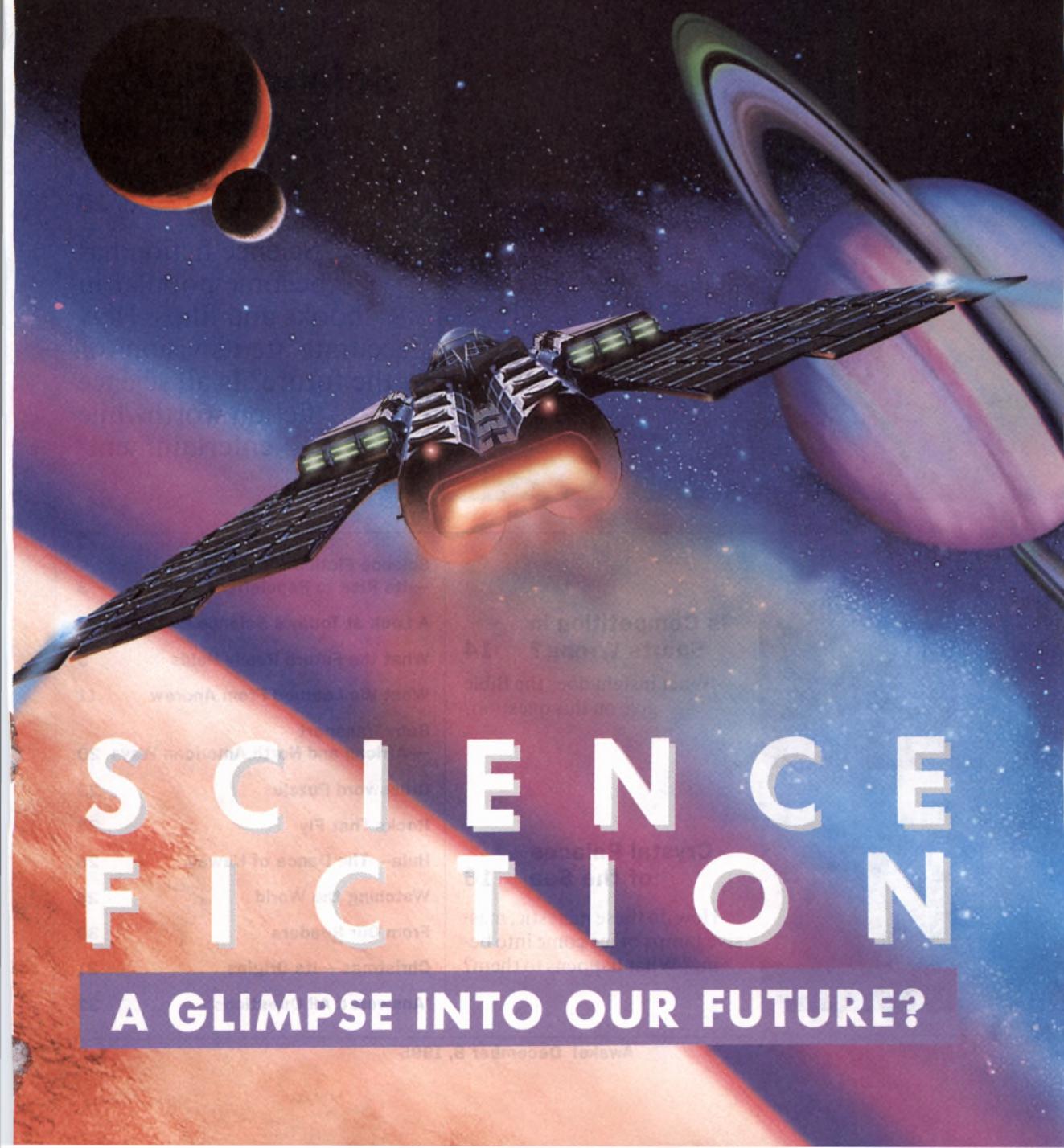


Awake!

December 8, 1995



SCIENCE FICTION

A GLIMPSE INTO OUR FUTURE?

Science Fiction A Glimpse Into Our Future?

3-10

Science fiction has become popular in books and films. How accurate are its visions of the future? Is all science fiction worthwhile entertainment?



Is Competition in Sports Wrong? 14

What insight does the Bible give on this question?

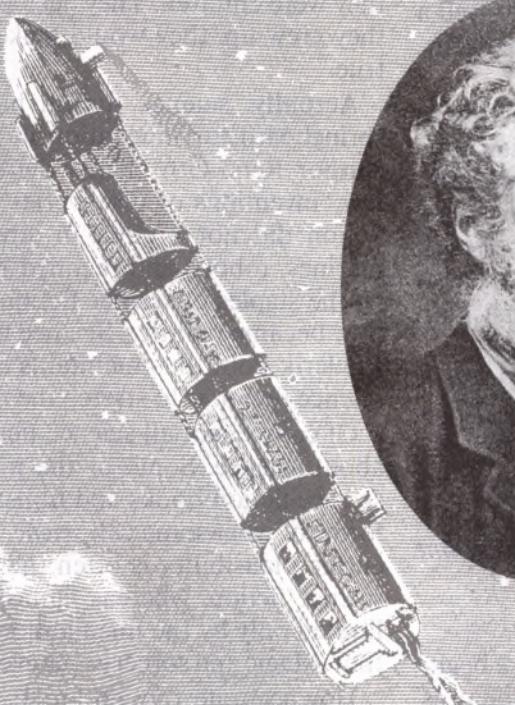


Crystal Palaces of the Sea 16

How do these majestic, massive lumps of ice come into being? What happens to them?

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SCIENCE FICTION ITS RISE TO POPULARITY



Jules Verne's novel "From the Earth to the Moon" did much to spark interest in space travel

THE year 1982 saw a first for the American movie industry. During the 1982/83 season, the most popular film "performer" was not a person at all. According to *The Illustrated History of the Cinema*, it was ET, the grotesque but somehow cute character from outer space that starred in the film *ET: The Extraterrestrial!*

This remarkable circumstance is just one evidence of the overwhelming popularity science fiction (SF) has enjoyed in recent years. Once relegated to pulp magazines and considered the fare of loners and dreamers, science fiction has become an established part of main-

stream entertainment. But what is behind its dramatic rise in popularity?

To answer this question, we must first consider the history of science fiction. From time immemorial men have told fantastic tales in order to awe, impress, or simply entertain. However, during the 17th and 18th centuries, Europe entered an era of scientific and material progress. Many

Rocket Ship: General Research Division/The New York Public Library/Astor, Lenox and Tilden Foundations

began to challenge traditional ideas and authorities. In this atmosphere some began to speculate on how scientific progress would affect mankind in the future.

Exactly who invented science fiction is a matter of debate. Seventeenth-century authors Francis Godwin and Cyrano de Bergerac wrote fictional works that involved space travel. In 1818, Mary Shelley's book *Frankenstein, or The Modern Prometheus* portrayed a scientist with the ability to create life and depicted the horrific consequences.

Some writers used this kind of fiction to highlight the shortcomings of human society. So when Jonathan Swift derided 18th-century English society, he wove his satire into a series of fictitious voyages. The result was *Gulliver's Travels*, a biting allegory that has been called science fiction's "first literary masterpiece."

But writers Jules Verne and H. G. Wells are usually credited with putting the science-fiction novel into its modern form. In 1865, Verne wrote *From the Earth to the Moon*—one of a string of successful novels. In 1895, H. G. Wells' popular book *The Time Machine* appeared.

Fiction Becomes Reality

By the early 1900's, scientists were beginning to make some of these visionaries' dreams come true. According to the book *Die Großen* (The Great Ones), German physicist Hermann Oberth spent years trying

to make Jules Verne's dream of manned spaceflight a reality. Oberth's calculations helped lay a scientific basis for space travel. However, he was not the only scientist influenced by science fiction. Says popular science-fiction writer Ray Bradbury: "Wernher von Braun and his colleagues in Germany and everyone in Houston and Cape Kennedy read H. G. Wells and Jules Verne when they were children. They decided that when they grew up, they would make it all come true."

Actually, science fiction has been the springboard for innovation in many areas. Author René Oth claims there have been few "inventions or discoveries that science fiction did not predict in advance." Submarines, robots, and manned rockets were all the staples of science fiction long before they became realities. Science-fiction writer Frederik Pohl thus maintains that "to read science fiction is to stretch the mind."

Of course, not all science fiction is really about science. Some of the most popular science-fiction books and films are actually forms of what some call *science fantasy*. Scientific plausibility is often the hallmark of science fiction, whereas fantasy stories are limited only by the imagination of their author. Magic and sorcery may even play a role.

How accurate, though, are science fiction's views of the future? Is all science fiction worthwhile for reading or viewing? The following articles will address these questions.

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A LOOK AT TODAY'S SCIENCE FICTION

AUTOMOBILES, telephones, computers—over 130 years ago, could anyone possibly have foreseen their invention? Science-fiction (SF) writer Jules Verne did! These startling scientific insights were found in a recently discovered manuscript of a Jules Verne novel entitled *Paris in the Twentieth Century*. In this previously unpublished novel, Verne even described a contraption that bears an eerie resemblance to a modern fax machine!*

Even the most astute of science-fiction writers, however, fall light-years short of being true prophets. For example, Jules Verne's *Journey to the Center of the Earth* makes for fascinating reading, but scientists now know that it is not possible to make such a journey. Nor does it seem likely that the year 2001 will see manned trips to Jupiter or other planets, as some suggested earlier.

* In Verne's words a "photographic telegraph [that] permitted the dispatch over long distances of the facsimile of any writing, signature or design."—*Newsweek*, October 10, 1994.

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* Audiocassettes also available.

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Science-fiction writers have also failed to predict many of the startling scientific developments that *have* transpired. In an article appearing in *The Atlantic Monthly*, science-fiction writer Thomas M. Disch admits: "Consider all SF's failures to imagine the cybernetic [computer] age . . . , the greenhouse effect or the destruction of the ozone layer or AIDS. Consider the new geopolitical imbalance of power. Consider all these things, and then ask what SF has had to say about them. Almost not a word."

Science Fiction—Big Business

For fans, of course, science fiction is not hard science but entertainment. Even so, there are those who challenge its value in that respect too. Science fiction's reputation for being trashy literature began early in this century with the publication of pulp magazines that specialized in science fiction. The first of these, the magazine *Amazing Stories*, went on sale in 1926. Its founder, Hugo Gernsback, is credited with coining a word that developed into the term "science

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fiction." Many felt that these sensational adventure stories had little, if any, literary merit.

Science fiction began to be taken more seriously after World War II. The dramatic role science played in that war gave science new prestige. The predictions of science-fiction writers began to seem more credible. So science-fiction comics, magazines, and paperbacks began to proliferate. Hardbound science-fiction books climbed the best-seller lists. But as science fiction struggles to meet the demands of the mass market, literary quality—and scientific accuracy—is often sacrificed. Science-fiction writer Robert A. Heinlein laments that "anything readable and even moderately entertaining" is now published, including "a great many poor speculative novels." Writer Ursula K. Le Guin adds that even "second-rate stuff" gets printed.

In spite of such criticism, science fiction has reached new heights of popularity, having received a significant boost, not by scientists, but by the motion picture industry.

Science Fiction Hits the "Big Screen"

Science-fiction films have been around since 1902 when Georges Méliès made the film *A Trip to the Moon*. A later generation of young moviegoers was mesmerized by *Flash Gordon*. But in 1968, one year before man landed on the moon, the film *2001: A Space Odyssey* received artistic recognition and was a commercial success as well. Hollywood now began allotting huge budgets for science-fiction films.

By the late 1970's and early 1980's, such films as *Alien*, *Star Wars*, *Blade Runner*, and *ET: The Extraterrestrial* accounted for half of all U.S. box-office receipts. Indeed, science fiction provided one of the biggest hit movies of all time, *Jurassic Park*. Along with the film came an avalanche of some 1,000 Ju-

rassic Park products. Not surprisingly, TV also jumped on the bandwagon. The popular show *Star Trek* spawned a number of programs about outer space.

Many feel, though, that by catering to popular demands, some science-fiction writers have compromised the qualities that gave science fiction a measure of value. German author Karl Michael Armer claims that 'science fiction is now simply a popular trademark defined no longer by content but by marketing techniques.' Others lament that the real "stars" of today's science-fiction films are, not persons, but special effects. One critic even says that science fiction is "abominable and abysmal in so many of its manifestations."

For example, many so-called science-fiction films are not really about science or the future at all. Futuristic settings are sometimes used merely as a backdrop for graphic violence. Writer Norman Spinrad observes that in many of today's science-fiction stories, someone gets "shot, stabbed, vaporized, lasered, clawed, devoured, or blasted." In many films this mayhem is portrayed in horrifying detail!

Another area of concern is the supernatural element that is featured in a number of science-fantasy books and films. While some people may see such stories as nothing more than allegorical battles between good and evil, some of these works seem to go beyond allegory and promote spiritistic practices.

The Need for Balance

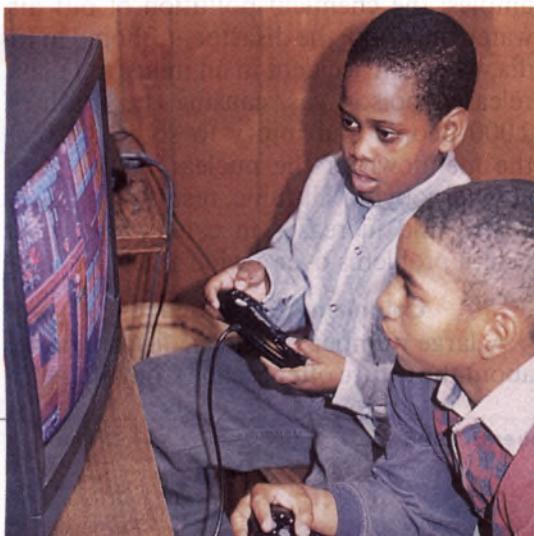
Of course, the Bible does not condemn imaginative entertainment as such. In Jotham's parable of the trees, inanimate plants are pictured as talking to one another—even spinning plots and schemes. (Judges 9:7-15) The prophet Isaiah likewise used an imaginative device when he portrayed long-dead national rulers as carrying on a conversa-

tion in the grave. (Isaiah 14:9-11) Even some of Jesus' parables contained elements that could not happen literally. (Luke 16:23-31) Such imaginative devices served not merely to entertain but to instruct and teach.

Some writers today may legitimately use a futuristic setting in order to instruct or entertain. Readers who are conscientious Christians keep in mind, though, that the Bible exhorts us to focus attention on things that are pure and wholesome. (Philippians 4:8) It also reminds us: "The whole world is lying in the power of the wicked one." (1 John 5:19) Some science-fiction films and books serve as a platform for ideas and philosophies that are irreconcilable with the Bible, such as evolution, human immortality, and reincarnation. The Bible warns us not to become prey to "philosophy and empty deception." (Colossians 2:8) So caution is in order when it comes to science fiction, as it is with all forms of entertainment. We should be selective about what we read or view.—Ephesians 5:10.

As mentioned earlier, many popular films are violent. Would our consuming a diet of gratuitous bloodshed be pleasing to Jehovah, of whom it is said: "Anyone loving violence His soul certainly hates"? (Psalm 11:5)

**Parents should supervise
their children's entertainment**



Christians must be selective when it comes to science fiction

And since spiritism is condemned in Scripture, Christians would want to exercise good judgment when it comes to books or films that feature such elements as magic or sorcery. (Deuteronomy 18:10) Realize too that whereas an adult may separate fantasy from reality with little difficulty, not all children can. Again, parents will therefore want to be observant as to how their children are affected by what they read and see.*

Some may decide that they prefer other forms of reading and entertainment. But there is no need for such ones to be judgmental of others in this regard or to make issues over matters of personal choice.—Romans 14:4.

On the other hand, Christians who choose to enjoy various forms of fiction as an occasional diversion do well to remember Solomon's warning: "To the making of many books there is no end, and much devotion to them is wearisome to the flesh." (Ecclesiastes 12:12) Many in today's world have clearly gone overboard in their devotion to science-fiction books and movies.

* See the article "What Should Your Child Read?" in the March 22, 1978, issue of *Awake!*

Science-fiction clubs and conventions have proliferated. According to *Time* magazine, *Star Trek* fans on five continents have devoted themselves to learning the fictitious language Klingon, which was featured in *Star Trek* TV shows and movies. Such extreme behavior does not harmonize with the Bible's

counsel at 1 Peter 1:13: "Keep your senses completely [“keep balanced,” footnote]."

Even at its best, science fiction cannot satisfy man's curiosity about what the future holds. Those who really want to know the future must turn to a source that is certain. We will discuss this in our next article.

WHAT THE FUTURE REALLY HOLDS

MANY science-fiction enthusiasts have an inquiring mind, a desire for change in human society, and a great interest in the future. The Bible has much to say about the future, but the Bible's view of man's fate bears little, if any, resemblance to the speculations of science-fiction writers.

Science fiction offers many, many different versions of what the future may be like. But would you stake your life on any one of these? On what would you base your choice? These scenarios, or projected courses of events, cannot all be true. In fact, since all of them involve conjecture—fiction—can you confidently say that even one of them is the truth? It is far more likely that none of them are.

Coming to Nothing

Already, many science-fiction scenarios are coming to nothing. In what way? In that those that deal with how science could lead the way to a better civilization here on earth have not come to pass. Far from an improved civilization, the reality of today is the opposite. German writer Karl Michael Armer notes: "The future has overwhelmed us." He points to "global threats of atomic

death, environmental disasters, hunger, poverty, energy crises, [and] state-sponsored terrorism."

In other words, the future for the earth and for the human family described in many science-fiction stories is not moving toward realization. To the contrary, as conditions deteriorate on the earth, the human situation is going in the opposite direction. In spite of any scientific or technical advancements, throughout the world human society experiences more and more crime, violence, poverty, ethnic hatreds, and family breakdown.

Some scientific endeavors have added greatly to man's ills. Consider just a few examples: the chemical pollution of our air, water, and food; the disaster at Bhopal in India, where an accident in an industrial plant released poison gas, causing the death of 2,000 people and injury to some 200,000; the meltdown of the nuclear power plant at Chernobyl in Ukraine, resulting in many deaths and increases in cancer and other health problems over a wide area.

Colonizing Outer Space?

A large number of science-fiction stories about the future offer escape from life's mis-

eries and the failures of human schemes on earth in yet another way. They transfer the enthusiast to imaginary scenarios in outer space. Humans using intergalactic spaceships to colonize other planets and other parts of the universe are common themes. Such induce many to feel as did the person who wrote to the editor of a New York newspaper: "Mankind's future lies in space exploration."

True, space exploration continues with the flight of space shuttles near the earth and the launching of instruments to probe space. But what about living in outer space? Although there is talk of extended space-flight by humans, there are at present no definite working plans to colonize the moon or any of the nearby planets—much less the other galaxies. Really, the colonizing of outer space by human efforts is not a realistic option in the near future. And current space programs of various nations cost so much that they are being scaled back or abandoned.

The reality is that mankind's future, *your* future, is not in any space adventures promoted by humans. Your future is right here on earth. And that future will not be determined by scientists, human governments, or script writers. Why can we be so certain?

Because the future will be determined by the Creator of the earth, Jehovah God. And no science-fiction scenario can emulate the promises held out in the Bible.

***Mankind's future
is on the earth***

In that book—God's inspired Word, which he has communicated to mankind—he tells us what the future will be for humans. (2 Timothy 3:16, 17; 2 Peter 1:20, 21) What does it say?

The Future of the Human Family

The Word of God clearly spells out the Creator's purpose to perform a complete overhaul of human society by means of a new government in the hands of Jesus Christ. In the Bible that heavenly government is called the Kingdom of God.—Matthew 6:9, 10.

Regarding that Kingdom the inspired prophecy of Daniel 2:44 declares: "In the days of those kings [existing today] the God of heaven will set up a kingdom that will never be brought to ruin. And the kingdom itself will not be passed on to any other people. It will crush and put an end to all these [present-day] kingdoms, and it itself will stand to times indefinite."

Under the inspiration of God's powerful active force, the apostle Peter also wrote concerning future life on earth under God's Kingdom. He said: "There are new heavens



[God's heavenly Kingdom] and a new earth [a new human society under that Kingdom] that we are awaiting according to [God's] promise, and in these righteousness is to dwell.”—2 Peter 3:13.

What will life be like for those who are privileged to live on earth under the rule of God's heavenly Kingdom? The Creator's promise is: “[God] will wipe out every tear from their eyes, and death will be no more, neither will mourning nor outcry nor pain be anymore. The former things have passed away.” And the One seated on the throne said: ‘Look! I am making all things new.’ Also, he says: ‘Write, because these words are faithful and true.’”—Revelation 21:4, 5.

The kind of future that the Creator promises is a marvelous one. It is completely different from any fictitious scenarios by science-fiction writers or scientists, scenarios so often characterized by weird, fantastic beings and surroundings. True Christians put faith in God's sure promises for the future. Indeed, they do more. They stake their life on them.

Why can they do so with such confidence? Because they know from God's Word that this “hope does not lead to disappointment,” since ‘God cannot lie.’ In fact, “it is impossible for God to lie.” (Romans 5:5; Titus 1:2; Hebrews 6:18) As Joshua, a servant of God, stated long ago: “Not one word out of all the good words that Jehovah your God has spoken to you has failed. They have all come true for you. Not one word of them has failed.”—Joshua 23:14.

Much of science fiction reflects the ideologies of this wicked old system. How so? Science fiction got off the ground in a period of so-called enlightenment, when many persons rejected traditional authority and believed that man could work out his own future. They rightly blamed worldly religion for much of society's trouble, but then they threw out the truth about God's existence

and purpose as well. They were disappointed with the way things were working out and so sought other ideas.

However, human ideas, no matter how well thought out, are limited in scope. Our Creator says: “As the heavens are higher than the earth, so my ways are higher than your ways, and my thoughts than your thoughts.”—Isaiah 55:9.

True Scientific Discovery

In God's new world, mankind's natural thirst for knowledge will be quenched in part by genuine scientific inquiry. There will be no need to invent scenarios, for the reality will captivate and educate the mind in a wholesome, truthful way.

Many will then understand how the renowned scientist Isaac Newton felt when he likened himself to “a boy playing on the seashore, . . . whilst the great ocean of truth lay all undiscovered before [him].” Doubtless, in God's new world, He will direct faithful humans to one stimulating discovery after another.

Yes, scientific research will then be based entirely on truth, since Jehovah is “the God of truth.” He invites us to learn from man's earthly environment and also the animal world. (Psalm 31:5; Job 12:7-9) Honest scientific endeavor guided by the God of truth will surely be a fascinating feature of God's new system. Then credit for all inventions, discoveries, and wonderful improvements in man's life and living standards will be awarded, not to any human, but to the Creator of the universe, Jehovah God.

In that fast-approaching new world, all obedient humans will glorify God for his loving care and guidance. They will serve him with great rejoicing and will say to him, as described at Revelation 4:11: “You are worthy, Jehovah, even our God, to receive the glory and the honor and the power, because you created all things, and because of your will they existed and were created.”

WHAT WE LEARNED FROM ANDREW

AS I drove to work, I found it elating to think about what had happened in the few preceding days. I had just become the father of a son, my second child. Today my wife Betty Jane and our little Andrew would be coming home from the hospital.

Before they were due to be released, however, my wife telephoned. There was a tone of anxiety in her voice. I hurried over. "Something's wrong!" was her greeting. We sat together, waiting for the doctor to return with the pediatric consultant.

The consultant's first remark was shattering news. She stated: "We are fairly certain your son has Down's syndrome." She explained that our son would likely be mentally retarded. Virtually nothing more of her explanation penetrated. My numbed brain had disconnected all auditory impulses. But the visual impressions continued to register.

She picked Andrew up and drew our attention to one of the things that had alerted her to the fact that something was wrong. The baby's head dangled limply. This lack of muscle tone was characteristic of newborn Down's syndrome babies. In a subsequent session with the consultant, we asked her the many



questions that flooded our minds as slowly our ability to comprehend returned. To what degree would he be disabled? What could we expect? How much could we teach him? How much would he be capable of learning? She explained that the answers to many of our questions would depend on the environment in which he lived as well as his inherent abilities.

In the more than 20 years since then, we have tried to give Andrew the love and affection he deserves and to teach him all we are capable of imparting. But looking back, we now realize that it has not been totally an exercise in giving.

Sound Advice

Before we had time to adjust to Andrew's presence, loving friends gave us advice they had gleaned from bearing up under their own trials. They meant well, but as would be expected, not all the advice turned out to be either wise or useful. After years of testing, however, their advice distilled into two precious drops of wisdom.

Some tried to console us by saying Andrew was not really retarded. But then an old friend admonished: "Don't fight it! The sooner you accept his limitations, the

sooner you will revise your expectations and begin working with him the way he is."

That turned out to be one of the most important lessons we learned in dealing with adversity. *There can be no healing until there has been acceptance.* While denial is often instinctive, the longer denial persists, the longer we postpone coming to grips with, and working within the limits of, the 'unforeseen occurrences that befall all men.'—Ecclesiastes 9:11.

Through the years when we have met parents whose children could not cope with the normal school curriculum or were in remedial schooling, we have often wondered how many of the children might in reality be retarded or otherwise disabled. Could some of them be among the "invisibly handicapped"—those, unlike Andrew, who have no apparent physical difference and look like normal children? Individuals with Down's syndrome are easily recognizable. But other types of disabilities have no overt indicators. How many parents cling to unrealistic expectations and refuse to accept their

Degrees of Handicap

Some experts divide Down's syndrome individuals into three groups. (1) **Educable (Moderate):** those who can acquire considerable academic skills. This group includes some who have become actors or even lecturers. Some have succeeded in living independently with minimal supervision. (2) **Trainable (Mild):** those capable of learning certain practical skills. While they can be taught to care for themselves to some degree, more supervision is necessary. (3) **Profound (Severe):** the least functional group, who need much supervision.

What of Andrew? We now know that he falls into the category labeled "Trainable."

child's limitations, resulting in exasperation for everyone?—Compare Colossians 3:21.

The second piece of advice that our experience verified is this: *Ultimately YOU will determine how most people treat your child. The way you treat him will likely be the way others will treat him too.*

Much has changed over the last few decades in people's attitudes toward the physically and mentally handicapped. But many of these changes have been stimulated by some of the disabled persons themselves, their relatives, and other lay and professional advocates. Many parents have courageously ignored advice to institutionalize their offspring and have, in effect, rewritten the books. Fifty years ago most medical textbooks on Down's syndrome were based on data gathered from institutions. Today expectations have been completely revamped, often because parents and others struck out in new directions.

Learning More Compassion

It is strange how easily we can deceive ourselves into thinking that we are genuinely compassionate. But until we are personally involved, our comprehension of many problems may often be superficial.

Andrew has forced us to recognize that disadvantaged persons often have no control over their situation. In fact, it has made us face the question, What really is my attitude toward the weak, the slow, and the elderly?

Often we have been in a public place with Andrew and have had strangers, observing our unashamed acceptance of him as a full member of our family, come up to us and share their secret burdens. It was as though Andrew's presence reassured them that we could empathize with their problems.

The Power of Love

By far the most important lesson Andrew has taught us is that *love is not just a function*

of intellect. Let me explain. One of the fundamentals of our worship as Jehovah's Witnesses is that true Christianity rises above racial, social, and political divisions and prejudices. Confident in this principle, we knew that Andrew would be accepted by our spiritual brothers and sisters. Ignoring the advice of professionals who said it was unrealistic to expect him to sit respectfully through worship sessions, since his birth we have seen to it that he has accompanied us to meetings and also from house to house in our preaching activity. As anticipated, the congregation treats him with kindness and compassion.

But there are those who go beyond this. They have a special fondness for him. Andrew seems to sense this on a level that is completely unimpaired by his diminished intellect. With these individuals he easily overcomes his natural shyness, and he heads straight for them at the end of the meetings. Time and again, we have observed his instinctive ability to be able, even in a crowd, to discern those who feel a special fondness for him.

The same holds true for his demonstration of love. Andrew is very gentle to babies, older people, and pets. Sometimes when he unhesitatingly approaches a baby of someone we do not know, we stay close by, ready to rescue the child if Andrew inadvertently plays too rough. Yet how often we have felt ashamed of our fears as we watched him touch the baby as tenderly as a nursing mother would!

Lessons We Have Learned

Because all children with Down's syndrome are similar in appearance, we expected that they would all have similar personalities. However, we soon learned that they bear more resemblance to their family than to each other. Each has a unique personality.

Andrew, like many other youngsters, does not enjoy hard work. But we found that if we had the patience and endurance to walk him through a task over and over until it became a habit, it no longer seemed like work to him. His chores around the house have now become second nature, and only extras are considered work.

As we look back over the lessons we have learned during Andrew's life, an interesting paradox emerges. Virtually all the principles we learned in raising Andrew turned out to apply equally to our relationships with our other children and with people in general.

For example, who of us does not respond positively to genuine love? If you were ever unfavorably compared with someone whose abilities or experience differed greatly from yours, did you not find that unjust and frustrating? Finally, has it not been true of many of us that tasks that were originally unpleasant eventually became tolerable, even satisfying, when we had the discipline to stick with them?

Though we have shed many tears over Andrew in our human shortsightedness, we have also shared many joys, small and great. And we find that in areas completely unrelated to Andrew, we have grown because of him. We learned that any experience in life, no matter how trying, has the potential to mold us into better persons rather than into bitter ones.

There is something else of great importance to us. We derive much pleasure from anticipating the grand moment when we will witness the reversal of Andrew's disability. The Bible promises that soon in God's righteous new world, all blind, deaf, lame, and speechless ones will be restored to radiant health. (Isaiah 35:5, 6; Matthew 15:30, 31) Imagine the joy all will have then in observing firsthand the healing of mind and body as mankind blossom to their full potential! (Psalm 37:11, 29)—*Contributed.*

Is Competition in Sports Wrong?

TWO elderly men sit in a park on a sunny day, playing a game of checkers. Nearby are the sounds of children squealing and running about playing tag. Not too far away, a group of young men enjoy a game of basketball. Yes, all around us every day, young and old delight in sports and games. When they take part, most people try hard to do their best. Perhaps you do too.

But could it be said that such friendly forms of competition are wrong? Many are aware of the apostle Paul's admonition at Galatians 5:26, where he said Christians should not be "stirring up competition with one another." In view of this, would it be improper for Christians to compete in recreational sports and games?

Simply stated, no. Why is that? Before answering that question, let us look briefly at the history of sports and games.

The History of Sports and Games

Participation in sports and games dates back to ancient times and has been a constant feature throughout history—including the history of God's people. The word "ball" even appears in the Bible. At Isaiah 22:18, when mentioning Jehovah God's denunciations against wicked men, it says: "He will wrap

(them) up tightly, like a ball." Some modern balls—like golf balls and baseballs—are still made by wrapping materials tightly. The King James Bible translates the same verse: "He will... toss thee like a ball." For this analogy to have been relevant, balls must have been used by those living at that time.

In addition, in the Bible there is the case of the patriarch Jacob wrestling with an angel. This account seems to presuppose some prior practiced skill on Jacob's part, since the struggle was an indecisive one that lasted for hours. (Genesis 32:24-26) Interestingly, according to some scholars, the account may indicate Jacob had a recognition of wrestling rules. Israelites likely engaged in archery too—an other sport requiring practice and skill. (1 Samuel 20:20; Lamentations 3:12) Running was another athletic endeavor for which men of old exercised and trained.—2 Samuel 18:23-27; 1 Chronicles 12:8.

Games that engaged the mind—like the propounding of riddles—were evidently popular and much esteemed. Perhaps the most notable example of this is Samson's propounding of a riddle to the Philistines.—Judges 14:12-18.

In the Christian Greek



Scriptures, sports and games were sometimes used as metaphors for Christian living. For instance, at 1 Corinthians 9:24, 25, Paul cites an athlete's vigorous training regimen and applies it to a Christian's need for self-control and endurance. Also, it is clear Jehovah incorporated a playful streak into much of his creation, for both man and beast find time to play.—Job 40:20; Zechariah 8:5; compare Hebrews 12:1.

When Competition Goes Too Far

What, then, was the apostle Paul saying to fellow Christians when he told them not to be "stirring up competition with one another"? (Galatians 5:26) The answer lies in the context. Paul prefaced this statement by telling them not to "become egotistical" or, as other Bible translations phrase it, not to become "proud," "conceited," "desirous of vain glory." The pursuit of fame and glory was prevalent among the athletes of Paul's day.

So too in today's vainglorious world, more and more athletes resort to strutting and calling attention to themselves and their skills. Some go so far as to demean others. Taunting, finger-pointing, and verbal degradation, or what some athletes call "trash talking," are rapidly becoming the norm. All of this would be "*stirring up competition*," leading to what Paul referred to in the concluding part of Galatians 5:26—envy.

At its worst, unbalanced competition leads to fights and even death. Consider the meeting between Saul's men and those of David at Gibeon, when Abner and Joab agreed to "let the young men come forward and sport before [them].” (2 Samuel 2:14-32, *Tanakh*) This seems to refer to a wrestling tournament of sorts. Whatever the contest was, it quickly degenerated into a fierce and bloody battle.

A Balanced View

Recreational sports and games should be refreshing—not depressing. This we can achieve by keeping things in perspective, remembering that our worth to God and our fellowman has nothing to do with our skills in sports or games.

It would be foolish to allow feelings of superiority to well up within us because of physical or mental abilities. So let us avoid the unseemly, worldly tendency to call attention to ourselves, lest we provoke envy in others, for love does not brag. (1 Corinthians 13:4; 1 Peter 2:1) And while it is reasonable to expect excitement, spontaneous bursts of enthusiasm, and congratulations among teammates, we would not want these emotions to run wild and become showy displays.

We would never measure the worth of others by their abilities in sports and games. Similarly, we would not want to think any less of ourselves because of lack of skill. Does that mean it would be wrong to keep score? Not necessarily. But we should remember how insignificant any game really is—people's true worth does not depend on how well they perform. In team play some regularly change the mix of players on each team so that no one team always wins.

Christians should also keep in mind that while sports and games are mentioned in the Bible, they are mentioned only sparingly. It would be a mistake to conclude that the mere mention of sports in the Bible constitutes an outright endorsement of all sports. (Compare 1 Corinthians 9:26 with Psalm 11:5.) Also, Paul noted that "bodily training is beneficial for a little; but godly devotion is beneficial for all things."—1 Timothy 4:8.

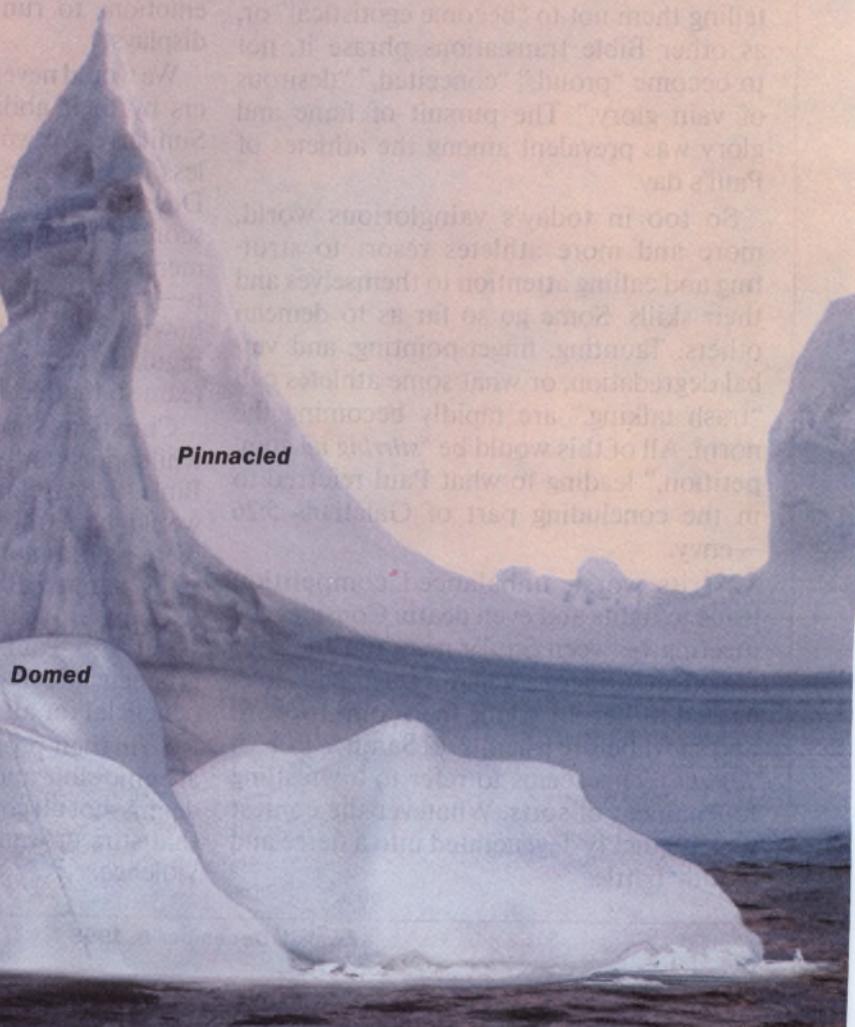
So in their proper place, sports and games are enjoyable and refreshing. The Bible condemns, not all competition, but competition that stirs up vanity, rivalry, greed, envy, or violence.

|| CEBERG right ahead!" shouts the anxious lookout. The crew on the ship's bridge reacts immediately. Engines are reversed to avoid a collision. But it is too late. The ship's starboard side sustains a fatal gash.

In less than three hours, the North Atlan-

tic swallows the world's then largest luxury ocean liner. On April 15, 1912, just five days into its maiden voyage from Europe to North America, the *Titanic* comes to rest on the ocean floor, two-and-a-half miles beneath the surface. About 1,500 passengers and crew die at sea.

CRYSTAL PALACES OF THE SEA



Pinnacled

Domed

And what was left of the massive ice lump? It remained virtually intact. Only its tip collided with the *Titanic*. The following day, searchers spotted it floating south into warmer waters, as if nothing had happened. The berg's demise, a gradual melting into the vast ocean, would soon be forgotten. The sinking of the *Titanic*, though, is still remembered as a traumatic sea disaster.

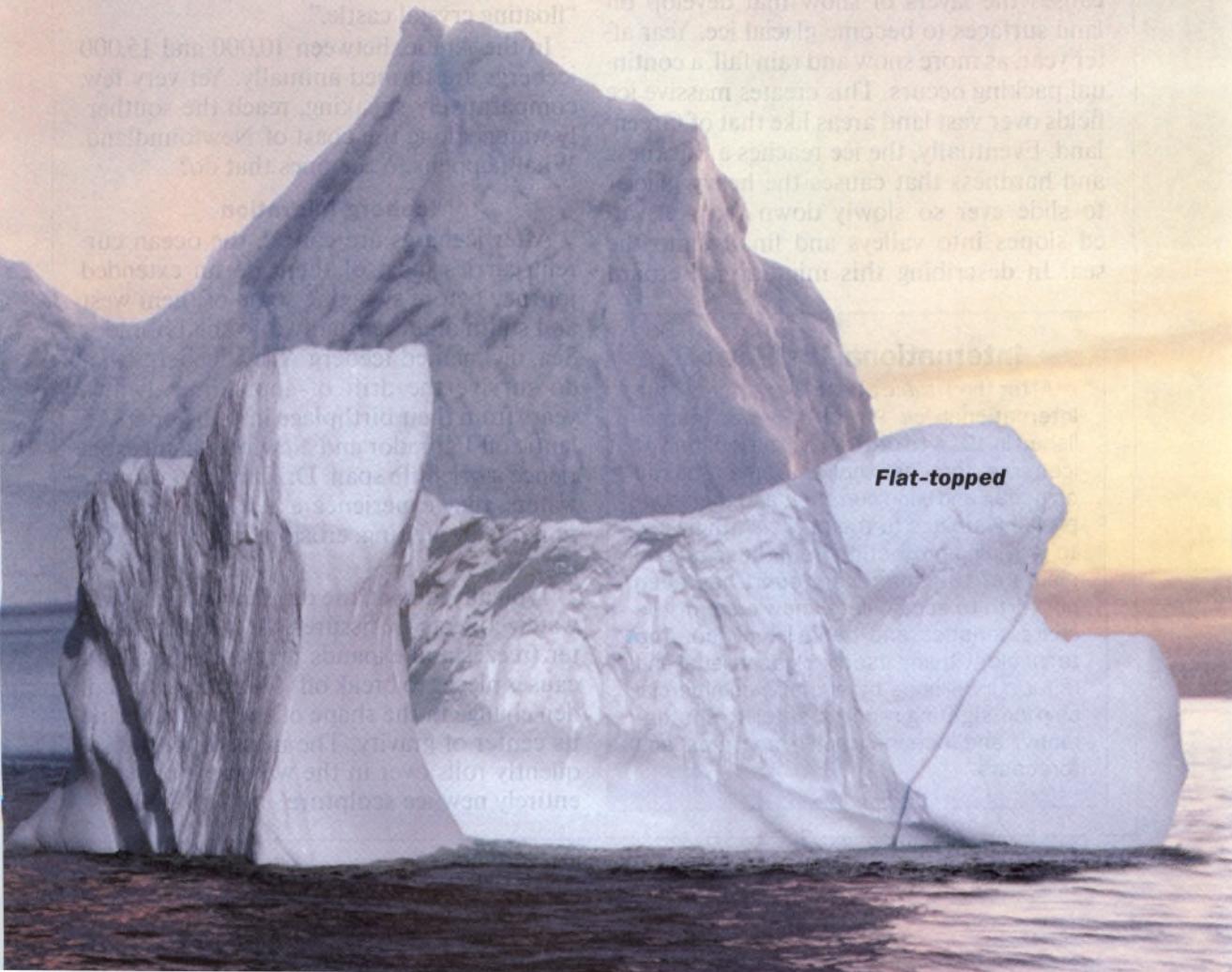
Icebergs! They are so inviting and majestic, yet so unyielding. Have you ever seen them close up and sensed the effect they have on man and nature? Would you like to know why and how they come into existence? And what is done to safeguard people at sea from the potential peril of icebergs? (See box "International Ice Patrol.")

Origin and Life Cycle

Icebergs are like giant freshwater ice cubes. They come from glaciers and ice sheets in the North and in the Antarctic. Did you know that the Antarctic ice cap produces some 90 percent of the earth's icebergs? It also yields the largest ones. These stand as high as 400 feet above the waterline and can measure more than 200 miles in length and 60 miles in width. Large icebergs can range between 2 million and 40 million tons. And like snowflakes, no two bergs look alike. Some are tabular, or flat-topped. Others are shaped like a wedge, are pinnacled, or are domed.

Usually only about one seventh to one tenth of an iceberg's mass is visible above

Flat-topped



the water. This is especially true of flat-topped icebergs. It is much like what you see when a cube of ice floats in a glass of water. However, this ratio of exposed ice to submerged ice varies, depending on the berg's shape.

Antarctic icebergs tend to be flat-topped and slab-sided, while Arctic icebergs are often irregular and turreted. These latter ones, which mostly come from the great ice cap covering Greenland, pose the greatest threat to man, since they may drift into transatlantic shipping lanes.

Just how are icebergs produced? In the northern and southern regions of the earth, the accumulation of snow and freezing rain often exceeds melting and evaporation. This causes the layers of snow that develop on land surfaces to become glacial ice. Year after year, as more snow and rain fall, a continual packing occurs. This creates massive ice fields over vast land areas like that of Greenland. Eventually, the ice reaches a thickness and hardness that causes the heavy glacier to slide ever so slowly down from elevated slopes into valleys and finally into the sea. In describing this migration, Bernard

Stonehouse stated in his book *North Pole, South Pole*: "Hard ice is elastic but readily deformable; under pressure its hexagonal crystals align, then slide on each other to create the flowing and slumping we associate with glaciers."

Just imagine a river of ice moving across uneven terrain very slowly, like cold molasses. Already carrying deep vertical cracks, this giant sheet of ice will be further influenced to produce a spectacular phenomenon once it reaches the coastline. With the combined effects of the rise and fall of tides, flexing waves, and underwater erosion, a huge chunk of freshwater ice that can extend some 25 miles out to sea will thunderously break away from the glacier. An iceberg is born! One observer described it as a "floating crystal castle."

In the Arctic, between 10,000 and 15,000 icebergs are formed annually. Yet very few, comparatively speaking, reach the southerly waters along the coast of Newfoundland. What happens to the ones that do?

Iceberg Migration

After icebergs are calved, the ocean current carries most of them on an extended journey before swinging some of them west and south and eventually into the Labrador Sea, nicknamed Iceberg Alley. Icebergs that do survive the drift of approximately two years from their birthplace into the open Atlantic off Labrador and Newfoundland experience a brief life span. Drifting into warmer waters, they experience extensive deterioration due to melting, erosion, and more calving.

Typically, during the day the ice melts and water collects in fissures. At night the water freezes and expands in these cracks and causes pieces to break off. This creates a sudden change in the shape of the berg, altering its center of gravity. The mass of ice subsequently rolls over in the water, exposing an entirely new ice sculpture.

International Ice Patrol

After the *Titanic* ocean liner tragedy, the International Ice Patrol (IIP) was established in 1914 to determine the location of icebergs, forecast their movement based on ocean and wind currents, and then supply ice warnings to the public. With a view to providing protection from these crystal giants of the sea, every effort has been put forth to accumulate knowledge of the characteristics and behavior of ice. The technology being used includes visual and radar surveillance by aircraft, commercial ship ice-sighting reports, satellite photography, and oceanographic analyses and forecasts.

As this cycle continues and the ice castles further reduce in size by splitting, they produce their own icebergs called "berg bits," about the size of an average house, and "growlers," about the size of a small room—the latter so named because of the sound they make while floating in the waves. Some smaller growlers may even flounder in the shallow waters of the shoreline and inlets.

Whatever the circumstances, the environment in the more southerly waters will cause the iceberg's rapid disintegration into small fragments of freshwater ice and then into part of the mighty ocean. Until that happens, however, icebergs are to be treated with caution.

How Icebergs Touch Our Lives

Fishermen who depend on the ocean for their livelihood tend to view icebergs as a nuisance and a hazard. Said one fisherman: "The iceberg may be desired by the tourists, but to the fisherman it is a possible menace." Fishermen have returned to check their catch, only to find that an iceberg, moved by the tide and the current, has destroyed their valuable nets and their catch.

Icebergs deserve respect. "You want to keep your distance," says a sailboat skipper. "Icebergs are most unpredictable! Huge sections can break off from high ones, or when striking bottom, great chunks can break off and shoot up at you. Also, the berg can spin and roll, all of which could be disastrous to anyone venturing too close!"

Ocean floor scouring by icebergs is another aspect of concern. "If a berg's draft is about equal to the water depth, its base is known to excavate long and deep channels. Such activity in regions of oil exploration would have devastating effects on seafloor installations such as well-heads," according to one observer.

By now you might be thinking that we would be better off without icebergs. The

story of the iceberg, however, is by no means all negative. One Newfoundland remarked: "Years ago, before refrigeration was common, people in some small coastal villages would retrieve small pieces of berg and drop them into their wells to keep the water icy cold. Another practice was to preserve pieces of berg ice in bins of sawdust to assist in the production of homemade ice cream."

Tourists are especially attracted to these huge mountains of floating glacial ice. They seek vantage points on Newfoundland's rugged coastline to get a panoramic view of the Atlantic and feast their eyes on these sea giants. Cameras click to capture the moment on film.

Icebergs also have the potential to furnish an almost endless supply of fresh drinking water. Distilling and bottling iceberg water could eventually become a feasible venture in this day of unprecedented water pollution. On a large scale, it may seem to be a simple matter to locate a giant "ice cube" and tow it to port for processing. In reality, it is a colossal challenge that so far has proved formidable.

A Wonder of Jehovah's Creation

The Creator of heaven and earth asks: "Out of whose belly does the ice actually come forth?" (Job 38:29) Elihu knew, for earlier he had said: "By the breath of God the ice is given."—Job 37:10.

Thus, when we view these towering, glistening wonders of the sea, our thoughts turn to our Creator, who put them there. Like the psalmist, we say: "How many your works are, O Jehovah! All of them in wisdom you have made. The earth is full of your productions." He adds: "Your works are wonderful."—Psalm 104:24; 139:14.

Truly, Jehovah is a wonder-working Creator. How we long to know him better! We can do so by paying attention to his Word.—Romans 11:33.

BABY TRANSPORT

African and North American Ways

BY AWAKE!

CORRESPONDENT
IN NIGERIA

THREE are a variety of ways that people throughout the world transport babies. The North American and African ways offer quite a contrast.

On these different continents, economic conditions vary dramatically. So we would expect that methods of transport would vary dramatically too. First, let us see how people in North America often handle the matter.

The North American Way

In the United States and many other parts of the world, four-wheeled baby strollers or prams are a common method. And the trend in recent years has been to make them easier to use, more stylish, and more comfortable for the baby. Many have plush cushioning, washable pads, and elevated seats.

Strollers offer children a welcome repose, a change of pace, a rest for sore feet. For a sleepy youngster, a stroller can be like a bed on wheels. Often the motion of a mov-



ing stroller soothes and calms a tired and irritable child.

Strollers can make life easier for parents too. One parent said: "It's easier than carrying a child everywhere." A child may be easy to carry when small, but it is a different story when he or she begins to double or triple in weight. Moreover, parents enjoy knowing that their child is safe and secure in a stroller that they are able to control.

In the United States, care is taken to make strollers safe. They are designed with a wide base and a low center of gravity so that they cannot be easily toppled. Brakes must be strong and in a position where they cannot be disengaged by a child in the stroller. Latches are installed to prevent the accidental folding of the stroller. Care is taken to eliminate any "pinch points"—areas that can pinch tiny fingers. Seat belts give added protection.

Strollers may range in price from over \$20 to some eight or ten times that much. One

luxury model that retails for about \$300 features an extra-large basket, a plush interior, a weather-resistant exterior, multidirectional wheel movement, and a fast-fold, lightweight frame. A specially designed "joggers stroller," which allows mom or dad to wheel the baby while jogging, sells for some \$380.

The African Way

In Africa, as well as in many lands of Asia, most mothers carry babies on their backs, just as their mothers did and their mothers before them. "Baby-backing," as many Africans call it, could hardly be less expensive or more convenient. The only equipment needed is a strong, rectangular piece of cloth called a wrapper. In a simple, safe maneuver, mother bends over, positions her baby on her back, and then wraps and ties the cloth around both of them.

Do babies ever fall while being tied in place? This almost never happens. When tying on an infant, mother gives support with one hand while she secures the wrapper with the other. Concerning older youngsters, a Nigerian woman named Blessing said: "Babies don't resist; they hold on tight. They love to be on their mother's back. At times they cry to be there. But if the baby does struggle, the mother can pin one or both of its arms to her side with her upper arms until she gets the wrapper in place."

To give support to the neck of very young babies, mothers use a second piece of cloth, which they tie in the same way as the main wrapper. Added support for young or sleeping babies is achieved by covering the child's arms with the wrapper. Older children enjoy having their arms free.

How long do African mothers carry their youngsters on their back? In times past some ethnic groups, such as the Yoruba of Nigeria, backed their babies for up to three years. Nowadays a baby gets a free ride for about two years, unless in the meantime mother

gives birth to another baby to take his or her place.

Comfortably tied to mother's back, baby can go wherever mother goes—up and down steps, over rough terrain, and in and out of vehicles. But apart from being a practical and inexpensive means of transport, baby-backing meets important emotional needs, such as comfort. A crying baby is put on mother's back; baby goes to sleep, and mother goes on with her work.

Transferring a sleeping baby from back to bed requires gentleness, since many babies do not like to be disturbed. To do this, mother carefully lies down on her side and gently unties the wrapper, which now becomes a blanket. Sometimes, to simulate the security of the back, she will prop a pillow in front of the baby.

Baby-backing has other benefits. It enables mother to keep in touch with her baby's needs. If the child is lethargic, agitated, feverish, or wet, she will feel it. Baby-backing can bring long-term benefits also. The book *Growth and Development* states: "Close physical proximity in babyhood creates a secure and loving bond between mother and baby, forming the basis for interpersonal relationships in later years. An important factor in this bonding is believed to be the fact that a child held so close can easily detect the rhythm of the mother's heartbeat, just as he or she did when still in the mother's womb."

Babies love the close contact baby-backing provides. In Africa you don't have to look far to see happy children on mothers' backs. Some doze peacefully. Others play with their mother's hair, ears, or necklace. Still others join in with contented sounds as the mother softly sings to the rhythm of her footsteps.

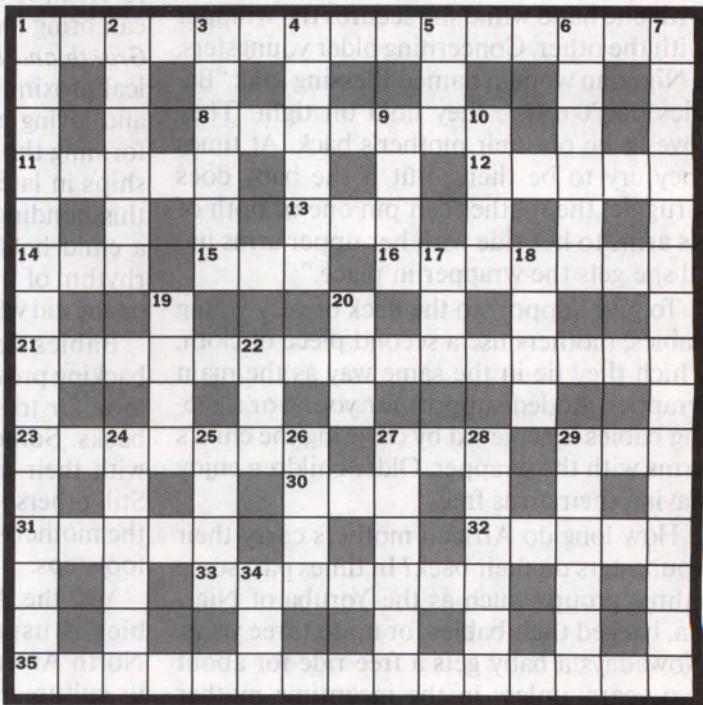
Yes, the African way of transporting babies is usually much different from the North American way. But each is suited to its culture and accomplishes its purpose.

CROSSWORD PUZZLE

Clues Across

1. This expression conveys the power God holds as he commands vast forces of spirit creatures [3 words] (*Isaiah 1:24*)
 8. The band of raiders who took Job's cattle and she-asses and slaughtered his attendants (*Job 1:14, 15*)
 11. This city was on the boundary of the territory of the tribe of Asher (*Joshua 19:30*)
 12. The Shulammite likens her shepherd companion to the pleasant shade of this fruit tree (*Song of Solomon 2:3*)
 13. The number of gods that Jehovah is (*Deuteronomy 6:4*)
 14. Away from (*John 15:19*)
 15. A place where travelers could find accommodations for themselves and their animals (*Luke 10:34*)
 16. Two of Jesus' ancestors through Mary shared this name (*Luke 3: 24, 29*)
 21. To keep in memory a cause for complaint [3 words]
 23. A descendant of Koz in the tribe of Judah (*1 Chronicles 4:8*)
 27. The unrighteous steward in Jesus' illustration, knowing he would be dismissed, felt he was not strong enough to do this (*Luke 16:3*)
 29. A flying mammal (*Leviticus 11:19*)
 30. The last of God's earthly creative works (*1 Timothy 2:13*)
 31. A feature that James used in distinguishing the rich man from the poor man in his illustration concerning favoritism (*James 2:1-4*)
 32. One floor level of a building (*Acts 20:9*)
 33. A head priest who returned from Babylon with Zerubbabel (*Neemiah 12:2*)
 35. What Jesus called the temple [4 words] (*John 2:16*)
4. The city where David first ruled as king of Judah (*2 Samuel 2:11*)
 5. This city, originally assigned to the tribe of Judah, was later reassigned to the tribe of Simeon (*Joshua 19: 7, 9*)
 6. A head of the people among the Benjamites living in Jerusalem (*1 Chronicles 8:16*)
 7. It was at this point in Jehoshaphat's reign in Judah that Ahaziah became king in Israel [2 words] (*1 Kings 22:51*)
 9. A Levite city given to the Gershonites (*1 Chronicles 6:73*)
 10. Known as "Dead" today, the sea was called by this name in the Bible (*Joshua 15:2*)
 17. What Adam did with the forbidden fruit (*Genesis 3:12*)
 18. A set of draft animals harnessed to a vehicle (*Micah 1:13*)
 19. John was exiled on the one called Patmos (*Revelation 1:9*)
 20. An occupation requiring knowledge (*Acts 16:16*)
 22. A son of Jether of the tribe of Asher (*1 Chronicles 7:38*)
 24. One of the men who, following the lead of Nehemiah, attested by seal to the confession contract (*Nehemiah 10:13*)
 25. Not yet found at the beginning of the third creative day (*Genesis 2:5*)
 26. After the Flood, God decreed this as one of the things that would never cease on earth (*Genesis 8:22*)
 27. One was appointed in Edom to act in place of the king during the time that Jehoshaphat was king of Judah (*1 Kings 22:47*)
 28. An overseer of the Nethinim temple slaves in Nehemiah's day (*Nehemiah 11:21*)
 29. A decorative metal clasp (*See Exodus 35:22*)
 34. Earlier than the present time (*Hebrews 1:1*)

Crossword Solutions Page 27



Clues Down

1. Peter told Cornelius that all Judea had heard about Him [3 words] (*Acts 10:37, 38, King James Version*)
2. In a Christian's armor, it represents salvation (*Ephesians 6:11-13, 17*)
3. This Persian queen was deposed for disobedience (*Esther 2:1*)



ROCKS That Fly

Sara Eichmiller Ruck

HAVE you ever seen a shooting star blaze across the sky on a clear night? It may be just a matter of time before you do. According to scientists these fireworks of nature trace their paths across earth's skies some 200,000,000 times every day!

What are they? They are simply chunks of stony or metallic matter known as meteoroids that light up in white heat as they enter the earth's atmosphere. The bright streak of light they trace across the sky as observed from earth is known as a meteor.

Most meteoroids burn up completely

A Fireball on Videotape

Some meteors are unusually bright and large. They are known as fireballs. On October 9, 1992, the fireball shown in the above photograph streaked across the skies over several states in the United States. The fireball was seen first over West Virginia and appeared over a 430-mile stretch of land. One fragment, weighing about 26 pounds, landed on a parked car in Peekskill, New York.

What is unique about this event is that because of the grazing angle at which the meteoroid entered the atmosphere, a bright fireball was produced that lasted more than 40 seconds. This afforded an unprecedented oppor-

tunity to record it on video, and this was done from at least 14 different points of view. According to the magazine *Nature*, "these are the first motion pictures of a fireball from which a meteorite has been recovered."

The fireball broke into at least 70 fragments, which appear in some of the videotapes as individual glowing projectiles. Although just one meteorite from this event has been found, scientists believe that one or more other fragments may have pierced the earth's atmosphere and crashed on land. That is all that may be left of the large meteoroid that previously weighed about 20 tons.

Rocks From Outer Space

Asteroid: Also known as a planetoid or a minor planet. These extremely small planets travel in an orbit around the sun. Most have irregular shapes that may indicate that they are fragments of once larger objects.

Meteoroid: A relatively small chunk of metallic or stony matter floating in space or falling through the atmosphere. Some scientists think that most meteoroids are fragments from asteroids produced by collisions or by the rocky debris from extinct comets.

Meteor: When a meteoroid penetrates the earth's atmosphere, the air friction produces intense heat and a bright glow. This trail of hot glowing gases is momentarily visible as a

streak of light in the sky. The streak of light is known as a meteor. Many call it a shooting star or a falling star. Most meteors are first sighted when they are about 65 miles above the earth's surface.

Meteorite: Sometimes a meteoroid is so large that it does not burn up completely when entering our atmosphere, and it crashes into the earth. Meteorite is the term for such a meteoroid. Some can be very large and heavy. One meteorite in Namibia, Africa, weighs more than 60 tons. Other large meteorites weighing 15 tons or more have been found in Greenland, Mexico, and the United States.

before they reach the earth, but some survive the intense heat and reach the earth's surface. These are known as meteorites. Some scientists estimate that each day some

1,000 tons of this flying rock is deposited on earth.*

These crashes are seldom dangerous to hu-

* Estimates vary.



NASA photo/JPL

Ida and Its Baby Moon

While photographing an asteroid named Ida, the Galileo spacecraft, on its way to Jupiter, made an unexpected discovery—the first documented example of a moon orbiting an asteroid. As reported in *Sky and Telescope*, scientists estimate that this egg-shaped moon, named Dactyl, measures one mile by three quarters of a

mile. Its orbit is about 60 miles from the center of asteroid Ida, which measures 35 miles by 13 miles. Their infrared color properties suggest that both Ida and its tiny moon are part of the Koronis family of asteroids, which are thought to be fragments of one single, large rock that was shattered by a collision in space.



**Meteor Crater, near Flagstaff, Arizona, U.S.A. is 4,000 feet
in diameter and 600 feet deep**

mans, mainly because of the relatively small size of these flying rocks. In fact, most meteors are caused by meteorites no larger than a grain of sand. (See box, "Rocks From Outer Space.") But what about the thousands of larger rocks flying in space? Take, for instance, the one known as Ceres, which is about 600 miles in diameter! And there are about 30 other known rocks with a diameter greater than 120 miles. These larger rocks are actually minor planets. Scientists call them asteroids.

What if one of these asteroids were to crash into the earth? This apparent threat is one important reason why scientists study asteroids. Although most asteroids orbit in a belt between Mars and Jupiter, some tracked by astronomers actually cross the orbit of the earth. The threat of a collision is reinforced by the existence of huge craters such as the Meteor Crater (also known as Barringer Crater) near Flagstaff, Arizona, U.S.A. One of

the theories for the extinction of the dinosaurs is that a large impact altered the atmosphere and plunged the earth into an extended period of cold weather through which the dinosaurs could not survive.

Such a catastrophic collision today would likely destroy mankind. However, the Bible indicates that "the righteous themselves will possess the earth, and they will reside forever upon it."—Psalm 37:29.

IN OUR NEXT ISSUE

Schools in Crisis

Should I Attend Rock Concerts?

**Doctors Learned
From My Near Death**

HULA

THE DANCE OF HAWAII

BY AWAKE! CORRESPONDENT IN HAWAII



MENTION Hawaii, and often the hula comes to mind. Although the hula is uniquely associated with Hawaii, its origins are in the South Pacific.

In ancient times Hawaiians had no written language, so songs and chants were used to relate their history and customs. The hula, with movements of the hips, hands, and feet, along with facial expressions, accompanied these chants and songs.

There is no way to document anything associated with the hula before 1778, when Captain Cook and his men arrived. What is known today is largely based on late 19th-century practices, songs, and chants.

The first hulas may have been sacred rituals. Yet it is not thought that all hulas were acts of worship or part of a religious service.

Influence of Missionaries

The hula was being performed for explorers and sailors on visiting ships in the 18th and 19th centuries. It is possible that these paying customers wanted the hulas to be sexually explicit.

When the missionaries arrived in 1820, they had strong reason to condemn the hula. After securing the approval of the chiefs, the missionaries attacked the hula as heathen and vulgar—and the work of the Devil. Even before this, in 1819, changes in the ancient reli-



gious practices were brought on by Queen Regent Kaahumanu, widow of King Kamehameha I. These included the tearing down of idols and the elimination of complicated rituals. Countless dances and chants were also lost forever.

Kaahumanu was accepted into the church in 1825. In 1830 she issued an edict forbidding public performances of the hula. After her death in 1832, some chiefs ignored the edict. For a couple of years, when moral constraints were openly flouted by young King Kamehameha III and his companions, the hula briefly became popular again. But in 1835 the king conceded that his ways were wrong, and the kingdom returned to the power of the Calvinists.

Revival of the Hula

During King Kalakaua's reign (1874-91), a resurgence occurred with full reacceptance of the hula at public performances. For his coronation in 1883, months of training and excitement culminated in the public performance of many chants and hulas, some especially written for that occasion. By the time of his death in 1891, the hula had gone through many changes in steps and body movements, and accompaniment by instruments like the ukulele, the guitar, and the violin had been introduced.

After the end of the monarchy in 1893, the hula again declined. By the mid-20th century, however, it was flourishing. To appeal to a more diverse audience, numerous innovations were made. Since many could not understand the Hawaiian language, English words were used. The modern hula places more emphasis on the dance itself—the movements of the hands and the feet, the swaying of the hips, and the expression of the face.

As the number of visitors to the islands increased, the hula became more and more popular. Travelers from the mainland took back with them the dances that they learned and began featuring them in Hollywood films with non-Hawaiian dancers. In 1935 even Minnie Mouse danced the hula for Mickey, who played his steel guitar.

The Hula Today

With the "Hawaiian Renaissance" in the 1970's, the knowledge of a few chanters, dancers, and master teachers became the basis for revitaliz-

ing older hula forms. Today there are hula masters who reproduce the old dances and those who create new ones. In either case, their attempts have resulted in extravagant and spectacular displays.

A spiritual affinity with the many Hawaiian gods has carried over to a degree into modern times. Each year before the start of the Merrie Monarch Festival held in Hilo, Hawaii, hula schools make their pilgrimage to Pele's fire pit or sites of recent lava flows. They chant, dance, and make offerings of flowers, berries, and gin, asking for her blessings on their efforts for the contest. Groups from around the world compete in three nights of competition viewed as the Olympics of hula.

The hula has become a large part of the cultural rebirth in Hawaii. It includes the somber dances accompanying chants with reverence to gods and goddesses as well as the simple expressions of everyday life in the islands that have no religious significance at all.

Christians should be very selective in dancing or in viewing certain hulas. They need to be sure that they are not unknowingly paying homage to a god or a goddess. Care also needs to be exercised when listening to or singing songs or chants. Many of these contain words with hidden or double meanings. If this is kept in mind, a viewer or a participant can enjoy the hula as a wholesome form of entertainment.

CROSSWORD SOLUTIONS

J	E	H	O	V	A	H	O	F	A	R	M	I	E	S
E	E	A	E			I				S		E		
S	L	S	A	B	E	A	N	S		H		V		
U	M	M	A	H		R	N		A	P	P	L	E	
S	E	T	O	N	E			L	A			N		
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WATCHING THE WORLD

Literacy and Health

A higher level of literacy may contribute to a longer life expectancy, according to statistics cited by UNESCO (United Nations Educational, Scientific, and Cultural Organization). "People who have learned to read and write," notes the magazine *UNESCO Sources*, "are more attentive to hygiene and health care; they tend to be less fatalistic and, in the event of illness, more likely to turn to a doctor." Literacy, though, is only one of the factors that affect life expectancy. "Access to medical treatment, the family's financial circumstances and the social environment" also play crucial roles.

Empty Summit

Approximately 20,000 delegates from around the world met in Copenhagen, Denmark, on March 6-12, 1995, to attend an assembly sponsored by the United Nations entitled: "World Summit for Social Development." Their purpose in meeting? To discuss ways to bring an end to poverty, unemployment, and segregation in developing countries. It did not take long, however, to identify a major roadblock—a lack of funds. It seems that many of the poverty-stricken countries are so heavily indebted to the wealthy nations that they cannot even afford to make their interest payments. The hosting nation, Denmark, proposed that the wealthy nations follow their lead and can-

cel the poorest nations' debts. There is one problem, though. Many of the poorer nations' debts have resulted from arms procurement. Therefore, as one UN adviser explained, if the debt is canceled, they will only use the opportunity to buy more guns.

Learning Empathy

Researchers who study empathy in children have proposed that the capacity for understanding the feelings of others is learned. "It's been shown that children who have been abused don't respond empathically to distress in



other children," says Dr. Mark A. Barnett, a professor at Kansas State University in Manhattan, as quoted in *The New York Times*. "They may look at the distressed child and do nothing, or they go over and yell and push the child." On the other hand, he adds that "a child whose own emotional needs are taken care of is more responsive to the emotions of others." In addition to providing emotional security, however, parents need to show their children how to be empathetic. As Dr. Barnett says, empathetic parents generally rear empathetic children.

Women or Men —Who Work Longer?

Except in North America and Australia, women everywhere work longer hours on the job than men, reports *Populi*, the magazine of UNFPA (United Nations Population Fund). The greatest gap exists in Africa and the Asia-Pacific region, where women in the labor force, on the average, work some 12 hours per week more than men. "In many developing countries," notes the magazine, "women are now working 60-90 hours a week just to try to maintain their meagre living standards of a decade ago." Meanwhile, in the industrialized world, men's share in household work is increasing. "But," explains *Populi*, this increase "is not due to a more equal division of routine cooking, cleaning, and laundry. Rather, men are taking longer to do such tasks as shopping."

China's Population Reaches 1.2 Billion

Earlier this year China's population hit the 1.2 billion mark, reported *China Today*. The population might have reached this size nine years earlier without the national family planning program introduced in the 1970's. Nevertheless, at the current rate of growth, China's population will reach 1.3 billion early in the next century. Though among the world's largest countries geographically, China's per capita output of grain, meat, and eggs is lower than the output of countries that are more developed. In addition, total cultivated land

is shrinking because of pollution and heavier land occupancy, said *China Today*.

Snails on the Attack

Before live South American golden snails were imported to Vietnam as a food item six years ago, scientists warned that the snails would cause great trouble if they ever escaped. Time, it seems, has proved the scientists right. Some snails did escape and quickly showed a penchant for eating rice. The government then banned the snails, but many small establishments continued to grow them anyway and sell them for food. The Associated Press reports that according to the official Vietnam News, merely eight of these tiny creatures can devour 11 square feet of rice paddy in a day! The snails have reportedly destroyed 77,000 acres of rice already and have spread into the country's most productive rice-growing region. A single female snail can lay some 40 million eggs in one year.

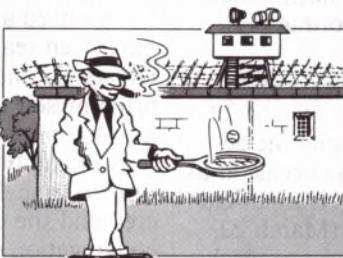
A Footnote to World War II

Over 50 years ago, at the height of World War II, a farmer in rural Colorado, U.S.A., might have thought himself relatively safe from enemy attack. How surprised one such farmer must have been when his tractor suddenly fell into a small cavern caused by a bomb blast! It turned out that the bomb had been launched on the other side of the Pacific Ocean—via balloon. In a curious footnote to a global war, the Japanese decided to retaliate for U.S. air raids in 1942 by launching more than 9,000 hydrogen balloons carrying small

incendiary and antipersonnel bombs. The idea, according to Scripps Howard News Service, was to start forest fires and panic in the United States, some 6,200 miles distant. The damage was relatively minor, although several people were killed. There were 285 balloon-related incidents reported, and at the government's behest, the media kept the news of these quiet to avoid panic.

Tennis Anyone?

The demand for illicit drugs in Australia's prisons has given rise to some innovative methods of drug smuggling. "People are filling tennis balls with illegal drugs and using racquets to hit them into Australian jails," reports Reuters news service. Prison spokesman Keith Blyth



says: "They pack the drug and then wrap it (in plastic film)." They then put it in a tennis ball and literally throw or hit it over the fence. In an attempt to stem the flow, the South Australian government has considered, among other things, using "drug-sniffing dogs" to patrol outside the state's jails for "people with suspicious tennis balls," explained Blyth. Another enterprising smuggler used a crossbow to propel drugs over a prison wall. The report said, however, that the "more traditional method of

hiding drugs in cakes" and carrying them into prison is still popular.

Plants With a "Memory"

When attacked, many plants produce chemicals to ward off their attackers. *New Scientist* magazine reports that some also form a "memory" of the attack, allowing them to begin producing the repelling toxins more quickly if attacked again. A caterpillar chewing on a tobacco leaf triggers the manufacture of jasmonic acid, which travels to the roots. This initiates the production of nicotine, which returns to the leaves to make them undesirable to the eater. Plants with roots previously exposed to the acid reacted more quickly to attack. "This suggests that plants do indeed have a memory," says Ian Baldwin of the State University of New York at Buffalo.

Surplus Clergy

Declining membership in Canada's Protestant churches has led to an "unprecedented surplus of Protestant clergy," reports *The Globe and Mail*. Over the last ten years, the Anglican Church in Montreal, Quebec, has seen membership plunge from 67,000 to 27,000, while the number of priests has remained the same. The surplus of clergy has resulted in some having to take on part-time jobs or go on unemployment insurance to survive. In Toronto, Ontario, the Presbyterian Church is facing a similar crisis. Jean Armstrong, the associate secretary of ministry and church vocation, says: "We're not sure how much longer congregations can afford full-time ministers."

FROM OUR READERS

Missing Children By the time I finished reading the series of articles "Missing Children—When Will the Tragedy End?" (February 8, 1995), tears were rolling down my face. Some of the experiences related in the articles were similar to mine. I thank Jehovah for giving me the strength to endure. Through his Word I have gained the hope of a paradise in which people will no longer suffer such evils.

T.O., Brazil

Japanese Prisoner I was encouraged to read the article "My Father Was 'Atom-Bombed Out Of Prison.'" (October 8, 1994) I was recently baptized as a Christian, and I have often wondered if I would maintain my integrity under test. As I read about Brother Katsuo Miura's rocklike faith, strong emotions welled up inside me. It helped me realize what I am lacking in my own faith—that I need to make Jehovah God the source of my confidence.

K.T., Japan

Genetics We have been discussing the genetic code in school. So I took the occasion to put the magazine on the subject "Human Genetics—What Makes You 'You'" (March 22, 1995) in my exercise book. Our science teacher analyzed the article with me. She told me that even though she is a biologist and has studied DNA for years, she was impressed by how deep the material was.

P.N., Italy

The articles showed how a complicated subject can be explained in comprehensible terms. It enabled me to understand better the material I am studying in biology class. However, I am unable to make use of the quotes in the article, since you do not give reference information such as author and publisher.

M.G., Germany

Because of space limitations, we usually do not publish lists of secular references as is often done

in technical and scientific journals. Since "Awake!" is written for the general public, not for professionals only, we feel that such bibliographic information would be of interest to relatively few readers.—ED.

Homosexuality I serve as a ministerial servant and a pioneer, a full-time evangelizer. The "Young People Ask . . ." articles on homosexuality seem to have been written for me! (February 8, February 22, and March 22, 1995) In my early and mid-teens, I explored homosexuality. I stopped, but ever since I've found it hard to fight these feelings. With these articles, however, I finally understand my feelings, and I've received help to keep on fighting!

Name withheld, Denmark

I've had homosexual feelings since puberty. I was raised a Christian, so these feelings have been really confusing to me. Because I felt so ashamed and confused, I could never bring myself to confide in anyone, not even my own parents. I'm married now to a beautiful woman, but I still have wrong desires from time to time. Finally, I told my wife my secret, and she encouraged me to talk with the congregation elders. They were very understanding and supportive. If I could say anything to anyone struggling with these feelings, it would be this: Don't keep it a secret. Tell your mate, your parents, an elder, or a trusted friend—but don't keep it inside.

Name withheld, United States

From childhood, I suffered sexual abuse. No love or affection was ever shown to me. I practiced homosexuality, but if young people only knew the shame, pain, sadness, and frustrations that homosexual attitudes bring, they would flee from them. Many avoid talking about this topic, but you treated it in a clear manner. I thank you with all my heart for publishing such subjects.

Name withheld, Brazil



Christmas—Its Origin

BY AWAKE! CORRESPONDENT IN ITALY

JUST three days before Christmas 1993, Pope John Paul II acknowledged that the celebration of Christmas is not rooted in the Bible. Regarding the date December 25, the pope admitted: "On that day in pagan antiquity, the birthday of the 'Invincible Sun' was celebrated to coincide with the winter solstice." How, then, did Christmas begin? The pope continued: "It seemed logical and natural to Christians to replace that feast with the celebration of the only and true Sun, Jesus Christ."

"In other words," wrote journalist Nello Ajello in *La Repubblica*, "someone had Jesus born on an imaginary, fabricated, false date." When did this fabrication take place? A press release from the Vatican stated: "The festival of Christmas appeared for the first time in 354 [C.E.]."

What about January 6, Epiphany, which commemorates the coming of the Magi to visit the newborn Jesus? "Much evidence leads us to be-

lieve that the choice of January 6, like that of December 25 for the Roman holiday celebrating the birth of Jesus, was also influenced by a pagan anniversary," continued the press release. "In Alexandria, in fact, on the night between January 5 and 6, pagans used to celebrate the birthday of the god Aeon (god of time and eternity). . . . It would seem that the Church wanted to Christianize this festival."

Jesus never authorized his followers to merge true worship with pagan customs. Rather, he told them to teach "all the things I have commanded you." (Matthew 28:19, 20) Furthermore, when confronted by the religious leaders of his day, Jesus asked them: "Why do you break the command of God for the sake of your tradition?" (Matthew 15:3, New International Version) That same question may well be asked of so-called Christians who perpetuate pagan customs today.

'Answered All Questions'

Awake!

February 22, 1995

A BETTER UNDERSTANDING OF MENOPAUSE

Commenting on the series in the February 22, 1995, *Awake!*, "A Better Understanding of Menopause," a reader from Kentucky, U.S.A., wrote: "I recently attended a three-hour seminar on this subject. It was put on by the education departments of two major hospitals. The program was very informative, but I learned more in 30 minutes by reading *Awake!* than I learned in three hours at the seminar (and it didn't cost \$15)."

Another reader of *Awake!* noted: "I've read a number of books and articles on menopause in the last three years. Afterward I always had unanswered questions. Your articles answered all my questions pertaining to this subject."

For more information on this topic, write to: Awake! International, 1250 North Glebe Road, Suite 600, Arlington, Virginia 22201, U.S.A.

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