

# **Awake!**

May 22, 1991

## **TELEVISION** **The Box** **That Changed** **the World**





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It can plant the same idea in millions of minds at the same time in all parts of the world. Its viewers need not know how to read or form their own mental images. It has changed the world. Some say it can change you.



Paul A. Berquist

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WHO photo by J. Abcede

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# How Television Has Changed the World

LAST summer, TV turned the world into a global sports arena. In Rome, Italy, the streets were deserted. Some 25 million Italians were watching the World Cup soccer matches. In Buenos Aires, Argentina, the streets were likewise desolate, and for the same reason. In Cameroon, West Africa, the same grayish-blue light flickered eerily in the windows as millions cheered in unison. In war-torn Lebanon, soldiers propped televisions up on their idle tanks to watch. By the time the tournament reached its climax, an estimated one fifth of the earth's population was watching, drawn to the box like moths to flames, their faces lit by its pale glow.

This mammoth TV event was not unique. In 1985 nearly a third of the earth's population—about 1,600,000,000 people—watched the rock concert called *Live Aid*. A dozen satellites beamed the program to some 150 countries, ranging from Iceland to Ghana.

TV—this ubiquitous box has been at the heart of a subtle revolution. The technology grew from the tiny, flickering screens of the 1920's and 1930's to the sophisticated screens of today, with vivid color and crispness, meanwhile fueling a global boom. In 1950 there were fewer than five million television sets in the world. Today, there are about 750,000,000.

Events such as the World Cup soccer matches only illustrate the power of TV to unite the globe in a single information network. TV has changed the way people learn

of the world around them. It has helped to spread news and ideas, even culture and values, from one land to another, effortlessly flowing over the political and geographic boundaries that once stemmed such tides. TV has changed the world. Some say it can change you.

Johannes Gutenberg is widely held to have revolutionized mass communications when the first Bible came off his printing press in 1455. Now a single message could suddenly reach a vastly greater audience in a shorter span of time, at a greatly reduced cost. Governments soon saw the power of the press and tried to control it with licensing laws. But the printed media reached ever greater audiences. In the early 1800's, historian Alexis de Tocqueville remarked that newspapers had the extraordinary power to plant the same idea in 10,000 minds in a single day.

Now consider television. It can plant the same idea in hundreds of millions of minds—all in the same instant! And unlike the printed page, it does not require its viewers to be educated in the complex art of reading, nor does it ask them to form their own mental images and impressions. It delivers its messages with pictures and sound and all the enticements they can produce.

It did not take long for politicians to see the tremendous potential of television. In the United States, Dwight D. Eisenhower used TV shrewdly in his 1952 presidential campaign. According to the book *Tube of Plenty—The Evolution of American Television*,

Eisenhower won the election because he proved the more "merchandisable" candidate in the media. The book shows that TV may have played an even greater role in John F. Kennedy's victory over Richard M. Nixon in the 1960 election. When the candidates debated on TV, Kennedy scored higher with viewers than Nixon did. Yet, audiences who heard the same debate over the radio felt that it had been a draw. Why the difference? Nixon looked pale and haggard, while Kennedy was robust and tanned, exuding confidence and vitality. After the election, Kennedy said of television: "We wouldn't have had a prayer without that gadget."

"That gadget" continued to make its power felt worldwide. Some began calling it the third superpower. Satellite technology enabled broadcasters to beam their signals across national borders and even oceans. World leaders used TV as a forum to garner international support and denounce their rivals. Some governments used it to transmit

propaganda into enemy countries. And just as governments had tried to control Gutenberg's invention once they understood its power, many governments took tight hold of television. In 1986 nearly half of all nations were broadcasting only government-controlled programs.

Technology, however, has made TV harder and harder to control. Today's satellites transmit signals that can be picked up even at homes having relatively small dish antennas to receive the broadcast. Small, portable video cameras and videocassettes, coupled with a profusion of amateur photographers, have produced an often unstoppable flood of visual records of almost any newsworthy event.

One U.S. news organization, Turner Broadcasting's CNN (Cable News Network), gathers news reports from some 80 countries and relays them all over the world. Its global, round-the-clock coverage can turn any event into an international issue almost instantaneously.

Increasingly, television has changed from a recorder of world events to a shaper of world events. TV played a key role in the string of revolutions that rocked Eastern Europe in 1989. Crowds in Prague, Czechoslovakia, chanted in the streets, demanding "live transmission" on TV. And whereas revolutionaries once shed blood to secure some government building, fortress, or police stronghold, the revolutionaries of 1989 struggled first of all to

## Newspapers can put an idea in ten thousand minds in one day

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## Television can put an idea in hundreds of millions of minds instantaneously

gain access to television stations. In fact, Romania's new regime started to govern the country from the television station! So, calling TV the third superpower may not be far-fetched at all.

But TV has done more than influence the political arena. It is even now changing the world's culture and values. The United States is often accused of 'cultural imperialism,' that is, of foisting its culture on the world through the medium of television. Since the United States was the first country to build up a stockpile of profitable commercial programs, in the late 1940's and in the 1950's, American producers were able to sell programs to other nations at a fraction of what it would cost them to produce their own shows.

In the late 1980's, Kenya was importing up to 60 percent of its TV shows; Australia, 46 percent; Ecuador, 70 percent; and Spain, 35 percent. Most of these imports came from the United States. One American show, *Little House on the Prairie*, was broadcast in 110 countries. The show *Dallas* appeared in 96

lands. Some complained that local flavor was vanishing from television around the world, that American consumerism and materialism were spreading.

Many nations are in an uproar over 'cultural imperialism.' In Nigeria, broadcasters have complained that the infusion of foreign shows erodes the national culture; they worry that Nigerian viewers seem more informed about the United States and Britain than about Nigeria. Europeans feel similarly. At a recent U.S. congressional hearing, broadcasting tycoon Robert Maxwell fumed: "No nation should tolerate its culture being subjugated by a foreign one." Consequently, some nations have begun to impose limits on the number of nondomestic programs that stations may broadcast.

'Cultural imperialism' may damage more than cultures. It may even hurt the planet. The have-it-all-now consumerism of Western society has played a part in the fouling of the air, the poisoning of the water, the general ravaging of the earth. As a writer for *The Independent*, a London newspaper, put it: "Television has brought to the world a glittering prospect of material liberation—of Western prosperity—that is delusive, for it can be achieved only at the cost of damaging the natural environment beyond repair."

Clearly, television is changing the world today, and not always for the better. But it also has much more specific effects on individuals. Are you vulnerable?

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# Has Television Changed You?

**A**"WINDOW on the world." That is how television has been described. In the book *Tube of Plenty—The Evolution of American Television*, author Erik Barnouw notes that by the early 1960's, "for most people [television] had become their window on the world. The view it offered seemed to be *the* world. They trusted its validity and completeness."

However, a mere window cannot select the view it presents you; it cannot determine the lighting or the angle of view; nor can it abruptly change the view just to hold your interest. TV can. Such factors dramatically shape your feelings and conclusions about what you are looking at, yet they are controlled by the people who produce TV shows. Even the most unbiased of newscasts and documentaries are subject to such manipulation, however unintentional it may be.\*

## A Master Seducer

Most often, though, the people who control television are trying outright to influence viewers. In advertising, for instance, they have virtually free rein to use every seductive gimmick at their disposal to lure you into the mood to buy. Color. Music. Beautiful people. Eroticism. Gorgeous locales. Their repertoire is vast, and they use it masterfully.

A former advertising executive wrote of his 15 years in the field: "I learned that it is possible to speak through media [such as TV] di-

rectly into people's heads and then, like some otherworldly magician, leave images inside that can cause people to do what they might otherwise never have thought to do."

That television has such formidable power over people was already evident in the 1950's. A lipstick company that was making \$50,000 a year began to advertise on U.S. television. In two years, sales skyrocketed to \$4,500,000 a year! A bank was suddenly avalanched with \$15,000,000 in deposits after it advertised its services on a TV program popular with women.

Today, the average American watches over 32,000 commercials every year. The ads play seductively on the emotions. As Mark Crispin Miller wrote in *Boxed In—The Culture of TV*: "It is true that we are manipulated by what we watch. The commercials that pervade daily life influence us incessantly." This manipulation, he adds, "is dangerous precisely because it is often hard to discern, and so it will not fail until we learn how to perceive it."

But television sells more than lipstick, political viewpoints, and culture. It also sells morals—or the lack of them.

## TV and Morals

Few people would be surprised to learn that sexual behavior is depicted more and more frequently on American TV. A study published in 1989 in *Journalism Quarterly* found that in 66 hours of prime-time network

\* See "Can You Really Believe the News?" in the August 22, 1990, issue of *Awake!*

TV, there were in all 722 instances of sexual behavior, whether implied, referred to verbally, or actually depicted. Examples ranged from erotic touching to intercourse, masturbation, homosexuality, and incest. The average was 10.94 instances every hour!

The United States is hardly unique in this matter. French TV movies depict explicit sexual sadism. Striptease acts appear on Italian TV. Late-night Spanish TV features violent and erotic films. The list goes on and on.

Violence is another type of TV immorality. In the United States, a TV critic for *Time* magazine recently praised the "grisly good humor" in a batch of horror programs. The series featured scenes of decapitation, mutilation, impalement, and demonic possession. Of course, much TV violence is less gruesome—and more easily taken for granted. When Western television was demonstrated recently in a remote village in Côte d'Ivoire, West Africa, one bewildered old man could only ask: "Why are whites always stabbing, shooting and punching one another?"

The answer, of course, is that television producers and sponsors want to give viewers what viewers want to see. Violence draws viewers. Sex does too. So TV serves up ample portions of both of them—but not too much too soon, or the viewers will be repelled. As Donna McCrohan put it in *Prime Time, Our Time*: "Most top shows go as far as they can with language, sex, violence, or subject matter; then, having gone to the edge, they take the edge off. Subsequently, the public is ready for a new edge."

For example, the subject of homosexuality was once considered beyond "the edge" of good taste for television. But once viewers got used to it, they were ready to accept more. A French journalist asserted: "No producer would ever dare present homosexuality as a deviation today . . . Rather it is society and its intolerance that are odd." On American cable

television, a 'gay soap opera' premiered in 11 cities in 1990. The program featured scenes of males in bed together. The show's producer told *Newsweek* magazine that such scenes were designed by gays to "desensitize the audience so that people will realize we're like everybody else."

### Fantasy Versus Reality

The authors of the study reported in *Journalism Quarterly* noted that since TV almost never shows the consequences of illicit sex, its "constant barrage of titillating sexual imagery" amounts to a disinformation campaign. They cited another study concluding that TV soap operas purvey this message above all: Sex is for unmarried partners, and no one gets a disease from it.

Is this the world as you know it? Premarital sex without teenage pregnancies or sexually transmitted diseases? Homosexuality and bisexuality without the fear of contracting AIDS? Violence and mayhem that leave heroes victorious and villains humiliated—but both often strangely unbruised? TV creates a world wherein actions are blissfully free of consequences. The laws of conscience, of morality, and of self-control are replaced by the law of instant gratification.

Clearly, television is not a "window on the world"—at least not on the real world. In fact, a recent book about television is called *The Unreality Industry*. Its authors claim that TV

**"Why are  
whites always  
stabbing,  
shooting and  
punching one  
another?"**

has "become one of the most powerful forces in our lives. The consequence is that TV not only defines what is reality, but much more importantly and disturbingly, TV obliterates the very distinction, the very line, between reality and unreality."

These words may sound alarmist to those who think they are impervious to television's influence. 'I don't believe everything I see,' argue some. Granted, we may tend to distrust TV. But experts warn that this knee-jerk brand of skepticism may not protect us from the subtle ways TV plays on our emotions. As one writer put it: "One of TV's best tricks is to never let on just how much it affects our psychic mechanisms."

### A Machine of Influence

According to the 1990 *Britannica Book of the Year*, Americans watch, on an average, seven hours and two minutes of television every day. A more conservative estimate puts the figure at about two hours a day, but that would still amount to seven years of television in a lifetime! How could such massive doses of TV fail to have an effect on people?

It hardly seems surprising when we read of people having trouble distinguishing between TV and reality. A study published in the British journal *Media, Culture and Society* found that TV does indeed induce some people to establish "an alternative vision of the real world," lulling them into thinking that their wishes about reality constitute reality itself. Other studies, such as those compiled by the U.S. National Institute of Mental Health, seem to support these findings.

With TV influencing popular notions of reality, how could it fail to influence people's very lives and actions? As Donna McCrohan writes in *Prime Time, Our Time*: "When a top-rated TV show breaks taboos or language barriers, we feel a greater freedom to break them ourselves. Likewise, we are influenced

when . . . promiscuity is the norm, or a macho character refers to his use of condoms. In each instance, TV acts—on a delayed-action basis—as the mirror of who we can be convinced that we are, and therefore by and large become."

Certainly, the rise of the TV age has seen a corresponding rise in immorality and violence. Coincidence? Hardly so. One study showed that the rate of crime and violence in three countries increased only after TV was introduced into each of these countries. Where TV was introduced earlier, the crime rate rose earlier.

Surprisingly, TV does not even rate as the relaxing pastime that so many seem to think it is. Studies carried out on 1,200 subjects over a 13-year period found that of all pastimes, television-watching was the least likely to relax people. Rather, it tended to leave viewers passive yet tense and unable to concentrate. Long viewing periods in particular left people in worse moods than when they began watching. Reading, by contrast, left people more relaxed, in better moods, and better able to concentrate!

But no matter how constructive reading a good book may be, TV, that nimble thief of time, may easily push books out of the picture. When television was first introduced in New York City, the public libraries soon reported a drop in book circulation. Of course, this hardly means that mankind is about to give up reading. Yet, it has been said that people today read with less patience, that their attention soon flags if they are not bombarded with flashy visual images. Statistics and studies may not substantiate such vague misgivings. Still, what do we lose in terms of personal depth and discipline if we depend on constant pampering by a steady flow of TV entertainment that has been designed, moment by fleeting moment, to hold even the shortest attention span?

## **Children of the Box**

It is with children, though, that the subject of television becomes truly urgent. By and large, whatever TV may do to adults, it can surely do to children—only more so. After all, children are more likely to believe in the fantasy worlds they see on TV. The German newspaper *Rheinischer Merkur/Christ und Welt* cited a recent study that found that children are often “unable to distinguish real life from what they see on the screen. They transfer what they see in the unreal world into the real world.”

Well over 3,000 scientific studies during decades of research have backed up the conclusion that violent television has negative effects on children and teenagers. Such reputable organizations as the American Academy of Pediatrics, the National Institute of Mental Health, and the American Medical Association all agree that television violence causes aggressive and antisocial behavior in children.

Studies have turned up other disturbing results.

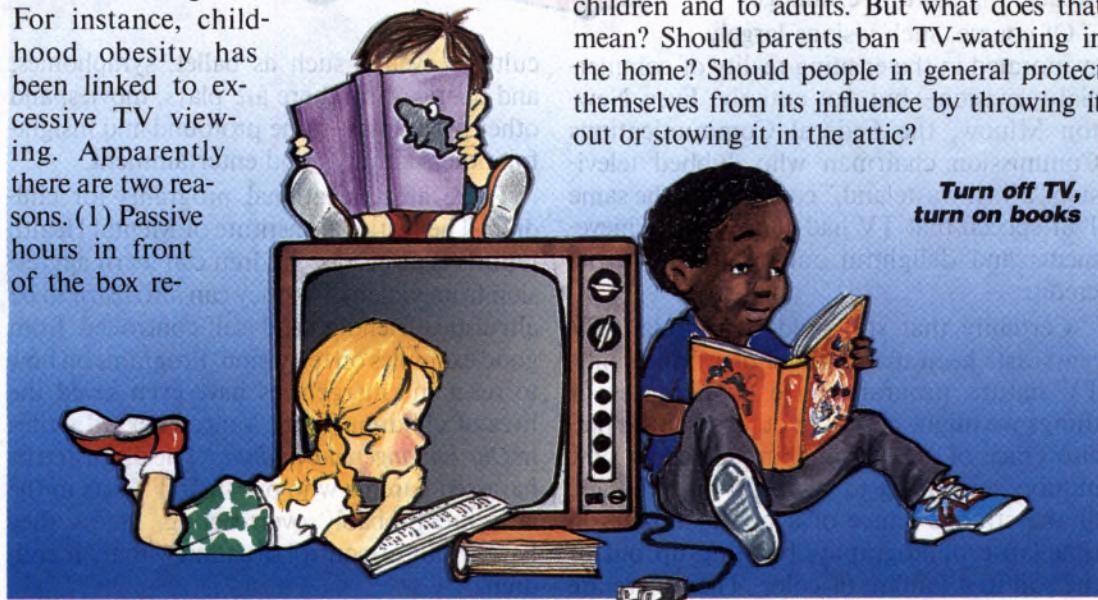
For instance, childhood obesity has been linked to excessive TV viewing. Apparently there are two reasons. (1) Passive hours in front of the box re-

place active hours of play. (2) TV commercials do a handy job of selling kids on fatty junk foods that have little nutritional value. Other research has suggested that children who watch excessive amounts of TV do poorly in school. While the conclusion is more controversial, *Time* magazine recently reported that many psychiatrists and teachers blame TV for a broad decline in children’s reading skills and school performance.

Again, time is a critical factor. By the time the average American child graduates from high school, he has spent 17,000 hours in front of the TV compared to 11,000 hours in school. For many children, TV constitutes their main spare-time activity if not their main activity. The book *The National PTA Talks to Parents: How to Get the Best Education for Your Child* notes that half of all fifth-graders (ten-year-olds) spend four minutes a day reading at home, but 130 minutes watching TV.

In the final analysis, there are probably very few who would argue seriously that TV does not present very real dangers both to children and to adults. But what does that mean? Should parents ban TV-watching in the home? Should people in general protect themselves from its influence by throwing it out or stowing it in the attic?

**Turn off TV,  
turn on books**

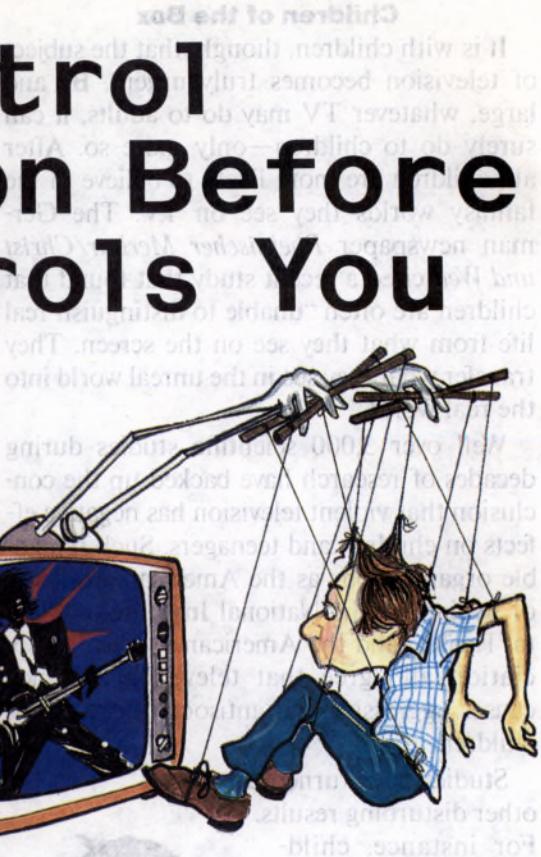


# Control Television Before It Controls You

**T**ELEVISION has staggering potential. When the American TV industry was persuading developing nations to adopt TV, it proffered visions of a TV Utopia. Whole countries would be transformed into classrooms, with even the remotest areas tuned in to educational programs on such vital subjects as farming techniques, soil conservation, and family planning. Children could learn physics and chemistry and benefit from a broadening cultural exchange.

Of course, such visions largely evaporated in the ensuing reality of commercial television—but not entirely. Even Newton Minow, the Federal Communications Commission chairman who dubbed television “a vast wasteland,” conceded in the same 1961 speech that TV had some great achievements and delightful entertainments to its credit.

Certainly that still holds true today. TV newscasts keep us informed of world events. TV nature programs give us glimpses of things we might never see otherwise: the precise grace of a hummingbird filmed in slow motion, appearing to swim through the air; or the strange dance of a bed of flowers in time-lapse photography, bursting up out of the soil in a fanfare of color. Then there are



cultural events, such as ballet, symphonies, and operas. And there are plays, movies, and other programs—some profound and insightful, others simply good entertainment.

There are educational programs for children. The National Institute of Mental Health reports that just as children can learn aggression from violent TV, they can also learn to be altruistic, friendly, and self-controlled from good examples on television. Programs on how to react in emergencies have even saved the lives of children. Thus, Vance Packard writes in *Our Endangered Children*: “The disgusted or harassed parents who put their TV sets in the attic are probably overreacting, unless they have an out-of-control situation with their children.”

### Taking Control

Clearly, whether we are speaking of adults or of children, the key is just that—control. Do we control TV, or does TV control us? As Mr. Packard suggests, for some the only way to control TV is to get rid of the thing. But many others have found ways to control the TV while still making use of its assets. Following are some suggestions.

- ✓ For a week or two, keep a careful record of your family's TV viewing. Add up the hours at the end of the period and ask yourself if TV is worth the time it is taking.
- ✓ Watch TV *programs*—not just TV. Check TV listings to see if there is anything worth watching.
- ✓ Reserve and protect certain times for family conversation and togetherness.
- ✓ Some experts caution against letting children or young teens have a TV set in their own room. Parents might find it harder to monitor what a child watches.
- ✓ A VCR (videocassette recorder), if you can readily afford one, may help. By renting good videotapes or by taping quality programs and watching them when convenient, you can use the VCR to control what is on your TV—and when your TV is on. A word of caution, though. Out of control, the VCR may only increase time spent in front of the tube or open the way for immoral videotapes.

### Who Is Your Teacher?

A human being is a virtual learning machine. Our senses are always soaking up information, sending our brain a flood of over 100,000,000 bits of data every second. To some extent we can influence the content of that flood by deciding what we will feed our senses. As the story of TV vividly illustrates, the human mind and spirit may be polluted by what we watch as easily as the body may be polluted by what we eat or drink.

How will we learn about the world around us? What sources of information will we choose? Who or what will be our teacher? The words of Jesus Christ offer a sobering thought in this regard: "A student is not above his teacher, but everyone who is fully trained will be like his teacher." (Luke 6:40, *New International Version*) If we spend too much time with television as our teacher, we may begin to imitate it—to espouse the values and standards it represents. As Proverbs 13:20 puts it: "He that is walking with wise persons will become wise, but he that is having dealings with the stupid ones will fare badly."

Even when TV is not bringing stupid or immoral characters into our homes, it is still missing something crucial. Very little of what appears on TV even begins to address a need common to every human being: the spiritual need. TV may be very good at showing what a lamentable mess this world is in, but what does it do to tell us why man cannot seem to govern himself? It may be good at showing us the beauties of creation, but what does it do to draw us to our Creator? It may take us to the four corners of the globe, but can it tell us whether man will ever live there in peace?

No "window on the world" is complete without answering such vital spiritual questions. That is precisely what makes the Bible so valuable. It offers a "window on the world" from our Creator's perspective. It has been designed to help us understand our purpose in life and give us a solid hope for the future. Fulfilling answers to life's most troubling questions are readily available. They are waiting there to be read in the endlessly fascinating pages of the Bible.

But if we don't control the TV, where will we find the time?

**Young  
People  
Ask . . .**



# How Can I Make Him Leave Me Alone?

**David is the most popular boy in school. And suddenly, to the envy of every girl in school, he has become interested in you! Several times he has asked you to go out with him, and each time you've refused. But David tells you that no other girl has ever made him feel this way and that he won't take no for an answer. You don't want to hurt his feelings, but you know what he likely has on his mind. Why can't he just leave you alone?**

YOUNG women everywhere (and frequently today young men) are being beset by schoolmates and workmates who give them unwanted romantic attention. Often the overtures amount to a clear-cut invitation to engage in sexual immorality. How would you react if it happened to you?

Says an article in *Psychology Today*: "If a man introduces sexuality, by innuendo or physical gesture, you must immediately respond. If you do not, your silence encourages him to continue." So you must do something—but what?

## Why It's Hard to Say No

A young woman named Sherron admits rather bluntly: "Usually it is not difficult to say no when a boy is ugly." The problem is, all of us like attention. And when it's coming from someone we admire or find attractive, it's not easy to turn it down. But ask yourself: 'Does this person share my goals, my spiritual outlook, my morals?' (2 Corinthians 6:14) If not, responding to his overtures may very well put you on the road to disaster.

Nevertheless, you may also face intense peer pressure to go against your religious standards. Young Dana reports: "The girls on the job pressure me to go out dancing with them; they ask why I am not dating anyone." If you are still in school, schoolmates may similarly urge you to go out with some of the boys there. This kind of pressure can easily weaken your resolve. What can you do to strengthen it?

## Establish Boundaries

The old maxim goes, "An ounce of prevention is worth a pound of cure." Maria agrees. She says: "I let it be known that I am one of Jehovah's Witnesses." When boys know that you have high moral standards, they may be less likely to bother you.

Proper grooming also plays a vital role in

discouraging unwanted attention. One New York executive learned this when she began having problems with men at her workplace. She notes: "Though I was serious about my job, I didn't look it. So I put my hair up in a bun, and I started wearing cotton shirts and owl glasses and tailored clothes to work. I look serious, like I'm here to work, not flirt." Of course, such an appearance may not be necessary for your situation, but it does illustrate the need to be sure that your dress and grooming give the proper impression.

—1 Timothy 2:9.

Your choice of friends is another important factor. The Bible says: "He that is walking with wise persons will become wise, but he that is having dealings with the [morally] stupid ones will fare badly." (Proverbs 13:20) So do not associate with—or even listen to—people who tell off-color jokes or boast of sexual escapades. If you do, others may get the wrong idea about you. Young Erica says that when the talk gets out of hand, she tells them, "That's my cue to leave," and they get the point.

### Becoming "a Wall"

At times, though, even establishing that you are a Christian is not enough to discourage some boys. ("What difference does it make that you're a Christian?" reasoned one determined young man. "You're still a woman, and I'm still a man.") How do you handle such situations? Well,

consider the Bible's example of the Shulammite maiden. She was wooed by one of the richest, wisest, and most powerful men who ever walked the earth—King Solomon. However, she was already in love with a humble shepherd from her hometown. So how could she get Solomon to leave her alone?

To begin with, she had a proper estimation of herself. She said: "A mere saffron of the coastal plain I am." (Song of Solomon 2:1) Having a similarly humble disposition is critical because the number one tool that seducers use is flattery. The Shulammite was too modest to fall for it. And when the "daughters of Jerusalem" used peer pressure to try to coerce her to accept Solomon, she put them under oath 'not to awaken or arouse love in her until it felt inclined.' (Song of Solomon 3:5) Letting your associates know where you stand may likewise neutralize some of their pressure.

Most important of all, the Shulammite girl



**How can you handle boys  
who won't take no for an  
answer?**

was determined to resist every attempt the king made to sway her. "I am a wall," she proudly declared. (Song of Solomon 8:10) You must show yourself to be just as resolute when it comes to improper advances. Like the Shulammite, you must learn to be good at saying no. If doing so is hard for you, practice saying no in less serious situations. Get used to standing up for what you believe. Then when the serious situations come, you will be better prepared to handle them.

### **Block That Pass!**

Let's now consider some common enticements boys use and how you should view them:

'Everybody's doing it.' Don't believe it! A survey by the organization Planned Parenthood revealed that 53 percent of 17-year-old girls in the United States have engaged in immoral sex. However, that still leaves 47 percent who have not—including you! Besides, Christians do not 'follow the crowd' when Bible principles are being violated.—Exodus 23:2.

'You're being immature.' Hardly! Mature people are defined in the Bible as "those who through use have their perceptive powers trained to distinguish both right and wrong." —Hebrews 5:14.

'You owe it to me.' You don't owe sex to anyone—whether it be a schoolmate, a boss, a friend, or anyone else! And no one has the right to demand it.

'Oh, live for the moment. We might die tomorrow!' As Christians, we look forward to everlasting life. We cannot allow one moment of illicit sexual pleasure to destroy an eternity of happiness.—1 Corinthians 15:32-34.

Such devious approaches require straightforward—at times blunt—responses. And when someone is persistent, you may need to give more thought to how you will answer the person more effectively. (Proverbs 15:28)

Whatever you say, show that you are *serious* about rejecting his advances; do not act amused or embarrassed.

Author Joyce Jillson further suggests: "If you really want to cool matters off permanently, get into a discussion of religion." Many Christian youths have found this to be true. Says one girl: "Whenever someone tries to make a pass at me, I pull out *The Watchtower*." Yes, one of the best defenses is to make your beliefs clear. Let the person know *why* you are rejecting his advances. You are not so much rejecting him as a person as you are rejecting the course of action he wants to take. Such a line of reasoning is especially helpful if the person is someone you must face daily. If he shows some interest in the Bible's message, a male member of the Christian congregation can follow through on it.

Unfortunately, there are some who cannot be reasoned with. All you can do is state your position clearly, unsmilingly—and walk away. If the harassment continues or the situation is too difficult for you to handle, talk matters over with your parents. They may have some suggestions—or may decide to intervene. In some cases, you may even have to flee a situation!—Compare Genesis 39:12.

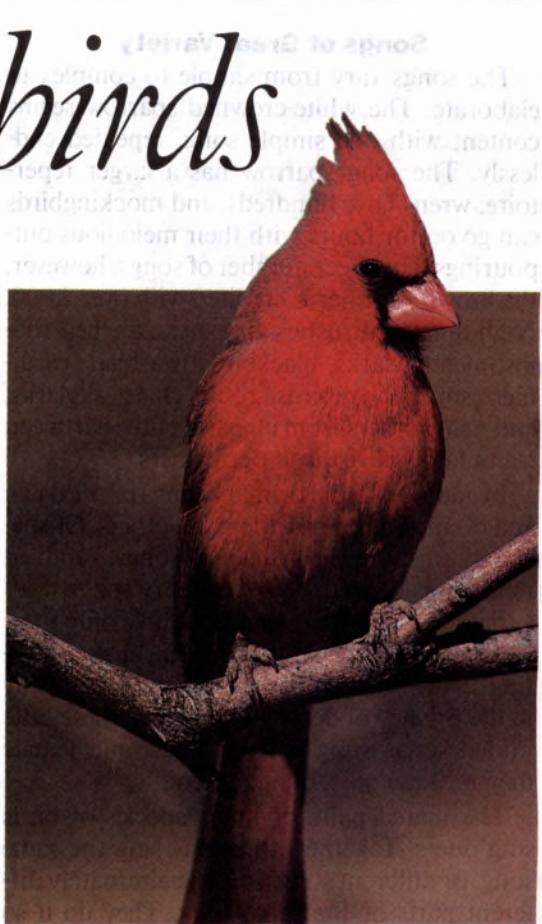
Now, you may well suffer verbal abuse or teasing as a result of your stand, but do not be discouraged. Like the Shulammite, you will enjoy the peace of mind that comes from doing what is right. (Song of Solomon 8:10) Besides, not all boys will react abusively. King Solomon, though spurned by the maiden, did not think badly of her. In fact, he wrote one of the most beautiful love songs ever composed, extolling her! Similarly, most boys will come to respect your courageous stand. And if they don't? Just continue being as resolute as the Shulammite. Be "a wall" and not an easily opened "door." (Song of Solomon 8:9) Remember: Your everlasting welfare and self-respect are at stake!

# Songbirds

## Virtuosos That Defy Understanding

"IN THE early morning hours, I was awakened by sounds strange to my citified ears. Strange but lovely. It was of birds singing. Not just one or two but many. Many birds. Some nearby, others more distant, and all of them singing. As I lay in bed and listened, a growing wonder came over me. I got up and went to the window, opened it, and got down on my knees with my elbows resting on the sill. Much nearer now, I heard the volume swell until it seemed that all outdoors was alive with music. Many songbirds with their many individual songs but all blending in one grand chorus. I ignored the chill in the air. I was enthralled."

The foregoing was experienced by a man from New York City who was visiting friends in North Yorkshire, England. Their home was surrounded by open fields and woodlands—and birds. When he greeted his host and hostess that morning, he was exuberant. They explained to him that he had just been exposed to the 'dawn chorus.' It happens every spring and into midsummer. There is also an 'evening



Paul A. Berquist  
chorus.' More subdued, but still impressive. In many parts of the world, these performances are becoming rare; in other areas they have ceased altogether.

There are some 9,000 known species of birds, about 5,000 of which are classed as songbirds, of the suborder *Oscines*. While some females sing, it is the males that put on these morning and evening musical extravaganzas. We are told that they are singing to hold territory and secure mates, but it's also just possible that they enjoy making music. Certainly, when the dawn chorus builds to its climax and continues unabated for 30 minutes, the singers do seem to reach festive heights.

## Songs of Great Variety

The songs vary from simple to complex to elaborate. The white-crowned sparrow seems content with one simple song, repeated endlessly. The song sparrow has a larger repertoire, wrens have hundreds, and mockingbirds can go on for hours with their melodious outpourings. For sheer number of songs, however, the brown thrasher is credited with over 2,000. Nightingales, thrushes, thrashers, finches, robins, meadowlarks, blackbirds, warblers, cardinals, superb lyrebirds, robin chats, skylarks, and many others from all parts of the earth can claim fame as virtuoso performers.

In addition to the primary songs of the dawn and evening choruses, there are others. Of special interest are the "whisper" songs, subdued renderings of snatches of primary songs, with variations and additions and audible only a few yards away. Often sung while the birds are sitting on the nest incubating eggs or hidden away in the privacy of dense underbrush, these little muted songs sung by both male and female may reflect a quiet contentment.

The mated pairs of many species of birds sing duets. Together, they may sing the same song, or different songs, or sing alternately different parts of the same song. They do it so perfectly timed that it sounds as if just one bird were singing. The interval between when one stops and the other starts is measured in milliseconds. The only way to be sure that two singers, not just one, are involved is to stand between them. In South America outstanding duettists are the musician wrens, considered by many to sing the most beautiful songs heard in the forests there.

## Shameless Plagiarism

Vocal mimicry is a favorite practice of several species. Ornithologists refer to it as a puzzling phenomenon and fail to see that it serves any function, although one researcher suggested that the birds were just playing. In North America the mockingbird excels at it. Its scientific name *Mimus polyglottos* means "many-tongued mimic." In just an hour's singing, one reportedly imitated 55 species of birds.

T. Ulrich/H. Armstrong Roberts



Philip Green

But the mockingbird holds no monopoly on mimicry. In Australia the superb lyrebird has "one of the most powerful and melodious of all bird songs," yet "to his own song he adds those

**Upper right, clockwise:**  
**Red-browed finch,**  
**satin bowerbird,**  
**song sparrow,**  
**variegated wren,**  
**eastern meadowlark**



J. P. Myers/VIREO/H. Armstrong Roberts

of nearly every species living nearby." Robert Burton, in *Bird Behavior*, pages 130-1, reports on the mimicry of bowerbirds, marsh warblers, and canaries. The Australian bowerbirds "have been recorded as imitating cats, dogs, axes chopping wood, motorcar horns and fence-wires twanging, as well as many kinds of birds.

Philip Green



Philip Green

"It is often mislead to believe that bowerbirds sing to attract females. One bowerbird is said to have mimicked an eagle so well that it caused a hen and her chicks to run for cover." Certainly, these bowerbirds were not singing to mate with axes chopping wood or to chase twanging fence wires from their territory! Perhaps they were just having fun, as were the people listening to them.

The marsh warbler of Europe pilfers so much from others that "the full range of its plagiarism was only realized through a study made in Belgium. Analysis of sonograms revealed that probably the entire repertoire was made up of mimicry. Not only were the songs

of nearly a hundred European species recognized in the sonograms but also those of over a hundred African species, which the marsh warbler would hear in its winter quarters."

Canaries "are undiscriminating and will copy anything, which makes them so popular as cage-birds. There is the famous example, from the early 1900s, of the Eurasian bullfinch which had been taught to whistle 'God save the King'. A canary in the next room learnt the tune over the course of a year and, when the bullfinch hesitated too long at the end of the third line, the canary would chime in and finish the tune."

The different species have definite preferences when it comes to platforms from which they will offer their renditions. Some sing from the ground, others from tips of weeds, others from an exposed perch at the top of a tree. Mockingbirds choose such exposed places high up and from time to time launch themselves into the air 10 or 20 feet and drop down to their perches again, singing all the while. Birds that nest in open fields often sing in flight while soaring over their territories. This is the case with the skylark, as shown by the poet Shelley in his beautiful "Ode to a Skylark," in which he speaks of this "blithe spirit" soaring high and pouring forth its heart "in profuse strains of unpremeditated art."

Spring and early summer is the time for the dawn and evening choruses. Even the Bible indicates that this is the special season for the birds to sing. The Song of Solomon speaks of the time when winter is past, the flowers are blooming, fruit is forming on the trees, the migrating birds have returned from their winter quarters, and "the birds will sing, and the turtle-dove's cooing will be heard in our land." (2:11, 12, *The New English Bible*) Many birds, however, will continue to sing after spring and summer, after mating and nesting activities have ceased.

One writer says that much about birdsong is puzzling, and "the greatest mystery is why these elaborate outpourings should have evolved in the first place," so "unnecessarily elaborate for any likely function." Perhaps he should consider that these "elaborate outpourings" did not evolve in the first place but that Jehovah God, who shows concern for sparrows and for mother birds sitting on their nests, gave them these musical gifts when he created them. (Deuteronomy 22:6, 7; Matthew 10:29) Maybe one of the 'functions' is to give the birds pleasure. Mockingbirds and some others often sing late into the night. Who is to say that it is not for their own enjoyment—and ours.

### How They Do It a Continuing Mystery

The "greatest mystery" may not be why they sing such elaborate songs; it may be how they do it. There have been different theories, and even now after intensive scientific investigation, there is no unanimous agreement. The bird's voice box is called the syrinx—a bony, boxlike resonating chamber with elastic membranes controlled by special muscles. It varies greatly in different species, its most complex form being found in the songbirds. It is located at the lower end of the trachea, or windpipe, and has two separate sound sources. Each sound source has its own set of nerves, muscles and membranes, which is why songbirds are said to have 'two voices.' By alternating muscular tension on the membranes and changing the air pressure, the bird varies volume as well as pitch. Birds with the most syringeal muscles have the greatest potential for producing different complex songs or calls. The most versatile of these feathered vocalists have from seven to nine pairs of these muscles.

Robert Burton in his book *Bird Behavior* shows why the singing feats of birds are beyond our comprehension: "Sound production reaches its peak in species such as the reed warbler and brown thrasher which sing two tunes at once with different notes coming from each

half of the syrinx at exactly the same instant. At one point in its song, the brown thrasher actually utters four different sounds at once, but it is not known how this feat is achieved."

For the last 20 years, the accepted theory of how birds sing was based on the syrinx alone. Its 'two voices,' capable of simultaneously producing two unrelated tones, with each one acting independently of the other, were said to be fully responsible for the quality and variations of birdsongs. After the two sounds leave the syrinx, they must travel up the length of the windpipe before they come out of the mouth. No role in song production, however, was given to the windpipe and its resonances.

In the last few years, a new theory has emerged as a result of intensive scientific investigation. It calls for a "cooperative coupling between the two syringeal sources" and the active participation of the trachea as a resonating, or vocal, tract. The picture emerging is one involving "close coordination between events in the syrinx and configurations of the vocal tract. This coordination is designed to achieve constant readjustment of resonances, with what must often be great speed and precision, to match the changing pattern of syringeal output." If each "voice" is separately listened to, some of the notes in the finished song are not to be found.

The ability of a songbird to alter its vocal filter is discussed by Stephen Nowicki in an article in *Nature*: "A bird could adjust its vocal filter in several ways: for example by varying tracheal length, by constriction of the larynx, or by flaring its throat and beak. Such configurational changes could well correspond to the head movements commonly observed in singing birds." Nowicki concludes: "In contrast to previous theories, birdsong must be viewed as the coordinated output of several motor systems acting in concert."

Researchers differentiate between bird voices and the clear whistles songbirds use.

N. H. Fletcher, writing in the *Journal of Theoretical Biology*, says that the pure tone whistles in bird song do not seem to come from vibrating membranes in the syrinx but by an entirely different mechanism, possibly "produced by purely aerodynamic means, without the aid of mechanically moving surfaces." Those lovely liquid notes used by some of the virtuosos still defy understanding.

Jeffrey Cynx of Rockefeller University Field Center offers this tidbit: "Readers may be delighted or humbled to discover that the mastery of absolute pitch can be found in songbirds. . . . My colleagues and I have tested a number of species of songbirds for absolute pitch perception, and found the ability to be rampant."

### **Beautiful to Them, Beautiful to Us**

"As scientists studying animal behavior," Stephen Nowicki and Peter Marler wrote in *Music Perception*, "we are often so engrossed by the functional and evolutionary significance of birdsong as a communication signal that we forget the powerful aesthetic feelings it holds for us as a kind of natural music." They then recalled that some scientists in the 1920's and thereafter "suggested that birdsong must be viewed as primitive art, beautiful from the bird's point of view as well as our own."

The whisper songs of the mother bird on the nest, the duets of the musician wrens in deep forests, the skylark's profuse strains of unpremeditated art, the bowerbird when mimicking an eagle so well that a hen and her chicks run for cover, the mockingbird's outpourings in the wee hours of the morning, and all of this climaxed by the grand dawn chorus that sets all outdoors alive with music! Surely, this should go far beyond statistics and sonograms. The performances of the birds may defy our understanding of exactly how they do it, but that mystery should only heighten our heartfelt appreciation of those wonderful songbird virtuosos and for the God that made them!

# CHOLERA OUTBREAK

## A West African Diary

By Awake! correspondent in West Africa

**D**ECEMBER: An elderly woman was the first victim. Diarrhea was the first symptom, watery and frequent. Then came vomiting. Cramps knotted her thighs and belly. Her breathing became rapid and shallow, her skin wrinkled, and her eyes sank in their sockets. Forty-eight hours later she was dead.

The following day, another person in the same house was stricken, then another. Next, some neighbors got sick. The disease began to appear in nearby villages and towns. The story was the same—diarrhea, vomiting, and in a third of the cases, death.

The Pasteur Institute examined stool samples and confirmed the worst fears of medical experts. It was the disease that has scourged 93 nations in the past 25 years, a disease so lethal that its very name elicits fear: cholera!

In the capital of one West African land, I witnessed some of the drama attending the outbreak of this dreadful disease. Following is a diary of the events of that year.

### **"No Need to Fear"**

*February 13:* Amid growing rumors, a newspaper carries the front-page news: "Diarrhoea: 70 Dead but Crisis Subsides." The article assures its readers that there is "no need to fear an outbreak of cholera."

*April 25:* I ask Dr. L. Bakka,\* a pediatrician and head of the nation's Control of Diarrhoeal Diseases program, if the persistent cholera rumors are true. "They're true," he

says. "There is cholera and it is widespread. Out of 13 districts, 10 have cholera."

I ask about mass inoculation. "We won't be vaccinating people," he says. "It doesn't do much good either in preventing or in controlling an epidemic. The present vaccines are effective for only three to six months."

"Are you saying that the vaccines are of no value in combating an outbreak?" I ask.

"No, it is the World Health Organization that says it."

"Have you been vaccinated?"

"No. And I've been in many areas where there is cholera, and I have treated many cholera patients."

Bakka explains that cholera is caused by a certain type of vibrio, or bacterium, that gets into the body through contaminated food or water. The vibrios then collect in the intestines, where they multiply and produce a poisonous substance that causes diarrhea and vomiting. These vibrios can then get into drinking water or on food contaminated by unwashed hands—and the disease is passed on.

The doctor points to his mouth. "The important thing is what goes in here," he says. It is said: "You can eat cholera and you can drink cholera, but you can't catch cholera!"

Was the disease likely to hit the capital? "It already has," says Bakka. "We've admitted five cases to the hospital today."

*May 7:* The overburdened hospital is ill-equipped to cope with a cholera epidemic. The cholera patients are isolated in a large room with a concrete floor and a single ceil-

\* Names have been changed.

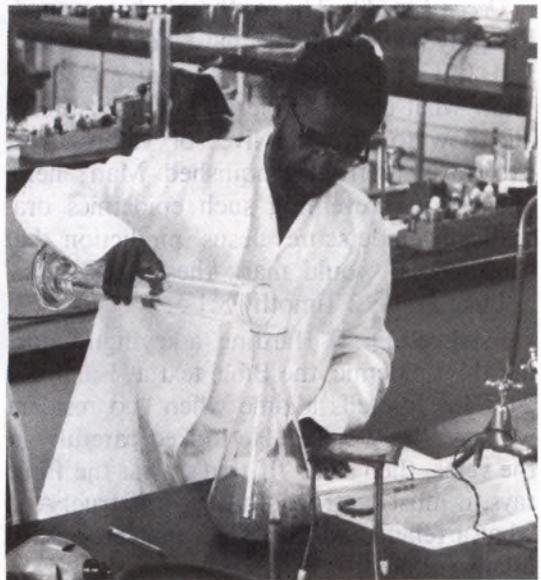
ing fan. Toilets are too far away to be used, so excreta is collected in bedpans and plastic buckets, then disinfected before disposal. There are now 12 patients—men, women, and 2 children. All look exhausted and miserable.

The stricken lie on wooden benches. There are no beds, no hospital meals, no private rooms. Yet, nobody complains. Life is being offered to these emaciated and shriveled victims, life in the form of one-quart plastic bags marked "Ringer's Lactate." It is a solution that is fed intravenously.

I learn that cholera kills through dehydration. As vital body fluids and essential salts are lost through vomiting and diarrhea, the human body withers and dies. The lactate drips serve to rehydrate, or replace, these fluids and maintain them until diarrhea and vomiting stop—usually within a few days. The drug tetracycline kills the vibrios and shortens the duration of the illness.

### The News Breaks

*May 29:* A British radio news broadcast breaks the news that cholera has killed from



WHO photo by J. Abcede

300 to 600 people throughout this country. I know one of them. When the father left for work, his young son was happily playing. When he came home in the evening, the boy was dead.

This afternoon the local branch office of Jehovah's Witnesses decides to send information to every congregation in the country, explaining how to guard against the disease.

*June 2:* Beds covered with plastic sheets have now been moved into the cholera ward. A dozen new patients arrive each day. Those who arrive in a state of shock and are unable to drink ORS (Oral Rehydration Salts) solution are given lactate drips, often three or four quarts in the first hour.\* After a day or two, they are released. Mild cases are put on ORS and sent home after a few hours.

Supplies of Ringer's lactate and ORS packets pour into the country and are rushed to provincial health centers, where the demand is presently greater than in the city. Over 600,000 packets of ORS have already been distributed. The government is providing vehicles to transport medical teams and supplies to areas in need. Radio broadcasts and leaflets inform the public as to how they can avoid contracting the disease and what to do if symptoms appear. Sound cars patrolling the capital carry the same message.

*June 10:* Admissions at the cholera ward jump to a peak of 71. Fifteen nurses now staff the clinic. Relatives of patients work with them to care for the stricken. The room is full—two to a bed. Some patients lie on the floor.

People arrive carrying their sick on their backs. Some have walked for miles and are soaked with excreta. Their eyes plead: 'Can you save the life of my child . . . my brother . . . my mother?'

\* See "A Salty Drink That Saves Lives!" in the September 22, 1985, issue of *Awake!*

## **When Cholera Strikes!**

Drinking water is the main source of cholera infection. The germs responsible for cholera come from human waste and get into drinking water because of a lack of hygiene. Drinking or handling this polluted water may result in infection. A major symptom of cholera is diarrhea. This brings on severe fluid loss, often resulting in shock and even death. To prevent cholera infection:

- 1.** Use only boiled, clean, or treated water.
- 2.** Wash your hands with soap and water before handling food and before eating.
- 3.** Cover food to protect it from flies.
- 4.** Wash raw food with clean or treated water.
- 5.** Use a toilet or proper place far from wells, rivers, and streams—not the open field.
- 6.** If infection occurs, rush patient to doctor or health center.

*Source: World Health Organization*

*June 21:* A press release states: "The Ministry of Health . . . wishes to assure the general public that there is no need for any alarm or panic." Yet people *are* alarmed! There are reports that Ringer's lactate is being hoarded. Taxi drivers charge exorbitant fares to carry cholera patients to the hospital—if they take them at all. Children walking to school past the cholera clinic are seen covering their mouths and noses with their hands. Some people are foolishly taking tetracycline daily, hoping this will ward off the disease.

I speak with Alafia, a student nurse at the hospital. She is clearly agitated. "One of the cooks at our hostel has come down with cholera!" she exclaims. "Some nurses are taking vacation time to avoid dealing with the outbreak."

But not all shy away from helping out. Susan Johnson is matron in charge at one cholera clinic. Though she is usually a jovial person, the strain is showing today. As I enter the ward, a patient's relative is taking a paper cup and dipping it into an urn of clean water. "Don't put your hands in there!" Susan snaps. "Contaminated water is how this disease is spread!" She looks at me and says in frustration: "They just don't understand."

## **The Battle Drags On**

*September 1:* Throughout the country, there have now officially been reported 10,200 cases, 796 deaths. Most deaths have been when victims have not received medical treatment or have not received it fast enough.

Of the 3,341 patients admitted to the clinics here, only 1 in 93 has died. Most of these were already dying when they were brought in. Some were unconscious due to advanced dehydration. At that point the blood grows thick and black, and veins collapse. As an emergency measure, the Ringer's lactate is infused directly into the jugular vein or the femoral artery.

*December 30:* The outbreak has waned. Roughly 14,000 people have been stricken, and 1,213 have died. It is ironic. Doctors know what causes cholera, how it is spread, and how to save the lives of victims. But cholera is far from vanquished. Man's helplessness in preventing such epidemics dramatically underscores Jesus' prediction that "pestilences" would mark these "last days." —Luke 21:11; 2 Timothy 3:1-5.

I showed Dr. S. Harding, a key figure during this epidemic, the Bible text at Isaiah 33:24. This foretells a time when "no resident will say: 'I am sick.'" He looked carefully at the verse, then said: "If that's what the Bible says, it must be true." Indeed, it is true! And what a relief it will be when that promise is finally fulfilled!

# They Said It With Flowers in Japan



EVER since the Great Exhibition of 1851 in London, world's fairs have always highlighted the progress of industry and technology. Nature, however, was center stage at the expo held in Osaka, Japan, through the past summer months. It reversed the trend and put flowers and greenery to the fore.

By Awake! correspondent in Japan



Featuring the theme "Coexistence Between Nature and Mankind," the beautiful gardens on the grounds of the so-called Flower Expo testified to mankind's potential to live in harmony with nature. At the same time, warnings were sounded of global environmental crises.

The grounds covered 350 acres and were divided into four sections around a central body of water named the Sea of Life. To the

right of the main gate was the Mountain Area, with its rolling hills. The Field Area opened up to the left. Beyond the Field Area, roads led to the City Area, the site of various pavilions. The Magical Crossroads, an amusement park, lay at the far end of the grounds.

A leisurely walk through the Field Area, the Mountain Area, and the international gardens made us feel totally immersed in the



flower aspect of the Expo. Fields of flowers of yellow, purple, lavender, and many other colors refreshed both the eyes and the spirit. Gentle breezes, scented by roses blooming in red, white, and yellow, added to the relaxed atmosphere. The quaint Valley of Flowers with its Japanese flavor gave its special touch. All of this indicates that men were made to live in gardenlike surroundings.

Wandering among the international gar-

dens, our attention was drawn to Israel's Bible Garden, which focused on old olive trees and stone walls. Displays of quotations from the Song of Solomon and other Bible books helped to recreate the atmosphere of a garden in Bible times.

Another display that brought to mind a Bible account was a dynamic demonstration of the parting of the waters of the Sea of Life. "Pumping 600 tons of water in four minutes makes it possible," explained an official at the site. As the sea gradually opened up, six fountains of different designs danced to music accompanying the pageant. If human technology can accomplish this, surely the almighty Creator was able to part the Red Sea.—Exodus 14:21-28.

#### **High-Tech Pavilions**

In spite of the long waiting time, large crowds were drawn to the exhibits in the many pavilions. One pavilion featured a "magic carpet" on which we were given a butterfly's-eye view of the migratory path of a monarch butterfly. Seated on the "magic carpet," a transparent plate of tempered glass, beautiful scenery unfolded beneath us. We felt as if we were flying with the monarch. When an alligator snapped at the butterfly, we too experienced the terror of escaping by the skin of our teeth.

Entering another pavilion, we were given a special pair of glasses to see a three-dimensional movie entitled *The Last Buffalo*. We could almost reach out and touch a grizzly bear catching a salmon, a cougar jumping toward a rock, and a pair of buffalo trying to protect their calf from enemies!

#### **Rare Flowers and Unique Displays**

Pavilions featuring gardens and greenery also attracted many visitors. The world's largest flower, the rafflesia from Indonesia, was one such attraction. Measuring about 40 inches across and weighing some 15 pounds, this

parasitic plant flourishes without roots or leaves. After thriving on the host for some 30 months, a grotesque flower blooms and lasts only four days.

In the Great Conservatory, a huge greenhouse, 15,000 plants of 2,600 species native to lands from the tropics to the polar regions were on display. A network of pipes, which heated or cooled the soil, and air curtains, which divided off the spaces, combined to maintain eight different climatic zones within the conservatory. With such technology, tropical plants and desert cacti, as well as Alpine plants like the rare Himalayan blue poppies, can bloom, serene and dignified.

#### **Warning of Ecological Crises**

As if deliberately to mar all the peace and beauty, warnings of ecological crises facing mankind today were seen throughout the grounds. For instance, messages and pictures with such titles as "Destruction of Ozone Layer," "Global Warming," "Acid Rain/Acid Fog," "Disappearance of Tropical Forests," and "The Earth Is Becoming More Desert-like" were prominently displayed in the pavilions and gardens of the Japanese Government Garden.

What, though, is the cause of such ruination? "Humans—Victims of Our Own Destruction," a display at the exit of the Great Conservatory, indicted the culprit. "Men have sacrificed many of earth's natural re-

sources for their own profit. . . . As a result, we are now faced with the consequences of our actions."

Even behind ecological crises that are thought to be the work of nature, we see the shadow of human hands. A plaque in the UN Peace Garden alerted us to the fact that desertification threatens one third of the earth's land, affecting nearly a hundred countries. "Desertification may be accelerated by drought, but it is rarely caused by it," it explained. "Major causes are man-made and can be controlled and cured by human action."

#### **Earth-Wide Gardenlike Home—How?**

The grounds on which the Flower Expo's gardens and flower beds stood was once a garbage dump for Osaka. This testifies to man's ability to change a wasteland into a paradise. However, even though many large corporations put on these beautiful shows, they are "being criticized for their environmental record in other parts of Japan and the rest of the world," said *Japan Quarterly*. In fact, instead of using his talents and abilities to transform the earth into a paradise, man—through his greed and selfishness—is destroying the earth's ecological balance.

Is there any hope for transforming the ruined earth into a paradise? The Bible provides hope with these words: "The wilderness and the waterless region will exult, and the desert plain will be joyful and blossom as the saffron." But how will this come about? Isaiah provides the answer: "There will be those who will see the glory of Jehovah, the splendor of our God." (Isaiah 35:1, 2) Yes, under the rule of God's Kingdom by Christ, human efforts to harmonize man's progress with nature will have certain success. The earth will be transformed into a global paradise, to man's eternal blessing and to God's glory and praise.

#### **In Our Next Issue**

##### **Gossip—How to Avoid Getting Hurt**

##### **Should I Join a Gang?**

##### **A Visit to the Great Barrier Reef**

# Preaching the Good News in Many Languages

WHEN Jesus gave the sign that would mark the last days, one of its features was the earth-wide preaching of the good news of the Kingdom. (Matthew 24:14) To understand why this worldwide preaching in all nations in many languages did not happen before this generation, and why it can and is happening now, we must look back in history. As Webster's dictionary points out, it was not until the 15th century, just over 500 years ago, that Gutenberg became the inventor of printing from movable type. From this beginning, man developed the means to reproduce the printed page in quantity for mass distribution.

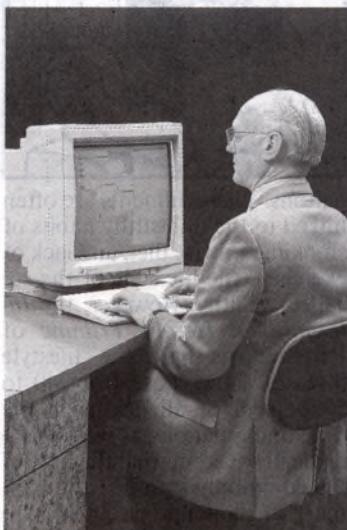
It is good to remember that before the invention of the printing press, the Bible was a scarce item, as it had to be copied by hand. Hand copying was laborious and expensive. The invention of movable type and the printing press was a giant step forward in making it possible to print the Bible and Bible-based literature in all languages.

Since 1914 there have been tremendous forward strides in printing and publishing, with the offset press eventually taking over most of the work formerly done on letterpress machines.

In more recent years, the advent of the computer has again accelerated this process. Characters, accents, and other im-

ages could be drawn, scanned into a computer, and made available for quick use at the touch of a key on a computer keyboard. This has made it much easier to publish material for peoples of all languages around the world.

In 1979 the Watchtower Society started what it called the MEPS project. MEPS is the



acronym for "Multilanguage Electronic Phototypesetting System." Commercial companies were developing computers only for selected languages where there would be a profit on their investment. The Society's commission is different. The Bible says that the good news is to be declared "to every nation and tribe and tongue and people." —Revelation 14:6.

Through many of the Society's 93 branch offices in all parts of the earth, research into language characteristics was done. A list of all the characters and accents needed to print literature in the languages covered by each branch had to be produced. Also needed were the rules of word division for each language. Each character and accent had to be drawn, scanned into a computer, and edited. This involved years of dedicated work. The result is that the Kingdom message can now be printed in more languages than ever before, and the number keeps on increasing.

In the beginning the Society designed and built their own computer hardware and software. Jehovah's Witnesses came from around the world to assist with this project. There was an interchange of skills as well as of encouragement. (Romans 1:12) It was somewhat like a reversal of what occurred at the Tower of Babel. After specialized training, the equipment, together with the skilled workers, was sent to branches around the world. The result is a versatile publishing system used in over a hundred lands and islands of the sea, well equipped to produce the Society's publications in about 200 languages thus far.

In these foretold last days, the good news of God's Kingdom is indeed being preached in all nations and in many languages.

## Watching the World

### Record Warmth

Climate expert James Hansen was so sure that the greenhouse effect had already begun to heat up the earth's atmosphere that he bet fellow climatologists that at least one of the first three years of the 1990's would set a temperature record. He could not have won his bet any sooner than he did. According to three independent systems of measurement, 1990 was the hottest year on record. Nonetheless, most climatologists feel that it is still too early to tell whether the greenhouse effect is responsible for the record temperatures. One year, they say, is not enough to prove anything. Hansen agrees but insists that an underlying trend made his bet a safe one. According to *Science* magazine, he says that it has become very difficult for the atmosphere to cool down "because it's being pushed pretty hard by greenhouse gases toward a warmer climate."

### Suicides in Norway

According to the World Health Organization, the suicide rate in Norway has quadrupled in the last 30 years. Currently, nearly 14 out of every 100,000 Norwegians age 15 to 24 kill themselves. The Oslo newspaper *Aftenposten* reports that in the industrial town of Gjøvik, some 15 percent of young hospital patients are there because of suicide attempts. Ironically, the paper notes that Norway is now the wealthiest of the Scandinavian countries. Far from creating happiness, wealth may have added to the common feeling of despair. *Aftenposten* quotes one hospital official as saying: "It may be that we have thrown our concern for others overboard to con-

centrate on money and material things."

### Life-Style That Kills

Half of all deaths can be prevented by a change of life-style, claims Dr. Ivan Gyarfas, head of the cardiovascular disease unit for the World Health Organization. Lung cancer, high blood pressure, heart attacks, and strokes account for 70 to 80 percent of all deaths in industrialized



nations. These ailments are often linked to the unhealthy habits of smoking, unwise diet, and lack of exercise—the life-style of the so-called wealthy. However, the *International Herald Tribune* of Paris reports that these "lifestyle diseases" now cause from 40 to 50 percent of all deaths in the developing nations as well. Paradoxically, it seems that the style of life commonly stamped the hallmark of economic progress is directly related to the major causes of death worldwide.

### An Attack on Paul

An American Episcopal bishop, John S. Spong, has just published a book claiming that the apostle Paul was a homosexual. Spong has long been a controversial figure. In the 1970's he campaigned for the ordination of women as ministers. In the 1980's he urged priests to bless homosexual unions and ordained an active homosexual as a priest. Now, ac-

cording to *The New York Times*, by teaching that Paul was homosexual, Spong "hopes to make homosexuals more comfortable in the Episcopal church and to attract people who left the church feeling that it was a moribund institution wedded to ancient ways of thinking." The *Times* notes, though, that "criticism of his thesis on Paul has come from all quarters, friends and foes, liberals and conservatives, Protestants and Catholics." In what may be this story's unlikeliest twist, Spong insists that his conclusions are based on "serious Bible study."

### Sex and the Teenage Girl

The fear of AIDS may have modified the sexual behavior of some Americans, but it has had no such effect on teenage girls, according to a recent study by the CDC (Centers for Disease Control) of Atlanta, Georgia, U.S.A. In 1970, when the "sexual revolution" was at its height, 28.6 percent of the 15- to 19-year-old girls in the United States reported having had premarital sexual intercourse. By 1988, when AIDS was already well publicized, that figure had soared to 51.5 percent. The increase was most pronounced among the youngest, the 15-year-old girls: up from 4.6 percent in 1970 to 25.6 percent in 1988. The CDC study also found that the younger a girl is when she becomes sexually active, the more likely she is to have several partners. Not surprisingly, teenage girls were also found to suffer relatively high rates of sexually transmitted diseases.

### Hazardous Motherhood

Every year over half a million women die from complications of

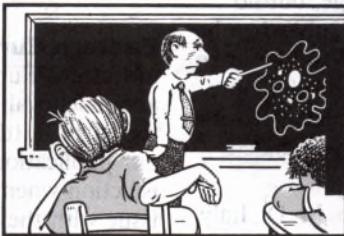
pregnancy and childbirth, reports the World Health Organization. *World Watch* magazine notes, however, that many experts believe the real figure to be at least twice that high. The scourge is at its worst in less developed lands. This year it will kill 1 out of every 73 pregnant women in South America, 1 out of 38 in South Asia, and 1 out of 21 in Africa—compared to 1 out of 10,000 in northern Europe. *World Watch* blames such factors as malnutrition and primitive health-care facilities for making motherhood so risky. Abortion alone is responsible for the death of 200,000 mothers each year. Studies show that children left motherless are themselves at greater risk of malnutrition and death, thus constituting a large portion of the 15,000,000 children under five years of age who die each year in developing lands.

### Violent Fleets

A violent mutiny aboard a Taiwanese fishing boat has brought to light a disturbing trend in the Taiwanese fleet, reports *Asiaweek* magazine. Reportedly, the mutiny broke out after two crewmen, distraught over brutal treatment at the hands of the ship's captain, attempted suicide by jumping overboard—whereupon the captain had them fished from the sea and brutalized them some more. The subsequent mutiny, which left at least eight of the crew dead, was apparently not an isolated incident. *Asiaweek* reports that according to Taiwan's Fishing Bureau, "at least 3,000 fishermen from Taiwan boats were reported dead or missing in the past ten years." One social worker told the magazine: "The number of people murdered or forced to walk the plank on these fishing boats is astounding."

### Making Biology Boring

A panel of scientists and educators declared recently that biology is taught so badly in the United States that the course seems designed to destroy students' interest in science. In an unusually blunt report, the panel claimed that biology teachers are poorly trained and use textbooks that are



often uninteresting, superficial, outdated, and even inaccurate. Students come away from such biology courses, the panel said, "with the conviction that further exposure to science is something to be avoided if at all possible." Dr. Timothy H. Goldsmith, the panel's chairman, laid the blame on every aspect of the educational system.

### Homeless in Germany

Over a million people in the Federal Republic of Germany are homeless, according to the German Association for Persons of No Fixed Abode. Heinrich Holtmannspötter, the secretary of the association, notes that some 130,000 of these are vagrants without any fixed income. Most of the rest of the homeless are immigrants from other countries or persons seeking asylum in Germany. "But in almost all cases," Holtmannspötter claims, the reason for homelessness is "the lack of cheap accommodation." The German newspaper *Frankfurter Allgemeine Zeitung* reports that the homeless have increased substantially in recent years and that vagrants are now "a common fea-

ture of almost every German city."

### Bodysurfing Dangers

Bodysurfing, the water sport of riding ocean waves, is not always as easy as it looks, warns the American magazine *In Health*. Debbie Goebert, an epidemiologist with the Pacific Basin Rehabilitation Research and Training Center, examined hospital records in Hawaii for the years 1985 to 1988. She found that of 500 people who were admitted to hospitals for injuries sustained in the ocean, it was the bodysurfers who suffered the most long-term damage. Their injuries ranged from broken bones and damaged backs to paralysis and even a few cases of brain damage. Most of those injured were inexperienced tourists. *In Health* warns: "Whether you're vacationing on the coast of Hawaii, California, Maryland, or Australia, ask lifeguards how rough the surf is and what the beach is like before making a splash."

### Absurd Brutality

Appalled by the number of deaths caused by reckless automobile driving in Brazil each year, an editorial in the newspaper *O Estado de S. Paulo* stated: "It is a question of absurd brutality, free slaughter, testifying, on one hand, to irresponsibility and, on the other, to a shocking contempt for human life." What is Brazil doing to try to bring negligent drivers to their senses? One judge sentenced a 23-year-old who caused the death of two of his friends in a street auto race to spend two years observing the autopsies of traffic-accident victims. A motorist who killed a 15-year-old girl and injured five others was sentenced "to work three years in an emergency hospital, especially helping to care for accident victims."

## From Our Readers

**Color Blindness** My husband has undergone an eye operation and presently cannot read. As soon as we received the article on Daltonism [color blindness] in the February 22, 1991, issue, he asked me to read it to him. As a child, he could not distinguish a black-and-white TV image from a color image, but no one in his family was concerned. Only when he later took his driver's license exam did he learn that he was color-blind. My husband therefore expresses his gratitude for your article. Had it been available before, he could have avoided many awkward situations!

M. D., Italy

**Religiously Divided Homes** Your article "Young People Ask . . . How Can I Live in a Religiously Divided Home?" (January 22, 1991) really helped me cope. Sometimes my dad would like me to stay home from Christian meetings just to watch TV. Your article helped me and my mom to keep praying and hoping that Jehovah will reach my dad's heart. Thank you!

C. E., United States

My father is not a Christian, and that sometimes makes me sad. I plan to use your helpful points to try to win him over.

L. M., United States

**Doctor-Patient Cooperation** Thank you for the article "Bridging the Gap Between Doctors and Witness Patients." (November 22, 1990) I have a little boy who was born with hydrocephalus and spina bifida. He had six operations before he was a year old. Although his condition has improved, he still needs medical attention. Because of our stand on blood [as Jehovah's Witnesses], I live with uncertainty as to whether doctors will cooperate. We hope the arrangement of having trained Christian broth-

ers to help us deal with doctors will soon come to Argentina.

A. M., Argentina

*Hospital Liaison Committees are being established in Argentina.—ED.*

**Eastern Europe** Since the recent changes in Eastern Europe began, I have been curious about Jehovah's Witnesses living in that part of the earth. Little information could be found in our publications. You can thus imagine my satisfaction when I received the January 8, 1991, issue with the article "Jehovah's Witnesses in Eastern Europe." I hope you will continue to inform us about the advancement of the preaching work in that part of the world.

E. S. L., Brazil

**Immune System** I want you to know how excellent a piece of medical research the articles on the immune system (November 22, 1990) were. I work in hematology-oncology and have really appreciated the scholarly but clear way in which the material was presented. I have distributed copies of the magazine to the doctors and nurses with whom I work.

G. T., United States

I am a science teacher, and as it happened, we were discussing immunology in class when this issue of *Awake!* was published. I distributed a copy to each student, and we had an advanced science session based on it.

R. I., United States

**Drugs** When I read the article "Drugs? Just Shake Hands With Satan!" (November 8, 1990), I was moved to tears. The report was sad but, at the same time, strengthening. The article made it clear that it does not pay to trade Jehovah for anything this old world may offer.

M. C. P., Brazil

# The Polar Bear's Engineering Feat

THE polar bear could teach mankind a good deal about harnessing solar energy, according to some scientists. Physicist Richard E. Grojean became intrigued with this notion in the mid-1970's, after an interesting discovery was made about white Arctic animals.

Canadian wildlife census takers found that they could not simply take conventional aerial photos of these creatures, since they blend into the white landscape. Infrared film, usually ideal for photographing warm-

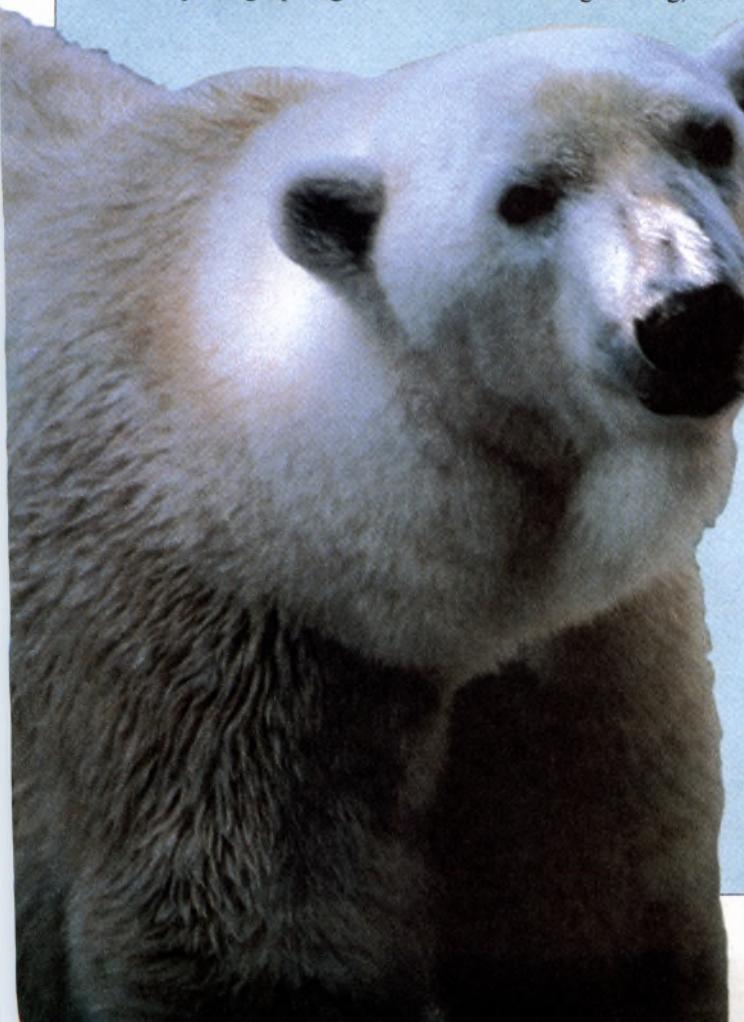
blooded animals, also failed. The animals were simply too well insulated to give off enough heat for the film to detect. However, when ultraviolet film was used, white seals and polar bears showed up as stark black objects on the white background. "While the snow reflected ultraviolet rays, the animals absorbed them," reports *The Toronto Star*.

Why? According to physicist Grojean and Gregory Kowalski, an associate professor of mechanical engineering, the bear's

coat holds the answer. At the invisible, ultraviolet end of the spectrum, the hairs of the coat trap 90 percent of the ultraviolet light and transmit it to the black skin beneath, thereby warming the bear. In the Arctic, where the temperature often dips to -20 degrees Fahrenheit, the coat's ability to keep its owner warm is remarkable. Common rooftop solar collectors, in contrast, are far less efficient. In fact, Kowalski estimates that man-made solar panels might be rendered 50 percent more efficient by applying the principles of the polar bear's coat.

In the visible portion of the spectrum, the hairs on the coat behave in just the opposite way; they reflect 90 percent of the light. This gives the bear its dazzling white appearance, even though the individual hairs themselves are not really white but transparent and pigmentless. The coat's whiteness enables the bear to hunt unseen on the Arctic snowscape. Some observers have even seen polar bears covering their black noses as they stalk their prey, as if conscious of the need to blend into the snow.

The polar bear's coat thus perfectly addresses two of the animal's key needs: looking white and staying warm. Little wonder, then, that physicist Grojean praised the coat as a "fantastic engineering feat." All in all, this unique and magnificent creature testifies to the wisdom of its Creator.



# teo's miniseries: the next best thing

in our culture, we've got to have a real future-oriented, tech-savvy culture that can make things more sustainable and more efficient. That's what we're trying to do. We've got to make sure that we're protecting our natural resources, but at the same time, we've got to make sure that we're doing it in a way that's sustainable and responsible. That's why we're doing what we're doing.

The first step is to make sure that we're using clean energy, and that's where solar panels come into play. We've got to make sure that we're using solar power to power our homes and businesses. We've got to make sure that we're using water efficiently, and that's where rainwater harvesting comes into play. We've got to make sure that we're using energy-efficient lighting, and that's where LED lighting comes into play. We've got to make sure that we're using energy-efficient appliances, and that's where energy-efficient refrigerators, dishwashers, and washing machines come into play.

The second step is to make sure that we're using sustainable materials, and that's where recycled materials come into play. We've got to make sure that we're using sustainable materials, and that's where recycled materials come into play. We've got to make sure that we're using sustainable materials, and that's where recycled materials come into play.

The third step is to make sure that we're using sustainable transportation, and that's where electric vehicles come into play. We've got to make sure that we're using sustainable transportation, and that's where electric vehicles come into play. We've got to make sure that we're using sustainable transportation, and that's where electric vehicles come into play. We've got to make sure that we're using sustainable transportation, and that's where electric vehicles come into play.

That's what we're trying to do. It's not just about saving the environment, it's also about creating a better future for everyone. We've got to make sure that we're doing what we're doing, and that's why we're doing what we're doing. We've got to make sure that we're doing what we're doing, and that's why we're doing what we're doing. We've got to make sure that we're doing what we're doing, and that's why we're doing what we're doing. We've got to make sure that we're doing what we're doing, and that's why we're doing what we're doing.