flood* by Whitcomb and Morris (Presb. and Reformed Publishing Co., 1961). The debate on the significance of Noah's flood in contemporary geological studies is a heated one. Morris has staunchly defended his viewpoint in a review of Young's book in *Impact Series* (No. 55, Creation Research Society, San Diego, Ca.). Morris even questions the propriety of Baker Book House in publishing Young's book. In such a charged atmosphere, few issues are likely to be resolved.

I agree with the comments of Dewey K. Carpenter in the ASA newsletter (Oct./Nov., 1977, p. 17):

His [Young's] criticisms of theistic evolution are familiar enough, covering ground known to most people interested in these matters. This part of the book will reinforce the views of those who already reject theistic evolution while appearing superficial and unconvincing to those who hold such a position.

However, I am pleased to see a critique of "flood geology" because this theory seems to me to be speculative, going much beyond the Genesis account. Many books have been written about the flood. Most are intended to save the Bible from the attack of evolutionists. However, the Bible does not need to be saved. It stands, without support from speculative theories

BOOK REVIEWS

which have little basis in the Scripture themselves.

It is regrettable that Young did not include a discussion of some of the recent hominid skull finds, particularly skull 1470 found by Richard Leakey in Kenya. (Implications of these finds have been discussed by Claude E. Stipe in the Dec. 1976 issue of the *Journal ASA*.) Furthermore, the absence of an index and bibliography at the end of the book is also a drawback.

R. Hodgson, in another review of the book (in *Pro Rege*, Dec. 1977, Dordt College, Sioux Center, Iowa) states the following:

On p. 172 Young inclines toward accepting the idea of a universal Flood without an adequate exegetical study, something not characteristic of him elsewhere. What does 'all flesh' and 'all the earth (or land)' mean, especially in the Hebrew? Is Moses thinking in global terms, or would an extensive regional flood be agreeable to Scripture? The question is not easily settled from the Bible.

These are not major criticisms, I feel. Young's book can be the beginning of a profitable dialogue about the validity of "flood geology" theories.

Reviewed by Harry Cook, Dordt College, Sioux Center, Iowa 51250.

Davis A. Young has made a valuable contribution to the Christian community in providing an alternative to Theistic Evolution and Recent Creation/Flood Geology. While maintaining an uncompromising view of Scripture, he suggests that Christians should not dogmatically insist on one interpretation of Scripture where a certain latitude of legitimate interpretation is possible. He claims that failure to allow legitimate latitude in interpretation of Scripture has produced many unnecessary conflicts between the Bible and Science, most of which are more apparent than real.

Young begins by critiquing the writings of theistic evolutionists, showing what he believes to be the theological shortcomings in their respective views of Scripture. Next, he critiques the mature creation/flood geology views of Whitcomb and Morris, criticizing the geological implication of their theory. He then proceeds to develop his alternative. Young's harmonization of Scripture with scientific observation includes an interpretation of the days of Genesis 1 as periods of time and the "creative" acts of God as being a mixture of miracles and process, i.e., God acting in extraordinary ways, and in customary ways through the so called natural laws. The permissible latitude of interpretation of Scripture in Genesis 1 is discussed in a surprisingly rigorous manner, considering the author's training is in geology, not theology. The level of scientific information provided is certainly in keeping with what one would expect from a knowledgeable geologist.

A whole chapter is devoted to the Genesis flood. Here the author rejects the Whitcomb-Morris model of the flood while affirming that the scope of the flood may indeed have been worldwide. Young's arguments here deal with quite specific geological problems that cannot be adequately explained by the Whitcomb-Morris flood model.

Young strongly advocates belief in a historical Adam

and then gives a fascinating summary of the fossil finds of prehistoric man or manlike creatures with an interesting interpretation of their possible significance.

The book has a few shortcomings which should be mentioned. The question of geological dating and the age of the earth is not dealt with in a comprehensive, unified manner. Sedimentation is discussed early in the book and strontium-rubidium radiometric dating is discussed late in the book. A critique of other dating methods purported to give indications of a young earth (dust on moon, earth's magnetic field, salination of seas, footprint in Puluxy River, etc.) is absent and would have been helpful. While the author's model is very similar to progressive creationism, he seems to avoid any detailed discussion of the gaps in the fossil record and their pertinence to such a model. He implies process may be an adequate explanation for the origin of life. This reviewer finds the current scientific evidence for spontaneous generation quite unconvincing. Finally, a more specific discussion of the positive alternatives to the Whitcomb-Morris model of a universal flood would have been helpful.

The author's willingness to resist the temptation to produce a superficial harmony of science and scripture where a real harmony is not possible at present is noteworthy. The breadth of coverage is extremely good and the style of writing makes for easy reading. The technical level will allow the book to be appreciated by the scientifically unsophisticated reader as well as the student of science. I highly recommend it to anyone interested in harmonizing Scripture and science.

Reviewed by Walter L. Bradley, Department of Mechanical Engineering, Texas A & M University, College Station, Texas.

FALLACIES OF EVOLUTION by Arlie J. Hoover, Baker Book House, Grand Rapids, Michigan, 1977, 85 pp., Paperback, \$2.50.

Evolution, as it has been popularized to the public, has been under heavy attack of late from a variety of sources. Arlie J. Hoover's *Fallacies of Evolution* is yet another voice joining the chorus crying out that "The Emperor has no clothes!" Dr. Hoover, dean of Columbia Christian College, Portland Oregon, and participant in a televised creation/evolution debate with Berkeley scientist Dr. Dick Lemmons, has written this book expressly for the layman. He thinks that scientists intimidate the laymen with their verbiage and jargon and seeks to encourage the average citizen to participate in the evolution/creation discussion. Hoover's approach is not to educate the laymen concerning scientific arguments per se, but to present the errors in logic and the thinking frameworks involved in the controversy. The premise of the book is whether the problem of origins is either an open or closed question. If it is indeed, an open question, then Hoover states that it is unjust to teach only one theory of origins in our classrooms.

The first and main fallacy Hoover presents is "scientism," which he defines as an uncritical worship of the empirical scientific method, an excessive veneration of laboratory technique. This fallacy makes "sci-

JOURNAL OF THE AMERICAN SCIENTIFIC AFFILIATION

BOOK REVIEWS

ence" a sacred word and the phrase "science has proved" has the force of a Papal Bull. Eventually scientism destroys the recognition of all abstract things: mind, values, morality, beauty, God, love, freedom, etc., and therefore creates a framework of thinking which cannot interpret facts in terms of abstract concepts. The results of thinking in these terms of reduced reality are shown in the chapter on Social Darwinism where laissez-faire capitalism, imperialism, war, eugenics, and racism are discussed. Hoover briefly covers some scientific topics involved in the evolution/creation controversy (but not the Second Law of Thermodynamics) as well as other logical traps (e.g., asserting the consequent). He concludes that evolution does not address the unique features of man; reason, language, art, morality, and religion, and therefore is *unjustly* being forced upon students.

Hoover's book is short and quickly read. For non-technical people it is a good introduction to the creation/evolution debate and I recommend it for them. I think American Scientific Affiliation members may find only the logical approach and "scientism" interesting. For those wishing to pursue the logical approach in greater depth and detail, I recommend the referenced book *Darwin Retried* by Norman Macbeth.

Reviewed by E. T. McMullen, Air Force Institute of Technology, Wright-Patterson AFB, Ohio

FROM EVOLUTION TO CREATION: A PERSONAL TESTIMONY by Carl E. Parker, Creation-Life Publishers, Inc., San Diego, California. 1977. 40 pp.

This small book consists of the transcripts of four radio talks in which Dr. Gary Parker responds to questions from the program host, who is obviously another young-earth creationist, and discusses his "... conversion, both Scriptural and scientific, from evolution to creation."

In the first talk, "Evolution as Religion," Parker mentions the "zealous," emotional, defensive ways in which he, like some evolutionists, used to respond to challenges to evolution. As a teacher, he consciously tried to get students to fit their religious feelings into the fact of evolution. Parker then compares the evolutionary concepts of sin and salvation, absence of God, and freedom to teach "evolutionary religion" in public schools, with their Christian counterparts. He believes that "evolution is really a faith and heart commitment, a complete world-and-life view; in other words, a religion." He concludes this talk with "To be quite honest with you, if God hadn't changed my heart, I believe I would be happy and content as an evolutionist today."

The second talk, "Conversion from Evolution to Christianity," describes his change from evolution to theistic evolution and progressive creation, neither of which completely satisfied him.

The next talk, "Scientific Conversion," centers around his "conversion" to become a young-earth creationist, a process which occurred while reading *The Genesis Flood* by Whitcomb and Morris, and taking some geology courses for his Ed.D..

The last talk, "Creation in Science and Education,"

touches on some differences which evolutionist and young-earth creationist perspectives make regarding current topics such as pollution, population control, abortion, and disease.

The general tone of this book is much like other publications from this school of creationist belief, even to the lack of a clear definition of "evolution". This word is often misunderstood, especially when used in the limited sense implied in this book. An explanation of what Parker means by "scientific conversion" would also help readers understand what was "scientific" about his conversion to a young-earth creationist. Some will question his implication that the mature, thinking Christian will eventually become a young-earth creationist too. However, it is probably not fair to regard this book as a scientific or theological publication which has gone through the usual process of being carefully thought out, written and rewritten, and edited for publication. It is just what the title and preface say, transcripts of Gary Parker's personal testimony given on radio. As such, it will be welcomed by young-earth creationists.

Reviewed by L. Duane Thurman, Department of Natural Science, Oral Roberts University, 7777 South Lewis, Tulsa, Oklahoma 74171

GENESIS ONE AND THE ORIGIN OF THE EARTH by Robert C. Newman and Herman J. Eckelmann, Jr., Inter Varsity Press, Downers Grove, Ill. (1977) paperback, 135 pp. \$3.95.

This is one of a number of very useful books published recently supporting the progressive creationist viewpoint. Both authors appear well qualified to discuss interactions between Christianity and astronomy in view of their theological degrees and their work experience or advanced degrees in astrophysics. Earlier work by Robert Newman has appeared in the *Journal ASA*. Their present discussion centers on the evidence (especially astronomical) for great ages, the formation of the earth, and the reconciliation of these with the Genesis account. They do not consider biological questions and deal only briefly with geology.

The scientific discussions are intended for a non-scientific readership and are probably at about the right level for college students. The extensive footnotes refer primarily to textbooks or compendia and only rarely to primary sources. While such practice would be incorrect in a technical book, it is probably appropriate and helpful for a general audience.

The theological section of the book first covers familiar ground regarding our inability to date creation using the Genesis genealogies. This is followed by a detailed discussion of Gen. 1:1-19, including exegesis and the proposed relationship of each section with an astronomical model for the origin of the earth. At this point the novel idea is suggested "that the 'days' of Genesis 1 are twenty-four-hour days, sequential but not consecutive, and that the creative activity largely occurs between days rather than on them. That is each Genesis day introduces a new creative period" (p. 74). Furthermore, these creative periods do not

BOOK REVIEWS

end with the coming of the next day, but rather continue on through the present. In particular, God's work in redeeming man is seen as part of the activity following the sixth day, with God's rest on the seventh day still in the future. There is no attempt made to reconcile this last point with the past tense reference to God's rest in Exodus 20:11, but the point is not critical to the majority of their discussion.

An astronomer can find a number of minor points to criticize in the scientific sections. For example, most red giant stars are not as luminous as indicated in Figure 1 (p. 25), nor do most of us believe that "stars heavier than 1.2 times the mass of the sun become neutron stars rather than white dwarfs" (p. 24), in view of the enormous amount of evidence for stars losing mass. More serious in the present discussion is the neglect of interstellar molecular clouds and their role in star formation. Young-earth creationists have argued correctly that typical interstellar clouds cannot contract under their own gravity. They need to be told that the high densities and very low temperatures observed in molecular clouds will lead to such contraction.

In conclusion, the book can be highly recommended. It should not be taken, however, as representing the views of all progressive creationists. As the authors emphasize, their proposals are offered for consideration, not as the final word on the subject.

Reviewed by Kyle M. Cudworth, Yerkes Observatory, Dept. of Astronomy and Astrophysics, University of Chicago, Williams Bay, Wisconsin 53191. For a previous review, see Journal ASA 30, 91 (1978).

THE SCIENTIFIC CASE FOR CREATION by Henry M. Morris, Ph.D., Creation-Life Publishers, Inc., San Diego, California. 1977, 87 pp., \$1.95.

This book summarizes the main viewpoints on evolution and creation held by Dr. Morris, Director of the

Institute for Creation Research (ICR) and former president of the Creation Research Society. Although described as "the scientific case for creation," it has the strong antievolution approach characteristic of other publications by the ICR. Most of the references, however, are from the scientific literature.

The first two chapters briefly describe the only two models of origins discussed, evolution and a young-earth, flood-geology model of creation. He mentions but does not discuss other models considered to be "pseudo-creationist." The main message is found in chapter 3, "Is Evolution Possible at Present?"; chapter 4, "Did Evolution Occur in the Past?"; and chapter 5, "Is the Earth Really Old—or Just Tired?" The last chapter (6) discusses some implications of the young-earth creation model. Of the 67 pages in these six chapters, 17 are figures and a table, all on a pleasant green background. At the end of the book are 11 pages of annotated bibliography describing additional books supporting this model of creation. There is an index of figures but no index for the book which, because of its small size, probably does not need one.

This book is quite readable and well-organized. The several quotations are enlightening and used effectively. Scientists may be uncomfortable with the frequent use of words such as "impossible," "never," and "only," where probability statements are generally used. Morris also uses the term "evolution" in an undefined but restricted sense that may be misunderstood by newcomers to the subject. Rather extensive use of the laws of thermodynamics and catastrophism characterize most of his case for creation. For someone who wants a readable treatment of the evolution and young-earth creation viewpoints held by the ICR and Creation Research Society, there is probably no better book than this one.

Reviewed by L. Duane Thurman, Oral Roberts University, 7777 South Lewis, Tulsa, Oklahoma 74105

We have sufficient energy resources to supply our basic needs for many decades, but the costs will rise continually. The country still does not understand the problem. The layman wants to believe in inexhaustible, cheap gasoline and in this has been supported by many unsubstantiated claims. The time has come to realize that no miracle is imminent and we must make do with what we have. We will never again have as much oil or gas as we have today, nor will it be as cheap. Nuclear energy has been a major disappointment, solar energy will be slow in developing and, contrary to popular opinion, quite expensive. Coal is the only salvation for the next few decades. In the last analysis, we have entered into a massive experiment to determine what effect energy growth has on economic growth, or how much we can slow the machine down and still maintain a democratic, capitalistic form of government.

Earl T. Hayes

"Energy Resources Available to the United States, 1985 to 2000," *Science* 203, 233-239 (1979)

Letters

Nuclear Waste Can Be Handled

A statement of Carl Henry's article in the September 1978 issue of the *Journal ASA* elicits this letter from me. In his article entitled "Christianity and Medical Frontiers," he states, "And many now ask whether scientists who hailed their creation of the bomb as signaling the dawn of a luminous atomic age should not have known and said also that there is no known way to handle atomic waste." He also makes generalizations that are popular in the antitechnology expressions of the day. The facts regarding nuclear waste are similar to those surrounding many of our societal problems of the day; measures for handling these problems exist, but the will to do so is lacking. We who are Christians certainly are aware of our willfulness or lack of will at times of decision.

May I commend the writings of Dr. Margaret Maxey, a Christian ethicist at the University of Detroit, as one who is articulating the issues of the day very clearly. Perhaps she would give you permission to publish some of her writings so that ASA members would be privileged to gain a Christian perspective on the energy picture of the day. A member of ASA, Vic Uotinen, is also writing and working on the subject. For your personal use, I am enclosing copies of some of the articles so that you might be persuaded to keep the ASA from being used for political purposes in contradistinction to its appropriate role of being an instrument of hope, based on the use of truth, both scientific and spiritual.

Everett Irish
Battelle, Pacific Northwest Laboratories
Richland, Washington 99352

[Ed. - We look forward to contributions from Dr. Maxey and others in later issues.]

Dialogue More Fruitful than Dispute

Now that the 1978 meetings are history and reflections on its many highlights compete for attention, there is one personal experience that I should like to share with you. It is evidence that sincere discussion between people holding opposing views can reduce misunderstanding—that communication can lead to increased understanding.

Leading up to this experience was the report of a panel discussion of May 2 at Wheaton College on the theological implications of how long ago creation took place. That event had involved the confrontation of those holding two major positions of creationism, that of a geologically ancient creation, and that of the young-earth, recent creation. The former position was presented by panelists who represented no single organization, although one of them was an ASA member. The latter position, because of the nature of its current image, and because the invitation was given to the Institute for Creation Research, Midwest Center, was represented by two of the prominent spokesmen for the ICR.

The particular highlight that I wish to share with you is that since one of those spokesmen, Pastor Marvin Lubenow, was present at the Hope College meetings we had a chance to have some long conversations, to exchange some ideas, to refine terminology, and thus to clear up some misunderstandings on the part of both of us. Although neither of us convinced the other to change his basic views, I was able to revise parts of the report to reflect his explanations. I found Pastor Lubenow to be a most gracious, Christian gentleman, willing to communicate without a closed mind.

Thus I was encouraged to believe that the bridgebuilding between the ICR and the ancient-creation position (often identified with the ASA) towards which the reported panel discussion was aimed, might indeed be continued between the more open-minded on both sides of the question.

This brings me to the point of this communication: although we seek continuing discussion among Christians, such interaction with reference to those holding opposite views on any subject should be conducted in charitable terms and in a manner becoming to Christians.

A recent communication from ICR director, Henry Morris, alleges that, " 'Bridge-building', of course needs to proceed in two directions. For at least three decades ASA . . . , and neo-evangelicals in general have been ridiculing those of us who believe in a young earth and flood geology This has been very hurtful."

Whether this charge is true or false, exaggerated or one-sided, or merely the result of misunderstanding, my reply to Dr. Morris in part promised, "to take every possible precaution against any further such expressions appearing in ASA publications. We shall . . . continue the 'open forum' style of expression, including different sides of questions debated by Christians, without sarcasm and ridicule against other creationists of which we have been accused"

Accordingly I am sending this letter to the editors of both our *Journal* and our *Newsletter*, and thus to all future authors within their pages, asking them to continue to lead our membership at large with diligent attention to the rhetoric of controversy. Dialogue is more fruitful than dispute; and criticism can be expressed as eloquently in love as in condemnation.

James O. Buswell, III
President, ASA
Wheaton College
Wheaton, Illinois

(Ed. - This letter was written for all the members of the ASA on September 1, 1978. It was published in its entirety in the Fall 1978 issue of the ASA News, but due to a misunderstanding has not been previously published in the Journal ASA.)

Problems of Chemical Evolution Not Solved by Prigogine

I would like to respond briefly to Dr. Jerry D. Alberts' communication entitled "New Insights into Thermodynamics" (*Journal ASA*, September, 1979). Having carefully read Prigogine's and Nicolis' new book *Self-Organization in Nonequilibrium Systems* (1977) (which I highly recommend), I believe Albert has greatly exaggerated the degree to which Prigogine's work has resolved the thermodynamic difficulties in chemical evolution. Prigogine, Nicolis and Babloyantz (1972, 1977) in commenting on biological complexity have recently noted:

"All these features bring the scientist a wealth of new problems. In the first place one has systems that have evolved spontaneously to extremely organized and complex forms . . ."

Furthermore, Prigogine repeatedly has argued that one cannot simply dismiss the problems by some vague appeal to non-equilibrium thermodynamics as Albert and many others do. The mechanisms responsible for the emergence and maintenance of coherent states must be established.

Nicolis and Prigogine (1977) have shown that a chemical system whose kinetic description involves a set of nonlinear equations is inherently unstable. In such a system a small fluctuation from steady-state may continue to grow larger, causing the system to move further from equilibrium, with an associated increase in energy dissipation. Nicolis and Prigogine suggest two models that would have the required nonlinearity, a highly improbable (by their own admission) trimolecular model and a series of chemical reactions which explicitly show autocatalytic activity. For the trimolecular model, if the relative reaction rates satisfy very specific criteria, the boundary conditions are tightly controlled and rapid removal of reaction products throughout the system occurs, one can show a spatial variation of concentration of two molecules that were initially homogeneous. This very low degree of spontaneous ordering in view of the number of constraints required on the system causes one to wonder whether a system capable of producing biologically significant complexity would not have so many constraints and conditions required that their simultaneous satisfaction would be a miracle in its own right.

LETTERS

While autocatalytic activity can and does give the required kinetic nonlinearity in some important chemical reactions in the metabolism of living systems, it remains to be demonstrated experimentally that these models have any real significance in the prebiotic condensation of protein and DNA. No significant autocatalytic activity has been noted in these systems. More importantly, however, these models in their current formulation predict at best higher yields in otherwise unfavorable chemical reactions without any mechanism to control the sequencing which is absolutely essential to function. Prigogine, Nicolis and Babloyantz have acknowledged the great gulf between their hypothetical models and prebiotically significant reactions by commenting at the end of an article in *Physics Today*, November, 1972,

"One is tempted to hope (emphasis added) that these aggregation phenomena will provide valuable indications of how higher organisms develop" (a much more cautious statement than that attributed to them by Albert).

Prigogine's work has clearly opened the doors to a better understanding of irreversible processes in living systems and the role energy and mass flow play in sustaining such systems. His work does not, however, give any adequate answer to how such living systems came into existence.

That a seed can become a tree or an egg, a chicken is not surpris-

ing if sufficient mass and energy flow through a system with a mechanism for converting the energy into the required specific work. Living systems through DNA and enzymes contain such a mechanism. Apart from living systems, nature is not full of "processes that bring order from chaos." Our dismal failures in synthesizing either protein under prebiotic conditions or DNA under any conditions suggests that the required nonlinearity via autocatalytic activity is absent. Neither can one solve the problem by arguing by analogy to a system such as conventional heat conduction that does have the required instability. It is certainly significant that theory predicts and experiments (as well as daily experience) confirm the existence of convection currents. This stands in sharp contrast to synthesis of DNA and protein where the autocatalytic activity required by theory remains at present unconfirmed experimentally and the synthesis of these molecules, unsuccessful.

I would urge Dr. Albert to read more completely Prigogine's work to avoid drawing exaggerated conclusions and then describing those who might disagree as being "unwary or uninformed."

Walter Bradley
Department of Mechanical Engineering
Texas A & M University
College Station, Texas 77843

Greek vs Hebraic Concepts

Greek

logical thinking
spatial thinking
thing as object
eye people
isolates, particularizes
architectonic, upward
freezes objects
objective
distant and abstract
time as quantitative
history is what is past
seeks being
being is static
creation as origin of world
word as ordering reason
nothingness is to be controlled
as an intimation of chaos
matter as object
body is an object encaging the soul
dualistic
spirituality flees the sensual

contemplation as flight from earthy
concerns to gaze at immutable being
charity as quiet repose and kindnesses
redemption as perfection
salvation as a journey out of this world
utopia is no-place

Father Matthew Fox, O.P.

"Elements of a Biblical Creation-Centered Spirituality," *Spirituality Today*, December 1978, pp. 368, 369.

Hebraic

psychological thinking
time thinking
thing as tool or instrument
ear people
universalizes
musical, around
welcomes movement
subjective
near and tactile
time as qualitative
history is altering the future
seeks becoming
being is energy
creation as inauguration of salvation history
word as deed
nothingness is to be entered into as part of
the good creation
matter as energy
body is soul; i.e., a living person
holistic
spirituality is found in the carnal and
sensual
contemplation as recreating the earth by
celebration and justice
charity as justice
redemption as liberation for the oppressed
salvation as a re-creation of this world
utopia is real (eschatology)

Founded in 1941 out of a concern for the relationship between science and Christian faith, the **American Scientific Affiliation** is an association of men and women who have made a personal commitment of themselves and their lives to Jesus Christ as Lord and Savior, and who have made a personal commitment of themselves and their lives to a scientific description of the world. The purpose of the Affiliation is to explore any and every area relating Christian faith and science. The *Journal ASA* is one of the means by which the results of such exploration are made known for the benefit and criticism of the Christian community and of the scientific community.

Members of the **American Scientific Affiliation** endorse the following statement of faith: (1) *The Holy Scriptures are the inspired Word of God, the only unerring guide of faith and conduct.* (2) *Jesus Christ is the Son of God and through His Atonement is the one and only Mediator between God and man.* (3) *God is the Creator of the physical universe. Certain laws are discernible in the manner in which God upholds the universe. The scientific approach is capable of giving reliable information about the natural world.*

Associate Membership is open to anyone with an active interest in the purpose of the ASA. **Members** hold a degree from a university or college in one of the natural or social sciences, and are currently engaged in scientific work. **Fellows** have a doctoral degree in one of the natural or social sciences, are currently engaged in scientific work, and are elected by the membership. **Dues:** Associate \$15.00, Member \$20.00, and Fellow \$27.00 per year. A member in any of these three categories can take the *special student rate* of \$7.50 per year as long as he is a full time student.

EXECUTIVE COUNCIL:

A. KURT WEISS (Physiology) University of Oklahoma Health Sciences Center, Oklahoma City, Oklahoma 73190, *President*

HOWARD H. CLAASSEN, (Physics), Wheaton College, Wheaton, Illinois 60187, *Vice President*

ROBERT L. HERRMANN, (Biochemistry), Oral Roberts University School of Medicine, Tulsa, Oklahoma 74102, *Secretary-Treasurer*

JAMES O. BUSWELL, III (Anthropology), Wheaton College, Wheaton, Illinois 60187

CHI-HANG LEE (Chemistry), RJR Foods, Winston-Salem, North Carolina 27100

EXECUTIVE SECRETARY:

WILLIAM D. SISTERTON, Suite 450, 5 Douglas Ave., Elgin, Illinois 60120.

EDITOR, AMERICAN SCIENTIFIC AFFILIATION NEWS:

WALTER R. HEARN, 762 Arlington Ave., Berkeley, California 94707.

PUBLICATIONS include the *ASA News* (sent to all members four to six times each year); four symposia: *Modern Science and Christian Faith*, F. Alton Everest, Editor, Van Kampen, Wheaton, Illinois (1950) (out of print), *Evolution and Christian Thought Today*, Russell L. Mixer, Editor, Eerdmans, Grand Rapids, Michigan (1960), *Our Society in Turmoil*, G. Collins, Editor, Creation House, Carol Stream, Illinois (1970), and *People, Power and Protein*, *Journal ASA Supplement 1* (1976). Individual authors are also encouraged to publish independently.

INDICES to back issues of the *Journal ASA* are published as follows: Vol. 1-15 (1949-1963), *Journal ASA* 15, 126-132 (1963); Vol. 16-19 (1964-1967), *Journal ASA* 19, 126-128 (1967); Vol. 20-22 (1968-1970), *Journal ASA* 22, 157-160 (1970); Vol. 23-25 (1971-1973), *Journal ASA* 25, 173-176 (1973); Vol. 26-28 (1974-1976), *Journal ASA* 28, 189-192 (1976). The *Journal ASA* is indexed in the CHRISTIAN PERIODICAL INDEX. Present and past issues of the *Journal ASA* are available in microfilm at nominal cost. For information write University Microfilms, Inc. 300 North Zeeb Road, Ann Arbor, Michigan 48106.

LOCAL SECTIONS of the American Scientific Affiliation have been organized to hold meetings and provide an interchange of ideas at the regional level. Membership application forms, ASA publications and other information may be obtained by writing to: AMERICAN SCIENTIFIC AFFILIATION, Suite 450, 5 Douglas Ave., Elgin, Illinois 60120.

CENTRAL CALIFORNIA
CHICAGO
DELAWARE VALLEY
GULF-SOUTHWEST
INDIANA
NEW ENGLAND
NEW YORK CITY AREA
NORTH CENTRAL (Minnesota)
ONTARIO
OREGON
RESEARCH TRIANGLE (North Carolina)
SAN DIEGO
SAN FRANCISCO BAY
SOUTHERN CALIFORNIA
WASHINGTON-BALTIMORE
WESTERN MICHIGAN
WESTERN NEW YORK

246-4
DR DONALD W MUNRO
DEPT. OF BIOLOGY
HOUGHTON COLLEGE
HOUGHTON NY

14744

SYMPOSIUM ON INERRANCY

<i>The Relationship between Christian Truth and the Natural Sciences</i>	65	
The Ongoing Struggle Over Biblical Inerrancy	69	Clark H. Pinnock
Another View: The Battle for the Bible	74	Richard J. Coleman
The Argument for Inerrancy: An Analysis	80	Timothy R. Phillips
The Behaviorist Bandwagon and the Body of Christ		
II. A Critique of Ontological Behaviorism from a Christian Perspective	88	Mary Stewart Van Leeuwen
Christianity and Culture		
II. Incarnation in a Culture	92	Kenneth L. Pike
Meditation: A Requirement	96	Helen E. Martin
Acceptance Address for the Templeton Prize 1978	102	Thomas F. Torrance

SCIENCE AND THE WHOLE PERSON

Part 10. Human Sexuality		
(A) Are Times A'changing?	106	Richard H. Bube

BOOK REVIEWS

<i>Biblical Authority</i>	113	Jack Rogers
<i>The Debate About the Bible</i>	113	Stephen T. Davis
<i>Healing and Wholeness</i>	114	John A. Sanford
<i>Medical/Moral Problems</i>	115	Robert Heyer
<i>Fire in the Fireplace: Contemporary Charismatic Renewal</i>	115	Charles G. Hummel
<i>Charismatic Social Action: Reflection/Resource Manual</i>	117	Sheila M. Fahey
<i>All Truth Is God's Truth</i>	118	Arthur Holmes
<i>Religious Origins of Modern Science</i>	118	Eugene M. Klaaren
<i>Reconciling Man with the Environment</i>	119	Eric Ashby
<i>Nature and Miracle</i>	119	Johann H. Diemer
<i>Reflections on the Technological Society</i>	119	Egbert Schuurman
<i>Textbooks on Trial</i>	120	James C. Hefley
<i>Science Textbook Controversies and the Politics of Equal Time</i>	121	Dorothy Nelkin
<i>Creation and the Flood</i>	122	Davis A. Young
<i>Fallacies of Evolution</i>	124	Arlie J. Hoover
<i>From Evolution to Creation: A Personal Testimony</i>	125	Gary E. Parker
<i>Genesis One and the Origin of the Earth</i>	125	R. C. Newman and H. J. Eckelmann, Jr.
<i>The Scientific Case for Creation</i>	126	Henry M. Morris

LETTERS 127

"Upholding the Universe by His Word of Power." Hebrews 1:3

VOLUME 31, NUMBER 2 JUNE 1979