

Awake!

July 8, 1988

What Happens When We Die?



Death is an enemy; it takes away our loved ones. It is an unpleasant subject. Yet, our view of death greatly influences the way we live. If we could learn what happens when we die, it would help us to understand the purpose of life better. In the following articles, "Awake!" correspondent in Britain analyzes the question, What happens when we die?



—ILLUSTRATION BY RONALD L. HARRIS

than will go with no explanation. "The two adult religions tend to have been influenced by ancient superstitions and mythical understandings which have been passed on to natural law," says one spiritual teacher. "The main problem is that as man's knowledge and logic have increased, the mind is left wondering."

IF YOU could ask God personally any question you like, what would it be?" The outcome of a recent survey in England revealed that 31 percent of those interviewed wanted to know: "What happens when we die?"

Given the opportunity, would you ask that?

Death "is the one thing we know for certain, and we share that knowledge with everyone who is alive," writes researcher Mog Ball in *Death*. Paradoxically, however, as Ball further observes, "between ordinary people it is not a topic of conversation. Death isn't something you talk about with people you don't know well."

Actually, many people don't even want to think about death. As *The World Book Encyclopedia* observes: "Most people fear death and try to avoid thinking about it." This fear is actually a fear of the unknown because death, to most people, is a mystery. So when somebody dies, people use expressions such as "passed on," "passed away," and "lost in death," or some similar euphemism. But since all of us face death, can we not be more specific in describing what happens to us when we die?

Skeptics will claim that we are asking hypothetical questions, that it is simply a matter of belief. As the *Encyclopædia Britannica* puts it: "Death is not life. What it is, however, can only be conjectured." Yet, the same authority also declares: "The belief that human beings survive death in some form has profoundly influenced the thoughts, emotions, and actions of mankind. The belief occurs in all religions, past and present."

What forms do these beliefs take? Do they shed true light on what happens when we die, or does death remain a mystery?

THE GREAT MYSTERY

THE MYSTERY DEEPENS

WE LIVE close to reality when gathered round a deathbed. Yet, death remains a frightening, even terrifying, experience to contemplate. Little wonder that conjecture and mystery abound each time death closes in on life. Life is short, and as Shakespeare observed, "Death will have his day."

What, then, is physical death? That is the first question we must determine.

An Unacceptable Fact

According to the *Encyclopaedia Britannica*, death is simply defined as "the absence of life." Although man can accept that fish, animals, and birds die naturally, his own intelligence tells him that human

death comes as an enemy, even as the Bible states.*

Of all the creatures on this earth, man alone is capable of contemplating his own death. He is also unique in burying his dead. Often, as the *Encyclopaedia Britannica* explains, ritual burying of the dead "stems from an instinctive inability or refusal on the part of man to accept death as the definitive end of human life. Despite the horrifying evidence of the physical decomposition caused by death, the belief has persisted that something of the individual person continues to survive the experience of dying."

As a result, customs accompanying death are often overlaid with age-old traditions and mysterious superstitions.

Customs and Beliefs

For example, many ancient tombs contain not just bones of the dead but evidence of food and drink, interred in the belief that the deceased had need of such things beyond the grave. Maps and eyes were painted on Egyptian wooden coffins to guide the departed. Tools and personal effects, such as jewelry, were also left on the assumption that the dead would be glad to have them in an afterlife.

* See Paul's first letter to the Corinthians, chapter 15, verse 26.

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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Eyes were painted on an ancient Egyptian coffin in the belief that 'the soul of the deceased could thus peer out'

Skeletons have been found on their side in a crouched position, akin to the fetal posture of a child in the womb, which some authorities have interpreted to indicate a belief in rebirth. The Greeks and the Romans believed that the dead needed to be ferried across the Styx, the principal river of the underworld. This service was performed by Charon, a demonic boatman. He was paid for his services by a coin placed in the mouth of the deceased, a practice that continues to this day in many parts of the world.

"It is clear that each major religion has beliefs about the process of dying, death itself and the afterlife," says *A Dictionary of Religious Education*. True—and why? Because it is so unacceptable to contem-



Courtesy of the British Museum, London

plate the end of conscious existence. "No one believes in his own death," asserted psychiatrist Sigmund Freud, and in our "unconscious [mind] every one of us is convinced of his own immortality."

Such thinking has naturally led to the development of many popular beliefs. Consider some of the main ones.

Purgatory and Hell

If the dead are alive, they must be somewhere—but where? And here lies the

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problem, since those who die are neither all bad nor all good. With a basic sense of justice, man has traditionally segregated the departed, the good from the bad.

The rabbinic view, as printed in *The Jewish Encyclopedia*, reads as follows: "In the last judgment day there shall be three classes of souls: the righteous shall at once be written down for the life everlasting; the wicked, for Gehenna; but those whose virtues and sins counterbalance one another shall go down to Gehenna and float up and down until they rise purified." Many will recognize in this last statement a description of purgatory.

Interestingly, the *New Catholic Encyclopedia*, giving an official assessment of the doctrine of purgatory, simply states: "In the final analysis, the [Roman] Catholic doctrine on purgatory is based on tradition, not Sacred Scripture." This is not surprising, as the word does not appear in the Bible, and the idea is not taught there. But what of Gehenna, the destination of the wicked according to *The Jewish Encyclopedia*?

Gehenna is a Greek form drawn from the Hebrew *geh hin-nom'*, the Valley of Hinnom, situated to the southwest of Jerusalem. It was a place where children were in times past sacrificed to the god Molech

and, states *The Jewish Encyclopedia*, "for this reason the valley was deemed to be accursed, and 'Gehenna' therefore soon became a figurative equivalent for 'hell.'"

"Hell, according to many religions," says *The World Book Encyclopedia*, "is a place or state inhabited by demons, where wicked people are punished after death." This is a doctrine still actively preached by some churches of Christendom and by other religions. As a result, many people have long grown up with a real fear of going to hell.

"When I was a boy," wrote English novelist Jerome K. Jerome in the year 1926, "a material Hell was still by most pious folks accepted as fact. The suffering caused to an imaginative child can hardly be exaggerated. It caused me to hate God, and later on, when my growing intelligence rejected the conception as an absurdity, to despise the religion that had taught it."

Whatever your view on hell (see the accompanying box "Hell and Gehenna—The Difference" for more information), the happier destination is held out by many to be heaven or Nirvana.

Heaven and Nirvana

"Heaven is the place and the blessed condition of unending happiness in the

Cryonics and Immortality?

Cryonic suspension is a technique that allows dead persons to be maintained at ultralow temperatures. The whole body is kept in a container filled with liquid nitrogen at -385° F., or customers can choose to become "neuropatients," which means that only the head is preserved. "I don't believe in life after death in the religious sense," says the president of the

British firm advocating cryonics, "but I enjoy life and I think cessation of consciousness is a bad thing." The idea behind the sales talk is that at some future time, science will be able to restore life, even cloning new bodies for the severed heads. This is one way, reports "The Sunday Times" of London, of "achieving immortality."

**Present-day
Valley of
Hinnom,
southwest of
Jerusalem**

Presence of God, and His holy angels and saints," states *The Catholic Religion—A Manual of Instruction for Members of the Anglican Church*. It adds: "It consists also in an endless reunion with all we have loved below, who have died in grace, and in our being perfectly good and holy for evermore."

Nirvana, on the other hand, reflects the Buddhist belief that a state of "perfect peace and blessedness" can be attained only when the "painful, continuous cycle of death and rebirth" finally ends. Either way, with heaven or Nirvana, religion presents us with some provision for termination of the sufferings of this life, followed by life in an idyllic world.



Do these conflicting teachings help us to answer our question, What happens when we die? or does the mystery deepen? How can we be sure that what we choose to believe is true? Is religion teaching us fact or fiction?

Our destiny after death will remain locked in mystery—unless we can answer the fundamental question that alone holds the key: What is the soul? This we must do next.

Hell and Gehenna—The Difference

The word "hellfire" is an English distortion of "Gehenna," the name of the ancient refuse dump outside the city of Jerusalem, which term was used by Jesus as a symbol of everlasting destruction. (Matthew 10:28) What, then, of hell itself (rendered from the Hebrew "she'ohl" and the Greek "hai-des")? If it is a place of torment, would anybody want to go there? Hardly. Yet, the

patriarch Job asked God to conceal him there. (Job 14:13) Jonah as good as went to the Bible hell when he was in the belly of the big fish, and there he prayed to God for deliverance. (Jonah 2:1, 2) The hell of the Bible is the common grave of mankind, where those who have died rest in God's loving memory, awaiting a resurrection. —John 5:28, 29.

THE MYSTERY SOLVED!

MOST people assume that death is not the end of human life, that after physical death something lives on. Usually, this something is described as a *soul*.

In answer to the question: "How do we know that the Ruh [soul] leaves the body when it is in the grave?" *The Straight Path* magazine answers: "Death is nothing other than the departure of the soul. Once the soul has left the body it is transferred to Barzakh (the past-death period). . . . The grave is a reservoir for the body only, not the soul." These are Muslim sentiments, but they differ little from Christendom's teachings.

Take, for example, two questions from *A Catechism of Christian Doctrine*, a British Roman Catholic publication used in schools:

Q. "How is your soul like to God?"

A. "My soul is like to God because it is a spirit, and is immortal."

Q. "What do you mean when you say that your soul is immortal?"

A. "When I say my soul is immortal, I mean that my soul can never die."

Although children can be taught to believe this, the book does not attempt to substantiate the assertions made.

Yet, there is a source of information that tells us exactly what the soul is. That source is the Bible, the oldest book known to man. You may be surprised at what it says.

The Soul—The Bible's Definition

Genesis, the first book of the Bible, gives us the account of the creation of man and the other creatures living on our planet. It was written in Hebrew, and in the first two chapters, the word "soul," translated from *ne'phesh*, appears four times; only once, however, does it refer to man.* To what do the other occurrences refer? Let us see.

"And God proceeded to create the great sea monsters and every living *soul* [*ne'phesh*] that moves about, which the waters swarmed forth according to their kinds, and every winged flying creature according to its kind."—Genesis 1:21.

"And to every wild beast of the earth and to every flying creature of the heavens and to everything moving upon the earth in which there is life as a *soul* [*ne'phesh*] I have given all green vegetation for food."—Genesis 1:30.

* "Souls," plural, also occurs at Genesis, chapter 1, verses 20 and 24.

Did You Know?

Nowhere in the Bible do we read of an "immortal soul." The two words are never linked. The words "immortal" and "immortality" occur only six times, all in the writings of the apostle Paul. When applying to

humans, immortality is described as a prize to be given only to the 144,000, who are redeemed from the earth to reign with Christ Jesus in heaven.—1 Corinthians 15: 50-54; Revelation 5:9, 10; 14:1-4; 20:6.

The “soul” of an Egyptian scribe, depicted as a human-headed hawk, supposedly ‘revisiting his body in the tomb’

“Now Jehovah God was forming from the ground every wild beast of the field and every flying creature of the heavens, and he began bringing them to the man to see what he would call each one; and whatever the man would call it, each living soul [ne'phesh], that was its name.”—Genesis 2:19.

A quick comparison of these three verses reveals that *ne'phesh* is used to describe all forms of *animal* life.

Now compare this with the account of the creation of the first man, Adam:

“And Jehovah God proceeded to form the man out of dust from the ground and to blow into his nostrils the breath of life, and the man came to be a living soul [ne'phesh].”—Genesis 2:7.

Commenting on this, the Jewish Publication Society of America, in a translation of the Torah, the first five books of the Hebrew Scriptures, says: “The Bible does not say we have a soul. ‘Nefesh’ [ne'phesh] is *the person himself*, his need for food, the very blood in his veins, his being.” (Italics ours.) Logically, the same is true of all other forms of life described as “soul.” They do not possess souls. All *are* souls.



Courtesy of the British Museum, London

Plato and the Soul

Where, then, does the idea that a soul leaves the body at death originate? *The Jewish Encyclopedia*, referred to earlier, says this: “Only through the contact of the Jews with Persian and Greek thought did the idea of a disembodied soul, having its own individuality, take root in Judaism.”

Even earlier in human history, the Egyptians believed that the human soul was immortal and that it could revisit its dead body. For this reason the Egyptians went to great lengths to preserve their dead by embalming, or mummifying, them.

Interestingly, the new German Lutheran *Evangelischer Erwachsenenkatechismus* (Evangelical Catechism for Grown-ups) openly admits that the source of the teaching that the human soul is immortal is not the Bible but the “Greek philosopher Plato (427-347 B.C.) [who] contended emphatically that there was a difference between body

Which Authority?

“The Concise Oxford Dictionary” defines “soul” as follows: “Spiritual or immaterial part of man, held to survive death.” This definition highlights the fact that the concept of life after death by means of a

“soul” remains a matter of religious assertion. No authority can prove it. In contrast, the highest authority, the Bible, says: “The soul that is sinning—it itself will die.”—Ezekiel 18:4.

and soul." It continues: "Evangelical theologians of modern times challenge this combination of Greek and Biblical concepts. . . . They reject the separation of man into body and soul."

What, then, happens to the human soul at death? On this matter our preeminent authority is the Bible, God's inspired Word. It states clearly: "The living are conscious that they will die; but as for the dead, they are conscious of nothing at all." (Ecclesiastes 9:5) And speaking of "a resurrection," Jesus said: "All those in the memorial tombs will

hear his [Jesus'] voice and come out."—John 5:28, 29.

So where are the dead? In the grave, "in the memorial tombs," that is, in God's memory awaiting a resurrection.* A resurrection? What does that mean? How real is that hope? The concluding article about a recent tragedy in England shows how real this hope can be.

* The Lutheran catechism agrees with the Bible, saying: "Since man as a whole is a sinner, therefore at death he dies completely with body and soul (full death). . . . Between death and resurrection there is a gap; the individual continues his existence at best in God's memory."

"I DON'T FEAR DEATH!"

NINE-YEAR-OLD Christopher Heslop was one of Jehovah's Witnesses, as was Matthew, his 14-year-old brother. They had spent the October morning, along with their uncle, aunt, and two cousins, calling from house to house in their Christian ministry near Manchester, England. In the afternoon, they set out together on a sight-seeing trip to Blackpool, a nearby seaside resort. All 6 were among 12 people killed instantly in a motorway crash, described by the police as "an absolute holocaust."

The night before the tragedy, death had been the subject discussed at a neighborhood Bible study attended by the Heslop family. "Christopher," said David, his father, "was always a very thoughtful boy. That night, he spoke clearly about a new world and his hope for the future. Then, as our discussion continued, Christopher suddenly said: 'The thing about being one of Jehovah's Witnesses is that while death hurts, we know we will see each other again on earth one day.' Little did any of us present realize how memorable those words were going to be."

After the accident, the headline of the



A Return From Death?

It is not unknown for "clinically dead" persons to be revived. Upon recovery, some claim to have had extraordinary experiences of 'another life.' There is, however, a medical explanation for this. States the London, England, newspaper "The Independent": "It seems likely that these hallucinations occur when people are near death because the same areas of the brain are triggered by high levels of carbon dioxide or low levels of oxygen in the circulation." Upon a return to consciousness, these hallucinations can give rise to the feeling of having died and returned to life.

Manchester Evening News read: "I don't fear death, said crash child," and the article quoted Christopher's exact words. How could a child of nine speak so confidently? What had Christopher been taught to believe?

Resurrection—The Sure Hope

"The most startling characteristic of the first Christian preaching is its emphasis on the resurrection," says the *New Bible Dictionary*. It adds: "The first preachers were sure that Christ had risen, and sure, in consequence, that believers would in due course rise also. This set them off from all the other teachers of the ancient world."

True Christians are just as different today. They do not toy with Greek philosophy, falsely attributing to man an "immortal soul." Rather, they draw strength from Jesus' declaration that 'those in the memorial tombs, upon hearing my voice, will come out.' That is the basis for Christian faith—the resurrection of those in God's memory from death to life on a paradise earth.—John 5:28, 29; see also Acts 17:31; 1 Corinthians 15:14.

David Heslop and his wife, Ailene, taught their two sons this basic Bible truth and, as a result, now find great comfort themselves. "Naturally, we now think about the resurrection very much," says David, "and if we ever feel down, as we do from time to time, we quickly start to think

about the future and see our loss as just a temporary one." Ailene adds: "It is like having somebody you love emigrate. You do not know how long they will be away but look forward to seeing them again upon their return."

A Sincere Invitation

Would you like to share such faith? It is not difficult to do so.

Our opening article referred to a survey recently taken in England. Interestingly, when nonchurchgoers were asked which place of worship they would choose if they decided to go to one, 27 percent (the greatest number) specified the Kingdom Hall of Jehovah's Witnesses.

Further, in reply to the question: "If you desperately wanted to know something about the Bible, Christian Faith, etc., who would you ask?" 19 percent replied: Jehovah's Witnesses.

Wherever you live, Jehovah's Witnesses will be pleased to help you build your faith on the teachings found in your Bible. All meetings at their Kingdom Halls and personal home Bible instruction are provided free of charge. Why not take the initiative and approach them? You will quickly gain not only comfort, as far as knowledge of death and the resurrection is concerned, but also hope of a new world of righteousness in which "death will be no more." —Revelation 21:4.



Artificial Intelligence

Is It Intelligent?

THE competition was intense. Move by countermove, the opponents were battling it out over the chessboard. But they were not ordinary chess players. On one side was the world computer chess champion Cray Blitz. On the other side was the challenger Hitech. Both of them were specially programmed supercomputers, running on different programs. And both of them were powerful enough to outplay all but the top-ranking human chess players. They were engaged in the world computer championship title match.

By the final round, Hitech gained the upper hand, as everyone had expected. It needed only a draw to win. But to everyone's surprise, Hitech failed to notice a subtle move Cray Blitz was developing. Suddenly, Cray Blitz came from behind and defeated Hitech, retaining its world championship!

Stories like this tend to leave some people

feeling uneasy. It is somehow unnerving to learn that computers have become better than most humans at playing chess, solving puzzles, or proving mathematical theorems; that there are robots that can hear, see, and even talk; or that doctors consult computers for opinions on treatment or diagnosis. Is science fiction coming true? Have computers become so smart that they will soon be masters of the world?

Such concerns are justifiable because we normally associate activities like problem solving and use of language with intelligence. We do not expect machines to do these things—not even computers—because ordinary computers are no more than high-speed information processors that respond to commands. But computers like Hitech and Cray Blitz are far from ordinary. To describe what they are trying to make such computer systems do, scientists have coined the term "artificial intelligence," or AI. And the claims and predictions they have made for these machines have not helped to calm the uneasiness.

In 1957 Herbert Simon, now a Nobel laureate, predicted: "Within 10 years a digital computer will be the world's chess champion." More recently, computer scientist Harvey Silverman of Brown University in Providence, Rhode Island, claimed that "in a few years we expect to develop [a computer] that will have a vocabulary of 5,000 words and will understand most conversations in plain English." Really, is the human mind becoming obsolete?

What Is Artificial Intelligence?

To reason, to understand, to discover meaning, to deal with unfamiliar circumstances, and to make decisions—these are things usually associated with the human mind. The ability to do these and many other tasks is what intelligence is all about.

Ever since the 17th century, scientists have been dreaming of a "thinking machine" that could solve mathematical and logical problems. However, it was not until the advent of the electronic computer in the mid-1950's that the dream began to take on substance.

Most of us are familiar with the computer's ability to store, retrieve, and process large amounts of information at great speed. Because of this, computers are used in accounting and bookkeeping; handling files, catalogs, indexes, and so forth. In all these operations, raw data is fed into the computer's memory, and the computer is given a set of instructions, or program, on what to do with the data. In a computer used for accounting, for example, the machine may be programmed to process all the information at the end of the month to produce bills and statements for all the accounts.

Of course, it takes a certain kind of intelligence to do the kind of work described. Essentially, however, such systems merely follow a predetermined set of steps, specified by humans, until the job is accomplished. If something is missing or has gone wrong during the course of operation, the machine stops and waits for further instructions from the human operator. Such machines can be said to be efficient but hardly intelligent. Computers with artificial intelligence, though, are to be a different breed.

Basically, artificial intelligence is a set of instructions, or programs, that attempts to enable a computer to solve problems on its own—the way a human does. In one approach, rather than follow a spelled-out, step-by-step procedure that leads to the so-

lution, the computer tackles the problem by trial and error. The result of each trial is analyzed and used as the basis for working out the next trial.

This principle may sound simple in itself, but when it is applied to real-life situations, things can become very complicated. Why? Because few things in real life are as simple as yes or no, black or white. Rather, everything is full of shades of meanings and subtle implications. For example, if a certain medical procedure is to be recommended only for patients over six years of age, what about a child five years and ten months old? Such decisions are far beyond what today's computers can handle. However, if the field of application is restricted, AI can be successfully applied.

For example, armed with artificial intelligence, Hitech was able to defeat some of the better chess players all on its own, without any external, human direction or intervention. But how does it do this? The computer carefully examines the opponent's move, then searches through the thousands of positions in its memory to come up with the countermove that would minimize the opponent's potential for gain. To do this, it checks through 175,000 chess positions every second, or over 30 million positions in the three minutes it usually takes to come up with the right move.

AI at Work

Good as Hitech is at chess, it is totally helpless at other games or tasks. This is because Hitech is only programmed to play chess. Its memory has been stocked with a vast amount of information about chess

The fact remains, however, that computer and human capabilities appear to be basically different and, for the foreseeable future, no human-like robot is likely to emerge."—*Computers and Society*, page 14.

moves and step-by-step instructions that enable it to "think" in a logical fashion. In other words, as far as chess playing is concerned, Hitech is an expert. And that is precisely what computer scientists call devices such as Hitech—expert systems.

An expert system is basically a computer stocked with an extensive collection of information in a particular field. Along with this, it is programmed in such a way that it can guide a user to the precise information he needs with a minimum of time and effort. It often does this by means of a set of *if-then* rules: *If* a certain condition is true, *then* a certain action should be followed. The user "communicates" with the expert system through a keyboard and video screen or some other device. The store of information and the *if-then* process give such expert systems the appearance of intelligence—artificial intelligence.

Today, expert systems are being used in various aspects of medicine, computer design, mineral prospecting, accounting, investment management, space flight, and so on. Computer scientists are working on expert systems that can process not just one *if-then* situation at a time but many such operations simultaneously, as does the human mind. Also under development are systems that can "see," "hear," and "speak," albeit in a limited way. All of this has caused concern in some circles. Will computers become as smart as, or even smarter than, man?

Is There Any Limit?

What scientists have been able to do with expert computer systems is truly impressive. There remains, however, the crucial question: Are these systems really intelligent? What would we say, for example, of a person who can play powerful chess but can do or learn hardly anything else? Would we

really consider him intelligent? Obviously not. "An intelligent person learns something in one area and applies it to problems in other areas," explains William J. Cromie, executive director of the Council for the Advancement of Science Writing. Here then is the crux of the matter: Can computers be made to approach the level of intelligence found in humans? In other words, can intelligence really be artificially made?

So far, no scientists or computer engineers have been able to reach that goal. In spite of the prediction about chess-playing computers, made over 30 years ago now, the world champion is still a human. And in spite of the claim that computers will be able to understand conversations in English or other natural languages, this still remains at a rudimentary level. Yes, no one has learned how to build the quality of generality into a computer.

Take language, for instance. Even in simple speech, thousands of words are strung together in millions of combinations. For a computer to understand a sentence, it must be capable of checking all the possible combinations of every word in the sentence simultaneously, and it must have an enormous number of rules and definitions stored in its memory. This is far beyond what present-day computers can do. Yet, even a child can manage all of this, plus perceive the nuances beyond the spoken words. He can discern whether the speaker can be trusted or is being devious, whether a statement is to be taken literally or as a joke. The computer is not up to these challenges.

The same can be said about expert systems with the ability to "see," like the robots used in automotive manufacturing. One advanced system with three-dimensional vision takes 15 seconds to recognize an object. It takes the human eye and brain only one ten-thousandth of a second to do the same.

Both the child and the computer understand language in varying degrees, but the child can detect intentions, trustworthiness, and human emotions

The human eye has the innate ability to see what is important and filter out nonessentials. The computer is simply inundated by the mass of details it "sees."

Thus, in spite of the advances and promises of the state of the art in AI, "most scientists believe that computer systems will never have the broad range of intelligence, motivation, skills, and creativity possessed by human beings," says Cromie. Likewise, renowned science writer Isaac Asimov states: "I doubt the computer will ever match the intuition and creative powers of the remarkable human mind."

A fundamental obstacle in achieving true intelligence artificially is the fact that no scientist or computer engineer fully understands how the human mind really works. No one knows the precise relationship between the brain and the mind or how the mind uses the information stored in the brain to make a decision or to solve a problem. "Because I don't know how I do [certain things with my mind], I cannot possibly program a computer to reproduce what I do," confesses Asimov. Putting it another way, if no one knows what intelligence really is, how can it be built into a computer?

Grand Masters and the Grand Master

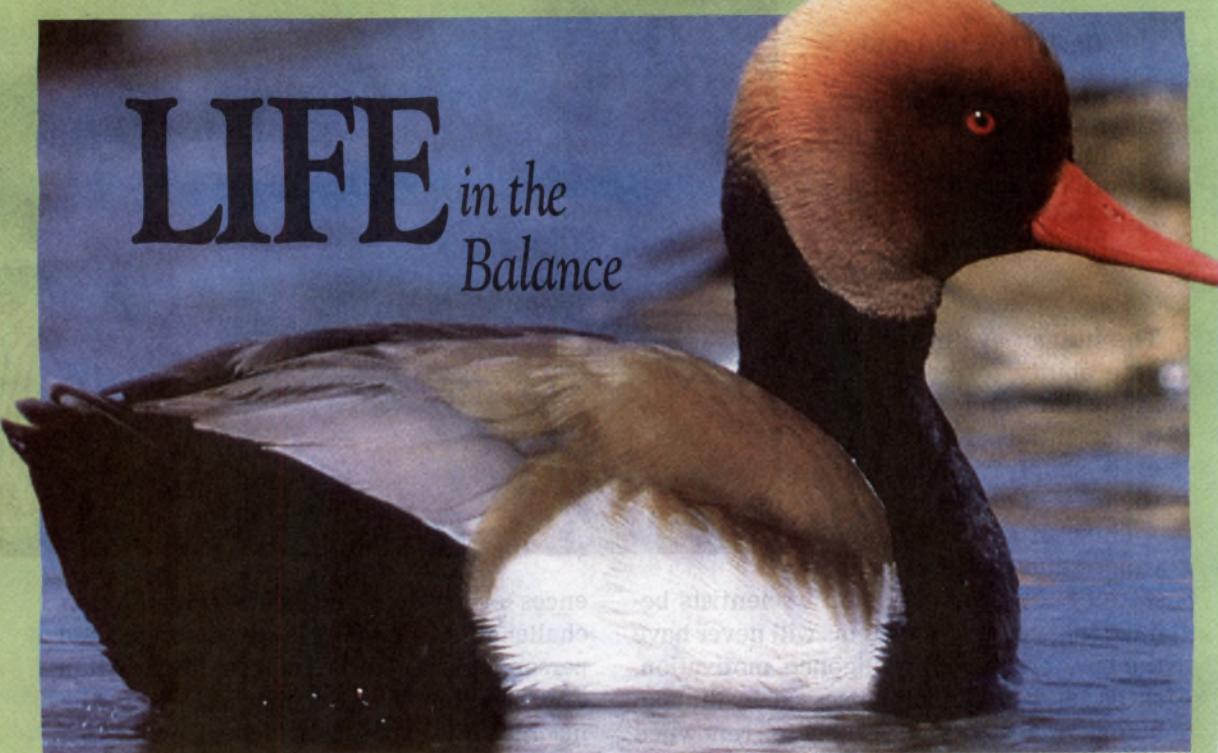
About the late 18th and early 19th century, a chess-playing machine thrilled audi-



ences everywhere by beating its human challengers, including such distinguished personalities as Maria Theresa, Edgar Allan Poe, and Napoléon Bonaparte. Finally, the machine was exposed as a fake. There was a man inside!

There is a man inside today's chess-playing machine too; only he is much better hidden. He is none other than the programmer, who is responsible for painstakingly storing in the computer all the rules of chess playing and all the directions on how to use them so that the computer can contest the grand masters all on its own.

The same is true with all the other expert systems and all the accomplishments in the field of AI. The credit must go to the scientists and engineers who design them. By the same token, to whom should we give credit for the real intelligence of the human mind? Here we must borrow the words of King David of ancient Israel when he was moved to say to the Creator, Jehovah God, in a poetic way: "I shall laud you because in a fear-inspiring way I am wonderfully made. Your works are wonderful, as my soul is very well aware."—Psalm 139:14.



J. L. González/INCAFO, S. A.

THE familiar landing strip is nowhere in sight as we circle to make our scheduled landing. The runway has inexplicably been torn up, and traveler service facilities have been demolished. Only an ugly, inhospitable terrain draws ever closer. Our lives hang in the balance!

Such is the tragic circumstance of many migrating waterfowl when they arrive at their winter quarters. The wetlands, for centuries their traditional haven, are being implacably destroyed to make way for urban or agricultural development. Often considered wastelands of no value, these habitats, vital to thousands of species, are

Red-crested pochard

quickly disappearing from the earth's surface.

Coto Doñana Threatened

Recently, one of the greatest expanses of marshland in southern Europe was so threatened. The survival of thousands of aquatic birds was in the balance. Concerned naturalists, appealing for funds to save this priceless wildlife sanctuary, warned a Danish hunting club: "Gentlemen, if the lakes of the Coto [in Spain] are allowed to disappear, within five years there will be no ducks in Denmark."

By "Awake!"
correspondent in Spain

The Coto referred to was the Coto Doñana wildlife preserve, located in the southwestern corner of Spain. Together with the extensive marshes of the Guadalquivir basin that border it, the preserve is recognized as one of Europe's three or four most important resting-places for migratory birds. It is also home to 125 species of birds as well as numerous mammals and reptiles.

At a meeting of the World Council of Ornithologists in New York in 1962, the following observation was made: "The marshes of the Guadalquivir constitute the last sure refuge in Europe of the pink flamingo and some species of heron; . . . it is an area where such rare and

beautiful species breed as the white-headed duck, crested coot, purple gallinule and many others impossible to enumerate."

Because of its status as a privileged hunting ground of kings and nobles, its relative inaccessibility, and its poor quality soil, these 270 square miles had for centuries largely escaped human encroachment. However, pollution, land reclamation, and urban development were endangering the existence of the preserve.

The need to obtain international backing to finance the purchase of Coto Doñana prompted the establishment of the World Wildlife Fund in 1961. The first transaction of this international body was to buy a portion of Coto Doñana in co-operation with the Spanish government. The preserve was given a reprieve.

'Ecological Crime'

The marshes were still mainly in private hands, and there was a constant threat

A. Camoyán/INCAFO, S. A.



Spoonbills

Purple gallinule

of pollution from neighboring farmland. In 1973 a potent insecticide sprayed on nearby rice fields caused the death of some 40,000 aquatic birds. It was described by one naturalist as a disaster "unparalleled in the annals of mankind's ecological crimes." Semivirgin beaches were coveted by property developers, and there was a scheme to construct a coastal highway right through the park. Meanwhile, the marshes were being drained inexorably to make way for agricultural projects.

Finally, in 1978 the whole area was declared a national park by the Spanish government. Pollution was tightly controlled, the highway scheme was abandoned, and a hydraulic system was established to maintain the natural water level of the marshes. The preserve could flourish once more.

Already, the benefits can be observed: Exotic birds, such as flamingos, are increasing, while other endangered fauna is being safeguarded from further regression. Visitors to the park may view many species in their natural habitat from observatories that do not disturb the wildlife, while organized excursions permit the public to encounter firsthand the herds of deer and wild boars that graze within its confines. But let us take a



A. Camoyán/INCAFO, S. A.

closer look at some of the park's unique features.

The Park's Role in Migration

From the Soviet Union and Scandinavia come 40,000 geese and as many as 200,000 ducks. Countless waders from as far north as the Arctic Circle winter on the tranquil beaches or probe for food in the shallow inland waters. In the spring the winter visitors depart, and from Africa arrive the spoonbills,



Imperial eagle protects its young from the hot sun

tious efforts of the park's naturalists in behalf of this eagle have already shown positive results. There are now some 14 pairs nesting in the park, the maximum number it can sustain because of the large territory of 19 square miles that each pair requires. Every nest is carefully monitored. If three eggs are found in one nest and only one in another, an egg is carefully transferred, so that each nest contains two eggs. Imperial eagles are unable to rear more than two eaglets successfully at a time.

To watch the eagles and kites soar in the heavens, to observe thousands of flamingos wading gracefully in the blue waters of Doñana's lakes, to see firsthand the wild boars cavorting under the pine trees, is to comprehend the unique variety and beauty of Jehovah's creation. In densely populated Europe, such places are rare indeed and more than merit the painstaking vigilance that their survival requires.

Now, when geese and ducks arrive in autumn, storks in January, spoonbills and herons and kites in spring, awaiting them is a protected refuge where they can rest, winter, or reproduce. Here, life in all its varieties abounds. Doubtless the 300,000 yearly visitors are thankful that, at least in this natural paradise, life, which was once in the balance, is permitted to thrive.

J. A. Fernández/INCAFO, S. A.

the herons, the kites, and numerous other birds that breed here during the summer months.

Many other species stop to rest and feed in the park while migrating to distant lands. In August hundreds of storks congregate here before crossing the Strait of Gibraltar en route to Africa. The same is true of many birds of prey that cannot travel great distances over the sea because of the lack of thermals, rising hot air currents, that enable them to stay aloft with minimum exertion.

However, there is one permanent resident that excites the interest and admiration of all visitors to the park—the imperial eagle.

The Imperial Eagle

During this century, the number of imperial eagles has decreased alarmingly throughout its restricted habitat. Egg collectors mercilessly robbed the nests, while others hunted the adult birds to provide museum trophies or in the mistaken belief that the eagle was depleting the game that the hunters coveted. The Spanish variety, distinct in some ways from the eastern imperial eagle, was decimated. In the 1970's only 30 pairs survived in Spain, and it seemed inevitable that another species would pass onto the list of birds exterminated by man's callousness.

Nevertheless, the conscien-

IT WAS early, about five o'clock in the morning. My husband, Basil, and I were cozy under the covers when he nudged me and said in a stage whisper, "Honey, it's raining." How I just loved to lie in bed and listen to the gentle patter of rain against the house! But for eight years, Basil had had to tell me when it was raining because I couldn't hear it. This time it was different, however. I sat suddenly upright. I could hear it! For the first time in years, I could hear that beautiful sound!

This was not my first encounter with old familiar sounds I hadn't heard in years. The previous week had been filled with a symphony of sounds—the purring of a furnace fan spinning, the persistent hum of a telephone dial tone, the gentle tapping of my own feet walking across the kitchen floor. These sounds, so commonplace to most people, were music to my ears. My hearing was restored! Let me tell you my story.

Early Diagnosis

Young and dedicated, I embarked on my career as a full-time Bible teacher in 1958. Now, 30 years later, I am still continuing in the same course. Early



From a Quiet World

in the 1970's, as Basil and I were helping people gain spiritual sight and unstoppably deaf to the wonderful truths in God's Word, my own physical hearing turned annoyingly dull.

In 1977 I contacted a doctor in San Pedro, California, who introduced me to the word "otosclerosis." He said that it was a common hereditary disease and that an operation could improve my hearing. But after he told me the possible side effects of the operation, I walked out of his office,

Have You Heard?

Have you heard of the following developments in the treatment of deafness?

- Ménière's disease, an inner-ear ailment that entails severe balance problems and eventual deafness, is now being treated surgically with the insertion of a shunt tube, developed by Dr. William House and the House Ear Institute in Los Angeles.
- For those profoundly deaf, hope may lie with what is being done with cochlear implants. The implant consists of a tiny electronic device surgically implanted in the ear. It is activated by a microphone and speech processor worn on the body. These devices turn sound waves into electrical current. Through the implant, the current stimulates auditory nerve fibers to transmit messages to the brain, which in turn recognizes these stimulations as sound. Thus, the implant patient is taken out of a world of silence into a world of sound. Though obtaining only very limited speech discrimination, the patient is nevertheless put in touch with his environment. It helps him to communicate, to distinguish environmental sounds, and to control his own voice. So far, approximately 400 patients have had some form of cochlear implant. The future appears bright for even greater improvements using the implant.

telling myself smugly: 'Not me! Things like that don't happen to me.'

Entering My Quiet World

During the next three years, I began to slip slowly into a soft, quiet world—a world void of any background noise. People seemed to sneak up on me from behind and suddenly appear. The familiar putt-putt of my husband's car pulling up in the driveway was gone; suddenly he too would appear in the house, scaring me out of my wits! When people spoke and I couldn't see their lips, it annoyed me because the sound of their voice seemed to come from the wrong direction. I found myself intently watching their facial expressions after they spoke to make sure I hadn't responded in the wrong way. If I was chewing food, I had to stop in order to hear conversation. The worst thing was the aggravation and almost dread I felt when conducting Bible studies with soft-voiced students, for I couldn't always understand their comments. I felt worn-out—exhausted—after just one hour.

A turning point came in 1980 when I was invited by the Watchtower Society to attend the Pioneer Service School—an in-

tensive two-week course in Bible instruction. I had waited several years for this privilege, but if I couldn't hear distinctly, I wouldn't now be able to benefit from the school. It was then that I decided to get another medical opinion.

At the doctor's office, I this time found myself sitting in front of a tall, sandy-haired otologist. He had a kind face and an approachable manner. "I agree with the San Pedro doctor," he said. "You have otosclerosis." I began to feel confidence in him because he listened to my questions and made sure he understood what I was asking before he answered. He was a listener! He took time to explain what otosclerosis is and gave me literature to read. Since he seemed to care, I felt at ease.

Otosclerosis—What Is It?

The words *oto* (Greek for "ear") and *sclerosis* (Greek for "hardening") gave me a clue to what was happening in my ear. Have you heard about the tiny bones in the middle ear—the hammer, the anvil, and the stirrup? Perhaps like me you have been unconcerned about these small structures, and yet we depend on them for

so much. It wasn't until I was personally affected that I learned their proper names—malleus, incus, and stapes. The stapes (or stirrup) is the final link in the middle-ear transducer chain. Usually, otosclerosis spreads to the stapes, and as the bone hardens, the vibrations it transfers to the fluid of the inner ear become less and less intense, re-

How to Communicate With a Person Whose Hearing Is Impaired*

- Start by telling the person the subject of your message and follow up with a written note for especially important points.
- Speak clearly and a bit slower but in a normal tone of voice.
- Talk facing the person, preferably with your face in bright light.
- Do not chew or put your hands on your face while talking.
- Avoid talking from another room or over avoidable background noise, such as running water.

* Suggestions from Jane E. Brody, health expert for *The New York Times*.

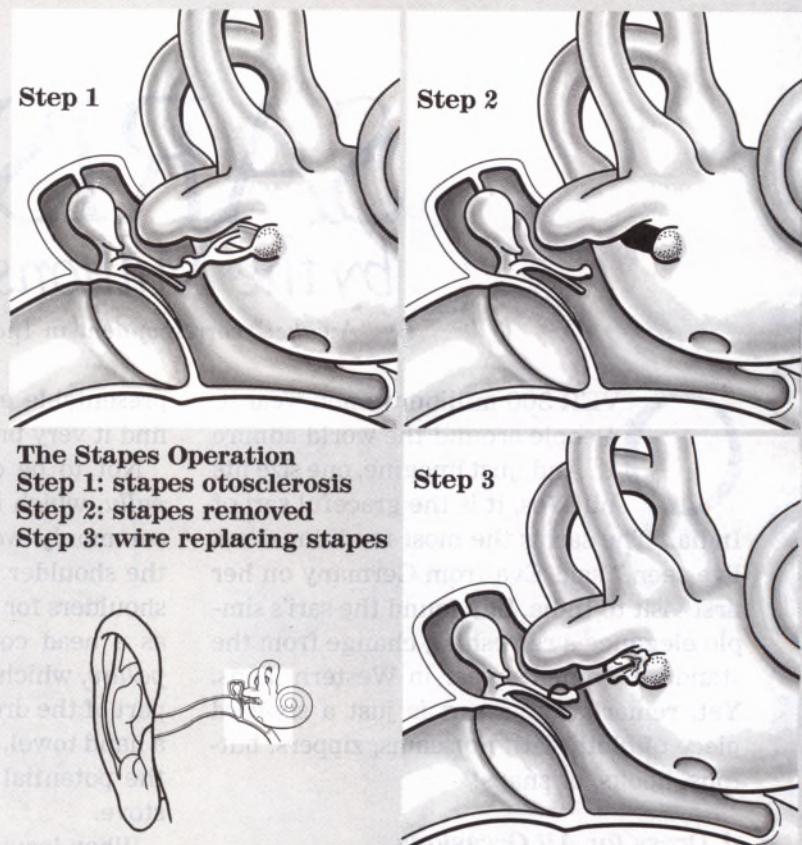
sulting in a conductive hearing loss. Stapedial otosclerosis is one type of conductive hearing impairment that is usually correctable by surgery.

One of the first things I learned was what is meant by a conductive hearing impairment. Simply, it means that sounds are not conducted through the middle ear because of some condition that blocks them out. But if there still is good nerve function, then one is a good candidate for surgery. Happily, I had good nerve function.

Removing the Stapes

I had imagined that all would be quiet during the stapes operation, but just the opposite happened. Under local anesthesia, I heard loud noises as the doctor, using a microscope and working through the ear canal, removed the stapes and replaced it with a wire prosthesis. Then, abruptly, while still on the operating table, I heard a voice clear as a bell—the doctor speaking to his nurse. Next, he asked me: "How is that?" "I can hear everything!" I blurted out. He warned me, though, that soon my hearing would regress because of swelling in the ear and that it might be a few weeks before hearing improvement would again be apparent.

Before the doctor left the operating room, he handed me my stapes in a little plastic container. I was astounded. So



tiny! I reflected momentarily on how great Jehovah God is to make such tiny but important things. I remembered the psalmist's words: "My bones were not hidden from you when I was made in secret . . . Your eyes saw even the embryo of me, and in your book all its parts were down in writing." Yes, even this little stapes, the smallest bone in the human body, was taken into account in the womb.—Psalm 139:15, 16.

The ability to hear and communicate well is a wonderful gift from our Creator. To lose that ability is indeed a great loss. To gain it back after losing it is an even greater thrill. How thankful I am for being able to leave my quiet world!—*As told by Bette E. Sterrett.*

SARIS by the Millions

By "Awake!" correspondent in India

OVER 300 million women wear it. People around the world admire it. And, just imagine, one size fits all! Yes, it is the graceful sari of India. "The sari is the most feminine dress I've seen," said Eva from Germany on her first visit to India. She found the sari's simple elegance a refreshing change from the standard women's wear in Western lands. Yet, remarkably, a sari is just a six-yard piece of cloth with no seams, zippers, buttons, hooks, or snaps!

A Dress for All Occasions

The beautiful sari is not simply for formal occasions. Women here view it as all-purpose clothing, finding it both versatile and practical. One has only to watch the Indian woman in her daily routine to appreciate this point.

She begins her morning chores in her older 'house sari.' She will fetch water, cook, sweep the house, hand wash the laundry, care for the garden, tend to children and animals, and perform all her other tasks in this floor-length garment. But isn't she terribly uncomfortable doing all that work in such an outfit?

"This presents no problem," explains Rani, a mother of two. "I can easily lift up the pleated part of my sari a few inches and tuck it in at the waist. Then if a visitor comes, I can quickly let it down and be

presentable enough to answer the door. I find it very practical."

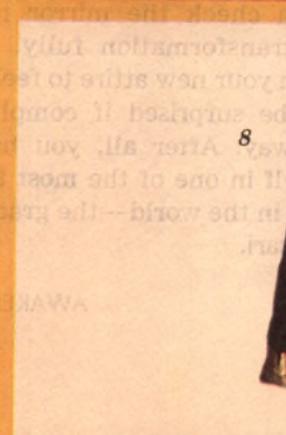
Not to be overlooked is the *pallav*, or *pallu*, which is the end portion of the sari, commonly worn hanging gracefully over the shoulder. It can be pulled around the shoulders for warmth and modesty or used as a head covering. And in a pinch, the *pallav*, which is always handy because it is part of the dress, doubles as a pot holder or a hand towel, although one must recognize the potential danger of using it near the stove.

When leaving her home, an Indian woman customarily changes into a fresh, clean sari. Her appearance in public, even if only for shopping in the local market, is neat and womanly. And as a passenger on a bicycle or scooter, she can ride sidesaddle through crowded city streets. When night comes, she will also sleep in a sari.

Not all women in India wear saris, however. Religion, culture, and regional preference are factors affecting the type of clothing they wear. Rani, for example, spent her early years in dresses and skirts as a typical schoolgirl and adopted the sari only as she approached adulthood. "Once I started wearing saris, it was expected that I would continue to wear them all the time," she says. "I have not worn a dress or a skirt since then." She even manages a game of badminton with her son by simply



The Art of Wrapping the Sari



1. Starting at your right, tuck the sari in the waistline of the half-slip and work across the front and back all around the waist. Be sure the material hangs straight and the hem-line is even.

2. Take the free end of the sari loosely around you and bring the extra material to the front.

3. Using the end portion of the sari, make a number of even folds lengthwise to form the *pallav*.

4. Drape the *pallav* over your left shoulder, down to the calf or lower. Secure the *pallav* to your *choli* with a safety pin.

5. Pull the sari around you until it fits snugly in the back and the remaining material is in front.

6. Working from right to left, form even pleats until all the material is used up. Make sure the pleats hang evenly.

7. Fold the entire section of pleats to the left. Tuck the pleats in at the waist, slightly off center to the left. Fasten the pleats to the half-slip with a safety pin.

8. The results are worth the practice.

pulling up her skirt a little for easier movement.

No End to Variety

Saris come in great variety of material, color, and style. They may be made of simple handloomed cotton, sleek polyester, or printed silk. They may be in florals, stripes, checks, plaids, geometrics—every imaginable design. While some may be plain and conservative, wedding saris, often in deep reds and lavishly embroidered with gold thread, are particularly beautiful.

Indian women who can afford it delight in buying and collecting a variety of colorful saris. 'I have 65,' boasts the wife of a prosperous Indian *soni* (jeweler). In sharp contrast with her, though, are hundreds of thousands of poor women for whom clothing is a luxury. These may have only one sari, or at best two, worn until it is threadbare and torn. Replacing it is an economic burden to their families.

Somewhere in between is the average woman who must carefully budget a very limited family income. Much of her wardrobe will consist of saris given her at the time of her wedding. The more elaborate saris usually lie neatly folded in a drawer or locked in a trunk with the family's other valuables, reserved for special occasions.

Thinking of Wearing One?

"I would really like to see my wife in a sari," expressed one husband in a Western country. He reflects the view of many men who appreciate the femininity of the dress. And it is an exciting change for a woman who has only admired them in pictures to wear one herself. Why not wear a sari on some special occasion?

Saris are readily available from the Indian communities in many large cities. But if there are no sari shops where you live,

lightweight material purchased from a regular fabric store can be used. The cloth must be at least six yards long and no less than 45 inches wide. An extra inch or two in width would be good if you are tall, as that will give you more to tuck in around the waist when forming the skirt. Any color or pattern that suits your fancy will do, but a border along the edges is especially attractive.

Only two other items are needed: an ankle-length half-slip or petticoat with a drawstring waist, and a *choli*, a short, fitted blouse. Both should be of a color that matches the sari. Since the *choli* reveals a portion of the midriff, chasteness would dictate that the blouse not be too short or cut too low at the neckline. You might like to try making your own *choli*. Otherwise, use any blouse or top with a round neck and sleeves that are not too loose.

Once you have on your *choli* and half-slip (drawstring tight at the waist but not uncomfortable), you are ready to begin learning the art of wrapping a sari. A female Indian friend would be a big help, but you might ask any girlfriend to assist. Don't be frightened by the volume of material. With a full-length mirror, a little patience, and plenty of time, you will soon learn to do it. Follow the illustrations provided here as a guide. And if you are not pleased after the first try, start again from the beginning. For finishing touches, add some complementary jewelry, as Indian women do.

Then check the mirror to appreciate your transformation fully. Spend some time in your new attire to feel at ease. And don't be surprised if compliments come your way. After all, you have wrapped yourself in one of the most feminine garments in the world—the graceful and versatile sari.

Young People Ask...



Why Can't I Have More Privacy?

Dear Watchtower Society:

I am 12 years of age. Why can't I have my own privacy? My parents don't trust me enough to allow me to have my own TV in my room. I know that they are concerned, but this is out of the question!
[Signed] Keith

PRIVACY—teenagers often feel they are not getting their fair share of it. When 15-year-old Heather receives personal mail or phone calls from her friends, her mother has an irritating way of quizzing her about their contents. Even if Heather simply wants to spend some time alone in her room, her mother may be curious as to *why* she wants to do so.

Twelve-year-old Alison has a different problem. "My parents give me enough privacy, but my sister doesn't. We have the same room. I sometimes come home early and start my homework, and as soon as she comes in, she starts telling me what happened at school... Then at night, when I'm still doing my homework, my sister and brother... just start barging into the room. They start wrecking it, and it's me who has to clean it up."—*Listen to Us!*, edited by Dorriet Kavanaugh.

Privacy means different things to different people, and individual needs vary. Some crave having a little bit of relaxing time alone. Others simply want some control over their time and personal possessions. Yet others want to be shielded from

nosy siblings, schoolmates, and what they consider to be overly inquisitive parents.

What about you? Do you at times feel the need for some "space," or privacy, in your life? If so, you are not unusual. Say the authors of *The Healthy Adolescent: A Parents' Manual*: "Teen-agers want and need privacy." Why, though, is privacy so important to youths? And why is it so often hard to get?

Privacy—The Need for It

The need for privacy is particularly acute when you're a teenager. You are growing to adulthood, and so it's only natural for you to want some measure of independence from your parents. According to researchers Jane Norman and Myron W. Harris, demanding privacy is one way teenagers 'put emotional distance between themselves and other family members.'

Privacy also serves a number of basic human needs. According to social scientist Albert Mehrabian, a little bit of time to oneself can serve as a safeguard against the pressures of everyday life. Mehrabian claims that "too little privacy is basically a stressful thing. You get sick more often, you're accident prone, you're irritable—you don't get along with people—and if the situation persists, you get depressed."

Why, even the Son of God once said to his disciples: "Come, you yourselves, privately into a lonely place and rest up a bit." For



Privacy is often hard to find when you are sharing a room with a sibling

cheerful and strong right after solitude."

Interestingly, we read in the Bible that the patriarch Isaac was "out walking in order to meditate in the field at about the falling of evening." (Genesis 24:63) Weighty responsibilities were soon to be placed upon him. Such private moments doubtless helped Isaac to

organize his thoughts and relax.

Privacy—Why It Is So Hard to Get

The magazine *American Health: Fitness of Body and Mind* reported on the findings of Dr. Lawrence Fisher, a professor of psychiatry at the University of California, saying: "Teenagers are healthier, emotionally and physically, if they have adequate privacy." Why, then, is it so often difficult to get it when you are young?

You may readily agree with the authors of *The Healthy Adolescent: A Parents' Manual*, who say: "It's important for [teenagers] to have their own . . . private thoughts, their mail, phone calls and diaries untouched by others." Your parents, though, may beg to differ, feeling they should be privy to all the goings-on in your life.

Concerned, or suspicious if they notice you spending a lot of time in your room with the door closed, your parents may even intrude upon the time you spend alone. Or like Keith's parents, mentioned at the outset,

there were many coming and going, and they had no leisure time even to eat a meal." (Mark 6:31) On that occasion, privacy was just what they needed! Of course, they were adults. However, many youths might feel a similar need. Consider young Erika. When she is upset, she finds it best to avoid being around people. "They frustrate me," she explains. "It's natural to want to be alone a certain amount of time. You have to have some privacy or you become uptight or depressed."

Research indicates that in moderate amounts solitude is beneficial. Says the book *Being Adolescent*: "People need to be alone to develop their individuality." It adds that "provided loneliness is kept within bounds—the absence of others makes it possible to order our thoughts, to concentrate better." The authors' study of 75 teenage youths revealed that after a bit of solitude, the 'psychological states' of the youths improved. "In addition to being more alert, teenagers report being significantly more

they may want to monitor closely what you watch on television or what movies you see. At times, parental intrusions appear to some youths to be excessive. "When I have a boy over," complained one 16-year-old girl to a newspaper columnist, "my mother thinks it's horrible if we shut the door while we're in my room. She always yells loudly, 'Leave that door open!' It embarrasses me . . . We aren't doing anything." Yet, Mother is right, leaving the door open is proper and a good protection against temptation to wrongdoing.

Privacy may also be limited by your circumstances. In many countries, living space is at a premium, and families live crowded together in a single room. Even in affluent lands, many families cannot afford to provide each child his own room. This may lay the groundwork for countless battles over living space. "Now I don't even have my own room anymore," says a young girl who suddenly found herself in a family of four children after her mother remarried. "I have to share everything."

Rights Versus Duties

Inquisitive parents, nosy siblings, intrusive stepsiblings, limited living space—these can be real sources of irritation for a teenager who simply wants a little privacy. However, more important than personal "rights" are God-given duties and responsibilities.

For example, parents are commanded to "train up" their offspring. (Proverbs 22:6) At times this includes their limiting your privacy. They know from experience that too much isolation can be unhealthy, resulting in a youth's becoming lethargic, depressed, or self-centered. As Proverbs 18:1 says: "One isolating himself will seek his own selfish longing." They also know that "foolishness is tied up with the heart of a

boy"—or a girl. A young person "let on the loose" without guidelines or restraints may thus easily harm himself physically, emotionally, and spiritually. (Proverbs 22:15; 29:15) Little wonder, then, that parents view it as a duty to monitor your privacy.

You too have a solemn duty. "Honor your father and your mother." (Ephesians 6:2) That means not rebelling or going against your parents' wishes but cooperating with them to the best of your ability. But what if they place what you feel are unreasonable restrictions upon you? Your being open, honest, and completely trustworthy will likely result in a lessening of very close scrutiny. Likewise with the problems that result from sharing with siblings—sensible steps can often be taken to improve the situation. A future article will discuss some of these things.

In the meantime, make the most of your situation. Limited privacy is the lot of millions of youths. Try to handle your situation with a sense of humor, and avoid getting frustrated or irritable. That would only make a difficult situation worse. And keep in mind that proper supervision of your freedom by loving parents who care is a protection and blessing. Be grateful for it.

In Our Next Issue

- *The Women's Movement
—What Has Happened to It?*
- *Should We Break Up?*
- *A Jazz Drummer
Finds True Happiness*

From Our Readers

Safe Driving

You are certainly to be commended on the "Safe Driving" articles. (January 8, 1988) As a person who has been vitally interested in driving safety for many years, I thought the sections entitled "Is Your Vehicle Roadworthy?" "Read the Road," and "Tips From the Experts" were particularly well presented and helpful. Your readers might be interested in this driving tip I learned from my father-in-law, which has helped me down through the years. He told me that every time you get in a vehicle, remember that you will be driving four cars: yours, the car ahead, the car behind, and the car you cannot see.

S. J. D., United States

I was very pleased to read your articles on "Safe Driving." However, the fact that the articles were addressed only to young persons made them somewhat distorted. Owing to failing vision and hearing and to a slowing down in their reactions, elderly ones are often a great danger to other road users. I realize just how convenient it is to nip down to the shops using the car. But I know several elderly people whose driving habits are very risky. For that reason I would have welcomed a few tactful reminders directed toward the elderly regarding responsible driving today.

E. D., Federal Republic of Germany

We thought that the material provided good counsel for drivers of all ages, but likely the counsel against excessive speed and aggression made it appear to be primarily for the young. A "New York Times" article dealing with the problem

of elderly drivers stated: "Unlike younger drivers, whose traffic violations often involve speeding or reckless behavior, older drivers tend to get into accidents when they fail to yield the right of way or obey traffic signs and signals, often as a result of failing vision or inattention." Being able to drive is a great convenience, especially for the elderly, but we want them always to arrive home safe.

—ED.

Criticizing Other Religions

I have been a faithful reader of Awake! for several years now, and I think you are on the right track. However, I am shocked by your constant criticism of other religions, for it sometimes amounts to backbiting and abusive speech, even bordering on slander. To say the least, it is unkind and diverts you from the mission you claim to fulfill, which I believe is to proclaim the good news.

B. P., France

We have a kind and loving interest in people of all religions, but when their religious beliefs and practices are false and merit God's disapproval, it is showing love to bring this to their attention by exposing falsehood. Jesus clearly showed up the error of the religious practices of the scribes and Pharisees of his day, saying that their religion was in vain. (Matthew 15:1-14; 23:2-32) It is God's Word that exposes and condemns wrong religious practices carried out in his name. We follow in Jesus' footsteps by drawing attention to what God's Word says, which can be to the everlasting benefit of those who will hear. —ED.

Watching the World

Editorial cartoon by Jim Wierzbicki

Crime Costs

The cost of putting a criminal behind bars in the United States averages between \$12,000 and \$24,000 a year for state or federal prisons. "For that kind of money you can send a kid to Harvard," notes *Forbes* magazine. However, in cities like New York the cost can run as high as \$35,000 annually. Concerns over such costly incarceration are compounded by the "avalanche of prisoners" being added each year. Available statistics show that there are approximately 550,000 men and women in prison throughout the United States. "One of every 450 Americans is in prison," reports *Forbes*, "the highest rate in the Western World." Increasing the burden, however, are the 35,000 to 40,000 inmates being added to the ranks each year, which is "the equivalent of a new prison every four days."

Unhappy Winner

Winning a multimillion-dollar jackpot is the dream of many an unemployed person. One out-of-work 27-year-old realized such a dream when he won \$6.4 million playing the lottery. However, since winning, millionaire Bob Campbell declares: "I wouldn't wish this on anybody." Why not? According to *The Toronto Star*, he found that buying material things did not bring much joy and satisfaction. "I would be just as happy without it," notes

Campbell. While conceding that it has eliminated the pressure of finding a job, "that's about it," he explains. He cautions others that there is no instant happiness associated with winning a large amount of money.

The Question Stands

How the millions of existing species came about is a question that has plagued evolutionists for a long time. For a species to be a species, it cannot interbreed with other species—even the one from which it is



supposed to have developed. If progeny does result, it either is sterile (as in the case of mules) or dies before reaching maturity. According to the science magazine *Discover*, geneticists now say they have found "a rescue gene, a slight fault in the species barrier" that, while weakening the flies that carried it, enabled some hybrid males of a fruit-fly species to survive. "However, the gene didn't completely break through the species barrier; it couldn't render the males fertile," notes the article. This raises a "troublesome question," says *Discover*. "If

the parents that carry it don't benefit from it, and offspring that inherit it can't pass it on, how could the gene possibly have evolved?"

Made to Last

An artificial blood vessel that "grows" with its recipient has been developed by Japanese researchers at Okayama University, reports *The Japan Times*. The new vessels are produced from a form of protein known as collagen that is extracted from defective blood vessels removed during surgery. The new vessels are encased in a synthetic fiber wrapping and strengthened by a special adhesive. To inhibit the clotting of the blood, this adhesive produces a thin layer of water inside the attached vessel that keeps unwanted clotting enzymes from appearing. Since the vessels have the unique capability to "grow" with the patient, infants with abnormal heart arteries and veins are expected to benefit the most.

Wife-Beating Approved

The surprise results of a random survey of 1,500 men and women throughout Australia revealed that, on the average, 20 percent (women, 17 percent; men, 22 percent) of those surveyed approved of wife-beating. While the extent of physical violence sanctioned varied, both men and women approved of a husband's shoving, kicking, or hitting

his wife "if she does not obey him, wastes money, fails to keep the house clean, refuses to sleep with him or admits to sleeping with another man," reports *The Australian*. The survey also revealed a reluctance on the part of some people to report to the police any domestic violence they see being engaged in by their neighbors. At least a third of those surveyed regard domestic violence as a private matter.

AIDS Test for Monks

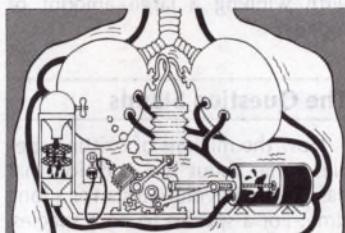
Monks in the 20 Eastern Orthodox monasteries situated on Mount Athos (Greece) are living in a "state of extreme disquiet," reports the French news agency AFP. The reason? One of their former novices, they learned, "is a carrier of the Aids virus." Leaders of the monasteries are now "considering having all 2000 or so monks and hermits undergo an Aids test."

Creeping Health Hazard

While studies show that cockroaches are the creatures most disliked by humans, research scientist Dr. Bann Kang explained at a recent entomology seminar in Washington, D.C., that roaches are also hazardous to health. According to a report in *The New York Times*, Kang said that allergies from roaches are far more common than had been thought and that "high rates of asthma in America's inner cities may be caused by the severe levels of roach infestation in those areas." Fungi, protozoans, bacteria, and viruses are all said to be carried by roaches. Commenting on the cockroach's increase in populated urban areas, Dr. Stephen C. Frantz, a research scientist for the New York State Department of Health, stated: "By and large we have these problems because we are creating the conditions that allow these creatures to live with us."

Only Partial Solutions

"Technology will probably never be able to simulate fully the complex nature of natural organs," the Munich international congress on artificial organs was told. According to the report in *Süddeutsche Zeitung* of Munich, "the drawback of mechanical organs" lies in their reducing "physical activity to a single function, even though it might be the main and crucial one." The human heart, for instance, does more than pump blood, and the kidneys do more than filter out toxins—hormones are also produced. While an



artificial heart may pump blood through the circulatory system, it cannot react to the signals from hormones or nerves, nor can it "influence the complex regulatory systems that keep the circulation in equilibrium," notes the article. Dialysis also falls short in replacing "the sophisticated natural system of cell membranes" in the human kidney: "To this day doctors do not know for sure exactly which substances must be washed out of the blood plasma to prevent poisoning of the organism."

Honeybee Threat

"Canada's beekeepers are living in fear of a silent invasion of Asian mites [varroa jacobsoni] that is already threatening honeybees," reports *The Sunday Star*, a Canadian newspaper. While the bee is in the pupa stage, the mite attacks, sucking "the juice out of the bees" and shortening the bee's life by half.

One authority on bees labels the Asian-mite threat the "most serious" crisis for beekeepers in 300 years. "Bee experts predict that every hive in the United States . . . will be attacked within the next two years and the impact on agriculture will be enormous," notes the *Star*. A significant drop in the honeybee population would reduce necessary crop pollination.

Bullet Surgery

A 22-year-old man "plagued by a compulsion to wash hundreds of times a day" accidentally "performed successful neurosurgery on himself" while attempting suicide, reports the New York *Daily News*. Distressed over his obsessive-compulsive behavior, he "put a .22-caliber rifle in his mouth and fired a shot that hit the left front lobe of his brain," explains the *News*. Instead of killing himself, the young man actually removed the portion of the brain that is believed to control obsessive behavior, reported Dr. Leslie Solyom in the *British Journal of Psychiatry*. Freed from his compulsive behavior, the individual has a new job and currently attends college.

Unconscious but Awake?

"Patients under anesthesia are unconscious but not necessarily deaf," reports *Geo* magazine. Studies reveal that the brain's ability to register acoustic stimuli can remain unimpaired even when the patient is sufficiently anesthetized. This could explain why patients under anesthesia have, on some occasions, taken note of things said in the operating room and later remembered them. Suggests one Munich doctor: "One ought to treat the anesthetized patient as if he were awake." This would include making optimistic comments and avoiding cynical or offensive remarks about the patient.



IN RECENT times one United States TV evangelist after another has been exposed for sexual misconduct. It was revealed that a child of former evangelist Pat Robertson, a U.S. presidential candidate, had been conceived out of wedlock. And other evangelists, Jim Bakker being the most prominent, have been exposed as adulterers.

A later scandal, though, swirled around Jimmy Swaggart, the evangelist who criticized the sexual escapades of rival TV preachers Jim Bakker and Marvin Gorman. According to reports, Gorman, in turn, secured pictures of Swaggart with a prostitute. Examining the sordid mess, *New York Post* columnist Carl T. Rowan observed:

"The worst thing Swaggart has done, in my mind, was not his taking a prostitute into a motel. It was his hypocritical effort to destroy utterly the Rev. Jim Bakker after it became known that the head of the PTL Ministry had had a sordid sexual relationship with church secretary Jessica Hahn.

"Swaggart's hypocritical attack on Bakker and the PTL was a clear attempt to bring to his empire the dollars the gullible were pouring into Bakker's domain.

"The thing most comparable is of one drug-trade kingpin striking to wipe out another and take over his turf.

"The analogy is not farfetched," says Rowan. "The Swaggarts, Bakkers, Gormans and others dispense a narcotic called religion, and in the process they give genuine religion a bad name."

2008 BIBLIOGRAPHY OF JEWISH STUDIES

In 2008, the number of publications in Jewish studies increased significantly. The total number of titles published in 2008 is 2,000, up from 1,700 in 2007. This increase is due to a significant increase in the number of titles published in English, while the number of titles published in Hebrew decreased.

The most significant increase in the number of titles published in English is in the field of history, which saw a 20% increase in the number of titles published in 2008 compared to 2007. A significant increase was also seen in the field of literature, with a 15% increase in the number of titles published in 2008 compared to 2007.

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