

Awake!

August 22, 2000



A color photograph of a smiling baby reaching for a large, yellow and orange bird of paradise flower. The baby is being held by a man whose face is partially visible on the right. The background is a soft-focus green foliage.

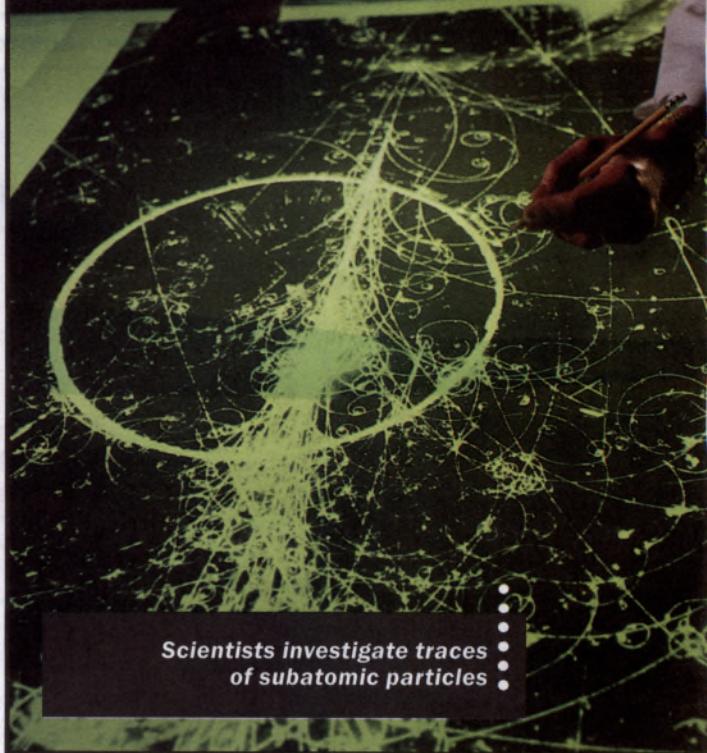
**SEEING MORE
THAN YOUR EYES
CAN SEE**

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So much is beyond the range of our unaided sight. What is revealed by peering into what normally is beyond human vision?

How can your life be affected?



Scientists investigate traces of subatomic particles



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WHAT THE UNAIDED EYE CANNOT SEE

TINY dust particles float unseen in the air. But then a shaft of sunlight streams through the window, and what had been invisible can suddenly be seen. The penetrating beam of light unmasks the particles to human vision.

Think further about visible light, which appears white or colorless to the unaided eye. What happens if sunlight shines at just the proper angle through droplets of water? The water serves as a prism, and we see a rainbow of beautiful colors!

Actually, objects around us reflect various wavelengths of light that our eyes see as color. Green grass, for example, does not of itself produce green light, but, rather, it absorbs all the wavelengths of visible light except green. The grass reflects the green wavelength back to our eyes. Thus, to our eyes the grass appears as green.

Aided by Man-Made Instruments

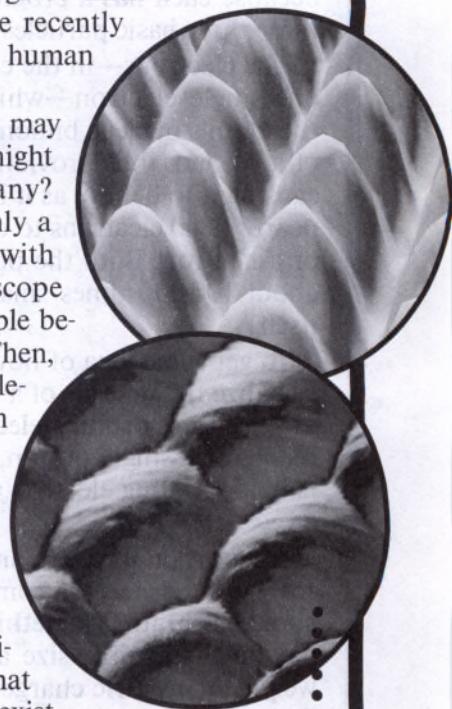
In recent years many things invisible to our unaided eyes have become visible by means of modern inventions. We can look through an ordinary microscope at a seemingly lifeless drop of water and discover that it is filled with all sorts of moving creatures. And a strand of hair, which to normal vision appears smooth and even, is seen to be rough and jagged. Very powerful microscopes can magnify objects one million times, the equivalent of enlarging a postage stamp to the size of a small country!

Now, with the use of even more powerful microscopes, researchers are provided with atom-scale contour

images of surfaces. This gives them a view into what until quite recently was beyond the scope of human vision.

On the other hand, we may look up into the sky at night and see stars. How many? With the unaided eye, only a few thousand at most. But with the invention of the telescope nearly 400 years ago, people began to see many more. Then, in the 1920's, a powerful telescope at the Mount Wilson Observatory revealed that there are galaxies beyond our own and that they too are filled with countless stars. Today, using sophisticated man-made means of probing the universe, scientists estimate that tens of billions of galaxies exist, many of which consist of hundreds of billions of stars!

It is truly amazing that telescopes have revealed that billions of stars, appearing as the Milky Way because of seeming being so close together, are separated by incomprehensibly great distances. Similarly, powerful microscopes have helped the unaided eye to see that objects that appear to be solid are, in fact, composed of atoms that are primarily made up of empty space.



Images of
nickel atoms
(top) and
platinum atoms

Courtesy IBM Corporation,
Research Division,
Almaden Research Center

The Infinitesimally Small

The tiniest speck that can be seen under an ordinary microscope is composed of more than ten billion atoms! Yet, in 1897 it was discovered that the atom has tiny orbiting particles called electrons. In time, the nucleus of the atom, around which the electrons orbit, was found to consist of larger particles—neutrons and protons. The 88 different kinds of atoms, or elements, that occur naturally on earth are basically the same size, but they vary in weight because each has a progressively larger number of these three basic particles.

The electrons—in the case of the hydrogen atom, one single electron—whirl through space around the atom's nucleus billions of times every millionth of a second, thus providing shape to the atom and causing it to behave as if it were solid. It would take nearly 1,840 electrons to equal the mass of a proton or a neutron. Both the proton and the neutron are about 100,000 times smaller than the entire atom itself!

To get some idea of how empty an atom is, try to visualize the nucleus of a hydrogen atom in relation to the atom's orbiting electron. If that nucleus, consisting of a single proton, were the size of a tennis ball, its orbiting electron would be about two miles away!

A report on the centennial celebrations of the discovery of the electron commented: "Few think twice about celebrating something no one has seen, which has no discernible size and yet has a measurable weight, an electric charge—and spins like a top. . . . Today no one questions the idea that things we can never see do exist."

Awake!

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 important, this magazine builds confidence in the Creator's promise of a peaceful and secure new world that is about to replace the present wicked, lawless system of things.

Unless otherwise indicated, *New World Translation of the Holy Scriptures—With References* is used.

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Even Tinier Objects

Atom-smashing machines, capable of hurling particles of matter at one another, now offer scientists a glimpse inside the nucleus of the atom. As a result, many particles with strange-sounding names are written about—positrons, photons, mesons, quarks, and gluons, to name but a few. All are invisible, even to the most powerful microscopes. But with such equipment as cloud and bubble chambers and scintillation counters, traces of their existence are observed.

Researchers now see what was once invisible. As they do, they are grasping the significance of what they believe are the four fundamental forces—gravity, electromagnetic force, and two subnuclear forces designated the "weak force" and the "strong force." Some scientists pursue a quest for what is termed a "theory of everything," which they hope will provide one comprehensible explanation of the universe, from the macroscopic to the microscopic.

What lessons can be learned from seeing what the unaided eye cannot? And based on what they have learned, what conclusions have many reached? The following articles provide answers.

WHAT is accomplished when humans use new inventions to pull back the curtain, as it were, and see what they could not see before? Doing so can help determine with a degree of certainty what was formerly unknown.—See the box below.

It was once the common belief that the earth was the center of the universe. But then the use of the telescope showed that the planets, including the earth, are held in place in rotation around the sun. More recently, with the invention of powerful mi-

PEERING INTO THE UNSEEN What Is Revealed?

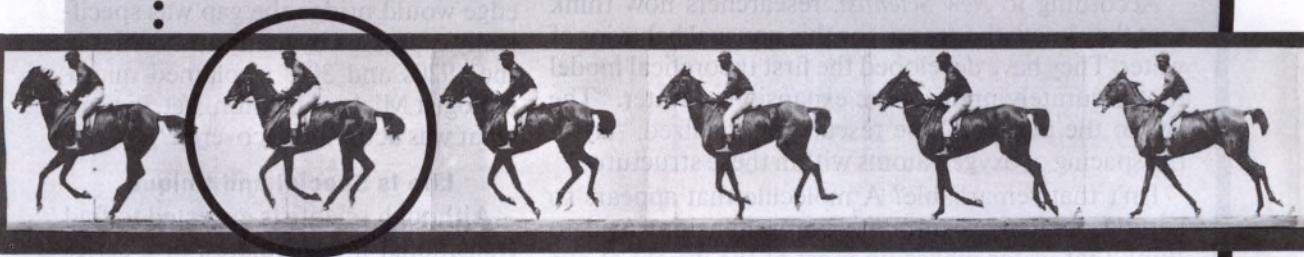
croscopes, humans have examined the atom itself and have seen how certain kinds of atoms combine with other kinds to form what are called molecules.

Consider the composition of a molecule of water, a substance essential to life. Because of their design, two atoms of hydrogen will combine in a unique way with a single atom of oxygen to form a molecule of water—billions of which are in each drop! What can we

Too Fast for the Eye to See

Since the movement of a galloping horse is so rapid, men in the 19th century debated whether, at any given moment, all of its hooves would be off the ground at the same time. Finally, in 1872, Eadweard Muybridge began photographic experiments that later settled the issue. He devised a technique for taking the first high-speed movies.

Muybridge lined up a series of 24 cameras spaced slightly apart. From each camera shutter, a string was stretched across the track, so that when the horse galloped along, it hit the strings and tripped the shutters. Analysis of the resulting photographs revealed that at times the horse was completely off the ground.



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learn by examining a molecule of water and considering its behavior under different circumstances?

The Wonder of Water

Although individual drops of water seem very simple, water is an extremely complex substance. In fact, Dr. John Emsley, a science writer at Imperial College, in London, England, said that it is "one of the most investigated of all chemicals, but it is still the least understood." *New Scientist* magazine stated: "Water is the most familiar liquid on Earth, but also one of the most mysterious."

Dr. Emsley explained that despite the simple structure of water, "nothing is as complex in its behaviour." For example, he said: " H_2O should be a gas, . . . but it is a liquid. Moreover, when it freezes . . . , its solid form, ice, floats instead of sinking," as would ordinarily be expected. Regarding this unusual behavior, Dr. Paul E. Klopsteg, a past president of the American Association for the Advancement of Science, observed:

"This appears as a remarkable design for sustaining aquatic life such as fishes. Think what would happen if water, as it cools to the freezing point, didn't behave as described. Ice would form and keep forming until it occupied an entire lake, snuffing out all or most marine life." Dr. Klopsteg said that this unexpected behavior of water is "evidence of a great and purposeful mind at work in the universe."

According to *New Scientist*, researchers now think that they know the reason for this unusual behavior of water. They have developed the first theoretical model that accurately predicts the expansion of water. "The key to the mystery," the researchers realized, "lay in the spacing of oxygen atoms within these structures."

Isn't that remarkable? A molecule that appears so simple challenges human comprehension. And to think that water makes up most of the weight of our body! Do you too see in the marvels of this molecule, of only three atoms of two elements, "evidence of a great and purposeful mind at work"? Yet, a molecule of water is extremely small and much less complex than many other molecules.

Molecules of Great Complexity

Some molecules are composed of thousands of atoms of many of the 88 elements that occur natural-

ly on earth. For example, a molecule of DNA (short for deoxyribonucleic acid), which contains the coded information for the heredity of every living thing, can have millions of atoms of several elements!

Despite its unbelievable complexity, the DNA molecule is only 1/10,000,000 inch in diameter, far too small to be seen except with the aid of a powerful microscope. It was not until 1944 that scientists discovered that DNA determines the heredity of a person. This finding set off intensive research into this extremely complex molecule.

Yet, DNA and water are but two of the many kinds of molecules that go into the construction of things. And since there are many molecules that are found both in what is living and in what is nonliving, should we conclude that there is somehow just a simple step, or bridge, between what is alive and what is not?

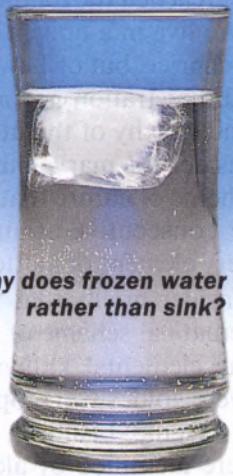
For a long time, many people believed that to be the case. "The hope that increased biochemical knowledge would bridge the gap was specifically expressed by many authorities in the 1920s and 30s," explained microbiologist Michael Denton. Yet, in time, what was actually discovered?

Life Is Special and Unique

Although scientists expected to find transitional intermediates, or a series of gradual steps, between what is living and what is not, Denton observed that the existence of a definite discontinuity was "finally established after the revolutionary discoveries of molecular biology in the early 1950s." Relating a remarkable fact that has now become evident to scientists, Denton went on to explain:

"We now know not only of the existence of a break between the living and non-living world, but also that it represents the most dramatic and fundamental of all the discontinuities of nature. Between a living cell and the most highly ordered non-biological system, such as a crystal or a snowflake, there is a chasm as vast and absolute as it is possible to conceive."

This does not mean that creating a



Why does frozen water float rather than sink?

molecule is easy. The book *Molecules to Living Cells* explains that "the synthesis of the small-molecule building blocks is complex in itself." It adds, however, that making such molecules "is child's play in comparison to what must have followed in order to generate the first living cell."

Cells may exist by themselves as free-living organisms, such as bacteria, or they may function as part of a multi-cellular organism, such as a human.

A DNA molecule is
1/10,000,000 inch in
diameter, yet the information
it contains would occupy a
million pages

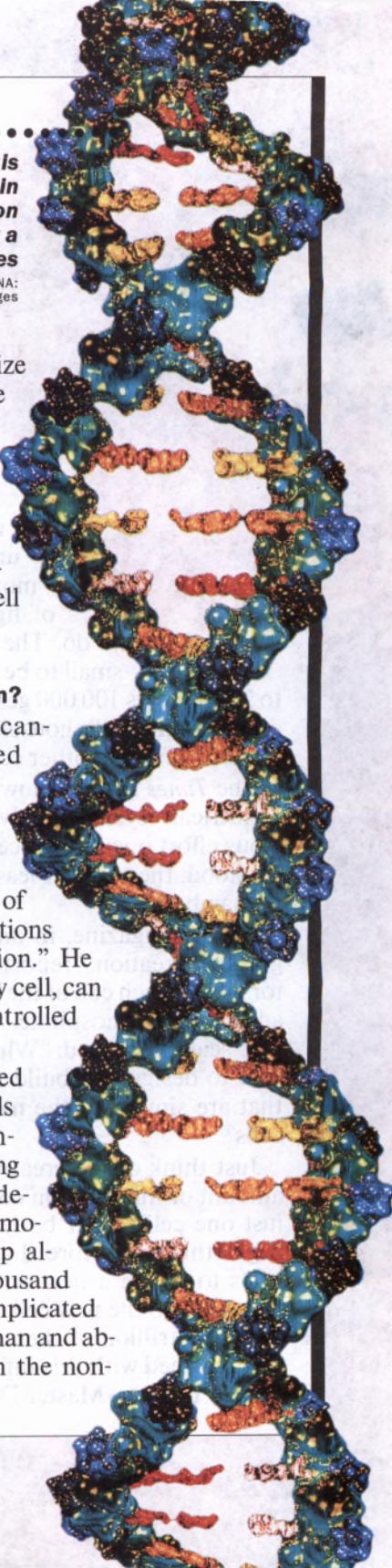
Computerized model of DNA:
Donald Struthers/Tony Stone Images

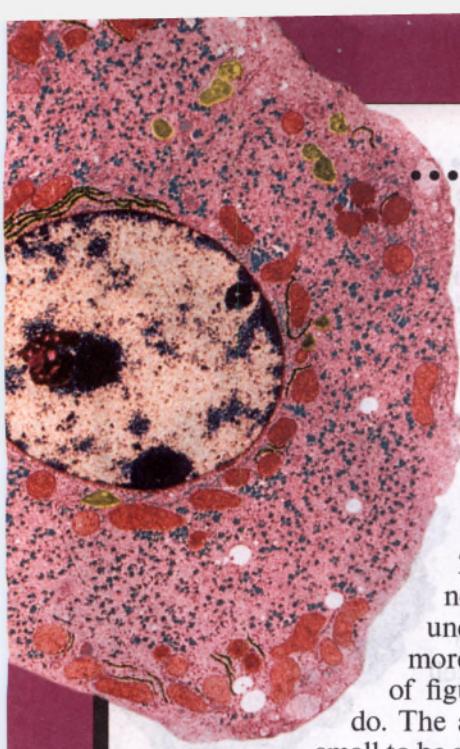
It would take 500 average-size cells to equal the size of the period at the end of this sentence. So it is not surprising that the functions of a cell are invisible to the unaided eye. What, then, is revealed by using a microscope to peer into a single cell in the human body?

The Cell —By Chance or Design?

First of all, a person cannot help but be amazed by the complexity of living cells. One science writer observed: "The normal growth of even the simplest living cell requires that tens of thousands of chemical reactions occur in coordinated fashion." He asked: "How, within one tiny cell, can 20,000 reactions all be controlled at once?"

Michael Denton compared even the tiniest of living cells to "a veritable microminiaturized factory containing thousands of exquisitely designed pieces of intricate molecular machinery, made up altogether of one hundred thousand million atoms, far more complicated than any machine built by man and absolutely without parallel in the non-living world."





In each body cell—all 100 trillion of them—tens of thousands of chemical reactions occur in coordinated fashion

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Scientists remain baffled by the complexity of the cell, as *The New York Times* of February 15, 2000, noted: "The more biologists understand of living cells, the more daunting seems the task of figuring out everything they do. The average human cell is too small to be seen, yet at any moment up to 30,000 of its 100,000 genes may be flicking on or off, executing the cell's housekeeping needs or responding to messages from other cells."

The *Times* asked: "How can a machine so tiny and so intricate ever be analyzed? And even if by prodigious effort one human cell were ever completely understood, there are at least 200 different types in the human body."

Nature magazine, in an article entitled "Real Engines of Creation," reported the discovery of tiny motors within each cell of the body. These rotate to create adenosine triphosphate, the power source of cells. One scientist mused: "What can we do when we learn how to design and build molecular machine systems that are similar to the molecular systems we find in cells?"

Just think of the creative capacity of the cell! The amount of information contained within the DNA of just one cell of our body would fill about a million pages this size! More than that, each time a cell divides to create a new one, this same information is passed on to the new cell. How do you think each cell—all 100 trillion of them in your body—came to be programmed with this information? Did it happen by chance, or was a Master Designer responsible?

Perhaps you have reached the same conclusion that biologist Russell Charles Artist did. He said: "We are confronted with formidable, even insuperable, difficulties in trying to account for [the cell's] beginning and, for that matter, its continued functioning, unless we maintain with reason and logic that an intelligence, a mind, brought it into existence."

A Marvelous Order of Things

Years ago, Kirtley F. Mather, at the time professor of geology at Harvard University, reached the following conclusion: "We live in a universe, not of chance or caprice, but of Law and Order. Its Administration is completely rational and worthy of the utmost respect. Consider the marvelous mathematical scheme of nature that permits us to give consecutive atomic numbers to every element of matter."

Let's consider briefly that "marvelous mathematical scheme of nature." Among the elements* known to the ancients were gold, silver, copper, tin, and iron. Arsenic, bismuth, and antimony were identified by alchemists during the Middle Ages, and later during the 1700's, many more elements were found. In 1863 the spectroscope, which can separate the unique band of colors that each element gives off, was used to identify indium, which was the 63rd element discovered.

At that time the Russian chemist Dmitry Ivanovich Mendeleev concluded that the elements were not created haphazardly. Finally, on March 18, 1869, his treatise "An Out-

* Fundamental substances that consist of atoms of only one kind. Only 88 elements occur naturally on earth.

line of the System of the Elements" was read to the Russian Chemical Society. In it he declared: "I wish to establish some sort of system not guided by chance but by some sort of definite and exact principle."

In this famous paper, Mendeleyev predicted: "We should still expect to discover many *unknown* simple bodies; for example, those similar to aluminum and silicon, elements with atomic weights of 65 to 75." Mendeleyev left blank spaces for 16 new elements. When asked for proof for his predictions, he replied: "I have no need of proof. The laws of nature, unlike the laws of grammar, admit of no exception." He added: "I suppose when my unknown elements are found, more people will pay us attention."

That is exactly what occurred! "During the next 15 years," explains *Encyclopedia Americana*, "the discovery of gallium, scandium and germanium, whose properties closely matched those predicted by Mendeleyev, established the validity of the periodic table and the fame of its author." By the early part of the 20th century, all existing elements had been discovered.

Clearly, as research chemist Elmer W. Maurer noted, "this beautiful arrangement is hardly a matter of chance." Of the possibility that the

harmonious order of the elements is a matter of chance, professor of chemistry John Cleveland Cothran observed: "The post-prediction discovery of all of the elements whose existence [Mendeleyev] predicted, and their possession of almost exactly the properties he predicted for them, effectively removed any such possibility. His great generalization is never called 'The Periodic Chance.' Instead, it is 'The Periodic Law.'"

A close study of the elements and how they fit together to form everything in the universe caused famous physicist P.A.M. Dirac, who was a professor of mathematics at Cambridge University, to say: "One could perhaps describe the situation by saying that God is a mathematician of a very high order, and He used very advanced mathematics in constructing the universe."

Truly it is fascinating to peer into the unseen world of both infinitesimally tiny atoms, molecules, and living cells and mammoth galaxies of stars far beyond the range of unaided vision!

The experience is humbling. How are you personally affected? What do you see reflected in these things? Do you see more than your physical eyes can see?

1	H	Hydrogen 1.0
2	Li	Lithium 6.9
3	Be	Beryllium 9.0
4	Na	Sodium 22.0
5	Mg	Magnesium 24.3
6	K	Potassium 38.1
7	Ca	Calcium 40.1
8	Sc	Scandium 45.0
9	Ti	Titanium 47.9
10	V	Vanadium 50.9
11	Cr	Chromium 52.0
12	Mn	Manganese 54.9
13	F	
14	Rb	Rubidium 85.5
15	Ca	Strontium 87.6
16	Sc	Scandium 87.6
17	Ti	Titanium 87.6
18	V	Vanadium 87.6
19	Cr	Chromium 87.6
20	Mn	Manganese 87.6
21	F	
22	Mo	Molybdenum 96.0
23	Tc	Technetium 98.0
24	Ru	Ruthenium 101.0
25	C	
26	W	Tungsten 183.9
27	Re	Rhenium 186.2
28	O	
29	Unh	Unnilhexium (260)
30	Uns	Unnilseptium (264)
31	U	Uranium (238)

Russian chemist
Mendeleyev concluded that
the elements were not
created haphazardly

Courtesy National Library of Medicine

DO YOU SEE MORE THAN YOUR EYES DO?

CAR drivers cannot ordinarily see around a blind curve. But with the aid of a mirror placed at the curve, oncoming traffic can be detected and accidents avoided. Similarly, humans cannot actually see an invisible Creator. Is there a way to know that such a One exists?

A first-century writer mentioned how we can perceive what we cannot see. He wrote: “[God’s] invisible qualities are clearly seen from the world’s creation onward, because they are perceived by the things made, even his eternal power and Godship, so that they are inexcusable.”—Romans 1:20.

Think about that. Do you see intelligence reflected in things around us that are beyond human ability to create? Do such things help you to see with “eyes of your understanding” that there is someone greater than man? Let us consider some examples.—Ephesians 1:18, *King James Version*.

Learning From Creation

Have you marveled at the splendor of a brilliant, star-filled sky on a moonless night, seeing in it evidence of a Grand Maker? “The heavens are declaring the glory of God; and of the work of his hands the expanse is telling,” exclaimed an ancient observer. “When I see your heavens, the works of your fingers, the moon and the stars that you have prepared,” this man pondered, “what is mortal man that you keep him in mind, and the son of earthling man that you take care of him?”—Psalm 8:3, 4; 19:1.



• • • • • **Do you see in these things evidence of a Creator?**

It is only natural for us to marvel at creations too wonderful to be duplicated by humans. One famous line of poetry says: "Only God can make a tree." Yet, far more marvelous is the creation of a baby, which occurs without any creative direction from parents. When sperm from the father unites with an egg from the mother, plans are quickly drawn up in the DNA of the newly formed cell to produce a child. "If written out," it is said, the instructions within the DNA "would fill a thousand 600-page books."

That is but the beginning. The original cell divides to make two, then four, then eight, and so on. After about 270 days, a baby made up of thousands of millions of living cells of more than 200 kinds is born. And to think that the original cell had within it the information to make all the different kinds of cells and to produce them at just the right time! Are you moved to praise our Creator? Note the praise furnished by the psalmist who wrote: "You yourself produced my kidneys; you kept me screened off in the belly of my mother. I shall laud you because in a fear-inspiring way I am wonderfully made."—Psalm 139:13-16.

Those who have studied these "miracles" feel a sense of awe. Dr. James H. Hutton, past president of the Chicago and Illinois State Medical societies, said that he was filled with amazement by the cell's "magical ability to pass on to successor cells the data they wish reproduced. It is indeed

wonderful that our research scientists have been able to learn about such things. But some Divine Intelligence surely must have planned these phenomena."

Dr. Hutton continued: "In my own subspecialty of endocrinology, the study of endocrine functions and the disorders of these glands adds to the conviction that a Divine Power must be responsible for the marvelous complexity and function of these vital structures." He concluded: "Contemplating these marvels seems to me compelling reason to believe that some omnipotent and omniscient power planned this universe, set it in motion and presides over it."

After making these observations, Dr. Hutton asked: "Is He a personal God who notes each sparrow's fall?" He answered: "Somehow I doubt that. Nor do I believe that He pays any particular attention to my relatively unimportant daily coming and going."

Why do many acknowledge that intelligence is evident in the "miracles" of creation but question the existence of a personal God who is concerned about humankind?

Does God Really Care About Us?

Many reason that if there were a God, he would not permit humans to suffer so much. A common question some ask is, "Where was God when we needed him?" One person who survived the murder of millions by the Nazis in World War II was so grieved by the suffering he saw that he said: "If you could lick my heart, it would poison you."

So for many it is a dilemma. As the ancient observer mentioned earlier noted, the evidence of a Creator is obvious when we examine the miraculous order and design of things. Yet, if He is a God who cares about us, how can He permit such terrible suffering? If we are to understand and to worship God properly, we must have a satisfying answer to that important question. Where can we find it?

We invite you to obtain a copy of the brochure *Does God Really Care About Us?* On page 32 of this *Awake!*, you can learn how to request one. We feel that a careful examination of the sections "Why God Has Permitted Suffering" and "What Has Been the Result of Rebellion?" will provide you with satisfying answers.

My Efforts to Make Wise Choices

AS TOLD BY
GUSTAVO
SISSON



At age 12, although I was deeply involved in swimming, I decided to become a doctor. But about the same time, I began to study the Bible and, as a result, wanted to become a minister. What became of my different ambitions and interests? Were they compatible?

IN 1961, Olive Springate, a missionary of Jehovah's Witnesses in Brazil, began to study the Bible with Mother and me. Because of opposition from Father, a respected medical doctor in Pôrto Alegre, we stopped studying. Yet, Olive kept in touch with us, and in time I recognized the ring of truth in what I had learned. But by then my involvement in swimming had distracted me from spiritual matters.

When I was 19, I met an attractive young woman named Vera Lúcia at the club where I swam, and we started to go out together. Mother spoke to her about our beliefs, and she was interested. So I got in touch with Olive, and she began to study the Bible with us, despite the opposition of Vera Lúcia's father.

Vera Lúcia continued to study, and she progressed in Bible knowledge. She even started to conduct Bible studies with workers at my swimming club. At the same time, I concen-

trated on training for the upcoming national swimming competitions.

After we had been studying and attending Christian meetings for over a year, Vera Lúcia's father began to suspect that something was up. One day when we returned from a meeting, he was waiting and demanded to know where we had been. I replied that we had attended a Christian meeting and that although religion may not be important to him, it was a matter of life and death to us. He gave a sigh and said: "Well, if it is a matter of life and death, I will just have to accept things." From that day on, his attitude changed, and although he never became one of Jehovah's Witnesses, he became a close friend and a companion in times of need.

Making Choices

I had decided to quit competitive swimming after the national championships, but two victories and a Brazilian record for the 400- and

1,500-meter freestyle earned me an invitation to the Pan American Games in Cali, Colombia, in 1970. Even though Vera Lúcia was against my going, I started training for the games.

When I swam well in Cali, the coaches asked if I was willing to train for the Olympics. I thought about my unfinished medical studies and the wonderful truths that I had learned regarding Jehovah's purposes and gave up all thought of pursuing a career in swimming. From then on, my spiritual progress was rapid. In 1972, the year of the Olympics in Munich, Germany, Vera Lúcia and I symbolized our dedication to Jehovah by water baptism. This encouraged Mother to resume her Bible study, and in time she too was baptized.

After Mother's baptism, Father's opposition increased. Finally our family broke up, and since I was still at the university, we had to get by on her small pension and the proceeds from the sale of our home. As a result, Vera and I postponed our wedding. Actually the fine lessons that I had received from Father helped me to make the decisions that I did. He would often say: "Do not be afraid to be different" and, "The majority are not always right." One of his favorites was, "A man's worth is measured by what he gives others."

As one of Jehovah's Witnesses, I have been able to put Father's excellent advice into practice. I was at his bedside when he died in 1986. We had become friends again and respected each other. I believe that he was proud of me, since, like him, I had become a medical doctor.

In the meantime, I had graduated from medical school in 1974. I decided to go into general practice, but later, after giving more thought to the matter, I decided that I could be of more help to my Christian brothers by becoming a surgeon. (Acts 15:28, 29) So I

accepted the challenge and spent the next three years training to be a surgeon.

A Challenging Legal Battle

A very sad case in which I was involved was that of a 15-year-old Witness girl who suffered internal bleeding. She was pale and hypotensive but lucid and absolutely firm in her decision not to take blood. After increasing her blood volume, I performed an endoscopy and washed the affected area with chilled saline solution to stop the bleeding. Initially she improved, but 36 hours later, while she was in intensive care, the bleeding suddenly started again. Despite diligent efforts, the doctor on duty was unable to control the bleeding and maintain her blood volume, and the girl died.

When this occurred, the ethics committee suspended my internship and referred my case to the regional medical council. I was charged with violating three articles of the medical code of ethics, which put my medical license at risk and with it my livelihood.

A committee stipulated a 30-day period in which I had to present my written defense. My lawyers prepared legal and constitutional arguments, and I prepared a technical defense with the help of the local Hospital Liaison Committee (HLC), a group of Jehovah's Witnesses who seek to promote hospital and patient cooperation. At the hearing the instruction committee asked questions mainly about my position as a doctor and as one of Jehovah's Witnesses. However, my defense was principally based on medical and scientific arguments and on reports by respected surgeons.

The evidence presented confirmed that the patient had refused to accept a blood transfusion and that I had done nothing to influence her to make that decision. The hearing also established that of the four

doctors consulted, I was the only one who had begun some kind of treatment consistent with the patient's wishes and her medical condition.

My case was then referred to a committee that would vote at a plenary sitting. I made a ten-minute oral defense in which, as in my prior written defense, I focused solely on medical aspects. After hearing me, two committee members mentioned that although I had not used transfusions, the treatment I had prescribed had a solid scientific basis. Another doctor stressed that bloodless treatment is effective and that it has a lower mortality rate. The last councillor said that the point in question was not whether blood transfusions were good medicine or not. The issue was whether a doctor could impose on his patient a treatment that the patient did not want, and the councillor did not think that a doctor had that right. Thus, by a majority of 12 to 2, the councillors voted in favor of dismissing all charges, thereby exonerating me.

Defending a Patient's Rights

Some medical authorities have obtained court orders to force Witness patients to accept blood transfusions, and occasionally I have presented evidence at court hearings that has helped overturn such orders. One case involved a Witness with swollen blood vessels in his esophagus, a problem that causes serious gastric bleeding. At the time he was hospitalized, he was already very anemic—his hemoglobin count was 4.7 grams per deciliter.* At first, he was not pressured to accept blood, and he received only support treatment.

Then, after a week in the hospital, the patient was surprised to receive a visit from a court officer bearing a transfusion order. By this time his hemoglobin count had ris-

en to 6.4 grams per deciliter, and he was clinically stable. It seems that the judge had based his decision on the first hemoglobin level not on the second, the higher one.

The HLC offered to help. The patient asked me to examine him. I did so and thereafter was successful in placing him in a hospital where he could be treated without blood. At the same time, his lawyers challenged the court's order to give the patient a blood transfusion.

I was summoned to a hearing before the judge, who asked me about the condition of the patient. During the hearing, she authorized me to continue treating the patient while the merits of the court order were being debated. By the time of the new hearing, the patient had improved and had been discharged from the hospital. When I was called on to testify again, the hospital's lawyer challenged me to prove that the treatment I had recommended had a scientific basis. To his embarrassment, I produced an article in a medical journal published by the very hospital he was representing, and it recommended such treatment!

When the decision was handed down, we were delighted to hear that our position of relying on medical treatment other than blood transfusions had been vindicated. The hospital was ordered to pay all costs, including legal expenses. Although the hospital appealed, it lost again.

Caring for Our Family

Ever since I became a Witness, I have had Vera Lúcia's support as a devoted companion and as a capable wife and exemplary mother of our children. How has she managed to face all the challenges, maintaining our home and helping to care for the children, now high-spirited youths? This has been possible because of her deep love for Jehovah and the Christian ministry.

* A healthy adult male has a hemoglobin level of approximately 15 grams per deciliter.



**Operating
on a patient**

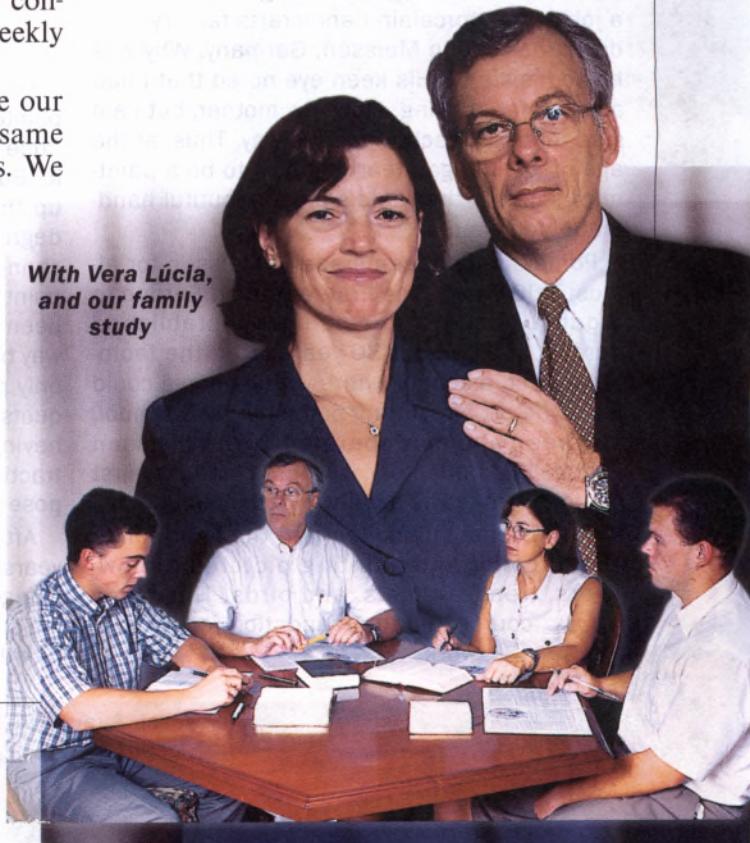
As parents, we have taught our children Bible doctrines and principles since they were very young. Despite leading a busy life, we strive to serve in the full-time ministry for a few months each year. And we do our best to stick to a schedule that includes reading the Bible regularly, discussing a Bible text each day, and sharing our beliefs with others in the Christian ministry. In recent times our family has frequently conducted as many as 12 Bible studies weekly with people who are not Witnesses.

Vera Lúcia and I also try to involve our sons in our activities while, at the same time, respecting their personal tastes. We believe that three basic things are necessary for parents to care properly for their family. First, the right teaching, based on God's Word, the Bible. Second, the right example, which gives children clear evidence that their parents have a healthy fear of God. And third, the right association with Christians of all age groups and social conditions, who can transmit a variety of gifts and abilities to family members. As a couple, we have made it our goal to provide our family with these things.

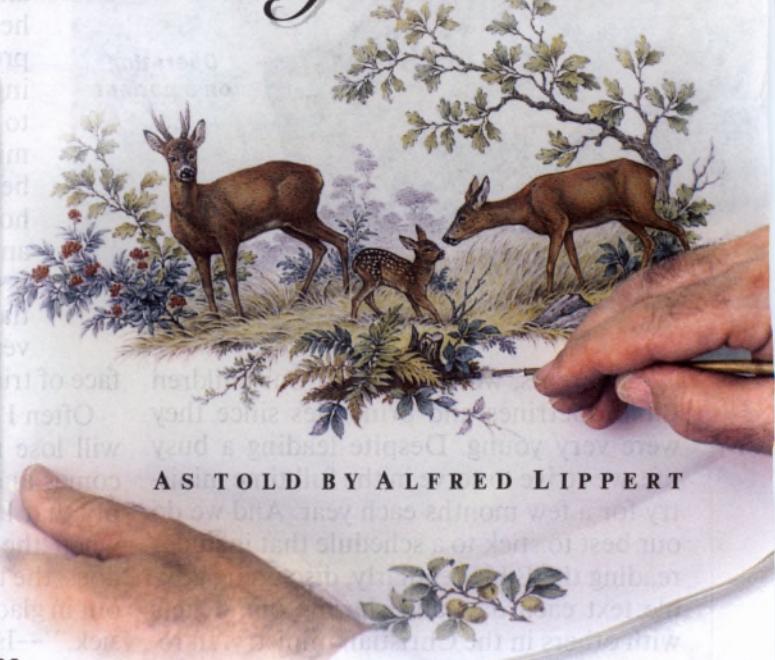
Looking back on our nearly 30 years of serving Jehovah, my wife and I can say that, without a doubt, he has given us the best in life and provided many pleasures and blessings. Although I did not make it to the Olympics, I still enjoy swimming several miles a week. True, my being a doctor as well as one of Jehovah's Witnesses has resulted in an extra-busy life, but I have found it very rewarding to help my Christian brothers and sisters to persevere in their service to God in the face of trials.

Often I am asked if it concerns me that I will lose my job when God's new system comes and there is no more sickness. I reply that I will be the first to jump with joy when 'the lame one climbs up just as a stag does, the tongue of the speechless one cries out in gladness,' and 'no resident says: "I am sick."'"—Isaiah 33:24; 35:6.

**With Vera Lúcia,
and our family
study**



Fifty Years Painting Porcelain



AS TOLD BY ALFRED LIPPERT

MOTHER wanted me to be a carpenter. But my schoolteacher urged her to get me a job at the porcelain handicrafts factory down the road in Meissen, Germany. Why was he so insistent? His keen eye noted that I had a knack for drawing. I love my mother, but I am glad that the teacher had his way. Thus, at the age of 14, I began learning how to be a painter of some of the world's most beautiful handmade porcelain.

Porcelain has been made in Meissen for almost 300 years. The first factory in Europe to produce genuine porcelain was established here in 1710. About 30 years later, the factory founded a school where young people could learn the art of painting porcelain. This school, still open and now operated by the Meissen Porcelain Manufactory, is where I made my first nervous strokes as a painter of porcelain.

At the school I also learned the finer points of sketching and painting pictures of flowers, trees, animals, and birds. This study course laid the foundation for my later work.

Glazed or Unglazed?

Porcelain is a translucent ceramic that can be painted in two basic ways. The painting can be done before the glaze is added to the ceramic. But unglazed porcelain is porous and soaks up the color, so the painting demands a high degree of concentration, since most mistakes cannot be corrected. On the other hand, the paint can be applied after the porcelain has been glazed. Painting flower decorations in this way became my specialty. This work involved not only painting but also designing individual bouquets for each item of porcelain. So the painter, having learned to focus his mind and avoid distractions, learns to use his imagination to compose something beautiful.

After painting flower decorations for several years, I finally moved on to the most difficult category of all—that of painting pictures of living creatures. Here is where my earlier study of painting animals and birds really paid off.

A Most Exciting Challenge

Painting animals, fish, and birds presents an exciting challenge because each creature has to look alive, not static like a flower or a tree. The artist has to know something about the anatomy and the habits of the animals and birds he is painting. For instance, many of the scenes I portray feature wild game, including stags with huge sets of antlers.

When it comes to learning about animals, nothing beats personal observation. Some years ago I planned to paint a series of pictures of fish, so I bought a home aquarium and put all manner of fish in it. My wife and I sat near the fish tank for hours, observing the movements and habits of each type of fish. Only after I had become acquainted with them did I start painting.

What Makes a Good Painter?

Friends sometimes ask me what makes a good painter of porcelain. Clearly, the painter needs to have artistic talent, a good eye, and a steady hand. But he needs more. To be successful as an artist, a person must have the right attitude toward himself, his work, and other people. A good painter is a craftsman who trains himself to work hard at improving his skill. He knows that you either use it or you lose it. He never stops learning, since he listens to what others say and accepts their advice.

One last point. The experienced artist is sensitive to the wishes of the customer. People who buy handmade porcelain do not want an every-

day item that will be kept for a while and will then be thrown away and replaced. The customer wants an object of art, an article of cultural value—something that catches the eye, warms the heart, and enriches the owner's life. The painter is pleased to have a share in satisfying those desires.

Painting Leads to Faith in God

My work as a painter gave me the impetus to take a closer look at the Bible and to develop strong faith in God. How? Well, at times I have worked with experts on birdlife, sketching and painting illustrations for books that they were working on. When I started doing such illustrations, I believed in evolution. But close contact with several authors led to conversations about the origin of life. And such conversations changed my outlook.

What struck me was that although the experts all believed in evolution, each had his own theory, which often contradicted those of other experts. As far as I can see, there is no uniform theory of evolution. Hence, I concluded that if the experts cannot agree on a uniform explanation for evolution, how could anyone else? For me, evolution died a natural death. The only alternative to evolution is that life on earth is the product of creation. That is where my belief in our Creator began.

I am so pleased that people now derive pleasure from my work, and this makes me feel good. I will never lose my love of painting or my love of porcelain.



Pictures on pages 16 and 17: Mit freundlicher Genehmigung der Staatlichen Porzellan-Manufaktur Meissen GmbH



▲ © Joe McDonald
▼ © Michael S. Quinton

"The Most Beautiful Forest Dweller"

BY AWAKE!
CORRESPONDENT
IN SWEDEN

I SAW it for the first time one day in June—"the most beautiful forest dweller," as it has been called by some here. It is the great gray owl, or, as it is sometimes known, the Lapland owl.

This entralling giant owl makes its home in parts of Finland and northern Sweden as well as farther eastward in Siberia, Alaska, and Canada. It is secretive and difficult to find if you do not know where its nest is. Once you have found the nest, you will also find that the owl is quite fearless.

Studying the Hunter

I was able to study the finely marked male Lapland owl as he scouted for food. He would suddenly leave a bough and try to catch a mouse. Did he get his prey? Oh, yes! I could clearly see a little rodent hanging in his talons as he moved upward in slow, imposing flight upon huge wings that stretched 50 inches from wing tip to wing tip.

The Lapland owl does not breed regularly every year as do many other owls. This giant owl feeds only on small rodents, so some years, when these are in short supply, breeding stops completely. During other years, when food is plentiful, there may be four or more young ones in each nest.



Choosing a Mate

Spring is the mating season for owls, and the female chooses her mate carefully, though the handsome appearance of her suitor is not her primary concern—as it may be for many females of the human species. According to studies by some bird watchers, the male has to show that he is a skillful hunter. Before any plans are made for a family, he has to provide the female with food.

If plenty of mice are available and the male is a skillful "breadwinner," the food he gives the female will cause her to put on weight. This increased weight acts as a signal to her body, indicating how many eggs it is to produce.

The male is now entirely responsible for the hunting, which requires a great deal of energy. He is urged on by the female's begging call, since all her energy is concentrated on producing eggs and caring for these valuable assets.

Locating the Nest

Through my binoculars I watched the beautiful male as he regularly passed overhead carrying prey. Eventually, I was able to locate the nest. Lapland owls do not build nests of their own but often take over nests of brushwood from other birds of prey living in the forest. In the absence of a nest, the owl may use a dead stump.

In the nest, I found two little downy chicks gazing in open-eyed wonder at everything around them. With a chorus of begging calls, they turned their hungry eyes toward their mother, who was sitting nearby watching. Getting too close to the young ones at this time could be hazardous. If the female feels that her young ones are threatened, she will come flying in silently and attack the intruder with

needle-sharp talons. So it is important to be wary and study owls at a respectful distance.

Feeding and Training

On arriving at the nest, the male shifted the prey from his talons to his beak and presented the mouse to one of the young. The feeding of one young bird is accompanied by tremendous sound effects from the bird next in line to receive a mouthful.

After a young one has eaten its coveted meal, it exhibits an almost comical change of behavior. Its countenance, which had up until then been bright and alert, suddenly changes, and the chick starts to act as if it were drunk! All its energies are directed toward digesting the food, and it soon collapses into a shrunken pile of soft, fluffy feathers. But the sibling closest to it has slowly started to get bright eyed and is on the way to recovering from the intoxicating effect of its last feeding.

Things go on this way until the middle of June. By then the young will be four weeks old and can flutter out from their nest, urged along by their mother's call. At first, they climb about in the trees, with great skill. There predatory animals are not as much of a threat as they would be on the ground.

In time, the chicks move between the boughs using their wings, thus practicing flying. After a while, they develop their own ability to fly and hunt. Also their appearance changes, so that they too may be considered 'beautiful forest dwellers.'

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A Matter of Conscience

THE 1944 classic movie *Arsenic and Old Lace* depicted the rapid death of several elderly men after drinking elderberry wine spiked with arsenic. The movie epitomizes the common perception that arsenic is always a fast-acting, lethal poison. In fact, the sudden deaths portrayed in the movie were due, not to the arsenic, but to the strychnine and the cyanide that were also added to the wine cocktail.

"The manifestations of arsenic poisoning are typically not acute," writes Dr. Robert E. Gallagher in *The New England Journal of Medicine*. He does add, however, that "arsenic poisoning due to contaminated drinking water and industrial pollutants is a serious public health problem in many parts of the world, where it predisposes people to a variety of diseases, including skin, bladder, lung, and liver cancers."

Given the above information, it is understandable that health-care providers would not normally consider prescribing arsenic as a form of treatment. But follow this experience from Canada carefully. Notice how when blood transfusion and then arsenic were proposed as treatments, a clash of conscience developed between a patient named Darlene and her doctors, nurses, and the pharmacist involved. Darlene tells her story this way.

"In May 1996, I had some problems with severe bruising, hemorrhaging, and unusual bleeding of the gums. My hematologist, Dr. John Matthews, in Kingston, Ontario,



diagnosed the problem as a rare type of cancer called acute promyelocytic leukemia (APL). After a series of tests, including a bone-marrow diagnostic, Dr. Matthews in a very kind manner explained what APL is and how the problem is treated. The normal treatment protocol included a blood exchange along with chemotherapy, but my Bible-trained conscience would not allow me to accept blood transfusions.

"Rather than lose precious time by trying to change my mind, wisely the doctors made a search for another medical treatment. The modified treatment involved the use of a vitamin-A derivative, in combination with moderately intensive chemotherapy. My leukemia went into remission for three months, only to return with a vengeance. The pains in my head, caused by the swelling of the brain, were unbearable. Furthermore, I had built up a resistance to the treatment. It was then that the doctor informed us that without blood transfusions there was no treatment for me. We were told that I had less than two weeks to live.

"The next few days were frantic, with more blood tests, visits to the lawyer about my will, and funeral arrangements. During this interval Dr. Matthews told us of an unusual medical therapy used successfully by medical doctors in China for APL, which had been reported on in respected scientific journals such as *Blood* and *Proceedings of the National Academy of Sciences*. While doing research, the doctor and a colleague had

read in a medical journal that 'it will probably come as a surprise to many that arsenic trioxide has been used successfully in intravenous form, with limited toxicity, for the treatment of acute promyelocytic leukemia (APL).'

"Now there were two options—either violate my conscience and accept a blood transfusion or take this little-known treatment with arsenic. I chose the arsenic treatment.* Little did I realize the turmoil of conscience that would touch doctors, nurses, the pharmacist, and even hospital officials.

"The hospital subsequently checked with regulatory authorities to confirm that arsenic trioxide could be administered. Only then could they permit such treatment to proceed. Initially the pharmacist was reluctant to cooperate, since in good conscience he questioned its safety. My attending physicians, Dr. Matthews and Dr. Galbraith, had to make convincing and positive presentations on this treatment. Eventually, being presented with sufficient medical evidence about the treatment, the hospital authorities and the pharmacist felt that they could cooperate.

"The pharmacist agreed to prepare the arsenic product and sterilize it for immediate infusion. But now the collective conscience of the nurses would not allow them to hang the intravenous bag of the controversial substance. They stood by as the doctors hung several units of the solution themselves. The nurses pleaded with me to take blood. They were convinced that I would die, so I appealed to their professionalism, asking them to respect my conscientious refusal of blood. I expressed my gratitude, put my arm around them, and asked them to put their personal feelings aside. We maintained a good relationship. The arsenic trioxide treat-

ments continued for six months, and I recuperated well. The doctors then agreed that I could have the balance of the treatments at home.

"Arrangements for home visits were made with the Victoria Order of Nurses, who administer home-care services. Again the matter of conscience came into the picture. They too were reluctant to administer the solution. Meetings, letters, and medical articles from respected medical journals turned things around. The nurses subsequently consented to cooperate. In September 1997, my treatments were completed.

"Oh, yes, my kind of cancer can come back. The doctor says that it is like living on a time bomb. But I have learned to find joy with each passing day, never forsaking my place of worship and keeping busy sharing the Bible-based hope of a time when 'no resident will say: 'I am sick.''"—Isaiah 33:24.

Medical professionals have a weighty responsibility in providing quality health care. They generally take this seriously and conscientiously proceed with treatment within the bounds of their expertise and current knowledge. As this experience bears out, doctors, nurses, and other health-care professionals can accomplish much by remaining flexible and sensitive to the convictions and conscience of the informed adult patient.

IN OUR NEXT ISSUE

**The Olympics
—What Happened to the Ideals?**

**Louis Braille—Bringing Light
to Prisoners of Darkness**

**The Original Lumberjack
Is Still on the Job**

* While reporting the experience, *Awake!* does not endorse any particular form of medicine or treatment.

A Visit to “RUSSIA’S Oldest City”

MY WIFE, Linda, and I arrived in Moscow in July 1998 on a work assignment. We had never been in Russia before, and we were eager to learn about the country, its language, and its people.

Soon after we arrived, I noted the intriguing engraving on the back of the green five-ruble paper note. It showed what looked like a 14th- or 15th-century brick fortress overlooking a river, with an island and a lake in the background. Engraved in the corner was the name of the place: Novgorod.

I asked Muscovites about it. All of them knew about Novgorod, but only one I asked had actually been there. I was told that it was less than 350 miles from Moscow, an overnight train ride in the same direction as St. Petersburg. My wife and I decided to go.

Our Trip to Novgorod

Since I had bought tickets to St. Petersburg before, I knew where to purchase them. The number of our train car and compart-

ment were printed on our tickets. We arrived at the train station a little after nine one evening last September and settled into our private compartment in car number 5.

With a groan and then a resistive jerk, the car lurched forward. This was to be repeated all night long, as we were on a local train. We would stop, and after a few minutes, another train would roar by. A few more minutes would pass as we sat on the siding in the quiet of the night. Then the brakes would be released, and our car would protest, groan, moan and, in the end, follow the rest of the train. I would then fall asleep again.

The matron of the wagon knocked on our door just before we arrived in Novgorod. The train station was busy, even at seven in the morning. At a newsstand, we found a map of the city and also asked the salesclerk how much a taxi ride to our hotel should cost. For 20 rubles (about 70 cents) the taxi driver took us in his Russian Lada to our hotel, across the Volkhov River—the river in the engraving.

The driver told us that he wasn't Russian but that his wife was. That's why he lives in Russia. The receptionist at the hotel welcomed us and even let us check in, although it was only 7:30 a.m. She gave us ideas as to where to go. We took a walk by the river and then had breakfast.





*The Russian five-ruble note,
and a photograph of the
same view of Novgorod*

1997

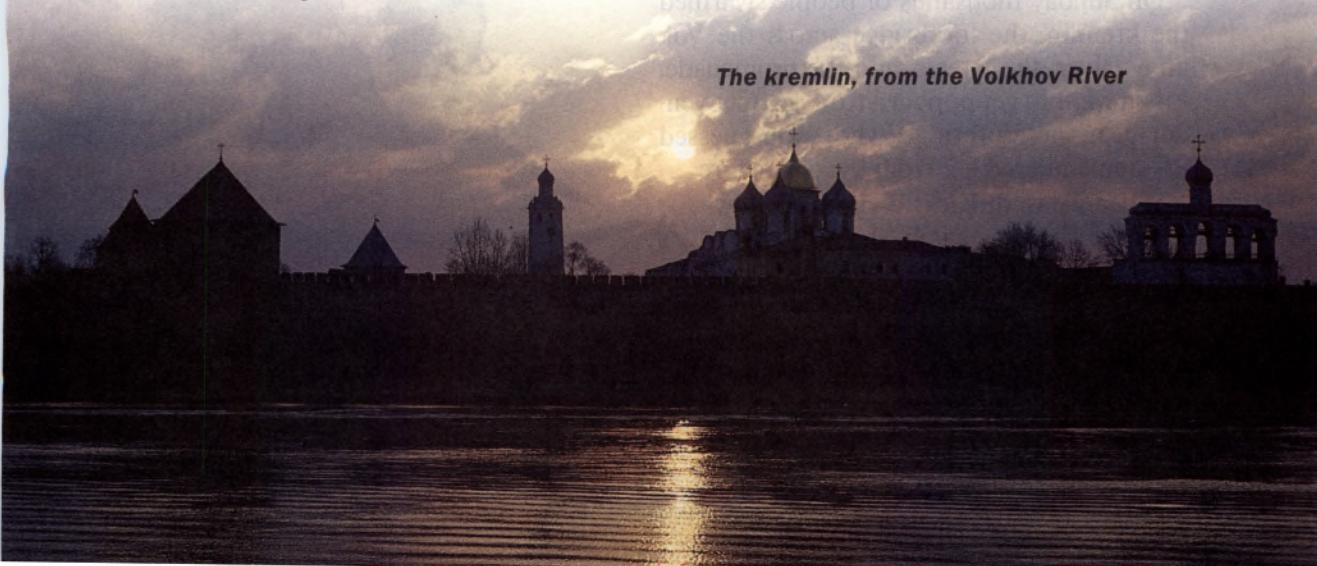
We saw a park with neatly cut grass and trees that were trimmed. The promenade along the river was resplendent with decorative beds of flowers. Although there were tourists—the occasional Korean-made bus came through with a tour group—Novgorod isn't a tourist town. Most of the people we saw were Russians.

We were told by a number of local residents that Novgorod is Russia's oldest city. It is said to be over 1,100 years old. Testifying to its religious heritage are dozens of old churches throughout the city. On a map, Linda counted 25 in just the area of the hotel.

We found a tower inside the kremlin—not the Kremlin in Moscow; "kremlin" is the Russian word for "city fortress." The tower was accessible clear to the top. For 5 rubles (less than 20 cents), we were allowed to climb the spiral stairs to the top. I compared the view with the picture on the five-ruble note. The trees had grown, and a cover had been put over the walkway of the kremlin wall. Yet, there was the Volkhov River—the same river and the same island and lake in the background. Only the crane dredging the river wasn't in the engraving.

We noticed a remarkable thing on our

The kremlin, from the Volkhov River





Crossing a footbridge over the Volkhov River

second day in Novgorod. While the city is considered small by Russians—despite its population of 250,000—its people remembered us and details about us! The waitress at the hotel remembered us from the previous day. She remembered we liked coffee, and she kept bringing it out to us. She also remembered that we didn't want juice and so didn't ask if we wanted it the second day. When I asked for the check, Olga—I remember her name—smiled and said, looking straight at me, "It's room 356, isn't it?"

On Sunday thousands of people swarmed the kremlin, the footbridge across the Volkhov River, the streets, and the promenade. Linda went to get popcorn from a street vendor near the footbridge, who—you guessed it!—remembered her from the day before.

When we went back to climb the tower to see the view again, the girl collecting the entrance fee smiled at us and said: "You were here yesterday, weren't you? Well, you already paid yesterday, so you don't have to pay again."

We met David, a friend we had known years before in New York. He had married a Russian girl, Alyona, and they were now living in Novgorod, serving as ministers with a congregation of Jehovah's Witnesses. We met in front of the Detinets Restaurant, which is built right into the wall at the top of the kremlin. There we were served the best Russian food we had ever eaten. A three-course meal (salad, soup, main course, coffee, and dessert) seemed relatively inexpensive to us.

Novgorod was a city with friendly people who remembered us, excellent food, and just enough history and variety to make it interesting. *We'll be back.*—Contributed.

Religion was prominent in Novgorod for centuries



YOUNG PEOPLE ASK . . .

"Boys make wolf whistles and catcalls."—Carla, Ireland.

"Girls call on the telephone again and again. They try to wear you down."—Jason, United States.

"He kept touching my arm and trying to hold my hand."

—Yukiko, Japan.

"Girls make suggestive comments to me."

—Alexander, Ireland.

"One boy kept shouting things at me from the school bus. He didn't really want to go out with me. He was just harassing me."

—Rosilyn, United States.



How Can I Deal With Sexual Harassment?

A FLIRTATIOUS stare, a "compliment" with sexual overtones, an obscene joke, an overtly sexual touch—such treatment, when unwelcome and repeated, often amounts to what can be called sexual harassment. Although global statistics are hard to come by, surveys indicate that most school-age youths in the United States have experienced it.

Just what is sexual harassment? The book *Coping With Sexual Harassment and Gender Bias*, by Dr. Victoria Shaw, defines it as "bothering someone in a sexual way . . . It can be physical (such as touching someone in a sexual way), verbal (such as making unwelcome comments about someone's appearance), or nonverbal." Sometimes the harassment involves crude propositions.

Much of the harassment in school probably comes from your peers. However, in some cases the offending behavior has come

from adults, such as teachers. An article in *Redbook* magazine speculates that the relatively small number of teachers who are actually convicted for sexual offenses "probably represents only the tip of the iceberg."

Women—and sometimes men—were subject to such mistreatment even back in Bible times. (*Genesis 39:7; Ruth 2:8, 9, 15*) And the Bible made this grim prediction: "There will be difficult times in the last days. People will be selfish, greedy, boastful, and conceited; they will be insulting . . . ; they will be unkind, merciless, slanderers, violent, and fierce." (*2 Timothy 3:1-3, Today's English Version*) So it is possible, even likely, that you will encounter sexual harassment yourself.

God's View

Admittedly, not all youths are distressed by sexually aggressive behavior. Some may find it amusing—or even flattering. One



Letting your Christian beliefs become common knowledge can be a protection

simply ignore her. Instead, he firmly rejected her immoral advances. (Genesis 39:8, 9, 12) Today, being firm and direct is still the best way to fend off harassment.

True, the one bothering you might not mean to offend you. What looks like harassment may actually be an unpolished attempt to attract your attention. So do not feel that you have to resort to uncouth behavior yourself to halt an unwanted advance. Simply saying something like, 'I don't like that kind of talk' or, 'Keep your hands to yourself, please' may get your point across. However you word it, do not water down your message. Let your no mean no! Young Andrea puts it this way: "If they don't catch on to your kind hints, you have to tell them straight out. It often comes to that." A firm 'Cut it out!' may do the job.

If the situation escalates, do not try to handle things alone. Try talking it over with your parents or other mature adults. They may have some practical suggestions for dealing with the situation. As a last re-

By not associating with the wrong crowd, you may prevent harassment

disturbing U.S. survey showed that among victims of sexual harassment, 75 percent admitted that they themselves had harassed others. Some adults may aggravate the problem by downplaying the seriousness of sexually aggressive behavior, brushing it off as just childish experimentation. But how does God view it?

God's Word, the Bible, clearly condemns all forms of sexual harassment. We are told not to "encroach upon the rights" of others by violating sexual boundaries. (1 Thessalonians 4:3-8) In fact, young men are specifically commanded to treat "younger women as sisters with all chasteness." (1 Timothy 5:1, 2) Furthermore, the Bible condemns "obscene jesting." (Ephesians 5:3, 4) Therefore, you have a right to feel angry, upset, confused, and even demeaned when you are harassed!

What Do I Say?

How, then, should you react if someone bothers you in this way? Sometimes a weak or vague response only makes a harasser try harder. The Bible tells us that when Joseph was propositioned by his employer's wife, he did not



sort, they may even feel it necessary to alert school officials. As uncomfortable as doing so might make you, it could protect you from further victimization.

Preventing Harassment

Of course, it's best to avoid being victimized in the first place. What might help in this regard? Andrea advises: "Never give the impression that maybe you are kind of interested. Others will hear about it, and the pressure will continue." The way you dress can play a major role. Young Mara says: "I don't dress like a grandmother, but I do avoid clothes that attract attention to my body." Rejecting sexual advances while at the same time wearing provocative clothes may be sending a mixed message. The Bible recommends dressing "with modesty and soundness of mind."—1 Timothy 2:9.

Your choice of friends also affects how you are treated. (Proverbs 13:20) Rosilyn observes: "When some of the girls in a group like the attention from guys, the guys may assume that all the girls in the group feel the same way." Carla made the same point: "If you hang around with ones who give in to the remarks or who enjoy the attention, then you will get harassed too."

The Bible tells of a young girl named Dinah who associated with girls from Canaan—where women were known for their loose behavior. This led to her being sexually assaulted. (Genesis 34:1, 2) With good reason the Bible states: "Keep strict watch that how you walk is not as unwise but as wise persons." (Ephesians 5:15) Yes, being "strict" about how you dress, how you speak, and with whom you associate can do much to protect you from harassment.

For Christian youths, however, one of the most effective ways of fending off harassment is simply to let others know of your religious stand. Young Timon, one of Jehovah's Witnesses, recalls: "The kids knew that I was a Witness, so that stopped almost all the harassment." Andrea observes: "Telling them you are a Witness makes a big difference. They will realize that in many ways you are different from them and that you have strict moral standards."—Matthew 5:15, 16.

If You Are Harassed

Try as you may, you cannot entirely escape rude, abusive people. But if you are the victim of a harasser, there is no reason for you to pummel yourself with guilt—as long as you have behaved like a Christian. (1 Peter 3:16, 17) If the situation distresses you emotionally, find support by talking to your parents or to mature ones in the Christian congregation. Rosilyn admits that it's hard to feel good about yourself when you are being harassed. "Just having companionship," she says, "someone you can talk to, is very good." Remember, too, that "Jehovah is near to all those calling upon him."—Psalm 145:18, 19.

Taking a stand against mistreatment is not easy, but it is worth it. Consider, for example, the Bible account of a young woman from Shunem. Although she was not really harassed as the term is commonly understood today, she did receive unwanted advances from Solomon, the rich and powerful king of Judah. Because she was in love with another man, she resisted those advances. She could therefore say of herself with pride, "I am a wall."—Song of Solomon 8:4, 10.

Show the same moral fiber and determination yourself. Be a "wall" when it comes to unwanted advances. Make your Christian stand clear to everyone around you. By doing so, you can remain "blameless and innocent" and have the confidence that you have pleased God.—Philippians 2:15.*

* More advice on sexual harassment is provided in the *Awake!* issues of May 22, 1996; August 22, 1995; and May 22, 1991.

WATCHING THE WORLD

World's Leading Tobacco User

China is "the world's largest producer and consumer of tobacco," reports *The Journal of the American Medical Association*. "Of China's population of 1.2 billion, more than 300 million men and 20 million women are smokers." Doctors from the Chinese Academy of Preventive Medicine and the Chinese Association on Smoking and Health, in Beijing, along with Western doctors have released the results of a nationwide survey of more than 120,000 respondents. Their conclusion? China is in "an early stage of a tobacco epidemic," and "at least 50 million Chinese smokers alive today are expected to die prematurely." The average age of first-time smokers in China has declined by about three years since 1984, from age 28 to 25, states the report. Only a minority recognized that lung cancer and heart disease can be caused by smoking.

When Parents Care

"Scientists now say the secret of a child's success is a parent who cares about his learning—and shows it," states *The Toronto Star*. Statistics Canada and Human Resources Development Canada have jointly tracked the development and health of 23,000 Canadian children aged 4 to 11 since 1994. Evidently, most Canadian parents take an active interest in their children's schooling, especially in the early grades. The report states that "95 per cent of children aged 10 and 11 say their parents encourage them to do

well at school all or most of the time" and that 87 percent of parents "read with their children every day during Grades 1 to 3." Mary Gordon, administrator of parenting programs for the Toronto District School Board, says: "We now know you don't have to be rich or educated to be a good parent but you have to be present, alert and interested." She adds: "It's the nurturing relationship that grows brains, and this happens first at home."

Teens and Telephones



Teenagers are famous for talking on the phone. "They reach for the receiver for fun or when they are bored," notes the Polish weekly *Przyjaciółka*. Many, however, may not consider how long they are on the phone or be aware of the cost of a call. What is the remedy? The magazine suggests that the young person be required to pay for at least part of the phone bill. It recommends reminding teens that "the telephone is to be shared and that others would also like to use it from time to time."

Gunslinger Beetle

"High-speed photographs have given scientists an insight into the mechanisms that make

the bombardier beetle the surest shot with the most effective arsenal in the insect world," reports the *Independent* newspaper of London. Using a pair of shieldlike deflectors at the tip of its abdomen, the beetle can precisely aim a stream of hot acids at a potential enemy and smother it in a fraction of a second. As the beetle is immune to the effects of this liquid, it can also defend itself by targeting specific sites on its own body, including its back, when under attack by smaller swarming insects, such as ants. Scientists at Cornell University, in Ithaca, New York, who photographed the beetle in action note: "Although it was known that bombardier beetles can aim their spray by revolving the abdominal tip, the degree of precision with which they target their ejections had escaped notice."

Kitchen Rage

"The increasing complexity of hi-tech domestic appliances is prompting outbreaks of 'kitchen rage,'" reports the *Independent* newspaper of London. Frustrated householders "discover they cannot microwave a cup of soup, wash a pair of socks or use the blender-cum-mixer without spending hours poring over a manual." Psychologists point out that modern technology permits designers to pack too many features into appliances, and they cite the average video player as a prime example of overcomplication. Cary Cooper, psychology professor at Manchester University, explains: "People

are confronted by new technology at work everywhere, and when they get home they want a more simple life that doesn't remind them of work."

Raw Sprout Risk

After an increase in reports of foodborne illness, the U.S. Food and Drug Administration has advised consumers that anyone who wants to reduce the risk of foodborne illness should avoid eating uncooked seed sprouts, reports *FDA Consumer* magazine. Many people enjoy raw alfalfa, clover, or bean sprouts. However, these have been linked to outbreaks of bacterial infection in several countries, notes *The New York Times*. Small children, the elderly, and those with compromised immune systems are particularly susceptible. Researchers tested various ways of curbing the bacteria, including washing the sprouts in chlorine or alcohol solutions, but none were totally effective. They explained that "the moisture and warm temperatures of the sprouting process provide ideal conditions for the organisms to flourish," states the *Times*.

London's Languages

Schoolchildren in London, England, speak at least 307 languages, reports that city's newspaper *The Times*. Dr. Philip Baker, one of the authors of the first survey of languages currently spoken in London, was surprised at their diversity. He said: "We are now pretty certain that London is the most multilingual city in the world, more so even than New York." The figure of 307 does not in-

clude hundreds of dialects and may well be an underestimate. Only two thirds of the city's 850,000 schoolchildren speak English at home. The largest foreign-language groups come from the Indian subcontinent. At least 100 African languages are spoken. In just one school, pupils speak 58 languages.

Fungus Attack!



Athlete's foot, a painful fungal infection of the toes and soles of the feet, is spreading rapidly in Germany, reports the newsmagazine *Der Spiegel*. One in 5 Germans suffers from it, and in some other European countries, there is an even higher level of infection. The chances of becoming infected are high wherever people walk barefoot in a confined area—such as at saunas, swimming pools, or even some religious edifices. Since the fungus spores are very hardy, foot-disinfectant spray machines or basins—where the chemicals have just a few seconds to take effect—often promote the spread of athlete's foot rather than prevent it. How can you protect your feet? Fungus specialist Dr. Hans-Jürgen Tietz recommends using bathing slippers in all places where others walk. Most important is keeping your feet dry. Drying them thoroughly, especially between the toes, prevents fungi

from becoming established and flourishing.

Taking the Salt out of Seawater

Seawater is being converted into drinking water at a desalination plant on a small island off the coast of South Australia, reports the newspaper *The Australian*. Though desalination is not new, "the technology has been hailed as a breakthrough in desalination because it does not require chemicals," states the report. To supply the 400-member community of Penneshaw, on Kangaroo Island, "water is drawn from the ocean and forced through a membrane at high pressure to remove the salt. The concentrate, or brine, can then safely be released back into the sea." Although hopes run high for wider use of the new system, it remains expensive, although it is less costly than traditional water-purification methods, says *The Australian*.

"He's in a Meeting"

In a survey of 148 secretaries who work for executives of major companies, 47 percent said that their bosses had asked them to mislead others on occasion, reports *The Wall Street Journal*. One secretary, a Texas marketing assistant, said that in order to keep her job for 30 years, she has had to tell callers that her boss was "in a meeting," even when he was alone in his office. Some untruths can be especially explosive, such as telling a wife that you don't know where her absent husband is. One secretary was fired after she truthfully informed a caller that an overdue check was not in the mail.

FROM OUR READERS

Twentieth Century The December 8, 1999, issue was great! I benefited so much from it, particularly from the series "The 20th Century—Critical Years of Change." It was very informative and concise. It awoke in me the desire to be more spiritually alert in these last days.

M. V., Philippines

Kidnapping What a fine message was contained in the series "Kidnapping—Why a Global Threat!" (December 22, 1999) This article came when the whole world was eagerly watching the drama of the hijacking of the Indian Airlines plane on December 24. I wish the authorities would read and apply the suggestions given in your article on controlling kidnapping!

A. S., India

Coma Victim Thank you for the experience of Michiko Ogawa. ("Sustained by Hope to Endure Trials," December 22, 1999) Her husband's accident happened when I was five days old. The thought that he has been unconscious nearly my entire life is overwhelming! She has truly had Jehovah's help in raising her two boys and in enduring this trying circumstance.

L. N., United States

The article touched my heart deeply. I live alone and recently learned that I have cancer. After reading this article, I wanted to hug Michiko and thank her for being faithful to Jehovah in spite of trials. At first, in my case, I wanted a miracle to occur. But now, like Michiko, I simply want Jehovah's will to be done.

M. S., United States

Bloodless Medicine The series "Bloodless Medicine and Surgery—The Growing Demand" (January 8, 2000) was the product

of advanced research. I am attending nursing school and gave the magazine to a colleague and to one of my teachers. On previous occasions these individuals have displayed prejudice against Jehovah's Witnesses. But they were pleased to receive these articles along with other information on Jehovah's Witnesses.

R. P., Switzerland

Two of my children were involved in an automobile accident in 1998. My son's leg was crushed. He stated repeatedly that he did not want blood! But the hospital wasn't equipped for bloodless surgery. He was transferred to another hospital, but the hospital staff were unwilling to operate before his hematocrit reached 35. (It had bottomed out at 8.1.) They developed a laissez-faire attitude, as if they were waiting to see if he would die. However, as they applied bloodless strategies—elevating his leg, administering erythropoietin, and so forth—his hematocrit climbed to 35.8! The surgery was successful, but the delay in treatment left him with much permanent damage. I wish that every doctor, surgeon, and anesthesiologist were required to read these articles.

L. L., United States

It is comforting to know that many doctors are willing to cooperate with Jehovah's Witnesses. This magazine is going straight to my doctor. I know he will appreciate it.

U. M., United States

The article came right at the time of my scheduled surgery. When my blood count dropped because of excessive blood loss, I used this magazine to explain to the hospital staff and family members why I will not accept blood. Thanks to Jehovah, I have made a full recovery.

C. B., United States

Help to Break Free From Delinquency

BY AWAKE! CORRESPONDENT IN FRANCE

RECENT events have brought to the fore an alarming breakdown of law and order in many of France's deprived urban areas. According to the French magazine *L'Express*, "urban violence has multiplied practically fivefold in six years." What is more, the number of minors involved in violent crime has increased dramatically.

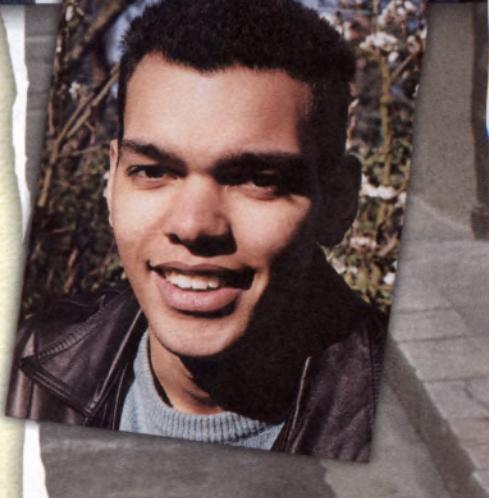
In addition to engaging in vandalism, drug dealing, extortion, arson, and theft, delinquents have been directly targeting representatives of the State. Policemen, firemen, and public transportation workers, among others, are regularly subjected to violent aggression.

Why so much violence? "Against the backdrop of the collapse of the family unit, it is a revolt against all that the authorities represent," explain two sociologists. They also cite "the [youths'] feeling of being abandoned by the authorities" and having no "prospect of a meaningful future."

Jehovah's Witnesses regularly preach the Bible's message of hope in areas where delinquency is rife. In a recent program on French television, a journalist observed: "Jehovah's Witnesses crisscross the suburbs and the deprived neighborhoods—areas that sometimes seem to have been abandoned by the social services, the police, and the republic. In these buildings and streets, they speak and they listen." Their work has a positive impact, as the following letter from a youthful reader of *Awake!* observes.

"I would like to thank you with all my heart for your publications. Not only have you helped me personally but my relationship with my parents has improved. I am only 16 years old and of Muslim origin.

"What I want to say is that you have succeeded in bringing me out of delinquency. As a result, I follow my religion more closely, but I also read the Bible. Thanks to you, I am also continuing my schooling. What is more, you have helped several people in my neighborhood to break free from delinquency through your magazines—which I lend them each month. I am very grateful to you and feel indebted."



MAN'S INHUMANITY

Will It Ever End?

A copy of the March 8, 2000, issue of *Awake!* dealing with the thorny problem of slavery, which, sadly, persists in parts of the world, was given to the Italian Minister for Social Solidarity, Livia Turco. In a letter to the branch office of Jehovah's Witnesses in Italy, she acknowledged:

"Modern forms of slavery, affecting especially women and children, constitute a grave emergency in which millions of human beings still suffer inhuman conditions." She concluded: "Every voice raised in indignation against this unacceptable reality is an irreplaceable contribution, and when it reaches a public as vast as the readership of [Awake!], it is even more telling."

Thanks to the distribution of more than 20 million copies of each issue of *Awake!* in 82 languages, millions of readers are not only informed of the nature of today's problems but also provided with Bible-based solutions to them.

