

Awake!

***Drug
Abuse
Tightens Its
Global Grip***

OCTOBER 22, 1977



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Today as never before, what goes on in the rest of the world affects each one of us. "Awake!" reports on the world scene. But it does more for you personally.

It probes beneath the surface and points to the real meaning behind current events. And it gives practical suggestions to help you to cope effectively with the mounting problems of our time.

The scope of subjects covered by "Awake!" makes it a magazine for the entire family. Customs and people in many lands, the marvels of creation, religion, practical sciences and points of human interest all are included in its pages.

In keeping its freedom to bring you the truth, this magazine has no commercial advertisers to please. Also, it stays politically neutral and it does not exalt one race above another.

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Heroin Addiction Is Spreading Across Western Europe at a Rate Many Experts Consider Alarming

By ALVIN BRISTER

Europeans in Fix On Heroin Traffic

BY ALVIN BRISTER
Special to The New York Times
ROCHESTER, FEB. 1—Five hours is less than the time it takes to get from Amsterdam to Paris. But for those who have been considering heroin addiction as a possible career, the time seems to be forever.
Their concern is well founded. Last summer, just a connection point, was added to the list of countries where heroin traffic is spreading. From the opium fields of Turkey and罂粟田 of laboratories in Switzerland, heroin has come to Britain, France, Germany, Italy, Portugal and Spain.

But now, according to experts considered several Western Europeans is becoming clear that the market for heroin is expanding. In the Golden Triangle of Burma, Laos and Thailand, production of opium is increasing rapidly. In Afghanistan and Pakistan, an American official says, the amount of heroin available has doubled in just five years.

1,200 Pounds in '76
Heroin seizures, amounted to only 100 pounds in 1972, increased to 1,200 pounds in all of Western Europe in 1976. In France, 40 kilograms (about 88 pounds) by the end of last year. According to Brister, can be expected to double

every year.

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"But there are suddenly statisitics and reports that we never heard of before."

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By ALVIN BRISTER

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Drug Abuse Tightens Its Global Grip

FOR some time, the United States has been labeled as the industrial area with the worst drug problems. No more. "Police now feel Europe is facing a heroin epidemic," reports the Belgian newsmagazine *To the Point International*. —March 21, 1977.

Last year European police seized more illegal heroin than did American crime fighters. Known addicts in the countries of the European Common Market are now said to number 100,000, and 2,000 reportedly paid for their habit with their lives last year.

In Portugal, officials admit that drug abuse is reaching the 'magnitude of a national calamity.' That nation is said to have one of the highest per person narcotics consumption rates in Europe.

"We're fighting a losing battle," says a French drug clinic operator. "Whenever we gain an inch, something happens to throw us back a mile."

Narcotics-related deaths reflect this sudden jump in European drug abuse. For example, such deaths in France rose from 13 in 1973 to 59 in 1976; in Germany, from 104 in 1973 to 156 during just the first half of 1976; and in Italy, from one death in 1973 to 30 in the first six months of 1976.

But Europe is not the only part of the world feeling the tightening grip of drug abuse. The *Far Eastern Economic Review* reports:

"Hard-drug trafficking and addiction in Southeast Asia are at an appalling level. In Hong Kong, according to a reliable

estimate, about one person in forty-three is addicted to opium or heroin. In Thailand, where narcotics were traditionally thought of as a 'European problem,' there is a burgeoning population of heroin addicts believed to number from 300,000 to 600,000. Reports from Singapore and Malaysia are equally alarming."—April 30, 1976.

Despite stiff penalties, known drug addiction in Singapore multiplied eight times and arrests of drug pushers tripled from 1974 to 1975. Japanese drug arrests quadrupled between 1971 and 1975. And in the Melbourne region of Australia, there was a 60-percent increase in marijuana arrests from 1974 to 1975. "It is widely used among all levels of Australian society," observes the *Age of Melbourne*.

Neither has the African continent escaped the grip of drugs. The U.N. Commission on narcotic drugs recently called the drug situation south of the Sahara "grave."

America's drug problem has not gone away, either. A recent Department of Defense study reveals that almost half of all the enlisted men in the armed forces regularly use drugs. This is nearly twice the rate found in a similar study made five years earlier. But the most tragic aspect of the problem is drug use among the young.

Growing Among Youth

A government survey revealed that in 1976 over half of American high-school senior class members had tried marijuana, and almost a third of the class admitted to using the drug currently—one in twelve using it every day. Other countries also reflect the trend to this and other, more damaging drugs.

"You can find heroin in every high school, university and youth center," worries a West German drug counselor. "The situation is catastrophic."

"Youthful addiction is also a mounting problem in Hong Kong," says the *Far Eastern Economic Review*. And an Italian official noted that, in his country, the "victims seem to be getting younger every day."

Because of the huge profits to be made, the drug distribution systems have made narcotics readily available to youths in school. "It is as easy to get drugs in schools as it is to obtain note paper," reports a U.S. congressional committee.

This same government committee also stated that drugged students routinely sleep at their desks without interference from school authorities. Why? "Teachers advised us that they are afraid to take any action relating to drugs," says the report, "because they will not be supported by the school authorities or by the child's parents." Youths who want to learn must continually be surrounded by this disruptive and unwholesome atmosphere.

Authorities Helpless

When the mayor of New York city and other city officials hid in a camouflaged police van to observe narcotics transactions firsthand, the mayor "was kind of shaken by what he saw," said his press secretary. "He was amazed how open it was and how impotent the present system is to deal with the problem."

To the Point International explains: "The problem can only worsen, because the demand is ever present and the sources are the most ruthless farmers, processors and marketers in the world."

One U.S. government agency recently proposed calling in the military to handle the "war" on drugs. The Senate Permanent Investigations Subcommittee said that the armed forces alone possess "the air and land vehicles needed to pursue and overtake the drug traffickers."

But, really, more enforcement is not the answer. As the head of the French nar-

coties squad, Francois Le Mouel, observes, drug abuse "seems to be a general civilization problem." The life-style, philosophy and goals of today's "civilization" have left an emptiness that many are filling with drugs.

"And why not?" they feel. "Even the danger of taking drugs has been overblown by the authorities. Some drugs are as harmless as having a drink." Is this true? Note the answer in the following article.



...But

Are All Drugs Dangerous?

"I'M A 17-year-old high school senior and have been smoking pot for about a year," wrote a young man to a medical advice columnist of the New York Post. "Many of my friends are into drugs," he continued, "and they say you just have to stay off the hard stuff—pot is okay. What do you think?"

The view that marijuana is harmless is increasingly common. One reason for this is the abundance of conflicting testimony from the scientific community. It seems that for every study that accuses the drug, another comes along that excuses it.

Proponents even point to certain useful medical properties. It is said to bring some

relief from the symptoms of glaucoma and asthma, as well as easing the nausea and vomiting associated with cancer chemotherapy. Research into its effects on epilepsy, sleep and appetite is also under way.

Armed with such favorable comment, many believe that marijuana is no more dangerous than alcohol or tobacco, and possibly less so. They feel that governments that ban the drug are cheating people of its pleasures. Hence, in some countries, there is strong pressure to "de-criminalize" marijuana.

It is not the purpose of *Awake!* to comment on whether certain drugs should be legalized or not. History indicates that many people are going to obtain what they want regardless of its legality. Many individuals just do not care about the medical consequences of their actions, as is illustrated by the huge number of tobacco users in spite of overwhelming testimony about the dangers.

But those who do care about medical and/or moral issues should have sufficient information upon which to base an informed decision. With this purpose, the following is presented.

Is Marijuana Wrongly Accused?

The contradictory findings on the effects of marijuana recently prompted a reporter for the Milwaukee *Journal* to ask one scientist: "Either marijuana is harmful or it is not. Why can't you experts get together on the controversy?"

Hardin Jones, professor of medical physics at the University of California, responded:

"We get different answers because we ask different questions. For example, if you only look at the beginning of marijuana use, or at occasional use, you see very little damage. But I am trained to look for long term effects. And I found

evidence of this sort by the bucketloads," —May 29, 1977, p. 28.

One factor behind such "long term effects" is marijuana's active ingredient, THC (tetrahydrocannabinol), that accumulates in fatty tissues of the body such as the neurons of the brain and the germ cells of the testes and ovaries. This contrasts with alcohol, which is water soluble and completely metabolized by the body into water and carbon dioxide within a few hours. THC can still be detected weeks after ingestion.

Though there is disagreement as to just how harmful this THC accumulation is, some widely reported effects on the mind are worth considering. Dr. Jones asserts that, for one thing, "parents and teachers are certainly aware of the major personality changes that occur in young users." He adds: "I never see a sharp sparkle in their face and eyes."

And Dr. John A. S. Hall, chairman of the Department of Medicine at Kingston Hospital, Jamaica, agrees that "personality changes among *ganja* [marijuana] smokers . . . are a matter of common observation in Jamaica." Apathy, retreat from reality and incapability or unwillingness for sustained concentration are also among the symptoms he cites.

One strong evidence of marijuana's effect on the mind is the fact that, after heroin, the drug is reported to be the second leading cause of admissions to federally funded U.S. mental hospitals. Similarly, "during a visit to a psychiatric hospital in Salé, Morocco," writes Dr. Pierre C. Haber in a letter to *New York* magazine, "I saw a whole ward of patients hospitalized as a result of prolonged cannabis-smoking."

If the above charges are true, we might reasonably expect to see mental damage reflected in social relations with others. Is there evidence of this?

Effects on Human Relations

Even though a recent three-year study for the U.S. National Institute on Drug Abuse minimized the physical damage from marijuana, it found "significant differences in the family structure of users compared to nonusers," according to *American Medical News*. The study stated: "Heavy marihuana smoking in our study correlated with a disruptive home life."

An extreme example of such family disruption occurred recently in Texas, where a father went on trial for killing his twenty-year-old son. Recounting the circumstances that led him to kill the boy, the father said: "He was my pride and joy, and we did all sorts of things together—until all this happened three years ago."

The son began using Valium (a tranquilizer) and marijuana. "He changed, he changed completely," agonized the father. "I thought we'd get him straight, and then he'd start again. He'd get a job, then quit and spend the money on this stuff. He kept maintaining he was all right."

Of course, marijuana's damaging effects on the family are seldom so extreme, but is jeopardizing relationships with those we are closest to worth the temporary pleasure?

Other relationships may also be affected. A high-school teacher wrote to *Psychology Today* magazine, commending one of its articles for "demythologizing the effects of this drug [marijuana]." The article had been generally favorable to marijuana from a medical standpoint. Yet this teacher added:

"I am becoming alarmed at the presence in my classroom of 'high' students. I would be the last to say categorically that any of their intellectual skills have been reduced as a result of their drug use but I have noticed that in a group setting, the high person appears to have difficulty communicating even simple ideas verbally."

"Heavy marihuana smoking in our study correlated with a disruptive home life."—National Institute on Drug Abuse study

to the straight person, and vice versa....

This 'harmless' intoxication has somehow built a wall."—March 1977, p. 8.

Clearly, not only what the drug does to users while they are under its influence, but the very fact that they often use it at inopportune times tells us something about it. Thus the desire for marijuana may ruin one's good judgment. Rather than restricting it to personal "recreation," it often interferes with necessary activities of life. Users tend to center their lives around their own pleasure, frequently showing a general disregard for others. Their inhibited judgment may even become a potential danger to innocent people. How so?

Hazard to Others

"The greatest concern I have about this drug," says Dr. Robert L. DuPont, director of the National Institute on Drug Abuse, "is its potential effect on automobile accidents in this country."

The *Medical Letter* provides some details of this hazard, reporting that

"forty-two per cent of those on low doses (4.90 mg THC per cigarette) and 63 per cent of those on high doses (8.40 mg THC per cigarette) showed a decline in their driving ability after smoking one marijuana cigarette. Unusual behavior included 'the missing of traffic lights or stop signs; unawareness or inappropriate awareness of pedestrians or stationary vehicles.'"

Do you think that people whose judgment is so poor as to bring their "high" into the classroom will show restraint when it comes to driving an automobile? Hence, use of this drug is hardly just a

"personal" matter. Family, schoolmates, fellow workers and even total strangers may be affected and possibly hurt.

And though the current scientific controversy tends to becloud marijuana's medical dangers, this does not mean that certain unquestioned dangers do not exist.

Proved Medical Hazards

Aside from still controversial hazards such as brain damage, inhibition of cell growth, reduction in sperm production, chromosome damage and others, certain medical dangers remain that there is little disagreement on.

One is lung damage. "Marijuana is far more irritating to the respiratory tract than tobacco," declares Dr. Nicholas A. Pace, president of the New York City Affiliate of the National Council on Alcoholism. "It takes 20 years of heavy tobacco smoking to produce the same type of severe sinusitis, pharyngitis, bronchitis and emphysema that one year of daily marijuana smoking produces."

Additionally, the *Medical Letter* reports research showing that "smoke from marijuana cigarettes, like smoke from tobacco cigarettes, accelerates malignant transformation of lung cells in tissue culture." Medical evidence of this cancer hazard is also cited by Dr. Hardin Jones: "Bronchial biopsies taken from 30 American soldiers in Germany who smoked 25 to 30 grams of hashish (from the same plant but richer in THC than marijuana) a

"It takes 20 years of heavy tobacco smoking to produce the same type of severe sinusitis, pharyngitis, bronchitis and emphysema that one year of daily marijuana smoking produces."—Dr. Nicholas A. Pace

month for a few months showed that 24 of them had precancerous lesions."

Hence, all dangers to one's health from marijuana use cannot just be dismissed as still controversial.

What About Cocaine?

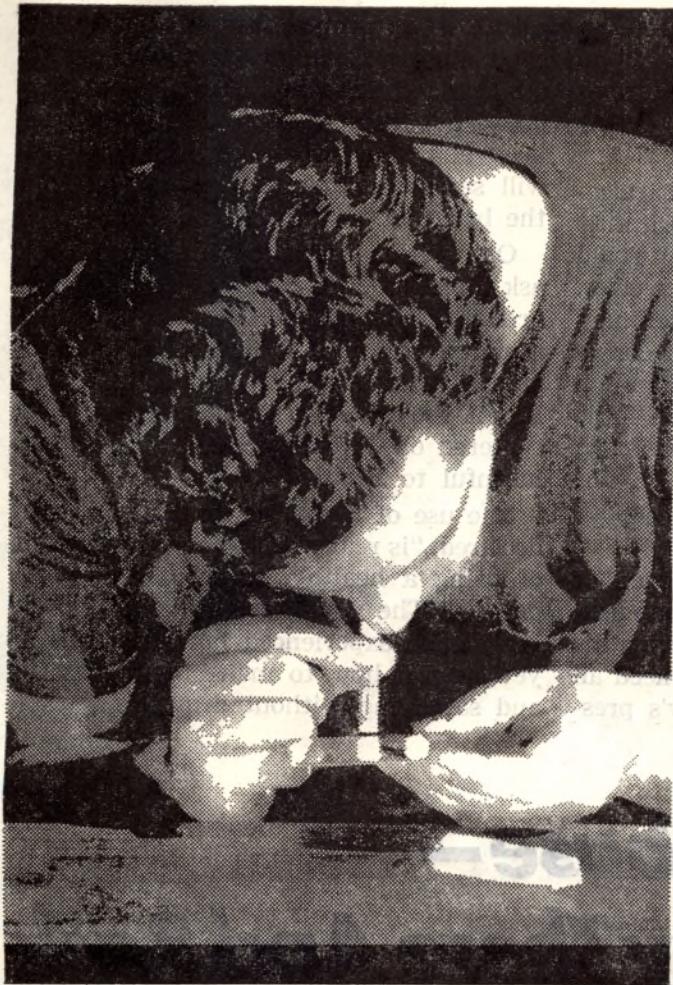
Another drug that many have believed to be relatively "safe" is cocaine. It has become a toy of the rich and famous and others who can afford it or steal enough money to get it. Less than a century ago, cocaine was mixed in a wine product that was praised by four European kings, U.S. and French presidents, the grand rabbi of France and Popes Pius X and Leo XIII, who presented a gold medal to the maker. Even the soft drink Coca-Cola was laced with cocaine for its first seventeen years, until caffeine replaced the stimulant around 1903.

Describing the feeling that cocaine gives, one writer said: "It hits you right in the brain, activating connections of pure pleasure . . . The C-charged brain is a berserk pinball machine, flashing blue and pink lights in electric orgasm." Another said: "Under cocaine I feel like a king."

But what is the price paid for this brief flight from reality? Harvard researcher Dr. Andrew Weil explains that "cocaine does not miraculously bestow energy on the body; it merely releases energy already stored chemically in certain parts of the nervous system. Consequently, when the immediate effect of the drug wears off, one feels 'down'—less energetic than normal."

"I plunge from the heights of heaven to the depths of the abyss," says a user. "I'm overly sensitive to criticism," says another. "You don't want to be around me when I'm coked out."

A recent four-year study of cocaine by the National Institute on Drug Abuse says that, far from being harmless recreation, cocaine is a "serious drug of abuse" with



A man snorting "coke" (cocaine)

side effects, including anxiety, insomnia, paranoid delusions and even death.

Is It Worth It?

Some may argue that cocaine, like marijuana, is *also used* for medical purposes. Hence, they believe, it must be safe. But just because a drug is used successfully in treating sick people does not mean that it is not dangerous. "Even the most beneficial drugs notoriously possess adverse effects," writes a professor of pharmacology. "The best one can say of any drug is that its beneficial effects outweigh its harmful ones—for most patients, most of the time."

So, in an effort to cure a greater evil, taking any drug is a calculated risk. A sick person or his doctor must decide whether to take that risk. But what reason is there to take a drug that causes harm when there is no medical reason whatever for doing so? Should a person poison his body merely for momentary pleasure? "Let us cleanse ourselves of every defilement of flesh and spirit," is the common-sense answer that is found in the Bible.—2 Cor. 7:1.

But some may argue that using marijuana or cocaine is no different than using alcoholic beverages, which are considered acceptable in most societies. "If alcohol is okay, why not pot and coke?" they reason.

First, it might be noted that most people use alcoholic beverages as a form of liquid refreshment and to relax, not to get drunk. As noted earlier, the body treats alcohol similarly to the way it does food, assimilating it relatively quickly. However, overindulgence in alcohol to the point where thinking becomes distorted is another matter. It raises the real issue: Can any drug, or can alcohol, when used primarily to alter our mind, be considered morally right as a form of recreation?

On this point it is of interest that, while approving alcoholic wine as a beverage, the Bible does not approve of it as a mind distorter: 'Drunkards will not inherit God's kingdom.'—1 Cor. 6:9, 10.

The principle is similar in the case of marijuana and/or cocaine. They serve no purpose as food or drink. They are used primarily to alter one's mental state. This is harmful in several ways.

Getting drunk on any drug, or on alcohol, leaves people open to actions that may differ considerably from what they would do if they had full control of themselves. For example, such loss of control may lead to promiscuous sex with its consequences in disease, illegitimacy and broken homes. To avoid such problems, the Bible urges that "each one of you must learn to gain mastery over his body, . . . not giving way to lust like the pagans."

—1 Thess. 4:3-5, *New English Bible*.

But a person under the influence of drugs such as marijuana and cocaine usually does not have full "mastery over his body." The drug does. Yet people need all their faculties to deal with today's pres-

sures and to protect themselves from deceptive attractions that can lead to disease and heartache. The Bible wisely points out that "thinking ability itself will keep guard over you, discernment itself will safeguard you, to deliver you from the bad way."—Prov. 2:11-13.

One who is tempted by drugs could ask himself: Why do I seek the unreality brought on by drugs? Does a healthy, balanced person need to find his pleasure by altering the normal function of his brain? Is not the whole drug experience a self-centered one, weakening to integrity and harmful to health?

The use of drugs, as Dr. Hardin Jones declared, "is really destroying the pleasure of being a healthy, vigorous and active person." The young couple in the following article experienced how true this is, yet learned how to make their lives full and satisfying without drugs.

Drug Abuse— Our Journey There And Back

IF YOU met us we would probably appear much like any other young couple you might encounter. The difference is that Nancy and I have been drug addicts. Perhaps our story can help others who are enslaved to drugs, but who want to free themselves and live useful lives. It may also help the parents of young people who are flirting with dope.

When I think back to when we were teen-agers on drugs, I am appalled at some of the lurid things that infected our existence, for that is what it was, merely an existence.

Neither Nancy nor I suffered as so-called "disadvantaged" children. We lived in "respectable" suburban neighborhoods, and came from what one would probably characterize as typical working-class and upper-middle-class American families. Our parents probably felt that they were raising their children in "safe" areas. But let me make a very important point.

There is no such thing as a geographically safe area where one's children can be protected from exposure to drugs. Too often parents are inclined to soothe their minds with the deception that the drug

scene is associated with living conditions of people who are underprivileged. This simply is not the case. Drugs of all kinds have permeated virtually every community. If a person wants drugs, he can find them. It is a matter of motivation, not location.

I, for example, was raised by devoted, hardworking parents. I had a happy childhood and led a normal, active life. Taught the value of work, I carried my load of responsibility in the family. In school I was an A-student, interested in science and mathematics. With all my heart I wanted to be an airplane pilot or an astronaut. John Glenn was my boyhood "hero."

But the fact of the matter is that, as I entered my teen years, I became bored with life. I wanted "excitement," and I became involved in petty crimes—"just for the fun of it." About this time, in 1964, my family moved to New York to an affluent suburban town.

On the drive to our new home, I vividly recall resolving to change my life-style, not to stay with the "squares," as I labeled the youngsters who behaved themselves. I began searching out associates of like mind. We competed to take on all dares. I wanted to be the "big shot" in our crowd. So the taking of drugs was inevitable. My parents were totally unaware of this change in my thinking and behavior.

Getting started was so simple: An "innocent" puff on a marijuana cigarette; then another and another. In short order I moved on to LSD, heroin, barbiturates, sniffing cleaning fluid—I tried everything!

What Drugs Can Do
One day a friend and I got hold of asthma powders. We tried eating the stuff, drinking it, smoking it, sniffing it. I finally went into a drugged stupor. Somehow I made my way home. It was dinner-

"My mother found me in my sister's closet, naked in the dark, playing with dolls."

time, I managed to get to the table, but I was suffering the sensation that the table and the food were falling over onto the floor. Nothing remained still.

I stumbled from the table and fumbled my way upstairs. That is the last I remember. My mother found me in my sister's closet, naked in the dark, playing with dolls. When she switched on the light, I jumped up, ran down the hall and fell down the stairway. My father forcibly restrained me until an ambulance arrived. The doctor got me in time, administered an antidote, and my life, such as it was, was saved.

I felt no regrets, not even after the close calls, and there were to be many. Still, in the back of my mind, I had a certain sense of guilt.

Getting to Know Nancy

Nancy, who later became my wife, comes from an upper-middle-class family. She was well provided for by her parents. She was taught all the graces and made to feel that she was special. Her predictable expectations were to enjoy her school years and then marry well. This is to say, marry a young man from her social class who would provide for her in the lifestyle to which she was accustomed.

Nancy's family moved to our town about the time that she entered high school. One day I asked her to go out with me. She refused, for I was notorious among the young people as a drug user. But, as the popularity of dope widened, so did the number of young people in our town who used it, including Nancy.

She also began on marijuana. Was it that she wanted to escape, or craved excitement? No, she was merely curious. It was not long before we were dating steadily and together indulging our mutual craving for drugs. Two normal children from "good" families and "good" neighborhoods had become slaves to drugs, and participants in deeds associated with drug use.

Deception and Evasion

Neither Nancy nor I ever discussed our drug habits with our parents. In fact, we went to considerable lengths to deceive them. Perhaps they suspected, but if they did it was never mentioned. If they knew, they probably wanted to deceive themselves and believe otherwise. I am certain my mother still saw me as "Johnny all-American boy."

One of our favorite deceptions after using drugs, and just before returning home, was to drink a can of beer. I would arrive home barely able to make it up the stairs, and my parents would say: "Oh, he has just had a little too much to drink!" So much did they not want to admit that their son possibly used drugs that they preferred to allow for addiction to another equally harmful, but more socially acceptable practice—excessive use of alcohol.

In our town the police suspected that I was on drugs, but they were never able to catch me with any on my person. Time after time I would be stopped and searched. When I was seventeen I was taken to the police barracks, tied up and hung upside down like a piece of meat. The troopers proceeded to kick and knee me in the stomach and about the body. They tried to frighten me, break me. I can understand their disgust. I represented what was evil in their town. But their threats accomplished nothing with me.

Seeking a Change

As Nancy and I advanced through our teen years, we began to think more of the years to follow and the effect that continued use of drugs would have on us. We were becoming apprehensive and fearful of our shared habit because there was no denying its damaging effects.

After using drugs for some time, it becomes difficult to relate to others, to express oneself or to think clearly. One feels isolated and unable to communicate, particularly with nonusers. Moods of deep depression, withdrawal, and, even aggression, emerge. During our periods of relative clear-headedness, which were becoming less frequent with each passing month, we realized that we had to stop. We had to get out of the drug environment if we were to survive. But how?

I decided to make a radical change in my life. Perhaps I could then help Nancy. I enlisted in the United States Marines. But even there I couldn't escape drugs. Within weeks after arriving at basic training camp I was able to identify the drug users, and soon was continuing my habit. There was no running away!

"One of our favorite deceptions after using drugs, and just before returning home, was to drink a can of beer."

Finally, on a military leave I proposed marriage to Nancy. We loved each other; perhaps we could do better together. She accepted. We were married on my following leave and Nancy came to make a home for us near the Marine base. We also continued on drugs.

More and more we talked about world conditions, the hopelessness of everything, and what we should do about our particu-

lar problem. We knew that to have any kind of future we had to shake the drug habit. But we also sensed that we just did not have the strength. Anyone on drugs who says he can quit anytime he feels like it is in for a rude awakening on the day he decides to try.

In retrospect, however, I realize that something very important *had* happened to us. Our motivation had changed. We no longer craved excitement, the satisfaction of our curiosity, or association with and acceptance by the old crowd. But still, we were scared, hopeless, desperate, searching for a way out.

Finding Needed Strength

Nancy took a job as waitress at a local restaurant. This was the forerunner of what was to be the greatest thing that ever happened to us. One day in conversation with another waitress the subject was, of all things, haunted houses. The girl said that she had recently learned some very interesting information on spirits, and asked if Nancy would like someone to come to our mobile home and discuss the subject. Nancy said, Yes. The young couple who called a few days later were Jehovah's Witnesses.

Our first look into the Bible was with the aid of the book *The Truth That Leads to Eternal Life*. We discussed the chapter "Are There Wicked Spirits?" The discussion was an eye-opener in more ways than one. Not only were our questions answered about wicked spirits, but we received a faith-building look into what the Bible has to say about our times and the future. Frankly, we were both impressed and not a little breathless to have discovered so much in the Bible in just one evening. We gratefully accepted the Witnesses' invitation for a weekly free home Bible study. Suddenly the future had a glimmer of hope.

"The subject was, of all things,
haunted houses."

Nancy and I were ready for the Bible truths that we learned in the following weeks. It all made so much sense. We could finally see a sure solution to earth's ills and a valid, attainable way out of our own personal disaster—drug abuse. During the ensuing weeks of study we learned why we should honor Jehovah and respect his principles for life. We came to understand the meaning of true Christian love, and to realize that such love indeed exists among Jehovah's Christian witnesses. We learned of God's established kingdom under Christ and the blessings in store for humankind. And best of all, we learned that these blessings would be realized very soon, in our lifetime. Every day we grew stronger in faith. And every day we wanted to share what we were learning with more and more people.

My active duty in the Marines ended, and Nancy and I said good-bye to those wonderful people who had helped us so much with Bible truths. We returned to our hometown, but not to our old associations. Instead, we filled our days with continued Bible study and association with Jehovah's Witnesses.

While neither of us can say it was easy, we were able to reach that great day when drugs had no further place in our lives. Something else of far, far greater value and power now filled our lives—the truth of God's Word and the desire to serve Jehovah forever. Happily, together we reached the conclusion that we wanted to dedicate our renewed lives to Jehovah and be baptized. We were, on December 2, 1972.

Today, our drug ordeal is behind us. I have the privilege of being a ministerial servant in our local congregation of Jehovah's Witnesses, and Nancy is very active in the witnessing activity. And we are both busy raising our lovely, new little daughter, Rebekah. We are happier now

than we ever thought possible. We have found useful drug-free lives in the only lasting and meaningful work in the earth today: Helping others to learn of Jehovah's eternal purpose and how to come under His protection and blessing.—Contributed.



Gone, Ride In My Balloon!

MANY of us have enjoyed the experience of flying in an airplane. Perhaps it was a small single-engine plane flying at a hundred miles (160 kilometers) per hour. Or, maybe it was a commercial aircraft cruising at some 600 miles per hour (960 kilometers per hour). The views are always breathtaking. But how many of us have flown in a craft that travels only five to six m.p.h. (8 to 9 k.p.h.), makes

no noise and can fly low enough to let us pick an apple off a tree?

Impossible? Why not see for yourself? Come along with me for a ride in my beautiful balloon.

First, a Word About Balloons

Two basic types of balloon are in use today. To lift it skyward, the gas balloon—much like a child's helium balloon at a circus—relies on a gas that is lighter than air. It may be hydrogen gas or helium.

Today we'll be riding in the other type, a hot-air balloon. To create lift, we simply heat the air inside it. One look at sparks rising from a campfire shows that hot air rises.

Admittedly, there are dangers associated with ballooning. Not long ago, in the state of Georgia, U.S.A., a hot-air balloonist was killed when his craft struck a power line. Both the man and his passenger were

thrown over thirty feet (9 meters) to the ground. The passenger escaped death in the accident, but did suffer rib fractures. This is not mentioned to scare you. However, it does emphasize the importance of good judgment and alertness.

Let's Go for a Ride!

We'll begin our inflation of the balloon at 5:30 a.m. The balloonist has one chief enemy—strong winds. So, the morning, usually the calmest part of the day, is when we go flying.

Hop into your car and follow me, not to the airport, but to a small farm just outside the town. When not inflated, the entire balloon can fit into a small trailer that is towed behind my car. And any area the size of a baseball diamond infield becomes our own private airport.

Give me a hand pulling the basket and balloon from the trailer, and we'll spread it out on the ground to prepare for inflation. As we start to stretch out the balloon, or envelope, a person begins to appreciate its enormous size. Why, here we have over a thousand yards (900 meters) of light-weight nylon and almost four miles (6 kilometers) of thread! When finally inflated, the balloon is over eighty feet high and fifty feet wide (24 by 15 meters)!

As we fill the envelope with cold air, using a fan, the balloon starts to "breathe," or swell, showing its many striking colors. Soon we begin to heat the air, and the envelope comes to "life." Now it is directly over our heads as we stand in the basket, or gondola, which is suspended from the balloon by cables.

You begin to ask, 'When will we take off?' But you are only in the middle of your question when you see the earth 'fall away.' Unlike sensations in other aircraft, there is no feeling of motion or vi-

bration in the balloon. Hence, it is the earth, rather than the balloon, that appears to move.

As we look down on the trees and fields, words fail to describe the experience. Since we can't steer the balloon, where the wind goes, we go. Flying is most enjoyable at low altitudes of around 500 feet (150 meters). From that height, we hear dogs barking and children shouting, laughing and calling to us—even asking for a ride. As we float on we pass over a hill and observe a family of deer bounding through the forest.

We Descend

Time passes all too quickly! Why, before we realize it, we've been flying for a couple of hours! Our propane fuel, used to heat the air inside the balloon, is almost gone. So we begin to descend and search for a large field. Once on the ground, I pull a long cord attached to the top of the envelope. This opens the top, allowing all the hot air to escape. It took us about a half hour to inflate the balloon. But only twelve seconds are required to get it flat on the ground.

Our flight is over, but the memories linger on. Floating like a butterfly, skimming over treetops—these experiences we'll not soon forget. We've had a memorable ride in my beautiful balloon.—Contributed.

IN COMING ISSUES

- ***Malnutrition
—the Creeping Sickness.***
- ***Through China to Europe
—By Train.***
- ***What People Are Asking
About Jehovah's Witnesses.***

Lightning-



awesome
force
in
the
sky!

CONSIDER, if you will, one of the most awesome displays of unbridled power in the world—the thunderbolt! Most people, at one time or another, have experienced an electrical storm, with all its frightening aspects: torrents of rain, blinding flashes of light, crashing thunder and that anxious anticipation of the next strike.

Would you like to learn more about what causes this mysterious electrical phenomenon in the sky? What goes on during a thunderstorm that generates such terrific awe-inspiring forces? Since lightning is an electrical manifestation in the atmosphere, we need to know something about the electrical properties of air to understand where lightning originates.

An Electric Atmosphere

We are not usually aware of it, but the atmosphere in which we live is highly charged electrically. The electric potential of the atmosphere is indeed astonishingly great. In clear weather, at the surface of the ground the potential goes up, on the average, about 150 volts per meter (45 volts per foot). The air is positive with respect to the ground, and the greater the altitude, the greater the voltage.

This means that if you are standing in the open, away from buildings and trees,

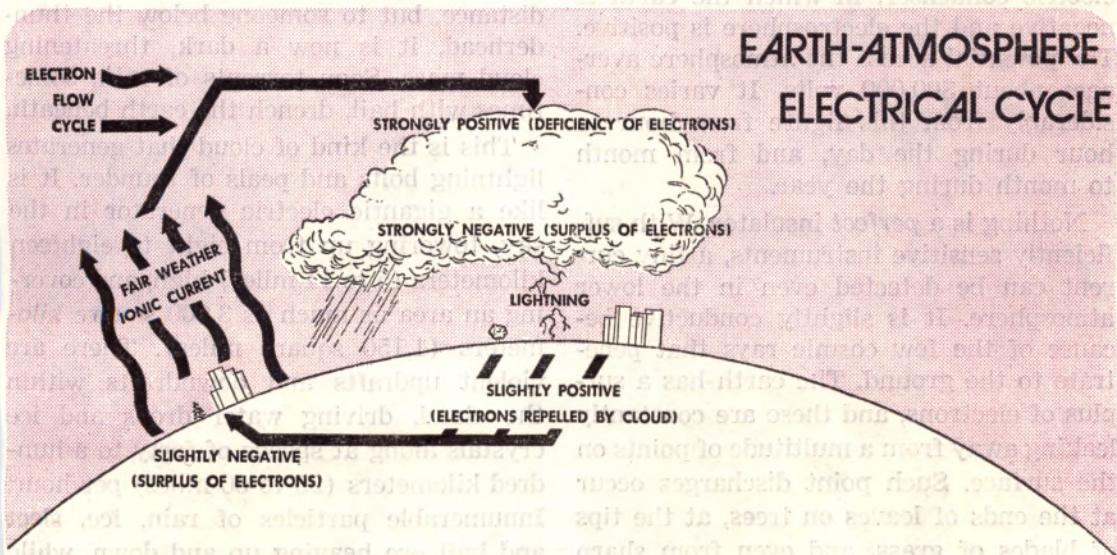
the air at your head level may be 250 volts above that at the ground level. Why, then, do we not feel the effects of this voltage? A person could be electrocuted at a voltage this high, with sufficient current, but we do not feel even a tiny spark. The reason is that air is such a good insulator. Our skin is a comparatively good conductor of electricity, and it maintains our body at an even potential. Only with very sensitive instruments, carefully insulated and shielded from other things that might carry an electrostatic charge, can the atmospheric potential be measured.

If the potential continues to rise at this rate, up only a hundred meters (328 feet), it would be 15,000 volts. There is, however, a limit to the potential set by the circumstance that at high altitudes, above the stratosphere, air becomes a conductor. What causes this difference—that the same air that is such a good insulator at the ground becomes a good conductor high in the sky? The answer lies in the phenomenon of ionization.

Air molecules, either of nitrogen or of oxygen, ordinarily are neutral. This means that the positive charge on each atomic nucleus is exactly balanced by the negative charges of the electrons around the nucleus. But if one of the electrons is removed from its orbit, it leaves the molecule with a positive charge. Then we say the molecule is ionized. Or, for short, it is an ion.

This action of ionization may result from various causes, but in the clear, lower atmosphere the chief agent is the cosmic rays that bombard us from outer space. High-energy particles strike the air molecules with such force that electrons are knocked loose, leaving positive ions. The free electrons may attach themselves to other molecules, forming negative ions. At levels as low as fifty kilometers (30 miles), enough ions are produced to make the air a good conductor.

We call this conducting layer of air the electrosphere. This has sometimes been included in the ionosphere, but this latter



EARTH-ATMOSPHERE ELECTRICAL CYCLE

name is properly applied to the higher layers, above a hundred kilometers (60 miles), which reflect radio waves.

Now, the ground is also a good conductor. In this case, the current is carried by ions in solution in groundwater. Any mineral in solution in water is in the form of ions. Thus, common salt gives positive sodium ions and negative chloride ions. Gypsum forms ions of calcium and sulfate. All groundwater contains more or less dissolved mineral, and even fairly dry earth still has some moisture. So even though a small clump of earth might not carry much current, the earth's crust is so vast that, all together, it is an excellent conductor.

All parts of a good conductor must be electrostatically at the same potential. If something happens to raise the potential at one point, current will flow from there to parts of lower potential until it is equalized. This is true of the earth. It is also true of the electrosphere. But the lower atmosphere is an insulator that separates the two. This makes it possible to maintain the great potential difference between them. In fact, this system forms a giant electric condenser, in which the earth is negative and the electrosphere is positive. The potential across the atmosphere averages about 300,000 volts. It varies considerably from this figure from hour to hour during the day, and from month to month during the year.

Nothing is a *perfect* insulator. With sufficiently sensitive instruments, a tiny current can be detected even in the lower atmosphere. It is slightly conductive because of the few cosmic rays that penetrate to the ground. The earth has a surplus of electrons, and these are constantly leaking away from a multitude of points on the surface. Such point discharges occur at the ends of leaves on trees, at the tips of blades of grass, and even from sharp

corners on grains of sand. Man-made structures, which stand higher in the air, compress the electric field around their peaks and roof corners, and the discharge of electrons is concentrated at such points. Earth wide, these tiny discharges add up to enough total current that they could completely discharge the earth to the electrosphere in less than an hour. There must be, then, some charging mechanism to maintain the surplus electrons on the earth. And this is where lightning comes into the story.

The Thunderstorm as a Generator

We see many types of clouds in the sky. Most of them are more or less flat and horizontal. But those that most excite our admiration are the beautiful white cumulus clouds, billowing up high into the blue sky like giant cauliflowers. Under the right weather conditions, a large cumulus cloud keeps on growing, rising thousands of meters toward the stratosphere at the same time that it broadens its base. Thus it becomes a cumulonimbus, or thunderhead. When fully developed, its top is blown out into a plume forming the familiar anvil head. It is still beautiful at a distance, but to someone below the thunderhead, it is now a dark, threatening cloud mass. Soon torrents of rain, sometimes with hail, drench the earth beneath.

This is the kind of cloud that generates lightning bolts and peals of thunder. It is like a gigantic electric generator in the sky, towering up from eight to eighteen kilometers (5 to 11 miles) high, and covering an area as much as 3,000 square kilometers (1,150 square miles). There are violent updrafts and downdrafts within the cloud, driving water drops and ice crystals along at speeds of forty to a hundred kilometers (25 to 60 miles) per hour. Innumerable particles of rain, ice, sleet and hail are heaving up and down, while

the cloud twists and turns, billows and swells.

Of course, gravity keeps tugging at the water and the ice, and somehow, in the friction so generated, electrons and ions are torn apart at the interfaces between air, water and ice. The charges are separated by the rushing winds. These carry positive charges to the top of the cloud while raindrops with negative charges slip through to the bottom. The potential difference between top and bottom keeps increasing as the cloud matures. Finally it is "bursting at the seams" with a tremendous excess of charge. Madly the cloud seeks some way to get rid of the hundreds of millions of volts it has churned up within itself. The insulating quality of the air can withstand only so much electrical pressure. It finally breaks, and a blinding flash of lightning dramatically relieves the stress.

At any given time, it is estimated that there are around 3,000 thunderstorms in progress all over the earth. Most of these take place over the land.

Much of the lightning occurs within the cloud itself, but the negative charge built up at the bottom of the cloud so overwhelms the normal potential of the earth that lightning flashes also to the ground, carrying electrons to the earth. When the cloud dissipates, the positive charge in its top finds its way into the electrosphere. Then, in fair weather, positive ions leak through the atmosphere to the earth to neutralize its negative charge, and negative ions rise into the electrosphere to neutralize it. So the cycle is completed.

How a Lightning Bolt Forms

It is difficult to study lightning within the cloud; it is not a very comfortable environment for the scientist and his delicate instruments. But lightning to the ground can be seen and photographed

with high-speed cameras, and from this scientists have learned much about the progressive build-up of a lightning flash. Here is the picture that emerges.

From laboratory studies of electrical breakdown of air, it is known that a lightning flash begins when the electric field reaches a strength of about three million volts per meter (75,000 volts per inch). What happens is that the few electrons that are always being freed by cosmic rays are pushed hard enough at this voltage that they knock other electrons out of the neutral molecules that they strike. These, in turn, are accelerated, collide with new molecules, and ionize them. Thus a veritable avalanche of electrons builds up, moving away from the negative charge in the cloud and leaving a trail of positive ions behind. This weakens the resistance of the air and pierces a path for the developing stroke of lightning through the insulating blanket.

Cameras designed to stop the action in times measured in millionths of a second (microseconds) show that this is a step-wise action. A "stepped leader" breaks out of the cloud at a point where the air is momentarily weaker in resistance, and the electron avalanche advances some fifty meters (160 feet). Then it "runs out of breath," so to speak, and pauses momentarily while the potential builds up at its tip. After some fifty microseconds, it again breaks out, perhaps in a different direction, according to the local resistance of the ionized air. Thus, step by step, the successive leaders open a path of strongly ionized air, one to ten meters (3 to 30 feet) wide, toward the earth.

The air being more ionized in some places than in others, the surging path of the leader twists and turns to take advantage of every favorable variation. That is how lightning gets the familiar forked appearance, as it shoots out in one direc-

tion or another, exploring various branches, always seeking the easiest path to the earth. When it comes closer than fifty meters (160 feet) to its goal, a streamer reaches up from a favorable point on the ground to meet it. Now the circuit is complete! The cloud has a pipeline through which to unload its unbearable burden of surplus electrons.

First, those electrons in the channel nearest the ground surge through, followed immediately by those pressing above. So the return stroke, now brilliantly glowing, reaches up toward the cloud with a speed approaching that of light itself. Whereas it might have taken the leaders 20,000 microseconds to reach the ground, the return stroke makes the trip in a mere seventy microseconds. Now for perhaps forty microseconds, the cloud discharges a current of 10,000 to 20,000 amperes or more. For this brief moment it generates a power of thousands of millions of kilowatts—more power than all the electric power plants in the earth combined. Truly, it is an awesome display of power!

The stroke quickly dies away, but that is rarely the end of the action. The path of the lightning bolt through the air remains, still intensely ionized. Other parts of the cloud that are still highly charged flash across to the region that has discharged, and this continues down the channel still open to the earth. Thus there are usually three or four successive strokes, repeated so fast that they look like a single flash. Sometimes it takes more than a dozen strokes to drain the cloud of its charge.

Now, in only a fifth of a second, the lightning flash has finished its work. 'It's all over but the shouting,' as the saying goes. The shouting, in this case, is the thunder. You may hear a clap, a roll, or a rumble, depending on how far you are from the lightning. A narrow, tortuous

A Typical Lightning Bolt

Length: 3 miles (5 kilometers)

Strokes per Bolt: 3 or 4

Peak Current: 20,000 amperes

Voltage: 100,000,000 volts

Peak Power: 2,000,000,000 kilowatts

Duration: 1/5 second

cylinder of air only a few centimeters (about an inch) thick in the path of the lightning has been heated to more than 30,000 degrees Celsius (55,000° F.). As soon as the current dies away, this superheated column of air expands explosively, at supersonic speed. The shock wave from this expansion makes the thunder, which may be heard up to twenty-five kilometers (15 miles) away.

You may wonder why the Creator saw fit to make lightning in the clouds. Does it do any good? Indeed it does. It plays a paramount role in the nitrogen cycle in nature. Nitrogen is essential to life, and there is a vast reservoir of it in the atmosphere. But living creatures cannot use it directly. In the lightning bolt, however, the intense heat splits both nitrogen and oxygen molecules into atoms, and as they cool, many combine to form oxides of nitrogen. These compounds dissolve in rain and are carried into the soil. There, converted into nitrates, they provide a vital fertilizer for growing plants. This is a major process for the natural fixation of nitrogen. It is estimated that hundreds of millions of tons of nitrate are provided every year by thunderstorms.

Living with Lightning

You really do have reason to feel uneasy when lightning is on the loose. It has

tremendous destructive potential. Lightning splinters trees and telephone poles, punches holes in roofs and walls, and starts many forest fires and building fires. Often, in a tree, the electric current is so intense that it instantly vaporizes the moisture in the wood and the superheated steam literally blows the tree to bits.

Obviously, too, lightning can kill. Animals seeking shelter under a tree during a thunderstorm are often electrocuted when lightning strikes the tree. People frequently suffer the same fate, especially on beaches and golf courses. Lone trees in such locations offer likely targets to lightning. If you are caught out in a thunderstorm, do not seek shelter under an isolated tree. In the woods, stay away from tall trees. And avoid wire fences, pipelines and railroad tracks. You are safer in a valley than on a hilltop.

If you live in an area of frequent electrical storms, you may be wise to protect your house with lightning rods. To be effective, they must be well grounded. Pointed rods connected through heavy wire (insulated from the building) to a

well-buried metal cable or plate will attract the lightning and conduct it harmlessly to the ground. Television antennas and electric power lines leading into the house can be protected with lightning arrestors.

If you are in an automobile or on a train during a thunderstorm, you have nothing to worry about. The metal body of the car around you distributes the electric current and conducts it to the ground. Likewise, the occupants of an airplane are safe from lightning. Planes are struck not infrequently, sometimes emerging with small holes pierced in the metal skin, but no instance has been reported of an airplane crash being caused directly by lightning. Of course, the violent wind turbulence of thunderstorms presents a peril to which a pilot wisely gives wide berth.

By taking these precautions, the next time a thunderstorm strikes your area you can relax and enjoy this magnificent display of the Creator's power. And knowing something about how lightning works should heighten your appreciation of that awesome force in the sky.

An Eyewitness Report: **JOHNSTOWN FLOOD No.3**



JOHNSTOWN, Pennsylvania—The Flood City. The name itself evoked long-ago images of disaster, steam locomotives turned over, people on rooftops. But that was in another time. New city fathers

decided the nickname "Flood City" harmed the town's image and they changed it to "The Friendly City." But old memories die hard. Wise old residents listened—but waited.

On July 20, 1977, at about 9:30 p.m., it started to sprinkle. One man and his family struggled to put up a tent to test whether it was waterproof. At 10 p.m., it was raining in earnest.

By midnight one of the town's low-lying areas began to have some high-water problems. Solomon Run, usually a quiet stream, was beginning to rise and water was running down the steep hills in rivulets. On Arthur Street, a neighbor to one of Jehovah's Witnesses called to him out of his second-story apartment, asking for help to dam the water from his lawn with boards.

Still nobody worried much. The city's formidable water-defense system was part of a flood-control project built during the late 1930's by the U.S. Army Corps of Engineers. The work was done only after Johnstown had already undergone two major floods.

The first one—the famous one—occurred in 1889, when a dam north of the city burst, killing 2,209 people. In 1936, a second flood killed twenty-two more and caused \$41 million in damage. But the massive flood-control project had finally set most of Johnstown's people at ease. Even when western Pennsylvania was deluged following Hurricane Agnes in 1972, Johnstown survived unscathed—high and, jubilantly, dry. No longer was it The Flood City—now it was The Friendly City.

But by 12:30 a.m., July 21, 1977, the two Arthur Street "dam builders" were forced to abandon their boards. In the ground-floor apartment lived a seventy-nine-year-old lady, and since the water was rising, the Witness decided to carry her up the steep stairs to his own apartment.

Then, through a long, terrifying night, he and his family watched the water climb the stairs. About 2 a.m. the water outside turned into a torrent, tearing off the

porch railing. Cars came floating by, ripping away part of the porch and the front of the house. By 6 a.m. the water was up to the ceiling lights on the first floor and the house foundation shuddered. "At that point," he said, "we thought we were dead."

Damage Revealed

Another Witness rose at 5 a.m. as usual, to go to work despite the heavy rain. But he had to turn back at the normal routes because the roads were washed out. He then thought of the congregation's low-lying meeting place, their Kingdom Hall, and the congregation members living in the housing project around it. So he went back to get his wife and together they picked their way on foot to the area.

The murky early-dawn light revealed a heartrending sight. At the housing project, several large apartment buildings were literally torn open, their living rooms, bedrooms and bathrooms exposed to view. The raging torrent had torn out foundations, piled up cars and deposited debris and boulders as much as fifteen feet (5 meters) high.

People were shouting, swimming toward safety and crying. The couple looked for the five Witnesses that they knew were living in the apartments, and thought that they recognized one in the distance. Unknown to them, another was being evacuated from a precarious rooftop position by helicopter. Helicopters and motorboats were appearing everywhere. Blocked from further advance by the torrent, the couple went next to the Kingdom Hall for another shock.

Picture an attractive, newly remodeled, recently landscaped building, sitting peacefully on a street that you have driven on hundreds of times. Now visualize the same

building—the new addition literally torn off, the entire structure caved in, a large tree protruding through the belly of the main auditorium, and a great rent in one wall where a ten-foot-square (3-meter-square) piece of asphalt ripped through and out the other side. The familiar street is now a jagged, boulder-strewn canyon. The "lawn" is a lunar landscape. A woman checking on the Kingdom Hall sits down and cries.

Help Arrives

At this point, a major problem was communication with other congregation members. Already the elders were receiving offers of help from neighboring congregations, but at first they could not even tell what was needed. By the following day, though, the "grapevine" had just about accounted for everyone in the congregation—but still, much coordination was needed.

The elders held their first full meeting, and priority was placed on health and safety. A checklist was made for each congregation member, listing damages and needs, including food, water, money and shelter. The next day, the elders made an effort to check personally on each household.

Attention now turned to the Kingdom Hall. The decision was to dismantle it as soon as possible. So the offers of help were now gratefully accepted. About sixty workers would be enough to recover anything worth keeping and to assist those needing help with their homes.

But by 9 a.m. Saturday, there were about 150 volunteers, with a virtual army of vehicles at the designated site. An ob-

serving National Guardsman, astonished at the total dismantling job just four days after the flood, remarked that "no way" could the Guard get organized that fast.

Some workers went to shovel out homes and businesses. The husband of a person who was studying the Bible with Jehovah's Witnesses, though opposed to their work, shook his head in disbelief as three of them worked several hours in the three-foot (.9-meter) muck of his basement. "Out of all the church groups," he said, "no one came by to help but Jehovah's Witnesses."

By the end of the day, the tally was complete. One Kingdom Hall destroyed and dismantled; fourteen houses damaged, nine extensively. Five families were evacuated to homes of their families or to those of other Witnesses. And we were grateful to find that, though the death toll in the city kept climbing, not one of Jehovah's Witnesses had been injured in the flood.

At a special meeting in a nearby Kingdom Hall the next Friday, we were thrilled by expressions of concern from our Christian brothers across the country, as well as the repeated communications about our needs from the Governing Body of Jehovah's Witnesses in New York.

So as the dust settles (literally) in Johnstown, we have many things for which to be grateful. We also have some things to analyze. Could we have handled the situation better? Can we tighten our bonds of Christian love even more for what may lie ahead of this old world? But some of this reflection may have to wait. For the present, we have a Kingdom Hall to rebuild.



What happens when



JOYFUL WORKERS get together

to cultivate joy. In fact, some individuals experienced unexpected joy even before arriving at the convention site. An example is the experience of a group traveling from New York to the "Joyful Workers" assembly at Oklahoma City:

"We had gone over 1,200 miles and had nearly 270 miles to go when the car broke down in Arkansas. It happened on a lonely stretch of road, miles from any large town; and we didn't know anyone in the area.

"We got to a phone and called the number listed for Jehovah's Witnesses. They were located about twenty miles away. The reply was: 'We'll get someone to you as soon as possible.' In about a half hour a welcome sight arrived. Three of our Christian brothers came to help, two of them riding in a wrecker. Shortly we got to their home, and they began seeing what could be done to help us.

"When it was determined that the car could not be fixed right away, they put us up for the night. And to our amazement the wives of two of these brothers announced that they would drive us all the way to Oklahoma City the following morning.

"We arrived at our destination strengthened by such an expression of love. In our case simply getting to the 'Joyful Workers' assembly proved to be a special cause for rejoicing."

Highlights from the First Day

The program for the convention's first day, Thursday, stressed finding joy by working what is good at home. Speakers

DO YOU think that modern times give much cause for rejoicing? Throughout the earth increasing crime, violence, drug addiction, immorality and other woes rob many of happiness.

In refreshing contrast to the fears and anxieties that afflict much of the world today, a spirit of joy pervaded the district assemblies of Jehovah's Witnesses this year. The theme for these gatherings was "Joyful Workers."

In the United States 108 assemblies convened. The combined peak attendance reached 958,008, which amounts to an average of 8,870 at each convention. Similar meetings are taking place in more than ninety lands outside the United States. To date 170 of these conventions have been held, adding an additional 1,013,717 to the overall attendance. In coming months the assembly program will be presented in still other parts of the world.

The four-day convention program furnished fine counsel that can aid Christians

focused attention on Bible principles that can solve the many problems that plague family life today.

The main presentation of Thursday morning was the keynote address, entitled "Share Joyfully with Jesus Christ in Jehovah's Work." This talk stressed the importance of the preaching and disciple-making work that Jesus commissioned his followers to do. (Matt. 24:14; 28:19, 20) "Jehovah has given us every indication that the work has not yet been brought to a completion," said the keynote speaker. "We must continue at it, not until we decide it is done, but until Jehovah finishes it according to his good pleasure."

A special feature of Thursday afternoon was the drama "God Is Not Far Off from Each One of Us." This depicted some experiences of King Hezekiah of Judah in distress and how he was delivered out of danger after turning to Jehovah in prayer. The audience was encouraged to pray frequently and to be sure that their prayers are both specific and related to God's purposes.

At various convention sites many individuals related personal experiences about the effectiveness of prayer. A report from Pullman, Washington, gives us an interesting example:

"Another of our new sisters told us that for five years she prayed to God to show her the truth. Each time that she prayed this way one of Jehovah's Witnesses would arrive at her door. But she was so sure that this couldn't be the truth that she would not listen to them. She and her husband moved several times during this period, and each time that they moved, she would again pray to God for help to find the true religion.

"On their last move, which was seven miles out in the country, and at the end of a quarter-mile lane, she prayed that God would show her the true church. Guess who knocked on her door. That's correct. It was

Jehovah's Witnesses. And this time it was too much for her. She accepted a Bible study, her husband joined in, and Friday they became our new brother and sister."

Thursday afternoon featured a special discussion of the Biblical view concerning blood. It was emphasized that the Bible commands worshipers of God to "abstain from . . . blood." (Acts 15:20) The conventioners listened to solid medical evidence that testified to dangers involved in transfusing blood. But then the speaker added:

"In mentioning the distinct, even fatal, dangers of blood transfusions, we are not



"Junior" helps to clean up the grounds

suggesting that Jehovah's Witnesses object to transfusions primarily for medical reasons. No! Let no one ever get that impression. The fundamental reason why we cannot, yes, will not, accept blood transfusions is because of what God's Word says. Ours is basically a religious objection. Nevertheless, the fact that there are so many risks in taking blood underscores the reasonableness, even from a medical standpoint, of our position."

After this presentation the audience was delighted by the release of a new 64-page booklet, *Jehovah's Witnesses and the Question of Blood*. This month Witnesses in the United States are studying this material at their meetings.

Marks of True Christianity

Friday's program featured the theme "Inciting to Love and Fine Works." The talk "Conducting Ourselves Honestly in All Things" urged Christians to imitate Jehovah God and Jesus Christ by displaying honesty at home, in the Christian congregation and elsewhere. (Ps. 31:5; Luke 20:21) Do Jehovah's Witnesses heed the Bible's counsel about honesty? Concerning the convention in Baton Rouge, Louisiana, James C. Cole, who served for many years as head of police for the Assembly Center at Louisiana State University, made a noteworthy comment:

"I have been in security and police service for the past forty-five years, the last eighteen here at L.S.U. And in my experience with Jehovah's Witnesses for the past three years I have found that they are the only people you don't have to worry about. . . . I can say with certainty Jehovah's Witnesses are the most honest, patient and hardworking people that I have ever come in contact with. . . . I would have to say that it's their overall beliefs and worship that make them this way."

A report from the assembly at El Paso, Texas, contained this interesting item: "The Immigration Service allowed about 1,000 persons from Mexico to attend the

assembly without much more than a promise that they would return on Sunday. When one officer objected saying that they would not return, an officer who had dealt with our organization the previous summer spoke up in defense of the brothers, saying: 'Oh, they'll return all right; they are honest people. If they say they'll be here, they'll be here.'

The characteristic that outstandingly identifies true Christianity is love. Jesus stated: "By this all will know that you are my disciples, if you have love among yourselves." (John 13:35) Much enjoyed, therefore, was the talk "Love in Action," which provided a verse-by-verse discussion of 1 Corinthians 13:4-8. Those in attendance were told that love must be evident by fine works, by action.

Do Jehovah's Witnesses have that mark of identification as true Christians? An engineer for the War Memorial Auditorium at Rochester, New York, thought so. He said of the assembly there: "This has been a wonderful week. What I've seen is unbelievable. I've seen real brotherhood this week." And consider this comment from a non-Witness who attended the convention at Niagara Falls:

"I've been in crowds before and have seen people push and shove. I bumped into a woman yesterday, and she dropped her purse, and she started apologizing to me. I told her not to apologize because I bumped into her. You not only can see but you can feel the love that they have for one another here."

Christian conduct is also evident in cleanliness. (2 Cor. 7:1) Jehovah's Witnesses are thorough in cleaning all convention facilities before, during and after their assemblies. When visiting an assembly in Berlin, Germany, an official of the Berlin Transportation Company exclaimed: "This is the best organized convention that has ever been held here at the Deutschland Hall. I told an apprentice



This woman was one of 7,691 baptized in the United States; thousands more were baptized in other lands.

whom I had brought with me that I would give him ten Pfennigs [about five cents U.S.] for every scrap of paper he could find lying around. After having made our way through the grounds, I discovered I didn't have to pay a single Pfennig!"

Friday also featured the baptismal talk, after which candidates motivated by love for God were baptized by complete immersion in water. This is a symbol of their dedication to Jehovah God. For the 108 assemblies in the United States those baptized numbered 7,691. An additional 1,479 were baptized at ten assemblies in Japan, 1,394 at the eleven conventions held in France and 1,231 at Spain's seven assemblies. As these gatherings continue to be held in different parts of the earth, many more will have opportunity to symbolize their unreserved dedication to Jehovah God.

On Friday afternoon there was announcement of certain adjustments in organizational procedure for Jehovah's Witnesses. These will include more effective means of teaching the Bible and administering God's law in the congregations. The final talk on Friday included release of a new book, *Our Incoming World Government—God's Kingdom*. From the Bible book of Daniel, this publication considers prophecies that reach down to the present generation and on into the millennial reign of Jesus Christ.

God's Love Motivates

Joyful Service

Presentations on Saturday emphasized the theme "Exerting Ourselves in the Field." Included were helpful suggestions on how Christians can be more effective at sharing Bible truths with their neighbors. Conventioners enjoyed the drama "Are You Whole-souled in Service to God?" It portrayed conditions in Israel during the fifth century B.C.E., in the days of Governor Nehemiah. The audience was reminded that persons who have dedicated their lives to God must view this as a complete dedication, without reservations. Though God does not ask that we spend every moment of our lives in preaching and disciple-making activities, what we do give in this way should be of our very best.

The principal talk Saturday afternoon pointed out that Jehovah God and Jesus Christ are genuinely interested in humans. "As Jehovah views the earth and sees the

many distresses that men undergo," declared the speaker, "he has deep feeling for humankind. His desire is to help each one of them. Though he does not 'turn a blind eye' to wrongdoing, he is not looking for people's faults, but for their good points." Following this presentation the audience was pleasantly surprised by the release of another new book, *Life Does Have a Purpose*.

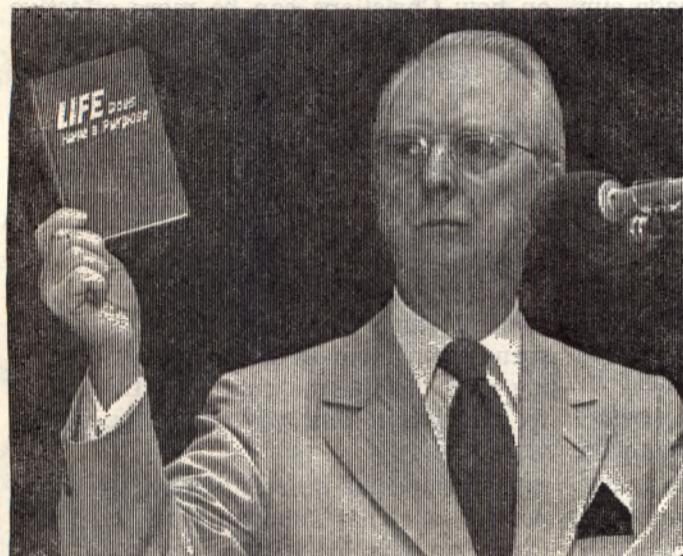
The theme for Sunday was "Loyal Workers Inherit the Promises." All in attendance were urged to be self-sacrificing and loyal to God. A number of special reports described the loyalty of Jehovah's Witnesses under severe persecution.

Sunday's featured talk bore the title "How God's Kingdom Can Benefit You." The speaker explained that throughout human history, "rather than being idle or merely waiting, as some suppose, Jehovah God has been making progressive moves toward the complete establishment of this kingdom ever since mankind rebelled at the first. (Gen. 3:15) He is now nearing the final end of these progressive preparations."

This talk further pointed out that there is "a fundamental difference between God-rule and man-rule. The rule of God's kingdom is based on a moral appeal, and those who respond obey that rule because of their love for God and neighbor. This is a unifying rulership. It really works among those who give allegiance to that heavenly kingdom. It is beneficial. You can see this in the loving harmony so apparent at this Christian assembly today!"

Highlighting the power of God's Word to bring about "loving harmony" by effecting changes for the better in people's lives are comments of a high-school counselor from Flint, Michigan: "I feel that the Bible, and its counsel, is more practical and far superior to anything that I had ever studied in college. Although being a high-school counselor with Bachelor's and Master's degrees and having read a large number of books on mental health and psychology, I discovered that the Bible's counsel on such things as having a successful marriage, preventing juvenile delinquency and how to gain and keep friends is far superior to anything I had read or studied in college."

The "Joyful Workers" assemblies provided a fine stimulus for Jehovah's Witnesses and many others to serve God with joy of heart. The talks, dramas and new publications will furnish instructive materials for personal, family and congregational Bible study during coming months. *Would you enjoy studying this information along with them? Contact the Witnesses locally. They will gladly show you how it is possible, even in these troublesome times, to be joyful workers with Jehovah, "the happy God."—1 Tim. 1:11.*



Grant Suiter of the Governing Body releases the "Life" book



Human Rights Appeal

◆ At a meeting of the Council of Europe, an appeal was made by a number of concerned representatives on behalf of Jehovah's Witnesses in Greece. Because of their conscientious objection to military service, Jehovah's Witnesses have been subjected to repeated jail sentences there. The total jail terms were often several times as long as the length of military service, which is two and a half years. The appeal asked the Council's Committee of Ministers "whether these punishments should not be considered violations of Article 3 of the European Convention of Human Rights, as the time spent in prison is not in proportion to the term set for military service . . . which is contrary to generally accepted principles of moral justice, whereby crime and punishment are proportional."

Plain-Language Contracts

◆ Many persons have difficulty reading consumer contracts, such as loan agreements and apartment leases, because of their legalistic and complicated language. Now the state of New York has passed a law that is to take effect next year requiring such contracts to be written in clear, understandable, nontech-

nical language, in "words with common and everyday meanings." The New York Times comments: "Suspicion also is high that lawyers favor impenetrable language to make sure a lawyer must be hired to translate. According to some estimates, as much as 20 percent of all litigation results from poorly worded contracts."

Environment Affects Brain

◆ In a series of nine studies made over a period of eight years, it was found that rats placed in an "enriched" environment had greater brain development physically than those placed in a poor environment. Those in the enriched conditions were placed in large cages in groups of between six and twelve rats and all were supplied with a variety of objects designed to stimulate them mentally. Other rats were isolated in small, bare, individual cages. Careful analysis after the test periods revealed that the brains of the rats who had more social interchange and mental stimulation were better developed. Scientists involved in the tests feel that there are groups of brain cells—neurons—that will fully develop only in the presence of proper amounts of stimulation. It is thought that human brain development may be similarly affected.

Seawater for Crops?

◆ Many deserts would be productive if they had water. But most crops require freshwater, not salt water. Yet seawater is available in almost unlimited quantities in many arid coastal regions. However, University of California (at Davis) scientists have grown strains of barley by watering the seeds with solutions of up to 90 percent of the salinity of seawater. Some of the plants survived to produce seed. Their descendants were raised with 100-percent seawater. The most successful of the plants yielded nearly half the amount of barley as do plants grown with freshwater. It is hoped that further experiments could lead to barley and other crops becoming economically practical for seawater irrigation.

Saving Drowning Victims

◆ It has long been assumed that drowning victims submerged for four or five minutes suffer irreparable brain damage, and when found blue and breathless they are certainly dead. But these assumptions are being challenged, because victims submerged for longer periods, even twenty minutes or more, have survived when the water was cold and efforts to revive them began immediately after rescue. One youth was revived after being under water thirty-eight minutes. It is theorized that when the body is submerged in cold water it goes through a "diving reflex." This is an involuntary response that delays suffocation by re-routing oxygen from the arteries, sending it to the heart, brain and lungs. Most of those revived after lengthy periods of submersion in colder water were children, since their "diving reflex" is apparently stronger than that of adults.

Indoor Pollution

◆ Two University of California (at Berkeley) scientists say that air pollution inside many

homes is worse than air pollution outside. Their studies showed that levels of certain harmful pollutants in some houses were two or three times higher than the recommended air quality standards. Readings of one pollutant showed a level about a thousand times higher than what is found outdoors on a normal day. Physicist Gregory Traynor stated: "Our primary concern is gas appliances." Due to improper design or poor servicing, they can release such pollutants as carbon monoxide, nitrogen oxide, nitrogen dioxide and sulphur dioxide. Cigarette smoke in a closed room also was listed as a major pollutant.

Mystery Solved?

◆ In 1908 a gigantic fireball fell to the earth in the valley of the Stony Tunguska River in Siberia, about 800 kilometers (500 miles) from Lake Baikal. It disintegrated in a fierce explosion near the earth, producing a blast wave that knocked down trees like matchsticks for up to 30 kilometers (19 miles) around. Fire produced great devastation of the surrounding forest. It was at first thought that the blast had been caused by a gigantic iron meteorite like the one that produced Meteor Crater in Arizona. But no crater was ever found. Now, after many expeditions and tests of soil and trees, some Soviet scientists think that the phenomenon was a comet that disintegrated before it struck the earth.

Sahara Truck Route

◆ The Sahara desert has been an impassable barrier to commercial land traffic except by camel caravan. However, the Algerian National Road Transport Company now runs weekly convoys of five to ten trucks each from the port of Algiers all the way across the Sahara to the port of Lagos, Nigeria, helping to relieve the latter's

huge shipping backlog. Thus, the Mediterranean is linked to the Atlantic north to south across the Sahara. The route is 2,188 miles (3,520 kilometers) from Algiers to Lagos and the scheduled time of transit is nine days. More than half the distance is over rough desert trails. Each truck carries a mechanic in addition to the driver. A workshop truck carrying fuel and spare parts accompanies every convoy.

Preferred Pets

◆ Which domestic creatures do the British prefer as pets? The consumer magazine *Which?* rated fourteen domestic creatures by their price, cost of upkeep, maintenance, durability and owner enjoyment. In a poll of the magazine's readers, dogs took first place. Horses and ponies came in second, and cats were rated third. The main consideration was the affection that the pet returned to its owner. For example, the lowest ranking was the tortoise because it "does not return love."

Mussel "Glue"

◆ Scientists have noted with admiration the "glue" that the sea mussel uses to attach itself to wet rocks or pilings. The substance it uses is so powerful that it literally becomes part of whatever it attaches itself to. Scientists are studying the sea creature to try to unlock its secrets. The magazine *Sea Frontiers* recently noted that the strength and durability of the mussel "glue" have attracted the attention of dentists for possible use as a filler material in repairing teeth.

No More "Beetles"?

◆ The Volkswagen "Beetle," the small German automobile, was at one time very popular in the United States. In 1968 a peak of 423,000 were sold there. However, rising prices and other factors caused lower sales in recent times. Thus,

the company announced that, with the 1977 model, production is being ended on this type of vehicle for sale in the United States. However, it will continue to be sold in other parts of the world where the car is still very popular.

Successful Antiviral Drug

◆ Researchers claim to have made the first successful use of an antiviral drug against a fatal disease. Until now, attempts to cure other viral infections, including the common cold, with drugs have failed. The new drug, named adenine arabinoside, has been used to treat cases of herpes virus encephalitis, a disease that destroys the brain. The disease, transmitted by insects, kills about 70 percent of its victims. But when the new drug was used, the mortality rate dropped to 28 percent. The drug is derived from a type of sponge found in the waters off Florida and the Bahamas.

Bloodless Surgery

◆ Doctors at the Indiana University Medical Center have devised a new type of surgeon's scalpel that could eliminate most bleeding in surgery. The "plasma scalpel" uses a tiny jet of superheated argon gas to cut and seal tissues simultaneously. It is reported that the most delicate operations can be performed "without shedding a drop of blood."

Chew Your Meat

◆ About 3,500 Americans a year choke to death while eating meat. Often the victims are talking, drinking and eating at the same time. The choking usually occurs on a piece of improperly chewed meat. Adults over forty-five years of age and children under four are the most common victims. The older victims often have bad or missing teeth, or poorly fitting dentures, so they are prone to swallow larger pieces of food without sufficient chewing. Autopsies

have revealed that many persons who first were thought to have died from heart attacks actually choked on food.

Library Books Decaying

◆ Tens of millions of older library books are destroying themselves because of the acids in their paper. A book restorer at Columbia University said that at least 1.5 million books in Columbia's collection of five million are falling apart. At the Library of Congress an estimated six million books out of 18 million are decaying. And half of the New York Public Library's research collection of five million is being disabled. A study of books that were produced between 1900 and 1939 concluded that 97 percent of them had a life-span of about fifty years, whereas present-day book paper has an estimated life expectancy of only thirty

to thirty-five years because the paper is "as bad as any ever made in history."

More British Oil

◆ Oil from the North Sea is flowing into Britain in ever-increasing quantities. After more than a decade of exploration and expenditures, the offshore oil fields are now supplying about one third of the oil Britain uses. It is expected that by 1980 Britain, once an importer of almost all its oil, will be completely self-sufficient in oil.

Largest Artificial Diamond

◆ Japanese scientists have made an artificial diamond weighing 20 carats, which they claim to be the largest of its kind in the world. The biggest such diamond previously formed is said to be just five carats. Scientists from Osaka University say that they

created the diamond by compressing many tiny artificial diamonds at 60,000 times standard barometric pressure and heating them to 2,000 degrees Celsius (3,632 degrees Fahrenheit) for five minutes. The diamond is black and of industrial quality, unusable as a gem, but fine for such things as the teeth of tunnel boring equipment.

Radiation Effects

◆ The Japanese Health and Welfare Ministry states that "a far greater percentage of people who survived the atomic bombing suffer from diseases of various kinds than ordinary people." A survey of 16,912 survivors, made thirty years after the atomic bombing of two Japanese cities, reveals that 59 percent of them had various diseases as compared to 29 percent of the general population.

etoo and brought off before
isability with varied religious
and social needs. About
two thousand different
types of ministry guided
nearly 200,000 visitors.
Religious events took place at bright
and quiet spots, including
outdoor services, home
and church services.

Religious services were held in
the United States, Canada, Mexico,
and Australia. In addition, many
other countries had their
own religious services. Most
of these services were held
in the United States. A
total of 100,000 visitors
attended these services.
The largest number
of visitors came from
the United States, followed
by Canada, Mexico, and
Australia. Other countries
represented included
Great Britain, France,
Germany, Italy, Spain,
Portugal, and Japan.

Visitors came from all over
the world, including
Europe, Africa, Asia,
South America, and Oceania.

NO RELIGION

At least one million visitors
had no religion. This group
was divided into those who
had no religious affiliation
and those who had
no religious affiliation
but still believed in God.
This group was
estimated to be about
one-third of the total
number of visitors.

RELIGIOUS SERVICES
The largest number
of visitors attended
Christian services, followed
by Muslim services. About
one-third of the visitors
attended services in
other religions, such as
Buddhist, Hindu, and
Jewish. Some visitors
attended services in
more than one religion.
About 10 percent
of the visitors did
not attend any religious
services during their stay.

The most popular religious
services were Christian
services, followed by
Muslim services, and
then Buddhist services.

THE WORLD'S POPULATION
The world's population
is estimated to be about
5,000,000,000 people.
About half of the world's
population is under 20 years
of age. The largest
percentage of the world's
population is in Asia, followed
by Europe and Africa.
The United States has
the largest population
in the Americas, followed
by Canada and Mexico.
Brazil has the largest
population in South America,
followed by Argentina and
Chile. Australia has the
largest population in Oceania,
followed by New Zealand
and Papua New Guinea.