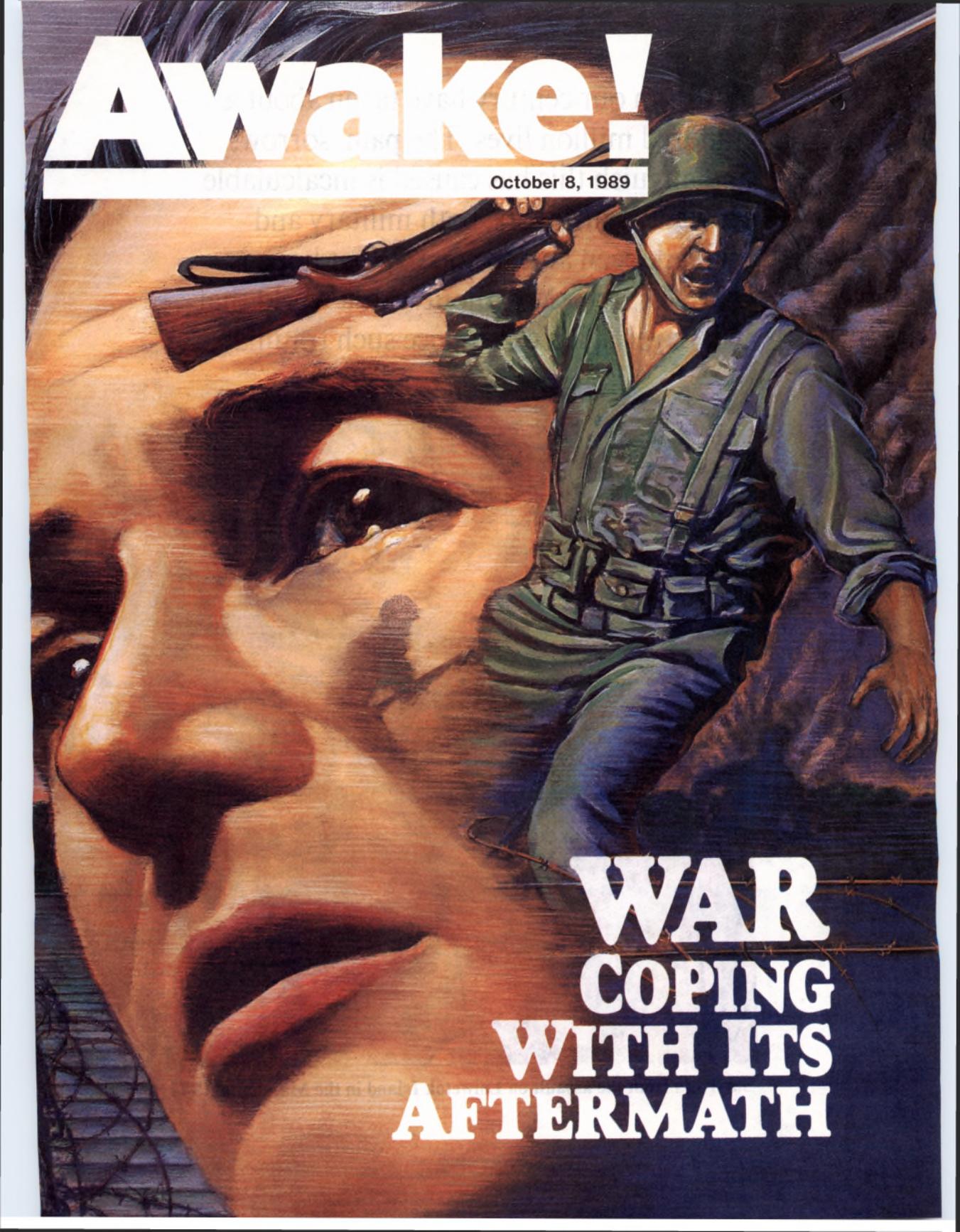


# Awake!

October 8, 1989



**WAR  
COPING  
WITH ITS  
AFTERMATH**

WARS in our century have taken about a hundred million lives. The pain, sorrow, and anguish this has caused is incalculable. How have survivors, both military and civilian, been able to cope? What hope is there for a world without war, a world that will never again experience such trauma?

Official U.S. Coast Guard Photo



**Survivors from the assault on Eniwetok Island in the Marshalls, 1944**

**W**E HAD been on a patrol that had proved uneventful. Our officer, a mild, kindly man, not a professional soldier, was leading us back to our own lines. A sentry challenged us. Before our officer could reply, a nervous soldier behind our lines fired, hitting the officer in the face. The poor man died, choking in his own blood." For Edward B——, a British soldier, that summed up the trauma of World War II.

Some try to hide the real face of war. World War I, for example, was portrayed by some propagandists as "part-Armageddon—the final battle of Good against Evil . . . and part mediaeval joust, with a touch of cricket thrown in." (*The Faces of Power*) It was neither. It was better described by news correspondent and author Ernest Hemingway when he wrote that it was "the most colossal, murderous, mismanaged butchery that has ever

taken place on earth"—up to World War II.

Such butchery has marked all the wars of this century and before. "Every war in history," wrote Malcolm Browne, "whatever its cause or justification, has been filthy, agonizing and de-

# WAR

## The Shock and the Trauma

grading to all concerned." In Vietnam, he saw firsthand much of the well-documented slaughter and agony of war, but he still felt that "the spectrum of horrors perpetrated in Viet Nam represents nothing new in human experience."—*The New Face of War*.

Similar horrors were certainly experienced during World War II. Germany and Japan were laid waste and totaled their military and civilian war dead in the millions. The United States lost about 400,000, Britain 450,000, and France over half a million. The Soviet Union lost an estimated 20 million. Listing what it described as "this toll of human suffering," the book *World War II* stated: "Overall casualties in the war, including civilians, numbered at least 50 million."

The civilian casualties were part of what Gerald Priestland in his book *Priestland—Right and Wrong* described as "total warfare: war for men, women and children, regardless of where they are or what they are doing, how old or helpless they may be." It was typified, he said, when "the allies incinerat[ed] Hamburg and Dresden, and the Germans wreck[ed] Liverpool and Coventry."

The annihilation of tens of millions in war has been obscene. But what about those who survive the "filthy, agonizing and degrading" trauma of war? How are they affected? And how can they cope with the aftereffects? The following articles will examine these questions.

# WAR

## The Bitter Aftermath

THE juggernaut of war has crushed millions of men, women, and children, combatants and noncombatants alike. It has left many physically, emotionally, and psychologically scarred.

### *The Soldiers*

Many soldiers who survive the carnage of conflict do so maimed and mutilated, with their future life prospects blighted. Typical is one old soldier who survived the first world war—only to spend the next 30 years of his life in continual suffering due to the after-effects of the mustard gas used in that war.

It is often the emotional and psychological wounds, however, that are the hardest to cope with. "No man who took part in the First World War ever completely shook off the ex-

perience," wrote Keith Robbins in *The First World War*. "Men who appeared to retain their poise and composure were secretly scarred," he continued. "Many years later they would wake up in the night, still unable to shake off some lingering horror."

Think of the horror, for example, of just one day in 1916 during the first battle of the Somme—21,000 killed and 36,000 wounded among British troops alone! "The men who came back from the Somme rarely spoke of their horrific experiences. A shocked numbness set in . . . One man was haunted all his life by the thought that he'd been unable to help another wounded comrade who called out to him as he crawled back across No Man's Land."—*The Sunday Times Magazine*, October 30, 1988.

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"You are afraid that you will hurt those you love," said Norman J——, explaining the consequences of his intensive battle training and combat. "If you are awakened suddenly, the instinctive reaction is to attack." Men in prolonged traumatic situations find their emotions deadened. "It becomes difficult to show any emotion at all," he continued. "I have also seen men severely disturbed by the strain. I saw men break beer glasses and chew the glass."

Norman's reactions are not uncommon. "One in seven Vietnam veterans suffers from post-traumatic stress disorder," said one report. Another carried the headline: "For many, the war lives on." It continued: "As many as 1 million Vietnam veterans have yet to leave behind a war that still terrorizes them every day . . . Some have committed suicide and abused their families. Others suffer flashbacks, nightmares and withdrawal . . . They suffered a psychological wound that is deep and abiding."

At times this results in criminal behavior. How much value can men put on life and high moral principles when, as Gerald Priestland put it, "an act of killing which could have me convicted of murder in one set of circumstances, could win me a medal in another." (*Priestland—Right and Wrong*) "We were hired assassins out there," said one Vietnam veter-

an. "Then the next day we're supposed to go home to the Ford [automobile] plant and forget everything. Yeah, right."—*Newsweek*, July 4, 1988.

### The Civilians

The two world wars, said *Frankfurter Allgemeine Zeitung*, "had an effect on the psyche of a whole generation . . . Having lived through such events, people were left with scars, these being handed down to grandchildren and great-grandchildren . . . Four decades later the symptoms of delayed injuries are becoming visible." Such injuries have been felt worldwide.

Mary C——, for example, lived in England near a target for German bombing missions during World War II. "Keeping my emotions to myself so as not to produce fear in my children resulted in my smoking heavily," she said, "and I eventually ended up with a nervous breakdown leading to claustrophobia."

On the other side of the battle lines was Cilly P——, in Germany. "As refugees," she said, "we learned the meaning of hunger." She also learned the meaning of grief. "Whenever there was talk of those killed or missing," she continued, "we thought of our men. Anni, my fiancé's sister, got news of her husband's death in the war just before she gave birth to their twins. The war robbed many families of their men, their homes, and their possessions."

### WHY "AWAKE!" IS PUBLISHED

"AWAKE! is for the enlightenment of the entire family. It shows how to cope with today's problems. It reports the news, tells about people in many lands, examines religion and science. But it does more. It probes beneath the surface and points to the real meaning behind current events, yet it always stays politically neutral and does not exalt one race above another.

Most importantly, this magazine builds confidence in the Creator's promise of a peaceful and secure new world before the generation that saw the events of 1914 passes away.

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Anna V— from Italy was another one stung by war. "I was embittered by the horror of war and the sufferings of my family," she said. "A year after World War II ended, my mother died, without ever seeing her son return from a prisoner-of-war camp in Australia. My sister died from malnutrition and lack of medical care. I lost my faith in God because he allowed the suffering and the atrocities."

## 'We were hired assassins out there. Then the next day we're supposed to go home and forget everything!'

The shock of such displacement, separation, and bereavement is difficult to bear. The cost in human terms is usually too high. One young woman, widowed during the Falklands War between Britain and Argentina in 1982, expressed the feeling of millions of bereaved and widowed people when she said: "It wasn't worth it for me, losing my husband for a little place in the middle of nowhere . . . It is coping with the emotional shock that is the big problem."—*Sunday Telegraph*, October 3, 1982.

Think, too, of the physical and emotional wounds inflicted on the survivors of nuclear war. A report written in 1945, *Shadows of Hiroshima*, gives a shocking reminder of the terrible aftermath of the bombing of Hiroshima:

"In Hiroshima, thirty days after the first atomic bomb destroyed the city and shook the world, people are still dying, mysteriously and horribly—people who were uninjured in the cataclysm from an unknown something which I can only describe as the atomic plague. Hiroshima does not look like a bombed city. It looks as if a monster steamroller has passed over it and squashed it out of existence." Over 40 years later, people are still suffering and dying from that explosion.

### *The Children*

Some of the most tragic victims in the war zones of the world have been the children, many of whom have been drafted into armies in places such as Ethiopia, Lebanon, Nicaragua, and Kampuchea.

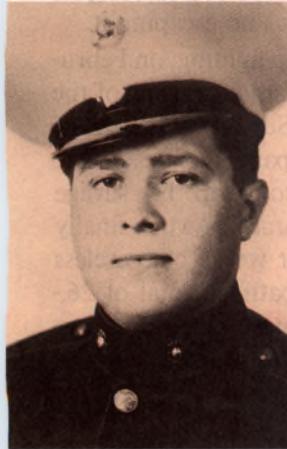
"What is clear, from Iran, when young boys were sent across the minefields is that boys are more malleable, cheaper and can be wound up to pitches of emotional fervour for long periods in the way no adult soldiers can be," said *The Times* of London. Commenting on the brutalizing effect this must have on such children, the chairman of a human rights organization asked, "How can they ever grow up as sane and balanced adults?"

That question is echoed in Roger Rosenblatt's book *Children of War*. He interviewed children who had grown up in areas where they had known nothing except war. Many showed remarkable resilience in the face of their horrific experiences. But others, like "a great many boat children, especially those whose parents were left behind in Viet Nam, seem deeply troubled and disturbed."

How can the surviving victims of war—men, women, and children—cope with the problems this has produced in their lives? How might other family members help? And will there ever be an end to such tragedies?

# WAR

## Coping With the Aftermath



**On the way to Iwo Jima, we studied models of the island**

Honis appears at top right

**H**OW do people traumatized by war manage to cope? To get insight into this subject, *Awake!* interviewed some victims of war.

Bob Honis was among the tens of thousands of U.S. Marines who fought in the second world war in the battle of Iwo Jima in the western Pacific. His story is printed not to shock but to show that it is possible for some to recover from even the most traumatic experiences.

U.S. Marine Corps



### *The Trauma*

"We began our approach to Iwo Jima at 8:30 a.m. on February 19, 1945. The big guns of the battleship *Tennessee* fell silent behind us, and then our landing craft were rocked by bombardments from the enemy shore batteries. Emotions at fever pitch, keyed up for the action ahead, I shouted amid all the noise and din, 'Save some for us!' as we followed the first assault troops in.

**"What had been  
building up inside  
me now surfaced  
—a dreadful emptiness  
and sense of futility"**

"Once on the beach, all I could smell was the sickening odor of gunpowder, volcanic ash, and burning equipment. Our landing craft was hit. The driver was killed instantly, and all our equipment was destroyed.

"I will never forget the sight of other dead marines. One was facedown in the sand. His combat boots, without bottoms, were fully laced up to his knees, on stumps that were once young, sturdy legs. Looking to my right as I crouched in a hastily dug foxhole, I saw another marine leaning forward with his rifle clutched to his chest, headless to the shoulders. The beach became littered with dead marines, many mutilated beyond description. This was just the beginning.

"On day two I was sent to check out one of our positions. What a grisly sight confronted me! An exploding shell had blown the legs and arms off the first marine I saw. His hel-

met and chin strap were still in position. His eyes were wide open, staring straight ahead as though he were in deep meditation. Strewed around like broken stuffed toys, the other members of the gun crew were nothing but pieces of torn flesh scattered in the soft, black volcanic ash.

"The slaughter continued throughout day three. Then the dead began to decompose rapidly. The stench became overpowering. It was everywhere. There was no escaping it.

"After four days of fierce fighting, on February 23 there was the now famous raising of the American flag on Mount Suribachi. Instead of elation, all I felt was despair. The dead were everywhere. Life seemed so cheap. The savage battle continued until March 26, when finally Iwo Jima was taken, after weeks of ceaseless slaughter. What a bloodbath—a total of 26,000 Americans and Japanese killed on an island only eight square miles in size!

### *The Aftermath*

"It should have been a time of great happiness when I was discharged from the Marines and reunited with my family. Instead, however, what had been building up inside me now surfaced—a dreadful emptiness and sense of futility.

"Questions kept tormenting me. If life is so cheap, what is the point of living? Can there really be a caring God? Will I be haunted by my experiences for the rest of my life? Even after I married my wife, Mary, the torment continued. I could see no prospect of a lasting, happy future, only war and more senseless slaughter till, finally, the destruction of the earth and all life on it.

### *Finding the Solution*

"Shortly after we married, my wife and I were visited by two of Jehovah's Witnesses. This gave me a chance to ask some searching

questions about war, suffering, and the purpose of life. The answers to my questions came quickly from the Bible.

"Yes, there is a loving God who cares and who will soon remedy all our pain and sorrow. (Psalm 83:18; Revelation 21:1-4) No, God does not sanction wars in pursuit of human political goals. (Psalm 46:9; Isaiah 2:4; John 18:36) No, the earth will not be destroyed in a nuclear holocaust. It will remain forever, as a paradise home for all who meet God's requirements.—Psalm 37:29; Isaiah 45:18; Revelation 11:17, 18.

"As my study of the heartwarming promises in the Bible continued, the void within me was gradually filled. I grew confident that God's Kingdom is the only realistic means for bringing peace and security to the earth. God's war of Armageddon will finally rid the earth of all evil.—Daniel 2:21, 22; Matthew 6:10; Revelation 16:14-16."

### ***Build Hope in God's Promises***

Others confirm that learning the truth about God's purpose for the earth and His reasons for the temporary permission of wickedness has been the most powerful factor in helping them to cope with the leftover traumas of war.

This is not to suggest that professional



**Bob and Mary Honis today**

medical help may not at times be needed. But a genuine hope, based on the dependable promises of God in the Bible, does give inner strength to endure serious problems.

However, you may not personally be affected by the trauma of war. But you may know someone who is. What can you do to help? "Be understanding and encouraging to those who have suffered in this way," says one victim of war trauma, Mary C—. "Help such ones to look to the future, to dwell on the promises of God, not the tragedies of the past," she advises. Yes, be patient and compassionate. Make allowances. And try to help them to build hope for the future.

'But,' you might say, 'how can it be that for those who have suffered through the trauma of war, another war, Armageddon, is going to be the solution?' Armageddon, God's war against all evil, will be a war without innocent victims. It will not violate principles of justice and goodness. It will be 'carried on in righteousness,' in which only the wicked will die.—Revelation 19:11; Proverbs 2:20-22.

Armageddon will have no horrible after-effects, no recurring nightmares or other psychological wounds. God's new world will fulfill the prophetic picture painted at Isaiah 65:17-19: "The former things will not be called to mind, . . . and no more will there be heard . . . the sound of weeping or the sound of a plaintive cry."

All past victims of murderous war and violence, even the dead, will benefit from this war. (Psalm 72:4, 12-14; John 5:28, 29) Think of it—a restoration of the Paradise of peace that God originally purposed.

"This hope that the Bible gives," said Bob Honis, "is the key to coping with the aftermath of war. All who have been damaged by the trauma of war can benefit from such a hope. This kind of hope is, as the Bible says, 'an anchor for the soul.'”—Hebrews 6:19.



# What's the Secret of Choosing the Right Clothes?

**M**IKE knows how to pick quality garments—and how to get them at a good price. At times his family members even ask him to shop for them! On one shopping trip, he picked out dresses for his mother, married sister, and eight-year-old niece—the right sizes and the styles that they wanted! While he was at it, he picked up a new bathrobe for himself at one fourth its regular price. For Mike, this was no ordeal but a real pleasure.



Maybe you don't have Mike's zest for shopping. But like most young people, you probably want to look your best at school, work, and play. The problem is, the mere fact that a certain style is considered fashionable among youths does not mean it is the right thing to wear, nor is purchasing the "in thing" necessarily the best use of your money. So, assuming that your parents allow you the freedom to select your own clothes, here are a few tips on how to select and purchase the right clothes.

### *Choosing the Right "Costume"*

First, let's dispose of the idea that anything goes when it comes to clothing. You are getting older, and the prospects of making a living and perhaps supporting a family loom ahead of you. How you dress will affect not only your employment prospects but also the way you will be viewed and treated by others. More important, we Christians are "not

Trendy clothes go out of style quickly. Conservative styles for various functions tend to last

to be pleasing ourselves," but we should be concerned about how what we do—or wear—affects others.—Romans 15:1.

Proverbs 25:20 speaks of one "removing a garment on a cold day." How inappropriate! It is equally inappropriate to wear a stylish garment that simply does not fit the occasion. An actor in a stage play carefully selects a costume to fit his role. And in real life, the roles we play often require different "costumes." For example, are you going on a job interview? Then a business suit may be the appropriate attire. Are you going to school? Then the look you want may be casual but neat nonetheless.

Millie, one of Jehovah's Witnesses, attended a school where violence was prevalent. Dressing as if headed for a Christian meeting would have made her overly conspicuous. So she wore a modest pair of jeans during school hours, as that was accepted at her school. But since she engaged in Bible educational work after classes, she took along a dress. Change of role, change of attire.

Youths among Jehovah's Witnesses give particular thought to what they wear at Christian meetings and in their public preaching work. For example, jeans and sneakers, which may serve quite well at school, are out of place during formal worship; they detract from one's claim to being a minister of God.—Compare 2 Corinthians 6:3.

### ***The Value of Dressing Conservatively***

Young Rudy's philosophy on clothing may surprise you. Says he: "I like the kind of clothing people have been wearing for the past 50 years." Hopelessly old-fashioned? Not at all. Rudy has learned that though 'the scene of the world is changing,' basic styles rarely change. (1 Corinthians 7:31) His rule is: Wear nothing so *in* that it soon becomes

*out!* "This way, you're always in style," advises Rudy.

Experts agree. Consultant Amelia Fatt, for example, says that conservative cuts are a "better investment." They are not readily outdated because the look isn't so specific. As a bonus, it is usually easier to coordinate conservative styles with other items in your wardrobe.

Some modern styles are inappropriate for Christians. Others are in good taste. Assuming that your parents approve, if you find that a stylish item not only looks good on you but goes well with other items in your wardrobe, you may want to consider wearing it. But beware of being a slave of fashion! Fashion consultant Carole Jackson observes: "If you follow fashion trends to be '*in*,' even when the current trend does not suit you, you are cheating yourself."

There are other advantages to being conservative in dress. Some young women find that this discourages sexual harassment in school and at the workplace. Furthermore, a youth who sticks to traditional styles will more than likely be viewed by others as mature, stable, not as one who is tossed around by every wind of fad and fashion.

Tammy, for example, is a young woman serving as a full-time evangelizer. Although high hemlines are quite the rage where she lives, she says, "For me, slightly below the knee is a comfortable length." This accords with Christian modesty. (1 Timothy 2:9) Of course, standards of modesty vary throughout the world. And if you're in doubt as to whether a certain style is appropriate or not, talk it over with a parent or an older friend.

### ***Smart Shopping***

"By skillful direction carry on your war," advises the Bible at Proverbs 20:18. Skillful direction is required even in matters as

mundane as shopping. For example, do you have difficulty finding clothes that flatter you? You can get skillful direction simply by making a trip to a public library and doing some research! There are books and articles that can help you to use different cuts, colors, and styles of clothing to compensate for problems in facial shape, neck length, figure, and so forth.

What about the quality of the garments you purchase? Though Jesus Christ was quite poor materially when on earth, he evidently wore a garment of such high quality that his executioners cast lots over who would confiscate it! (John 19:23, 24) Similarly, you should endeavor to stick to quality garments, even if your funds are limited and you have to save up before buying. In the long run, a costlier quality garment that gives you years of use may be cheaper than a short-lived "bargain."

How can you develop an eye for quality? Try browsing in the more expensive stores that specialize in quality garments. Get to know the look and feel of good clothes. Says the book *Elegance*: "Do not be taken in by a name; the clothing must stand on its own feet . . . Poor quality, regardless of the imprimatur, is no bargain." Feel the material. Inspect the collar, lining, and button holes. Look for reinforced stitching.

Mike (mentioned at the outset) has developed an eye for quality. Thus, he recognized that the bargain bathrobe was a true bargain! However, "don't be seduced by 'bargains,'" warns Amelia Fatt. One full-price sweater that can be worn with several items in your wardrobe may give you more service than a "bargain" sweater that matches nothing. Proverbs 21:5 says: "Everyone that is hasty surely heads for want." Avoid buying when you're in a hurry. Shop when the stores aren't crowded. Know in advance what you are looking for. The more you have in mind the

fabric, style, color, and price you want, the less likely you are to be sidetracked into buying something you don't really need.

Store clerks can be of great help if you state your specific needs. (Indeed, it was with the help of a saleslady that Mike was able to purchase clothes for the female members of his family.) But do not let salespeople flatter you into going against your better judgment. "Anyone inexperienced puts faith in every word, but the shrewd one considers his steps."

—Proverbs 14:15.

Be appropriately dressed and groomed when you shop. How can you tell if a suit jacket looks good if you try it on over a T-shirt? Or how can you decide if a gown or a dress is flattering if you're wearing sneakers? One writer even alleges that when you are sloppily dressed, salespeople tend to "assume that you are a person with limited taste and/or no money to spend," and they will concentrate on other customers.

Finally, you may find that oftentimes "two are better than one" when shopping. (Ecclesiastes 4:9) A friend or a parent can tell you how a garment looks from behind, whether it is too loose, too tight, or in some other way immodest.

### The More Important Things

At Philippians 1:10, Christians are exhorted to "make sure of the more important things." The truly important things in life center on having a knowledge of God—not clothing. Sad to say, some youths may be impeccably dressed but slovenly in their ability to make public declaration of their faith.

So while it's good to be a smart shopper and to look as presentable as your finances allow, concentrate on becoming a mature Christian. Learn to live that role, and dressing for it will come naturally.

# A Sour Note in the Music Industry?



**L**ISTEN closely to the music coming from your radio or your records or your television set. Are those real stringed instruments you are hearing? Is that a real brass section you are listening to?

*As musical technology takes giant steps forward, those sounds you hear may not at all be coming from the instruments you imagine. You may be listening to a synthesizer. Indeed, to many musicians, the synthesizer represents a sour note in the music industry. Many such musicians feel that the synthesizer is taking away their jobs!*

After years of being a "poor relation" to the more popular rock and roll, the synthesizer is finally getting its due. It's been around since the early 1960s, but it wasn't until the late 1970s that it began to receive widespread acceptance. Now it's everywhere, from the concert hall to the movie screen. And it's not just replacing traditional instruments; it's creating new ones.

One reason for the synthesizer's popularity is its versatility. It can produce a wide range of sounds, from soft, melodic tones to sharp, metallic clangs. It can also play multiple notes simultaneously, something that's difficult for most real instruments. Another reason is its low cost. While a top-of-the-line acoustic guitar might cost several thousand dollars, a basic synthesizer can be purchased for under \$1,000. This makes it accessible to a wider range of musicians, from professionals to amateurs.

But there are also some negative aspects to the synthesizer. Some musicians feel that it lacks the "warmth" of real instruments. They argue that it's too sterile, too mechanical. Others worry about the long-term effects of playing a synthesizer exclusively. They fear that it might lead to a loss of musicality, a lack of emotional depth. Still others are concerned about the environmental impact of synthesizers. They point out that they require a lot of power to operate, which can contribute to global warming.

### **What Is a Synthesizer?**

A synthesizer is an instrument through which sound is produced electronically. The characteristics of sound can be altered and controlled by the user. The sound is often generated from a keyboard, and when this is so, the layout of the keys is the same as that of a piano.

A synthesizer is called such because it synthesizes, or combines, various programmed characteristics to produce its sound. Some synthesizers and electronic keyboards offer a digital sampling feature in which sounds can actually be recorded into the keyboard and reproduced in pitch according to the keys pressed. While such sounds may not be synthesized by strict definition, this article will include such keyboards as synthesizers.

Synthesizers have been around for many years. But their prominence skyrocketed particularly during the 1970's, when the instrument was used in popular music to bring a new sound that gave the electric guitar competition. While at first seeming to be only a novel instrument that could produce some interesting sound effects, synthesizers can actually be programmed by digital technology to imitate and reproduce the timbral sounds of traditional instruments.

### **How Does the Synthesizer Threaten Jobs?**

Imagine that you are a musician, and you make your living by playing the violin in recording sessions for television music, commercials, and the like. Let us suppose that for an upcoming recording ses-

sion, a 20-piece string section will be needed.

The music director wants to cut down the expense of hiring a large violin section, and he can get the same full string sound by hiring only six violinists and one synthesizer player. Therefore, the synthesizer has put 14 violinists out of work for that recording session, and you may be among those not hired. Now, if this happens just once, it may not bother you. But if it becomes a general pattern—and some musicians feel that it already has—do you see how the synthesizer could threaten your very livelihood?

Can the synthesizer duplicate a traditional instrument's tone and timbre accurately? Mike Comins, session violinist and Recording Musicians Association official, says: "We've often joked about the idea of Georg Solti walking out on the stage in Orchestra Hall in Chicago, and there

would be just him and a synthesizer player. He would raise his arms, and this guy would completely recreate the sound of the Chicago Symphony . . . It's a grim joke, because even though the synthesizer hasn't replaced a symphony orchestra in public or on record, it will have the capability of doing so, and that's frightening."

### **Orchestra in a Box?**

In 1984 one musician recorded an album with a big orchestral sound and called the "orchestra" the "LSI Philharmonic."\*\* The "orchestra" was actually a synthesizer. The composer spent an estimated 2,000 hours over a

\* "LSI" is the composer's abbreviation for "Large-Scale Integration" circuitry, or computer chips.

**"The [synthesized] trumpet does not sound like a trumpet to an experienced musician. . . And the phrasing and articulation of a wind instrument is not natural to a keyboard."**

period of a year and a half in programming a digital synthesizer to capture the sound of the orchestra. The results were amazing. *Keyboard* magazine called it "one of the more remarkable feats of synthesis" and commented that "the idea that a lone keyboard can fool us into thinking they're the Chicago Symphony isn't a completely impossible notion."

Does such replication of orchestral sounds imply that traditional instruments will soon become obsolete? Not according to the above-mentioned composer, who says, "I love the orchestra . . . I still prefer the original!"

Many musicians would agree. Some feel that no synthesizer can reproduce the tones and timbres of other instruments so accurately that it will actually replace them. Musician Walter Sear says: "The [synthesized] trumpet does not sound like a trumpet to an experienced musician. . . . And the phrasing and articulation of a wind instrument is not natural to a keyboard." But he fears that people are not that discriminating in their listening and that they have learned to accept electronically generated sound in spite of its "lack of those minor flaws that make acoustic instruments so interesting."

Truly, the synthesizer is causing quite a controversy in the professional music industry. But the popularity of the synthesizer does not affect just professional musicians. It also affects a well-known instrument that you may have in your home.

### ***The Last Days of the Piano?***

Because of the synthesizer revolution, the piano itself is facing hard times. Piano companies report that sales are going down, and several well-known piano manufacturers have actually gone out of business. Yet, during the same period of time, synthesizer sales have skyrocketed.

However, it is not the sound of the piano that has become unpopular. As one studio

owner explains: "There is a definite demand for piano sounds, but 99 times out of 100 the clients aren't purists about how they get it." Many prefer to use the synthesizer because of its stable tuning, portability and in many cases, affordability. In fact, many synthesizers sell for less than half the cost of a piano.

Does this mean that the synthesizer will soon replace the piano altogether? Some doubt that it will go that far. Manufacturing executive John Steinway says: "Nothing will ever supplant a regulated natural piano action. Although they're doing extraordinary work in this area, I don't think they'll ever give the player the kind of control he or she can get from a piano."

Yet, from the piano manufacturer's viewpoint, the evidence is clear: Piano sales are down, and people are favoring the synthesizer. It could be a temporary trend. Or it could be, as *Keyboard* magazine notes, "that we are witnessing the first of the last days of the piano."

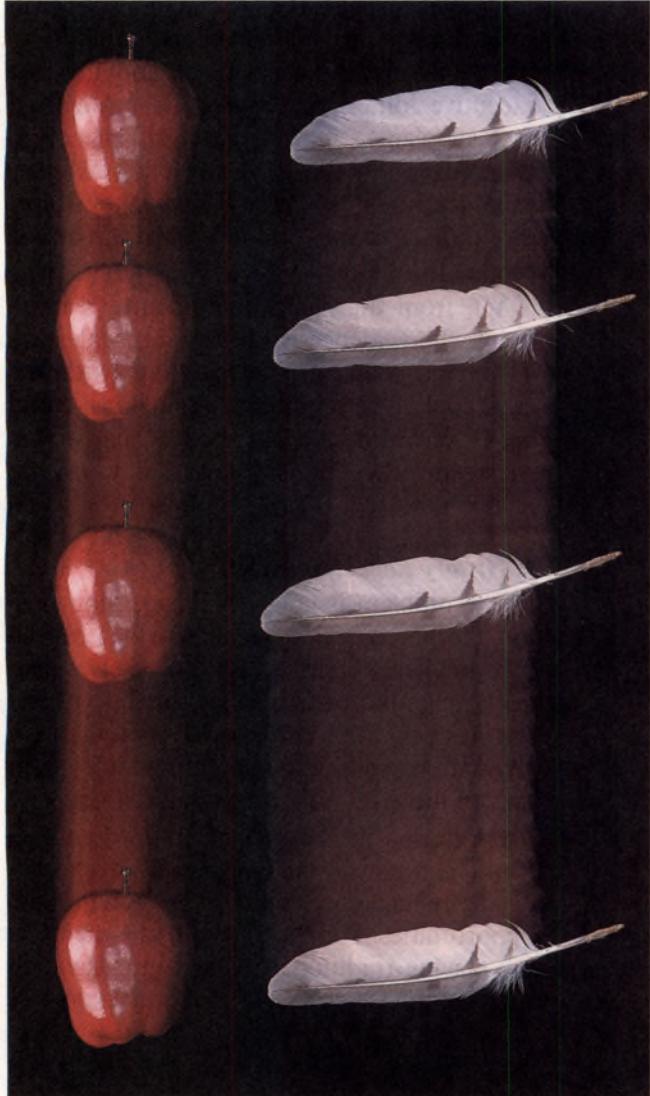
### ***Is History Repeating Itself?***

The problem is not new. Throughout history, technological advancement has caused many skilled workers to find themselves suddenly unemployed. And now, because of the synthesizer, even some professional musicians are beginning to see the unemployment line on the grim horizon of their career.

For those who are involved in the manufacturing and playing of synthesizers, technology has opened doors with seemingly limitless opportunities. For those who make their living playing traditional instruments, the synthesizer represents a sour note that could cost them their jobs.

So the next time you hear music on your TV, radio, or record player, listen closely, and do not let your ears fool you. You may be listening to a synthesizer.

# The Fascinating Force of GRAVITY



**Newton's law of gravity asserts that in a vacuum, a feather would fall at the same speed as an apple**

**I**SAAC NEWTON, about 300 years ago, theorized how gravity works. He imagined a man throwing an object from the top of an unusually high mountain. If simply dropped, the object would fall, as would an apple, downward to the ground.

If, however, it was thrown forward, it would follow a curved path in falling to the ground. Newton then reasoned that if thrown fast enough, it would circle the earth in an orbit.

From this theorizing, the link between gravity and the movements of the moon and the planets became apparent to him: the moon bound in an orbit around the earth because of the pull of earth's gravity and the planets kept in their orbits by the sun's gravity.

## *A Universal Law*

After careful study, Newton formulated a precise mathematical description of this universal law. Simply stated, Newton's equations said that all objects, small or large, exert a pull on one another, the strength of that pull being dependent on how massive the objects are and on the distance between them.

With some refinements, scientists still use Newton's basic formulas describing gravity, particularly in

planning such space ventures as sending a space probe to encounter Halley's comet in 1985. In fact, English astronomer Edmond Halley, a colleague of Newton, used Newton's theories to predict the year when that comet would next appear.

Newton's discoveries about gravity gave him a glimpse of the order manifest in the universe, an orderliness that arises through intelligent design. But his work was by no means the final word on the subject. At the beginning of this century, scientists came to realize that some aspects of Newton's theories were inadequate, even inconsistent.

### **Einstein and Gravity**

In 1916 Albert Einstein put forward his general theory of relativity. His amazing discovery was that gravity not only shapes the universe but also governs the way we see and measure it. Why, gravity even affects the way time is measured!

Again, an illustration helps clarify matters. Imagine space to be like a boundless rubber sheet. Now, placing an object on this flexible mat will cause a dimple, or depression. According to Einstein's description, the earth, the sun, and the stars are like objects on a flexible mat, causing space to curve. If you roll another object onto the rubber sheet, it will be deflected into a curved path by the depressed area around the first object.

Similarly, the earth, the planets, and the stars move along curved paths, following the natural "depressions" in space. Even a beam of light is deflected when passing near massive objects in the universe. Furthermore, Einstein's equations predicted that light traveling against gravity would lose some of its energy, as noted by a slight shift in color toward the red end of the spectrum. Physicists call this phenomenon gravitational redshift.

Thus, besides clearing up the discrepancies arising from Newton's discoveries, Einstein's theory revealed new secrets of how gravity works in the universe.

### **Fascinating Effects**

The ability of gravity to affect the way light travels gives rise to some astonishing consequences that astronomers have observed.

Desert travelers have long been familiar with mirages—optical illusions that have the appearance of water shimmering on the ground. Now, astronomers have photographed cosmic "mirages." How is this?

Light from a distant object, believed to be



**Light is bent in space when it passes through the gravitational field of other bodies**

the active nucleus of a galaxy and called a quasar (or, quasi-stellar object), passes intervening galaxies in the line of sight from the earth. As the light passes the galaxies, it is bent by gravitational forces. The bending of the light forms two or more images of the one quasar. An observer on earth, thinking that light has come straight toward him,

concludes that he is seeing more than one object.

Another fascinating aspect arising from Einstein's work concerns black holes. What are they, and what is their connection with gravity? A simple experiment serves to answer.

Try throwing an object above your head. You will notice that it rises to a certain height, stops momentarily, and then falls back to the ground. With light it is different. A beam of light can escape from earth's gravity because it travels fast enough.



## From infancy a tiny organ in the ear helps us take gravity into account and keep our balance

Suppose now that the force of gravity was much stronger, strong enough to prevent even light from escaping. From such an object, nothing could escape. The object itself would be invisible because no light could escape its gravity and reach the eyes of an outside observer, hence the name black hole.

The German astronomer Karl Schwarzschild was the first to demonstrate the possibility, in theory, of black holes. Although there is, as yet, no unequivocal proof that black holes really do exist in the universe, astronomers have identified a number of possible candidates. Black holes may also be the hidden powerhouses of quasars.

### **Gravity Waves**

On the basis of Einstein's work, we can also picture gravity as an invisible web, linking

everything and holding the universe together. What happens when that web is disturbed?

Consider again the illustration of the rubber sheet, and suppose that an object on the sheet is suddenly jostled to and fro. The vibrations generated in the sheet will disturb nearby objects. Similarly, if a star were violently "jostled," ripples in space, or gravity waves, might be generated. Planets, stars, or galaxies caught in the path of a gravity wave would experience space itself contracting and expanding—like a rubber sheet vibrating.

Since these waves have not as yet been detected, what proof do scientists have that Einstein's theory is correct? One of the best indications comes from a star system known as a binary pulsar. This consists of two neutron stars in orbit about a common center, with an orbital period of about eight hours.\* One of these stars is also a pulsar—it emits a radio pulse as it rotates, like the sweeping light beam from a lighthouse.

Thanks to the precise timing of the pulsar, astronomers can map the orbit of the two stars with great precision. They find that the time of orbit is slowly diminishing in exact agreement with Einstein's theory that gravity waves are being emitted.

On the earth, the effects of these waves are infinitesimal. To illustrate: On February 24, 1987, astronomers spotted a supernova—a star undergoing a spectacular transformation, blazing forth with the brilliance of millions of suns as it blew off its outer layers. Gravity waves produced by the supernova would cause, on the earth, a shiver in dimension of only a millionth of the diameter of a hydrogen atom. Why so small a change? Because the energy would be spread out over a

\* These neutron stars are extremely dense, having a mass greater than the sun, yet being no bigger than a mountain.

vast distance by the time the waves reached the earth.

### Baffling

In spite of great advances in knowledge, certain fundamental aspects of gravity still baffle scientists. It has long been assumed that there are basically four forces—the electromagnetic force responsible for electricity and magnetism, the weak and the strong forces acting within the nucleus of the atom, and gravity. But why are there four? Could it be that all four are manifestations of a single fundamental force?

Recently it was established that the electromagnetic force and the weak force are manifestations of an underlying phenomenon—the electroweak interaction—and theories seek to unify the strong force with these two. Gravity, however, is the odd one out—it does not seem to fit in with the others.

Scientists hope that clues may come from recent experiments performed in the Greenland ice sheet. Measurements made down a one-and-a-quarter-mile-deep hole bored in the ice seemed to indicate that the force of gravity differed from what was expected. Previous experiments, performed down mine shafts and up television towers, likewise indicated that something mysterious was causing deviations from the predictions of the Newtonian description of gravity. Meanwhile, some theoreticians are trying to develop a new mathematical approach, the "superstring theory," in order to unify the forces of nature.

### Gravity—Vital for Life

The discoveries of both Newton and Einstein demonstrate that laws govern the movements of heavenly bodies and that gravity acts as a bond holding the universe together. A professor of physics, writing in *New Scientist*, drew attention to the evidence of design

in these laws and said: "The most minute change in the relative strengths of gravitational and electromagnetic forces would turn stars like the Sun into blue giants or red dwarfs. All around us, we seem to see evidence that nature got it just right."

Without gravity we simply could not exist. Just consider: Gravity holds our sun together, sustaining its nuclear reactions, which supply our needed heat and light. Gravity keeps our spinning earth in orbit around the sun—making day and night and seasons—and prevents us from being thrown off like mud from a spinning wheel. Earth's atmosphere is held in place by gravity, while the pull of gravity from the moon and the sun generates regular tides that help circulate the waters of our oceans.

Using a tiny organ of our inner ear (otolith), we sense gravity and learn to take it into account from infancy when walking, running, or jumping. How much more difficult it is for astronauts when they have to cope with zero-gravity conditions in spaceflight!

Yes, gravity contributes to making life on earth normal for us. It is, indeed, a fascinating example of our Creator's "wonderful works."—Job 37:14, 16.

## IN OUR NEXT ISSUE

Satanism  
—A Growing Menace

Doctors Tried to Take Our  
Daughter Away

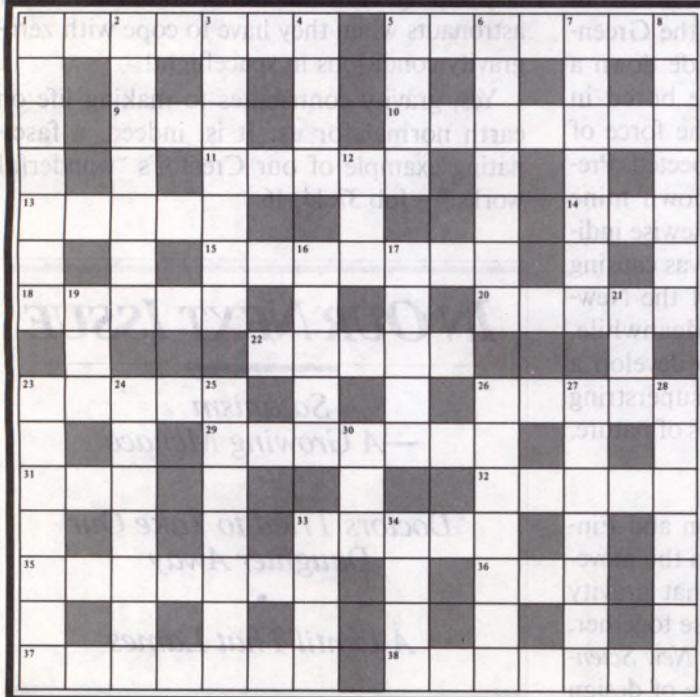
A Lentil That Lames

# CROSSWORD PUZZLE

## Clues Across

1. Capital of the ten-tribe kingdom (Isaiah 7:9)
5. Title by which people addressed Jesus (Mark 12:19)
9. Its tempest was halted when Jonah was thrown in (Jonah 1:15)
10. The part of their garments that the Pharisees enlarged to impress others (Matthew 23:5)
11. Ancient linear measure (Judges 3:16)
13. The father of one of Israel's judges (Judges 3:31)
14. What Jesus repeatedly declared against the wicked scribes and Pharisees (Matthew 23:13-36)
15. Fifth letter of the Greek alphabet
18. Greek equivalent of "Sheol" (Acts 2:27)

CROSSWORD SOLUTIONS PAGE 22



20. Where Jesus spent the earlier part of his life in fulfillment of prophecy (Matthew 2:13-15)
22. Shrub used as a cosmetic (Song of Solomon 4:13)
23. A family head of the Nethinim (Ezra 2:44)
26. The earth's appearance before the creative days (Genesis 1:2)
29. A place Josiah made unfit for worship (2 Kings 23:10)
31. The fifth of Jacob's 12 sons (Genesis 30:6)
32. Son of Zophah of the tribe of Asher (1 Chronicles 7:36)
33. The appearance of the "three unclean inspired expressions" (Revelation 16:13)
35. Hebrew prophet contemporaneous with Jeremiah and Daniel
36. Domestic container (Micah 3:3)

37. One of several faithful women who cared for the needs of Jesus and his disciples (Luke 8:1-3)
38. Type of vessels to which Christians are likened (2 Corinthians 4:7)

## Clues Down

1. An observance not enjoined on Christians (Colossians 2:16)
2. Faith the size of this grain can move mountains (Matthew 17:20)
3. Extends (Job 20:6)
4. Babylon was prophesied to become so desolate that this one would no longer pitch his tent there (Isaiah 13:20)
5. Bunch (Ezekiel 8:3)
6. District ruled by Lysanias (Luke 3:1)
7. A main road (1 Samuel 6:12)
8. What a wife should give her husband (Ephesians 5:33)
12. One of the five sons of Bela the Benjaminite (1 Chronicles 7:7)
16. Animals representative of innocent and defenseless people (Matthew 10:16)
17. Phinehas' use of this weapon resulted in the halting of a scourge (Numbers 25:7, 8)
19. Adam sinned when he did this (Genesis 3:12)
21. A son of Ham (Genesis 10:6)
23. Body organs representative of one's deepest thoughts and emotions (Psalm 73:21)
24. Swift messengers (2 Chronicles 30:6)
25. Position (Job 2:1)
26. To speak softly (Luke 12:3)
27. Extend (Exodus 8:5)
28. He was noted for killing Goliath's brother (1 Chronicles 20:5)
30. He and Aaron supported Moses' hands until the Amalekites were defeated (Exodus 17:8-13)
33. Parasitic insect (1 Samuel 26:20)
34. Soft ground (Jeremiah 38:22)

# *Christendom Grapples With World Change*

**"Philosophy and religion are irreconcilable."**  
*Georg Herwegh, 19th-century German poet*

**P**HILosophy," a word derived from Greek roots meaning "love of wisdom," is difficult to define. While doubting that "a universal and all-inclusive definition" can be made, *The New Encyclopædia Britannica* ventures that "a first attempt in this direction might be to define philosophy either as 'a reflection upon the varieties of human experience' or as 'the rational, methodical, and systematic consideration of those topics that are of greatest concern to man.'"

These definitions clearly show why *true* religion and philosophy are irreconcilable. True religion is based upon divine revelation, not upon "the varieties of human experience." First and foremost, it revolves around the interests of the Creator, not around the "topics that are of greatest concern to man." *False* religion, on the other hand, like philosophy, is based on human experience and puts human interests uppermost. This fact became particularly evident from the 17th century onward as Christendom grappled with world change.

## **A Triple Threat**

As soon as modern science was born in the 17th century, a clash between it and religion seemed inevitable. Spectacular scientific breakthroughs enveloped science in a halo of infallibility and authority, producing scientism, a religion in itself, a sacred cow. In the light of scientific "facts," religious claims suddenly seemed precariously unprovable. Science was new and exciting; religion seemed outdated and dull.

This attitude toward religion was intensified by the Enlightenment, an intellectual movement that swept Europe during the 17th and 18th centuries. Stressing intellectual and material progress, it rejected political and religious authority and tradition in favor of critical reasoning. This, supposedly, was the source of knowledge and happiness. "Its ancestral roots," says *The New Encyclopædia Britannica*, were found "in Greek philosophy."

The Enlightenment was mainly a French phenomenon. Prominent leaders in France included Voltaire and Denis Diderot. In Great Britain it found spokesmen in John

Locke and David Hume. Advocates were also found among U.S. founding fathers, including Thomas Paine, Benjamin Franklin, and Thomas Jefferson. In fact, the separation of Church and State demanded by the U.S. Constitution is a reflection of Enlightenment ideas. Outstanding members in Germany were Christian Wolff, Immanuel Kant, and Moses Mendelssohn, grandfather of composer Felix Mendelssohn.

Kant, suspicious of religion, is said to have defined "enlightenment" as "the human being's release from self-imposed tutelage." By this, explains Allen W. Wood of Cornell University, Kant meant "the process by which human individuals receive the courage to think for themselves about morality, religion, and politics, instead of having their opinions dictated to them by political, ecclesiastical, or scriptural authorities."

During the second half of the 18th century, the Industrial Revolution began, first in Great Britain. Emphasis switched from agriculture to the production and manufacture of goods with the aid of machines and chemical

#### CROSSWORD SOLUTIONS

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processes. This upset a largely agricultural and rural society, sending thousands of people crowding into cities for work. Pockets of unemployment, housing shortages, poverty, and various work-related ills resulted.

Would Christendom be able to cope with this triple threat of science, Enlightenment, and industry?

#### *Easing God Out, if Ever So Gently*

People persuaded by Enlightenment thinking blamed religion for many of the ills of society. The idea that "society should be constructed according to the preordained blueprints of divine and natural law," says *The Encyclopedia of Religion*, "was replaced by the notion that society was, or could be, constructed by man's own 'artifice' or 'contrivance.' A secular, social humanism thus came into being that, in turn, would beget most of the philosophical and sociological theories of the modern world."

These theories included the "civil religion" advocated by influential French Enlightenment philosopher Jean-Jacques Rousseau. It centered upon society and human involvement in its concerns rather than upon a divine Being and his worship. French memoirist Claude-Henri de Rouvroy advocated a "New Christianity," while his protégé Auguste Comte spoke of a "religion of humanity."

In the late 19th century, the American movement known as the social gospel developed among Protestants; it was closely related to the European theories. That theologically based idea asserted that the main duty of a Christian is social involvement. It finds great support among Protestants to this day. Catholic versions are found in the worker-priests of France and among the clergy of Latin America who teach liberation theology.

Christendom's missionaries also mirror this trend, as a 1982 *Time* magazine report

indicates: "Among Protestants, there has been a shift toward greater involvement with the basic economic and social problems of the people . . . For an increasing number of Catholic missionaries, identification with the cause of the poor means advocacy of radical changes in political and economic systems—even if those changes are being spearheaded by Marxist revolutionary movements. . . . Indeed, there are missionaries who believe that conversion is fundamentally irrelevant to their true task." Such missionaries evidently agree with French sociologist Émile Durkheim, who once suggested: 'The real object of religious worship is society, not God.'

Obviously, Christendom was easing God out of religion, if ever so gently. Meanwhile, other forces were also at work.

### *Replacing God With Pseudoreligions*

The churches had no solutions for the problems created by the Industrial Revolu-

tion. But pseudoreligions, the products of human philosophies, claimed they did, and they rapidly moved in to fill the void.

For example, some people found their purpose in life in pursuing riches and possessions, a self-centered tendency pandered to by the Industrial Revolution. Materialism became a religion. Almighty God was replaced by the 'Almighty Dollar.' In a play by George Bernard Shaw, this was alluded to by a character who exclaimed: "I am a Millionaire. That is my religion."

Other people turned to political movements. Socialist philosopher Friedrich Engels, collaborator with Karl Marx, prophesied that socialism would eventually replace religion, itself taking on religious attributes. Thus, as socialism gained ground across Europe, says retired Professor Robert Nisbet, "a prominent element was the apostasy of socialists from Judaism or Christianity and their turning to a surrogate."

## **Pressured by World Change, Christendom Compromises**

**THE EMERGENCE  
OF MODERN SCIENCE**  
weakened faith in the unseen and created doubt about things science could not "prove." Christendom compromised Bible truth by adopting unproved, supposedly scientific theories like evolution and by seeing in scientific know-how, rather than in God's Kingdom, the panacea for world problems.

**THE RISE OF POLITICAL  
IDEOLOGIES** (capitalism, democracy, socialism, Communism, and so forth) created nationalistic conflicts and ideological bickering, thus obscuring the Bible truth that God, not man, is earth's rightful Ruler. Christendom compromised Bible principles by breaking Christian neutrality and becoming involved in wars that pitted members of the same religion against one another. Christendom actively or

passively supported political pseudoreligions.

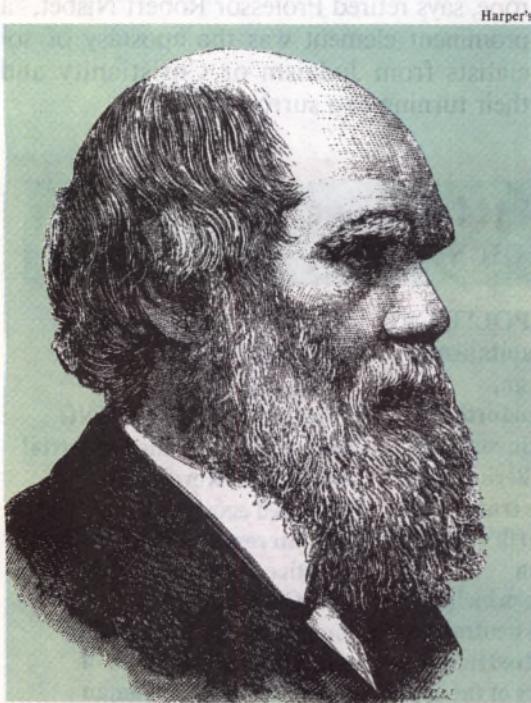
**THE HIGHER  
STANDARD OF LIVING** made possible by the Industrial and Science Revolutions promoted egotistical self-interest and brought social injustice and inequality to the fore. Christendom compromised by neglecting divine interests in favor of getting involved in human interests of a social, economic, ecological, or political nature.

Christendom's failure to cope with world change allowed forces to develop that the *World Christian Encyclopedia* refers to as "secularism, scientific materialism, atheistic communism, nationalism, nazism, fascism, Maoism, liberal humanism and numerous constructed or fabricated pseudo-religions."

In view of the fruitage these philosophical pseudoreligions have produced, British poet John Milton's words would seem most appropriate: "Vain wisdom all, and false philosophy."

### ***Seeking a Compromise***

Caught between ineffective ecclesiastical systems on the one hand and deceptive pseudoreligions on the other, millions of people were looking for something better. Some



**Darwin's unproved speculations in *Origin of Species* became the pretext for many to abandon belief in a God of revelation**

thought they had found it in a form of Deism, also known as "natural religion." Gaining prominence particularly in England during the 17th century, Deism has been described as a compromise that embraced science without deserting God. Deists were therefore freethinkers set on a middle-of-the-road course.

Author Wood clarifies: "In its principal meaning, *deism* signifies the belief in a single God and in a religious practice founded solely on natural reason rather than on supernatural revelation." But by disallowing "supernatural revelation," some Deists went so far as to reject the Bible almost totally. Nowadays the term is rarely used, although professed Christians who reject ecclesiastical or Scriptural authority in favor of personal opinion or alternate philosophies of life are in actuality adhering to its principles.

### ***Parallel Theories of Evolution***

The most dramatic confrontation between religion and science occurred after the publication in 1859 of Darwin's *Origin of Species*, in which he proposed his theory of evolution. Religious leaders, especially in England and the United States, at first denounced the theory in strong terms. But opposition soon faded. By the time of Darwin's death, says *The Encyclopedia of Religion*, "most thoughtful and articulate clergy had worked their way to the conclusion that evolution was wholly compatible with an enlightened understanding of scripture."

This may explain why the Vatican never placed Darwin's books on its *Index of Forbidden Books*. It may also explain audience reaction at the 1893 Chicago conference of the World's Parliament of Religions. As Buddhists and Hindus listened, a "Christian" speaker said: "The theory of evolution fills a gap at the very beginning of our religion, and

## Up or Down?

**The Bible says:** Humans were created perfect and were taught how to worship their Creator acceptably; but they rebelled against God, and for some 6,000 years, they have been degenerating both physically and morally, moving ever further away from the true

religion they originally practiced.

**Biological and religious evolution says:** Humans evolved from a primitive beginning and were atheists with no religion; for untold millions of years, they have improved both physically and

morally, moving ever closer to a state of Utopian religious, social, and moral development.

Based on your knowledge of human behavior, mankind's present condition, and the status of religion in today's world, which view seems more consistent with the facts?

if science is satisfied in a general way with its theory of evolution as the method of creation, assent is a cold word with which those whose business it is to know and love the ways of God should welcome it." The statement was reportedly greeted with loud applause.

This attitude is not surprising in view of the popularity during the late 19th century of what became known as comparative religion. This was a scientific study of world religions designed to determine how different religions are interrelated and how they came about. English anthropologist John Lubbock, for example, expressed the theory that humans started as atheists and then progressively evolved through fetishism, nature worship, and shamanism before arriving at monotheism.

However, as *The Encyclopedia of Religion* explains: "Religion in such a view was not absolute truth revealed by the deity, but the record of developing human conceptions about God and morality." So those who accepted this theory found no difficulty in accepting Deism, a "civil religion," or a "religion of humanity" as rungs upward on the ladder of religious evolution.

In the final analysis, where does such a

view lead? Already in the 19th century, English philosopher Herbert Spencer said that society was moving into a frame of advancement no longer compatible with religion. And of the 20th century, Professor Nisbet observed that sociologists generally believe that religion "answers certain psychosocial needs in human beings, and *until or unless these needs become casualties of biological evolution of the human species*, religion in one or another form will remain a persisting reality of human culture." (Italics ours.) Accordingly, sociologists are not ruling out the possibility that "evolutionary progress" may one day lead to no religion at all!

### ***The Search for True Worship Intensified***

By the middle of the 19th century, it was obvious that for some 200 years, Christendom had been fighting a losing battle against world change. Its religion had degenerated into little more than a worldly philosophy. Millions of honest people were concerned. The search for true worship intensified. It could truly be said that reformation of Christendom was impossible. What was needed was the restoration of true worship. Learn more in our October 22 issue.



## *At One Time, More Precious Than Gold*

**A**S A perfume it was strewed in the theaters of Greece. When Nero made his triumphal entry into Rome, the streets were sprinkled with it. Solomon prized it. (Song of Solomon 4:14) For a time it was more precious than gold. Even today it is still the most expensive spice in the world. Such is saffron.

This extraordinary red-gold spice is produced from the stigma of the saffron crocus, related to the crocus that adorns many gardens in springtime. It thrives in the dry limestone ground, making Spain's La Mancha region ideal for its cultivation.

Native to the Mediterranean area, saffron

was cultivated from early times in Asia Minor. Centuries later, the Moors brought it to Spain and promoted its cultivation. They valued it for seasoning dishes and even used it to treat maladies as varied as toothache, menstrual pain, and the plague. Today, saffron is still esteemed in the kitchen, adding flavor and color to such famous recipes as Spanish paella and French bouillabaisse.

### *Swift Toil and Harvest*

In La Mancha's arid plains, little has changed for centuries. Saffron growing begins in early summer when the crocus bulbs are planted in La Mancha's red soil.



In the autumn comes the harvest, which lasts for three weeks. All the work is done by hand, as modern mechanized methods have not yet been utilized.

First comes the backbreaking toil of picking thousands of flowers one by one. This is done toward the end of October, when the first chill of autumn has arrived. Then hundreds of villagers head toward their plots planted with crocuses. They bend over the freshly blooming flowers, and with amazing speed, their dexterous hands pick the delicate crocus flower.

Soon their baskets are overflowing with the morning's harvest, ready to be carried home. There the freshly plucked blossoms are spread on trays so that they can be aired. Now an even more laborious work begins, that of separating the saffron stigma—the female part of the blossom—from the rest of the flower.

### ***Separating the Stigmata***

Following the custom in La Mancha, whole families work together to process the harvest. For three weeks they often toil 19 hours a day.

The flowers are split open, and the stigmata carefully plucked out. The wet, deep-red stigmata—there are three stigmata to each flower—are collected on plates. And here we have the secret of saffron's value. According to *The New Encyclopædia Britannica*, it may take some 75,000 blossoms to obtain just one pound of saffron!

Speed and expertise are essential at this stage, since the stigma has to be plucked the same day that the saffron is harvested. The blossoms wither very rapidly and soon get sticky, making it impossible to remove the stigmata. And the stigma has to be plucked at exactly the right point; otherwise it will not qualify as *Mancha Selecta*, the choicest saffron of all.

### ***Toasting the Stigmata***

After this arduous work is finally done, the stigmata are carefully spread on trays or sieves of muslin gauze for drying. At this point, a charcoal fire is prepared, and the trays or sieves with their precious contents are put over the fire. Every possible precaution is taken to avoid smoking the delicate stigmata. They must be toasted, not smoked.

After just 15 minutes over a low fire, the saffron loses up to 80 percent of its weight. The harvest of some two and a half acres—stigmata weighing nearly a hundred pounds—becomes a meager 20 pounds of dried saffron.

As soon as the drying process is finished, the saffron, which is now a deep-red tangle of filaments, is ready to be stored away. Tightly sealed into dark plastic bags and protected from the light, La Mancha's "red gold" waits to be sold to a saffron dealer.

### ***Delightful Spice From a Beautiful Flower***

Although saffron is also grown in France, Italy, Greece, Iran, and India, 70 percent of the world saffron market is supplied by Spain. Its somewhat bitter taste is used all over the world to improve the flavor of poultry, rice, and seafood, while Scandinavians enjoy the taste of saffron-flavored bread. And in Japan it is still used as a dye for coloring expensive articles.

The rewards of growing saffron are not just economic. There are days when all the crocus flowers in an average field of 5,000 square feet seem to blossom in unison. Such a day is called *dia del manto*—day of the mantle. It looks as if the entire field were gently covered by a purple mantle. On such a day, the beauty of La Mancha's dusty fields calls to mind the words of the prophet: "The desert plain will be joyful and blossom as the saffron."—Isaiah 35:1.

# WATCHING THE WORLD

## RARE STRAIN OF AIDS VIRUS

A second strain of AIDS virus found mainly in western Africa has appeared in several blood samples in New York City. Standard AIDS tests used in the United States fail to detect consistently the antibodies of the new strain, HIV-2. This causes uncertainty for two groups of people: those who show no infection by the standard AIDS test and those who operate blood banks, since they cannot be sure that donated blood is safe. Experts also believe that the new strain may remain "silent" in the body for a longer period before symptoms are noticed and may have the same epidemic potential as the first AIDS virus, HIV-1. According to *The New York Times*, HIV-1 "is estimated to have infected a million or more Americans, with 97,193 AIDS cases reported as of May 31, [1989], of which 56,468 had died."

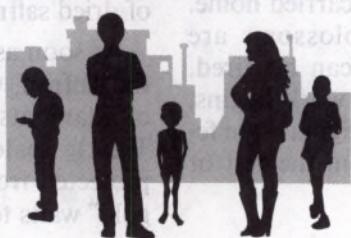
## COMPUTER CRIMES

More professional criminals are now relying on computers to carry out crimes like embezzlement and credit-card fraud. Security specialists report that in the United States some \$555 million is lost each year to computer crime. Even law-enforcement employees and military personnel are included in the list of offenders. According to the National Center for Computer Crime Data in Los Angeles, reported crimes ranged from an attempt to steal \$15 million to the theft of \$10. However, money is not the only target of computer crime. With the help of computers, some have successfully stolen information and com-

puter services and have maliciously altered computer data.

## STREET CHILDREN

There are reportedly some one hundred million children living on the streets of the world. They eke out a meager living as street vendors, thieves, and beggars. According to Peter Tacon, executive director of a group set up to help these children around the world, many



of them fall victim to the thriving child-sex trade and are exploited by organizations that cater to pedophiles. Tacon reckons that every day, some 5,000 new "candidates for the street" are born.

## BURMA NOW NAMED MYANMAR

Myanmar is the new official name for the Southeast Asian country formerly known as Burma. In addition, the name of the country's capital and largest city was changed from Rangoon to Yangon. These versions now match present usage in the Burmese language. The country's new name was adopted by the United Nations on June 22, 1989.

## SPAIN'S GAMBLING ADDICTION

Spanish officials are disturbed. Even though the country's 22 ca-

sinos were built to cater to foreigners, officials found that only 10 percent of the money gambled in the casinos is from tourists. The remaining 90 percent now comes from the local population, which, according to a Gamblers Anonymous spokesman, may include 600,000 compulsive gamblers. The total cost of Spain's gambling boom is around \$24,000,000,000 annually, five times more than the country spends on education, reports *The Financial Times* of London. The technical secretary for Spain's Gambling Commission, Santiago Mendioroz, stated: "There are still people out there who don't realize that the gambler always loses."

## SEX EDUCATION FAILS

Have classroom sex-education programs succeeded in reducing teenage sexual activity and its resultant problems? To find out, five studies were conducted from 1980 to 1987 on the effect of such programs on high-school teenagers from various areas and backgrounds. "The sex-ed programs had no measurable impact on pregnancy rates, negligible effect on the use of birth-control methods and insignificant influence on teen-agers' decisions about when to engage in their first sexual intercourse," reports *The New Jersey Herald*. According to the researchers, "existing data suggest that a classroom course alone cannot be expected to change sexual behavior in a direction that is in opposition to the adolescent's sexual world as it is molded by the television, motion picture, music

and advertising industries, as well as peer group and adult role models."

### NO TATTOO, NO SCAR!

For centuries, technology for the satisfactory removal of tattoos has eluded researchers. In an attempt to remove an embarrassing tattoo, some have tried sandpapering, freezing, burning, and even rubbing salt into the tattoo to wear the skin away. Now *The New York Times* reports on a new laser treatment that can remove tattoos without leaving a scar. The treatment uses deep-red laser pulses that last 40,000 millionths of a second with a power level of 100 million watts. In most cases the procedure is performed without the use of local anesthesia. Patients claim the laser flashes cause no more pain than that produced by the snap of an elastic band.

### BONES FROM THE SEA

The replacement of missing, damaged, or diseased facial bones often involves the use of grafts from other bones in the body. The procedure requires complicated surgery, with patients having to endure much pain and a prolonged healing period. What is more, the success of this method over the long term has often proved disappointing. However, Harvey Rosen, chief of plastic surgery at Pennsylvania Hospital, has apparently solved the problem by using sea coral instead of bone grafts. The mineral content of the chemically treated coral is almost the same as that of human bone. The Canadian magazine *Equinox* reports that biopsies taken a year after surgery have shown human bone and blood vessels actually living within the pores of the coral,

making the implants resistant to infection.

### TV LINKED WITH MURDER

Has television viewing contributed to the violence of society? A study published in the *American Journal of Epidemiology* analyzed three countries and concluded that it has. The study notes that 10 or 15 years after television was introduced in each of the coun-



tries, the rate of murders soared. Where television was introduced later, the violence rose later. "While television clearly is not the sole cause of violence in our society," the author of the study observes about the United States, "hypothetically if television did not exist, there would be 10,000 fewer homicides a year."

### GROWING STEROID ABUSE

Stripping an athlete of his Olympic gold medal seems to have done little to deter anabolic steroid abuse in sports. In fact, steroid abuse has shown a "marked increase," according to Gert Potgieter of the Sport Research Institute at the University of Pretoria, South Africa. Being a sportsman himself and a gym owner, he sees constant use of steroids by athletes who hope to improve their appearance or athletic performance. Often the supplies are being dispensed without a murmur by doctors and pharmacists, he states. "Sport is no

longer a physical achievement," concludes Potgieter. "It has become a chemical achievement."

### RENT-A-GUEST

In addition to professional housecleaning and delivery services, a company in Japan also provides guests for a fee. *The Wall Street Journal* reported that these guests-for-rent are available as stand-ins for anything from weddings to funerals. In weddings, they can pose as the bride's or the groom's childhood classmate, an executive from their job, a relative from far away, or even as one of the parents. Reportedly, the company's biggest job so far was a wedding for which it provided 60 of the bride's 80 guests. The service costs between 15,000 and 25,000 yen per person (between \$110 and \$180, U.S.).

### TORONTO'S NEW SKYDOME

"An enormous engineering marvel!" is the description being used for the new 500-million-dollar, air-conditioned stadium named SkyDome that recently opened in downtown Toronto, Canada. It has a seating capacity of 60,000 for sports events, concerts, and conventions. A retractable, four-section roof, 310 feet above the playing field, is the latest wonder of modern technology. The largest section of the roof weighs 1,906 tons, yet the huge roof can open or close over an area of some eight acres in about 20 minutes. The SkyDome boasts the world's largest video-display scoreboard, with a television screen 35 feet high and 115 feet long. The project involved some 5,000 workers and was completed in 32 months. The SkyDome is situated beside the CN Tower, the world's tallest freestanding structure.

# FROM OUR READERS

**Losing Weight** When I first saw the article in the May 22, 1989, issue on losing weight, I put off reading it for several weeks. You see, I have been overweight most of my life. Well, I have just read it and am very much encouraged, even eager, to put into practice the fine, loving suggestions. Your empathy, understanding, and loving concern are very much appreciated.

L. B., United States

Thank you so much for the article on overweight. (May 22, 1989) I am not a glutton but have a number of metabolic problems that have caused me to be overweight. I feel like a freak most of the time. I don't need thin people prejudging me, assuming all I do is eat, eat, eat. Thank you for pointing out that all fat people aren't gluttons. I know that Jehovah loves and understands me and accepts me despite my appearance. I just wish humans could be more loving and understanding.

P. R., United States

Since reading your article, I have begun a program of exercise and am putting forth effort not to eat so much late at night. I have already lost seven or eight pounds and feel wonderful. Thanks a million!

G. V., Federal Republic of Germany

*Not all experience quick results. For some individuals, losing weight is a hard battle requiring much effort, determination, and support—not criticism.—ED.*

**Worse Than Aids** I was deeply touched by the article "Something Worse Than Aids." (April 22, 1989) The article reminded me of my situation. I too have done some things that are very detestable to Jehovah God. As I read it, my eyes filled with tears. I began to realize that without Jehovah, it is like living

on some other planet without water! I will now put forth more effort to do what is pleasing in the eyes of God.

I. A., United States

**Choosing Careers** Many thanks for the article "What Career Should I Choose?" (May 8, 1989) I had wanted to go to a university but had to give up my dream because of various problems. In the meantime I began studying the Bible with Jehovah's Witnesses. Your article helped me very much indeed. I no longer have any regrets. I have a part-time job and serve as a full-time evangelizer. I do not think any career could be more satisfying.

A. P., Italy

**Miracles and Visions** I am a frequent reader of *Awake!* However, I feel you overlooked a number of points regarding Lourdes. (March 8, 1989) I have been visiting Lourdes for 18 years, and while I have seen no miracles or visions, there are other benefits. For many it is an awakening, and for many more it has provided a source of direction in their lives. A visit to Lourdes is not about searching for a miracle. It is a coming to a realization of Jesus' command: "Love one another." Any place that can bring so many people to an understanding of this cannot be evil.

R. K., Britain

*The shrines at such places as Lourdes and Fátima are very dear to the hearts of many sincere Catholics, and we can well appreciate their feelings. Our article showed, however, that the veneration of such sites is rooted in falsehood and contrary to Scripture. And though such sites may have great emotional appeal, we must remember that Jesus Christ said that "true worshipers" do not venerate any particular site but "worship the Father with spirit and truth."*  
—John 4:21-23.—ED.

# Deliberately Spreading Death

**B**EFORE AIDS kills its victims, it bestows upon them a dreadful responsibility: a power of life or death over others. Many AIDS sufferers act responsibly, denying themselves any act that might infect another. But a dangerous few decide differently.

A psychiatrist in Washington, D.C., wrote of a frightening example—one of her own patients: "A deeply disturbed bisexual AIDS victim is, I fear, deliberately trying to infect other people with his disease. He knows it could kill them." He told her: "At first when I found out I had AIDS I decided not to have sex with anyone, and then I just got angry and said: Let's conquer the world." What did he mean?

The psychiatrist explains: "He told me that sometimes when he got angry with someone, an inner voice told him, 'Let's get this guy' and he would try to have sex with him. He also said he was living with a bisexual man who was promiscuous with women." The psychiatrist tried to persuade officials to confine this dangerous man but to no avail. "When

I last saw him," she writes, "his behavior was unchanged, and I have no reason to doubt that it is any different today."

A unique case? Sadly, no. One man was dubbed Patient Zero by the Centers for Disease Control because of his key role in the early spread of AIDS in the United States. Even after he knew he was endangering the lives of others, he continued to have homosexual contact with some 250 partners a year.

Women have complained of mates who kept their bisexuality a secret. Drug users continue to share their used and contaminated needles and so have become the largest group of new AIDS victims in several countries.

As disturbing as all of this is, it comes as no surprise to students of the Bible. That ancient book long ago foretold that people of this troubled generation would be "lovers of themselves . . . having no natural affection." (2 Timothy 3:1-5) That time has certainly come. Those who ignore God's laws on morality have always offended the Author of those laws, our Creator. That is the worst risk one can take in life. But today the same disobedience often brings an added risk: entrusting one's very life to people who value nothing more than their own pleasure.



# What is the VDS?

Women who have undergone  
a hysterectomy may experience  
incontinence problems due to  
loss of tone in the pelvic floor.  
VDS is a device that can help  
these women.

VDS is a small device that is  
placed in the vagina. It helps to  
strengthen the muscles of the  
pelvic floor. VDS is a safe and  
effective treatment for incontinence.  
It is a non-invasive procedure and  
does not require surgery. VDS is  
a simple device that can be used  
at home. It is a small device that  
can be inserted into the vagina  
and left in place for several hours.  
The device is made of a soft, flexible  
material that is designed to fit  
comfortably into the vaginal canal.  
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