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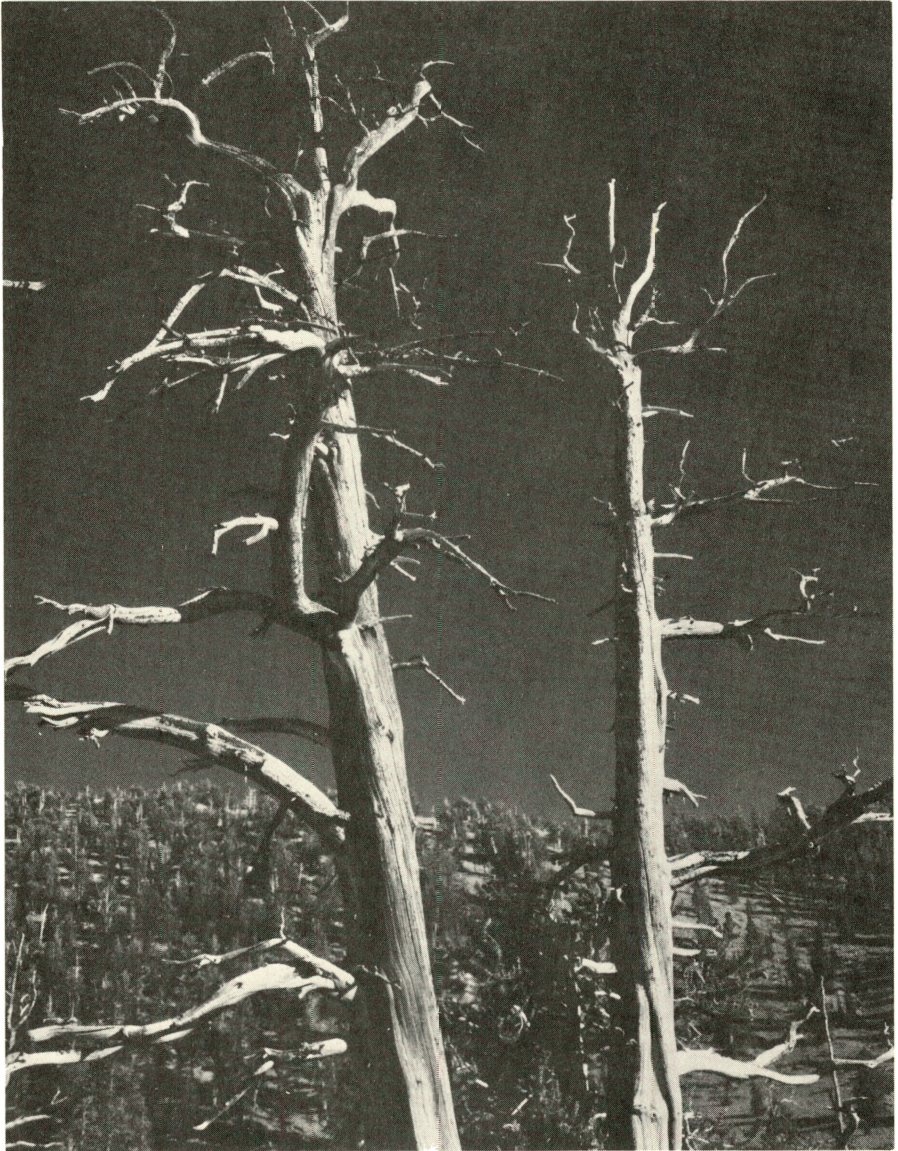
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GEORGE O. SCHUMACHER



An Ethic of Responsibility

JACK W. PROVONSHA

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Many serious-minded Christians share in the alarm expressed by conservative believers over the degenerating moral climate of America — including the American church. Overrapid change in almost every aspect of life has left large segments of our country in a situation of virtual anomie, or at least in considerable confusion about what constitutes the good life.

Negative reaction to this confusion has tended to center against one aspect of contemporary ethical thought, namely, that ethical posture known as Situationism, and one can only feel sympathetic toward the anxiety revealed in this reaction. Unfortunately, many of those who have written and spoken out against this ethical viewpoint have been nonprofessionals who, however well-intentioned, have not possessed the basic information essential to an understanding of what is really at stake.

Above all there is a need for a clarification of language. First, for example, let us consider the terms Situationism and "situationism." Though spelled the same, they refer in fact to quite different entities. The former is a technical term with a fairly precise definition. It is an ethical posture also referred to as Contextualism or Contextual Ethics, terms I shall use interchangeably here. By usage in conservative circles, the latter has come to mean lack of moral responsibility; immorality; permissive, impulsive, or capricious moral behavior; antinomianism; and whatever. Those who decry it see it as characterizing a "generation adrift" — often particularly in regard to sexual behavior. The term New Morality, originally an epithet of disdain applied by conservative critics, enjoys a similar distinction but is mainly employed in a pejorative sense.

Little need be said here about "situationism," since its meaning appears obvious. Apparently much more needs to be said about Situation Ethics as

a method for dealing with moral dilemmas, however. Therefore I shall direct my attention primarily to this use of the word.

By definition, Situation Ethics is a method which assumes that answers to moral questions may be found within the context of the situation in which they arise. When asked, "What am I to do?" the Situationist or Contextualist looks at moral dilemmas and responds, "It all depends on the situation." "What are the facts in the case?" To this extent Situation Ethics involves application of the inductive method to morals.

Contextual Ethics is an antagonist of a kind of rule ethic which simply turns to prescriptions for all of its answers — that is, an ethic which asks in turn, "What do the rules, the fathers, the authorities say about the matter?" To illustrate: some years ago when Abraham Joshua Heschel, the well-known Jewish religious thinker, was asked about Judaism's position on a medical moral issue, he responded by saying that he did not know since the rabbis had not spoken on that subject. A rule ethic underlies the almost total dependence of some church members on the authoritative pronouncements of institutional leaders as the way to dispel ambiguity in moral matters. The Contextualist, on the other hand, places great store on individual reason and responsibility. He rejects the rule-ethicist's tendency to emphasize conformity for conformity's sake, the tendency to utilize in matters moral his ability to read, listen, and be taught.

I do not mean to imply that the Contextualist rejects rules as of no value simply because he objects to mere rule conformity. He knows that most of life can be, and indeed must be, lived "by the numbers" to use an old Army phrase. He hopes that the people who share the freeways and airports with him and scrub for his surgical operations will be committed to fairly dependable prearranged patterns of behavior. He also knows that life would be simply chaotic if every momentary possibility were turned into a major moral struggle. Habitually good behavior on the part of the majority of people is the very basis of social existence on this planet.

But the Contextualist has a point to make. It is that life is complex and that no two situations can ever be exactly alike. If one is insensitive to this fact, he may discover himself in circumstances where his "habitual behavior" may be quite inappropriate, even morally destructive. Account must be taken of all the circumstances in which an action takes place if one is really to do the "right" thing.

The Contextualist is also aware that one may encounter novel situations for which previous experience, or even "divine revelation," has not precisely prepared him. What does one do when he finds no precise rule ready to guide

him? Or worse, what if the rules express competing claims so that they seem to contradict one another? Is one then reduced to moral impotence? Unfortunately, our rapidly changing world has thrust many such situations upon us.

7 The Contextual ethicist is likely to be intrigued by moral issues raised by aspects of the newer technologies. One Contextualist, for example, recently expressed the wish that all rule-ethicists could spend a few months wrestling with the moral problems of the world of medicine to test whether their astounding ability to separate the moral "black sheep" actions from the white ones could stand up under the pressure of the physician's shadowland of confusing shades of gray. To illustrate: it is one thing to know that killing is wrong and that saving life is right. The rules say very definite things about taking life. But what of the situation where to kill or not to kill are not the alternatives, where rather it is a question of *whom* to kill or *how* or *when*, as in the matters of therapeutic abortion or cardiac transplantation? Often the physician would prefer to shift the responsibility to someone else — as in Heschel's words, the rabbis. But how frequently he cannot. What he clearly needs is an ethic that tells him how to act responsibly as an individual, on his own.

It should be obvious that an ethic that concentrates on the moment of decision and the situation in which it occurs is greatly conditioned by its reading of the situation. Because of this, Situation Ethics seems to be no single entity, at least in terms of the specific answers it gives to moral questions. There is a uniformity of method, that is, in the form of its question, "What am I as a morally responsible agent to do in the light of *this* particular situation?" There may be great diversity, however, in how "this particular situation" is perceived. Thus there may be a fairly broad spectrum of possible situational answers given by persons using the identical method.

Some situational answers may represent a narrow reading of the "situation." This is part of the reason for the pejorative use of the word "situationism." Such persons, for example, might see the extent of the situation as the impulses of a boy and a girl on a lonely road in the back seat of the car, oblivious to the larger personal and social consequences of their actions. But the situation might also be so broadly perceived as to include the revelation of God and the wisdom of the community as well as the future, even eternal, consequences of human behavior. In other words, the conclusions of this method, as in all matters involving logic, are only as valid as their premises.

If this is so, the alarums of the conservatives are understandable but

misdirected. It is not Situation Ethics the method that is at fault but the individual persons who use the method. If one opposes some of Joseph Fletcher's answers to ethical questions, it must be because of Fletcher's peculiar reading of the situation and not because he is a Situationist.

What is new about the "new morality" is not the ethical method involved but the fact that many of the moral premises have changed. The "situation" is being perceived in a new way. What should be criticized is the premises upon which many in our time are basing their moral decisions, not the fact of their involvement in personal decision making. How one perceives God and His revelation to man, for example, is likely to prove most crucial to moral decision. A belief in a highly personal God who is deeply concerned about man and elects to guide him into the way of love is one kind of premise. An abstract notion of a God who is impersonal, with a corresponding view of the commandments of Scripture as an accumulation of human folkways, is quite another. Each radically modifies the perceived situation in its own way.

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Anyone who is sufficiently open to be able to see it can only be struck with the fact that, from one end of the Scriptures to the other, the moral imperatives were constantly adapted to the circumstances in which they were to be carried out. This was so even with the Ten Commandments. The "thou shalt not kill" was given immediate exception, sometimes of a chilling nature. Jesus' dealings with the Sabbath, David with the showbread, Paul and the matter of circumcision — we could go on endlessly, the point being that *never should a rule, even a Ten Commandment rule, be so applied as to oppose love*. This is the situational method, and it is thus as old as morality — what men have always done when they were morally sensitive and accepted responsibility for their actions. It is in fact what most of the detractors of "situationism" themselves do, whether or not they realize it, when they wrestle with morally ambiguous issues. Indeed, it is what they had better do if they do not wish to be involved in unloving actions.

A second semantic misunderstanding in this conflict derives from the use of the term "absolute." The Christian Contextualist insists that there is only one absolute, love. When the opposition objects that this minimizes the significance of the Decalogue, he is not aware that each is using the term "absolute" in a different way.

When the anti-"situationist" speaks of the Ten Commandments as God's "absolutes," he means that they are to be taken with the utmost seriousness and that they possess an exceedingly broad range of applicability and durability. He may also mean that they are the highest expressions of moral

principle that God has revealed to man and that they carry with them the very authority of God Himself.

The Contextualist, who may also take the Ten Commandments seriously, employs the term *absolute* in its philosophic, logical sense, meaning the ultimate, beyond which there can be nothing. In such usage there can never be more than one absolute under any circumstance, just as there can be only one "first." If one speaks of ten absolutes, for example, he makes a semantic error, because these ten, even if prior to all lesser values, would necessarily have to be relative to each other. Note this relativity in the Ten Commandments. Imagine a situation where strictly literal observance of the fifth commandment would put one in conflict with one of the first four. Few persons who take the Decalogue seriously would hesitate to place their obligation to God above that to man even if that man were his earthly father. The fifth commandment is therefore secondary and thus relative to the one taken from the first four, that is, in a sense relatively less binding — at least with a literal reading of the commandments. It will be recalled that Jesus seems to have made a distinction something like this when He said "the second is like unto it." Conceivably, in desperation one might be forced to give one of the last six priority over another, as in that intriguing case of Rahab and the spies.

It is clearly consistent both with the words of Jesus and the writings of Ellen White to say that the Ten Commandments are *expressions* of God's law. But note: that which is an expression of something is relative to it, even if it is its highest expression.

It is important to remind ourselves at this juncture, however, that the love "absolute" which is commanded is no mere sentimentality or feeling, even less the biological urgency suggested in the plaint that "it must be right because we love each other so." The love commanded is a principle. *agape* — love involving reason, choice, will, commitment, loyalty, the acceptance of responsibility for, etc. It can even be directed toward one for whom one has no positive feelings as such, even the enemy. Such love alone, with exception, is eternally valid. It is indeed the very character of God.

All expressions of this love are conditioned, however, by time and space. Stated positively as "thou *shalt*" notes, they are sublime descriptions of how love operates under the conditions of our being human. But these descriptions might have to be restated so as to be appropriate to other conditions, as, for example, the fifth and seventh when literally applied to angels. They may even be amplified (magnified) so as to apply in spirit to new

situations. Paul's observation regarding the governing powers is an illustration of such an amplification of the fifth commandment. The same can be said for Christ's descriptions of *agape* in action in His well-known sermon. But the very fact that this can be done attests to the truth that it is not their wording that is sacrosanct but their principle, the absolute value that undergirds them. But if one says this, one has become a Christian Contextualist in essence. The conservative Contextualist tends only to give these descriptions of love greater practical authority because of his presuppositions about God and what happened at Sinai.

A final point of contention uncovers a semantic error on the other side. This concerns the word "legalist." Both sides vigorously reject legalism but, as before, the antagonists simply mean different things by the term. (From what has gone before, it should be plain that the true antagonists are the Christian moralists and the "situationists," not Christian moralists and Situationists.) When the "situationist" (note well the quotes) rejects legalism, he is likely, as an antinomian, to be rejecting rules *per se*. On the other hand, Christian Contextualists, whether so self-consciously or not, are more likely to be simply objecting to a misuse of the rules. To be consistent, I shall speak of the former as "legalism" and the latter as Legalism. Since Legalism constitutes the stimulus and the point of departure for the whole Contextual enterprise, it is important that we understand this distinction.

The Christian moralist who views God's commandments as the supreme expressions or descriptions of love — love in action and thus relative to love — must always insist that the rules serve love. If any rule is stated or applied in such a way as to conflict with love, it is no rule, or it is a bad rule, or rather a bad application of a rule, and must be suspended or abrogated. One of God's commandments can never contradict love and be God's commandment without introducing an unthinkable contradiction in God Himself. (Generally, in such a case what we have is a misinterpretation of the requirement, not a rule truly opposing love.)

Legalism does not consist simply in having rules or even in their precise application. Being careful may indicate the depth of one's concern or even a quality of personality or character. The careful surgeon who takes great pains with his operative procedure may be revealing something very important and valuable about himself. The same might be said about a housepainter, a bricklayer, or anyone else who takes pride in his workmanship. He is not thereby necessarily a legalist — though of course, he may also be.

The Legalist is one who is morally "careful" for the wrong reasons. For the Legalist, law does not serve love — it serves law; or perhaps even more

accurately, it serves unworthy motives or unresolved conflicts in the Legalist. It is one thing for the surgeon to practice his art with all of the skill and precision he can muster, including scrubbing before the operation in a fairly well-defined manner for the sake of reducing his mortality rates to the barest minimum (and thus out of his loving concern for his patients), but quite another thing if he does so for the purpose of enhancing his own status in the medical and larger community, or, even deeper, as a way of compensating for or resolving hidden conflicts within himself.

The Legalist is one who keeps the rules not so as to be more loving but more often so as to solve personal deep feelings of guilt and unworthiness that prevent him from really accepting himself, and thus other people. Guilt, of course, need not be clearly identified as such by the individual. Psychologists speak of "free-floating" guilt, that is, guilt tied to no clearly recognized act or situation. Such guilt, for example, may be related to forgotten parental perfectionism internalized by the child as an enduring sense of frustration, failure, and unworthiness, only to appear later as attempts to earn feelings of "righteousness" by a life of high-level moral rectitude. Theologians call this "salvation by works." Unable to feel worthwhile and accepted, even if he does not understand the basis for his anxiety, such a person attempts to earn the acceptance of himself and others. But unfortunately he most often only succeeds in compounding the difficulty.

The Christian solution to his problem is "salvation by grace," of course, rather than by works — that is, through the acceptance of God's loving acceptance, through trusting in God's forgiveness freely given. (This is a doctrine which is psychologically sound, by the way. In practice, grace is often mediated through accepting, noncondemning, loving persons in such a one's life.) The one who can accept himself because he has truly learned to trust God is thereby released from his frenzied struggle for superficial moral purity and is freed to a life of unstrained and naturally outflowing loving behavior in which the rules serve as useful guides.

The Legalist often identifies himself by the way the rules function in his life. Most often they are either the means by which he receives the punishment he feels he deserves (masochism), or they become the vehicles by which he critically projects his own guilt on others (the other side of the same coin, that is, sadism). They are not easy persons to live with. Such legalism is rejected by all Christian Contextualists, including the Apostle Paul.

To summarize: Christian Situation or Contextual Ethics, as opposed to "situationism," is a clearly defined ethical method for dealing with moral

dilemmas. Such dilemmas occur in the presence of conflicting and competing moral claims or where there is a lack of adequate, clear, and applicable moral guidance. This ethical method recognizes the complexity of human life as it is lived morally and the difficulty of anticipating all of the factors that make up any particular moment of decision. It admits to only one absolute norm for human behavior — love as *agape*, as concerned commitment to the other in ways that are appropriate to and guided by the needs of particular circumstances.

As a method it is inductive and depends on a marshaling of all of the relevant facts that make up the situation. It accepts full responsibility for deciding what is the most “loving” action in the light of these facts.

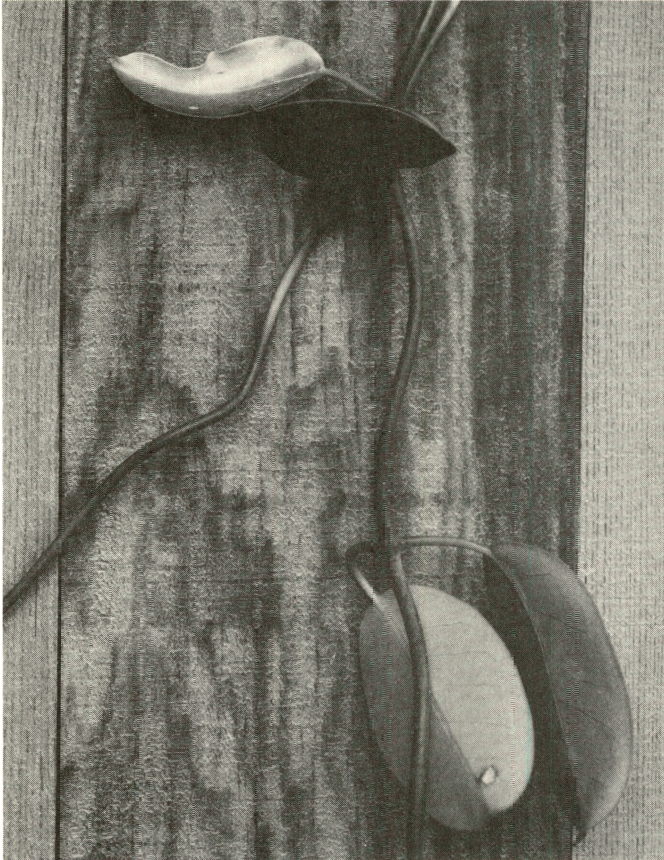
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Individual Contextualists may differ widely in how they interpret the “facts” of the context or situation, depending on their antecedent beliefs and experiences. As in any enterprise involving logic, the ethical conclusions reached will reflect such premise differences. These differences may demonstrate the *Weltanschauung*, or world view, of the individual observer, including his conceptions of God, the meaning of existence, man’s eternal destiny, and the relative value and authority he gives to such revealed guidance as the Bible. Persons with little respect for the “authority” of the Bible are likely to appear antinomian, capricious, and impulsive as they draw ethical conclusions, and this is part of the reason why conservative Christians find them disturbing. A Christian Contextualist who takes the Bible authoritatively, on the other hand, may include in his perceived situation the whole of human history and destiny, including God’s acts toward and revelations to man. Contextualists may thus be “broad” or “narrow.” In either case, however, it is *not the method* which makes the difference *but the beliefs or premises* of the ones who use the method.

The narrow “situationist,” a virtual antinomian, is likely to reject the “legalism” of having rules — which is how he defines legalism. The broad Contextualist, in contrast, sees Legalism as not the having of rules but the misusing of them. He values the rules as giving guidance to love and thus serving love. He knows that the Legalist uses rules as means to the wrong ends, frequently the solving of unresolved conflicts deep within himself.

It is important for persons who take morality seriously to recognize that the “new morality” is not new in method, but in its way of looking at the “facts.” What has changed is not a perfectly logical and valid way of dealing with perplexing moral questions but the “world” in which the questions are being asked. And it is this misreading of the total context of decision which should give them concern.

If we are to bring some sort of clarity out of the present obvious confusion of moral tongues occasioning so much well-meant but meaningless controversy, we shall have to reexamine the language of the conflict. Perhaps even the creation of new terms is in order. I conclude by suggesting a new name for this so badly misunderstood and misjudged ethical method, with the hope that its presentation will further movement in the direction that the name suggests. That name is *Responsible Ethic*.



GEORGE O. SCHUMACHER

Adventism's Social Gospel Advocate John Harvey Kellogg

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RICHARD W. SCHWARZ

"The evil that men do lives after them, the good is oft interred with their bones," Shakespeare had Marc Antony declaim over the bier of Julius Caesar. Antony's statement can be illustrated, at least in part, in the way in which John Harvey Kellogg is remembered by Seventh-day Adventists. To most, he appears a shadowy figure vaguely connected with the golden days of the Battle Creek Sanitarium and the early development of "health foods." For others, his theological aberrations and organizational controversies have left a tarnished memory and a figure better forgotten. Almost unnoticed today are Kellogg's efforts to launch Seventh-day Adventists on an extensive program for alleviating many of society's social ills.

During the 1890's, just as what historians call the Social Gospel Movement was getting under way, Kellogg developed a project that would utilize Chicago as a laboratory for testing ideas for improving the lot of urban slum dwellers. In harmony with the Adventist program for healthful living, which stresses a vegetarian diet and the use of natural remedies such as water, fresh air, and sunshine, Kellogg's approach to slum problems was simple and practical. It was one that he believed deserved the support of all church people.

One of the most forceful of his statements to this effect was made in an address at Northwestern University on October 11, 1896. Kellogg was speaking before a conference called to consider the problems of Chicago's unemployed, homeless, and destitute. He shared the platform with Jane Addams, C. R. Henderson, pioneer University of Chicago sociologist, C. C. Bonney, chief promoter of the Parliament of Religions at the Chicago World's Fair of 1893, and other civic leaders.

"I have no scheme of social reform to propose," Kellogg stated. "I am not sure that I understand the causes of the unfortunate state of things which it is the purpose of this meeting to discuss. But I take it to be the duty of every Christian community to see that every homeless, hungry man is fed." Speaking of the city's down-and-outers, he said: "These men need not only shelter and food, but brotherly kindness, encouragement, and instruction. They need to be taken by the hand and lifted up. The homeless, destitute man is always a sick man. He is sick morally, mentally, and physically. He needs the physical tonic of good food and cleanliness." After touching on the need to bring to such persons the consolation offered by religion, Kellogg went on to suggest that if Chicago's churches would contribute as much to help the poor at home as they did to the cause of foreign missions, "more would be accomplished for the heathen at home than is now being done for the heathen abroad."¹

It was not just the whole family of Christians in general that Kellogg saw as having the responsibility for helping society's unfortunates. He believed that the Seventh-day Adventist Church had a special calling along these lines. In the Adventist vocabulary of those days the social services about which Kellogg spoke to the Chicago conference were referred to as "medical missionary work." To a church conference in Battle Creek in 1899 he stated, "I believe the Lord intended *we* should be a medical missionary people."² Several years later, writing to his longtime friend, S. N. Haskell, Kellogg said, "For thirty years I have dreamed that the whole Seventh-day Adventist denomination would sometime become . . . medical missionaries, and that we should be the medical missionary people of the world."³ In another letter he spoke of his desire that Seventh-day Adventists should be "the Good Samaritan to all the world."⁴

Kellogg's desire to be of personal service to the unfortunate and to prepare other Adventists in this work led in 1893 to the establishment of a medical mission on Chicago's near south side. Within several years this had expanded into half a dozen different enterprises in the city, and similar activities were being carried on under the auspices of Seventh-day Adventists in many other urban areas.⁵ Just what inspired Kellogg to begin city mission work is not altogether clear. Probably several experiences combined to point his natural humanitarian instincts in that direction.

The first of these may well have occurred in 1888 at the Minneapolis General Conference session. There Kellogg was profoundly affected by the "righteousness by faith" studies of A. T. Jones and E. J. Waggoner. Years later Ellen G. White stated, "After the meeting at Minneapolis, Dr.

Kellogg was a converted man, and we all knew it. We could see the converting power of God working in his heart and life."⁶ It seems likely that this experience may have set Kellogg to thinking of a more definite way in which to bring spiritual and temporal aid to those who needed both.

Shortly thereafter, Kellogg chanced upon a little missionary paper in which George Dowkontt told of his mission activities in New York City. Dowkontt had come to the United States from England around 1880 and had immediately opened a mission in New York similar to one he had conducted in London. It included a medical clinic, a day nursery, and religious services. Up to this time Kellogg had never had an opportunity to see city mission work. Now on a trip to New York in early 1891 he contacted Dowkontt and spent some time observing his activities. He returned to Battle Creek convinced that this was "a most blessed kind of work, and a most fruitful field of labor."⁷

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Whether or not Kellogg examined other city missions at the same time he visited that of Dowkontt is uncertain. It is known that the next year he spent some time observing the famous Bowery Mission begun by Jerry McCauley and operated at that time by Sam Hadley. Some of his associates in the work he was soon to begin in Chicago felt that it was his visit to the McCauley Mission that led to his real decision to start work for Chicago's unfortunates.⁸

Kellogg's interest in welfare work in Chicago was undoubtedly reinforced by his church activities. He was one of the first Adventists actively to promote foreign work; in 1893 he and General Conference President O. A. Olsen discussed the need for practical training for future missionaries and concluded that Chicago would make a good training center.⁹ In after years George Wharton James, the famous journalist and publicist of the American Southwest, was to claim that it was he who first suggested Chicago mission work to Kellogg as early as 1889.¹⁰

Kellogg's opportunity for beginning in a small way some kind of special work in Chicago came in 1892 through the generosity of a Chicago banker whose daughter had spent some weeks as a patient at the Battle Creek Sanitarium. Her health had deteriorated too far for recovery, and she returned to Chicago to die. Her stay in the sanitarium had impressed her, however, and on her deathbed she secured a promise from her father that he would support a sanitarium nurse to work among Chicago's poor. Arrangements were made with Kellogg to carry out the request, and in 1892 an experienced sanitarium nurse was sent to work with the Chicago Visiting Nurses Association.¹¹ Her reports stirred up interest among sanitarium

personnel, and before long several others joined her in Chicago. Part of this group worked privately among the wealthy people and then contributed a portion of their salaries to support the others who worked gratuitously among the city's poor.¹²

Before Kellogg could begin an extensive work of the kind he envisioned, he had to raise money. Adventists generally were not wealthy, but early in 1893 two relatively new Adventists, Francis and Henry Wessels, whose family lands in South Africa had been the site of a rich diamond strike, informed Kellogg that they had been impressed by his work and were considering giving him a substantial sum of money.

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What would he do with \$40,000, they asked. His reply was immediate: "I would use it to begin work among Chicago's heathen." This idea met with the brothers' approval, and soon a check for the proffered amount was in Kellogg's hands.¹³

For some time wealthy Chicago patients at Battle Creek had been urging Kellogg to open a branch of the sanitarium in their city, and he now conceived the plan of using the Wessels' gift to establish such a branch and then use the expected profits from the new institution to finance a mission for the destitute. Thus the Wessels' \$40,000 could be made into a kind of endowment, and Chicago's wealthy would indirectly contribute to the welfare of the city's poor.¹⁴ On Kellogg's urging, the 1893 General Conference session set up the Seventh-day Adventist Medical Missionary and Benevolent Association to operate the Chicago work and any similar activities that might result. Kellogg was made president of the association.¹⁵

By May 1, 1893, a suitable building large enough to accommodate seventy patients had been acquired at 26 College Place, and the Chicago Branch Sanitarium was launched. Patronage was good, not only from Chicago residents, but from former Battle Creek patients who had been drawn to Chicago by the World's Fair and had decided to take advantage of sanitarium diet and treatments during their stay.¹⁶ Within a month, prospects were so favorable that Kellogg began plans for launching his work for the unfortunates. At first he considered joining forces with Jane Addams and in fact carried on some preliminary negotiations with her. Miss Addams was afraid, however, that his religious views might obscure the objectives she had in mind; so Kellogg developed his own program.¹⁷

According to his account, Kellogg visited Chicago's police chief and asked to be directed to the "dirtiest and wickedest place" in the city. He was sent to the skid row district at the south end of the Loop.¹⁸ After unsuccessfully canvassing the area for a suitable location, he finally persuaded

Henry Monroe, superintendent of the Pacific Garden Mission, to let him share its building at 98-100 West Van Buren Street, and on Sunday, June 25, 1893, the Chicago Medical Mission was officially opened.¹⁹ It offered a free medical dispensary, free baths, free laundry, an evening school for Chinese, and a visiting nurse service. Religious services were held in cooperation with the Pacific Garden Mission.

The medical dispensary was on the street level and was staffed all day with sanitarium-trained nurses. A doctor from the Branch Sanitarium was on duty for at least two hours a day, and Kellogg himself spent each Sunday at the mission for a number of years. The dispensary provided free obstetrical care for the neighborhood's poor and unemployed. It also offered a diet service, with special foods supplied free by Kellogg's Sanitarium Health Food Company. These were available on a doctor's prescription.

The basement of the mission building housed the free laundry and baths, which some mission workers considered unnecessary accessories. If the gospel were preached, they maintained, it would lead men to clean up of their own accord. Kellogg's thesis, however, was that if the men were cleaned up first, they would be easier to reach with Christian teachings. Since hundreds of Chicago unfortunates had only the clothes they wore and no place to wash, they soon became filthy. It was not long until they came crowding into the mission basement to wash both themselves and their clothes. In connection with the free baths, special sanitarium water treatments and electrical treatments were also dispensed to those who called at the clinic. These were found to be particularly effective for "sobering-up purposes." Three days a week the baths and laundry were reserved for women and children.

During the first month, an average of a hundred men and women a day came to the mission for one or more of its services. The Pacific Garden Mission director told Kellogg, "The moral atmosphere of this community has visibly brightened within the last few days, and it is improving every day, as the result of the influence of your practical presentation of the gospel of cleanliness." Within six months the constant services of ten nurses and doctors were needed to meet the continually increasing patronage. The work was broadened to include a modest free kindergarten for the benefit of working mothers and a series of mothers' meetings for instruction in the physical and moral training of children.²⁰

One of the more interesting features of the mission was the penny lunch counter inaugurated in the fall of 1893. Shortly after the mission opened, Kellogg made a practice of offering a bowl of bean soup with zwieback

crackers for one cent at noon on Sundays. With a larger number of unemployed after the close of the World's Fair, this program was expanded into a daily feature. During the fall and winter months an average of five to six hundred people took advantage of the penny lunch daily, and some days the total went as high as fifteen hundred. The penny lunch was discontinued in the spring of 1894 but was reinstated periodically when funds and personnel were available.²¹

Kellogg insisted that no free meals be given, although he often put up the penny for a destitute man himself. In one instance, he liked to relate, this had far-reaching results. His penny convinced a down-and-outer named Tom Mackey that someone still had faith in him. Mackey attended religious services at the mission, was converted, and immediately launched into mission activities himself. For a time he ran the separate Star of Hope Mission on West Madison Street for Kellogg. Later he went out on his own initiative, first in Chicago and later in several other major cities.

Kellogg even devised a way to help panhandlers resist the temptation to spend their receipts in the local saloons: he sold books of penny tickets to businessmen for distribution to panhandlers, who thus got hot soup and zwieback at the penny lunch counter instead of the price of a cup of coffee.²²

Soon after getting the mission underway, Kellogg set out to provide better clothing for the patrons of the free laundry. Here was a program that could be supported by church members across the country. He advertised for good used garments in the *Advent Review and Sabbath Herald*, and in the *Medical Missionary*. Four years after the Chicago Mission was begun, Kellogg reported that more than 200,000 persons had made use of the free laundry and 75,000 of them had been given new clothing as the result of church members' gifts.²³ Kellogg's work in Chicago can thus be seen as the genesis of modern Adventist welfare activities.

By the summer of 1896 it was clear that the mission had outgrown its location. During the first three years of operation the records show that some 38,000 baths and 26,000 other treatments had been given. Nurses connected with the mission had made 9,000 home visits; an estimated 75,000 penny dinners had been served; 17,000 "gospel conversations" had been recorded; and 13,500 tracts had been distributed.²⁴ In the summer of 1896 the mission program was expanded in two major directions. An old church at 42 Custom House Place, which had been converted into a flophouse during the World's Fair, was rescued from this indignity and named the Workingmen's Home. Farther south, at 1926 Wabash Avenue, a five-story



building, which had been acquired the previous year, was converted into the American Medical Missionary College Settlement Building.²⁵

The original free laundry, baths, and dispensary were continued in connection with the Workingmen's Home, where dormitory-style rooms accommodated up to four hundred persons a night. To be eligible for a bed the applicant had to agree to take a bath and have his clothing fumigated. For ten cents a laborer could be assured of a clean bed and nightshirt and, if he checked in early enough, a bowl of soup and crackers as well. In the morning he could get breakfast for an average of five cents. Inflation had caused the penny meals to be advanced in price to a penny per item. The Workingmen's Home also included a reading room and a hall for religious services. The major religious activities, however, were conducted from the Life Boat Mission located not far away at 436 South State Street.²⁶

As the Workingmen's Home was designed to help rehabilitate down-and-outers, a portion of the building was set aside as an industrial department where temporary work for men seeking jobs in the city was provided. By working at either rug or carpet weaving or broommaking, a man could earn enough to meet his expenses at the home until he found other employment. Readers of Adventist journals were soon being requested to ship their old carpets and rugs to the Workingmen's Home and were informed that they might also purchase freshly woven rugs from the same institution.²⁷

The operation of the College Settlement Building resulted from the founding of the American Medical Missionary College by the Medical Missionary and Benevolent Association in the summer of 1895. A medical college was a logical extension of the educational work Kellogg had begun soon after he went to the Battle Creek Sanitarium. From the start he had conducted private courses which, according to the customs of the times, were recognized by most schools as fulfilling the first part of a medical course.

In 1884 a training program for nurses had been started at the sanitarium. Four years later it was reorganized on a missionary basis. Only students were accepted who would pledge to uphold the health principles taught at the Sanitarium and agree to work for at least five years after graduation under the direction either of the sanitarium management or of the executive committee of the Seventh-day Adventist General Conference.

By 1895 many young Adventists were in training to become physicians. The church even operated a private dormitory in Ann Arbor for those attending the University of Michigan medical school. Kellogg and his associates had become convinced, however, that a different type of medical school was needed, one that would stress rational medicine rather than the exces-

sive use of drugs, one at which the students might acquire practical missionary experience.²⁸

The American Medical Missionary College enrolled forty students in its first class in the fall of 1895. The cost of operating the college was borne jointly by the Medical Missionary and Benevolent Association and the Battle Creek Sanitarium. A four-year course was inaugurated. Initial classes were to be taken in Battle Creek, and the last third of the work, which stressed clinical experience, was to be carried on in Chicago. Acceptance in the college was not limited to Seventh-day Adventists, but all students were required to sign a missionary pledge. Only a nominal tuition was charged, and students might earn the cost of board and room by working two or three hours a day at the sanitarium. In the fifteen years of its existence the college became a recognized medical school and graduated about two hundred physicians. After Kellogg broke with Adventist leaders in 1907 over matters of theology and organization, enrollment declined. Wholly dependent on his own resources to finance the college, Kellogg arranged for the merger of AMMC with the University of Illinois medical school.²⁹

The AMMC Settlement Building acquired in 1895 not only provided a dormitory for the medical students while they were in Chicago but served as home base for eight visiting nurses who worked in the low-income residential area surrounding the building. Other activities sponsored at the settlement were a day nursery, a kindergarten, a kitchengarten, a free laundry for women, a school of health for instruction in first aid and home hygiene, and a women's discussion club (which considered correct methods of child training and principles of healthful dress, diet, and cookery). Working out of the Settlement Building, the medical students organized seventy-five clubs among the newsboys and bootblacks of the city. Upon invitation they also began gymnastic and moral instruction for boys being detained in the city jail.³⁰

The AMMC Settlement Building ran a free employment agency and a placement service for orphans and men and women who had been reclaimed from skid row. Medical students engaged in this work became convinced of the need for a mission farm where men could be sent to work and be free from urban temptations. When they so informed Kellogg, he advised them to make it a matter of prayer. Within a week a wealthy patient at the sanitarium, Edward S. Peddicord, approached Kellogg and asked if there were some need in connection with the Chicago work to which he might contribute. Kellogg immediately mentioned the idea of the mission farm, and before the interview was completed, Peddicord offered 160 acres in La Salle

County, Illinois. Peddicord died shortly thereafter, and his heirs sought to reclaim the farm; but eventually the Illinois Supreme Court awarded it to Kellogg to be used in his charitable enterprises.³¹ It has been impossible to ascertain just how many rehabilitated alcoholics and vagrants were employed on the Peddicord farm during the years truck garden produce was raised there, but it is doubtful that it ever accommodated a number anywhere near the four hundred men Kellogg hoped it would support.

The more deeply he became involved in city mission work, the more convinced Kellogg was of its usefulness. During these years he carried on a regular correspondence with Mrs. White, who was then in Australia. In 1897 Kellogg wrote her, "What a pity it seems that of the many thousands of dollars raised by our people there is such a small proportion used in such a way as to really advance the cause of Christ for the relief and saving of sinners."³² The next year he informed her that, under the auspices of the Medical Missionary Association, work similar to that in Chicago, but on a smaller scale, had been begun in Milwaukee; St. Louis; Omaha; Kansas City; Lincoln, Nebraska; Denver; Portland, Oregon; San Francisco; Clinton, Iowa; Terre Haute and Indianapolis, Indiana; Rochester and Buffalo, New York; Nashville; Salt Lake City; and Butte, Montana. And that fall a mission was launched in Brooklyn.³³

In 1898 Kellogg prepared a handbook of nearly a hundred pages on the operation of city medical missions.³⁴ In it he stressed that "the one sole object of the medical mission, as well as of other missions, is the salvation of men, but here the intimate relation of mind and body, of health and morals, is recognized as an important factor requiring careful attention and consideration."³⁵ He stated that the mission was no place to teach theology, but rather a place to emphasize the saving power of Christ. Denominational activities as such were to be kept in the background.³⁶ It was this accent on the nondenominational status of the missions, together with problems of finance, that was to lead to increasing tension between Kellogg and Adventist leaders.

Kellogg's plans to support the Chicago Medical Mission from the earnings of the Branch Sanitarium had proved unsuccessful. There were simply not enough profits. By the spring of 1897 some hundred workers were connected with the various enterprises in Chicago. While approximately nine-tenths of them were students working for board, room, and experience, still \$500 a month was needed to keep the mission activities going.³⁷ In 1894, Kellogg had assured Mrs. White that he intended to make all medical missionary work self-supporting so as not to draw on the limited funds of the

church.³⁸ But by 1897 he was forced to admit that up to that time at least one-half the cost of the Chicago work had been met by the Medical Missionary and Benevolent Association,³⁹ which in turn had received its funds largely from solicitations among Seventh-day Adventists. In December 1898 Kellogg wrote Mrs. White that he was at his "wits end to know how to keep the Chicago work going financially." Several years earlier he had indicated a belief that profits of \$100,000 could be realized annually from the health food business to support the medical missionary work. Now he had to confess, "The profits . . . have not yet been sufficient to pay for machinery necessary to manufacture the foods or a place in which to manufacture them, but the prospect is fair that there will be enough outside sales to do this and furnish a little income besides with which to help the various charities which we are trying to promote."⁴⁰

Meanwhile, in the spring of 1895 Kellogg had begun to advocate a special fund-raising program for medical mission work. Through the *Medical Missionary* and the *Advent Review and Sabbath Herald* he began suggesting to the largely rural Adventist laity that they dedicate a piece of ground to some project of the Medical Missionary and Benevolent Association. They were to plant some vegetable or grain and turn over the proceeds from the harvest to the association. Kellogg offered to supply seeds to those who had the land but could not afford the necessary seed. This project, easily recognized for its similarity to the later Sabbath school investment program, grew and was soon designated the Missionary Acre Fund.⁴¹ Kellogg persuaded the General Conference to commit this money to the Medical Missionary and Benevolent Association. But three years after the project was started, he complained that some of the local conference presidents, having found the Missionary Acre Fund to be a good producer, were devoting its proceeds to other work. He therefore planned to ask the General Conference to allow the tithe paid by sanitarium employees in Battle Creek to be used for medical missionary work.⁴² This was a rather drastic step, for it was Adventist policy that the tithe be used only for the support of the ministry. No record exists to show that the request was approved.

Such lack of support convinced Kellogg that the Adventist leaders were not in sympathy with his work. To Mrs. White he had written in 1896, "There is a great jealousy of our work on the part of many because the Lord has seemed to prosper it so much, and because it has gotten along without asking for help."⁴³ In fact, of course, the Medical Missionary and Benevolent Association was appealing directly to the Adventist membership for financial aid.

Kellogg's social welfare activities alone did not precipitate his break with the Seventh-day Adventist Church, but they undoubtedly played a part. Church leaders became more and more convinced that his work, though commendable, would in no special way promote the distinctive doctrinal truths they felt called on to present to the world. On his part, Kellogg came to feel that denominational emphasis on points of difference with other Christians was too great and that the important thing was to follow the work of Jesus in healing the sick, aiding the destitute, and teaching the un-informed.

Around 1899 Kellogg began to bear the primary financial responsibility for the Chicago Medical Mission work himself, through the income from his books, health foods, and inventions. He therefore began to restrict the mission's work to those activities that would provide students of the American Medical Missionary College with the clinical and practical experience he felt necessary. With the end of the college as a separate institution in 1910, the Chicago Medical Mission work was discontinued.⁴⁴

Three years earlier Kellogg had been dropped from membership in the Adventist Church. He had terminated most of his connections with the denomination's farflung home and foreign mission activities before that time. Only the Battle Creek Sanitarium remained firmly under his control.

Kellogg's activities with the Chicago Medical Mission are but an episode in the life of a man who devoted more than seventy years to humanitarian service and to a crusade to make America health conscious. But they also provide an interesting glimpse of what one man interpreted to be a prime mission of the church — they present John Harvey Kellogg as a practitioner of his own interpretation of the social gospel.

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The foregoing article on John Harvey Kellogg appeared in somewhat different form in the spring 1964 issue of the *Illinois State Historical Journal*. EDITOR.

PRAYER

give us the word
o lay down the law unto us
o lay down the law upon us

pour us
into the divine mould
stamp upon us
the divine impression
make us
divine interchangeable parts

o standardize us
release us from the cruel necessity
of grappling with diversity

and when we have been stamped
and when we have been moulded
and when we have been polished
to the similitude of a palace

o assemble us
o put us each into his rightful place
o fit us each into his proper niche

that we may remain
fitted and put
grounded and immovable
forever and ever
amen

isaac johnson

the condemned one

DIRK K. KOOPMANS



JVSTE JVDICATE
FILI HOMINVM

The Nature of the Fossil Record In the Rocks of Eastern Oregon

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RICHARD M. RITLAND

A troop of soldiers returning to the Army outpost at Fort Dalles along the Columbia River just over a hundred years ago brought to light the first evidence of prehistoric mammals of the Oregon country. The finds were not spectacular — only several teeth and a few scraps of bones picked up by the cavalry in the colorful badland exposures of the plateau country east of the Cascade Mountains. But this was enough to arouse the keen interest of the local Congregational Church minister at The Dalles, the Reverend Thomas Condon. Of particular interest was a fine fossil jaw with teeth from an extinct rhinoceros. Condon did not know it was a rhinoceros, but he recognized that it did not closely resemble anything living in that part of the country, and he realized that a great discovery might have been made.

Early the next spring Condon obtained permission to travel with a company of soldiers taking supplies to a garrison that had wintered in the field in Harney Valley, southeast Oregon. Much of Oregon east of the Cascade Mountains is relatively arid, with only sparse vegetation composed principally of sagebrush and bunch grasses, so that along the creek and river valleys the volcanic rocks are extensively exposed. Since the old military routes followed such valleys, Condon could readily explore the rock outcrops along the way. That first summer he discovered several fossils in the valley of the Crooked River and considerably more in the extensive exposures along Bridge Creek. Unfortunately, he was prevented from collecting many specimens because of frequent harrassment by marauding Indian bands.

The following summers often found Condon in the field, with a rifle in one hand and a pick in the other, exploring for fossils. Within the first

decade of discovery, many historic sites were located, sites extensively collected from in later years.

In 1871 the famous paleontologist O. C. Marsh of Yale University and a party of fifteen students spent the summer in the field, with Condon as guide to the expedition. While there Marsh secured the services of several persons who continued to collect and send specimens to Yale with little interruption until 1877. Expeditions from Pennsylvania, Princeton, California, Oregon, Carnegie Institution, the National Museum (Smithsonian), the United States Geological Survey, and many other institutions have spent a cumulative total of hundreds of individual man-years, through the intervening decades, searching over the outcrops, removing and preparing fossils (chiefly mammals and plants) for shipment, and finally, in the laboratory, cleaning, preparing, and studying the specimens.

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The Army, which was responsible in the early years for the initial discovery and for furnishing protection to Condon and others from the Indian bands, was more directly involved later. In 1880 Captain Bendire, with a large party from the Seventh U. S. Cavalry, made collections of plants, mammals, and fish, and turned these over to the Smithsonian Institution in Washington, D. C., for study. When the University of Oregon was founded in 1876, Thomas Condon, the man most directly responsible for the early exploration and for making the finds known in scientific circles throughout the world, was elected to the chair in natural science.¹

Just what is the nature of the information one can uncover concerning former life? How complete a story is told in the rocks? What can one discover about origins and diversification, about change in the environment and in life? Perhaps the best way to find answers to these questions is to consider first a few facts and principles about the nature of fossils and their occurrence. Then as such facts are applied to an actual field example, such as the record of life entombed in the volcanic deposits of central Oregon, one can perhaps better evaluate their meaning and limitations. The example chosen is significant, both because it is one that demonstrates richness and variety of fossil remains and because it is typical of volcanic rocks, one of the major types of deposits in which land life is preserved. Volcanic deposits are widespread in western North America and are found to a lesser extent in nearly all continents.

Although the processes by which fossils, remnants, or traces of former life, are preserved are not exactly the same, nevertheless they involve many of the same principles used by housewives in the preservation of food for winter. Complete or partial exclusion of air, as in the canning process that

restricts oxidation and bacterial decomposition; drying; freezing, as in frozen mammoth, rhinoceros, or buffalo remains in the far north; preservation in a weak, poorly aerated acid solution, as in the peat bogs widespread in northern forests of both America and Europe (comparable to the housewife's use of vinegar, a weak acid, in preservation of pickles); shielding from the chemical and mechanical forces of weathering by a protective location or cover — these are all processes that may contribute to preservation of fossils in different instances.

Relatively rapid entombment in very fine-grained sediments such as clay or in fine volcanic ash have been among the most successful and common means of preserving evidences of former life. Clay is ideal because the particles are so fine that circulation of water and air is greatly retarded. When the particles become compressed and more or less cemented or fused together, the resultant sedimentary rock is shale, which usually splits or cleaves along the bedding plane. Frequently, even when shale appears to be barren of fossils, microscopic examination will reveal plant spores or pollen grains.

Hard or resistant parts of organisms, with sufficient porosity to allow mineral-rich ground water to seep in or through them, are often effectively sealed by the deposition of mineral substances within the interstices or pore spaces. Compounds of carbonate, silica, or iron are commonly deposited in this way. Sometimes the hard parts or skeletal remains, instead of being infiltrated, are partially or completely replaced by mineral matter. The organic remains thus infiltrated or replaced are effectively transformed to the appearance of stone, a process analogous to imbedding materials in plastic today. This process is aptly called *petrification*, a word that literally means "turn to stone." But since fossil remains such as coal or peat may never be mineralized, the degree of mineralization or petrification is in no sense a criterion of whether a plant or animal is a fossil or not.

There are a number of environments where traces or remnants of certain living forms seem destined to be preserved. For example, in coral reefs such as the Great Barrier Reef, which extends for more than a thousand miles along the northeastern coast of Australia, are found a great variety of animals and plants. These include various types of corals, moss animals, encrusting algae, tube worms, shelled animals, and a few other forms which become firmly cemented to the substrate — the skeleton of the reef — and build it up layer by layer as they grow and add to the older skeletal framework of the reef. Like a tree that grows by adding layer on layer to its girth, a coral reef grows upward from its base to near the surface of the sea and

then spreads out around countless tropical islands and seamounts. Besides the attached forms of life, a wealth of colorful, free-living plants and animals, such as fish, crabs, marine worms, seashells, starfish, jellyfish, and many other forms of life, abound in any tropical reef. The variety of form and color, the symmetry, and the exquisite beauty surpass description.

But note that only a fraction remains. In a fossil coral reef one might find, among the hard parts that are preserved, identifiable remnants of perhaps fifty to seventy-five of the more than three thousand species that may have inhabited the reef.² The great host of soft-bodied forms, and even many animals having hard parts readily preserved under other circumstances, seldom leave a trace. Most forms are consumed by predators or scavengers, large or small, and the hard parts are broken to bits by the action of the waves. Yet the few remaining species speak eloquently of a distinctive environment.

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Certain other environments seem destined to oblivion. Traces of the life of high mountains or freshwater streams may persist for a few years or even centuries in a bog, in an alpine meadow, or in a terrace gravel, but in general the record is exceedingly poor. Mountains generally are source areas for sediments, not areas where quick and permanent burial is possible. Wind, rain, snow, or floods may destroy, but they seldom bury for more than a few years at most the traces of such life as may have abounded.

Even extensive lowland areas may be ineffective in preserving a record of much of the most characteristic life. Before the settlement of the American West by ranchmen, vast herds of bison and countless smaller herds of pronghorn antelope, together with a host of less conspicuous mammals, large and small, roamed over the prairies and high plains. Remains from the many generations of these magnificent animals that lived during recent centuries are seldom encountered today. Occasionally a few skeletons are turned up in a bog, an old salt lick, gravel or sand deposits of a recent river terrace, or perhaps in a cave or rock shelter together with artifacts of ancient man. For the most part, preservation has not been in deposits that might be expected to be permanent. Although the bison has a heavy, comparatively resistant skeleton and horns, probably not more than one in a million was ever preserved, and only a small fraction of these are ever found.

In North America the only comparatively extensive deposits being formed today that might be expected to preserve representative samples of land life fairly permanently are the deltas of great sediment-laden rivers, the undrained Great Basin of the West, and the undrained lakes and bogs of the northern regions. Deposits from most other areas may be expected to be

relatively transitory, stripped off again after a few years or centuries as the face of the land is worn down. Of the rivers, the Colorado and the Mississippi transport by far the greatest sediment load, the latter moving approximately two million tons of suspended particles to the Gulf daily during most of the year, and up to twice that quantity during times of flooding.³

Much of the life of vast areas of the earth today is essentially unrecorded in the sedimentary record. But circumstances now are not necessarily typical of all former times. If one judges from the somewhat more abundant remains of land life in many sediments from past times, one may conclude that in many respects the present is not an adequate key to the past. Nevertheless, at no time is the preservation of various habitats and forms of life at all equal — some are preserved, some perish without a trace.

Even in marine environments, opportunities for fossilization are unequal. Many years ago in an anniversary address to the Geological Society of London, Sir Charles Lyell (1851) commented on the results of a series of 140 dredgings of near-surface sediments from the sea bottom off the coast of England. Although a wealth of life abounded in the seas there, it is surprising how small a portion of it was ever trapped in sediments. Indeed, the dredgings would be expected to bring up some incomplete decomposed remains that would never become permanently preserved in the sedimentary record. Lyell stated:⁴

I allude to the observations laid before the British Association, at Edinburg, in 1850, by Messrs. Forbes and MacAndrew, who in the summer of that year explored the bed of the British seas from the Isle of Portland to the Land's End, and thence again to Shetland. They have recorded and tabulated the numbers of the various organic bodies, obtained by them in 140 distinct dredgings, made at different distances from the shore, varying from a quarter of a mile to forty miles. The list of marine invertebrate animals, both radiata, mollusca, and articulata, is by no means inconsiderable, but very few traces of any vertebrate animal were found. When these occurred (in five or six cases only), they were limited to fish, consisting of a few ear-bones, as in the Crag, and of small vertebrae. No cetaceans [whales, etc.] were met with, no relics of terrestrial mammals, although at some points they approached near to the shore so as to dredge up a few fragments of wood. In two or three instances only were any articles of human manufacture, such as a glass bottle, fished up. If reliance could be placed on negative evidence, we might deduce from such facts, that no cetacea existed in the sea, and no reptiles, birds, or quadrupeds on the neighbouring land.

It becomes clear that the possession of a skeleton, other hard parts, or resistant cuticles, which are readily preserved, is not necessarily enough to ensure preservation and subsequent discovery as fossils of even a few members of a population. Preservation and subsequent recovery of even traces, for most kinds of animals and plants, are the exception rather than the rule. "Dust thou art, and unto dust shalt thou return" (Genesis 3:19) is the fate

not only of men but also of nearly all of the countless billions of other living things with which men share the land area of the planet. In most habitats the overwhelming majority of animals, great and small, and plants of every description, once they die, are quickly destroyed or reduced to a state beyond recognition. Organisms of decay, scavengers, agents of chemical decomposition, and mechanical wear ordinarily make quick work of even comparatively resistant parts. "As a flower of the field, so he flourisheth. For the wind passeth over it, and it is gone; and the place thereof shall know it no more" (Psalm 103:15-16).

Even when fossils consist of well preserved parts, there may still be problems in interpretation. We tend to forget that at best fossils are usually only traces of past life. Sometimes these traces are very difficult to relate clearly to living forms or to one another. We shall consider two incidents.

For more than a century now, twigs and needles of trees that seem to belong to species identical with or very close to *Sequoia*, the living genus of redwoods of the coast ranges of northern California and southern Oregon, have been known from localities scattered through much of the northern hemisphere in Europe, Asia, North America, and even many points in the Arctic as distant as Spitzbergen, well north of the Arctic Circle. Such leaves are also abundant in two of the formations from central Oregon that we shall consider.

It was in 1941, when communication between America and the Orient was nearly at a standstill, that S. Miki, a Japanese student of fossil plants, made the surprising discovery that fossil redwoods of Japan that had been assigned to the North American type (*Sequoia*) actually exhibited rather basic differences both in leaf arrangement and in certain features of the cones and twigs. He established for them a distinct new genus, *Metasequoia*. He also suggested that they might be deciduous, that is, lose their leaves in the winter instead of being evergreen, as are the familiar redwoods of western North America. Before American students of fossil plants had had opportunity to read Miki's paper, there came the amazing discovery by Chinese botanists of a hitherto unknown large conifer in the forests of the Szechuan Province in central China, a tree that was recognized as possessing the distinctive features of the fossil *Metasequoia* remains described by Miki. Full confirmation of Miki's brilliant discovery was provided. The fossil tree had come to life. It is now known that most of the fossils once assigned to the redwood *Sequoia* from both temperate and Arctic regions, including many of the specimens from central Oregon, actually belong to the newly discovered "dawn redwood," *Metasequoia*.⁵

No type of fossil is more intriguing to man than fossils of men or of animals structurally close to man. But such fossils are exceedingly scarce; hence they seldom fail to attract considerable attention when they are found.

The second incident, now an almost apocryphal story in the annals of American paleontology, concerns reports of just such a discovery.

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On March 14, 1922, the famous paleontologist Henry Fairfield Osborn received a small package from Nebraska which contained a single considerably worn molar tooth. The paleontologist Harold Cook who had collected the tooth in the Pliocene Snake Creek beds felt that it resembled more closely the anthropoid-human type of molars than that of any other known mammal. Osborn responded immediately, "It looks one hundred percent anthropoid." After comparing the specimen with "all the books, the casts, and all the drawings" and consulting with three other specialists, two of whom were eminent specialists on fossil Primates, Professor Osborn wrote: "It is hard to believe that a single small water-worn tooth, 10.5 mm. by 11 mm. in crown diameter, can signalize the arrival of the anthropoid Primates in North America in Pliocene time. We have been eagerly anticipating some discovery of this kind, but were not prepared for such convincing evidence of the close faunal relationship between eastern Asia and western North America as is revealed by this diminutive specimen." Osborn designated the tooth as a type of a new genus *Hesperopithecus* (western ape) which, indeed, seemed to have closer resemblances with "Pithecanthropus," the Java man, and with modern man than with apes!

But, alas, later comparative studies by other paleontologists have demonstrated that the tooth undoubtedly belongs to a fossil peccary, a little animal which resembles a pig! Experiences like this tend to keep most scientists humble and cautious. This incident is not quoted in criticism of those who made the mistake, because, as every paleontologist knows, anyone is likely to miss occasionally. And for every mistake there are numerous discoveries, many of which are validated by later finds. But it does demonstrate the thin ice one is on when working with fragmentary specimens.⁶

Thus we see that at best the record of past life is biased by many factors beyond our control. The chances for fossilization are enormously unequal for different forms of life: unequal population density; unequal preservability of resistant versus delicate forms of life; unequal preservation of various habitats; unequal chances for exposure, detection, and discovery of the fossil remains; unequal opportunity for preservation at different time levels in earth history (occasional catastrophes are about the only possibility for burial of certain types); unequal quality of preservation, so that reliable information is not always obtainable from the remains — all contribute to an inadequate and in many ways biased record of past life.⁷ Yet in spite of all such limiting factors, in many deposits a wealth of information may be uncovered.

We now turn again to the story inscribed in the rocks of the Oregon country. In few areas of North America, or indeed the world, has the succession of fortuitous circumstances necessary for the preservation and later recovery of a variety of land life of a significant segment of earth history

been so favorable as in the Columbia River Plateau of the Pacific Northwest, particularly that region known as the John Day country of central Oregon.⁸ One has only to travel along the numerous canyons and river valleys, such as the Columbia, the Yakima, the Snake, the Deschutes, or the John Day, that dissect the plateau country to discover how remarkably widespread and thick are the dark basaltic lava flows. These lava flows are the most characteristic feature throughout the plateau's more than 200,000 square miles of geographic extent. Williams has estimated the total volume of lava as not less than 100,000 cubic miles.⁹ But there is more than lava. Beneath and above and punctuating the flows are colorful deposits known as volcanic tuff and breccia.

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Now when lava flows out through volcanic vents or fissures, immense heat like that of a furnace usually incinerates completely any trace of life in its path, although molds of tree stumps or even animals may be preserved in rare instances. By contrast, explosive volcanic eruptions that blast into the air large quantities of more or less finely divided rock particles, called volcanic ash, or larger fragments, are less destructive. Often by the time the finely divided particles settle like a layer of snow onto the ground, they are cool enough to provide a thick protective blanket that entombs and preserves a portion of the life destroyed by the holocaust. Commonly, explosively volcanic eruptions are followed by torrential rains that saturate the ash to the consistency of soft mush, so that ash and larger rock fragments from around volcanic vents or high areas flow out as a widespread, fairly even layer. The mineral-rich ash and larger fragments become compacted and cemented to form hard rock known as volcanic tuff (small particles) or volcanic breccia (larger particles).

One of the most striking contrasts between the picture of years past, which unfolds in the Oregon country, and the picture we see today is in the magnitude of the geological events transpiring in the region. Today a lava flow or volcanic explosion that ejects a fraction of a cubic mile of lava or ash makes news even if it is on the other side of the world. When on the order of five cubic miles is explosively ejected and a tidal wave that destroys 30,000 or 40,000 villagers is generated, as when the East Indian island of Krakatoa exploded in 1883, it is an event that goes down in the annals of history.¹⁰ We can scarcely comprehend the magnitude of activity required to build up deposits of lava and ash averaging perhaps one-half mile in depth over hundreds of thousands of square miles. In this case the present is surely not an adequate index to this "age of fire," as it has sometimes been called.

In the river valleys of central Oregon five distinctive volcanic formations that lie superimposed one above another may be recognized. Two are below the most extensive lava flows and two are above. In certain other parts of the plateau in Oregon and Washington, approximately comparable formations are also exposed. TABLE 1 lists these formations from top to bottom, the reverse order in which the rocks have been deposited.

TABLE 1†

<i>Formation</i>	<i>Description</i>	<i>Feet</i> §	<i>Fossils</i>
Rattlesnake‡	Volcanic tuff; a welded or fused acidic tuff; thin flows of lava, gravel, sand, and silt.	800	Vertebrates and plants
Mascall	Volcanic ash and tuff, which weathers to a whitish buff or brown badland relief; gravel, sand, and silt lenses.	1,000	Vertebrates and plants
Columbia River Basalt	Many flows of dark basaltic lavas, with only very minor ash or soil partings locally.	2,000	Very rare
John Day	Upper part: buff-colored tuffs. Middle part: greenish-colored tuffs. Lower part: reddish-colored tuffs.	1,000	Vertebrates and plants
Clarno	Variable beds, including tuffs, irregular volcanic conglomerates (agglomerates), lava flows, gravel, sand, and clay.	3,000	Vertebrates and plants
Marine sedimentary rocks	Underlying the volcanic series, as may be seen where erosion has cut completely through the volcanic sequence of strata, an underlying series of nonvolcanic rocks is exposed. These are primarily composed of water-laid sediments, most of which contain fossil sea animals.		Marine invertebrates

† Data from Stock (1946) and Baldwin (1964).¹¹

§ Approximate thickness in feet measured at right angles to the bedding plane (central Oregon); hence not indicative of present relief.

‡ Deschutes formation to the west.

This is the series of colorful volcanic rock formations of central Oregon that Thomas Condon explored for fossils in the 1860's, and even today it is still yielding fossil land animals and plants. Perhaps it would be best to look first at the record of fossil plants, since on land the plants are a better index of the environment than warm-blooded animals are. The story of exploration could fill a volume, but space allows only a few brief excerpts from the writings of Ralph W. Chaney (of the University of California at Berkeley), a long-time student of the ancient forests of Oregon.¹²

My first view of the Bridge Creek hills was in 1920. Together with Chester Stock, then an instructor in geology at the University of California, and a graduate student, Richard J. Russell, I had traveled by autostage to Mitchell, where we found that the next stage northward would not depart until the following day. Leaving Stock to bring our bulkier equipment, Russell and I started out on foot over the winding road down Bridge Creek. After an eight-mile walk, we came to a house in a grove of cottonwoods, described in Merriam's paper as Allen's ranch. A young couple named Wade was operating this ranch, and with a little persuasion agreed to provide meals and lodging. Nowadays, one would hesitate to arrive unannounced and ask for such accommodations; but in the days before good roads it was a custom of the country to take care of travelers. Earlier that summer, I had enjoyed the hospitality of William R. Mascall, James Cant, and Jerome Moore in the valley of the John Day River to the east; I had even been left in temporary charge of the Moore ranch, to milk the cows, feed the chickens, and do other chores while the family went to pick huckleberries in the Blue Mountains. After getting established at the Wade ranch, Russell and I started for the fossil locality on a side road which came down out of Bear Creek. My notes for this afternoon read: "Two and a half miles southwest of Wade's (Allen's) ranch where the road to Fitzgerald's passes a small white hill, there are two rounded hills about thirty feet high, one on either side of the road. These are covered with white bits of shale containing leaves." Here was the Bridge Creek locality which Condon had visited more than half a century before. . . .

At the Bridge Creek locality, a single slab of rock, weighing only a few pounds, may show the imprints of dozens of leaves on its surface; when split along its many bedding planes with a broad chisel, scores of additional specimens may be uncovered (Chaney, 1925). In 1923, I quarried 98 cubic feet of leaf-bearing shale from three pits on the low hill to the right of the road (Chaney, 1924); I split the slabs of ashy shale into thin layers which yielded a total of 20,611 specimens, or an average of more than two hundred to a cubic foot.

The Bridge Creek locality, which is in the lower reddish tuffs of the John Day formation, still yields rich returns today for those who have the patience to quarry the rock and split the ashy shales apart.

Several striking facts emerge as one compares the fossil plants from the successive volcanic formations in Oregon. First, a marked climatic change seems to be indicated. The climate of eastern Oregon today is semiarid, cool temperate, with dry summers. Fossil plants in the upper, more recent levels are mostly from plants that still live in Oregon today (aspen, cherry, box elder, cottonwood), but in somewhat less arid parts of the state, suggestive of similar climate with, however, slightly greater rainfall. By contrast, species preserved in the lowest formation of the volcanic sequence (Clarno) most closely resemble species one would find in subtropical or tropical forest having adequate moisture throughout the year. Breadfruit, cinnamon, laurels, palm, an avocado, and tropical types of ferns are among the species represented. The rich fossil floras of the intermediate levels (John Day and Mascall formations) include many types that today are characteristic of warm, temperate climates with adequate rainfall in the summer. The closest living counterparts for the majority of species preserved in these

levels now flourish in the mixed forests of eastern United States and Central China (Szechuan Province). The plant species seem to suggest that during the time in which the volcanic rocks were being deposited, the climate was undergoing a marked change from humid, subtropical, with moist summers, to cool, temperate, with dry summers.¹³ Much corollary evidence from other parts of the world, based on both plant and animal fossils, suggests that the change was widespread geographically. Characteristic animals of coral reefs that today are restricted to tropical seas may be found as fossils in latitudes as far north as the Oregon and Washington coasts in rock strata that seem to correspond to the lower lying volcanic formation of Oregon, the Clarno formation.

A second feature of the record is the remarkable stability, that is, the evident lack of change of the plant species represented. The majority of leaves that appear as fossils seem to be closely similar to or identical with the leaves of various species of forest trees still living today. It is true that not all of the levels of rock strata in which flowering plants are known to be abundantly recorded are represented in Oregon. Nevertheless, the lack of change is striking. Furthermore, in other areas where deposits classified as Paleocene or Cretaceous (commonly held to be more ancient) are found, most of the plants still are scarcely distinguishable from living genera. In the fossil record there is absolutely no clear evidence that the flowering plants, or indeed the other major plant types, have originated from one or more common ancestral types.

In the first undisputed appearance of flowering plants in the fossil record, numerous and diverse complex modern families are represented, apparently including many living genera such as the maples, service berry, dogwoods, figs, magnolias, sycamores, poplars, oaks, sassafras, and grapes. One student of fossil plants has summed up the problem still confronting students of plant evolution in the following cogent way: "In particular, these include the 'abominable mystery' surrounding their early evolution, notably their center of origin, their ancestry, and their 'sudden appearance' in the Middle Cretaceous as a fully evolved, wholly modern phylum."¹⁴

In an article in the British scientific journal *Nature*, the botanist T. G. Tutin¹⁵ affirms the same truth in typical forthright British fashion: "In the ninety-two years since the publication of the 'Origin of Species' a great deal of argument but remarkably little fact has been produced about the relationships of the angiosperms [flowering plants]. . . . Meanwhile, neither paleobotany, morphology, anatomy or cytology has thrown any light on the origin of the angiosperms or of any major group within the angiosperms

which an unbiased observer can regard as unequivocal. Indeed, one may go further and say that no more is known now about the origin of any major group of plants than was known in 1859." In fact, relationships of the various plant groups are so obscure that there is considerable lack of unanimity over which features should be considered primitive and which should be considered advanced or derived.¹⁶

43 There are still unanswered questions in the record of fossil plants, both for those who believe in an initial special creation of separate basic types and for those who believe that the origin of basic groups is the result of natural processes. The virtual absence of the flowering plants (the dominant type of plants in the world today, including most of the familiar plants we see around us) in layers below those mentioned above (the Cretaceous system) is a problem from either point of view. From the evolutionary point of view, where are the ancestors that should indeed include connecting links between the principal groups? From the viewpoint of special creation, where are the ancestors that should have been living when the lower lying deposits with fossil land life were laid down? At the present time neither question is answered by the fossil record. This leads to the next basic point illustrated by the record of fossil plants in the Oregon country.

The record from several of the Oregon formations is commonly described as "rich," but still it is tantalizingly incomplete. A tropical or subtropical forest is indicated by palms, laurels, figs, cinnamons, and other trees with large, thick entire leaves, such as are common in these environments. Furthermore, the animals that are known from the Clarno formation include extinct rhinoceroses, a small four-toed horse with low-crowned teeth adapted for browsing on leaves, a tapir, an oreodont, an archaic carnivore, and crocodile types that would probably be at home in a subtropical forest environment. These forms of life speak of a specific habitat, a habitat that from similar environments today we infer may have supported eight or ten thousand species of animals and plants.

There must have been scores of amphibians, hundreds of species of birds, thousands of insects, and many hundreds of kinds of plants; yet fewer than a hundred kinds of animals and plants of all types have been described as fossils. Numerous major groups common in any tropical forest today, some of which are known as fossils elsewhere, are completely missing — and this in spite of the fact that the Clarno formation is almost unique in the wide range of kinds of fossils represented in a single formation. Near Hancock Park, one level exhibits beautifully preserved leaves; not far away are the

Clarno "nut beds" famous for the abundance of fossil seeds, including walnuts, figs, etc.; not more than a half mile away are outcrops of tuff that have preserved at one level a number of tree stumps, upright and apparently in position of growth; within a few hundred feet is an important mammal quarry that is still yielding bones; about two miles away in the Clarno formation is a silicified, swampy deposit with ferns, etc.

Few circumstances are more favorable for the preservation of land life than the rapid deposition of mineral-rich volcanic ash and breccia; yet even under such ideal circumstances the record is not more than a skeleton as compared to a fully formed body. Much can be learned. But built-in factors of bias should caution us against unconsciously assuming that the record is adequate or complete, and against arriving at hasty conclusions on the basis of negative data, such as the absence of fossils of certain types.

The animal life recorded in the volcanic formations of the Oregon country reveals another fascinating story — but again, in actuality, only fragments are now discernible. Above, we have briefly commented on the life of Clarno, the lowest or deepest of the five formations being compared. The overlying badlands of the colorful John Day formation, particularly the middle and upper portions, which possess dominantly greenish and buff-colored rocks respectively, have preserved the greatest variety of mammals known from any of the volcanic formations of the plateau country. The John Day formation is that series of volcanic tuff deposits that lies just beneath the most extensive dark lava flows known as the Columbia River Basalts. Evidence from microscopic analysis of the particles forming the tuff indicates that some beds composed of particles that retain their sharp angles and edges were apparently deposited (by air drop from volcanic explosions) essentially where they are now found, or at least close by. Others in which the particles have been rounded and altered seem to have been considerably reworked by wind and water subsequent to the eruptions. Included in the essentially unworked category are those that preserve the very abundant leaves of the Bridge Creek area where Chaney identified 20,611 leaves from 98 cubic feet of tuff.

More than one hundred species of mammals have been recovered and described from the middle and upper John Day beds. There are horses, tapirs, rhinoceroses, giant pigs, peccaries, oreodonts, camels, large-clawed ungulates, wolves and other members of the dog family, sabertoothed cats and true cats, weasels, opossums, rabbits, squirrels, beavers, mountain beavers, pocket gophers, and many other less familiar forms.

In contrast to the plants, which in the majority of instances closely re-

semble living species, most of the mammals exhibit certain distinct differences from the most similar living species. Several species of horses are known which range in height from scarcely over two feet to the size of Shetland ponies. All had spreading feet with three toes, each provided with a hoof well adapted for relatively soft terrain. Their low-crowned teeth were well adapted for feeding on leaves, or browsing as it is called. Multiple toes with hoofs, small size, and teeth adapted for browsing are features that would remind one of modern tapirs, which are very much at home in tropical forests. These small horses are widespread in fossil deposits of both the Old and the New Worlds.

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Tusked pigs known as *elotheres* were truly giant in size, the largest mammals known from the John Day beds. One skull in the University of California collection is two and one-half feet long, and numerous isolated bones indicate that some specimens were considerably larger and must have stood at least six or seven feet high. The late J. C. Merriam, who spent many years studying fossil mammals from the Oregon country and other

The John Day formation, with dark Columbia River basalt flows, near Turtle Cove.



localities in the Pacific states, suggests that "probably few animals have ever existed that were better able to protect themselves than the huge Miocene boars; yet they have long since disappeared from the earth leaving no direct descendants."¹⁷ He describes the discovery and removal of a huge specimen from the John Day beds near Picture Gorge:

When the large *Elotherium* skull now in the museum of the University of California was found, only a portion of a single dingy front tooth was in sight; and not until several days of hard labor had been expended in cutting away the surrounding rock with pick and chisel was it at all certain that the whole cranium was present. The skull was situated in an almost inaccessible place near the top of a steep bluff about two hundred feet high, and in order to get standing-room from which to work, it was necessary to cut foot-holes. To make matters worse, the cranium ran straight back into the cliff, necessitating so much excavation that a number of loose blocks above were almost certain to fall and damage it. To avoid all possibility of accident, steps were cut to a pinnacle about twenty feet above the specimen and from that point the face of the cliff was systematically torn down till a working space was uncovered. The whole operation of excavating occupied for two weeks as many persons as could conveniently work at the same time, and resulted in the discovery of the most important parts of the animal's skeleton. The lower jaw was found intact some distance away from the cranium, one of the fore limbs and a few scattered bones were beneath the head, and close behind it were all of the neck vertebrae.¹⁸

By far the most abundant remains in the John Day beds are from animals that in size and body proportions, and possibly also habits, seem to resemble the peccaries and swine of today. They are in an extinct group called "oreodonts" or "ruminant hogs," which up to the present time is known only from deposits in the New World. There are, in fact, several mammal families whose fossil and living members are restricted to the New World. Those represented in the deposits of the Oregon country include: the pocket gopher family (*Geomyidae*), the kangaroo rats and their allies (*Heteromyidae*), the pronghorns (*Antilocapridae*), and the large ground sloths of the extinct New World family (*Megalonychidae*).

The nature of occurrence of fossils in the John Day formation often seems to indicate partial or complete dismemberment before burial. Entire skeletons are rare, individual bones or parts of skeletons are relatively common. Some bones give evidence of having been gnawed by rodents before burial. The volcanic tuff in which they are entombed may at times have been considerably reworked by water and wind before the remains were finally buried.

The reference to "abundant" mammal fossils in the John Day and some other formations is likely to be misleading to a reader who has not collected fossils. "Abundant" fossils of marine life may mean that the limestone rock is packed with or largely composed of seashells, corals, etc. "Abundant"

plant fossils may imply that a shale or ash layer has leaves or leaf fragments almost wherever the rock is split, at least in certain zones. In contrast, mammals are considered relatively abundant when possibly three or four or perhaps a half dozen skulls can be located in a week or two of careful search over the outcrops. Unless, as occasionally occurs, a pocket or nest has been located where a number of mammals are found near together, it never pays to dig at random in search of fossil mammals. To do so would be tantamount to shooting at random in the forest in the hope of killing a deer.

Overlying the colorful John Day tuffs are many layers of dark basaltic lavas, a most unusual place to find even traces of life. And the lava beds are indeed virtually barren. Nevertheless, there are at least two levels in Washington, near Blue Lake along the banks of the Grand Coulee, where molds of upright stumps and prostrate logs may be observed between the lava flows. In still another level, completely contrary to what anyone would predict, there is a well-formed mold of a small rhinoceros, apparently a member of the widespread but now extinct genus, *Diceratherium*.¹⁹ Several bones were found within when the empty mold was first discovered. It has been conjectured that the rhinoceros was in a freshwater body, which accounted for rapid enough cooling to prevent immediate cremation of the remains.

Along the Columbia River not far from Arlington the same formation has a distinct soil zone with numerous fossil roots between two of the lava flows. This is well exposed in a recent roadcut for Interstate Highway 80. In places the soil appears little altered, whereas in others it has been apparently baked to a brick red from the heat of the lava flow. Such fossil soils have been reported at several levels.

The assemblages of animal life recorded in the more superficial Mascall formation that overlies the Columbia River lavas, and in the Rattlesnake formation above the Mascall, are not as great in variety as is preserved in the John Day formation below. Yet they exhibit distinctive features that contribute to the total picture. Although faunas include many of the general groups, nearly all of the genera and species are different in each formation. In general, the mammal remains of the upper formations seem to resemble living types more closely than those from the lower formations. Oreodonts so prominent in the John Day beds below are present, but much less common and less varied. Camels, horses, rhinoceroses, deer, rodents, and carnivores are found. Giant pigs are not recorded, but large members of the elephant tribe, a type of mastodon, enter the picture. The camels are larger than those in the John Day beds. Remains of *Merychippus*, a pony-sized

horse with three toes and with the high-crowned teeth that possessed complex enamel patterns well adapted for grazing, are relatively common in the Mascall deposits.

In the volcanic deposits of the Rattlesnake formation are preserved a range of mammal types one might expect to encounter in a primeval savannah country. The presence not only of large camels but also of numerous horses and antelopes, both of which are well adapted for grazing and which are not very different from living forms, suggests open grassland country. Mastodons, rhinoceroses, peccaries, and indeed a large variety of fossil tree leaves point to the existence of woodlands as well.

If one looks at the total picture of faunal succession in the strata of the Columbia Plateau, there arises the question of how much time may be required for the completion of study of what confronts us here. One must consider the interbedded volcanic deposits, the establishment of the diverse mammalian faunas and their peculiar ecologic and climatic needs, their disappearance, and the length of time necessary for a new fauna that had its life and soil destroyed by volcanic activity to come in and occupy the area.

As one reviews the record of fossil mammals preserved in the sequence of volcanic deposits of central Oregon, at least two further points deserve comment. First, the general impression one gains from a survey of the fauna seems to reinforce the evidence provided by the fossil plants, namely, that the trend of climatic and environmental change was from moist, subtropical forests, with adequate rainfall in all seasons, toward cooler, drier climates, with progressively more open country.

Second, although the animals differ considerably from level to level, with a higher degree of strangeness in the lower deposits, one does not see transitional or intermediate forms that bridge the gaps between one family or order of mammals and another. The horses, for example, include nearly the full range of adaptation one sees within this family (Equidae), and yet these horses are not clearly connected, in the fossil record either here in Oregon or elsewhere, to any other mammal family.

This absence of connecting links between the basic types, the families and orders of mammals, and other forms of animal life as well, seems to be a nearly universal feature of the fossil record.²⁰ It is indeed one of the greatest theoretical obstacles for those who believe that the various basic types of life have not always been distinct but have risen from common ancestors. Although such students usually attribute the absence to the spotty and inadequate nature of the fossil record, nevertheless, a major problem remains. As the paleontologist Norman Newell points out, "Many

of the discontinuities tend to be more and more emphasized with increased collecting.”²¹

In the foregoing account I have attempted to give several glimpses into the wealth of information that has been combed from the rocks of the volcanic deposits of the Columbia River Plateau, particularly that section well exposed along the river valleys in central Oregon. Only certain facets could be touched on, but I have introduced data to illustrate the nature of information one can gain from the fossil record, even though the meaning of these data is often obscure.

In retrospect, as one endeavors to assess the mute testimony of the rocks deposited during this period of volcanic catastrophes, this “age of fire” as it is sometimes called, the thoughtful student can hardly escape drawing certain conclusions. Perhaps the most fundamental conclusion is this. Although a wealth of knowledge about plants and animals of times past may be learned, even under the most favorable succession of circumstances for the preservation of successive samples of a variety of land life, the record is still so incomplete that many basic questions cannot be answered with certainty from the available data. Those who come to the fossil record in search of proof regarding either creation, by some means or another, or evolution of basic forms of life will be disappointed. Such proof does not exist in the fossil record. Available evidence is equivocal and subject to various interpretations. One may justifiably feel that the evidence in the fossil record favors one or the other of several viewpoints. However, each viewpoint should not be equated with proof, as is so often done.

It is appropriate to ask: “Granted that from the fossil record alone proof regarding origins is not possible, still how does the weight of evidence look to you?”

The more I probe into the secrets of nature the more I am impressed that the adjustments on this planet for life are too numerous to be accounted for by chance. Some will say life had no alternative but to adapt to the circumstances that exist, but I feel that this statement misses the point. Existence of a source of energy and organization; of a chemistry of matter that allows for complex structures, processes, and interchanges necessary for any imaginable system of life; of essential elements and compounds such as carbon and water, each with countless, unique, and remarkable properties absolutely essential to life as we know it, and to life processes, seem to me to point to a designer, a source of plan and organization and power.

The location of the planet Earth in the temperate zone of the solar

system and the adjustments by which the narrow range of temperature friendly to life are maintained; the continued existence of suitable habitats for land, water, and air life in the planet and of a suitable atmosphere seem to me to be strong evidence that the planet is not the product of chance. Order and organization of the universe point to a dependable administration. Remarkably intricate and complex structures both at the molecular and organismal level, and the numerous interdependent complex physiological processes that must exist in even the simplest conceivable independent forms of life, and to a far greater extent in higher forms, seem to point to a designer of incomparably superior ability. The existence of beings capable of appreciation of truth, of beauty in a myriad of forms, of higher values such as love and devotion, and of spiritual perception again suggest to me a creator with far greater capacities than those possessed by the created beings. If it takes personal intelligence to understand an edifice, it must take far greater intelligence to plan the edifice. It may be possible to have a picture without an artist or a cathedral without an architect, but I am unable to conceive of such a situation. Words are feeble instruments to express ideas so vast.

What does all of this have to do with the fossil record and origins? Simply this: when I study the record of the rocks I find there an order of nature in both the inanimate and the living world similar to that which exists on the earth today. Someone has said, "We are reading the first verse of the first chapter of a book whose pages are infinite." Yet in this verse is revealed to me the undisputed work of a creator, a revelation no less magnificent than that which is given in the early verses of the sacred Scriptures.

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Student Attitudes toward Missions

BETTY STIRLING

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Missionary evangelism has been the primary purpose of the Seventh-day Adventist church, and the gospel commission, "Go ye into all the world," has been taken as a direct command. If the church is to fulfill this command, the youth of the church must be educated and motivated to take their place in the active mission program, for the future of the mission program rests on the college youth of today.

But how do these students feel about the program the church conducts? Do they want to enter mission service? To learn how they stand on these important questions, Loma Linda University Department of Sociology and Anthropology in the fall of 1966 began a study of student attitudes toward missions.

A probability (random) sample amounting to 15 percent of the students of each North American and Australian English-speaking Adventist college was chosen from student lists provided by the college registrars.

METHODS. Questionnaires were distributed to the chosen students by officers of the college or by direct mail. Over 50 percent of the questionnaires distributed were returned; in one college the return was almost 90 percent. A total of 1,011 usable questionnaires was returned in time for analysis — 947 from North America, 64 from Australia. The respondents appeared to be representative of the total student body in such characteristics as sex, age, class, and so forth.

A 27-question, multiple-choice type of questionnaire was used. It was developed from questions used in a small study done previously at Loma Linda and from the results of personal interviews conducted by the department at three schools. The printed questionnaires and explanatory

letters were put with return envelopes inside sealed envelopes addressed to the students in order to assure complete confidentiality of the responses.

FINDINGS. As the study was exploratory in nature, it attempted to answer certain broad questions. The analysis of student responses is summarized below with these guiding questions as headings. Analysis of the answers students made and the comments they wrote in seem to have some important implications for the future of the mission program.

1. *How do students feel about the mission program?*

Students are concerned about the mission program. The amount of response itself shows interest. Also, almost 50 percent of the students filling out the questionnaire were interested enough to write out thoughts on missions to amplify answers they checked.

The introductory question was: "Imagine the following situation: A group of acquaintances are having a *general* discussion about Seventh-day Adventist mission service. When you join the group would you (1) argue for mission service, (2) argue against mission service, (3) remain silent and listen?" In response almost none said they would argue against mission service. (Seventy-one percent would be "for," 2 percent "against," and 26 percent "silent.")

But they are not necessarily satisfied with the present mission program. In response to the question, "Do you feel that the mission program of the church is (1) progressive, adequate for the needs of the future, (2) meets the needs of the world today, (3) outdated?" 41 percent answered that the program is outdated, only 21 percent that it is progressive.

Almost half the respondents indicated that they felt that trained nationals should direct the mission program (in their countries). Many wrote strong comments on what they viewed as injustice in the relative pay and treatment of nationals and overseas workers. In response to a question on the "effect" of the mission program, almost half said the missions both "Christianize and Americanize" (or "Australianize").

Most of the students surveyed were not satisfied with the recruitment program, and advocated changes in terms of service. In all three countries they commented favorably on a program more like that of the Peace Corps.

2. *How accurate is student knowledge of the mission program?*

In general, they are uncertain of the facts on salaries, conditions, and availability of recruits to fill positions, and many, particularly the younger students, commented on their uncertainty.

Half of the American respondents thought that missionaries get less pay than homeland workers but that it is worth more, a fourth that missionaries get the same pay, slightly less than a fourth that they get less and that it is worth less. The Australian students have a very different picture: 70 percent thought that missionaries get the same pay as homeland workers, only a sixth thought that they get less pay and that it is worth more.

In comparing missionaries with national workers of similar training, half of the respondents thought that missionaries have higher wages and better living conditions, a fourth thought that the two groups are equal, and almost a sixth thought that missionaries are worse off than national workers. The correct answer is higher wages and better living conditions; so about half the respondents had a true view of the situation.

3. *Where do students get their information about missions, and how do they assess the value of their sources?*

Particularly from written-in comments, it would appear that students most value reports from direct sources such as returned missionaries, friends or relatives who have been in the mission field, and student missionaries. But the usual mission reports in Sabbath school or in church papers are another thing. Students criticized — in many cases emphatically — both the accuracy and the quality of mission reports, and overwhelmingly asked to be told of both success and failure in the mission fields. In answer to the question, “Do you think mission reports (1) paint a true picture, (2) exaggerate, (3) understate conditions of mission service?” only 40 percent answered “true picture,” and in the larger schools it was less than this percent. Concerning the question on quality of reports, only 27 percent felt that reports are both inspiring and informative. Eighty-four percent indicated that a college audience should be told of both success and failure.

4. *What kind of training do students feel is necessary for mission service?*

The five suggested possibilities were “a call” in lieu of training, college or professional training, education in cultural differences and customs, leadership training, and training in practical skills (plus a blank for write-ins). At least 50 percent of the students checked all possibilities, except “call,” which was checked by 48 percent. But there is an interesting variation by college: in those that emphasize the training of ministers, over half of the respondents checked “call.” Professional training rated uniformly high except in two colleges. For all except three colleges, “practical” train-

ing received the largest number of checks; in one college "leadership" received the most; and in the two schools with the most graduate students, "culture" received the most checks. (The write-in on a number of questionnaires: "a good wife!")

5. *Are students interested in serving as missionaries? For how long? Where? When did they first become interested? Do they feel needed and wanted?*

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Over two-thirds considered themselves candidates for mission service in some degree ("have been asked," would go "if asked," "might be interested"), whereas less than a third said that they are uninterested — because of not thinking about it, or having lost interest, or never having been interested. However, in assessing other students' interest in mission service, they saw only 6 percent considering themselves candidates, almost two-thirds interested in a general way in missions, but not for themselves, and 27 percent apathetic. There are several possible explanations for this discrepancy of response. If the question on other students is considered a "projective" type of question — that is, the student is reading his own real feelings into his interpretation of others' feelings — then possibly fewer students are really interested in mission service for themselves than say they are — or else classmates do not perceive their interest. Another explanation might be that the students seen as apathetic are the ones who did not return questionnaires. However, the number of unreturned questionnaires for a given college does not seem related to the amount of apathy for the college. Apathy does seem to be related to the total pattern of opinions at the college with more apathy being seen where the pattern of response is not too traditional (see last paragraph of section 6).

Well over half of the respondents viewed mission service as challenging for a lifetime career; a fourth saw it as challenging for a few years. Write-in comments, though, indicate that most look with favor on short terms (more frequent but possibly shorter furloughs). Latin America and the Pacific Islands seem to be the preferred fields of service, although almost a fifth of those interested were not sure which field they would like most.

The study shows the importance of high school and college years as times when interest in mission service is first aroused. Sixty percent, however, did not feel they had ever been "asked" to be missionaries by anyone in an official capacity; 29 percent indicated that they had been "asked," but only as a member of a group; only 10 percent felt that they had been personally asked. The percentages on this question vary widely by college.

6. *What factors affect student attitudes toward missions and toward mission service — personal characteristics, class standing, major, college attended, number of years spent in SDA schools?*

Students are not a homogeneous mass. The study shows that differences in age, grades, sex, and majors are related to attitudes toward missions and to knowledge of the mission program.

One problem in trying to relate these characteristics separately to attitudes is that the characteristics themselves are related. Class standing is related to age and, to a lesser degree, to years spent in SDA schools. But marital status is also related to age and class standing: older students are more likely to be married. To some extent, major is related to both sex and age (or class standing), since the graduate professional programs (medicine, theology, dentistry) are heavily male. This preponderance of the male is balanced to a degree by graduate education students, many of whom are female. But it would take a sample many times larger to separate out completely the effect of one variable by holding all others constant. However, a comparison of the results of cross-tabulations with each in turn gives some indication of which characteristics are related to which personal variable.

There is little difference in attitudes and knowledge between the sexes. Men are somewhat more critical of the mission program than women are, and also they show somewhat better knowledge. Women develop interest in mission service at younger ages than men do and they are more interested in lifetime service. Marriage, as a variable, seems to bring the attitudes of women closer to those of men.

The student's major is related to how he looks on the mission program and whether he is interested in mission service. However, these results must be considered as speculative, since the numbers of students in certain majors were small.

Of all the characteristics that were investigated, class standing (freshman, sophomore, etc.) is most clearly related to attitudes toward missions. Higher-level students are more critical of the program, have more suggestions for change, show better knowledge of conditions, and are more skeptical of the quality and accuracy of mission reports. Higher-level students are also more likely to have been asked to be missionaries and to have accepted, they are more likely to have lost interest in serving, and they seem to be more likely to see other students as apathetic.

Age is related to attitudes in much the same way as class standing, but with an interesting difference: the older the student, regardless of class standing, the more likely he is to remain silent in a discussion on missions.

The number of years spent in an SDA school is also related to attitudes, but to a lesser extent than either class standing or age. The pattern is similar. More time spent in SDA schools does not give him a greater desire for mission service, nor does it increase the accuracy of his knowledge of conditions.

There is a pattern of answers to questions by college, particularly if the questions on attitude or opinion are considered as a block. The general pattern in some colleges might be termed traditional, whereas in others it is more nontraditional. Some fall in between. But this pattern is apparently related in part to the class distribution and the age of students.

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7. How does students' degree of interest in serving relate to their views on the mission program?

The students who indicated that they had been asked to serve and that they intend to go as missionaries are not necessarily satisfied with the program. For example, they are likely to see the program as outdated rather than as progressive or adequate; they are in favor of giving qualified nationals the responsibility for direction of mission programs. They do not view mission service as much different from work in the homeland. They have more accurate views on salaries and living conditions. Although they are critical of mission reports, they are not so critical as some other groups.

In contrast with those students expecting to go, those who indicated that they would become missionaries if asked differ in many respects. They are much less critical of the present mission program. Their knowledge appears good in most respects. They are less critical of reports and are more likely to feel that reports understate conditions rather than exaggerate them. They are the only group in which significantly more than the population average believe other students are interested in missions for themselves.

Students who said that they might be interested in going differ from the population average only slightly on almost all questions. Where they do vary, they resemble the "if asked" group; however, their knowledge of conditions is less adequate.

Students who "haven't thought much about" mission service also differ little from the average; however, their pattern of answers definitely indicates less thought about missions. They, too, show somewhat less knowledge.

Students who were at one time interested but are no longer, resemble the "asked" group in many ways. These now-uninterested students, too, are critical of the program, and in much the same ways, but to a stronger degree.

Their knowledge is about the same. They are more critical of mission reports, but their assessment of the student mission program is about the same.

Students who said that they had never been interested in mission service differ from the "used to be interested" in several ways. They are less critical but more apathetic. They question the accuracy of mission reports less than they do the quality. They seem to know less about the mission program than the average.

8. *What are the components of students' attitudes on the mission program?*

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Cross-tabulations were made of several questions to determine possible components of certain attitudes. For example, what did a student mean when he said the program is "outdated?" His pattern of answers shows that he feels these changes should be made: turn direction over to the nationals; Christianize more and "Americanize" less; make service temporary rather than lifelong. But he also feels that mission service is not really a sacrifice and that reports exaggerate conditions and are not especially inspiring. He wants to hear about both success and failure. He wants prospective missionaries to be educated in cultural differences and also in practical skills; he wants classes for the study of missions. He is a little more likely than others to favor a Peace Corps type of program, but not scholarships. And although the number of students who said that the program is "outdated" are just under half of the total respondents, they are the majority of the higher-class-standing students.

When a student said that the mission program is "progressive," on the other hand, he has almost the opposite views on these subjects.

When a student said that he feels that mission service is a lifework, what does he mean in terms of other attitudes on missions? His response pattern shows that he views the present program as progressive. He also looks on mission service as a sacrifice. He does not view conditions as unhealthy, however, nor does he feel that missionaries should be paid more than homeland workers.

In what way do students see mission service as a sacrifice? For one, they feel that the missionary gets less pay than homeland workers, and they would like to see him receive more pay. For another, they regard conditions as unhealthy rather than as merely inconvenient.

How does the student mission program affect interest in missions? The student who sees the project as benefiting only the student missionary him-

self and the student who thinks his college has no program (whether or not it does) consider other students to be apathetic toward missions. The student who sees the project as benefiting the entire college is also more likely to be interested in missions himself, whereas the student who sees it as benefiting only the one who goes is not especially interested himself.

CONCLUSION. In many ways the study raises more questions than it answers, as is true of much exploratory research. But it also indicates which directions will be most fruitful for further inquiry. It tells much about student attitudes toward the mission program and toward service, but it also shows that in student knowledge there are certain gaps that may affect their attitudes.

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One area in which more study needs to be done is on the apparent decline of interest in mission service, which comes with advancing levels of schooling (or increase in age or more years in SDA schools). Is this realism on the part of the student? Is it recognition that he has talents and opportunities that do not fit with mission service? Is it a counting of costs that makes him believe he cannot afford mission service? Or is it disillusionment with the mission program? The survey indicates that it may be all of these.

There should be further probing into why students see themselves as personally interested in missions but see other students as not personally interested. Is this a realistic appraisal of other students or of themselves?

Further study should be given to mission reports, particularly the reports given in Sabbath schools. Indications from this study are that in the larger centers the students who would presumably have more firsthand reports are the least satisfied with quality and content. Is this a matter of higher expectations? Or are the reports less satisfactory? Caustic write-in comments indicate prevalent skepticism about what is told in public mission reports.

The student mission program appears from this research to be definitely related to interest, and certainly write-in comments are enthusiastic. What would a follow-up show about the succeeding activities of the student missionaries themselves? Do they return to mission service on completion of their schooling? How does one type of program differ in effect from another?

In conclusion, the research shows that students are interested in the mission program and in mission service, but their interest is critical and their knowledge does not always measure up to the information presumably transmitted to them. They ask for more dialogue that will allow them to ask sensitive questions and to receive straight answers about missions.

REVIEWS

A Reasoning Christian

J. PAUL STAUFFER

CHRISTIAN REFLECTIONS

By C. S. Lewis

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The fourteen essays of *Christian Reflections* come from the last twenty-odd years of the life of C. S. Lewis. The earliest, "Christianity and Literature," was read to a religious society in Oxford and then included in a collection of essays that appeared in 1939. The last, retitled "The Seeing Eye," had been printed in *Show* as "Onward, Christian Spacemen" in 1963. Those who think of Lewis primarily as the explicator and defender of "mere Christianity" may find these essays only peripheral to that central concern. In them the educated Christian reflects not so much on questions that concern all Christians as on such questions as would be faced by one who, like Lewis himself, is by profession a literary scholar and an intellectual, or by anyone whose interests focus on intellectual and aesthetic activity.

From the time of his conversion Lewis devoted himself to what he called "the enormous common ground" shared by Christians. Discussions about differences of doctrine or ritual he found "seldom edifying." He chose to be neither controversialist nor innovator. When an American editor invited him to write a critique of *Honest to God*, Lewis wrote back: "What would you yourself think of me if I did? . . . A great deal of my utility has depended on my having kept out of dog-fights between professing schools of 'Christian' thought. I'd sooner preserve that abstinence to the end." Though in one of these essays, "Modern Theology and Biblical Criticism," he takes issue with contemporary theology, he engages in no dogfight. He makes instead a very gentle and conciliatory protest and speaks of it as the bleating of a sheep whose shepherds he hopes will hear.

Awareness of Lewis's longtime commitment to the common ground of Christianity prepares the reader of *Christian Reflections* for its conservative position. In one of the essays Lewis speaks of himself as "a Christian, and even a dogmatic Christian untinged with Modernist reservations and committed to supernaturalism in its full rigour" (p. 44).

That conservatism shows itself most clearly in a cluster of essays that seem to belong together, not only by reason of some overlapping ideas, but even more obviously in the employment of the same strategy of logic. To illustrate that strategy and to show how Lewis's mind works in the essays of this group, let us look at "The

Poison of Subjectivism" in some detail. Until recent times, Lewis notes, man in studying his environment has assumed the validity of his own reason. Now, in the light of the belief that his brain developed as a result of blind evolutionary process, man concludes that his thought is merely subjective, that "there is no reason for supposing that it yields truth."

The focus of the essay is on "practical reason," by which Lewis means our judgment of good and evil. Contemporary man's surprise at the idea that judgment of good and evil is a function of reason is itself evidence of the pervasive influence of subjectivism. Up to our time, he says, men took for granted that in moments of temptation passion was opposed by reason, not simply by a feeling about values that had been generated by the interaction of environment and tradition. In the modern view, "to say that a thing is good is merely to express our feeling about it; and our feeling about it is the feeling that we have been socially conditioned to have" (p. 73).

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Now, one who assumes that value judgments are the result of such social conditioning, and who also happens to be a reformer, is likely to conclude that the conditioning might have been different and better, and that it is therefore possible to improve our conceptions of morality. In opposition to that conclusion Lewis offers these propositions:

(1) The human mind has no more power of inventing a new value than of planting a new sun in the sky or a new primary colour in the spectrum.

(2) Every attempt to do so consists in arbitrarily selecting some one maxim of traditional morality, isolating it from the rest, and erecting it into an *unum necessarium* (p. 75).

Lewis's method of supporting these assertions is to show that whenever one proposes to abandon an old morality and substitute a new one, inescapably he bases his appeal on principles of the traditional morality he professes to have rejected, and is thus guilty of self-contradiction. To illustrate this inevitable confusion of thought, Lewis notes that such a statement as "We must abandon irrational taboos and base our values on the good of the community" is in effect only a variant of "Do as you would be done by."

Likewise, a shift of ground offering a biological rather than a moral foundation for conduct and urging a certain line of action "for the preservation of our species" appears to be founded on the notion that we have other instincts also that are vigorously in conflict with that instinct to preserve the species. Then how does one decide which instincts are to be obeyed more than others? Only by an appeal to a standard, and that standard turns out to be traditional morality. Having rejected traditional morality, the subjectivist is placed in the position that he cannot propose any moral reform, because he finds no grounds on which to justify that reform except, ultimately, the traditional morality he has already rejected.

To the argument that his position makes progress impossible, Lewis replies that goodness is a fixed and immutable standard. That being so, moral progress consists not in seeking a new standard but in moving closer to that fixed, though never wholly attainable, standard. He admits that our ideas of good may improve, but says that such improvement must be from within the moral tradition and that it results from illuminating blind spots that have obscured our understanding of what goodness truly is.

As confirmation of his belief in "the massive unanimity of the practical reason in man," Lewis points to the surprising agreement among men of diverse cultures and religions on matters of moral principle. Examining a great variety of moral codes, almost universally he finds denunciations of oppression, murder, treachery, and falsehood. He finds injunctions of honesty, of almsgiving, of kindness to the aged, the young, and the weak. He finds mercy more stressed than justice. He admits that "no outline of universally accepted value shows through," yet he finds "substantial agreement with considerable local differences of emphasis and, perhaps, no one code that includes everything."

If Lewis seems to pass over the evidence that practical reason can be easily subverted, that consciences can be badly educated, and that revelation is progressive, the reason may be in his vividly expressed fear of the dangers inherent in subjectivism. He says, "Out of this apparently innocent idea comes the disease that will certainly end our species (and, in my view, damn our souls) if it is not crushed; the fatal superstition that men can create values, that a community can choose its 'ideology' as men choose their clothes." Looking ahead, he sees the subjectivist reformers as conditioners who will seek to create conscience by "eugenics, psychological manipulation of infants, state education, and mass propaganda," until eventually there would be on the one hand only the masses conditioned in a morality determined by the experts, and on the other a few conditioners who, having created conscience, cannot be subject to conscience themselves and thus stand outside morality.

In "*De Futilitate*," the most closely reasoned of the essays, Lewis argues again for validity of reason. Here he examines a subjectivist view that it is absurd to demand that the universe be good, or to complain that it is bad, because such judgments are merely human thoughts and consequently they tell us nothing whatever about the universe, only about man's thinking.

But, says Lewis, unless thought is valid we have no reason to believe at all in the real universe, and he concludes that logic is a real insight into the way in which real things have to exist. He rejects the term "human reason," insisting that if thought is indeed rational it is far more than human, it is in fact cosmic or supercosmic. That is, logical thought is not "reading rationality into an irrational universe but responding to a rationality with which the universe has always been saturated" (p. 65).

The essay "On Ethics" is closely related to the two mentioned above, employing a style of argument that relies a good deal upon pointing up contradictions inherent in an opposing position, revealing a great deal of faith in logic, and expressing conviction that man cannot create values or establish a new morality or a code of ethics or an ideology. He concludes the essay by saying: "I send you back to your nurse and your father, to all the poets and sages and law givers, because, in a sense, I hold that you are already there whether you recognize it or not: that there is really no ethical alternative: that those who urge us to adopt new moralities are only offering us the mutilated or expurgated text of a book which we already possess in the original manuscript. They all wish us to depend on them instead of on that original, and then to deprive us of our full humanity. Their activity is in the long run always directed against our freedom" (p. 56).

Three other essays explore questions likely to be present in the mind of a Christian

who, by profession and inclination, is concerned with literature and the arts — “Christianity and Literature,” “Christianity and Culture,” and “On Church Music.” The first of these was a lecture on an assigned topic, and it turned out to be a topic on which Lewis did not have much to say. He almost dismissed the subject in an analogy I quote as a good illustration of Lewis’s felicitous use of that device:

It would be possible, and it might be edifying, to write a Christian cookery book. Such a book would exclude dishes whose preparation involves unnecessary human labour or animal suffering, and dishes excessively luxurious. That is to say, its choice of dishes would be Christian. But there could be nothing specifically Christian about the actual cooking of the dishes included. Boiling an egg is the same process whether you are a Christian or a pagan. In the same way, literature written by Christians for Christians would have to avoid mendacity, cruelty, blasphemy, pornography, and the like, and it would aim at edification in so far as edification was proper to the kind of work in hand. But whatever it chose to do would have to be done by the means common to all literature; it could succeed or fail only by the same excellences and the same faults as all literature; and its literary success or failure would never be the same thing as its obedience or disobedience to Christian principles (pp. 1-2).

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The Christian, he believes, will take literature a little less seriously than the cultured pagan, for whom literature or culture may be a substitute for religion.

If, for the Christian, the end of human life is salvation in Christ and the glorifying of God, what is the value of culture, he asks, in “Christianity and Culture.” He attacks the idea that “coarse, unimaginative people” are less likely to be saved than “refined and poetic people.” Examining all New Testament references that might be relevant, he finds that if it is not hostile, it is “unmistakably cold to culture.” To New Testament writers, culture may be innocent, but it is not important. Lewis’s conclusion is that culture is a storehouse of the best sub-Christian values, that it is not in itself meritorious, that it may be innocent and pleasant, that it is a vocation for some, that it may be helpful in bringing certain souls to Christ, and that it may be pursued to the glory of God.

In the essay “On Church Music,” he is concerned with the way differences in education and in taste affect our judgment of what glorifies God. His reflections lead him to this interesting observation: There are two musical situations on which I think we can be confident that a blessing rests. One is where a priest or an organist, himself a man of trained and delicate taste, humbly and charitably sacrifices his own (aesthetically right) desires and gives the people humbler and coarser fare than he would wish, in a belief (even, as it may be, the erroneous belief) that he can thus bring them to God. The other is where the stupid and unmusical layman humbly and patiently, and above all silently, listens to music which he cannot, or cannot fully, appreciate, in the belief that it somehow glorifies God, and that if it does not edify him this must be his own defect (pp. 96-97).

The least characteristic essay is doubtless “Modern Theology and Biblical Criticism,” because it reveals Lewis in a position closer to controversy than he usually occupies. In it he presents to a group of young clergymen in training a reasoned, ingratiating statement of his response to recent theology. Its most telling arguments are those in which as literary scholar and critic Lewis exposes the way biblical criticism has frequently been bad or discredited criticism. Touches of humor are

more frequent in this essay than in any other. For example: "The Biblical critics, whatever reconstructions they devise, can never be crudely proved wrong. St Mark is dead. When they meet St Peter there will be more pressing matters to discuss" (p. 161).

"The Seeing Eye," an essay in response to the Russian astronaut's failure to find God in space, includes this glimpse of his personal ground for faith: "I never had the experience of looking for God. It was the other way round; He was the hunter (or so it seemed to me) and I was the deer. He stalked me like a redskin, took unerring aim, and fired. And I am very thankful that that is how the first (conscious) meeting occurred. It forearms one against subsequent fears that the whole thing was only wish fulfilment. Something one didn't wish for can hardly be that" (p. 169).

To read *Christian Reflections* or any of the other Lewis works that I know is to be in communication with a cultivated and adroit and urbane mind, a mind disciplined to make precise distinctions, a mind skilled in logic and orderly analysis. Lest these qualities in any way suggest detachment and remoteness, let me quickly add that it is a mind that reveals itself in expression that is personal, genial, ingratiating. And one must feel, I think, even when not fully persuaded by its logic, that above all it is an honest mind dedicated to the glorifying of God and the salvation of men.

Yet I put down *Christian Reflections* with a touch of nostalgia, a vague feeling of disappointment, for its author addresses a world that is gone, a world that now seems curiously remote from us, a world not yet engaged by the most pressing problems of these days. I fear that many of the questions on which he focused his impressive intellectual resources may seem only academic to young readers. And to many older ones his obvious faith that sweet reasonableness can lead us to the solutions we require may stir up more than a little envy.

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In Defense of Secular History

RONALD L. NUMBERS

GOD AND MAN IN HISTORY

By George Edgar Shankel

Southern Publishing Association, Nashville, 1967 268 pp \$5.95

The historian seeks to understand human activity in the past. He is not satisfied merely with establishing a correct chronological sequence of events; he attempts to identify the causes and effects of these events, whether they be of a social, political, economic, or psychological nature. The only restriction placed on these explanations is that they be supported by evidence available to other scholars. For this reason historians do not generally write about the influence of divine and satanic forces. They may believe that such powers actually exist, but the absence of evidence usually prevents inclusion of such considerations in scholarly histories.

God and Man in History is a protest by George Edgar Shankel, a Seventh-day Adventist teacher of history, against this practice of excluding the supernatural from historical explanations. The first part, described in the preface as "an analysis and evaluation from a Christian point of view of various human philosophies of history promoted at different times during the past few centuries" (p. 8), is essentially a polemic against rationalism, secularism, humanism, communism, and the "doctrine of inevitable progress." The historical treatment of these ideas is generally cursory and denunciatory. I will focus on the second part of the book, in which the role of the supernatural in history is discussed.

Shankel believes that divine and satanic forces have influenced the course of historical events so frequently and so fundamentally that they constitute the "mainspring of action in history" (p. 7). He fears, however, that historians have been so preoccupied with the search for empirical evidence in support of their various theses that they have overlooked these vital spiritual sources. Consequently, their histories have been shallow and inadequate.

Shankel fails to recognize that his approach might just as easily produce superficial history. If a historian is convinced that Satan always acts to thwart "the best effort of God" (p. 200), he is likely to think that the *real* cause of some evil phenomenon can be explained without tiresome research, but with a simple ascription to diabolic influence. This type of explanation was actually used in a recent work by another Seventh-day Adventist writer, who attempted to account for the widespread acceptance of evolution in the mid-nineteenth century. The idea of evolution became popular at that particular time, explains the author, because Satan wanted to use it in his battle against the early advent movement. No documentary evidence is cited to support this claim of satanic intervention.¹

The deterministic overtones of Shankel's interpretation of history are likewise disturbing. God intervenes to ensure that His predetermined plan for this world will not be foiled by man's misuse of his "free will" (pp. 182, 198), but we are assured by Shankel that God would prefer to grant us absolute freedom if we could only be trusted to make the right decisions (p. 203). Shankel does not resolve the contradiction between his statement that "God cannot deny the privilege of free will and be consistent with Himself" (p. 185) and his belief that God intervenes whenever His predetermined plans are threatened. "The only question," he says, "is how long and to what extent God can allow man to carry out his human designs and imperfect wisdom without endangering seriously His ultimate plan" (p. 198). This is indeed a strange conception of freedom; but without it, divine interference would be difficult to justify.

God's interventions are supposed to take place in two ways: "(1) indirectly, by making the forces and laws operating in the world the expression of divine will; (2) directly, when God by supernatural intervention causes matters to take a different course than they would in the natural course of events" (pp. 193-194). The crucial problem confronting Shankel's ideal Christian historian is to discover when these interventions have occurred. As the only reliable source in this area is divine revelation, and it throws light on relatively few historical events, most historians have no evidence whatsoever to substantiate claims of providential action. Therefore, even

though they may have a deep personal belief that God is guiding the affairs of this world, they refrain from unsupported speculations.

Since Shankel agrees that the plans of Providence cannot be known "except as they were revealed in the prophetic word" (p. 69), we naturally would expect all his examples of divine intervention to come from this source alone. This expectation is reinforced by his statement that "no responsible historian should have the temerity to assign providential action to specific historical events" (pp. 203-204). Having assumed Shankel to be a responsible historian, I was surprised to find him indulging in the same kind of speculation he condemns. He suggests, for instance, that the English defeat of the Spanish Armada in 1588, the miracle of the Marne in World War One, and the Union victory at Gettysburg are all examples of God's overruling in history (p. 204). Such conjectures tell us more about the author's Protestant, Allied, and Northern biases than about divine manipulation.

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When Shankel tries to show that many of the turning points of history can be understood only in the light of the principle that God intervenes when individuals or nations abuse their moral freedom, he provides more dubious illustrations of divine action, such as the following (p. 192):

Charles I of England abused his royal prerogative by curtailing the freedom of his subjects, and by becoming an absolutist he profaned his sense of moral responsibility. There remained no choice but for the people to reassert their lost freedom and themselves assume the sovereignty betrayed by their king. When the sovereign power thus assumed by the Cromwellian regime exceeded its rightful moral prerogatives and assumed the liberties guaranteed constitutionally to the people and to Parliament, it too was forced to capitulate to the higher moral will of a sovereign people.

This interpretation comes dangerously close to equating the will of the people with God's will. If this rule were applied consistently, we might have to conclude that the successful people's revolutions in Russia, China, and Cuba during this century were favored with divine support, Shankel's strictures of communism notwithstanding.

A secondary issue raised by Shankel concerns the propriety of passing moral judgments on individuals and ideas from the past, a subject of interest to many historians. Christians who feel a duty to condemn evil because they possess in the Law of God a standard for making seemingly valid judgments would do well to remember the biblical admonition to "judge not, that ye be not judged." They should also be aware of the hazards moral judgments pose to the writing of good history. Taking past actions out of context and judging them by present values is clearly unhistorical. The historian's goal is to understand — not to praise or condemn — the past. Judging has a dangerous tendency to obstruct understanding.

Shankel's treatment of this question is not very lucid. He devotes a chapter to "Moral Judgment in History" but fails to distinguish adequately between the moral judgments made by historians and the execution of divine judgment, two distinct acts. Furthermore, he tends to take an ambiguous position toward the first kind of judgment. While advocating judgments based on absolute biblical principles (pp. 124-125), he warns the historian not to "take upon himself the prerogatives of God" (p. 131) and cautions against offering "judgment on social systems that may ulti-

mately be used of God" (p. 203). In practice, Shankel has no reservations about passing judgment — even on social systems that may ultimately be used of God. For example, he describes the present confrontation between Christianity (i.e., capitalism) and communism as "a part of the larger struggle between good and evil for the souls of men" (p. 120).

Karl Löwith, a Christian philosopher of history, has correctly concluded that it is impossible to impose "on history a reasoned order or [to draw out] the working of God. . . . To the critical mind, neither a providential design nor a natural law of progressive development is discernible in the tragic human comedy of all times."² The Christian interpretation of history is derived from revelation alone. Since revelation is strictly a matter of faith, historians should not expect either to verify or to falsify it with historical evidence. Here lies the fallacy in Shankel's book, which was written primarily as a text for college history majors. The student is led to believe that he can and should find evidence of God's (or Satan's) hand in the study of history. Because such discoveries are unlikely, he will probably become disappointed, if not cynical.

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Although I question the legitimacy of any Christian approach to history that would have historians searching for unrevealed evidence of supernatural activity, I do recognize the possible value of having an overall interpretation of history based on Christian beliefs. Patrick Gardiner's comments on the Marxist philosophy apply equally to the philosophy of the Christian. "Theories of this kind," he says, "may indeed be regarded in some respects as 'pointers' to types of historical material which may prove relevant to the understanding of a particular historical situation, from a certain angle and for certain purposes. . . . Their significance lies in their suggestive power, their directive importance."³ Used in this way, the Christian philosophy could guide the historian in his search for explanations of the past, but it would not make available any supernatural explanations.

Essentially, Shankel wants to abandon the training of professional historians in Christian colleges in favor of a program that would produce historically oriented theologians trying to answer "the great questions of human destiny" by the aid of faith and revelation. These new "historicists" would be modern prophets, for Shankel believes that "we can hardly expect society to support history as a useful branch of knowledge if it cannot . . . give some insight into future developments" (p. 14). He does not see, as did the late historian Carl Becker, that "the value of history is . . . moral; by liberalizing the mind, by deepening the sympathies, by fortifying the will, it enables us to control, not society, but ourselves; it prepares us to live more humanely in the present, and to meet rather than to foretell, the future."⁴

The Christian historian knows by faith that God influences the affairs of men, just as the Christian scientist knows that God is controlling the operations of nature. But God's hand is invisible, and we must not accuse the historian or the scientist of impiety when he cannot discern it. The teaching of secular history in Christian colleges is as defensible as the teaching of secular physics or physiology. The historian makes his contribution to Christian education not by teaching a peculiar history but by enabling students to learn in a Christian environment and by witnessing for Christ in and out of the classroom.

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“Might” Never Makes Right

EDWARD N. LUGENBEAL

THE CHRISTIAN VIEW OF SCIENCE AND SCRIPTURE

By Bernard Ramm

W. B. Eerdmans Publishing Company, Grand Rapids, Michigan, 1954 368 pp

\$4.00

Fifteen years after its publication date *The Christian View of Science and Scripture* remains in many respects unique, significant, and, for Adventists, particularly relevant to much of our current discussion on science and religion.

The book differs from most of the apologetic literature on “Genesis and science,” because the author, Bernard Ramm, is a competent theologian who is also well informed in science. He is simultaneously a defender of the “fundamentalist” Protestant view of Scripture as fully authoritative and unerring, and a defender of the integrity of scientific inquiry and the validity of its results. In fact, probably the major point Ramm wishes to make in this book is that, contrary to what many conservative Christians have said, it is possible for the conscientious Christian scientist to accept much of modern biology, anthropology, and geology, and still believe in the Bible as infallible and verbally inspired. On the one hand, the book contains the usual conservative polemic against both secular non-Christian skepticism and liberal Christian skepticism regarding fiat creationism and supernaturalism, though it is a gentle polemic. On the other hand, Ramm vigorously defends most of the conclusions of modern science and roundly chastises the “hyperorthodox” for their obscurantism in scientific matters.

In research for this book I discovered that there are two traditions in Bible and science both stemming from the developments of the nineteenth century. There is the ignoble tradition that has taken a most unwholesome attitude toward science and has used arguments and procedures not in the better traditions of established scholarship. There has been and is a noble tradition in Bible and science, and this is the

tradition of the great and learned evangelical Christians who have been patient, genuine, and kind and who have taken great care to learn the facts of science and Scripture (p. 9).

Seventh-day Adventists are caught in the crossfire here. Ramm cites one of our pioneers, George McCready Price, as an example of the ignoble tradition and contrasts his work with that of J. W. Dawson, nineteenth century Christian geologist, who presumably exemplifies the noble evangelical tradition.

The book has two major divisions. The first three chapters contain a broad discussion of the relationship between science and Christianity. In these chapters Ramm develops his framework and methods for solving the specific problems he examines. The temptation for one who is oriented to science may be to skip lightly over these generalities and to "get on with it" into the second part of the book, four separate chapters that deal with the specifics of harmonizing biology, geology, anthropology, and astronomy with biblical teaching. This temptation must be resisted, however, since the value of Ramm's specific solutions cannot be assessed apart from their methodological and theological presuppositions. Particularly important are Ramm's discussions of the nature of the biblical language pertaining to science, the principles for interpreting such language, and the biblical philosophy of nature.

Since so much of the current debate on science and religion in Adventism swirls around problems related to geology, let us take a closer look at Ramm's treatment of that subject. His solution to the geological problems posed by Genesis is a synthesis of three theories: "We believe then the harmony of Scripture with geology is achieved by uniting together (i) the pictorial-day theory of Genesis' days, (ii) the moderate theory of concordism, and (iii) progressive creationism" (p. 229).

Briefly, Ramm's setting for this synthesis is as follows: The purpose of Genesis One is religious and theological and deals solely with primary causes. The secondary causes, including the time element and the process involved, do not come within its scope. The scriptural description of God speaking things into existence sets forth dramatically the primary cause of creation, but does not exclude a process in time involving secondary causes. The religious purpose of Genesis is to prohibit idolatry and point to God as the originator of the universe. Genesis challenges man to worship the good and omnipotent Creator; it prohibits all "superstitious" views of the universe; and it denies any view of nature that rejects the existence of God and a spiritual order (pp. 219-220).

This means that Ramm rejects a literal interpretation of the six-day creation week. For him the days are *pictorial days*, or days of revelation. The sequence is only *moderately concordant* with the sequence described by science; the Genesis sequence is at least partially logical rather than chronological. Ramm cites the creation of the heavenly bodies on the fourth day as an example of a logical rather than chronological order: "We believe . . . that creation was *revealed* in six days, not *performed* in six days. We believe that the six days are *pictorial-revelatory* days, not literal days or age-days (p. 222, italics in original). . . . A carpenter can tell his child that he made a house — the roof, walls, floors, and basement. The child realizes that his father made the house even though the father gave a topical order, not a chronological order" (p. 223).

Progressive creationism is the theory that creation occurred over the vast period of time indicated by the modern geological time scale, not as a "theistic evolution" but as widely separated *de novo* divine creative acts with much phylogenetic change occurring between creations. Ramm feels that this theory does justice to the fossil record with its "missing links" between major groups and its sequences and progressions within the major groups of living forms.

Convinced as he is that the evidence for the antiquity of the earth is overwhelming, Ramm is sharply critical of "Flood geology." Some of his most pointed criticisms are reserved for Price. (I find it unfortunate that Ramm so summarily dismisses the possibilities of Flood geology, a rejection based partially on identifying Flood geology with some of the interpretations of Price that may no longer be tenable in the light of present data.) Nonetheless, Ramm raises a key criticism of Flood geology that is worth considering carefully for the constructive value it may offer.

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The so-called strength of Price's work is his effort to poke holes into the uniformitarian geology of [Charles] Lyell as it is taught in standard books on geology. We must be careful of a logical fallacy at this point. To show the logical fallacies of another theory does not automatically prove ours to be right. It is admitted that the geological record is not completely lucid, and that there are problems. Suppose that 80 per cent of the geological record makes clear sense when interpreted from the Lyellian point of view, and that 20 per cent remains a problem to uniformitarian geology. We have our choice of taking the 80 per cent as established, and going to work on the 20 per cent; or, of taking the 20 per cent as normative, and trying to dissolve the 80 per cent. Price adopts the latter procedure. The author does not know what the actual percentages are, but he is sure that he is generous to Price in the choice of the above percentages. If by analogy Price's principle were followed *in other sciences* it is obvious that chaos would result (pp. 181-182, italics in original).

It seems to me that conservative Christian students of geology have been too often content to offer possibilities instead of probabilities. On a whole range of problems, they have been satisfied to say, "Yes, the usual interpretation looks reasonable, but it is not impossible that it *might* be like this." Obviously, to achieve scientific standing, a hypothesis has to be likely, not just possible. If Flood geology is to make an impact on the world of science, its interpretations must provide the most successful synthesis of the data. Perhaps more importantly, it is doubtful that Flood geology can pacify the haunting insecurities of its own practitioners so long as it can only say, "But it *might* be like that."

There are two further theses on which I would like to comment. One is Ramm's attempt to persuade conservative Christians to bring to science a wholesome respect. This is an emphasis often needed in orthodox circles. Too many conservative Christians tend to stress and to write about only "science falsely so-called" or the "delusions of science" or related themes. Ramm is quite right, for example, that geology cannot be shrugged into oblivion and that the picture of atheistic-evolutionary geologists seeking to disprove the Bible is unrealistic and unbecoming. In fact, Ramm challenges the belief widely held among conservative Christians that the only reason there are differences between the Christian and the geologist is that the atheistic geologist has a different set of presuppositions. There may be different presuppositions, but often these have little to do with the interpretation of a given set of data.

Too often, explanatory hypotheses are mistaken for presuppositions. For example, the conservative Christian apologist might say something like this: "I begin with belief in the Bible and its description of the Flood. If you shared my presuppositions, you would believe the Flood responsible for the formation of this rock and its fossils." Such an assertion, however, identifies the truly basic assumption of belief in the Scriptures as God's word with a particular interpretation of Scripture — that the Bible teaches that all or most of the rocks and fossils are the result of the Flood. Therefore, the explanatory hypothesis — "This rock was formed at the Flood" — becomes instead a "basic presupposition." There are any number of scientific tests for determining the mode of formation of the rock and evaluating the plausibility of its having been formed by a flood. The application and validity of these tests are rarely significantly affected by the presupposition "I believe in the Holy Scriptures."

71 Surely Ramm is correct in emphasizing that science must be respected. However, respect for science need not excuse the Christian from exercising caution in accepting the conclusions of science, for the scientist who thinks carefully must also respect the limitations of scientific inquiry. It is extremely difficult to assimilate what is known, and there is so much that is not known. It is also difficult to transcend the bias of one's own mind or intellectual community or era. Could it be that Ramm's confidence in the current results of scientific inquiry is uncritical? Is Ramm justified in saying with finality that the evidence is overwhelming and that the Scripture must therefore be reinterpreted?

A related theme is Ramm's caution against identifying one's own interpretation of Scripture with revelation or inspiration. "One cannot say: 'I believe just exactly what Genesis 1 says and I don't need any theory of reconciliation with science.' Such an assertion identifies revelation with interpretation" (p. 40). If nothing else, *The Christian View of Science and Scripture* should arouse the reader to the realization that scriptural interpretation is in itself a science demanding careful training and scholarship. It is commonly assumed that anyone can interpret Scripture correctly, but that nature is complex, and that, therefore, if there is disharmony, the error is obviously in science. Ellen White, to be sure, knew better. She commented that science and Scripture are in full harmony when *each* is correctly interpreted. The Bible scholars in our midst know better also. There is a humility born of a continual grappling with the complexities of scriptural interpretation. (Surely, anyone can interpret Scripture so as to obtain a saving knowledge of Christ, and everyone can and should be a Bible student, but only those who possess the proper tools and information can truly be Bible scholars.)

It may be because I have identified interpretation of Scripture with revelation, but it is in matters of biblical interpretation that I find myself the most uneasy with Ramm. The challenging aspect of Ramm's reinterpretation of Genesis is that it is based on a view of biblical revelation and inspiration that parallels the view of Seventh-day Adventists, and so it is natural that Ramm's *principles of interpretation* parallel those of Seventh-day Adventist exegetes. In spite of this, however, his *interpretations* of Genesis are often radically different from ours.

I wonder whether Ramm does not find it necessary to do in biblical interpretation exactly what he criticizes Flood geologists for doing in science — interpret on the

basis of the 20 percent of the evidence instead of the 80 percent. Would he ever have come to such conclusions if it were not for the findings of science? If not, how does accepting the weight of evidence in science, while rejecting the weight of exegetical evidence, differ from accepting the weight of exegetical evidence, while rejecting the weight of scientific evidence? If the Flood geologist cannot rest secure in the notion that "might" makes right in science, neither can the interpreter of Scripture long maintain an honest confidence that "might" makes right exegetically.

Ramm's answers cannot be our answers, yet *The Christian View of Science and Scripture* remains a bold attempt to reconcile the Bible and science. In many respects, *how* the church goes about seeking solutions is as important as the actual solutions it may or may not find. Ramm can teach us much concerning the spirit and methods appropriate to our search for answers.

Brief Reviews

COMPLETENESS IN SCIENCE

By Richard Schlegel

Appleton-Century-Crofts, New York, 1967 xi plus 280 pp \$7.50

The gap between the culture of the scientist and that of the humanist has been the subject of much recent writing. There has been much talk, particularly from the humanists, about the need to build bridges between the two cultures. It seems significant that most of the bridges are being built by scientists. Richard Schlegel, a physicist, in writing the largely philosophical work *Completeness in Science* has provided an example.

In view of the title of the book, one reasonably expects the author to provide working definitions of *science and completeness* at an early stage. His treatment of *science* actually takes the form of a philosophy rather than a definition. Since science is the study of nature, this treatment leads to a philosophy of nature. For him, nature broadens as scientists wish to, or can, broaden their perceptions (pp. 58, 239). He believes that defining the scope of nature is a scientific rather than a philosophical problem.

Schlegel's definition of *completeness* is rather weak, in my opinion, since it may confirm the view of some readers that scientists flit from one field to another in the same frivolous way that people change from one fashion to another: "A science is complete when it gives as much descriptive detail as is desired . . . and when the theoretical structure of the science satisfactorily explains all the facts of the science" (p. 46).

It comes rather as a surprise to read that in one very important direction science *has* come to an end, "to have reached a limit of the understanding that came in the form of complete description" (p. 173; see also p. 236). This alarming conclusion, supported by three chapters (ten, eleven, and twelve) of argument, is further

bolstered by analogy to the field of logic, where Gödel's theorem (chapter five) has placed very specific limitations upon the search for completeness.

The author makes much of the similarities between science and religion. For example, in the science age, he points out, the same drives that once caused men to build cathedrals have been directed into such efforts as the space program. Two unwarranted generalizations about religion, unfortunately, are made in *Completeness in Science*: that religions claim to explain everything, including their own axioms (p. 252 and context), and that fundamentalist thinkers accept creation of fossils (p. 107). The author is quite willing, however, to admit that science has its problems too (paradoxes, difficulties in interpretation, observational discrepancies, etc.), and he admits that science lacks in its contributions to "humane living" (p. 260).

The considerations raised by this book make one wonder about completeness in areas other than science — for example, criminal evidence, communications, and religious experience. Perhaps one of the choice quotations among those Schlegel uses throughout the book from John von Neumann gives a partial answer (p. 78): "[Truth] is much too complicated to allow anything but approximations." In my own mind, I find it helpful to remember that, at least on certain levels in Christian experience, there is hope for closure: "Let us hear the conclusion of the whole matter: Fear God, and keep His commandments: for this is the whole duty of man" (Ecclesiastes 12:12).

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HOW TO BECOME A BISHOP WITHOUT BEING RELIGIOUS

By Charles Merrill Smith

Doubleday and Company, New York, 1965 131 pp \$1.98 paper \$.50

How to Become a Bishop, its introduction would have us believe, is first a book of practical advice for the young seminary graduate, telling him how to succeed as a pastor, and second an advertisement of some of the advantages of the ministry, seeking to recruit manpower for that profession. Actually, these purposes only provide the satirical matrix of a humorous, and yet entirely serious, plea for the general reader to reexamine his feelings toward religion generally and the clergy particularly. I suspect that the humor will appear either fanciful and delightful or biting and cruel, depending on the religious experience and circumstances of the reader.

Very early in the first chapter, Smith distinguishes between being religious and being pious, which he defines as *appearing* to be religious. He considers piety, unlike true religiousness, to be absolutely essential to ministerial success, because piety is the quality church members must see in their pastor if they are to feel at ease with him. "It is like people who have so long had frozen orange juice for breakfast," he explains, "that if they were served a glass from freshly squeezed fruit, it would taste somehow artificial."

The chapter entitled "Conducting Public Worship, An Exercise in Nostalgia," provides a good example of how much Smith is able to say about modern religious attitudes using the satirical framework he has chosen. He cautions the young pastor

to put out of his mind whatever he may have learned at the seminary about conducting the church service, since the instruction he has received there will have been based on the assumption that the purpose of the service is to glorify God.

What your good Christian people want to worship is not God but themselves, although they do not know this and only a pastor who expects to depart shortly for other fields of endeavor will have the temerity to explain it to them. But you need to know it, for this is the correct assumption on which all successful public worship is built. . . .

In this worldly, secular, materialistic age . . . millions of people still go to church Sunday after Sunday to do the same thing over and over. They sing hymns, pray, and listen to a choir and a preacher.

On the face of it, it is difficult to understand. Why do all these people forsake warm beds and a leisurely perusal of the Sunday paper? . . .

You may be certain that they do not make this extraordinary effort for the purpose of anything so abstract as to worship God, however commendable such a motive would be. Leaving aside such contributory but not very important factors as force of habit and the need to flee from loneliness, the main force which pushes them out the door and brings them to the house of the Lord is the gratifying experience of worshipping themselves.

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Smith explains that if the worshipers are not to be disappointed in the church service, it must produce in them the proper mixture of nostalgia and "religious feeling." He shows how the careful selection of music can be especially crucial in focusing the attention of the churchgoers firmly on themselves. To this end "objective" hymns (for example, "A Mighty Fortress"), which emphasize God's majesty, power, mercy, or love, are to be avoided in favor of "subjective" ones (for example, "Sweet Hour of Prayer"), which are "preoccupied with the feelings, reactions, desires, hopes, and longings of the individual worshiper" and often "have texts which are little short of gibberish."

We are assured that by faithfully following the advice in the first six chapters the preacher will inevitably find himself in a position to start his climb to more comfortable and prestigious fields of service. (A timetable is provided.) Chapter seven begins the discussion of church policies. The terminology here is that of the Methodist church (bishop, board executive, etc.), but no special genius is required to translate these titles into ones more familiar to Seventh-day Adventists. Some of the parallels thus recognized serve us at present, I trust, only as warnings, but in other respects it may appear that we are not entirely as peculiar as we would like to think — either in our personal attitudes toward the clergy or in their attitudes toward the church organization.

It is revealing that Smith feels the necessity to close his book with a "Benediction" in which he drops his satirical mask and tries to explain why he feels that his unusual treatment of religious ideas is appropriate.

It behooves us then — those of us who love the church — to do what we can to eliminate the ridiculous, the superficial, and the trivial so that the glory and the dedication and the relevance may be seen unobscured.

Some sincere Christians insist that this end is best accomplished by pretending that there is nothing ridiculous, superficial, or trivial about the church. But so to pretend is to underestimate the perceptive powers of those outside the church, especially the well-educated materialists and the keen-minded unregenerate. That they are quicker to detect the ridiculous in the church than they are to see its glory is due in part to

their lack of objectivity. But it doesn't help much for the church to play like it is perfect. These things will not go away for all our pretending.

It is healthier, I think, to acknowledge our shortcomings and poke fun at them than to claim sanctimoniously that they do not exist or at least ought not to be admitted [publicly]. More devils can be routed by a little laughter than by a carload of humorless piety.

It is unfortunate that religious — or should I say pious? — people are so unaccustomed to laughter, especially to laughing at themselves.

B.E.T.

THE BIBLICAL FLOOD AND THE ICE EPOCH

By Donald W. Patten

Pacific Meridian Publishing Company, Seattle, 1966 336 pp \$7.50

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Why write a book on the biblical flood? Has not this subject been largely relegated to academic limbo?

With these words Donald W. Patten, a disciple of Immanuel Velikovsky,* begins his multifrontal iconoclastic attack on uniformitarian theory in astronomy, geology, biology, and anthropology. In this day of increased specialization one must admire the self-confidence of any man who writes a work so nearly universal in scope, but one must also question his ability to do so competently. Patten's ambitious polemic, if one can bear its burdensome repetitiveness, presents a few interesting theses reviewed here.

The Biblical Flood points out that most Christians have traditionally felt comfortable when working with catastrophism as their integrating theory. In this century, however, many fundamentalists have found immense conflicts in attempting to reconcile the Bible and science; and for the sake of their intellectual integrity, many have sought a reinterpretation of either one or the other. When Velikovsky first began to publish, there were those who felt that his catastrophism would be the mechanism of that reconciliation. The fact that Velikovsky was rejected overwhelmingly by the scientific community and the fact that even the most theologically conservative scientists had been educated by that community tended, Patten believes, to cause a rejection of the initial feeling. The forces of conformity and tradition were at work.

Patten challenges the scientific community to react to catastrophism rationally and maturely, not emotionally. He might have helped the reader do so more easily had he not chosen so often to base his own theories on clearly erroneous information (for example, the supposed existence of vast numbers of quick-frozen Siberian mammoths).

To tilt with contemporary uniformitarian theory by the use of a theoretical lance forged from misinformation becomes ludicrous. The few times this quixotic joust succeeds for him the author vanquishes only theories that uniformitarians themselves have long discarded (such as environmental determinism, as Darwin originally postulated it). The valid information that Patten does use is often presented with a new interpretation. But rather than indicate that his interpretation is different from that of the academic community generally, Patten takes the stance, without even the

briefest explanation, that his is the standard interpretation. (One of his unique uses of data is his bold assumption that several of the psalms were written in the Exodus period, merely because such an interpretation furthers his catastrophic theory.)

For men who have been trained in conventional uniformitarian theory, to adjust to catastrophic theory or methodology is difficult, I believe, but not impossible. Initially catastrophism may seem more like fantasy than science. But if Patten and others who believe that the Bible contains scientific truth would demonstrate a clear understanding of the theories they seek to challenge and of the facts relevant to these refutations *before* they try to convince the scientific community of their own particular overview, it would be easier to break down some of the prejudice against catastrophic theory.

The most frustrating thing about this book is that it holds out the promise of a rational catastrophism as the new integrating scientific theory. But by failing to fulfill the prerequisites, it may well reinforce the doubt that catastrophism will ever be put on a scientific basis. Though some of its theory is interesting, the book is more successful as fascinating fantasy than as a work of lasting scientific value.

FREDERICK G. MEYER
Student, School of Law
Columbia University

* Immanuel Velikovsky's *Worlds in Collision* (published in 1950) attempts to establish near approaches of the planets Mars and Venus to Earth as the physical mechanism for miraculous and catastrophic events recorded in the Old Testament and in other ancient writings. His *Earth in Upheaval* is a companion work. Both are available in paperback (Delta Books). B.E.T.

BOOK REVIEWS. Since the quality and variety of reviews can best be maintained and improved with a wide base of participation, readers are encouraged to submit reviews of books that they feel are of special interest or importance. Information on editorial criteria and manuscript format, which may be helpful to prospective reviewers, is available from the Book Review Editor, SPECTRUM, 315 Inwood Lane, Hayward, California 94544. Inquiries about reviews should also be directed to this address. All other *typescripts* and *letters of comment* for publication, however, should be sent to the Editor, Box 866, Loma Linda, California 92354.

LETTERS

The three articles appearing in SPECTRUM under the heading "The Christian and War" are provocative and timely. Our church has wisely been flexible on this issue, recognizing its complexity and the need to respect the conscientious scruples of church members in this vital area.

The "just war" theory, which dates back to antiquity, is attracting much interest at present. At the annual meeting of the American Historical Association in joint session with the American Society of Church History last December, one entire session was devoted to the just war issue. Participating were Professor R. H. Bainton and other authorities on this subject.

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The complexities of modern life and the hidden intricacies of foreign relations are such as to preclude an intelligent evaluation of twentieth century wars, declared or undeclared, on the basis of their being just or unjust. Such an evaluation would require among other things the acceptance or rejection of certain assumptions: for example, the domino theory of communist aggression in Southeast Asia, and the ultimate threat this poses to the security and wellbeing of the United States. Loyal and informed public servants have differed on this question.

The ethicists' six criteria of a just war listed in the article on selective nonpacifism appear to be unrealistic if not naive. They seem to ignore the fact that war brutalizes the belligerents and society in general. Propaganda seeks to make men hate, passions are aroused, bloodthirsty sermons are preached in the name of the gentle Christ. In the last two wars, "Made in Germany" was invariably stamped on the bottom side of hell. To say that a war should "be conducted in an attitude of Christian love" is to ignore all that history has taught us about the base spirit in which wars have been carried on. Violence and hatred are indeed the essence of war.

Rather than agitate as a church, as has been suggested, for a law that would provide for conscientious objection to particular unjust wars, might we not be better advised to speak out as a church, and as individual Christians, more forthrightly than we have against the horrors and futility of war? Obviously, as a well-intentioned nation we could not unilaterally renounce war as an instrument of national policy, given the kind of world in which we find ourselves. This would be naive also. But in this antiwar role the church would be recapturing its early courageous stance, a stance predominant in the church until the time of Constantine. This would be in keeping with the chief objective of the church, which is to mediate the love of God to all men everywhere.

As long as war is an accepted instrument of national policy, a nation caught in its fearsome toils, whether the war be just or unjust, tends to curtail the democratic processes and humanitarian advances and impinge on the freedoms and rights of its citizens.

GODFREY T. ANDERSON
Loma Linda, California

Three cheers for SPECTRUM. Content, format, and typography are excellent. I especially enjoyed Alvin Kwiram's prologue, G. T. Anderson's clear-sighted observations, and the editor's epilogue. They ring the bell. Perhaps SPECTRUM will be able to supply a notable lack in our present modus operandi, a forum in which different points of view on significant problems can be expressed in a responsible tone of voice. To be sure, some have attempted this, but all too often with an undertone that neutralizes whatever good might otherwise be accomplished. Two writers in the first issue take issue with current church policy on certain points, but they do so constructively and with dignity. They are obviously concerned with what is right, not who is right.

RAYMOND F. COTTRELL
Washington, D. C.

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I am extremely pleased with the contents and format of this quarterly. Thank you for a breath of fresh air.

FRANK W. HALE, JR.
Huntsville, Alabama

I heartily endorse SPECTRUM in its initial appearance. In format, content, and quality it is most pleasing. Alvin Kwiram's introduction sets the stage for a continuum in breadth and depth. In "The Christian Scholar and the Church" G. T. Anderson provides the "magna charta" for academicians who would like to make their contribution within the church organizational structure. It is gratifying to note his observation that *dialogue* "is still a respectable and useful word." Every reader will find much in this new journal to stimulate thought and action, not the least of which is communication through well selected art forms.

WM. FREDERICK NORWOOD
Glendale, California

I like the journal's style. Its contents are exhilarating and stimulating. In my opinion the writers stayed on a high plane in discussing issues. We may not agree with all of the opinions expressed, but that makes for healthy discussion.

REINHOLD R. BIETZ
Glendale, California

Both its quiet sophistication and challenging content are a real credit to the Forum.

FRED H. OSBOURN
Loma Linda, California

NOTES ON CONTRIBUTORS

JACK W. PROVONSHA (*An Ethic of Responsibility*) is professor of philosophy of religion and Christian ethics at Loma Linda University. He received the doctor of medicine degree (1953) from Loma Linda University, the master of arts degree (1963) from Harvard University, and the doctor of philosophy degree (1967) from the Claremont Graduate School. His areas of special interest are Christian ethics, philosophy of religion, and religion and medicine.

RICHARD W. SCHWARZ (*John Harvey Kellogg: Adventism's Social Gospel Advocate*) is professor of history and chairman of the department of history and political science at Andrews University. He earned the master of science degree from the University of Illinois and the master of arts and doctor of philosophy degrees from the University of Michigan. His teaching interests include twentieth century America, Russia, and historiography.

RICHARD M. RITLAND (*The Nature of the Fossil Record*) is director of the Geoscience Research Institute and professor of paleontology at Andrews University. He was graduated with the master of science degree from Oregon State University and received the doctor of philosophy degree from Harvard University. One of his fields of special interest is paleoecology.

BETTY STIRLING (*Student Attitudes Toward Missions*) received the master of arts and doctor of philosophy degrees from the University of California at Berkeley in 1959 and 1963. She is associate professor of sociology at Loma Linda University. She has also taught at San Jose State College and the University of California at San Francisco and at Riverside. Doctor Stirling is a member of Phi Kappa Phi and Kappa Tau Alpha.

J. PAUL STAUFFER (*A Reasoning Christian*) earned the master of arts degree from Pacific Union College (1944) and the doctor of philosophy degree, with a major in English literature, from Harvard University (1952). Doctor Stauffer is dean of the Graduate School and professor of English at Loma Linda University. His special interests are nineteenth and twentieth century English poetry and education in the humanities.

EDWARD N. LUGENBEAL (*"Might" Never Makes Right*) is a graduate student in prehistory and Pleistocene geology at the University of Wisconsin and is also a staff member of the Geoscience Research Institute at Andrews University. Mr. Lugenbeal was graduated from Andrews University with the bachelor of divinity degree and has taken a year of graduate study in theology at the University of Basel.

RONALD L. NUMBERS (*In Defense of Secular History*) is a graduate student at the University of California at Berkeley, where he is studying toward the doctor of

philosophy degree in the history of science. His dissertation subject is the nebular hypothesis in American thought. His master's degree was conferred by Florida State University.

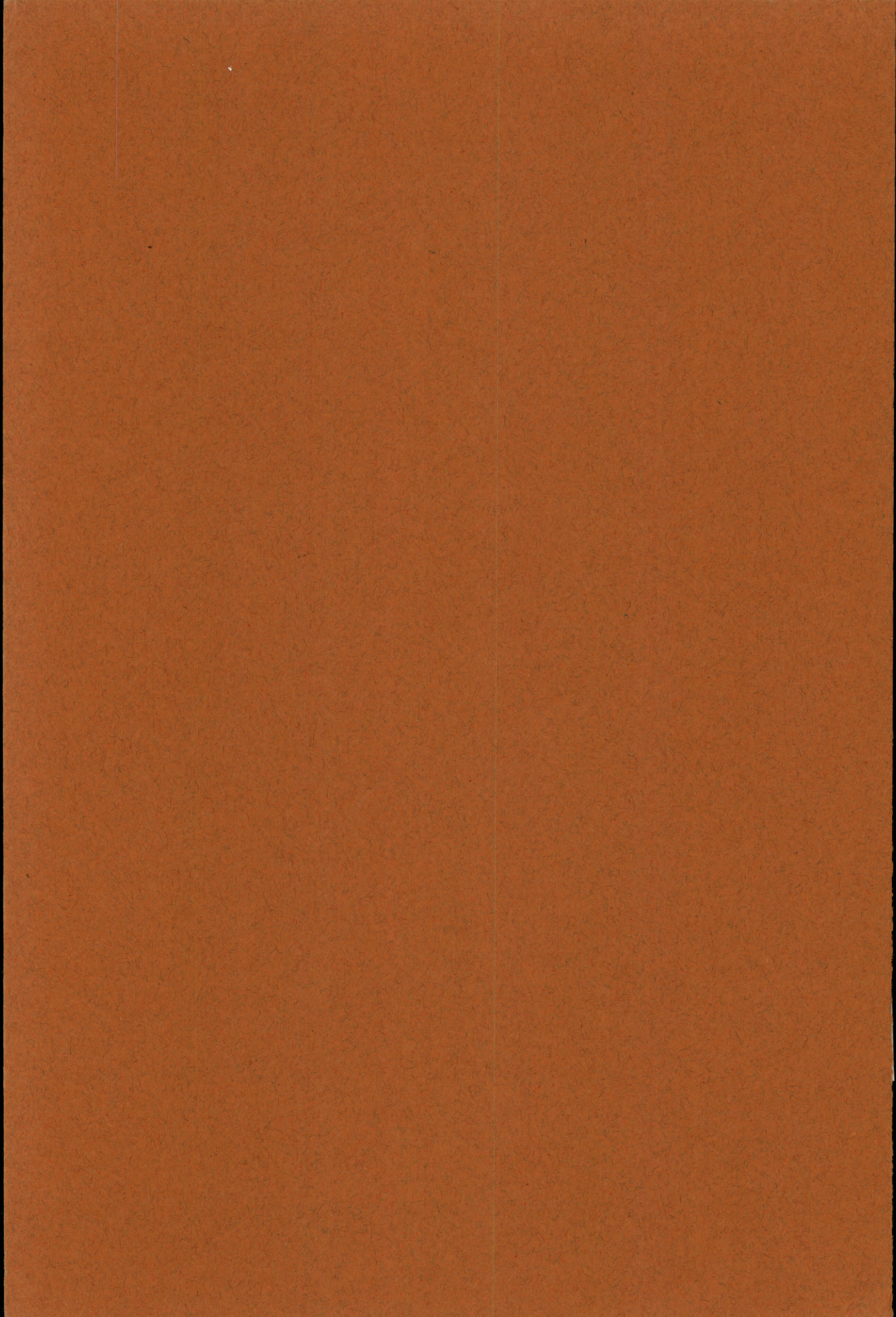
DIRK KOOPMANS (*The Condemned One*) was born in a small rural community in the Netherlands province of Friesland. He attended Colegio Adventista del Plata in Argentina and lived in Argentina afterward for a few years before returning to Europe. His interest in drawing and painting began in childhood. He has been a professional artist since his work was first exhibited at Ateneo Ibero Americana in Buenos Aires in 1931. His works include oil paintings, aquarelles, pen drawings, woodcuts, and wood carvings.

ISAAC JOHNSON (*Prayer*) was graduated from Atlantic Union College in 1968 with an English major and at present is an elementary school teacher. He plans to attend Northwestern University in the fall of 1969. Mr. Johnson is listed in the 1967-68 Who's Who in American Colleges and Universities.

GEORGE O. SCHUMACHER, whose photographs appear on pages 4 and 14, earned the doctor of medicine degree (1940) from Loma Linda University, and he has been in practice at Turlock, California. He has been interested in photography since he was nineteen. His friendship with Ansel Adams influenced his development of photography as an art form. Some of his photographs have been published, and in 1968 his work was exhibited at Carmel. Most often he uses the Polaroid camera to record the beauty of the patterns of both the microscopic and the macroscopic worlds.

References and notes for the article by CHUCK SCRIVEN, *The Case for Selective Non-pacifism*, were printed on gummed paper and enclosed with the spring issue for attachment on page 44 of the winter issue (from which they were accidentally omitted).

ANNOUNCEMENT. A new anthology of short literature by Adventist authors is proposed. Poetry, short stories, and short dramas are solicited. Acceptance is based on literary quality. Manuscripts should be sent to: Norman Wendth, Department of English, Loma Linda University, Riverside, California 92505; OR Delmer I. Davis, Department of English, Walla Walla College, College Place, Washington 99324.



The following references and notes for the article by CHUCK SCRIVEN, *The Case for Selective Nonpacifism*, were omitted from the winter issue of SPECTRUM.

REFERENCES AND NOTES

- 1 I have compiled this list from material in the following works: Roland H. Bainton, *Christian Attitudes Toward War and Peace* (New York: Abingdon Press, 1960), and Paul Ramsey, *War and the Christian Conscience* (Durham, North Carolina: Duke University Press, 1961).
- 2 Bainton, *op. cit.*, p. 249.
- 3 RALPH POTTER, *Conscientious Objection to Particular Wars* (unpublished essay, Harvard Divinity School, 1966), p. 2.
- 4 Potter, *op. cit.*, p. 46.
- 5 *Ibid.*, p. 39.