described as a "trap" and a "bomb." We may be approaching the upper limits of the food production curve now, although the upper limit of people production is nowhere in sight. Shortages are certain to result. Shortages will necessitate controls, and rigid controls will not produce the kind of world Toffler envisions.

One who jumps off the Empire State Building on a foggy day may be exhilarated by his acceleration due to gravity. He may report his progress in glowing terms as he passes the fiftieth floor, and he may speculate on how rapidly he will be moving in ten minutes' time as he hurtles past the twenty-fifth floor. But there below the fog is the ground that will thwart his progress and nullify his speculations.

## LETTERS

76

Harold Clark's reply to "The Whole Truth" (Summer 1971 SPECTRUM) gives further support to Donald Hall's suggestion that writers on important and potentially controversial subjects in church journals be given formal and informal criticism of their ideas by qualified persons.

In discussing Hall's second point, dealing with soft-sediment slumping of the Grand Canyon walls, Clark purports to offer evidence from field geology and related activities; but in reality his evidence deals with other disciplines (physics and chemistry) and is faulty. Apparently the astrophysicist, Hall, understands the physical factors involved in sediment compaction better than the field geologist, Clark.

Water removal from soft, newly deposited clays (shales) on the scale of a geological formation is a very slow process because of the fine size of clay particles. Futhermore, the drying and hardening of the newly exposed canyon walls, if it would actually occur, would be confined to a relatively short distance from the exposed surface. On the scale of the Grand Canyon, this effect would be insignificant in modifying the bulk resistance of the surrounding sediment to deformation and flow.

The general supposition that rapidly deposited water-laid sediments harden slowly is well supported by physical and chemical reasoning and geological evidence. For an example of a sediment-like material that hardens quickly, Clark uses an unnatural product, cement, which is produced by heating limestone and shale to about 2700° F. It consists mainly of calcium silicates and aluminates that are unstable in water and hydrate, and therefore cause setting quickly. Clearly, such an example would not occur in a natural, water-laid sediment; nor, to my knowledge, has it ever been found. Unfortunately, this is probably the best example Clark can find to illustrate his thesis.

A writer discussing the geology of the Grand Canyon should consider the structure of the surrounding rocks. Field evidence indicates that these rocks have been upwarped, folded, and faulted. The differential vertical displacement of the Kaibab limestone, which forms the rim of a large part of the canyon, is about 6,500 feet in northern Arizona. The steep Kaibab monocline just north of the canyon accounts for 3,000 feet of this. The folding and faulting indicates that the strata eroded by the

canyon were fairly competent and hard before significant canyon erosion occurred, because these movements preceded and initiated canyon downcutting and controlled the actual pattern of erosion to some extent. See Edwin D. McKee and others, *Evolution of the Colorado River in Arizona* (Flagstaff: Museum of Northern Arizona 1967), as an entry to geological literature on the Grand Canyon.

Much of the subject matter of physical geology is little more than applied physics and chemistry. There are many well-qualified Adventist physicists and chemists who by their criticism of articles could help eliminate errors in reasoning found in apologetic literature.

ROSS BARNES La Jolla, California

Polygamy is an issue charged with pathos and sentimentality. One envisions the stern white missionary, book in hand, condemning the mores of the happy, innocent, naked native and his bevy of beauties and their offspring. Sunshine turns to storm as the harried native convert is forced to drive his lovely extras out into a world of shameful sin and suffering, and the little ones have no one to call daddy.

Cruelness in this world does not come from the gospel of Jesus Christ nor from the ministers of the gospel in foreign lands. Cruelness comes from the deceptive hand of Satan and his perversion of all that was meant to be beautiful. I respectfully suggest that one of the tragic problems met in mission work is not the [church] attitude toward polygamy — it is polygamy!

I have lived many years in societies where polygamy is accepted, both in Africa and in the Bible lands of the Middle East. Christianity had been in these areas long before I had. From the poor farmer who lived behind the Seventh-day Adventist compound with his two wives, to the Fon of Bafut with his 400 wives, all the polygamists I have been acquainted with knew of the Christian standards of marriage. Many polygamists were Christians, and several told me that their own fathers had advised them against taking more than one wife. But as the man's prosperity increased and his eye wandered over the form of a lovely unwed lass, soon he had a second wife, or more. All these men assured me that they were advising their sons against the practice. Whether in the structured form under native custom or in the free and easy way under American custom, lust and adultery are the same.

It is my opinion that the extra women are not truly wives. They are not of one flesh. Four naked women trudge down the path with heavy loads of firewood on their heads — while their "husband" rides behind on his bicyle. These "wives" are really slave labor on the farm. The rich merchant takes his eighth wife. She comes into a home where there are already children as old as she is, or older. She is willing to marry the man because he is "great" in the town and his name will be hers and her child's. After the excitement of the wedding dies away, she is given some cloth and other merchandise and is expected to go down to the marketplace to trade and earn her own keep and that of her child (if and when a child comes).

Only when one has lived in these countries, and has entered as a physician into the problems of these people, can one appreciate the blessing and beauty of the love between husband and wife in a Christian marriage. And this love is found in the homes

77

of Adventists and other Christians in these lands. In contrast, this love (possibly with rare exceptions) is not found in the polygamist's home. The mother's love is all-encompassing, and the child is only acquainted with his father.

When a man under spiritual conviction seeks to join a Christian church, in most cases he finds real problems. Usually the greatest problem is undoing something he knew he shouldn't have done in the first place — and even in our own enlightened land this is a hard task. The Adventist church is kind and understanding in mission lands. Missionaries are people with hearts of love. They feel that the gift of love between husband and wife is one of the greatest blessings God gave man and that it is worth great effort to preserve this gift in the church.

Space does not permit a complete answer to the problem presented (SPECTRUM Summer 1971). But I did want to join the editor in his perceptive and sensitive approach to a very real problem that is possible only in such a world as we live in.

WILLIAM WAGNER Loma Linda, California

Competent observers of world needs make it clear that there is still a large unfinished task that cannot be completed by a missionary philanthropic program alone. Medical mission work has been established and continually expanded. But the problems have not yet been solved, and they seem even to have increased. Curative treatment is still needed, but the population explosion has increased poverty and created new health problems. The effects of increased population, insufficient food, superstition, and lack of education bring still greater challenge to the medical missionary. It is necessary not only to know how to treat the sick but to bring greater knowledge to solving the problems that cause the sickness.

Right after World War II, when needs were acute and great in most areas of the world, much was done; but rapid changes have taken place since then. Now the medical missionary works with the national medical personnel in the developing countries and cooperates with UNESCO, UNICEF, FAO, and other international organizations trying to improve the conditions of the underprivileged. For this work there is one important goal for him — "to follow in the footsteps of the Master Physician." More specialized Christian workers are needed in places that should be training centers. Where there is a shortage of doctors in large centers, self-supporting specialists who work with the upper classes can be positive witnesses for Christ. Doctors who are helped by their colleagues in the homeland can go further inland to less affluent areas, give curative medical and dental care, and teach principles of healthful living.

Has the concept of medical missions changed? Yes and no. With the increase of knowledge, missionary skill has to be much greater than it was a hundred years ago — but the objectives are the same. Medical missionaries are still needed to improve the physical, mental, social, and spiritual health of all people. But the difficulties are greater and the approaches must often be adjusted to the needs and circumstances of these times. This ever-challenging task requires self-sacrifice and devotion to the ideal of following in the footsteps of the Great Physician.

NANTJE TWYNSTRA Thailand

*78*