

Awake!

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JULY 8, 1966

THE REASON FOR THIS MAGAZINE

News sources that are able to keep you awake to the vital issues of our times must be unfettered by censorship and selfish interests. "Awake!" has no fetters. It recognizes facts, faces facts, is free to publish facts. It is not bound by political ties; it is unhampered by traditional creeds. This magazine keeps itself free, that it may speak freely to you. But it does not abuse its freedom. It maintains integrity to truth.

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Awake!

"It is already the hour for you to awake."
—Romans 13:11

Volume XLVII

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Number 13

Balance love

WITH

UNDERSTANDING!

HAVE you ever tried to express kindness to another only to be rebuffed, or to have it misunderstood? Or, at least, to have it fail in its intended purpose? Most likely you have. But why?

True, the fault may lie with the other person, but it might be well to ask, Was the other person entirely at fault, or could it have been that I was to blame, at least partly, because of lack of insight, discernment, understanding?

Yes, love is fine, beautiful, wonderful and important, but love succeeds best when it is balanced with understanding. That is true whether it is romantic love between the sexes, love of one's family or friends, or the ideal, principled unselfish love, which the Greeks call *agape*. Love needs to be balanced with insight, understanding and knowledge, even though of itself it often gives added insight.

That we should balance love with understanding is apparent from the writings of the apostle Paul. Much as he stressed love—he took a whole chapter to describe how it works (1 Cor. 13)—he also showed that for Christians "to walk worthily of Jeho-

vah to the end of fully pleasing him" they must also be "filled with the accurate knowledge of his will in all wisdom and spiritual discernment" or understanding. The same principle applies to our relations with our fellowman.—Col. 1:9, 10.

Where shall we turn for this insight, this understanding, this discernment that is so beneficial if we would make our efforts to show kindness and love successful? To the psychologists and psychiatrists? That is the popular trend, but in spite of it the fact remains that human relations are ever worsening. No wonder that not a few in the psychiatric profession hold that the way many of their colleagues are going about matters is, to say the least, ill-advised!

Thus Karl Meninger, a leading United States psychiatrist, not long ago stated that "the psychiatrist as a person is more important than the psychiatrist as a scientist. What he *is* affects the patient more than what he *does*." Then there is professor of psychology Dr. T. S. Szasz, who, in his latest book *Psychiatric Justice*, lashes out at the members of his profession for labeling men insane and sentencing them to institutions for the criminally insane without sufficient grounds therefor. According to him either judges or policemen or a jury of laymen could better judge whether a man accused of a crime is mentally competent or not to stand trial for it than certain professional psychiatrists.

Underscoring Dr. Szasz' contention was the article that appeared in the *New York Times*, March 20, 1966, telling of a judge's awarding \$115,000 in damages to a man who had been wrongly judged insane and kept in various mental and criminal institutions for thirty-three years. In conclusion the article stated: "In response, New York state began this week to transfer more than 600 inmates from Correction Department hospitals to civil institutions. Many who were retained under the unconstitutional procedure are expected to demand and get jury trials. One state official said a number of them will probably be released entirely. This could expose the state to more [such] damage suits." Truly, psychiatric knowledge is overrated!

Then to where can one turn for insight, for understanding in dealing with one's fellows? To the book of wisdom, the Bible! It gives us much fine counsel if we are but willing to look into it and apply it. For example, it shows that timing is important, 'for there is an appointed time for every affair under heaven, a time to love and a time to hate.' (Eccl. 3:1-8) Efforts at gaiety, for example, may be entirely out of place when another is greatly depressed, even as the inspired proverb states: "He that is removing a garment on a cold day is as . . . a singer with songs upon a gloomy heart." Obviously, to do that would show a lack of insight, of empathy, of ability to put oneself in another's place.—Prov. 25:20.

The need of discernment, understanding or insight is especially vital in the parent-offspring relationship. The Bible shows that a father who loves his son will discipline him: "Chastize your son while there exists hope." "The one whom Jehovah loves he reproves, even as a father does a son in whom he finds pleasure." (Prov. 19:18; 3:12) But does that mean

that the father who loves his son will make discipline a matter of habit without trying to understand and reason with his son? Not at all!

Love might prompt the discipline but it must be balanced with understanding, insight. That is why the apostle Paul counseled: "You, fathers, do not be irritating your children," "do not be exasperating your children, so that they do not become downhearted." Certainly if a parent would avoid unduly irritating and exasperating his children he must seek to understand them, must try to put himself in their shoes, as it were. Yes, if you do not discipline with understanding you can break your son's spirit, and if you do that you have lost him; he withdraws into a different world from yours. How many children today are irritated, downhearted, frustrated and exasperated because their parents, who may be ever so fond of them, do not balance this fondness with understanding!—Eph. 6:4; Col. 3:21.

The same applies to the marital relationship. Husbands are therefore counseled to continue to dwell with their wives "according to knowledge, assigning them honor as to a weaker vessel, the feminine one." (1 Pet. 3:7) Yes, it is not enough for a husband to feel and endeavor to express ardor for his wife, he must also work at understanding her; he must have sensitive mental discernment as to how he may express it and when. For example, a wise and loving husband knows and takes into account the fact that, while his emotional nature is uniform and constant, his wife's is cyclic, and he will be governed accordingly.

So, in seeking to express love toward others, balance it with understanding. Take their viewpoint into consideration; let insight guide you and also consider the question of the right time for it!

THE young man was in the prime of life. He enjoyed excellent health, a well-paying job and a sense of security. What is more, he had a wife, two children and a comfortable home in the Bronx in New York city. But practically overnight the picture changed. The young man rapidly began to lose his sight, and soon went blind. As a result, he lost his job. Now, his sense of security was gone; he was no longer confident that he could provide adequately for his family.

Previously, when Christian ministers called at his home to talk to him about God, he paid no attention. But, then, one Sunday morning last winter, a Christian minister again called upon him. This time he listened attentively, invited the minister into his home and seriously considered the Bible's message for the first time in his life. He felt a need for God and expressed a keen desire to know more about God's purposes.

This experience is not unusual; it is common for persons to turn to God in time of trouble. When a real tragedy strikes, there is really no other source of genuine relief and comfort. How harshly is this impressed at a funeral! There a loved one lies motionless in a casket, unresponsive to anything one may say or do. On such occasions people are generally seized with grief and a sense of utter helplessness. They need God, and many times will turn to his Word the Bible for comfort.

When You Need God

OFTEN PEOPLE
TURN TO GOD IN TIME
OF TROUBLE
Will he show them

favor? When do you
need God?

A similar need for God is felt when one's life is in jeopardy. In a telecast some years ago Dwight D. Eisenhower, the famous general and former president of the United States, observed regarding hardened soldiers: "In battle they learned a great truth—that there are no atheists in the foxholes. They know that in time of test or trial we instinctively turn to God for new courage and peace of mind." Yes, persons often recognize their need for God in time of trouble.

Favor in Time of Need

But the questions arise, Will Almighty God respond to the petitions of persons in need? Will He hear the cries of those in distress? What if they have neglected God throughout their lives, and have lived immorally and wickedly? When in trouble, will Jehovah allow himself to be found by such persons? Will he show them favor?

Consider as an example a mighty king of God's ancient kingdom of Judah.

"Twelve years old was Manasseh when he began to reign," the inspired Bible record says, "and for fifty-five years he reigned in Jerusalem." It was the longest rule of any Judean king. Yet, note what kind of ruler Manasseh was:

"He proceeded to do what was bad in Jehovah's eyes, according to the detestable things of the nations that Jehovah had driven out from before the sons of Israel. So he built again the high places that

Hezekiah his father had pulled down, and set up altars to the Baals and made sacred poles, and he began to bow down to all the army of the heavens and serve them. . . . And he himself made his own sons pass through the fire in the valley of the son of Hinnom [burning them alive in sacrifice to heathen gods] . . . He did on a grand scale what was bad in the eyes of Jehovah, to offend him."—2 Chron. 33:1-6.

Finally, because of his extreme badness, God allowed the Assyrians to come up against Jerusalem and capture Manasseh. They "bound him with two fetters of copper and took him to Babylon." It was there, while suffering in prison, that Manasseh first appreciated his need for God. "As soon as it caused him distress," the Bible record says, Manasseh "kept humbling himself greatly because of the God of his forefathers. And he kept praying to Him."

Did Almighty God show favor to Manasseh? When he turned to Him in distress, did God listen to his petitions? The Bible says: God "let himself be entreated by him and He heard his request for favor and restored him to Jerusalem to his kingship; and Manasseh came to know that Jehovah is the true God." How merciful and kind is Jehovah God! Despite Manasseh's evil past, he secured relief and comfort when he humbly turned to God. —2 Chron. 33:10-13.

Repentance and Proper Motive Vital

Does this mean that one can live wickedly throughout his life, then, like Manasseh, simply cry unto God in time of distress and be shown favor? Not at all! A momentary turn to God for courage and peace of mind, such as by a soldier in a foxhole, is not sufficient. More is required. True repentance and a proper motive are

necessary. The scripture says: "If you search for [God] he will let himself be found by you." (2 Chron. 15:2) This indicates continued action, including a sincere effort to learn about God, repenting of former badness and taking up His service.

In Manasseh's case, God could see that his heart had changed, that his motive in turning to Him was proper. This was indicated by his "humbling himself greatly," and his continual praying to God. Manasseh had truly repented. His course was in keeping with the Scriptural admonition: "Draw close to God, and he will draw close to you. Cleanse your hands, you sinners, and purify your hearts, you indecisive ones." So, despite his past sins, God drew close to repentant Manasseh.—Jas. 4:8.

In proof that Manasseh indeed had a change of heart, after he was restored to his kingship, the Bible record explains: "He proceeded to remove the foreign gods and the idol image from the house of Jehovah and all the altars that he had built . . . Moreover, he prepared the altar of Jehovah and began to sacrifice upon it communion sacrifices and thanksgiving sacrifices and went on to say to Judah to serve Jehovah the God of Israel." —2 Chron. 33:15, 16.

Only When in Trouble?

It should not be drawn from this true-life experience that we need God only in time of trouble. Certainly not! While some persons may be like King Manasseh and require a hard experience or a tragedy in life to awaken them to their spiritual need, it is a fact that we all need God all the time.

Think about it. Where would we be without the sun and rain, and the air we breathe? Why, we would not exist! Who provides these necessities of life? Who

makes the vegetation grow, the rain to fall and the sun to shine? Not any man, but God does! "He himself gives to all persons life and breath and all things," the Bible says. Gratefully we should worship this loving and merciful Provider.—Acts 17:25.

Humans often have to be reminded of this. Once when the people of Lystra in Asia Minor attempted to do obeisance to imperfect human creatures, the Christian apostle Paul pleaded with them: "Turn from these vain things to the living God, who made the heaven and the earth and the sea and all the things in them. . . . [The One] giving you rains from heaven and fruitful seasons, filling your hearts to the full with food and good cheer." (Acts 14:14-17) It is similar today. Frequently people with plenty of food and other good things of life fail to appreciate that God is the real source of their daily provisions.

Appreciate Your Need

How about yourself? Has a time of material prosperity caused you to take the wonderful gifts of God for granted? Do you appreciate your dependence upon God for "life and breath and all things"? Are you grateful to Him for the things he has provided—for the foods you eat, for the water you drink, for the air you breathe, the beautiful scenery that delights your eye, the melodious sounds that please your ear, and His many other provisions? When was the last time you humbly gave thanks to Him, for example, before eating a meal? Do not wait for a time of trouble to turn to God. You need him now!

While the above provisions were made to satisfy man's material needs, they are not in themselves enough to make man happy. He needs more. God also created man with a mind and heart, and these, too, must be fed in order to bring him true happiness. Just as wholesome mate-

rial food is needed to satisfy the physical body, so also is spiritual food required to satisfy man's mind and heart. And God has lovingly provided this food too.

He has done so by providing accurate knowledge concerning himself and his purposes. God has explained where man came from, why he is on the earth and what his ultimate destiny is. He also makes clear why man dies, how death will be eliminated and the reason wickedness and human suffering have been tolerated for so long. In addition, God explains how man should worship Him, as well as how he should deal with his fellow humans. Man needs this knowledge—this spiritual food. And Jehovah God has provided it all in his Word, the Bible.—Matt. 4:4.

Do you appreciate your need of spiritual food? Do you regularly read the Bible? When was the last time you sat down and listened to God speak to you through his Word? We need daily direction and correction from God's Word just as surely as we daily need physical food to eat.

It is true that, unlike the fatal effects of physical starvation, failure to take in spiritual food does not quickly result in the death of the human organism. But the effects are even more disastrous. How so? Because the spiritually famished person is a menace to society. Without God's righteous principles to govern his life he lies, cheats, steals, yes, often even kills, to get what he wants. Today the world is filled with such spiritually starved persons—many of whom are apparently already dead spiritually. That is why the world is such a dangerous place in which to live.

How obvious that man needs God! Without Jehovah God life cannot be truly enjoyed. Therefore, heed the Bible counsel: "Search for Jehovah, you people, while he may be found. Call to him while he proves to be near."—Isa. 55:6.

THE race into space, led by the United States and Russia, has rekindled lively speculation on an old question: Does life exist on other planets?

Since ancient times the nearer planets have been known as wandering stars, but only after Galileo turned his telescope on the skies, in 1609, was it realized that the planets are bodies comparable in size with our earth. This discovery, coming after a century of exploration that had opened to view new lands peopled with strange races around the world, naturally stirred men's imagination to wonder what sort of yet stranger races of men, or exotic animals and plants, might populate these other worlds.

Flourishing in the lack of knowledge of what the weather is like on other planets, science fiction writers dreamed up bizarre inhabitants for every nook and corner of the solar system. Today, the advance of scientific knowledge of surface conditions on the planets has put severe limits on such speculations, but now the impending exploration of space has attracted many sober-minded scientists to a serious consideration of life on other planets. It is even said that the prospect of finding extraterrestrial life is the most compelling scientific motivation for the outlay of billions of dollars in the space program. The United States National Academy of Sciences recommended in November, 1964, that Mars should be the primary goal of space exploration after 1970, because that planet "offers the best possibility in our



solar system for shedding light on extra-terrestrial life."

The wide acceptance of the evolution theory has provided the stimulus for much of the speculation. A generation ago it was popular to try to guess how the evolution of plants, animals and humans might have been influenced by the different temperatures, atmospheres and forces of gravity thought to prevail on other planets. Today, it is more fashionable among scientists to speculate and write articles about the spontaneous generation of life. Most recently in vogue is the theory of "chemical evolution," which is supposed to have preceded the appearance of life and prepared the way for it. It is postulated that in a primitive, lifeless planet, the crust and the atmosphere and the ocean interact under the effect of ultraviolet rays to form a variety of compounds, which gradually become more and more complicated. Finally, a molecule happens to form that has the ability to duplicate itself. Thus, this molecule comes to life—or almost to life. In time one of its offspring acquires the knack of building protein molecules and surrounds itself with protoplasm, and it starts down the road of biological evolution. So today many scientists support the space program, not because they expect

to find living things on the planets, but because they hope to find evidence for their theories of chemical evolution and spontaneous generation.

Admittedly, recent investigations have shown that the environments on other planets would be quite drastic for most earthly plants and animals, and some of the wilder speculation has ranged to ideas that extraterrestrial life may be based on chemical processes completely foreign to life on earth. However, most scientists agree that the chemical compounds formed by the element carbon with oxygen and hydrogen are unique in the constitution of living matter; also that the unique properties of water make it vitally essential to the chemical reactions on which life depends. Thus the possible existence of life must be limited to environments in which these familiar compounds can exist and interact. The temperature must be above the freezing point at least some of the time, but never so high as to destroy the complex carbon compounds of which living things are made, that is, no more than 165 degrees Fahrenheit. What, then, do we know about the presence of water and oxygen, and the temperatures on the surfaces of other bodies in the solar system?

The Moon

The moon is earth's nearest neighbor. It has long been the object of speculation and the goal of fictional space travelers. In 1835 the New York *Sun* published a series of articles purporting to describe the discovery of manlike inhabitants on the moon with a powerful new telescope. Although this was quickly admitted to have been a hoax, yet its popular appeal attested to wide interest in the subject. Even today the most powerful telescope on earth cannot reveal anything as small as a man or a house on the moon. Fea-

tures as wide as 500 yards can be resolved, so that forests and cultivated areas, large rivers, cities and water reservoirs could be seen. But the telescope shows no such features on the moon. Rather, its surface is spotted with a profusion of craters, thought to be caused by gigantic meteors, which vary in size from over a hundred miles down to about a mile, as small as can be seen in the telescope. There is no sign of life of any kind.

Moreover, studies of the lunar environment leave no room to believe that it could support life. It is devoid of water and atmosphere. The temperature rises as high as 250 degrees Fahrenheit at noon and falls to around 200 degrees below zero at night. Since the moon turns on its axis only once a month, the hot days and the cold nights each last two weeks. Furthermore, in the absence of a protective atmosphere the lunar surface must be continually bombarded by a rain of meteorites, and of lethal ultraviolet and X rays from the sun. We must conclude that it is quite impossible for the surface of the moon to support any living thing.

The Planets

Looking beyond the moon, to the planets orbiting around the sun, what possibilities of life do we find? The basic facts of chemistry in regard to water and carbon compounds immediately eliminate most of the planets as abodes of life. Mercury, the small planet closest to the sun, rotates on its axis so slowly that its day and night each last 88 earth-days, the same time as it takes to revolve around the sun. The day is so long and the sun so close that daytime temperatures reach an estimated 750 degrees, but at night it chills to hundreds of degrees below zero. It has no atmosphere, which is in keeping with the high temperature and the low

force of gravity. There can be no life on Mercury.

At the other extreme of planetary environments are the giant planets, Jupiter, Saturn, Uranus and Neptune, ranging from 15 to 300 times the mass of the earth. They are distant from the sun, five to twenty times as far as the earth, and are intensely cold. They have very dense atmospheres composed chiefly of the poisonous gases, methane and ammonia. The top of the atmosphere is all that astronomers can see of these planets, but they theorize that they may have a solid crust of ice, thousands of miles thick, possibly enveloped by an ocean of liquid ammonia. The surface must be intensely dark, frigid, and under a tremendous pressure from the deep overlying atmosphere. It is impossible to think that anything could live in such a place.

Venus

Between these extremes, on either side of the earth, lie our near neighbors in the planetary system, Venus and Mars. Venus, toward the sun, is most like the earth in size and in thickness of its atmosphere. Definite information about the conditions vital to life—its temperature, the length of its day, the presence of water and oxygen—have been difficult to acquire, for two reasons. One is that Venus' atmosphere is permanently clouded, blocking its surface from view. Thus no detail can be seen, only occasional faint shadings, which are apparently cloud patterns and are not permanent. Then, also, because Venus' orbit is inside the earth's, when it is closest to the earth it is between us and the sun, and we can see only the dark side. With the possibility that Venus' day might be about as long as ours and that its atmospheric blanket might moderate the temperature, it was possible to believe that

some parts of the planet, although warmer than Earth, might be habitable.

However, recent results of studies of Venus have squelched such wishful thinking. From studies both of visible light from the cloud surface and of radar pulses reflected from the surface, it appears that its rotation must be very slow. The most reliable results from radar measurements indicate that it may turn backward with reference to its orbital motion, once in 240 days. The atmosphere has been found to be very dense, producing a pressure at the surface ten to fifty times as great as on Earth. It is composed largely of carbon dioxide, but neither oxygen nor water vapor is present in detectable proportions.

The most startling discovery about this mystery planet has been made with radio telescopes. Microwaves emitted from Venus show a temperature of about 700 degrees. The cause of such intense heat is still a mystery, only partly explained by the greenhouse effect of the carbon-dioxide blanket. What the dense clouds are made of is likewise an unsolved mystery. But these discoveries make Venus a very unlikely habitat for any kind of life.

Mars

Mars is, next to Venus, the earth's closest neighbor in the sun's family of planets. It is, next to Venus, the planet most like Earth in its size and atmosphere. But, in contrast to Venus, it lends itself to close study, because, when closest to the earth, it lies opposite the sun and is fully lighted. Furthermore, its atmosphere is transparent and permits a clear view of its surface. So we have good maps of Mars, and we know much more about it than about any other planet.

As seen in a telescope, the generally red surface is in contrast to regions of a darker, gray or brown, hue. These colored

areas are generally permanent, although changes in outline and color occur from time to time. The Martian day is almost the same length as ours, 24 hours and 37 minutes. Mars is tipped on its axis like the earth, so it has seasons during its year of 687 days. During the long winter night a thin layer of ice or frost forms a white cap around the North Pole, with a radius of several hundred miles. As spring comes and advances into summer, this ice cap shrinks and disappears. Meanwhile an ice cap forms at the South Pole. There are no oceans or seas: All the water in the ice caps would not fill a good-sized lake. The atmosphere is about 50 miles thick, but is much less dense than ours. It appears to consist mostly of carbon dioxide, although it is possible that nitrogen is also present. It contains some water vapor, but no oxygen can be detected. Thin white clouds often form high in the equatorial skies during the Martian afternoon. The ice caps are also blanketed with cloud. Closer to the ground, yellow clouds sometimes obscure the surface for days at a time; they act like dust storms raised by high winds across the arid surface. Mars is much colder than Earth, being half again as far from the sun as we are. At high noon on the equator, the temperature may reach 70 degrees. But it drops rapidly below freezing during the afternoon, and at night it falls to 140 below zero.

Fifty years ago, several noted astronomers who had made a lifetime study of Mars were convinced that it was inhabited by intelligent creatures. Their conviction was based on the observation of the so-called canals—long, straight lines crossing the red areas of the planet and intersecting at sharp angles in numerous "oases." It was supposed that these were artificial channels constructed by the Martian inhabitants to distribute water from the melting ice caps to irrigate the desert soil.

This controversial theory stimulated an intensive study of Mars to gather evidence pro and con. The result of these studies is now a general consensus that the geometrical appearance of the canals is an illusion. The best photographs of Mars do not show any straight canals, but only irregular lines which are not suggestive of any artificial construction.

Increasing knowledge of the Martian environment has left little likelihood that any humans or animals could survive there. However, the physical conditions do not completely rule out the possibility of some kind of vegetation. Some hardy forms of plants are known that could conceivably endure the intense cold and the protracted droughts of Mars. For example, there are lichens growing on rocks in high mountain country that can withstand extreme cold and drought. The strongest support to the theory of Martian vegetation has been the seasonal change in color seen in the dark areas. While the ice cap is shrinking, the brown areas in that hemisphere take on a darker hue, which looks bluish-green in contrast with the red areas. This well-attested phenomenon suggests the onset of spring, with dormant plants putting forth green leaves. It has been held that the light from the blue-green areas, when analyzed in a spectroscope, is similar to that from green plants at high altitudes.

Those who hold that these observations are sure evidence of living plants on Mars have enthusiastically supported plans to send spaceships there to get a closer look. However, not all scientists are convinced. The spectroscopic evidence has not held up under close scrutiny. In laboratory tests, reflected light from various plants, including lichens and cacti, has been tested and found not to match the light from the Martian dark areas. It is now believed that the bands of light absorption are produced by water in the earth's at-

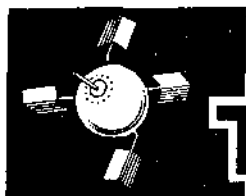
mosphere rather than by plants on Mars. Furthermore, it is pointed out that one of the areas where the seasonal darkening is most pronounced is so far south that the noonday temperature is never high enough to melt ice. Since no plant can grow under such conditions, some scientists believe that inorganic processes are more likely the cause of the darkening wave. One theory is that the dark areas represent higher ground that is covered with finer or coarser dust particles, according to the prevailing winds at different seasons. Another explanation is that ultraviolet light in the summer affects the color of silica minerals in the surface. Although the Martian vegetation theory is perhaps still the more popular among scientists, the existence of sound alternative theories leaves the question open.

No Evidence for Life

To what does all this evidence add up? Every place in the solar system where it

was once imagined that men, or at least some kind of vegetation or animals, might live, has been eliminated by the ruthless advance of scientific knowledge. Every place is too hot or too cold. Atmospheres are either lacking or so dense that their pressure is of crushing intensity. None contain free oxygen. Liquid water has not been discovered anywhere outside the earth. Oxygen and water, both vital to life, are the unique possession of Earth, among all the bodies in the solar system.

In all this overwhelming evidence against life on other planets, only one possible exception, and that but a faint hope, remains. That is on Mars. The near-vanishing glimmer of hope that Mars holds out to those who are seeking extra-terrestrial life has moved it into the focal point of space activity that bids fair to lure man into the greatest technical gamble of all time. The first steps in the exploration of the solar system are the subject of the following article.



EXPLORING THE PLANETS



SINCE the first Sputnik was hurled into orbit around the earth in October, 1957, the exploration of space has become a major activity of the two most powerful nations, the United States and Russia. Hundreds of man-made satellites—Pioneers, Explorers, Luniks, Cosmos, Rangers, Mariners—have been sent aloft. The environment of space immediately around the earth has yielded up long-kept secrets—huge radiation belts held in the grip of the earth's magnetic field, solar winds of

electrical particles churned at times into electromagnetic tempests by flares on the sun, immense currents of electricity girdling the earth high above the atmosphere. Already satellites are serving valuable uses, as weather observers, as relay stations for intercontinental transmission of radio and television, for more accurate mapping of the earth's shape and surface, testing the physiological reactions to weightlessness in dogs, monkeys, chimpanzees and men.

By far the most ambitious—and most expensive—undertaking in the space program is the attempt to send manned space-ships to the moon. The United States is committed to reach this goal in the decade of the 1960's, and Russia is competing vigorously to get there first. The project has won public acceptance, and national prestige is now involved so deeply that a planned cost of 20 billion dollars is not so great as to discourage the effort.

Since one of the most important goals in space exploration is to find life outside the earth, the moon is only a stepping-stone to the more important objective, earth's neighboring planets. From this viewpoint, going to the moon would hardly be worth the effort unless the trail is to be followed on to the planets, because no one really expects to find life on the moon. So the cry is "On to Mars." The Space Science Board of the National Academy of Sciences urges that 1985 be set as the target date for manned expeditions to Mars. Even though this project could cost as much as 100 billion dollars, they feel that the possible reward is worth it. The Board says, "Given all the evidence available at present, we believe it entirely reasonable that Mars is inhabited with living organisms and that life independently originated there."

Disagreement over Extraterrestrial Life

However, scientists are far from agreeing on whether extraterrestrial life exists, where it might be found, and what forms

it could take. On the one hand, there are those who are sure that intelligent life like man exists throughout the universe. Typical of this view is that expressed by Professor Melvin Calvin, chemist at the University of California and a leading proponent of chemical evolution. He was quoted



ed in a newspaper interview as believing that "living beings, many of them far more advanced than the humans on earth, almost certainly exist on millions of other planets through the universe. . . . Since in the course of the chemical and biotic evolution the appearance of man on the surface of the earth has occupied only a very small fragment

of time, namely, only one million years of the five billion, it is clear that we may expect to find cellular life and perhaps precellular life and post-human life, in many of these other planets."

Dr. Wernher von Braun, the German space scientist who transferred his support from the Nazis to the Americans after the war, agrees, but gives a different reason: "I cannot believe that the Power which created life and order confined all sensible organisms to this comparatively tiny planet. Our sun is one of 100 billion stars in our galaxy. Our galaxy is one of billions of galaxies populating the universe. It would be the height of presumption to think that we are the only living things in that enormous immensity."

On the other hand, Professor George G. Simpson, paleontologist at Harvard University, reasons that life is not nearly so

likely as some think. "There is, then, no clear evidence of life anywhere else in our solar system. Wishful thinking, to which scientists are not immune, has obviously played a part here. The possibility is not excluded, but, on what real evidence we have, the chance of finding life on other planets of our system is slim. . . . The assumption, so freely made by astronomers, physicists, and some biochemists, that once life gets started anywhere, humanoids [living organisms with intelligence comparable to man's] will eventually and inevitably appear is plainly false."

The highly respected astronomer William J. Luyten of the University of Minnesota agrees with Simpson: "Arguing from general principles one might say that life could well exist outside Earth, but it seems to me that the only definite statement that is now scientifically tenable is that we do not know; we can neither prove nor disprove it."

In regard to the search for life on Mars, Dr. Philip H. Abelson, editor of *Science*, disagrees sharply with the National Academy's Space Board. He says, "Our present knowledge of Mars is incomplete, but the facts available provide little basis for thinking that life will be found there. . . . The severity of the Martian environment does not seem to have been realistically taken into account in plans for the exploration of Mars. . . . In looking for life on Mars we could establish for ourselves the reputation of being the greatest Simple Simons of all time."

Exploring the Moon

Before sending a man to the Moon, or to Venus or Mars, the space scientists have considered it prudent to learn as much as possible about what he is likely to encounter. For this purpose, space vehicles are being sent ahead with a variety of instruments and with television cameras,

equipped to radio their findings back to the earth.

The first exploit in the unmanned exploration of earth's neighbors in space was to look at the back side of the moon. As many a schoolboy knows, the unchanging face of the moon as it follows its course around the earth is due to the fact that it turns on its axis at the same rate as it revolves in its orbit. The other side of the moon, ever hidden from man's sight, has been a mystery. In October, 1959, the Russian Lunik III was guided beyond the moon, where it automatically photographed the unseen hemisphere. The picture showed that it was little different from the familiar front side. There are more of the dark areas, and a long range of mountains that is not matched by any feature on the face, but nothing to indicate that the back of the moon is any more propitious for life than the front.

After a discouraging history of six successive failures in attempts to reach and photograph the moon's surface, the United States space team finally launched Ranger 7, which stayed on course and obeyed the commands sent to it. It televised back a remarkable series of pictures as it fell to a crash landing on the moon. These close-up views of the lunar surface filled in small-scale details, but they only confirmed beyond any further doubt, if such were possible, the conclusions long accepted as to the lifeless state of the moon. The pictures showed smaller and smaller craters as the camera approached. More recently, pictures sent back by Surveyor added evidence. The landscape is utterly bleak and desolate, without a sign of life. The astronauts who are planning to land on the moon will not encounter any unearthly monsters; they will have to cope only with the physical hazards of the unearthly environment.

Rendezvous with Venus

The first attempt to contact Venus was with a Russian rocket fired from a larger ship already in orbit above the earth, in 1961. However, its radio transmitter went dead and it was lost in space. So it turned out that the first rendezvous of a man-made spaceship with a planet was that of the United States Mariner II, which passed within 22,000 miles of Venus in December, 1962. The most important task assigned to this flight was to learn from just what part of the planet the high-temperature radio waves come. It was uncertain from earth-based measurements whether the source was on the surface of Venus or in an ionized layer of gas high in the atmosphere, like the earth's ionosphere, which has a temperature of 2,000 degrees at an altitude of 200 miles. Mariner II was equipped with microwave receivers tuned to wavelengths that would penetrate the atmosphere. It scanned the planet at close range, and radioed results that clearly indicated that the temperature of about 700 degrees is at the surface, not in the atmosphere. With infrared radiometers, it also verified the much lower temperature at the top of the cloud surface, about 40 degrees below zero. Magnetic measurements showed that Venus has little if any magnetic field.

So the picture of Venus as a pleasant haven for space travelers is only a science-fiction bubble, pricked by the sharp scientific facts. There are no longer plans for the manned exploration of Venus.

Mariner IV Visits Mars

Impressive as these exploits in probing space have been, they were far surpassed by the accomplishments of Mariner IV. The remarkable voyage of this lavishly instrumented spacecraft to Mars in 1965 opened a new chapter in the long history of that controversial planet. Its television

cameras, looking at Mars from a distance of only 6,000 miles, transmitted clear pictures of it across 134,000,000 miles back to Earth. The scene disclosed was astonishing. There were no familiar features of earthlike mountain ranges, river valleys or ocean basins. Although the twenty-two pictures covered an area of 500,000 square miles between latitudes 50 degrees north and 50 degrees south, and features only 2.5 miles across could be distinguished, there was no sign of the great engineering works that earlier enthusiasts had credited to the mythical Martians. There was no trace of the canals, even though in some pictures the camera pointed directly at places where they are shown on maps of Mars. In fact, none of the ideas about the Martian surface put forth by rival camps of scientists were confirmed by the Mariner photographs. Instead, they showed a surface pockmarked by craters—just like the moon! The large number of craters and their state of preservation shows that they have never been subjected to the eroding force of rain, which effaces similar features on Earth in the course of a few thousand years. It is agreed now that Mars has never had much more water or air than it now has.

Besides the revealing photographs, more precise measurements of Mars' atmosphere were made by means of radio waves transmitted by the Mariner as it disappeared behind the planet. Analysis of the signals received through the atmosphere shows that it is even colder and thinner than earth-based studies had shown, having a pressure less than one percent of that on Earth. Also, there appears to be no more than a few percent of any gas other than carbon dioxide. The low pressure means that Mars has no shield against deadly radiations from the sun. Additionally, Mariner magnetic measurements showed that Mars has no magnetic field.

Hence its surface is exposed to the full effects of ultraviolet rays, ionizing rays from solar flares, and cosmic rays. All these findings tend to make the existence of life on Mars more doubtful.

So the expeditions to search for Martian life appear far less promising than before the flight of Mariner IV. The trend now is to retreat to the hope that analysis of surface samples from Mars will reveal the prebiological conditions that result from the hypothetical chemical evolution, and which under the more favorable conditions on earth, theoretically opened the way to biological evolution. So, although their arguments for getting billions of dollars from the public treasury are much weakened, the space explorers have not abandoned their quest. And the starry-eyed extremists have hope that someday contact will be made with the civilizations they feel sure exist in planetary systems in other parts of the Galaxy.

What Does the Bible Say About Life on Other Planets?

Does the Bible give us any reason to expect that man will find life on other planets? Will Mars, or perhaps even the moon, provide the missing link between "chemical evolution" and "biological evolution"? Are space explorers likely to find people on other planets with whom they can communicate? Would it not be wise to consider what the Creator has to say before spending hundreds of thousands of millions of dollars in a quest to indulge what may be only a passing fancy in the ever-changing theories of scientists?

The Bible reveals the relationship between the Creator and man on the earth, and his purpose for man and for the earth. It shows that Jehovah formed the earth and prepared it for man's habitation. He created man to live on the earth and to take care of it. The Bible shows that

the invisible heavens are populated with spirit creatures, but as to fleshly life in the visible heavens, it says nothing.—Isa. 45:18; Gen. 1:1-30.

Notwithstanding the lack of any direct Bible statement on the subject of life on other planets, there are certain Bible principles that relate to the question. First is the fact that Jehovah created the whole universe—the earth and the visible as well as the invisible heavens. All the stars and planets are under his control, through his organization of spirit creatures, who appear to have the power to come and go throughout the universe. He has not given man dominion over the heavens. A second basic principle is that all life, wherever it exists, originated with Jehovah. If plant life should someday be found on Mars, it will be, not because life bursts out spontaneously wherever it has the chance, but because Jehovah created it and put it there.—Gen. 1:1; Job 1:7; Dan. 10:12, 13; Ps. 115:16; 36:9.

So, too, if intelligent races of fleshly creatures exist on other planets, it is because Jehovah made them and put them there. But is it reasonable to believe that this is in harmony with his revealed purpose? If he has created other races of people, we would expect that he would test their obedience, just as he permitted his human and angelic creation to be tested. And under such a test, we might expect that some would fail, just as Adam and Eve on earth, and Satan and many angels in the invisible heavens failed. What then? Would the drama of the fall into sin, redemption, vindication and restoration have to be repeated for the inhabitants of some other planet? Who would provide the necessary ransom? In the case of sinful man on earth, only one person was found suitable, the only-begotten Son of God, who became the perfect man Jesus Christ on the earth. But

Jehovah has only one only-begotten Son. Would Jesus, then, have to go to that planet and take the form of one of its inhabitants and live and die there to provide the ransom? To this the Bible answers definitely, No! Jesus died only once. (Heb. 9:25, 28; 10:12) He is now immortal, and cannot die again. It is not consistent with Jehovah's purpose that, after Satan's rebellion is squashed and the rebels are destroyed, the universal peace in God's creation will ever again be broken by an organized rebellion that God permits to continue.

Men who speculate in disregard of Jehovah's purpose argue that there is nothing unique about the earth, that there must be millions of planets in the universe that are very similar. But the Bible shows that the earth does have a unique place in God's purpose. It was at the founding of the earth, not the sun or another star, that the sons of God applauded. It was to the earth that Jehovah sent his only-begotten Son, Jesus, to prove his faithfulness, bearing witness to the truth and to show himself worthy to be the King in God's kingdom. The 144,000 persons who are to be associate kings with Jesus and rule over all of Jehovah's universal organization are all taken from the earth, not

some from one planetary system and some from another throughout the Galaxy. In the last days just before Satan's binding, he is confined for a short period, not to Venus or Mars, but to the earth. And the battle of Armageddon will be fought here at the earth. Then Jehovah will make an everlasting paradise home for obedient mankind right on the earth. Truly the earth does have a unique place in God's universe.—Job 38:4-7; John 18:37; Rev. 14:3; 12:9, 12; 16:14, 16; Ps. 37:11.

Such reasoning, in harmony with God's revealed Word, leads us to the conclusion that he has not created intelligent fleshly creatures on other planets, either in our solar system or in unknown, distant reaches of the universe. As to whether, in the future, Jehovah will ever turn his creative hand to the preparation of other planets for habitation by man or other creatures, he has not revealed. After the 1,000 years of Christ's reign, Jehovah's 7,000-year sabbath of rest from earthly creative work will end, and an eternity of time will stretch out before tested, obedient mankind on earth and the 144,000 of the Kingdom in heaven. In those ages we may hope to learn some of the secrets of Jehovah's creation in the visible heavens and his purpose for them.

"Twelve Hours of Daylight"

There is no indication that the Hebrews used hours in dividing up the day prior to the Babylonian captivity. In the days of Jesus Christ, the practice of dividing the daylight period into hours was common. Thus, at John 11:9 Jesus said: "There are twelve hours of daylight, are there not?" These were generally counted from sunrise to sunset, or from about 6 a.m. to 6 p.m. So the "third hour" would be about 9 a.m., and it was at about this time that the holy spirit was poured out at Pentecost. (Acts 2:15) When Jesus, tired out from a journey, was sitting at Jacob's fountain, "the hour was about the sixth," or noon, which was also the time of day when Peter became very hungry at Joppa. (John 4:6; Acts 10:9, 10) It was also about noon when darkness fell over all the earth until the "ninth hour," or about 3 p.m., when Jesus expired on the torture stake. (Matt. 27: 45, 46) The "ninth hour" was also called "the hour of prayer." (Acts 3:1; 10:3, 4, 30) So the "seventh hour" would be about 1 p.m. and the "eleventh hour" about 5 p.m. (John 4:52; Matt. 20:6-12) The night was also divided into hours at that time.—Acts 23:23.

THE lure of the North may get you this year, and, spurred by multiplying stories of its marvelous scenery, you may decide to head up the Alaska Highway. But is it not taking quite a chance to journey into the northern wilderness? asks someone with visions of a narrow, rough trail, of fording rivers and pushing through country fit only for jeeps and heavy-duty trucks. The answer is, Not if you first compare notes with someone who has made the trip recently.

Opened to the public first in 1948, this vital link between Dawson Creek, British Columbia, and Alaska was swiftly pushed through to completion in slightly less than seven and a half months in 1942, the job having been rendered urgent by the Pearl Harbor attack in the previous year. The immediate aim was to provide an adequate land route for transport of defense forces and equipment to the North Pacific coastline. During the past seventeen years, however, it has attracted increasing thousands of vacationers.

Most recent travelers will tell you the same story. While the Alaska Highway is by no means a rough and dangerous trail, it probably is quite different from any highway you have traveled. There are precautions you must take that are not needed in modern, superhighway travel, but once these matters are cared for this northern route is no more dangerous than

others. In fact, it may present fewer hazards because of its lighter volume of traffic and its necessarily slower speeds.

Preparing for the Trip

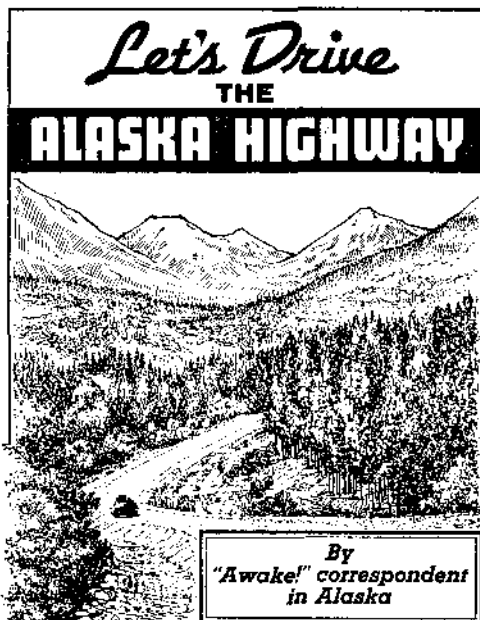
What steps should you take to ensure a minimum of inconvenience on the trip? First, it might be well to wrap around

your gas tank some old rubber sheeting of sufficient thickness to provide a cushion against sharp rocks thrown up by your wheels. It can be wired on snugly. And check carefully on any other item that will be handy in case of breakdown on the road. You see, in some places the service stations are as much as fifty miles apart.

As with any other long trip, of course, the tires should be checked to make sure they will stand up under several thousand miles of travel. A

screen to protect the front of your car from flying gravel is also recommended. It is even advisable to have your headlights covered with plastic covers, though you may have to wait to obtain these until you near the Alaska Highway itself.

And then, how much money will you take along? Canadian border officials will require that you have enough funds to take you through to Alaska. The 1965 edition of *The Milepost* states: "Generally \$250 per driver and car will satisfy the requirements, or about \$100 more per person than the cost of bare necessities." Since most products sold along the high-



way have been shipped in from great distances, you can expect them to cost more than they do farther south.

Along the Way

To commence your trip on the Alaska Highway you must first get to Dawson Creek, either by following the Caribou and John Hart Highways north from Vancouver, or by going north through Alberta and its northern city of Edmonton. Dawson Creek is 788 miles from Vancouver and about 300 miles from Edmonton.

Once started northward from Dawson Creek you will see all along the route little markers telling how many miles you have come. By watching these and your trip log you can always tell how far you are from the next point of interest or to the next accommodations area.

The first eighty-three miles you travel on good pavement, but from then on you can expect to be on gravel road for the next 1,200 miles. Most of the time it is not rough enough to restrict your speed seriously, so that you have no difficulty maintaining the local speed limit of fifty miles per hour. Notice how wide the road is, and how well banked its curves. And there are not even any streams to ford! Graceful, steel bridges take you across rivers and creeks.

After a few hours you will begin to get hungry. What did you plan to do? Eat at some wayside restaurant, or did you remember to pack a noonday lunch? There are public campgrounds where you can stop and eat and even heat some water for a hot beverage. But keep the fire hazard in mind, and, if you can, prefer an open rocky place to one where there is much foliage. In this way you will avoid too many mosquitoes. However, you may have brought along repellent. Be sure, though, to keep the car closed so that the pesky insects do not invade it during your stop.

Another reminder just suggests itself here. You might do well to obtain your processed lunch meats from some familiar and dependable source, if you are conscientious about refraining from products that contain blood. You see, the labeling laws in Canada allow processors to mix blood in their meats without having to list it on the label.

By this time you have passed quite a few cars, and have noted what a cloud of dust you have to penetrate each time. So, to keep the interior of your car clear, it will be a good idea to close all the windows, open the front vents and turn on the heater fan so that cool air will be blown through. This intake of air builds up enough pressure inside the car to prevent the swirling dust from entering through every little opening. But do not forget to close the vents and turn off the fan when meeting or being passed by another car. This may keep you busy at times, but it is worthwhile, in order to maintain a high degree of comfort. It is also suggested that when meeting a number of cars you slow down, pull slightly to the right and turn on your headlights even in daylight. In this way oncoming drivers will spot your presence and refrain from overtaking other cars until you have safely passed.

Points of Interest

Here, now, is Fort Nelson, 300 miles from Dawson Creek, a very suitable stop, offering as it does some choice of accommodations. Looking over your map, you have already determined the stopping places for the next three succeeding evenings: Watson Lake, Yukon; Whitehorse, Yukon; Tok, Alaska. Good advance planning may already have suggested the idea of writing in advance for rooms, especially in the season when there are many travelers.

Much of the way thus far you have been driving through rolling, wooded hills, often with a distant backdrop of mountains. The wild beauty of the scenery is enhanced by the absence of hideous commercial advertising. It is exciting to know that there are in this area mountain sheep and goats, bear, deer, moose and a great variety of wild birds, some of which you may just chance to spot.

At mile 496.5 is Liard Hot Springs. Close by, reached by a boardwalk some 400 yards long, is a restful spot where travel-weary people can relax in a hot spring. There is even a free bathhouse for changing clothes. Farther back up a woods trail is another deeper hot spring, this one with a diving board.

Mile 588 brings us to Contact Creek bridge. This name commemorates the fact that here two highway construction crews, one working southward and one northward, met to complete this road link with Alaska, a highway that had been pushed through virtually uncharted wilderness. Now you are in the midst of magnificent territory. Lakes sparkle here and there, meadows of brilliant-colored wild flowers stretch away toward distant snowcapped peaks. The sunshine, the bracing air and the silence bring exhilaration.

The very name of our next city, Whitehorse, brings visions of the Gold Rush days. Few relics remain, for Whitehorse is now a busy, modern city. For the remains of that exciting period one has to visit Dawson City, Yukon, much farther north, where ancient buildings still stand on their original sites, with weathered signs now barely readable.

At mile 1053 we come to Silver City near the shore of picturesque Kluane Lake, an enchanting little place with its old log cabins crowned with grassy turf just as

they used to build them. Gophers have taken over now, and they keep popping up out of holes here and there, curious at the sound of visitors. But look, quickly, over there! On the steep shore of the lake are four majestic white Dall sheep just disappearing over a ridge.

Soon we are entering Alaska. We know because here paved road resumes, and we are about ready for the change, since four days of driving on gravel does produce a little strain. Here we are now in the midst of typical northern country. Away off to the south there you can see the Wrangell and Chugach Mountains. Here, too, we can be on the lookout for that stately beast of the north, the moose. If one should be on the road it is best to stop and give him plenty of time to get out of the way. He can be mean. It has been reported that one of these powerful creatures charged a jet at Anchorage Airport. But usually they will just trot quietly off into the woods.

As you travel along now, perhaps toward Anchorage, you should be on the watch for one of the unique sights of the North, a real glacier, a river of ice pushing its way steadily down from the mountain heights. It is thrilling to see a glacier even from a distance. The route here also takes you through the rich Matanuska Valley, so there are nearby things of interest to be seen also—productive fields that furnish excellent crops despite the short northern growing season.

Before you turn southward perhaps you will find time to see lofty Mount McKinley, the highest peak in North America, or take an air trip to Barrow or Nome, where you can look out upon the Arctic Ocean or the Bering Sea. Certainly, you will long remember the unique experience of driving along the Alaska Highway.



A NEW NATION EMERGES

By "Awake!" correspondent in Guyana

GENERALLY at midnight the majority of Guyanese are fast asleep. But on the 25th of May things were quite different. Instead of going to bed, thousands of residents of Georgetown, the capital city, streamed toward the seawall that evening; and in other communities they gathered at selected spots. In the forested interior a small party of hardy men concluded their climb of 6,700-foot Mount Ayanganna in order to be at the summit precisely at midnight.

But why? What was happening? A significant event was about to take place: the birth of Guyana, whose population is slightly over 600,000, but whose vast territory is larger than the British Isles and nearly as large as West Germany. At midnight there would be a simultaneous flag-raising ceremony in various parts of the land.

The largest numbers assembled in the new Queen Elizabeth Park, just north of Georgetown. There, following martial music by several bands and four prayers by clergymen, the "Union Jack" was hauled down and in its place a young man pulled up a new five-color "arrowhead" emblem.

This act signaled the end of over 150 years of colonial rule and the emergence of a new nation. *British Guiana* was dropping the "British" from its name, changing an "i" to a "y" and becoming just plain "Guyana." Great Britain, in its decolonization process and amidst its dealing with thorny problems over Rhodesia and Aden, was here relinquishing its last hold on this colony. In fact, the Queen's personal representative, her cousin, the Duke

of Kent, was on hand for the official changeover.

Other observers included representatives of nearly seventy countries, including Russia and the United States, both keenly interested in the future of this young "neutral." The Vatican sent its delegate too.

Following the flag ceremony, a half-hour fireworks display lighted up the night sky for many miles. Then the crowd, estimated at more than 40,000, emptied out of the park and trekked homeward. As many strolled along and cycled in the bright moonlight, they must have been thinking about the continuing celebrations of "Freedom Week." The day soon to dawn would be "Independence Day," Thursday, May 26, their first day as Guyana, the twenty-fifth country in the Western Hemisphere to gain its freedom and the third colony of Britain in the Caribbean to become independent in the 1960's. (Jamaica and Trinidad both received independence in 1962.)

Getting Ready

Long in advance much of the populace had been preparing for this very day, yes, for this special week. If Georgetown, the "Garden City," had put on its 'finest dress' for the Queen's visit in February, then she put on even a 'better dress' for this memorable occasion. The number of colored light bulbs was increased, to decorate trees, buildings and homes. There was more painting done. There was a big shipment of cloth for "independence hats, shirts and dresses," and flags of all sizes to be unfurled. There had been a house-

to-house hunt for rooms and entire homes for hundreds of guests that could not be accommodated in hotels. There had been rehearsals of waiters and waitresses for the banquets, balls and receptions; rehearsals of schoolchildren for their plays and parades; rehearsals of the new national anthem; rehearsals of officials to meet the Duke and Dutchess, and others; rehearsals of band members, and of policemen, who were joined by many special constables in the tightest possible security arrangements.

"Independence Week" had opened with the unveiling of a lofty aluminum arch in Georgetown Sunday noon. Then, in the afternoon, the royal couple flew in. A newspaper pointed out that the Duke of Kent had officiated at three similar independence celebrations: in Uganda, Gambia and Sierra Leone. This was the second time that a British colony had been granted its freedom while still in a state of emergency, the other one being Sierra Leone.

On Monday a civic welcome had been extended to the British visitors in the historic Town Hall, which was brightly illuminated each night. That evening a formal dinner party was held for them. On Tuesday the royal couple visited rural areas and New Amsterdam, center of the oldest of the three counties, Berbice.

Wednesday morning they were entertained by the water pageant in the choppy waters of the Demerara, along with speedboat races and water skiing. Later, while the Duke inspected the defense forces, his wife paid a visit to the elderly poor in the "Palms House." In the evening a gorgeous state banquet was held, featuring local and foreign dishes, preceding the flag-raising at midnight.

Independence Day

Finally, "Independence Day" came. At eight o'clock a gun salute was sounded

from the well-decorated warships of several nations. Then came the "fly-past" by four jets of the United States Air Force. If one were sleeping soundly and had missed the gun salute, he did not sleep through the several "fly-pasts" of the roaring jets, streaking low over the city. Meanwhile the governor-general (the last governor, asked to remain) and ministers of the Guyana government were sworn into office.

At eleven o'clock the Opening of Parliament by "His Royal Highness" drew another large crowd to the Public Buildings, Georgetown. The Duke read the "throne speech," handed to him by Prime Minister Forbes Burnham, and then presented the instruments of independence to Burnham, officially making Guyana a separate sovereign state.

Later that day representatives of the United States Government signed an agreement transferring Atkinson Field, one of the air bases leased from the British during World War II, to the new nation. Besides that gift, there were loans, books and scholarships given, and President Johnson sent a "Texas" saddle to Burnham, who is another horseback rider. Venezuela presented a statue of a South American liberator, along with the offer to build a model school soon. Britain's freedom gift was \$14.4 million to its ex-colony. Guyana herself was in the giving mood, announcing the reduction of sentences of hundreds of prisoners and the freeing of several in a week's time.

Tramping

Friday, May 27, was also a public holiday. The prime minister, addressing a mammoth audience at the Independence (formerly Parade) Ground, said: "I bid you, enjoy yourselves!" Immediately steel bands let loose with Creole tunes and began marching up the already crowded

street. Whereupon a mass of humanity, holding hands and shuffling feet, closed ranks behind their favorite bands and "tramped" to the pulsating rhythm of the beat on the homemade instruments (drums and tubs). A visiting journalist, upon observing the sea of men, women and children in colorful costumes depicting bears, Indians, kings, queens, slaves and sailors, all swaying with the music, remarked: "Only television could hope to capture some of the gaiety."

"Tramping" is a great attraction for many Guyanese, a contribution of African culture to West Indian life, and they will "tramp" whenever an opportunity arises.

The steel bands, which were vying for attention and prizes as usual, drew huge crowds that filled the streets, following them far into the night.

Meanwhile the royal party on Friday were flown out to the Rupununi savannahs, where they viewed breathtaking stunt riding of wild bulls and horses by Amerindians and neighboring Brazilians; and then on to Mackenzie, a mining community sixty-five miles upriver from Georgetown, where they were given another rousing reception, interrupted by a downpour.

Friday evening's feature was a spectacular pageant staged by schoolchildren, covering Guyana's history from the time that Sir Walter Raleigh first saw the shores of this land of 'many waters and green plains.' *Guyana* means "land of many waters." Meanwhile thousands of others were enjoying street dancing, to the accompaniment of the popular steel bands.

Float Parades

Amid a busy Saturday morning's marketing came the float parade, dry at first

but drenched by a tropical rain. Nearly every aspect of Guyanese art, culture and life was depicted: a slave ship, reminding one of the past—1763, the Berbice slaves' rebellion, and 1838, the emancipation; a float depicting the primitive life of the Amerindians (earliest settlers) before the arrival of the white man, and subsequent changes; another showing "bees," small boys in brown costumes remarkably resembling bees, bobbing about a hive; another with a "freedom bell" and behind a

replica of the Kaieteur Fall (a 741-foot waterfall, one of Guyana's "wonders"), which float captured first prize; beautiful girls with various exhibits, and

steel bands spaced appropriately.

This forty-three float parade was repeated Sunday afternoon, followed by more tramping. Celebrations continued into Monday, a regular holiday anyway. A local editor sighed: "It is a good thing Independence comes only once in a country's history for I doubt whether groggy, footsore Guyana could live through the agony and the ecstasy of another Freedom Week."

Another Side of the Picture

But not all the people celebrated. True to his word, Dr. Cheddi Jagan, leader of the opposition party (PPP), boycotted all the functions to which his party had been invited except two: the flag-raising and the opening of Parliament. On the latter occasion he and fellow party members entered the assembly chambers wearing small placards that read: "Release Detainees," and "End Emergency." A little later, a hushed audience in the packed-out room heard him protest the detaining of nine remaining members of his party 'without trial.' He stated that "the PPP,

ARTICLES IN THE NEXT ISSUE

- Are You Subject to Moods?
- The Beauty and Power of Sand.
- What to Do for Burns.
- Communication by Satellite Proves Practical.

the vanguard of Guyana's struggle for national liberation, is convinced that liberty is achieved only after it has been struggled for and won. It cannot be the gift of charity. For the people of Guyana, real freedom is a prize still to be won. And win it we will . . . as a reunited people."

The present state of emergency began when his party was yet in power, at the height of the 1964 hostilities, and has not been lifted at the time of writing. Picketing was carried on by the opposition right into "Freedom Week." So a partial boycott of the independence celebrations was evident in most parts of Guyana.

What Follows Independence?

Widespread was the publicity on this country's attaining nationhood. An legislator wrote from London: "Well, at any rate, Guyanese independence has become a reality—flag, anthem, shouting—the lot. After the shouting comes the stock-taking and a sober look at what's left. Those of us abroad, away from the shouting, will cast a cold, banker's eye over Guyana's credit and loss ledger."

The New York *Times* editorialized: "Two major problems threaten an otherwise hopeful future. . . . They are the danger of racial strife between the country's 200,000 Negroes and the 320,000 Guyanese of East Indian origin, and the threat posed by the Marxist leader of the opposition."

There is no question that problems confront the government. Venezuela and Surinam both have made claims on Guyana's

rich land—which geologists say contains at least twenty-four valuable minerals as well as oil, lumber, etc.—amounting to two-thirds of the territory. British troops have been asked to remain in this country until October, preparing the local defense force.

Guyana's prime minister, trying to preserve the current peace that followed the riots and clashes from 1962 to 1964, has introduced the slogan, "One People, One Nation, One Destiny." He proudly points to the national anthem, which emphasizes "land of the free," and to 'one of the most modern and liberal constitutions in the world.'

Guyana's constitution provides for a sovereign democratic state, but makes provision for a republican system to be adopted after January 1, 1969, if the majority of the legislature are in favor of it. Fundamental freedoms of the individual, irrespective of race, place of origin, political opinion, color, creed or sex, are guaranteed. There is even the provision for an "Ombudsman," a sort of public defender of individuals with complaints against governmental abuses or lapses. When asked about any limitations in any part of the country to freedom of propagation of religion, the prime minister replied: "None whatever."

So Guyana, where peoples of Asia, Africa and Europe with their varying cultures and religions have been thrown together, plans to work out a way of life within a democratic framework.

Bible in 1,250 Languages

The American Bible Society recently reported that parts of the Bible have been published in 1,250 languages. The released statistics show that the entire Bible has been published in 237 languages, the Christian Greek Scriptures (New Testament) in 297 languages and at least a single Scripture book in 716 others. This language coverage reportedly covers 97 percent of the world's population.

By "Awake!" correspondent
in Trinidad

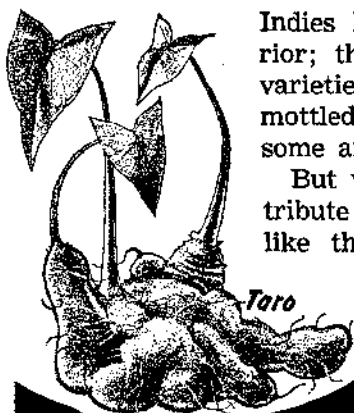
"A MEAL without my spaghetti?" cries the Italian. "No rice?" queries the Chinese. "Bread is my staff of life," and, "Tortilla is mine!" say still others. What is your choice of fare? Well, a meal in the tropics would not be complete without roots; we go to the root of things for tasty, nutritious food.

Suppose we start with that toothsome delight, the sweet potato. These are fleshy roots, shaped like elongated beets. Some varieties have a reddish skin, others are creamy. The fleshy part may be creamy, yellow or orange, and it has a smooth texture.

Sweet potatoes have a high energy value. More nutritious than the "Irish" potato, the sweet potato supplies calcium, phosphorus and iron and vitamins B and C. The yellow variety is also very high in vitamin A. A word of caution, however: Handle and store your sweet potatoes with care, as they bruise easily and do not like the cold.

Like the sweet potato, real yams also have a twining vine with heart-shaped leaves, but yams are related to the large lily family, whereas sweet potatoes are of the morning-glory family. The yam, with its over 150 varieties, is also widely cultivated throughout the tropics. Native to the East, it spread to Africa and the West. In fact, when slaves were becoming more numerous in the West Indies, this bulky root was encouraged to help fill the food bill. No doubt this connection with Africa explains its name, for yam is from a Senegal word *nyami*, meaning "to eat."

One of the best-known yams in the West



At the Root OF THINGS

Indies has a dark-brown exterior; the flesh is white. Other varieties may be bright purple, mottled or yellowish. In texture some are mealy and dry.

But what does the yam contribute to our table? Well, it is like the white potato, mainly starch, and this it supplies generously and economically, as does another giant root of the tropics, the taro or dasheen.

Valuable Underground Stems

Taro or dasheen patches are a familiar sight throughout the tropics. Cut this potato-like tuber and notice how crisp the white flesh is, although of a coarse and needlelike texture. Like the potato, the taro root is often eaten baked or boiled. When boiled the dasheen is about one and a half times as nutritious as white potatoes and is more easily digested than most kinds of starch.

Another plant, the roots of which are eaten, is the well-known cassava, one that grows only in tropical climates and which is related to the castor bean and Pará rubber tree. The cassava's large, two- to eight-inch-thick roots may reach a length of three feet or more and weigh twenty-five or more pounds. Cassava is believed to be native to Brazil. This no doubt explains one of its other names, "manioc," originated from the Tupian tribes of Brazil, especially in the Amazon valley. In parts of South America the plant is also called yucca.

There are two kinds of cassava, bitter and sweet. The roots of both are important sources of starch, but the bitter contains a greater starch content, so it is

more important economically. Sweet cassava is usually used for the table, like potatoes, either boiled or roasted and has a flavor much like that of chestnuts. Bitter cassava, however, contains prussic acid and can be used only after special treatment to remove the poisonous acid.

Did you know that a common item on your pantry shelf originates from this bitter cassava root? Yes, tapioca does! To make tapioca, the damp cassava starch is spread on iron plates, heated slowly while being stirred constantly. The heat causes the starch granules to burst into irregular pellets, which, on becoming cold, are hard and almost clear. Tapioca is highly esteemed for making puddings, which are a healthful food and easily digested.

So starch-producing cassava or manioc is really a "staff of life" to many a family in the tropics. Since starch is its chief contribution, it is well to remember that it, like the yam, needs to be supplemented with other foods for one to maintain good health.

Long, horizontal underground stems that store up food are known as rhizomes; and among these are the West Indian arrowroot. This rootstalk makes a light starch used in puddings, pie fillings and other desserts. It is known for its easily digested form of starch, which is why it is useful for babies and sick persons. But, of course, even if this starch provides an economical "filler," it cannot take the place of milk in a baby's diet, for it does not supply the proteins or minerals needed for growth. The plant's name may be a corruption of the Indian name of this plant, *Araruta*, meaning "mealy root."

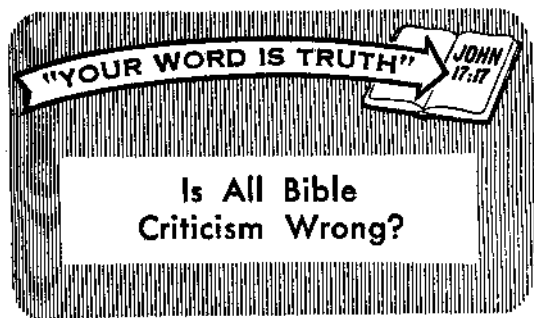
The arrowroot's white rootstalks are tapering and cylindrical, about one and a half inches in diameter and from nine to eighteen inches long. An acre of the plant yields about seven tons of fleshy

roots, from which about one ton of starch is obtained. By grinding the ripe rootstalks and washing them repeatedly, the starch is extracted. It settles and is then dried in the sun and finally further pulverized.

There are other valuable rhizomes. Spice and color are added by those known as ginger and turmeric. Both are native of the East, ginger being one of the first Oriental spices to be known in Europe. Ginger rhizomes send out many small "hands," so called from their irregular, fingerlike shape. These are dug up, washed and sun-dried, after which they may be used perhaps in your favorite recipe. The volatile oils, which give the odor, and a resin, which gives it pungency, made ginger a spice popular with the ancient Greeks and Romans, even as it is today, being used in baking, cooking and to flavor ginger ale.

The turmeric rhizome, of bright-yellow color, has a more regular pattern of formation. From the mother root the shoots are produced, each resembling a thick finger. Down two sides of each finger a new row of little shoots come out until a compact mass is formed. After being dug up, these fingers are broken off, washed, boiled briefly, then sun-dried. Finally they are ground to a moist powder, ready to supply the coloring and their particular aromatics to curry powder and mustard. You will appreciate this root's contribution as you enjoy your curried foods.

Truly our tropical friends could hardly do without their many roots. A careful look at the secrets "down under" enhances our interest in the dinner plate and our appreciation for the Creator's bounty provided underground in those flavorful, toothsome roots!



“WHY, of course, all Biblical criticism is entirely wrong,” one might say, “because the Bible is God’s Word!” That the Bible is, without a doubt. (2 Pet. 1: 20, 21) But some persons view Jehovah’s witnesses as being inconsistent for condemning Biblical criticism on one hand and employing it in other ways. Yet, are Jehovah’s witnesses blameworthy in this respect? No, because there are different types of Biblical criticism. In fact, there are two distinct kinds, higher criticism and lower criticism.

According to *Webster’s Third New International Dictionary*, higher criticism is “the literary-historical study of the Bible that seeks to determine such factors as authorship, date, place of origin, circumstances of composition, purpose of the author, and the historical credibility of each of the various biblical writings together with the meaning intended by their authors.” This same dictionary defines lower criticism as the “study of the Bible that aims at reconstructing the original biblical texts.” It is textual criticism. Jehovah’s witnesses do not object to certain features of either type of Biblical criticism.

The word “criticism” is often used in an unfavorable sense, when it conveys the thought of criticizing or censuring. But it has also been defined as “the art of evaluating or analyzing with knowledge and propriety works of art or literature.” (*Webster’s Third New International Dic-*

tionary) A drama critic or book critic, or reviewer, may appraise a play or literary work, but the objective is not necessarily to find fault. So, too, Biblical criticism can be the kind that elevates the Bible and honors its Author, Jehovah God.

A current publication of Jehovah’s witnesses is entitled “All Scripture Is Inspired of God and Beneficial.” It thoroughly considers each book of the Bible, providing information on the identity of the writer, place of writing, time and circumstances of composition, also furnishing an epitome of each book and discussing its benefits. Among this publication’s absorbing studies are those regarding the preservation of Biblical manuscripts, various translations of the Bible and its authenticity and truthfulness. To a degree, this book has been based on Biblical criticism, but it is of the most noble order. It is necessary only to read this or other publications of Jehovah’s witnesses to discern the pervading spirit of deep respect for the Holy Scriptures and of reverence for Jehovah God, who is responsible for the Bible’s original composition and marvelous preservation.

However, Jehovah’s witnesses are properly against the type of Biblical higher criticism that is founded on the assumption that the Bible should just be viewed exactly as any other ancient literary or historical work. This type of criticism presupposes that the Bible is not the product of divine inspiration. Critics with such an attitude often have no compunctions about questioning the veracity of the Scriptures, viewing them as contradictory or even assailing them openly. But they have tried in vain to discredit the Bible. For that matter, their errors and misconceptions have often been brought to light in these columns. When Jehovah’s witnesses take a stand against Bible criticism, it is with such a form of higher criticism in mind;

so no person with respect for God and his inspired Word can reasonably take exception to this stand.—Prov. 3:1-8.

Objective textual criticism or lower criticism of the Bible has been of benefit. Among researchers in this field were Rudolf Kittel and his colleagues. They used the valuable Ben Asher Masoretic Hebrew texts to produce the later editions of their *Biblia Hebraica*, the principal text from which the New World Bible Translation Committee rendered the Hebrew Scriptures into English.

Various scholars have also studied extant manuscripts of the Christian Greek Scriptures. During the last century, B. F. Westcott and F. J. Hort of Cambridge University analyzed various Greek Bible manuscripts with extreme care. They labored for twenty-eight years to produce a master Greek text, one that has attained the widest acceptance and has been called "the most important contribution to the scientific criticism of the New Testament text which has yet been made." This highly acclaimed work was the principal text used by the New World Bible Translation Committee in their English rendition of the Greek Scriptures.

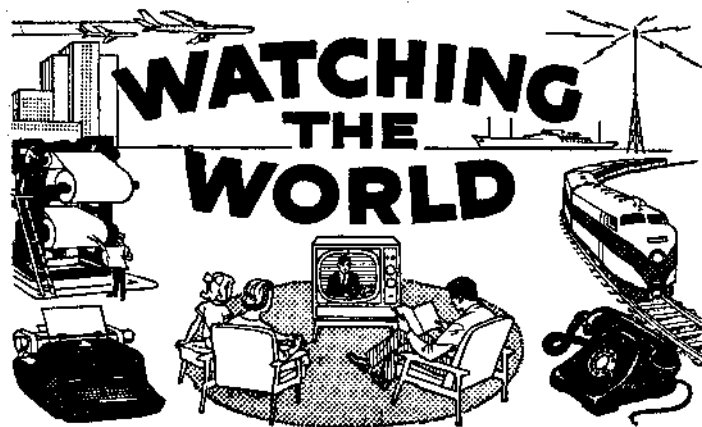
Textual criticism of the Bible has resulted in the discovery of certain scribal elaborations or additions by copyists, as at Mark 16:9-20 and John 7:53-8:11. However, this type of Bible criticism is not to be condemned. It is not resorted to in an effort to assail God's Word or diminish its value. In fact, as a result of conscientious Biblical lower criticism, the textual integrity of both the Hebrew and Greek Scriptures has been unquestionably established. The New World Bible Translation Committee itself weighed and evaluated various ancient Bible texts and versions so as to ascertain the best for purposes of translation. All of this has resulted in dependable translation, the kind

that is trustworthy and that honors the Author of the Bible.—See *The Watchtower*, February 1, 1962, pages 88-92.

Concerning the Hebrew Scriptures it has been stated: "It may be safely said that no other work of antiquity has been so accurately transmitted." (*General Introduction to the Old Testament: The Text*, by W. H. Green, 1899, page 181) What happens when one compares the preservation of the Greek Bible text with that of the writings of most of the classical authors of Greco-Roman times? Scholar Jack Finegan writes of this in his book *Light from the Ancient Past* and says: "The close relationship in time between the oldest New Testament manuscripts and the original texts is also nothing less than amazing. . . . the certainty with which the text of the New Testament is established exceeds that of any other ancient book."—Page 352.

Yes, Jehovah's witnesses are interested in proper Biblical criticism. But they are not doubters of the Bible. They do not question its credibility. As true Christians, they believe that the Bible is historically accurate and that it has come down to us in authentic form. Toward it Jehovah's witnesses take a position similar to that reflected in Jesus Christ's words when he petitioned God in behalf of his followers: "Sanctify them by means of the truth; your word is truth." (John 17:17) Jehovah's witnesses have the same appreciative attitude toward the Word of God as that displayed by the first-century Christians of Thessalonica. To them the apostle Paul wrote: "You received God's word . . . not as the word of men, but, just as it truthfully is, as the word of God." (1 Thess. 2:13) This same apostle also said: "All Scripture is inspired of God and beneficial." (2 Tim. 3:16, 17) In their view of the Holy Scriptures, Jehovah's witnesses agree with the early Christians.

WATCHING THE WORLD



Surveyor I Examines Moon

◆ The United States made its first attempt to land a spacecraft softly on the moon. On May 30 an Atlas-Centaur rocket carried into space the Surveyor I, a buglike vehicle designed to test the lunar surface and return vital information to earth. The craft was launched on a nearly perfect lunar course. It carried a camera that promised to send thousands of pictures of the moon's surface back to earth. One flaw marred the venture. One of two antennae on Surveyor I apparently failed to expand as the craft cleared the earth's atmosphere. On June 1 the Surveyor I spacecraft made a soft landing on the moon. U.S. scientists who developed the Surveyor I and commanded its flight were jubilant. The flight took 63½ hours. It covered 248,000 miles. Its performance had exceeded all expectations.

Children for Sale

◆ Drought and two successive crop failures have affected the lives of some 50 million people in Orissa, India, and neighboring states. United Press International reported on May 4 that parents have been forced by the famine to sell their children "like chattels" or abandon them in jungles. Hindu farmers who normally do not eat meat for

religious reasons are reportedly killing "sacred cows" and eating them. Hungry people are stealing cattle from rich farmers for food. (Eating beef is a sacrilege and sin for Hindus and violators are often excommunicated.) Banka Behar Das, member of Parliament for this region, gave an eyewitness account of the conditions: "I saw a ghastly and heartrending sight," he said. "All around, there were thousands of sullen faces of hungry men with their ribs bulging out, potbellied, emaciated children, rickety women with skeleton babies on their breasts, and dead cattle. For days, they have been living on leaves and bark of trees, grass, roots, wild fruit and even wood dust. Husbands have deserted their wives, wives their husbands, and both have left their children in the woods, rather than see them die before their eyes."

Citizen Brutality

◆ Last year 2,848 persons were arrested in the city of New York for assaulting city policemen, many of whom were seriously injured. Fourteen policemen were shot, 24 were cut or stabbed, 57 bitten by persons, 153 punched, 58 kicked, 71 struck with objects and the remaining number were injured in various other ways. The city police made

203,000 arrests in 1965. Recognizing the tense feeling between the police and the citizen, Commissioner Leary stated: "Each arrest is fraught with sensitive and highly explosive human emotions. . . . It is a tribute to the efficiency and the humanity and the forbearance of our police officers that so few of these encounters erupted into violence. It is a reflection of the professional manner in which the law has been enforced. It is a barometer of the extent to which law enforcement officers respect the constitutional rights of the criminal aggressor, as well as the victim of the crime."

Wrong Blood Kills

◆ On May 9 gynecologist Dr. H. Neifeld told a court in Johannesburg that a woman nursing-home patient had died after being given a blood transfusion intended for another woman. The State charged that the doctor who gave the transfusion was negligent in failing to check the blood incompatibility test and that he continued to administer the blood after being told by a nurse that no blood had been ordered for the patient.

In Kankakee, Illinois, a man and wife filed a suit asking for judgments totaling \$415,000 against St. Mary's Hospital. The suit charges that the hospital was negligent in performing a blood transfusion. The patient, Jack Farrar, claims he has been unable to work since the alleged incident. The complaint states that the hospital failed to ascertain Farrar's blood type properly before giving him a transfusion, and, consequently, he was transfused the wrong type of blood.

Tattoo Ban

◆ On June 2 the Court of Appeals upheld the constitutionality of New York city's Health Code outlawing tattooing. Associate Judge Stanley

Fuld stated that he was in agreement with the prohibition. Then he cited evidence that "strongly supported the conclusion that there was a connection between tattooing and serum hepatitis, that those tattooed, despite all precautions taken by the tattooed, were subjected to a far greater risk of contracting hepatitis than those not tattooed." Why not, then, outlaw blood transfusions on the same premise? A report from Washington, dated April 19, stated that "at least 30,000 persons in the United States got hepatitis from blood transfusions last year, and 3,500 of them died." A survey by the U.S. Public Health Service disclosed that almost one of every 500 who got transfusions last year died afterward as a result of hepatitis. Surely this is far more serious a matter than tattooing has ever created.

Crank Calls

◆ The world seems to be filled with neurotic people who appear to get pleasure out of tormenting others. The way some cranks do this is by harassing and terrorizing persons over the telephone with threatening or indecent remarks, stupid laughter and other annoying things. The New York Telephone Company has set up an Annoyance Call Bureau to shield the victims from such abuse. The bureau, created in the spring, has in the space of a month received more than 1,000 complaints. Last year the Bureau of Policewomen of the Police Department in New York city recorded 1,810 complaints from women who had received obscene calls. The telephone company said it had developed new elaborate techniques for tracing crank calls. Some persons, handling the matter themselves, when receiving an obscene call, simply hold a large, loud toy or police whistle near the telephone's mouth-

piece and blow hard. They report that the undesirable calls soon stop.

The Grab Bag

◆ Where money is involved a good many people find it hard to be honest. Ten thousand dollars fell from an armored truck onto a freeway in the Los Angeles, California, area. More than 400 motorists stopped their cars as the bag containing the cash split open and grabbed as much cash as they could, driving off before the police arrived. Of the \$10,000, only \$1,090 was recovered in this professedly "Christian" nation of churchgoing people.

Earth an Explosive Keg

◆ United States Secretary of Defense Robert S. McNamara, in an address before the American Society of Newspaper Editors in Montreal on May 19, said that the earth has become a most dangerous place to live. "In the last eight years alone there have been no less than 164 internationally significant outbreaks of violence—each of them specifically designed as a serious challenge to the authority, or the very existence, of the government in question. Eighty-two different governments have been directly involved. What is striking is that only 15 of those 164 significant resorts to violence have been military conflicts between two states. And not a single one of the 164 conflicts have been a formally declared war." The secretary's words remind Bible students of Jesus' statement that in the "last days" there would be an "increasing of lawlessness."

Congo Earthquake

◆ An earthquake in the northeastern Congo town of Beni in North Kivu Province near the Uganda border has killed 90 persons, injured 23 and demolished 916 homes. The violent tremor took place on May 18, but because of

poor communications the news of the disaster did not reach Leopoldville until some five days later. Strong tremors also shook parts of Uganda a week earlier, chasing people from their homes in Kampala and Fort Portal. A quake killed more than 100 persons in Uganda in March.

The Beat in Church

◆ The priests, members of the Oratorian Order in Rome, Italy, have enlisted three rock 'n' roll combos of long-haired boys to play Roman Catholic Church music with a beat in an effort to attract teen-agers back to church. An Associated Press Dispatch stated that "the 17 musicians will play at a youth meeting the priests have arranged, and their performance will include their a-Go-Go versions of the Lord's prayer and Hallelujah." It was reported that the noise from electric guitars and singing reached such a pitch during a rehearsal that a window pane broke during the Hallelujah Chorus. The duty of these Italian priests is to instruct Catholic youth, but one cannot help but wonder as to the quality of instruction and the depth of spirituality learned at a religious "a-Go-Go."

Mount Kelud Erupts

◆ Mount Kelud, situated between Blitar and Kediri in East Java, spewed out death and destruction for more than two weeks during May. At least 1,000 persons are reported to have died as a result of the eruptions. During more than two weeks the mountain spewed out 21,000,000 cubic meters of lava. Clouds of superheated steam rushed down the mountainside, killing everything. Tons of ash and stones showered surrounding villages. Inhabitants of one village fled to the cemetery at the approach of the lava. They climbed on the tombstones. But the oncoming lava

poured over them, burying 150 alive. With a roar louder than an express train, the lava swept trees and houses along as it plunged forward. Mount Kelud last erupted in 1951. Villagers say that on former occasions the mountain always gave a warning when it was about to erupt, allowing time to evacuate. But this time there was no warning.

World Arms Cost

◆ The United States Arms Control and Disarmament Agency compiled figures on defense expenditure of the world. The nations of the world spent more than \$130,000,000,000 on defense in 1964, according to the Agency. If this bill were divided among the world population, it would have come to more than \$40 for every man, woman and child. These totals indicate an increase in global defense spending. The United Nations

estimated world defense spending at \$120,000,000,000 in 1962. In 1964 worldwide expenditures on public education and health were \$5,000,000,000 less than the total spent on defense. The United States and the Soviet Union together were said to have accounted for nearly two-thirds of the world's defense expenditures in 1964, or some \$90,000,000,000. All available evidence was said to indicate that the poorer lands are increasing their defense expenditures at a faster rate than the economically developed nations.

Losing Youth

◆ French-Canadian priest Paul Doucet told a Catholic Information Center recently that "there is overwhelming evidence that the younger generation in Quebec—those between the ages of 18 and 35—is more and more estranged from the church." Quebec stu-

dents today are said to address priests more readily as "Mister" instead of "Father," said a Montreal Dominican priest. Large defections from the Roman Catholic Church among students and workers are admittedly taking place.

Smoking and the Heart

◆ The Office of Health Economics in London, England, reported on May 9 that heavy cigarette smoking more than doubles the risk of coronary disease. Heart disease in Britain during 1966 would leave 6,000 new widows below the age of 50 alone. At present there are at least 500,000 widows of all ages in Britain who have lost husbands through heart disease, it was observed. Dr. Cuyler Hammond of the American Cancer Society recently showed that in the United States smoking doubled the heart disease rate among women.

Is there anyone in good spirits?

Let him sing psalms.

Song has always been an expression of joy. What better way is there, then, to express the pleasure of warm and friendly association than to join in singing songs that build up your spirit and lay a foundation for a firmer faith in God? The apostle Paul wrote to the early Christians: "Keep getting filled with spirit, speaking to yourselves with psalms and praises to God and spiritual songs, singing and accompanying yourselves with music in your hearts to Jehovah." (Eph. 5:18, 19) The new songbook of 119 original songs will enable you to enjoy singing at its very best, whether in your own home or in company with others. Send today for your copy of *"Singing and Accompanying Yourself with Music in Your Hearts."* Paper bound, blue-edged. Only 1/6 (for Australia, 20c; for South Africa, 14c).

WATCH TOWER

THE RIDGEWAY

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