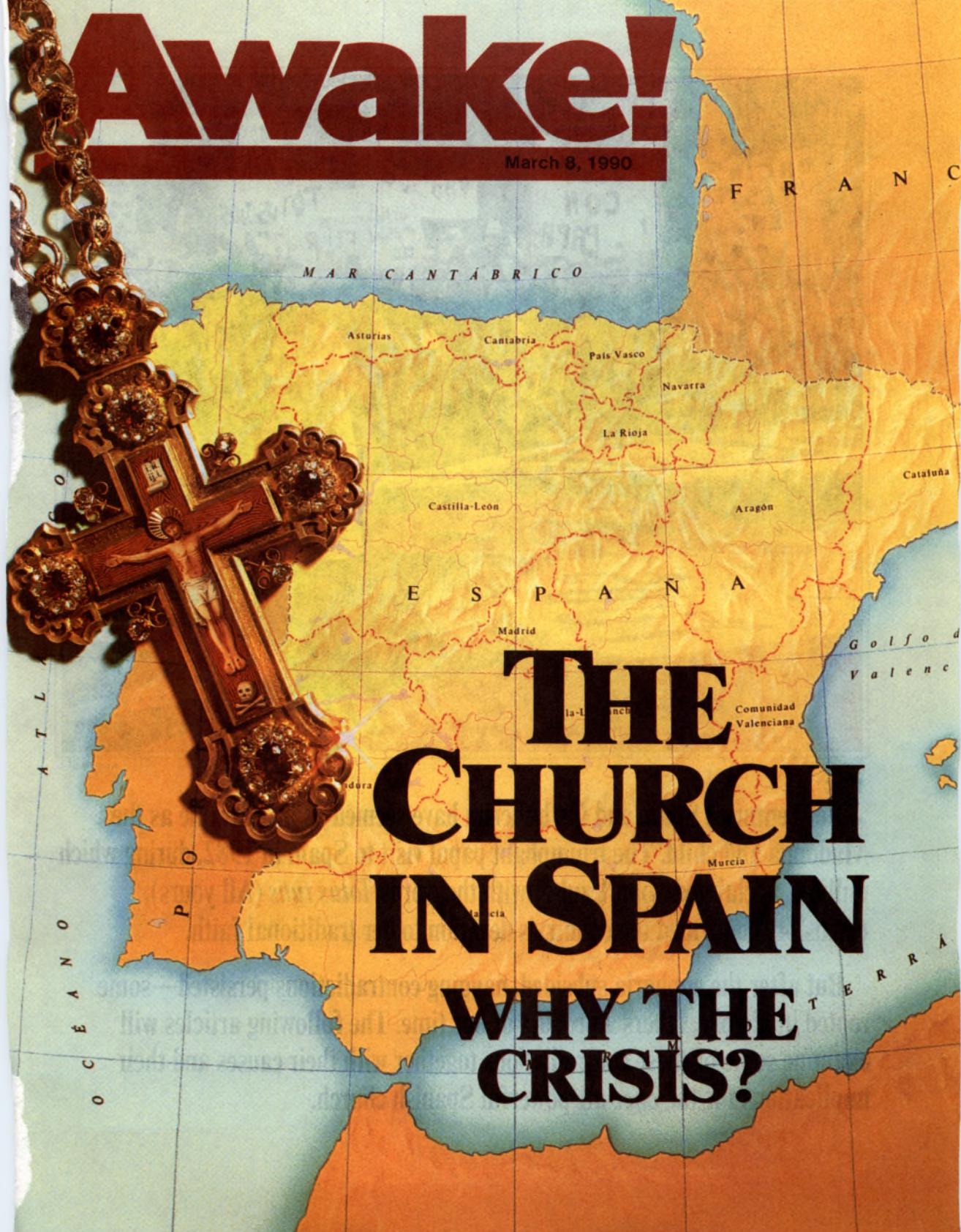


# Awake!

March 8, 1990



## THE CHURCH IN SPAIN

WHY THE  
CRISIS?



Agencia EFE

**F**or centuries Spain and Catholicism have seemed as inseparable as the Madonna and child. The triumphant papal visit to Spain in 1982, during which millions acclaimed John Paul II with the words *Totus tuus* (All yours), ostensibly confirmed the country's devotion to her traditional faith.

But after the euphoria subsided, nagging contradictions persisted—some rooted in history, others a product of our time. The following articles will examine some of these contradictions together with their causes and their implications for the once all-powerful Spanish church.

# The Contradictions

By *Awake!* correspondent in Spain

"Things are seldom what they seem." This observation by Sir William Gilbert aptly describes the Sagrada Familia temple in Barcelona (depicted on page 10). Its majestic towers conceal an empty interior—after a hundred years of construction, the temple is still just a shell. Spanish Catholicism too is a curious mix of strength and emptiness, as comments by the following Spaniards reveal:

"John XXIII? The name sounds familiar. Was he a king?" said Cristina, a Spanish teenager, who had never heard of that popular pope.

Madrid taxi driver José Luis and his wife, Isabel, made a rare appearance at the parish church in order to get their son christened. "Why do you want to christen your son?" they were asked. "Because we are Catholics," the father replied. However, when pressed, he admitted that the main reason was to avoid problems with the family.

**A** PERSON who visits Spain during Holy Week may well be impressed by the processions held in cities throughout the country. But some Spaniards—especially the younger ones—may know little, if anything, about the religion they profess.

Religious illiteracy is often coupled with religious indifference. Although most Spaniards are christened, married, and buried by the church—and indeed view themselves as Catholics—living according to Rome's decrees is another matter.

Parents may christen their children but rarely feel obliged to teach them Catholic doctrine. Married couples likely have their vows solemnized by the church but seldom feel bound to follow church teaching on marital matters. And 10 percent of those who say they are Catholics do not even believe in a personal God.

This situation is not entirely surprising, considering Spain's lasting but contradictory

relationship with the church. Described as formerly "the light [of the council] of Trent, the hammer of the heretics and the sword of Rome," Spain has also begotten the "most bloody persecution suffered by the Catholic Church in all its existence," states a professor of contemporary history at the University of Deusto, Vizcaya.

In the 16th century, Spanish money and Spanish armies defended European Catholicism against the Protestant tide, but in 1527 Rome and the Vatican itself were mercilessly sacked by the army of Spanish king and Holy Roman emperor Charles V.\* Charles, like other Spanish sovereigns, blithely ignored any Vatican decrees that he disliked.

Spain's independent yet exclusive brand of Catholicism owes these contradictions to a unique Church-State relationship, forged when both were at the height of their power.

\* After the sacking of Rome in 1527, Charles kept Pope Clement VII under virtual house arrest in Castel Sant' Angelo, Rome, for seven months.

# The Power and the Privilege

"The Lord left to Peter the governance not of the Church only but of the whole world."

—Pope Innocent III.

**W**HEN Innocent III wrote those words in the early 13th century, the medieval Catholic Church had reached the pinnacle of its power. But the road to temporal power had been paved by political rather than spiritual alliances. Nowhere was this more so than in Spain.

The Spanish church grasped power and privilege by joining forces with the State.

### *Religious Unity a Political Tool*

In 1479, after centuries of rule by divided and fractious kingdoms, nearly all of Spain became united under the rule of Ferdinand and Isabella. But how was the newly formed nation to be united in thought and purpose? Ferdinand enlisted the aid of the church. In 1478 the Inquisition had been set up with pa-

pal backing. Now, controlled by the king and run by the church, it proved to be one of the most powerful weapons yet devised for suppressing religious and political dissent. With the rapid submission of all baptized Spanish Catholics to its yoke, the only remaining obstacle to unity were the several million unbaptized—the Jews and the Moors.

In 1492, under pressure from Inquisitor-General Torquemada, Ferdinand and Isabella ordered the expulsion from Spain of all unbaptized Jews. Ten years later, all Moors who refused to become Catholics were also expelled. Friar Bleda described the forced exodus of the Muslims as "the most glorious event in Spain since the time of the Apostles." He added: "Now religious unity is secured, and an era of prosperity is certainly about to

**Awake!**<sup>®</sup>

March 8, 1990  
Vol. 71, No. 5

Average Printing: 11,930,000 Published in 55 Languages

Printed in U.S.A.

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Unless otherwise indicated, *New World Translation of the Holy Scriptures* used.

dawn." *La España Católica* (Spain, the Catholic) had become a reality, and in recognition Isabella and Ferdinand were named "the Catholic Sovereigns" by Pope Alexander VI.

With religious unity achieved at home, the Spanish church widened its horizons. Under Spanish royal patronage, Columbus had just discovered new lands and peoples in the Americas. Accompanying the conquistadores, Dominican and Franciscan friars sailed to the New World, bent on bringing the heathen into the bosom of the church.

# "We came here to serve God and also to get rich"

Cortés, conqueror of Mexico, was told that the primary goal of his expedition was to serve God and spread the Christian faith. Notwithstanding, he frankly admitted: "I came for the gold." Perhaps the majority of

## 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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the conquistadores had mixed motives, similar to those expressed by one of their number: "We came here to serve God and also to get rich."

Before embarking on the conquest of a certain region, the conquistadores read aloud a document entitled *Los requisitos*—in or out of the natives' hearing—according to which the natives were required to recognize that the church governed the world and that the king of Spain was its representative. A refusal to acknowledge such was sufficient to consider the military colonization a "just war."

Millions of natives were baptized, many immediately after being conquered. Thereafter, priests and friars cooperated with the Spanish monarchs in governing the colonies. As church historian Paul Johnson observed: "The Catholic Church was a department of the Spanish government, and never more so than in the Americas. . . . In return, the Church required protection, privilege, and the crown's unwavering devotion to the orthodox faith."

Thus, by the end of the 16th century, the church in Spain had become the most powerful national church in Christendom. It exercised absolute religious control throughout Spain and a vast part of the New World. But the singular power and privilege that it enjoyed inevitably led to abuses more pronounced than in other lands.

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# The Abuse of Power

"The greater the power, the more dangerous the abuse."

—Edmund Burke.

**T**HE man who wielded the greatest power in 16th-century Europe was Philip II, king of Catholic Spain. His vast empire, "on which the sun never set," stretched from Mexico to the Philippines, from the Netherlands to the Cape of Good Hope.

But his ambitions were religious rather than political—to defend Catholicism in Europe and to spread the faith throughout his empire. Reared by priests, he was convinced that the Catholic Church was the ultimate bulwark of his monarchy and of civilization itself. Above all, he was a child of the church.

To further the cause of Catholicism, he gave his blessing to the cruel methods of the Inquisition; he fought against Protestants in the Netherlands and against Turkish "infidels" in the Mediterranean; he reluctantly married Mary Tudor, an ailing English queen, in a fruitless attempt to provide her with a Catholic heir; he later dispatched the "invincible" but ill-fated Armada to wrest England from the Protestant fold; and at his death he left his country bankrupt—despite huge infusions of gold from the colonies.

### ***The Inquisition***

### ***—Three Centuries of Repression***

Next to the king, the most powerful man in Spain was the inquisitor general. His duty was

to keep Spanish Catholicism undefiled and orthodox. The unorthodox kept their opinions to themselves or went into exile, provided the agents of the Inquisition did not find them first. Everyone, with the possible exception of the king, was vulnerable to the Inquisition's power and abuse thereof—not even the Catholic hierarchy was above suspicion.

The archbishop of Toledo was imprisoned for seven years on the flimsiest of evidence, despite repeated papal protests. Nobody in Spain dared to speak in his defense. It was argued that 'it is better for an innocent man to be condemned than for the Inquisition to suffer disgrace.'

The Inquisition accompanied the conquistadores to the Spanish colonies in the Americas. In 1539, just a few years after the conquest of Mexico, Aztec chief Ometochtzin was accused of idolatry, on the evidence of his own ten-year-old son. Despite his plea for freedom of conscience, he was condemned to death. In the colonies, as in Spain, the Bible in the vernacular was forbidden. Jerónimo López wrote in 1541: "It is a most dangerous error to teach science to the Indians and still more to put the Bible . . . into their hands. . . . Many people in our Spain have been lost that way."

For three centuries the *Inquisition* kept its narrow vigil over Spain and its empire until it

finally ran out of money and victims. And without victims, who were obliged to pay heavy penalties, the whole machine ground to a halt.\*

### ***Winds of Change***

With the demise of the Inquisition, 19th-century Spain saw a growth in liberalism and a gradual decline of Catholic power. Church lands—until that time they constituted a third of all the cultivated land—were confiscated by successive governments. In the 1930's, socialist prime minister Azaña declared: "Spain has ceased to be Catholic," and his government acted accordingly.

The church was completely separated from the State, and subsidies to the clergy were abolished. Education was to be nonreligious, and even civil marriage and divorce were introduced. Cardinal Segura lamented this 'severe blow' and feared for the survival of the nation. It seemed that Catholicism was destined to an

\* The last victim was a hapless schoolmaster who was hanged in Valencia in 1826 for using the phrase "Praise be to God" instead of "Ave Maria" in school prayers.



inevitable decline when, in 1936, a military uprising rocked the nation.

### ***Civil War—A Cruel Crusade***

The army generals who led the coup were motivated by political considerations, but soon the conflict took on religious overtones. Within a few weeks of the uprising, the church, whose power had already been undermined by recent legislation, suddenly found itself the target of widespread and vicious assault.\* Thousands of priests and monks were killed by fanatical opposers of the military coup, who equated the Spanish church with a dictatorship. Churches and monasteries were plundered and burned. In some parts of Spain, just wearing a priest's cassock was enough to sign a man's death warrant. It was as if the monster of the Inquisition had returned from the grave in order to engulf its own progenitors.

Faced with this threat, the Spanish church turned once again to the secular powers—in this case the military—to champion its cause and to restore the nation to Catholic orthodoxy. But first the civil war had to be sanctified as a "holy war," a "crusade" in the defense of Christianity.

Cardinal Gomá, archbishop of Toledo and primate of Spain, wrote: "Is the war in Spain a civil war? No. It is the fight of those without God . . . against the true Spain, against the Catholic religion." He called General Franco, the leader of the insurgents, the "instrument of God's plans on the earth." Other Spanish bishops expressed similar sentiments.

\* According to a church report by Canon Arboleya in 1933, the working man considered the church an intrinsic part of the rich and privileged class that was exploiting him. Arboleya explained: "The masses fled from the Church because they believed it their greatest adversary."

**From this monastery-palace complex of San Lorenzo del Escorial, Philip II ruled over his empire, "on which the sun never set"**

## The Spanish Civil War —The Bishops' Pronouncements

**S**oon after the outset of the war (1936), Cardinal Gomá described the conflict as a fight between "Spain and anti-Spain, religion and atheism, Christian civilization and barbarism."

*La Guerra de España, 1936-1939,*  
page 261.

**T**he bishop of Cartagena said: "Blessed are the cannons, if the Gospel flourishes in the breaches they open."

*La Guerra de España, 1936-1939,*  
pages 264-5.

**O**n July 1, 1937, the Spanish bishops issued a collective letter outlining the Catholic position on the civil war. Among other things, it stated the following:

"The church, despite its peaceful spirit, . . . could not be indifferent to the fight. . . . In Spain there was no other way to reconquer justice, peace, and the benefits that derive from them than through the National Movement [Franco's Fascist forces]."

"We believe that the name National Movement is appropriate, first because of its spirit, which reflects the way of thinking of the large majority of the Spanish people, and it is the only hope for the entire nation."

*Encyclopedia Espasa-Calpe,*  
supplement 1936-1939,  
pages 1553-5.

**C**atholic bishops in other countries were quick to support their Spanish colleagues. Cardinal Verdier, archbishop of Paris, described the civil war as "a fight between the Christian civilization and the . . . civilization of atheism," while Cardinal Faulhaber of Germany exhorted all Germans to pray in behalf of those who "defend the sacred rights of God, that He may grant victory to those who fight in [this] holy war."

*Encyclopedia Espasa-Calpe,*  
supplement 1936-1939,  
pages 1556-7.

Of course, the truth was not that simple. Many on the Republican side of the conflict were also sincere Catholics, especially in the Basque region, a traditionally Catholic stronghold. Thus, the civil war found Catholics fighting Catholics—all in the cause of Spanish Catholicism, according to the bishops' definition of the conflict.\*

When Franco's forces finally overran the Basque Provinces, they executed 14 priests and imprisoned many more. French philosopher Jacques Maritain, writing about atrocities committed against the Basque Catholics, observed that "the Holy War hates the believers that don't serve it more fervently than the unbelievers."

After three years of mutual atrocities and bloodletting, the civil war came to an end, with a victory for Franco's forces. From 600,000 to 800,000 Spaniards died, many of them because of the harsh reprisals of the victorious forces.\* Unfazed, Cardinal Gomá asserted in a pastoral letter: "Nobody can deny that the power that has resolved this war has been God himself, his religion, his statutes, his law, his existence, and his recurring influence in our history."

From the establishment of the Inquisition in the 15th century to the Spanish Civil War (1936-39), with few exceptions, Church and State had made common cause. Doubtless, their mutual interests had been served by this unholy alliance. Nevertheless, five centuries of temporal power—and the accompanying abuses—had seriously undermined the church's spiritual authority, as our following article will show.

\* Some Catholic priests actually fought in Franco's armies. The parish priest of Zafra, Extremadura, was especially notorious for his brutality. On the other hand, a few priests bravely protested the killing of suspected Republican sympathizers—and at least one was executed for this reason. Cardinal Vidal y Barraquer, who tried to maintain an impartial position throughout the conflict, was obliged by Franco's government to remain in exile until his death in 1943.

\* Exact figures are impossible to obtain, and calculations are approximate.

THE CATHOLIC CHURCH IN SPAIN

# Why the Crisis?

"They sow the wind, they will reap the whirlwind."

Hosea 8:7, "The Jerusalem Bible."



Only 3 out of 10 Spaniards regularly attend church



**J**N MAY 20, 1939, in the church of Santa Bárbara, Madrid, General Franco presented his victory sword to Archbishop Gomá, primate of Spain. The army and the church celebrated together the triumph that the pope described as the "desired Catholic victory." The civil war had ended, and apparently a new dawn of Spanish Catholicism was breaking.

The church triumphant received generous State subsidies, control of education, and wide censorship powers over anything not conducive to national Catholicism. But the successful military-religious crusade had also sown the seeds of the church's decline.

In the eyes of many Spaniards, the church was implicated in the atrocities of the victorious forces. True, during the immediate post-war years, the majority of the population

went to Mass. To get a job or a promotion, it was wise to be a good Catholic. But had genuine faith been fostered by armed might and political pressure?

Forty years later, a series of crises were to answer that question.

**Crisis of Faith:** By 1988 only 3 out of 10 people in Spain were regularly practicing the Catholic religion, and most people considered themselves "less religious than they were ten years ago." A survey, carried out for *El Globo*, a Spanish weekly, showed that although the majority of Spaniards believe in God, fewer than half of them are convinced that there is life after death. Most surprising of all was the finding that as many as 10 percent of those who considered themselves practicing Catholics said that they did not believe in a personal God.

**Crisis of Vocations:** Spain used to send priests to the four corners of the globe. Thirty years ago, 9,000 were ordained every year. Now, that number has fallen to a thousand, and many large

**The Sagrada Familia Church in Barcelona is still unfinished after a hundred years of building and soliciting donations**

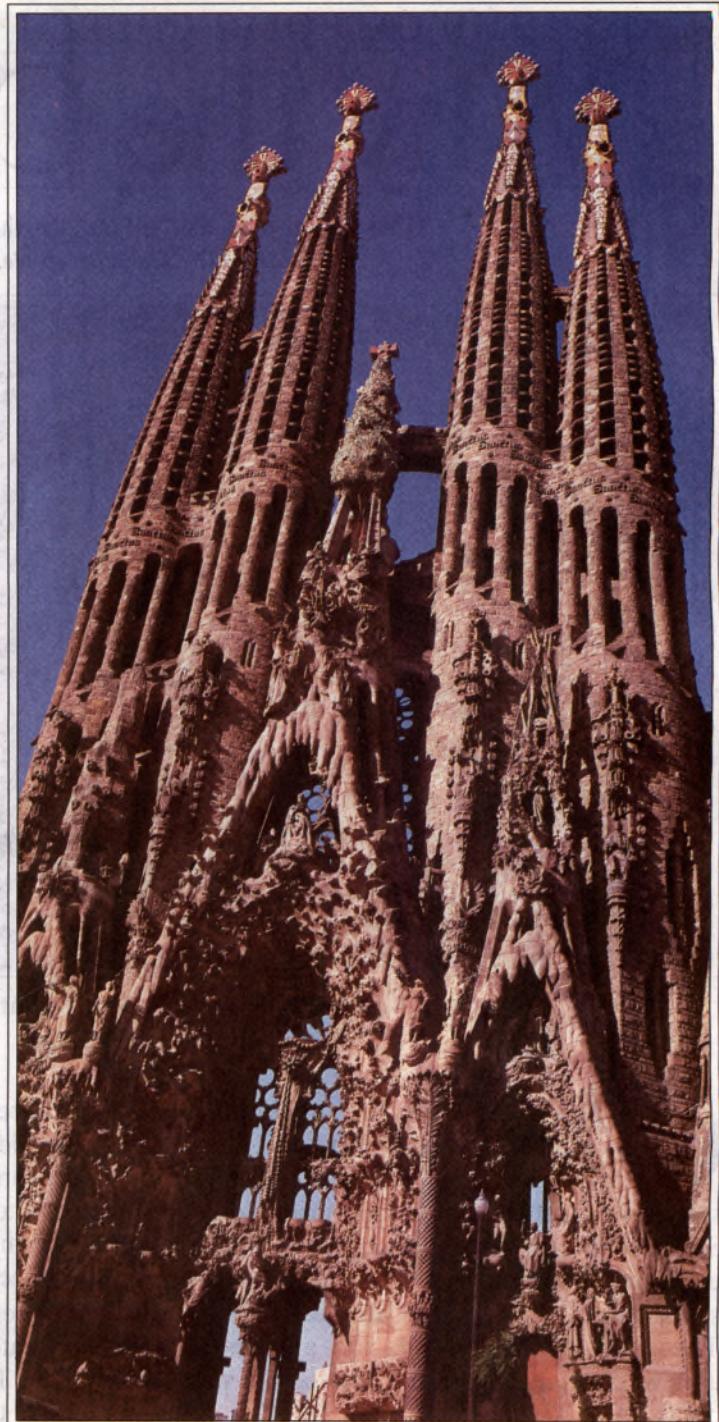


Photo: Godo-Foto

seminaries lie idle. As a result, the average age of Spanish priests is increasing—16 percent are now over 70 years of age, while only 3 percent are under 30.

**Crisis of Funding:** The new Spanish constitution separates Church and State. Formerly, generous State subsidies were automatically assigned to the Catholic Church. The present government has introduced a new system whereby a small percentage of each person's taxes is allotted either to the church or to some worthy social cause, depending on the wishes of the taxpayer. Surprisingly, only 1 out of every 3 Spanish taxpayers preferred to have the church receive his money. This was a blow for Catholic authorities, who had estimated that almost double that number would assign this "religious tax" to the church. It means that a self-supporting church is still a long way off.

Meanwhile, it appears that the government will reluctantly have to keep on subsidizing the church to the tune of \$120 million a year. Not all Catholics are happy about this situation. One Spanish theologian, Casiano Floristán, pointed out that "a church that does not receive sufficient contributions from the faithful either does not have the faithful or is not a church."

**Crisis of Obedience:** This crisis affects both priests and parishioners. Younger priests and theologians are often concerned with social rather than religious issues. Their "progressive" tendencies clash with the conservative Spanish hierarchy and also with the Vatican. Typical is José Sánchez Luque, a priest from Málaga, who feels that "the Church does not have a monopoly of the truth" and that it should "orientate the citizens, but without dominating."

Many Spanish Catholics think similarly—only a third of Spanish Catholics generally agree with what the pope says. And the Span-

ish episcopacy is viewed even less favorably. Of the Catholics interviewed in a recent poll, one fourth explained that they "couldn't care less" about the bishops, while 18 percent said they could not understand them anyway.

### *"A Second Evangelization"*

In the face of this alarming situation, the Spanish bishops published in 1985 an extraordinary series of confessions. Among other things, they admitted:

*"We have veiled rather than revealed  
the true face of God."*

*"Perhaps we have enchain'd  
the Word of God."*

*"Not all of us have explained  
the undiluted message of Jesus."*

*"We have trusted little in God and too much  
in the powers of this world." \**

The bishops also acknowledged that the country was becoming more and more secularized, or religiously indifferent. They recommended a "second evangelization" of Spain. Few, however, heeded their call. Two Catholic ladies who went from house to house had a surprise. They spent more time explaining to householders that they were not Jehovah's Witnesses than they spent giving their Catholic message.

This should not have been surprising, for Jehovah's Witnesses spent more than 18 million hours last year visiting the homes of people in Spain in a genuine nationwide evangelization. All Witnesses—like the first-century Christians—feel obliged to "do the work of an evangelist." (2 Timothy 4:5, *Revised Standard Version*, Catholic Edition) And although they may find widespread apathy toward the

\* Another confession was made at a joint assembly of priests and bishops in 1971. Although not passed by the required two-thirds majority, more than half endorsed this statement: "We humbly recognize and ask pardon that we did not know how, when it was necessary, to be true 'ministers of reconciliation' in the midst of our people torn by a fratricidal war."

church, the evangel, or good news concerning God's Kingdom, that they impart does find many a hearing ear.

One elderly man they met was Benito. When the civil war broke out, he found himself in the area controlled by the military insurgents. He was forced to enlist as a soldier, but in his heart he felt that it was wrong to take up arms. He refused to accept that it was a "holy war." Rather than kill his fellowman, he deliberately shot himself in the hand so that he would be unable to pull a trigger.

Forty years later, he and his wife started studying the Bible with Jehovah's Witnesses. Benito was delighted to learn that God himself urges his people to "beat their swords into plowshares," just as his conscience had urged him to do many years earlier. (Isaiah

## Catholic bishops called for a second evangelization of Spain. Few heeded their call

2:4) Despite failing health, before long he too was doing the work of an evangelist.

### ***A Beautiful Bubble***

Gloria was a Catholic who had resigned herself to worshiping God in her own way. For years she had devoted her life to the church as a missionary nun in Venezuela. But she had

become disillusioned when she was unable to find answers to her questions regarding church doctrines, such as the Immaculate Conception of Mary, purgatory, and the Trinity.

When she sought explanations, she was always told that it was a mystery. 'Why does God make things so difficult to understand?' she asked herself. On one occasion she was warned that if she had lived in the time of the Inquisition, she would have been burned. 'And that's probably true,' she thought.

Because of such rebuffs, she was skeptical when Jehovah's Witnesses visited her. But when she realized that everything they were teaching was confirmed by the Scriptures, that she could at last understand God's message for mankind, she was overjoyed. She now devotes much of her time to the preaching of the good news of God's Kingdom.

"Now, when I think about all the religious ceremonies of the Catholic Church," Gloria says, "I compare them to a beautiful bubble, glistening with many colors, but empty—if you try to probe further, it just disappears."

Benito, Gloria, and thousands of Jehovah's Witnesses like them in Spain, have found real spiritual refreshment by turning to the unadulterated waters of truth contained in the Holy Scriptures. Such refreshment was missing in that venerable Iberian institution, the Spanish church—so rich in tradition but so poor in spiritual content, so powerful for centuries but now so helpless to allay the apathy of her dwindling flock.

Jesus Christ once said, referring to the need to identify and avoid religious error: "Beware of false prophets who come to you disguised as sheep but underneath are ravenous wolves. You will be able to tell them by their fruits. . . . I repeat, you will be able to tell them by their fruits."—Matthew 7:15-20, JB.

We leave the reader to judge for himself the fruits of Spanish Catholicism.

## YOUNG PEOPLE ASK...



# Why Should I Avoid the Occult?

**I** WAS very attached to my grandpa," said the young girl, "and when he died, it hit me terribly hard. I wanted to know if it was possible to get in touch with him again." The young girl thus began dabbling in the occult.

A recent report claimed that "at least 200,000 children and youths in the Federal Republic of Germany have had experience with various forms of the occult." Japan has a crop of amateur spiritists in school, some specializing in telepathy, others in hypnosis, and still others in exorcism. In Nigeria it is not unusual these days to hear of primary-school children practicing witchcraft. And, sad to say, even some youths raised by Christian parents have, perhaps unwittingly, toyed with the supernatural.

Why does the occult hold such a fascination for youths? And why is getting involved with it so dangerous?

### Why They Become Involved

Occultism involves the supernatural, an exploration of the spirit world by means of astrology, divination, witchcraft, magic, and the like. And why are so many youths eager to peer into such things? Dirk had a deep desire to contact his dead father. Convinced that he could do this if he developed his mental pow-

ers, he set out on a routine of meditation in which he tried to make objects move without touching them. Such meditation, said Dirk, brought him to the threshold of the spirit world!

Other youths fear the future. They want advice regarding their grades or marriage prospects and reckon that the spirit world can help them. Particularly disturbing is the worship of Satan himself! The appeal of this gruesome religion? "I'm into it for power," explained one Canadian youth who practices Satanism. "It gives me the power to hurt people."

Most investigators believe, though, that the major reason youths get involved with occultism is simple curiosity. "I was so curious," confessed one girl who became involved in the occult. Another girl put it this way: "I felt very skeptical at first, but I thought, 'At least you'll know what it's really like.'" So she accepted an invitation from a friend to join in an occult session.

Driven by curiosity, some youths try their hand at the Ouija board or improvise by studying the movements of an upturned glass. From there it is but a short hop to deeper involvement in spiritism by the use of crystal balls, tarot cards, pendants, tea leaves, and horoscope books. Some even begin

consulting professional fortune-tellers or medicine men. Many professionals, though, prove to be little more than tricksters. For example, to improve his grades, Alexander contacted a medicine man. Not only did he not improve his grades but he lost out financially. His money was split between the phony medicine man and the so-called friend who recommended him.

For many a youth, though, a venture into spiritism results in something far more injurious than financial loss.

### **'Unbelievable Torment'**

"If only I'd known" is a phrase commonly heard among those who came to regret playing with the supernatural. So observed *Personality*, a South African magazine. Typical is the lament: "If only I hadn't been so naïve. . . . I have suffered unbelievable torment, voices, nightmares, threats, and I have been tortured mentally and physically by other satanists when I tried to get out."

Fully 24 percent of teachers surveyed in Germany noted the disturbing influence of occultism on pupils. Some students were withdrawn, had problems learning, lived in fear, suffered from depression, and developed a tendency to inflict harm on themselves or others. Dirk often could not sleep at night. He recalls: "Gripped with fear of being possessed by demons, I didn't dare close my eyes. I winced at every sound." A youth named Michael similarly suffered "sleepless nights with demon harassment" after taking potions prescribed for him. Other reports describe ominous personality changes in persons participating in occult practices. One girl alarmed her mother by informing her that in the future she would dress in black (the color she also wanted to paint her room) and sleep in an open coffin!

### ***The Real Inhabitants of the Spirit World***

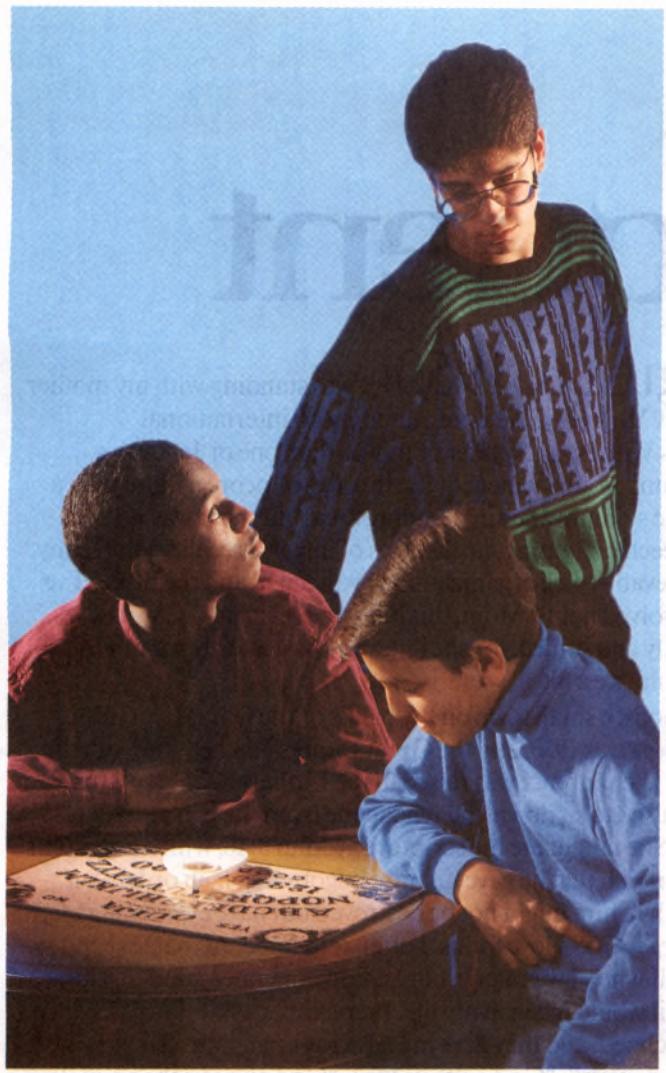
The scriptures make plain that "the dead . . . are conscious of nothing at all." (Ecclesiastes 9:5) The spirit world is therefore not inhabited by souls of departed loved ones. What, then, is the reason for such frightening experiences? Wicked demons! According to the Bible, these are rebel angels, followers of Satan the Devil. (1 Peter 3:19, 20; Revelation 12:9) They have a history of perpetrating mischief and mayhem among humans.

Luke 9:42, for example, tells us of a demon-possessed man whom "the demon dashed . . . to the ground and violently convulsed." How sadistic! Acts 19:16 similarly describes how a demon-possessed man made a violent attack upon seven would-be exorcists. Modern-day experiences clearly confirm that the demons have not changed their vicious ways one bit.

A youth who begins toying with ESP, astrology, tarot cards, or any form of the occult may thus be opening the door to horrifying experiences. The magazine *Personality* said: "A common thread running through the experiences of all those we spoke to [who had got involved with the occult] was that they had been sucked deeper and deeper into the satanic whirlpool through channels clothed in a thin veneer of respectability." Yes, the occult is nothing more than a stepping-stone to contact with Satan and the demons!

### ***'Honey on a Sharp Knife'***

God's Law to the Israelites therefore prohibited any form of spiritism, saying: "There should not be found in you . . . anyone who employs divination, a practitioner of magic or anyone who looks for omens or a sorcerer, or one who binds others with a spell or anyone who consults a spirit medium or a professional foreteller of events or anyone who inquires of the dead."—Deuteronomy 18:10, 11.



Involvement with the occult might begin with a seemingly harmless game, such as this Ouija board or the use of an upturned glass

has repeatedly been linked to Satanism.

The Tibetans have a saying: 'Think twice before accepting honey that is offered on a sharp knife.' In trying to lick the honey off the knife, you may lose your tongue! Similarly, no matter how appealing the supernatural may be to your curiosity, it is lethal. So refuse any invitation to participate in or even observe an occult session. Something as seemingly harmless as the glass-moving game may lead to dangerous involvement in demonism. True, you may be curious. But would you eat rotten meat simply to find out what it's like to have food poisoning?

Dirk (mentioned earlier) was able to free himself from the occult. By studying the Bible with the help of the publications of the Watch Tower Society, he came to understand the truth about his dead father, and he learned about the hope of a resurrection. (Psalm 146:4; John 5:28, 29) This truth set him free from any desire to communicate with the spirit world. (Compare John 8:32.) Where is Dirk now? He has joined the ranks of Jehovah's Witnesses and works at one of the printing facilities of the Watch Tower Society as a full-time minister.

Yes, the Bible satisfies our 'spiritual needs.' (Matthew 5:3) And in the long run, this is far more beneficial than satisfying one's morbid curiosity through the dangerous, death-dealing occult.

Christians in the first century cleansed themselves of any connection with spiritism, destroying all demonistic paraphernalia. (Acts 19:19) Youths today who desire Jehovah's friendship will similarly steer clear of anything associated with the occult. That would include all films, books, comic books, and posters with spiritistic overtones. Even one's choice of music should come under scrutiny. Heavy metal music, for example,

# From Delinquent

**I**t was August 6, 1950. I was standing with my mother in Yankee Stadium, New York City. We were attending an international convention of Jehovah's Witnesses. Neither of us was then one of Jehovah's Witnesses. I looked around in amazement at the throngs of people, more than a hundred thousand in the stadium and surrounding area, but there was no pushing, no abusive speech or fighting, no displays of anger. I recall saying to my mother: "This is unbelievable. The organizations I've been in and the places I've gone to have usually involved fights. Mom, this has to be the truth!" She just squeezed my hand tightly and smiled, for she knew my past as only a mother could. Permit me to reminisce a bit.

I was born in Metropolis, a small town on the banks of the Ohio River in southern Illinois. The year was 1930, and the Great Depression had the world in its grip. I was the 9th of 11 children. I was raised in the Lutheran religion. In the afternoons my mother used to sit down and read to me from the Bible, and I truly enjoyed those sessions. She taught me the scripture at John 3:16, which says: "For God loved the world so much that he gave his only-begotten Son, in order that everyone exercising faith in him might not be destroyed but have everlasting life," and told me never to forget God's love for us. I often remembered that text and would repeat it to myself when I was alone, but I could not understand just how God loved us and what it would mean in my life. I remember asking various ones who were religiously inclined, and they gave me an array of answers, such as: "God gives us trees and flowers"; "God gives us life"; "God gives us the animals, the beautiful stars, and the rain to make things grow." Then I would think: 'But all those things were here before Jesus was born. The text promises everlasting life, but my brother and sister died.' When I asked about that, I was told: "Oh, but that comes after you die." Thus, as a mere boy, I was confused and very early in life lost interest in religion and Sunday school.

# to Missionary

By the time I was ten years old, I was a juvenile delinquent and a member of a street gang, even heading it at times. I was constantly in difficulties with the authorities. When my father would see a police car on our street, he would assume that they were coming to inquire about me and say: "Call Robert. Here come the police." My parents suffered a great deal because of my delinquency, and my father would plead with me to stop my association with the gang I was running about with. He was so disheartened and would tell me: "You have caused us enough trouble to make up for all the other children, and it's just because of your associations." Strangely, however, Mother would tell Father: "He'll change. You watch, Robert will be a minister someday."

### **God's Truth Changes Me**

Then something happened that was to have a big effect on my life. My sister Evelyn began studying the Bible with Jehovah's Witnesses in 1948. However, at that time all that I knew about the Witnesses was their neutral position on national and political issues. I was very inclined to nationalism and didn't want my sister to get involved with these people. I opposed her strenuously. Nevertheless, she recognized the truth of what she was learning and did not listen to me. To this day she and the majority of her children and grandchildren are faithfully serving Jehovah God. Now I thank her and God for her persistence because one day I overheard her discussing the Bible with her Bible teacher while I was in the kitchen. I found out about the Paradise earth to come and the possibility of living forever on it. John 3:16 came back to my mind, and I thought: 'This is God's love for us through Jesus.' After that, each week I would listen from the kitchen. Soon they invited me to sit in on the study. Thus I came to know the loving, true God, Jehovah.



**Robert and Earline Reed**

My parents had also attended the study, and after moving to Ypsilanti, Michigan, they continued to study the Bible. Soon after, I joined them there. In 1950 I went to my first convention of Jehovah's Witnesses, an international one at Yankee Stadium, New York City. That week-long demonstration of true love convinced me that these were the kind of people I wanted as my close associates for the rest of my life. At that convention I made my dedication to serve Jehovah, the true God.

During our return to Michigan from the convention, we had the joy of visiting the Watchtower Bible School of Gilead, a school for training ministers to serve as missionaries in other countries. At that time the school was located in a beautiful country setting near



**Laundry day in Colombia for my wife, Earline**

South Lansing, New York. On that visit, I set my goal to be a missionary.

On September 10, 1950, I was baptized along with two others in a small creek on a farm. I was then 19 years old. My associations had been undergoing a change, and when I met many of my former associates, they would ask me what had happened. Some would tell me that I was crazy. But, truly, I had never felt more sane in my life! My father was amazed and very happy.

In 1951 I married Earline Merlau Olson. Her background was very different from mine, as she had been raised by parents fully dedicated to God. She had spent her school vacations in the full-time preaching activity and was hoping to expand her service to the missionary field.

#### **Pursuing Goals in Spite of Difficulties**

Because of my stand for Christian neutrality, I once again became involved with the au-

thorities, and for the first time in my life, I went to jail—for being a Christian! During the day and the night that I was held in the county jail, I was vividly shown God's loving watchcare. One of the prisoners, apparently the cell boss, told the others that he wanted to hold a kangaroo court and make me the victim. What should I do? Revert to acting as I had for so many years as a youthful delinquent or trust in God? I beseeched Jehovah to help me to continue faithful and to give me wisdom and strength. Immediately another prisoner came to my aid. He told the others to use *him* for their victim and, physically putting me behind him, said: "You'll have to come through me to get him." There were several tense moments. Then the cell boss said: "Forget it. It's not that important." I thanked God! Legal counsel secured my release the following day, but the legal proceedings continued for three years until I was finally exempted from military service as a minister.

On May 1, 1955, my wife and I embarked on our career of being full-time preachers, or pioneers. We pioneered for two years with the congregation in Ypsilanti, Michigan. Then we were invited to serve as special pioneer ministers, beginning May 1, 1957, in Burlington, Vermont, devoting even more time to preaching. During our two years there, we shared in the reestablishment of the congregation. Our first Kingdom Hall was in the very center of town! On Sunday the public talk was "Communism or Christianity—Which Will It Be?" Since some threats had been made to prevent our meeting, I went to the police to inquire if we could count on their protection if needed. They assured me that they would handle the situation. About 20 minutes before the meeting started, a carload of men parked in front of the Kingdom Hall. Within minutes the police came and talked to them, and they left. We had a peaceful, well-attended meeting.

## **Missionaries at Last!**

We were invited by the Watchtower Society to become part of its headquarters staff in New York City, starting May 1, 1959. As we were getting things ready in order to go, another letter came inviting us to attend Gilead School to be trained as missionaries, starting September 1959. Two grand blessings in one year! Finally, we had in sight our goal of becoming missionaries. Our sacred service continued to expand!

In February 1960, after nearly six months of study and training, we graduated in the 34th class of Gilead. We were assigned to Bogotá, Colombia, where we arrived on March 1, 1960.

Our first challenge was to learn Spanish. My misuse of words was a source of much laughter. I recall working in the Rooming Department during our first district convention and asking the brothers to lend us mattresses (*colchones*), but I used the word *cochinos* (pigs). They kindly asked me: "What do you need them for?" I said: "For the brothers to sleep on." After the laughter, we got the mattresses.

While enjoying God's creation in the natural beauty of the majestic snowcapped Andes, the jungle areas, and the plains, we had many unforgettable experiences. One was while we were visiting the special pioneers in Villavicencio, where the llanos (plains) begin. In the town of San Martín, we met with the group of Witnesses from Granada. This would be the first time for the people of San Martín to hear the Kingdom message. While my wife was talking to a lady at her home, a boy approached my wife and asked her what she was doing. When she told him, he left but then came back and told her that a customer in the drugstore across the street wanted to talk to her. The man heard the message gladly and asked for all the Bible literature she had. When she offered to have the *Watchtower* and

*Awake!* magazines sent to him by mail, he told her: "I live so far out on the plains that there is no mail service. I would have to pick the mail up here in San Martín, and I only come here once a year for supplies." Providentially, that year he had come during our visit.

We greatly enjoyed sharing the truth of God's Word with the Colombian people for 16 years, traveling by every means of transportation available: piragua (dugout canoe), airplane, bus, car, horse, and burro. Wherever we went, we found friendly people who were happy to discuss Bible truth and come to know and truly understand the love of Jehovah and his dear Son.

## **Sacred Service Once More in the United States**

In 1976, due to personal responsibilities, we had to return to the United States, where we were able to continue our sacred service as pioneers. Then, in 1980, I was in a position to visit a number of congregations in a circuit as a traveling overseer. Thus, I was assigned to serve in the Spanish-speaking field. We have been delighted to work with our warm, loving, spiritual brothers and sisters in circuits located in various parts of the United States.

When I was a child, my mother told me: "Never forget God's love!" I thank Jehovah for helping me, through his earthly organization, to understand his love and what it means for mankind, as well as helping me to be transformed, by his Word and spirit, from a juvenile delinquent into a person acceptable to him for sacred service. He has poured out his blessings, making it possible to achieve the goals I've set along the way. For our abundant privileges in God's sacred service and a life overflowing with happiness, my wife and I give thanks to Jehovah, his Son and his faithful organization.—*As told by Robert D. Reed.*

# **What You Should Know About Angels**

**"About 3,000 religious scholars met for four days in New York last week to hear more than 500 reports on subjects ranging from the role of humor in sermons to the importance of ritual to Pentecostals. Nobody mentioned angels."—Daily News, December 26, 1982.**

**T**ODAY, eight years later, the clergy still say little about angels. Why? Could it be that these heavenly messengers are viewed simply as part of an ancient myth? Or do they really exist? If so, what should you know about them?

### **Do They Exist?**

Angels are not simply "powers" or "movements of the universe," as some philosophers claim. They are real enough to be mentioned hundreds of times in God's Word, the Bible. In the original Bible languages, the words rendered "angel" (Hebrew, *mal'akh'*; Greek, *ag'gelos*) literally mean "one who brings a message" or simply "messenger." These words occur nearly 400 times throughout the Bible, sometimes referring to human, but usually to spirit messengers.

The angel that appeared to Manoah's barren wife announcing the conception of her son, Samson, was real to her. So were the three angels that appeared to Abraham and his wife Sarah, and the two that searched out Lot, and the one that sat under a big tree and talked

with Gideon. (Genesis 18:1-15; 19:1-5; Judges 6:11-22; 13:3-21) At the time of Jesus' birth, an angel suddenly appeared to a group of shepherds in the midst of a dazzling, gleaming light.—Luke 2:8, 9.

Those angels were real. They were not a figment of the imagination or an impersonal force. They fulfilled a given purpose as messengers from God, and the accounts have appropriately been recorded in the Bible for our benefit today. (2 Timothy 3:16) The Bible thus reveals important details about angels that you need to know, some of which conflict with traditional concepts.

### **What Do They Look Like?**

Perhaps you may picture angels as beautiful women or as chubby, babylike creatures with wings, smiling sweetly in white robes, plucking at tiny harps, and hovering in the air. If so, you should know that these are misconceptions derived from pagan ideas, such as Greek mythology. Or the ideas were adopted after Bible writing was completed. In Biblical symbolic visions, spirit creatures such as seraphs and



**Angels pictured as babylike creatures with wings are derived from pagan ideas**

cherubs have wings.—Isaiah 6:2; Ezekiel 10:5; Revelation 14:6.

God's Word describes angels as very powerful spirits, and a spirit is invisible. (1 Kings 22:21; Psalm 34:7; 91:11) It was an "angel of Jehovah" that struck down 185,000 Assyrians in the camp of the enemy of Israel in just one evening! (Isaiah 37:36) When angels showed themselves to humans, they always appeared as fully clothed men, not as women or children and never in subhuman form.

From where did these powerful spirit creatures come? The Bible says that "by means of him [Jesus] all other things were created in the heavens and upon the earth, the things visible and the things invisible." (Colossians 1:16) Jehovah God, through this firstborn Son, not only created angels long before man but also made them a higher form of life than man.—Job 38:4, 7; 2 Peter 2:11.

### **Do They Have Personalities?**

Angels, like humans, have feelings. After witnessing earth's creation, we are told that the angels "joyfully cried out together," even "shouting in applause." (Job 38:7) The Bible also reveals that "joy arises among the angels of God over one sinner that repents." (Luke 15:10) Certainly, no impersonal "power" could have experienced the immense joy described in those verses.

Angels also have limitations. Certain facts about Christ and the future were revealed to human prophets but not to angels. God's Word tells us that it is "into these very things angels are desiring to peer." (1 Peter 1:10-12) As to the exact date chosen by God for the Lord's coming, Jesus said: "Concerning that day and hour nobody knows, neither the angels of the heavens nor the Son, but only the Father."—Matthew 24:36.

Then, too, the names of two angels, Michael and Gabriel, appear in the Bible. (Daniel 12:1; Luke 1:26) Does this not add to the evidence of their individuality? As individuals, they were not programmed, like a computer or a robot, to act in a certain way. Rather, angels are gifted with the power of reason and have the freedom to form personal moral decisions. Thus, as free moral agents, certain angels chose to rebel against God and became Satan and his demons.—Genesis 6:1-4; Jude 6; Revelation 12:7-9.

### **Should They Be Worshiped?**

Although we may recognize the existence of angels as fact, not fable, we must avoid extremes. Some religious organizations have given undue prominence to angels, although angel worship is condemned in the Bible. (Colossians 2:18; Revelation 22:8, 9) The Catholic Church has transformed Michael and Gabriel into objects of devotion. And in Eastern Orthodox churches, angels are extremely important in the litany. What a contrast with the warning given by Jehovah's angel when the apostle John fell down at his feet: "Be careful! Do not do that! All I am is a fellow slave."—Revelation 19:10.

Why is there so much confusion about angels? Satan, who masks himself as "an angel of light," "has blinded the minds of the unbelievers." (2 Corinthians 4:4; 11:14) Thus, would it not be reasonable to expect that many today would hold to their own opinions regarding the existence and nature of angels rather than accept what God's Word has to say? Yes, although clergymen today may say little about angels, we have God's guarantee through the Bible record that they really exist and perform an honored service as messengers of Jehovah.—Hebrews 1:7, 14; 6:18.

# Unusual Telescope Reveals Sun's Mysteries

**W**E HAD taken a day off to picnic in the cool Lincoln National Forest in southern New Mexico, trying to escape the desert's heat for a while, when we saw a sign that directed us to the Sacramento Peak Observatory at Sunspot, near Cloudcroft, New Mexico. Our curiosity now aroused, we drove to Sunspot.

No one in our small group was used to the high altitude of 9,200 feet, and all of us were out of breath as we walked up the path to visit the telescopes housed on the peak in odd-shaped buildings. We expected a domed building, so we were not disappointed when we saw the Hilltop Dome, but we found that visitors were not allowed to enter. Then we saw a strange-looking building.

It was a tall, narrow-base, triangular building rising out of the ground, and it was open to visitors. (See photo, next page.) We soon found ourselves in a laboratory housing a long telescope suspended from a bearing in the top of the tower high above us. Signs warned us not to step on the platform and disturb the balance of the instrument.

## *Making the Sun "Stand Still"*

In a small reception room, colored diagrams explained what was being studied, and it was interesting to see that this complex of

buildings is devoted to the study of the sun. We asked one of the scientists working there if this was a project to learn how to get energy from the sun. He explained that it was not that type of study but that it was a basic research project to gather information about the sun and its effect on the earth's atmosphere and upon space in the solar system. Also, scientists are studying the interior of the sun by constantly observing its surface.

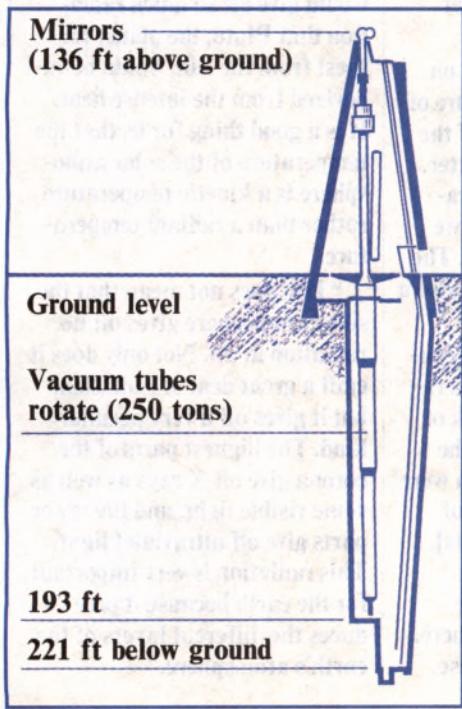
Our guide explained that the observatory was located there because the dry mountain air and lack of pollution make it a good site. Established in 1951, it was one of the first of its kind built in the United States to be devoted to the study of the sun. A diagram nearby showed us that this large tower projects 136 feet above ground but that another 193 feet of the telescope lie buried below ground. Thus, the telescope has a total length of 329 feet, the length of a football field! There is an almost total vacuum inside the telescope tube so that when sunlight enters, it is not distorted by heated air. This allows for reflected images of unusual clarity, providing researchers outstanding views of the sun's surface.

The whole telescope (weighing over 250 tons) hangs from a mercury-float bearing, allowing the telescope to rotate freely to

compensate for the earth's rotation. Thus, the telescope can be directed at the sun for long periods, so that the sun effectively "stands still" in relation to the telescope. It is designed to observe and photograph very small features of the sun's surface, the photosphere, and in the sun's lower atmosphere, the chromosphere.

### **Grain Bin Dome**

As we returned to our car, we passed an unusual building that to us looked like a round farm silo. And that was exactly what it was! It is called the Grain Bin Dome and was purchased in the early days of the observatory from Sears Roebuck and Company; it was modified to house the first telescope at Sunspot. At that time, space travel was being planned, and there was need for



From a sketch by National Optical Astronomy Observatories



information about how the sun affected the atmosphere of the earth, especially in creating disturbances that might be caused by unusual sun activity.

Later, in 1957, a nonprofit organization, AURA (Association of Universities for Research in Astronomy, Inc.), was organized in connection with the Kitt Peak National Observatory in Tucson, Arizona; the Cerro Tololo Inter-American Observatory in La Serena, Chile; and the Space Telescope Science Institute in Baltimore, Maryland. AURA felt that by sharing scientists and information, all could gain more understanding of the sun.

We were beginning to see that this isolated observatory had connections in various parts of the earth.

### **The Quivering Sun**

Dr. Bernard Durney, a research director, graciously offered to answer some questions about the sun. He explained that he is working in the field of solar seismology. We needed an explanation of what that meant. It seems that it was first studied there at Sacramento Peak. He explained: "The sun not only rotates on its axis but moves in many other ways that can be studied by viewing its sur-

## **What Do Sun Temperatures Mean?**

The book *Life and Death of the Sun*, by John Rublowsky, explains on pages 59 and 60: "We should understand something about the meanings of temperature. There are two different kinds. One is called 'kinetic temperature'; the other, 'radianc temperature.' Kinetic temperature is the measure of the average molecular motion of a particle. The faster this motion is, the higher the temperature. When we speak about the temperatures of the solar atmosphere, we speak about this kinetic temperature. What we are saying, then, is that the average speeds of motion of the particles in the solar atmosphere increase as we go upward from the photosphere. Though these particles have

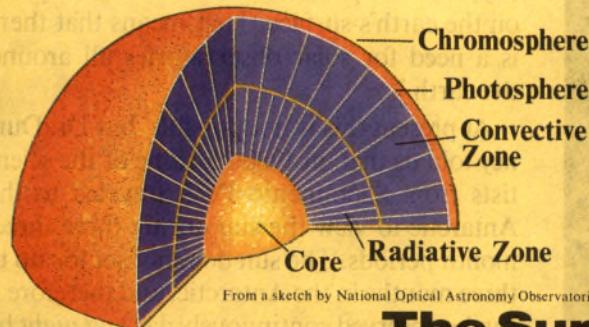
temperatures of millions of degrees, they could not blister your skin.

"Radianc temperature, on the other hand, is a measure of the amount and quality of the radiation given off by matter. When we speak of temperatures deep inside the sun, we use the word in this sense. The temperature of a flame is also a radianc temperature.

"But we cannot use the concept of temperature in this radianc sense when we speak of the solar atmosphere. If the temperature of the corona were at a radianc temperature of 1,000,000 degrees [Celsius], the atmosphere of the sun would be so bright that we could not see the photosphere. In fact, if this were the case,

the atmosphere of the sun would give off so much radia-tion that Pluto, the planet far-est from the sun, would be va-porized from the intense heat. It is a good thing for us that the temperature of the solar atmo-sphere is a kinetic temperature rather than a radianc tempera-ture.

"This does not mean that the solar atmosphere gives off no radia-tion at all. Not only does it emit a great deal of radia-tion, but it gives off a very pecu-liar kind. The highest parts of the corona give off X rays as well as some visible light, and the lower parts give off ultraviolet light. This radia-tion is very important for the earth because it pro-duces the different layers of the earth's atmosphere."



From a sketch by National Optical Astronomy Observatories

## The Sun Earth's Star

The sun is a huge furnace supplying life-supporting heat and light to our earth. This vast ball of mainly hydrogen gas is so large that it could hold over a million earths! Yet, as stars go, it is not among the largest. As scientists are finding out, this energy source is full of subtleties. For example, "most of the visible light emanates from a region within the photosphere only about 100 km [60 mi] thick." Yet, the sun's radius is calculated to be 432,651 miles.—*The Sun*, by Iain Nicolson.

### *The Sun's Design*

**THE CORE**—The nuclear "burning" zone at the sun's center where the highest temperatures are found.

**THE RADIATIVE ZONE**—Energy from the core transfers by radiation through this zone as gamma rays and X rays.

**THE CONVECTIVE ZONE**—A cooler region through which energy from the radiative zone travels by convection.

**THE PHOTOSPHERE**—Practically all the sun's light is emitted from this apparent surface of the sun. It is to some extent transparent, and "it can be observed down to a depth of a few hundred kilometers." (*The Sun*) The temperature is about 10,000 degrees Fahrenheit.

**THE CHROMOSPHERE**—Seen only during a total eclipse of the sun. Tenuous layer of gas a few thousand miles thick but hotter than the photosphere, about 18,000 degrees Fahrenheit.

**THE CORONA**—Visible only during a total solar eclipse, when it appears as plumes and streamers extending over great distances and having very high temperatures.

face constantly and seeing changes that occur. From these changes, we can formulate ideas about what may be occurring inside the sun and then plan studies to confirm or disprove our ideas."

"About 1970," he continued, "a quivering, or shaking, of the sun was predicted. It is much like the shaking, or vibration, that occurs when a large bell is rung. One can also think of the illustration of a pebble thrown into a pond and how it causes the entire surface of the pond to be affected as the rings of waves cross the pond from the point of impact. The difference is that the waves in the sun go throughout the sun in all directions."

It appeared that these vibrations originated at different levels, some beneath the surface and others from deeper within the sun. Because of these studies, it is known that the sun expands slightly and then contracts again about once an hour, much as if it were breathing. An investigator first saw these movements of the sun in 1975. In 1976 Russian scientists also reported a rising and falling of the sun's surface.\* It was not until 1979-80 that this vibration was confirmed, partly at the Sacramento Peak Observatory.

"Actually," Dr. Durney continued, "the sun has many unusual movements. Since everything on the sun is gaseous, parts of the sun's surface can rotate faster than others. . . .

\* The Soviet Union has an impressive solar research agency based in Irkutsk, Eastern Siberia. They have the world's most powerful solar radio telescope, consisting of 256 antennae that synchronously track the sun from its rising to its setting.



Holiday Films  
**Solar Prominence**



National Optical Astronomy Observatories  
**Sunspots**

By constantly viewing the sun as we do here at the Sunspot observatory, we can determine how the inside of the sun is rotating. . . . Since the sun rotates faster at its equator, much mixing occurs on the surface, and this causes many strange phenomena. This unusual movement creates magnetic fields deep inside the sun, which float to the surface. Sunspots on the sun are a manifestation of these magnetic fields.

#### ***Observing the Sun Day and Night!***

Dr. Durney explained: "We really need to observe the sun continuously so that we can see all the activity and all the changes on the sun's surface. Since the earth rotates every

day, it is not possible to do this in one place on the earth's surface. That means that there is a need for solar observatories all around the earth."

At present this is not possible, but Dr. Durney told us that, in 1980-81, some of the scientists from Sacramento Peak traveled to the Antarctic to view the sun during three three-month periods. The sun does not set for up to three months in the Antarctic, and therefore it can be observed continuously day and night by one telescope. It was interesting to learn that the gathering of this information involved so many places on the earth. Scientists hope some day to be able to classify all the sun's vibrations and interpret them so as to understand what is happening inside the sun. Investigators now have prospects of forming an earth-wide network of observatories to do this.

#### ***Solar Flares and Corona***

"What else is being studied here at Sacramento Peak?" was our next question to Dr. Durney. He told us of the solar flares. "These tremendous flares burst from the sun's surface outward millions of miles into space, ejecting particles that disrupt radio communications when they arrive at the earth. There is also a continuous flow of particles out of the sun called the solar wind. This slows down the rotation of the surface of the sun, which in turn acts on the rotation deep inside the sun. The result is that as the sun ages, it rotates slower and slower. How the solar interior reacts to the braking of the surface is one of the things we study here."

Another study being performed at the observatory involves daily taking pictures of the sun's corona. These pictures reveal how the heat around the sun changes daily. Diagrams are prepared that show the distances that high temperatures extend from the sun.

These diagrams change daily and provide useful information for space travelers.

### **Sun's Vital Role**

Energy from the sun is needed for life to continue on earth. It affects us, our vision, and the earth's plants and animals. A study published in 1979 shows that there is evidence of a 22-year cycle of drought in the western United States that seems to be related in some way to the complete sunspot cycle of about 22 years. This is one reason for interest in the sun's activity and its possible influence on the weather.

In the 1950's the Sacramento Peak Observatory was one of the first to help determine the solar constant, which is the total units of power reaching an object in space at the distance of the earth from the sun. Possibly more important is how much the solar constant may vary.

Sunspots are one of the more interesting features of the sun and one that affects us on earth. Sunspots were first observed by Galileo. Later it was determined that a sunspot cycle lasts 11 years and that a complete sunspot cycle has two 11-year periods of sunspot activity. As Dr. Durney explained: "Sunspots are magnetic fields. They are dark because they block the motions that transport energy. Flares are thought to be caused by the annihilation of these magnetic fields on the sun's surface, which then release enormous amounts of energy that affect us by disrupting radio waves and by electrifying parts of our atmosphere. This energy also causes what are called northern lights and southern lights, or auroras, a wonder to mankind throughout history."

Sun studies may help to predict the geomagnetic storms that may occur in our atmosphere when there is sunspot activity. These affect world communications and thus the ac-

tivities dependent on good radio communication, such as air travel. Because of the high cost of satellite transmission, most communication is still done by means of radio transmitters on the ground. The energy released by sunspots disrupts the shell of ionized particles surrounding the earth that reflects the radio waves back to earth. When the shell is ineffective, radio messages are lost.

More about sunlight needs to be known. Plants that produce our food depend on sunlight to make the sugars and other chemicals in our food. Photochemical reactions caused by sunlight allow us to take photographs both in black and white and in color. Therefore, it seems prudent to many to learn all that they can about our nearest star.

From our short visit to Sunspot and from talking to experts, we came to realize that we are quite limited in our knowledge of the sun. Most of us appreciate the sun on a cold winter day and wish it were not so hot in the summer months, and that is about all. We enjoyed our glimpse into the more technical side of the sun. All of us had to conclude that mankind is really just beginning to comprehend the wonders of our beneficent star, the sun.

—Contributed.

## **IN OUR NEXT ISSUE**

*Who Is Killing  
the Rain Forests?*

*Understanding Asthma*

*I Tried to Change the World*

# WATCHING THE WORLD

## UPDATE ON CHERNOBYL

Three and a half years after the nuclear accident in Chernobyl, U.S.S.R., local residents, "especially children, are afflicted with swollen thyroid glands, sluggishness, cataracts and a rise in the cancer rate," according to the *Manchester Guardian Weekly*. In one area, medical experts predict that tens of thousands are yet to die from cancer caused by the radiation. Farm directors report an increasing rate of birth defects among farm animals: "calves without heads, limbs, ribs or eyes; pigs with abnormal skulls." It is reported that radiation readings are 30 times higher than normal in the area. Zoya Tkachova, a hospital director in the Mogilev region of Belorussia, stated: "We cannot give any guarantees of a healthy life to the population of the contaminated areas."

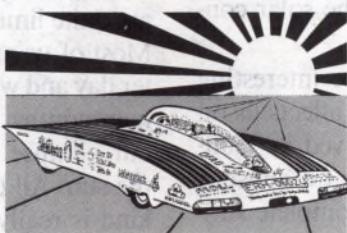
## "WORLD'S LAST GREAT WILDERNESS"

As available supplies of natural resources continue to dwindle, the continent making up almost a tenth of the earth's land area, Antarctica, is being considered a potential new source. The ice-clad continent has been under the protection of the 1959 Antarctic Treaty and a voluntary moratorium on mining. However, a new agreement has been proposed that would open it up to oil exploration and mining. The *International Herald Tribune* reports that two of the treaty's member nations, Australia and France, are refusing to sign the agreement. Citing the oil spills in Alaska and Antarctica as grim reminders of the environmental dangers of mineral exploration,

Australia's prime minister, Bob Hawke, called for "stronger protection for what remains the world's last great wilderness."

## WHILE THE SUN SHINES

An architect in the Federal Republic of Germany has designed and built a remarkably efficient, if odd-looking, solar-powered car. According to the newspaper *Die Zeit*, in the architect's hometown, the car elicits whoops of joy from children, while adults discuss whether it looks more like a Ping-Pong table or a flounder. But looks aside, the car is a success. It has won world championships for



From a photo by Trykowski/Dürschner

solar-powered vehicles and has even reached speeds of 80 miles per hour. But that is with its batteries fully charged. When running directly on sunlight, the car cannot exceed 20 miles per hour—and that only while the sun shines.

## THE POWER OF SCENTS

Japanese firms are experimenting with behavior-altering scents. According to one Japanese expert, such scents, delivered through air-conditioning ducts, have "been found to calm restless nursing-home patients and to enhance efficiency and lower stress among factory and office workers." Thirteen keypunch operators were

monitored for 30 days, and the experiments showed that the average number of errors per hour dropped by 54 percent when office air was scented with lemon fragrance. The magazine *Discover* reports that now a psychologist "has been hired to come up with an aroma that could be sprayed in New York City's subways to reduce commuter aggression and increase friendliness."

## EMPTY CHURCHES

According to a recent survey in the Federal Republic of Germany, 70 percent of Germans believe in God, and only 13 percent admitted being atheists, reports the *Schweinfurter Tagblatt*, a German newspaper. However, the results of a poll by the Allensbach Opinion Research Institute indicate that only 5 percent of Lutherans and 25 percent of Catholics in the Federal Republic of Germany attend church services regularly. Of these, 50 percent are over 60 years old.

## BAT AND MAN

In Europe, rabid bats pose an increasing danger to humans, reports the *Manchester Guardian Weekly*. Hundreds of cases of infection from bat bites have been recorded in Europe in recent years. The problem is not unique to Europe. Reportedly, since 1983 two persons have died in the Soviet Union and one in Finland as a result of being bitten by infected bats. "In South and Central America, there is currently an epidemic of rabies among blood-sucking vampire bats," states the *Weekly*. In addition, recent bat attacks on humans in France have led to the

discovery of a new type of virus affecting bats. The new virus, similar to that of rabies, is called the European bat virus.

### POOR CHILDREN

The United States is a nation known for its prosperity and plenty, yet studies conducted by government agencies have found millions of unhealthy and uneducated children in that country. According to the Census Bureau survey, 1 in every 5 children in the United States—12.6 million under 18 years of age—live below the poverty line. Economist D. Lee Bawden blames the increase in poverty among children, in part, on the rising number of one-parent families. It is estimated that more than 17 million children in the United States live with one parent only.

### MALARIA THAT TRAVELS

Several cases of malaria have reportedly been contracted near airports or on airport grounds in Britain, France, the Netherlands, and Switzerland. After stating that some of the people who contracted the disease had not traveled abroad for a year, the magazine *Machine Design* added that such circumstances suggest that "the malaria was transmitted by mosquitoes arriving at the airport on a long-distance flight."

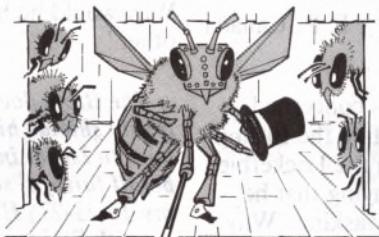
### YOUNG RAPISTS

A recent study revealed that among 1.5 million sexual assaults and attempted rapes in the United States, nearly half involved an adolescent rapist, according to the magazine *Medical Aspects of Human Sexuality*. In another U.S. study, researchers found that "72% of adolescent rapists reported using a drug or drugs on the day of the episode; 54% had used alcohol,

44% marijuana, and 25% another drug . . . Forty-three percent were intoxicated during the rape." According to this magazine report, alcohol use may often contribute to assaults in which the rapists use extreme violence or force.

### BOGUS BEE

In 1945 zoologist Karl von Frisch showed that the dance of the forager bee is really a complex code, giving fellow bees directions to a newfound source of nectar. He later received a Nobel prize for his discovery. Since then, scientists have tried to make a robot bee that could do the same. But the results have been discouraging. The im-



postors, for all their frantic dancing, went largely ignored by real bees. But according to the German newspaper *Hannoversche Allgemeine*, scientists have built a robot bee with tiny wings mounted on diamond bearings. The wings produce a unique sound vital to the dance. Tested in Denmark, this robot got the attention of the other bees. They set upon it and tried to sting it to death. Bees in a different town accepted the bogus dance, though, and set off to look for the nectar.

### SUICIDES ON THE INCREASE

□ The 1980's produced the highest suicide rates among older men in Canada's history, reports *The Toronto Star*. Statistics show that 80 percent of the suicide vic-

tims are men. The acting head of psychiatry at the Baycrest Centre for Geriatric Care, Dr. David Conn, listed as possible causes the combination of physical illness, latent alcoholism, and isolation after retirement or family deaths. "Adding the mixture of depression and drinking can plant suicidal thoughts," reports the *Star*. What are some other warning signals? Barbara Debuk, a mental health consultant for Health and Welfare Canada, said that they are: stockpiling medication, planning funeral, changing a will, arranging for body to be donated to medicine, and showing a general preoccupation with death.

□ The *Saturday Star*, a newspaper of Johannesburg, South Africa, listed, among other things, "the fact that churches paint the hereafter as attractive" as a possible factor contributing to the incidence of suicide in that country. It noted that "a fascination with the mystery of life after death" has led to self-destruction. The newspaper cited as an example the case of a 16-year-old boy who committed suicide. In a note, he "told his family he had decided to end his life for one reason only—to find out about life after death," reports the newspaper.

### ABUSE VERSUS DISCIPLINE

A study of 237 prison inmates in the United States examined what makes children grow up to be violent adults. It found that "87 percent of the inmates who said their parents kicked and punched them as children were violent criminals," reports the January 1990 issue of *Science Digest*. Seeing one parent beat the other had a similar effect on children. But spanking children in itself did not seem to cause them to become violent adults.

## FROM OUR READERS

**Losing Weight** Thank you for the article on losing weight. (May 22, 1989) Last April, I was a 177-pound, 58-year-old, diabetic woman with high blood pressure. I was also deeply depressed. Today I am 158 pounds, require less insulin, and my blood pressure is excellent. The blanket of depression is gone too. I accomplished this by watching my sugar and fat intake and by walking three miles every morning with a one pound weight on each wrist. I may look comical while walking, but I have won a few battles, and I believe I will win the war. Once again, thank you.

E. P., Canada

**Lockerbie Tragedy** I was concerned about your comments regarding the Bishop of Galloway in the article on the Lockerbie disaster. (July 22, 1989) In saying that he had 'bitter words for God' by asking, 'Why did God let this happen?' you are misrepresenting him.

A. W., Britain

*We accurately reported the bishop's words as quoted in "The New York Times" of December 26, 1988. Since then, however, we have received a transcript of the bishop's sermon, and it would appear that his words were actually intended to echo the thoughts of others, not his own. Nevertheless, the bishop's words were quoted to show that he did not give a Bible-based answer to that question, nor did he point to the Bible's hope for the dead. (John 5:28, 29)*  
—ED.

**Cursing** The article "Young People Ask . . . How Can I Resist the Urge to Curse?" arrived just in time! (September 8, 1989) With a mate who is opposed to Christianity,

sometimes it's all I can do to bridle my tongue. The thoughts of cursing have caused me to feel ashamed and unworthy of God's love. This wonderful article gave me the guidance I need to resist the temptation to curse.

C. D., United States

**Avoiding Rape** The woman quoted in your article (August 22, 1989) said that she "was able to avoid being raped because of Jehovah's help." Does this mean that those who are raped do not have God's help? Why would he help one person and not another?

V. R., United States

*The Bible does not say that God miraculously shields his people from harm. God's laws to Israel indicated that rape could befall faithful servants of God. (Deuteronomy 22:23-27) However, God has provided us with Scriptural direction that can work for our benefit if we apply it. And the Bible-based advice on resisting rape proved to be a protection for the woman in question. Appropriately, she thanked God for providing this helpful information.—ED.*

**Smoking** The cover for the issue on "Death for Sale" (July 8, 1989) really caught people's attention. I regularly visit an elderly woman who is a chain-smoker. For years she has had a subscription to *Awake!* but seldom reads the articles. Recently, I called on her and noticed that I could finally breathe in her home. Yes, she was trying to quit smoking. When she saw that issue, she read it from cover to cover and now wants to study the Bible and come to the Kingdom Hall. Thank you for the eye appeal of our magazines!

C. P., United States

# The Red Charmer With a Cheerful Song

Have you ever been awakened by a red charmer with a cheerful song? If you live in North America, that may be your happy exit from slumber because one of the most popular songbirds—the cardinal—makes his nest in that part of the world. The male cardinal stakes out his territory with a clear whistle. And can he be a persistent and accomplished singer!

"One male cardinal was recorded as having 28 songs made up of different combinations of syllables," says *The International Wildlife Encyclopedia*.

This beautiful bird is about eight inches long, decked out in bright red feathers with a distinctive black "bib" around his bill. However, the female wears a coat of dull brown plumage. She belongs to one of the comparatively few species whose females can sing.

No matter where you live, next time you hear the lilting tune of a songbird, thank your heavenly Creator for his remarkable wisdom and ability. Songbirds are one of his gifts of color and cheer.—Psalm 148:7-10.



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the blessed are the poor in spirit, for theirs is the kingdom of heaven.

They that mourn shall be comforted. They that hunger and thirst after righteousness shall be satisfied.

They that weep now shall laugh. They that have no good things now shall receive many good things.

Rejoice and be glad, for your reward is great in heaven. For it is not as you think. For the kingdom of God is not like this.

Forasmuch as ye have seen one another's afflictions, ye have seen mine afflictions.

Forasmuch as ye have seen me weeping, ye have seen me weeping.