

Awake!

October 8, 1999

MUSIC

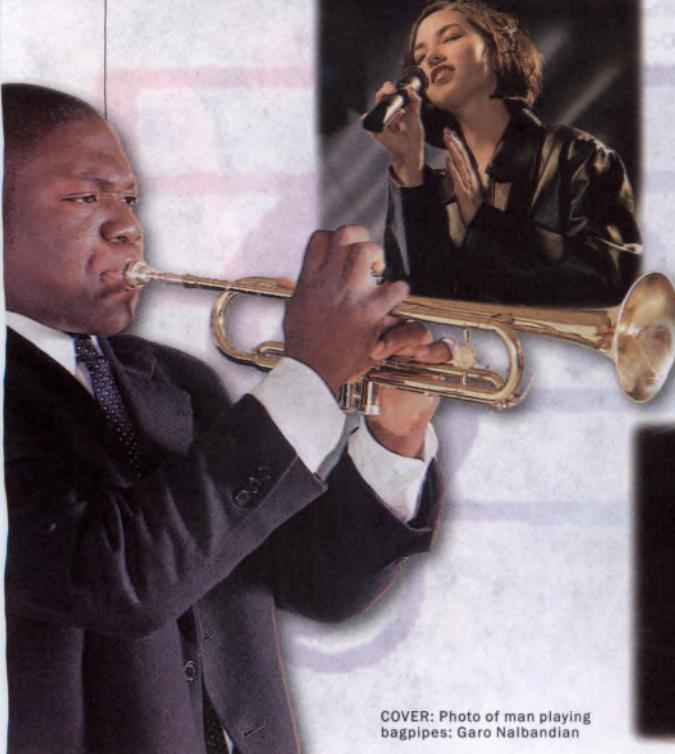
More Powerful
Than You
May Think



Music—More Powerful Than You May Think 3-10

What effect can music have on us?

What caution should we exercise when choosing what we listen to?



COVER: Photo of man playing bagpipes; Garo Nalbandian



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The Power of Music

*"Music alone with sudden charms can bind
the wandering sense, and calm the troubled mind."*

SO WROTE William Congreve about 300 years ago in his *Hymn to Harmony*. Centuries earlier, ancient Greek writings claimed that "musical training is a more potent instrument than any other, because rhythm and harmony find their way into the inward places of the soul."

The truthfulness of that has been seen by some parents who have observed their teenagers becoming sullen and uncooperative after feeding on a steady diet of heavy metal music. It was also seen during the 1930's and 1940's in Germany when the Nazis used stirring march music to help prepare large crowds to listen to Adolf Hitler's mesmerizing speeches.

Unquestionably, music can affect minds and hearts and can be used to manipulate them either for good or for bad. For example, exposure of young children to certain types of music is believed to enhance their intellectual and emotional development. Even stammerers can sometimes sing sentences that they cannot speak.

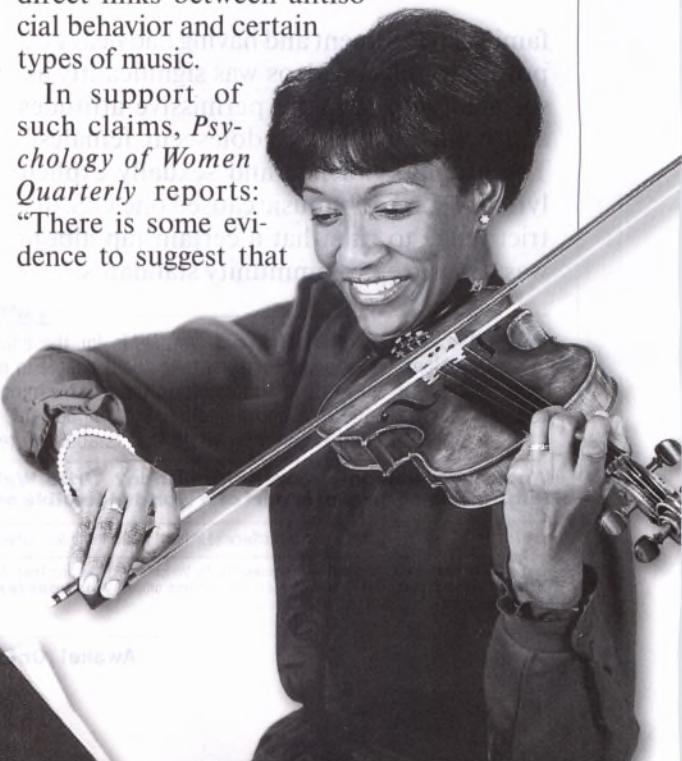
The effects of music upon patients who have neurological diseases causing movement disorders are sometimes astonishing, according to Anthony Storr in his book *Music and the Mind*. Storr cites the example of

a female patient: "Frozen into immobility by [Parkinson's] disease, she would remain helplessly unable to move until she was able to recall tunes she had known in her youth. These would suddenly release her ability to move again."

A Cause for Concern

So it seems that there are benefits that can be attributed to the power of music. However, there is the danger that corrupt or greedy people may use the power of music as a deadly tool. Some studies have shown direct links between antisocial behavior and certain types of music.

In support of such claims, *Psychology of Women Quarterly* reports: "There is some evidence to suggest that



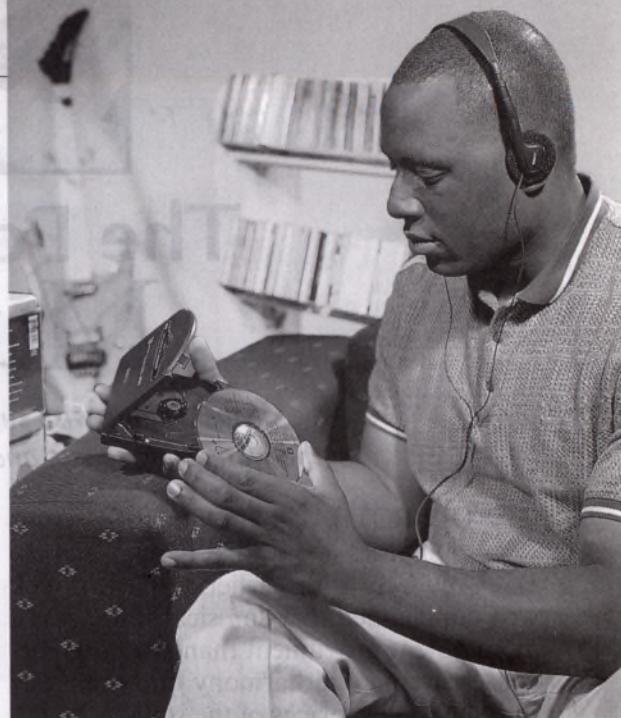
viewing rock videos has the same effect as viewing pornography in that men who were shown violent rock videos expressed more calloused and antagonistic attitudes toward women than did men who were shown non-violent rock videos."

This effect is not limited to men. Women can also be affected. That same report adds: "Men and women alike may begin to accept the negative messages these songs present concerning women's lack of worth."

The journal *Sex Roles* agrees with this conclusion, stating: "A recent study . . . found the combination of being from an unsatisfactory

Music can affect hearts and minds either for good or for bad

family environment and having had heavy exposure to music videos was significantly associated with sexually permissive attitudes and behavior among adolescent females." The graphic violence and sexually explicit lyrics of some rap music caused one U.S. district judge to rule that a certain rap album was "obscene by community standards."



Was the judge being extreme? By no means! The journal *Adolescence* reached the conclusion that "both the adolescents and their parents report significantly more turmoil in the lives of the adolescents who listen to heavy metal and rap." Such turmoil is linked with "aggressive and destructive behaviors" and low academic achievement.

Indeed, links between certain types of music and sex, suicide, and antisocial behavior are well documented. But does this mean that all music is associated with such negative effects? Read what the following articles have to say about this.

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.

Would you welcome more information? Write Watch Tower at the appropriate address on page 5. Publication of *Awake!* is part of a worldwide Bible educational work supported by voluntary donations.

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Why Music Affects Us

MUSIC and language are uniquely human. A world without either would be hard to imagine. "Both language and music are characteristics of the human species that seem to be *universal*," says the book *The Musical Mind*. They are aspects of our need to communicate. So

it could be said that, as is true of language, when music "speaks" our emotions "listen."

Why and how does music speak to our emotions? To answer that, we need to consider: (1) the musical elements themselves and the way that our brains process them; (2) our emotional makeup and cultural backgrounds, which influence our reaction to music; and (3) language, which can also affect our reaction.

The Musical Elements

The characteristics of music are often referred to as "musical elements." These elements include the *tone*, or timbre, of an instrument. For example, the French horn has been described as "portentous," or heavy, and its sound as quite different from the "haughty" trumpet. Although both belong to the same family, or group, of wind instruments, each of them produces overtones, or harmonics, of varying strength. This is what gives each instrument its unique "voice."



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Composers use these qualities to create certain sonic effects to stir the emotions of the listener.

Probably one of the first elements we become familiar with is *rhythm*—perhaps while we are still in the womb, listening to our mother's heartbeat. It has been said that response to musical rhythm may be subconsciously influenced by our heartbeat or even our breathing. Hence, it may be no coincidence that most people appear to prefer musical tempo ranges between 70 and 100 beats per minute—the same range as the average heart rate of a healthy adult. At least this is what is suggested in the journal *Perceptual and Motor Skills*.

The great musical variety that these elements can produce becomes evident when a range of instruments and the sounds and melodies they produce are considered. The haunting voice of the bassoon in the second movement of Mozart's concerto for bassoon may evoke deep emotions and feelings. The plaintive sound of a Japanese *shakuhachi* flute may delicately touch the heart. The husky sound of the tenor saxophone makes a blues melody linger in the minds of many. The oompah of a tuba in a German band usually stirs up feelings of exuberance. The liltting strains of violins playing a Strauss waltz move many listeners to want to get onto the dance floor. Such effects are produced because "music speaks to the entire human being," according to Clive E. Robbins, of the Nordoff-Robbins Music Therapy Center, in New York.

Harmony, Discord, and Melody

Harmony produces pleasing sounds, while *discord* produces harsh ones. But did you know that these elements complement each other in some music? A piece of music that sounds harmonious probably has more discord in it than you would imagine. The constant interaction of harmony and discord provides a vacillating, though mostly imper-

ceptible, rise of tension, which finds its release in our emotions. This gentle emotional rocking is soothing, whereas discordant music alone can grate on the nerves and evoke unpleasant feelings—much as scraping fingernails on a slate or chalkboard would. On the other hand, if music is based only on harmony, it can be boring.

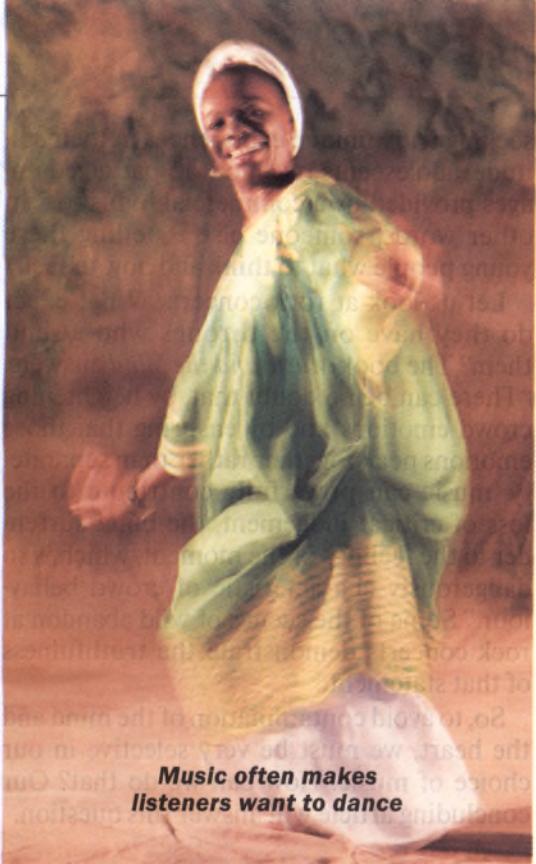
Melody is the tuneful arrangement of single notes in succession. According to some authorities, the word is derived from the Greek word *me'los*, meaning "song." Melody, according to dictionaries, is sweet music, any sweet sound.

However, it is not just any succession of sounds that makes a sweet melody. For example, large intervals occurring frequently between successive notes may make a melody dramatic but not sweet. On the other hand, notes flowing by with few big intervals can make a pleasant melody. The different arrangements of notes and intervals give a melody a sad or happy character. As with harmony, a melody creates its own tension and release, affecting our emotions because of the rise and fall of the pitch—that is, how high or low a note sounds.

When combined, all these elements create powerful forces that can stimulate or soothe our emotions. This is because of the various ways our brains perceive and process the music.

Music and the Brain

Some suggest that language and logic are predominantly functions of the left side of the brain, while music is processed in the right side of the brain, which deals largely with feelings and emotions. Whether this is so or not, it is obvious that music evokes spontaneous reactions from listeners. The journal *Perceptual and Motor Skills* expresses it this way: "Music has the power to create feelings and emotions in a quick and effective manner. What in a book would require many



**Music often makes
listeners want to dance**

sentences for description . . . , in music can often be conveyed by just one measure or one chord."

As to the interaction between seeing and hearing and the responses to each of these, the book *Music and the Mind* makes this interesting observation: "There is a closer relation between *hearing* and emotional arousal than there is between *seeing* and emotional arousal. . . . Seeing a wounded animal or suffering person who is silent may produce little emotional response in the observer. But once they start to scream, the onlooker is usually powerfully moved."

Music, Lyrics, and You

One school of thought maintains that a given piece of music has a similar effect on all listeners. However, another says that reaction to a melody or song reflects an individual's present state of mind or previous expe-

rience. An example of this might be when someone who has lost a loved one in death hears a certain song, perhaps at a place of worship. The song may bring back memories and cause sadness or even cause tears to well up in the bereaved person's eyes. Others who are not in that situation may sing that same song with a joyful heart.

Also consider the descriptions of the French horn and the trumpet given earlier. You may not agree that a French horn sounds portentous. To you it may sound boisterous or playful, whereas the trumpet may seem more soulful. Within each of us, there is a unique fountain of feelings that music can cause to well up—thus, we respond *in our own way*.

Music helps to connect words or ideas with emotions. Hence, few television or radio advertisements are presented without musical accompaniment. Often the words do not make much sense. However, if the right background music is used, the advertisement will play on the listeners' emotions. How true it is that the aim of most advertising is to make buying an emotional response rather than a logical one!

Whereas advertising may have an undesirable effect on the public's pocket, there is a much more serious downside to the power of lyrics and music. The *Journal of Youth and Adolescence* suggests that through lyrics repeated over and over again, songwriters teach adolescents to disregard others' opinions and to "hang tough." According to another source, the messages conveyed by "controversial rap lyrics . . . , more graphic than their heavy metal counterparts," can permeate the emotional makeup of the listener and result in antisocial behavior.

Could negative reactions be prevented if a person just listened to the music and ignored the lyrics? Well, it has to be acknowledged that to a great extent, the words in heavy metal and rap music are difficult to hear. In

fact, they often become almost unintelligible above the extraordinarily loud volume of the music. Yet, words or no words, the message is still there in the pulsating rhythm and the repeated melody!

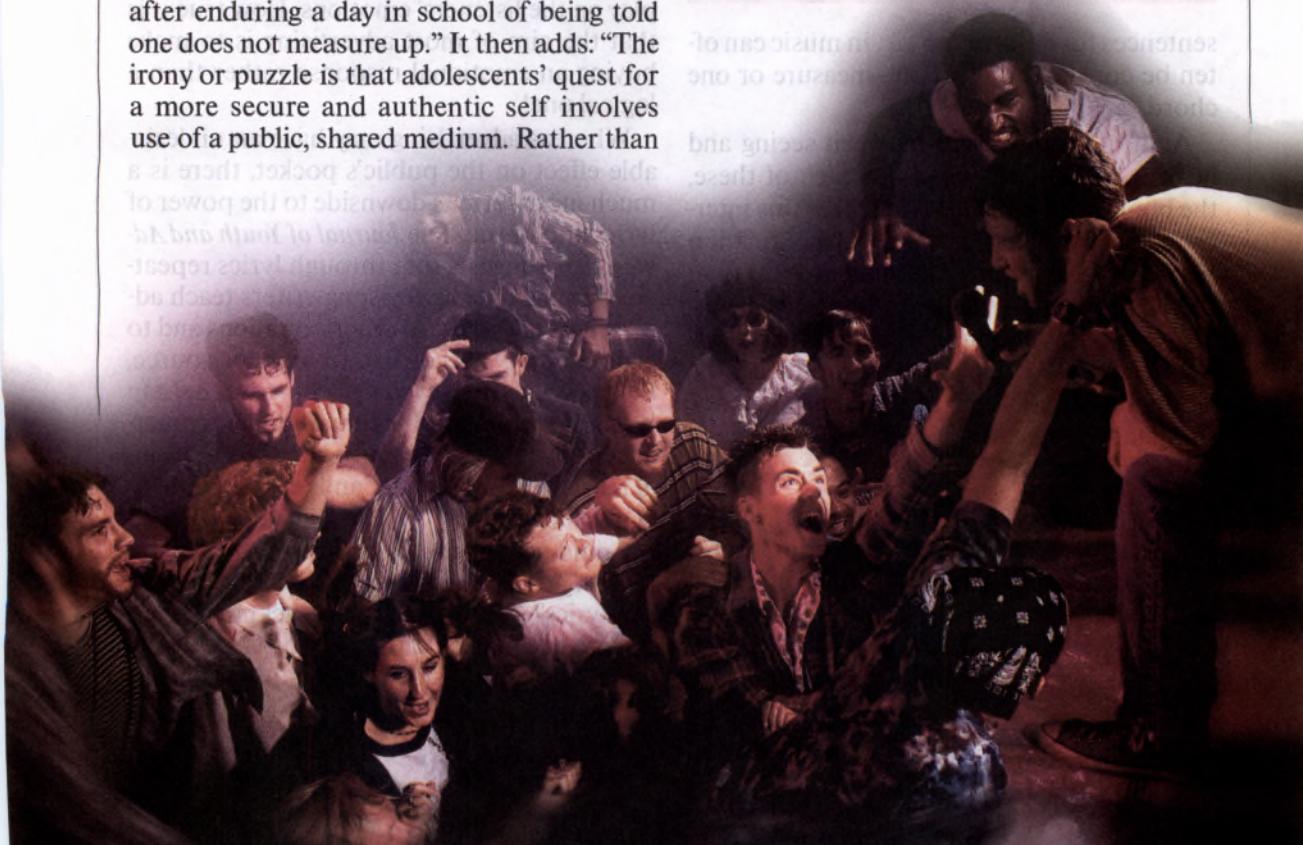
How so? Well, some of the titles alone create images. Further, the kind of music itself is often the message. What message is being conveyed? One youth journal says: "It appears to be an imagery of power, potency, and sexual conquest." Another says: "The basic themes . . . are extreme rebellion, violence, substance abuse, sexual promiscuity, perversion, and Satanism."

Some youths claim that while this may be true, it does not affect them negatively. They will argue that such music is beneficial because it helps them to 'find themselves' as individuals. Does it? The *Journal of Youth and Adolescence* notes: "The anger, oppositional themes, and power some boys identify with in heavy metal may be especially welcome at the end of the day for low achieving boys after enduring a day in school of being told one does not measure up." It then adds: "The irony or puzzle is that adolescents' quest for a more secure and authentic self involves use of a public, shared medium. Rather than

seeking truly unique experiences in their solitude, adolescents reach out to packaged images provided by a commercial industry." In other words, someone else is telling these young people what to think and how to feel.

Let us look at rock concerts. What effect do they have on the throngs who attend them? The book *Music and the Mind* answers: "There can be no doubt that, by heightening crowd emotions and by ensuring that those emotions peak together rather than separately, music can powerfully contribute to the loss of critical judgement, the blind surrender to the feelings of the moment, which is so dangerously characteristic of crowd behaviour." Some of the scenes of wild abandon at rock concerts demonstrate the truthfulness of that statement.

So, to avoid contamination of the mind and the heart, we must be very selective in our choice of music. How can we do that? Our concluding article will answer this question.





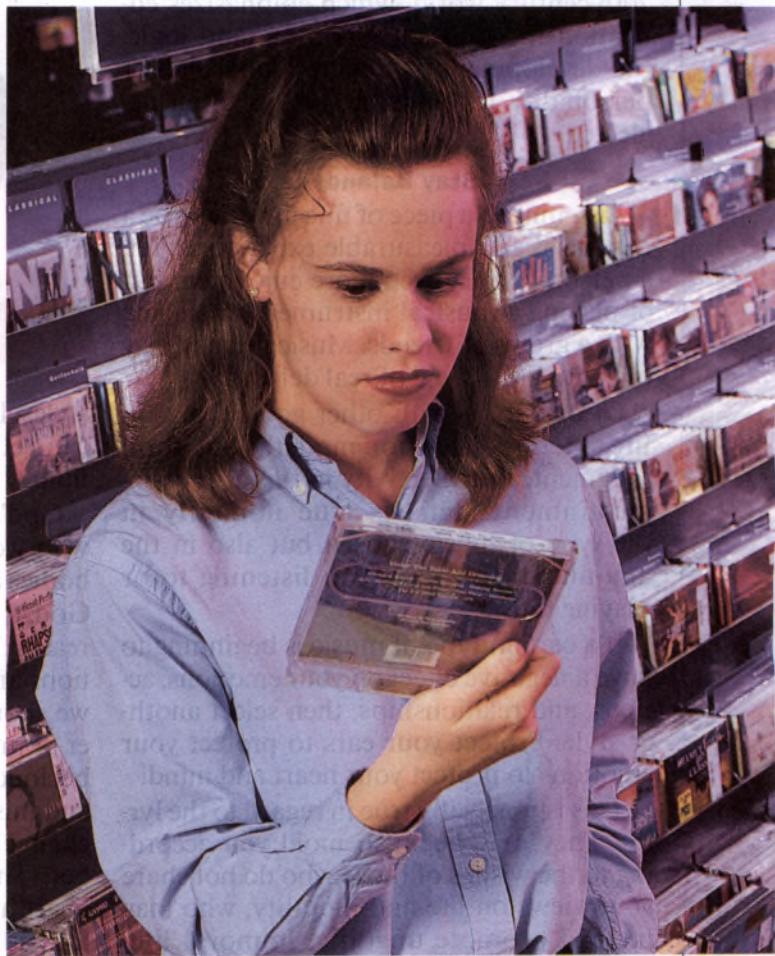
Keep a Balanced View of Music

THE music industry today is a multibillion-dollar business. Popular musicians and their promoters are making a great deal of money. Yet, it is a fact that unhappiness, premature death, and suicide have marked the lives of some very successful musicians. And it has been amply demonstrated that some music is morally, emotionally, and spiritually debasing and can lead to violent, antisocial behavior.

However, it is good to have a balanced view of music. While there is much that is wrong and bad in this art form, some music can enrich one's life and bring a measure of joy and contentment. It can uplift us emotionally and spiritually. Consider just a few examples.

The 150 psalms of the Bible are literary masterpieces—lyric poems, sacred songs, and prayers. Today they are read with pleasure in hundreds of languages. However, the ancient Hebrews did not just *read* the psalms; they *sang* them. Often they did so with beautiful musical accompaniment—a powerful way to link the wisdom of their God, Jehovah, as expressed in the words, with

the emotions that trained singers could impart to the listeners. Far from being too basic or even primitive, the quality and style of Hebrew music was apparently



loftier than that of the surrounding nations of the time.

Later, the Christians of the first century sang psalms and other sacred songs to praise God and to bring relief to stressed emotions. Music thus served to enrich their lives. And by singing Bible-based songs, they embedded more deeply in their hearts the knowledge of God, which they needed to guide their lives.—Matthew 26:30; Acts 16:25.

The ancient Greeks believed that music develops the human personality and makes a man or a woman more complete. In this 20th-century world, which emphasizes education in science, economics, and logic, the development of the emotional side of personality through the arts is often neglected.

Stay Balanced

Listening to a piece of fine music can be a beneficial and pleasurable experience. Yet, a person can get even more enjoyment out of playing a musical instrument or singing with a group of friends. Music literacy may open up a vast field of real delight.

Of course, as with other good things in life, there is need for moderation, good judgment, and selectivity in this area of entertainment. This is true not only in the type of music chosen but also in the amount of time spent in listening to or playing music.

If a certain type of music is beginning to have a negative effect on your emotions, actions, and relationships, then select another style. Protect your ears to protect your emotions to protect your heart and mind!

This is especially true in regard to the lyrics. They may begin to mold you according to the wishes of those who do not share your views on life and morality, who may instead promote ungodly, immoral life-

Enhancing Learning Ability

"Research indicates that regularly hearing harmonious music can enhance a baby's learning ability. But in many homes, they never hear any."

—Audio, March 1999.



styles. In some cases even the title of a song can set the wrong kind of feelings in motion.

God's Word, the Bible, admonishes those who would please him to "present [their] bodies a sacrifice living, holy, acceptable to God, a sacred service with [their] power of reason." (Romans 12:1) Clearly, our emotions are part of that 'living sacrifice.' So if we should ever find that through the power of music, our emotions are beginning to becloud our critical judgment and reason and misdirect our actions, then it is time to change our music-listening habits. Remember: The power of music can affect your heart and your mind—either for good or for bad!

CROSSWORD PUZZLE

Clues Across

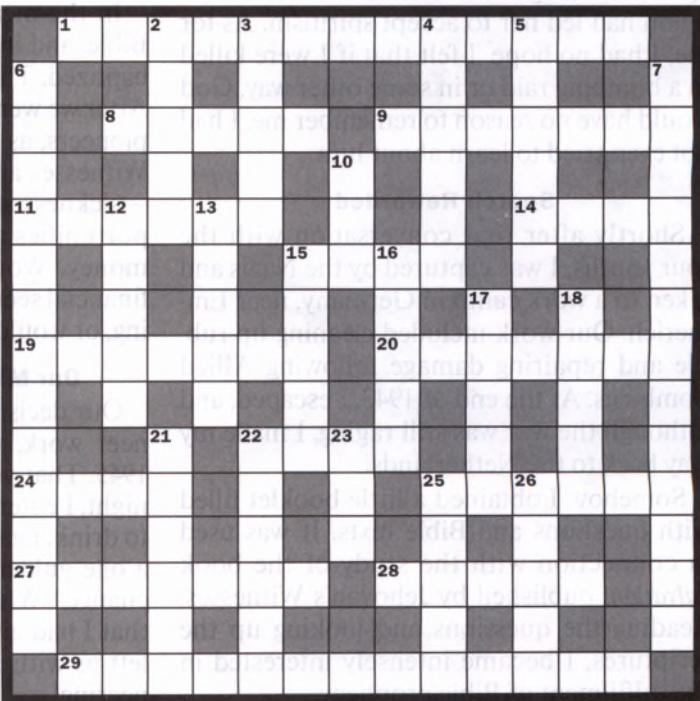
1. Of this part of Israel, those fit for military service had decreased by over 60 percent when the second wilderness census was taken [3 words] (Numbers 1:23; 26:14)
8. Jesus said that resurrected ones will not do this (Luke 20:35)
9. A son of Gilead and great-grandson of Manasseh (Joshua 17:2)
11. A boundary city of Issachar (Joshua 19:21)
14. One to whom Agur spoke the words found in Proverbs chapter 30 (Proverbs 30:1)
15. Paul said that it must be made over to do God's will (Romans 12:2)
19. Using him as an example, Gamaliel persuaded the Sanhedrin not to harass the Christians (Acts 5:34-40)
20. What Joseph intended to do in order to avoid making Mary "a public spectacle" (Matthew 1:19)
22. Joshua expelled the giant Anakim from this Judean town (Joshua 11:21)
24. The father of Eliasaph, the chief-tain of the paternal house of the Gershonites (Numbers 3:24)
25. When people inhabiting this plain saw that Peter had healed Aeneas, they "turned to the Lord" (Acts 9:35)
27. The tribe of Reuben rebuilt this city shortly after its conquest (Numbers 32:37)
28. To induce a person to do something (Matthew 16:1)
29. The wicked angels forsook their proper one [2 words] (Jude 6)

Clues Down

2. The reflection of God's qualities distinguishing man from the animal creation (Genesis 1:27)
3. God's footstool (Isaiah 66:1)
4. The son of Hammolecheth,

- a descendant of Manasseh (1 Chronicles 7:18)
5. Where Cleopas and a fellow disciple were headed when Jesus materialized and accompanied them (Luke 24:13)
6. It is also known by the Arabic term "wadi" [2 words] (Genesis 32:23)
7. Jehovah will not hold back anything good from those walking in this (Psalm 84:11)
10. The 22nd letter of the Greek alphabet
12. A Judean who took an Egyptian wife, Bithiah, the daughter of Pharaoh (1 Chronicles 4:18)
13. Paul and Aquila had the same one (Acts 18:3)
15. A craftsman who builds with brick or stone (See 2 Kings 22:6.)
16. A tribe that God helped the tribes of Reuben, Gad, and Manasseh to defeat (1 Chronicles 5:19)
17. The royal city of Hadad, who was the fourth king of the Edomites (Genesis 36:35)
18. Cain said that his punishment for it was "too great to carry" (Genesis 4:13)
21. As they wish (Psalm 80:6)
22. Third-named son of Abraham's son Ishmael (Genesis 25:13)
23. One of the 70 "souls of the house of Jacob who came into Egypt" at Pharaoh's direction (Genesis 46:21, 27)
25. Those doing good to the least of Jesus' brothers were compared to these (Matthew 25:31-45)
26. The first letter of the Greek alphabet, part of a title given to God (Revelation 1:8)

Crossword Solutions Page 14



Reality Has Exceeded My Expectations

AS TOLD BY WILLEM VAN SEIJL

It was 1942, and our country was in the midst of World War II. I was one of five young men in hiding from the Nazis in Groningen, in the Netherlands. Sitting in a small room, we began talking about our chances of surviving.

IT WAS obvious that our chances of survival were not very good. As it turned out, three of our group died violently. In fact, I am the only one who has reached old age. This is but one instance of reality exceeding my expectations.

At the time of the incident mentioned above, I was only 19, and I knew little about the Bible or religion. In fact, Father was against all religion. Mother's search for a religion had led her to accept spiritism. As for me, I had no hope. I felt that if I were killed in a bombing raid or in some other way, God would have no reason to remember me. I had not even tried to learn about him.

Search Rewarded

Shortly after that conversation with the four youths, I was captured by the Nazis and taken to a work camp in Germany, near Emmerich. Our work included cleaning up rubble and repairing damage following Allied bombings. At the end of 1943, I escaped, and although the war was still raging, I made my way back to the Netherlands.

Somehow I obtained a little booklet filled with questions and Bible texts. It was used in connection with the study of the book *Salvation*, published by Jehovah's Witnesses. Reading the questions and looking up the scriptures, I became intensely interested in the fulfillment of Bible prophecy.

I spoke with my fiancée, Gré, about what I was reading, but she had little interest at first. Mother, on the other hand, became absorbed in the booklet. "This is the truth that I have been looking for all my life!" she exclaimed. I also spoke with friends, and some wanted to know more. One, in fact, became a Witness, and through letters and visits, we kept in touch with each other regularly until his death in 1996.

In the meantime, Gré began to study the Bible, and in February 1945, both of us were baptized. The war ended a few months later. After we were married, we wanted to become pioneers, as full-time ministers of Jehovah's Witnesses are called. But we faced obstacles—sickness and financial problems. Also, opportunities arose for us to earn much more money. Would we work for a measure of financial security first and then start pioneering, or would we start immediately?

Our Ministry in the Netherlands

Our decision was to get right into the pioneer work, which we did on September 1, 1945. That very day, on my way home late at night, I entered a restaurant to get something to drink. I gave the waiter what I thought was a one gulden note and told him: "Keep the change." When I returned home, I discovered that I had given him a 100 gulden note! That left us with exactly one gulden to begin pioneering!

When I began to give public Bible talks in 1946, I had only a leather jacket. A friend, who was about my size, served as chairman. He would introduce my talk and immediately come backstage and give me his jacket. Then I would give the talk. We reversed the process at the conclusion of the talk!

In March 1949, Gré and I received an invitation to share in the circuit work, visiting congregations of Jehovah's Witnesses to strengthen them spiritually. Fritz Hartstang, who had been a faithful minister prior to and during the war, trained me for the circuit work. He gave me good advice: "Wim, follow the instructions you receive through Jehovah's organization even if at first you don't think they are best. You will never regret it." He was right.

In 1951, Nathan H. Knorr, then president of the Watch Tower Bible and Tract Society, visited the Netherlands. At that time, Gré and I applied for missionary training in the United States. Soon afterward, we received an invitation to attend the 21st class of the Watchtower Bible School of Gilead. When we started pioneering in 1945, there were about 2,000 Witnesses in the Netherlands, but by 1953, there were over 7,000, a reality far surpassing our expectations!

Ministry in Our New Home

We were assigned to Dutch New Guinea, now a province of Indonesia, but when we were not granted admission, our assignment was changed to Suriname, a tropical country in South America. We arrived in December 1955. Suriname then had only about a hundred Witnesses, but they were extremely helpful. We soon felt at home.

True, we had to adapt to many different circumstances, and sometimes doing so was hard. For example, Gré had been afraid of everything with legs and wings. In the Netherlands, when she found a small spider in our bedroom, she wouldn't go to sleep

until I got rid of it. But Suriname has spiders ten times as big, and some are poisonous! Our missionary home also had cockroaches, rats, ants, mosquitoes, and grasshoppers. Even snakes visited us. Gré has become so used to such creatures that the fight to get rid of them is now just a routine part of her life.

After more than 43 years, we know the country better than many who were born here. We have come to appreciate its rivers, rain forest, and swamps near the coast. We are also familiar with the bountiful animal life—porcupines, sloths, jaguars and, yes, even the many kinds of snakes, often beautifully colored. But especially have we come to appreciate the wide diversity of the people here. The ancestors of some were from Africa as well as India, Indonesia, China, and other countries. And some are Amerindians, descendants of the original inhabitants.

In our Christian ministry, we meet people of all these backgrounds as we call on them in their homes. Also, at our Kingdom Halls, we enjoy the same wonderful variety in our Christian brothers and sisters. There has been growth from a single run-down Kingdom Hall in 1953 to more than 30 attractive Kingdom Halls, a beautiful Assembly Hall,

In 1955, when we came to Suriname



and a very fine branch facility, which was dedicated in February 1995.

Lessons I Have Learned

Deep in the interior of Suriname, there are several congregations of so-called Bush Negroes, descendants of African slaves who escaped from the plantations and fled as far up the rivers as they could. I have repeatedly been amazed by their feats—for example, how they use the river for transportation and make the rain forest their home. They fell trees, build boats, and maneuver these through waterfalls and rapids. They find food by hunting and fishing, cook without any modern facilities, and do many other things that we would find very difficult.

Over the years, we have also come to know the other peoples who live here in Suriname, their customs, their ways of thinking, and their ways of living. I remember visiting an Amerindian village back in the 1950's. In the middle of the night, I arrived at a deserted camp in the rain forest, where my Indian guide and I were to start a boat trip. He made the fire, cooked the food, tied the hammocks. It was a normal thing for him to do every-

thing for me because he knew that I didn't know how.

When I fell out of my hammock in the middle of the night, he didn't laugh. Instead, he brushed off my clothes and tied the hammock again. When we traveled on a narrow river, it was so dark that I couldn't even see my hands in front of me, but my guide managed to steer the boat around the many curves and obstacles. When I asked him how he did it, he said: "You are looking the wrong way. Look up and note the contrast between the treetops and the sky. It will show you the curve in the river. Look down and watch for ripples. They will help you to tell if there are rocks or other obstacles ahead. And listen. Sounds also tell what lies ahead."

Traveling in dugout canoes, traversing rapids, and bypassing waterfalls can be dangerous and tiring. But at the end of the journey, when we meet our Christian brothers and sisters waiting to welcome us with warm hospitality, we feel refreshed. There is always food for guests, perhaps a bowl of soup. Missionary life has often been trying and difficult but never a disappointment.

What Has Helped Us to Continue

We have not been blessed with exceptional health. Nor have we had much encouragement from family members, since my mother is our only Witness relative. Yet, help and encouragement from dear friends has never failed to meet our needs, assisting us to continue in our assignment. Mother was especially encouraging.

After we were in our assignment for about six years, Mother became very sick. Friends wanted us to return to see her for the last time, but Mom wrote: "Please, stay in your assignment. Remember me as I was before I became sick. I hope to see you in the resurrection." She was a woman with strong faith.

It was not until 1966 that we were able to return to the Netherlands for a vacation.

CROSSWORD SOLUTIONS

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We enjoyed very much seeing old friends, but we felt that Suriname was now our home. We thus see the wisdom of the organization's counsel that missionaries not return to their homeland on vacation until serving at least three years in their assignment.

Another thing that has helped us to enjoy our assignment is maintaining a sense of humor—being able to laugh at things, including ourselves. Jehovah even put humor in some of the natural creation. When you look at the antics of chimpanzees and otters, and especially the young of many animals, it brings a smile to your face. Also, it is important to look at the positive side of things and not take ourselves too seriously—something we have learned through the years.

Our rewarding work in the ministry has especially helped us to continue in our assignment. Gré started a Bible study in Paramaribo with nine men in a home for the elderly. All were over 80. Each had been either a *balatableeder* (rubber-tree tapper) or a gold digger. Each came to love what he learned, was baptized, and shared faithfully in the preaching work until his death.

An old preacher by the name of Rivers, from the New Church of Swedenborg, listened in on the study and made sarcastic remarks. But each week he would move a little closer, and his ridicule began to lessen. Finally he sat down with the others and participated. He was 92 years old and could hardly see or hear, but he could quote scriptures as if he were reading them. Eventually he began sharing with us in the ministry and



Using canoes in our ministry

With my wife

would preach to everybody who would listen. Just before he died, he sent a message asking us to come. When we arrived he was already dead, but under his pillow we found his report of the time he had spent in the ministry that month.

In 1970, after more than 25 years in the full-time preaching work, I was appointed to oversee the Suriname branch office. I found sitting behind a desk difficult and envied Gré, who was still going out in the field ministry each day. Now Gré also works in the branch, and we both have meaningful work to do here as we grow older.

Indeed, when I compare the fewer than 160,000 active Kingdom proclaimers in the world back in 1945 with the some 6,000,000 today, I see that reality has far exceeded my expectations. And in Suriname the number sharing in the ministry has increased by more than 19 times since we arrived in 1955—from approximately 100 then to more than 1,900 today!

I am confident that we will see far grander developments in the outworking of Jehovah's purposes in the future if we simply remain faithful to our God. And that is what we intend to do.

SWIFT IN NAME SWIFT IN FLIGHT

BY "AWAKE!" CORRESPONDENT IN KENYA



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RACING THROUGH THE AIR on sickle-shaped wings flies one of the fastest living creatures on earth. It is a small bird weighing but a few ounces, yet it can move through the sky at high speed. "Swifts have been credited with air speeds of over 100 miles (160 km) per hour," states *The Encyclopedia Americana*. No wonder these feathered speedsters are appropriately named swift!

The flight of swifts seems effortless as they soar high above the earth, turning and banking at breakneck speeds in their search for insects. Swifts are the most aerial of birds, catching food, eating, drinking, collecting nesting material, and even mating while in flight. They spend so much time flying that observers in ancient times believed that swifts roosted in the heavens, somewhere unseen in the clouds. Some swifts can be airborne for up to nine months of the year. These amazing little birds apparently even sleep while gliding in flight!

Designed to Fly

Swifts are marvels of aerodynamic design. They possess efficient crescent-shaped wings that curve backward and eliminate much of the drag that slows the flight of most birds. When aloft, they accelerate using rapid, shallow wingbeats with intermittent short glides.

Their unusual maneuverability is partly due to their ability to beat one wing faster than the other in flight. Beating the wings slightly out of phase enables swifts to make sharp turns without a reduction in speed. This permits them to attain great

swiftness as they wheel about overtaking flying insects and scooping them up with their gaping mouths. Swifts must consume large quantities of insects in order to fill the massive energy requirements of their fast-paced life. And these nimble fliers can cover hundreds of miles a day in their search for insect prey.

The swifts' humble appearance belies their outstanding flying skills. Both male and female are unimpressive, most of them a dull gray or brown in color. The many types of swift are found throughout the world and can be observed primarily in tropical and subtropical lands. In winter those that inhabit the Northern Hemisphere migrate thousands of miles to warm climates.

Nests of Glue

Swifts make their nests using a very unlikely building material—their own saliva! Possessing specialized salivary glands, they can produce large amounts of saliva that acts as a bonding agent for nesting materials.

Swifts seldom land on level ground, and they cannot perch as other birds do. Their legs have tiny hooklike feet and are so short that they cannot lift the bird high enough for it to make a complete wingbeat. However, their feet are ideally suited for clinging to vertical surfaces, such as cliffs, caves, and walls of buildings. When the time comes for building a nest, the swift cannot gather leaves,



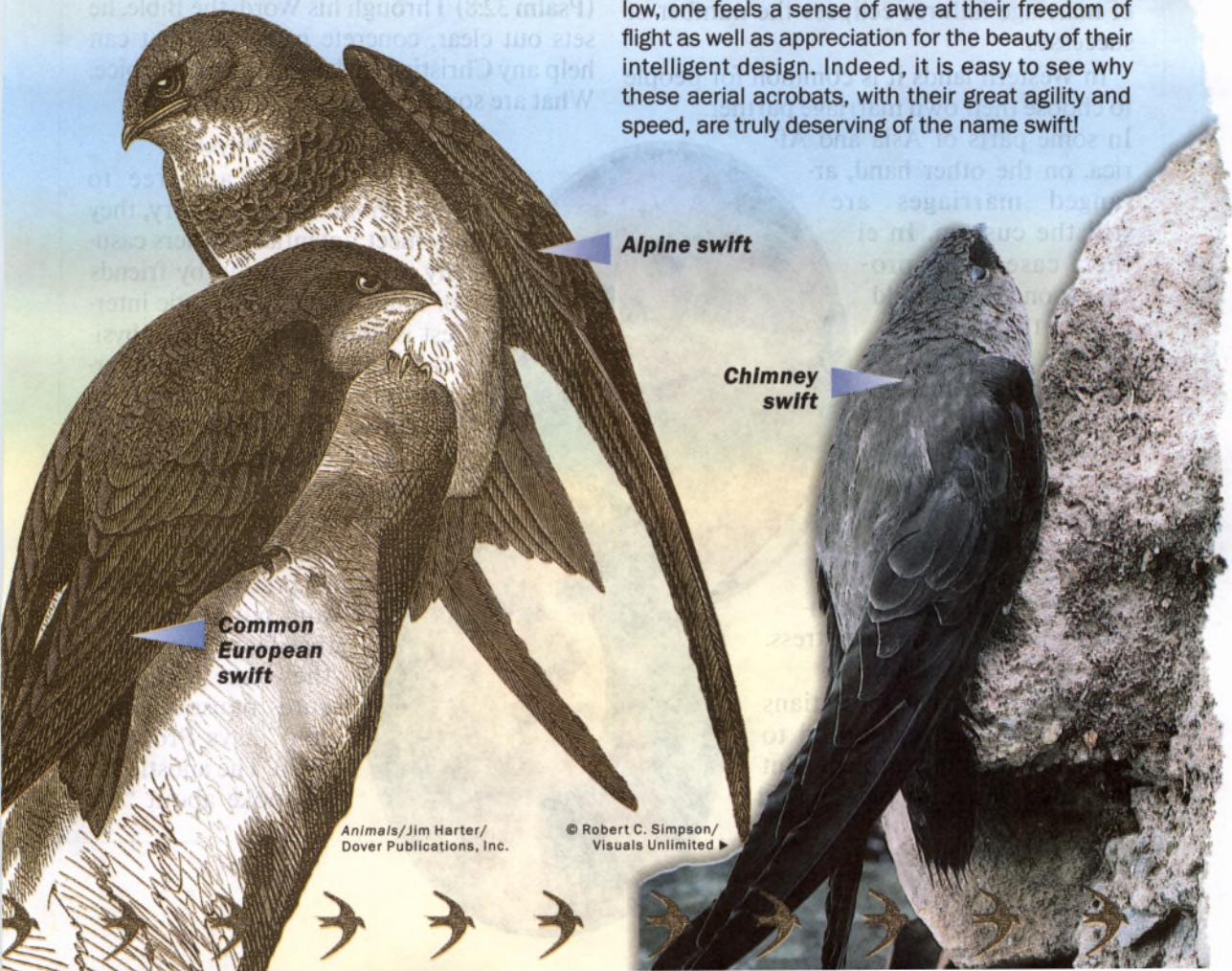
sticks, or mud from the ground, as is common with other birds. It must find another way.

The chimney swift gathers small twigs by swiftly flying through the branches of a tree, grabbing hold of a twig, and snapping it off with the force of its momentum. It then glues the twigs together, cementing them to a vertical surface with its sticky saliva. The American palm swift moves nimbly through the air snatching hairs, feathers, and bits of cotton and other light, floating material, which it uses along with its saliva in building a nest.

Another swift has been aptly called the edible nest swiftlet. Its nest is made almost entirely of its own hardened saliva. For centuries the saliva making up these nests has been the main ingredient of the delicious bird's-nest soup enjoyed in the Orient. It is reported that millions of nests are used every year for this gastronomic delight.

One of the most interesting nests is made of the gluelike saliva of the African palm swift. This tiny bird glues a small flat pad of feathers to the underside of a palm leaf. Hanging upside down, the nest is often blown wildly in the wind. How does the tiny egg stay in the nest? David Attenborough, in his book *Trials of Life*, explains: "It seems almost impossible that the single egg could remain in the tiny cup. Indeed, it would certainly fall out were it not for the fact that the bird has not only glued the nest to the leaf, but the egg to the nest." With both nest and egg firmly fixed to the palm leaf, the parents grip the sides of the nest with their claws and take turns incubating the egg. After the chick hatches, it clings to its windblown nest home until it develops flight feathers and takes to the air.

It is a delightful spectacle to behold thousands of swifts flying in high-speed swirls, twittering loudly as if with excitement. Watching them from below, one feels a sense of awe at their freedom of flight as well as appreciation for the beauty of their intelligent design. Indeed, it is easy to see why these aerial acrobats, with their great agility and speed, are truly deserving of the name swift!



How to Choose a Marriage Partner

A SINGLE WOMAN WAS ASKED, "DO YOU EVER THINK OF GETTING MARRIED?" "THINK?" SHE ANSWERED QUICKLY. "I WORRY."

THIS woman's terse comment speaks volumes about some people's desire for love and companionship. Many rate finding a marriage partner as one of the most important things in life. Thus, worldwide, there has been a mushrooming of services designed to help people find a marriage mate. Nevertheless, in many parts of the world, the number of marriage failures eclipses the number of successes.

In Western lands it is common for people to choose their own marriage partner.

In some parts of Asia and Africa, on the other hand, arranged marriages are still the custom. In either case, the process is one that should not be treated lightly. Few other decisions a person makes in life have as much potential for happiness or for sadness. A loving marriage can be most enriching and fulfilling. Conversely, a contentious union can be a constant source of pain and stress.

—Proverbs 21:19; 26:21.

Like others, true Christians want their marriage union to bring joy and contentment. But they also desire to please God

and honor him. (Colossians 3:23) Being the Creator and Originator of marriage, God knows intimately what our real needs are and what is best for us. (Genesis 2:22-24; Isaiah 48:17-19) Besides, he has witnessed millions upon millions of marriages, good and bad, over the millenniums of man's existence. He knows what works and what does not. (Psalm 32:8) Through his Word, the Bible, he sets out clear, concrete principles that can help any Christian make an informed choice. What are some of these principles?

Look Beyond the Physical

Where individuals are free to choose whom they will marry, they may meet potential partners casually or be introduced by friends or family. Often, romantic interest is initially sparked by physical attraction. While this is certainly a natural and powerful incentive, the Bible encourages us to look deeper than mere appearance when contemplating marriage.

"Charm may be false, and prettiness may be vain; but the woman that fears Jehovah is the one that procures praise for herself," says Proverbs 31:30. The apostle Peter spoke about "the



incorruptible apparel of the quiet and mild spirit, which is of great value in the eyes of God.” (1 Peter 3:4) Yes, the spiritual qualities of a prospective mate—that person’s devotion to God and love for God as well as his or her Christian personality—are far more important than physical beauty. It is vital to take the time to make an objective choice, selecting someone who shares the same spiritual goals and who is also endeavoring to display the fruitage of God’s spirit. This will go far in ensuring a happy marriage union.—Proverbs 19:2; Galatians 5:22, 23.

‘Marry Only In the Lord’

Sharing common goals and beliefs with the person you want to marry is very important. Marriage is a real challenge, requiring many adjustments in behavior and attitude by both parties. Logically, the more you already have in common with your prospective partner, the easier those adjustments will be.

This helps us to see why the apostle Paul exhorted Christians to avoid becoming “unevenly yoked with unbelievers.” (2 Corinthians 6:14) Paul knew that marrying someone who does not share the same faith and understanding of Bible principles can create conflict and disagreement. The admonition to ‘marry only in the Lord’ is reasonable. (1 Corinthians 7:39) It reflects God’s thinking. Those who wisely follow it avoid many serious complications and problems.—Proverbs 2:1, 9.

Arranged Marriages

What about areas where arranged marriages are still customary? In southern India, for example, some have estimated that 80 percent of all marriages are arranged by the parents. Whether or not Christian parents follow this tradition is a matter for personal decision. At any rate, such arranging of marriages works best when spiritual values dominate.

Those who favor arranged marriages feel that this puts the decision-making process

into the hands of experienced and mature people. “Some parents feel that because of their children’s age and lack of experience, they cannot be relied on to judge correctly the spiritual maturity of a prospective mate,” notes one Christian elder in Africa. “Young ones are inexperienced in life and may decide things emotionally,” adds a traveling minister from India. Since parents know the character of their children better than anyone else, they feel that they are in a unique position to choose wisely for their children. They would also be wise to consider the views of the young man and woman.

However, when parents ignore Bible principles, they may end up suffering repercussions if the marriage subsequently has difficulties. Because there is often little chance beforehand for the prospective marriage partners to get to know each other well, problems may result. And when they do, explains a Christian father in India, “the tendency is to shift the blame onto the parents.”

For Christian parents who are arranging a marriage, the question of motive must also be considered. When materialistic goals or a desire for prestige dominate the choice of a marriage partner, problems arise. (1 Timothy 6:9) Therefore, those arranging a marriage should ask themselves, ‘Is this selection made to ensure the happiness and spiritual health of the two parties? Or, rather, is it to enhance family status or wealth or to gain some financial benefit?’—Proverbs 20:21.

The Bible’s counsel is clear and beneficial. When a marriage partner is being considered, the virtue and spirituality of the prospective mate should always be of primary concern, regardless of how the choice is made. When this is done, Jehovah God, the Author of the marriage arrangement, is honored and those marrying can start off on a solid spiritual footing. (Matthew 7:24, 25) This will greatly contribute to a happy, enriching union.



PROTECT YOUR CHILD FROM ACCIDENTS

BY AWAKE! CORRESPONDENT IN SWEDEN

HANNA, almost three years old, was with her parents, Karl-Erik and Birgitta, as they cleaned up the house of a neighbor who had died. After a while, Hanna came out of a room with a bottle of pills in her hand. She had eaten some of them. Checking the bottle, Birgitta was horror-struck. It was a bottle of the neighbor's heart medicine.

Quickly, Hanna was taken to a hospital, where she remained overnight in intensive care. Despite a dose of medicine that could have damaged her health permanently, she suffered no aftereffects. Why? Because she had eaten a portion of cooked cereal just before she swallowed the pills. Some of the poison was ab-

sorbed by the cereal, which was forced out when she threw up.

Hanna's experience is hardly unique. Daily, thousands of children worldwide meet with accidents that make a call to a doctor or a hospital necessary. Each year, 1 out of every 8 children in Sweden receives medical treatment after an accident. Hence, if you are a parent, there is a substantial chance that something similar could happen to your child.

It is not strange that children are often injured in a familiar environment, such as the home and its surroundings. The type of injuries they incur change as they get older. An infant can easily fall off its nursing table or choke on a piece of food or a small object that gets stuck in its throat. Young children often fall when they climb about or get burned or poisoned when they touch or taste things within reach. Children of school age often get injured in traffic accidents or when playing outdoors.

Many of these accidents are preventable. With a little foresight and a knowledge of your child's level of development, you can help prevent injuries or even fatal accidents. This has been proved by an organized child-safety program that has been carried out in Sweden since 1954. Before that time, more than 450 children



died every year in accidents. Today, the yearly death toll has dropped to about 70.

Indoors

"You cannot teach the one-year, two-year, or three-year-old to avoid dangers and then count on them remembering," says child psychologist Kerstin Bäckström. Hence, the responsibility for helping your child to avoid accidents rests on you as the parent—or on other adults with whom the child stays now and then.

To begin with, take a look around your home. Use the checklist in the adjoining box. Perhaps some safety devices are not available in all countries or are not available at a reasonable price. Yet with a little ingenuity and imagination, you can probably think of solutions that will work in your particular circumstances.

For example, if you have loop-type handles on your kitchen drawers, you can lock them by slipping a stick through the handles. A similar arrangement could also serve as a lock for the oven door. Plastic bags are much less dangerous if you tie them in a knot when storing them.

Perhaps you can think of other simple ways to prevent accidents in and around the home and can share these with friends and acquaintances who have small children.

Outdoors

Check the areas where your child plays. Most injuries to children over four years of age happen when they play outdoors. They fall down and hurt themselves or perhaps fall off their bicycle. The most common fatal outdoor accidents for children between the ages of three and seven are traffic accidents and drowning.

When you inspect playgrounds, check to see if the equipment is in good working condition so that the child will not be hurt when using it. Are surfaces under swings, climbing frames, and similar equipment composed of soft material, like loose sand, so that the child will not hurt himself if he falls?

Are there pools of water or streams near your home? Only a few inches of water is enough for a one- or two-year-old child to drown. "When a little child falls facedown in a pool of water, it loses its sense of what is up and what is down," says child psychologist Bäckström. "The child simply cannot get back up again."

The most fundamental rule, therefore, is this: Never let a child between one and three years of age play alone outdoors without adult supervision. If there is a quantity of water in the neighborhood, wait until the child is considerably

Safety in Your Home

- **Medicines:** Keep them out of the child's reach in a locked cupboard. The same goes for nonprescription and natural medicines. Also, ask overnight guests to keep their medicines secure.

- **Household chemicals:** Store them out of the child's reach in a lockable cupboard. Keep them in their original containers so that they are clearly identified. Keep strict watch over the products as you use them, and always put them away, even if you leave the room for only a moment. Never leave residues of detergent in your dishwasher.

- **Stove:** Always turn the handles of pans inward on the stove. Attach a saucepan guard, if available. Equip the stove with a tilt guard for safety should the child climb on the open oven door. The oven door itself should be equipped with a locking de-

vice. Could the child burn himself by touching the oven door? Then, attach a guard or a grating so that he cannot touch the hot door.

- **Dangerous household utensils:** Knives, scissors, and dangerous appliances should be kept in cupboards or drawers with locks or catches or stored out of the child's reach. When you are using such utensils and temporarily put them aside, place them away from the edge of the table or counter, out of the child's reach. Matches and plastic bags are also dangerous items for small children.

- **Stairs:** Fit gates, at least 30 inches high, at both ends of stairs.

- **Windows and balcony doors:** Equip them with childproof safety catches or chains high up or some other safety device that prevents the child from opening them or squeezing through them when they are opened to air out the room.

- **Bookshelves:** If the child likes to climb and hang on things, secure bookshelves and other tall furniture to the wall, to keep them from falling over.

- **Power outlets and electric cords:** Outlets not in use must be equipped with some kind of lock. Cords for table lamps and the like should be attached to the wall or to furniture so that the child cannot pull down the lamp and be struck by it. Otherwise, take such lamps away. Never leave the electric iron on the ironing board, and do not let the cord hang down loose.

- **Hot water:** If you can adjust the temperature of your hot water, you should put it down to about 120 degrees Fahrenheit so that the child will not be scalded if he or she turns on the tap.

- **Toys:** Discard toys with sharp edges or corners. Throw away small toys or toys that can be pulled into small pieces, as they can choke the child if put into the mouth. Eyes and noses on the child's teddy bears should be securely fixed. Teach older brothers and sisters to remove their small toys when the baby is on the floor.

- **Candy and snacks:** Do not leave candy and snacks, such as peanuts or hard sweets, within reach. They could get stuck in a child's throat.

Source: The Office of the Children's Ombudsman

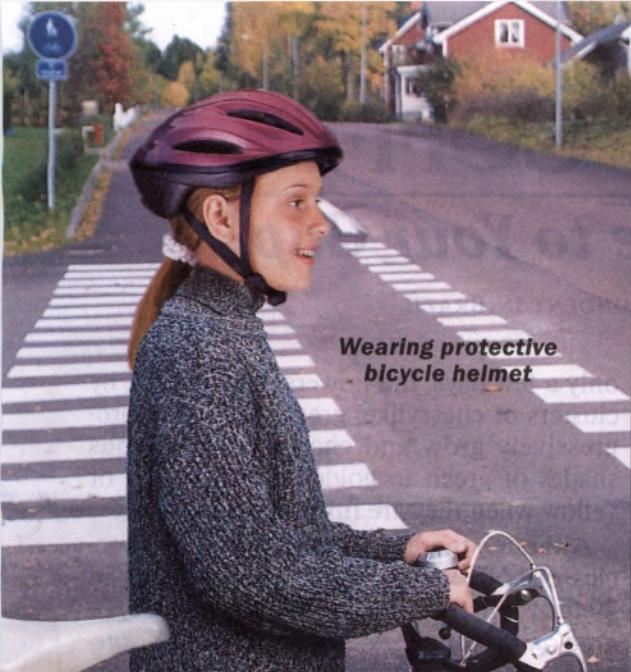
In Case of an Accident

- **Poisoning:** If the child has swallowed some toxic liquid, rinse its mouth thoroughly and give it one or two glasses of water or milk to drink. Thereafter, call a doctor or a poison information center for advice. If the child has got something corrosive in its eye, immediately rinse with plenty of water for at least ten minutes.

- **Burns:** For minor burns, apply cold (not too cold) water on the injury for at least 20 minutes. If the injury is bigger than the child's palm or is located on the face, a joint, or the lower abdomen or genitals, you should take the child to an emergency room. Deeper skin injuries must always be treated by a doctor.

- **Choking:** If something has got stuck in the child's windpipe, it is most urgent that you get the object out quickly. One effective method you might resort to is the Heimlich maneuver. If you are not familiar with it, contact your doctor in order to get more information about this method, or attend a child-accident or first-aid course where this method is taught.

Source: The Swedish Red Cross



*Wearing protective
bicycle helmet*



Safely in car seat

older before allowing him to play outdoors without supervision.

In Traffic

The same is true if there is traffic around your home. "A preschooler can only take in tangible messages and concentrate on one thing at a time," observes Bäckström. "But traffic is full of abstract conceptions and double messages." Do not let your child cross a street on his own before he is of school age. Children are not considered mature enough to cycle alone in busy traffic until they are at least 12 years of age, according to experts.

Teach your child to use a safety helmet when cycling, riding, roller-skating, or tobogganing. Head injuries are difficult to treat and can cause permanent damage—or even be fatal! At one children's clinic, 60 percent of those treated after bicycle accidents suffered injuries to the head and the face, but those using helmets suffered no severe head injuries.

Also, make sure your child is safe when traveling by car. Many countries have laws that require small children to be buckled up in specially designed safety seats. This has drastically reduced the rate of injuries and deaths among

children involved in traffic accidents. If safety seats are available where you live, using one could be good life insurance. But make sure it is an approved model. Note that seats for infants are different from those for children from about three years of age.

Our children are precious gifts from Jehovah, and we want to take care of them in every way. (Psalm 127:3, 4) As good parents, Karl-Erik and Birgitta have always been concerned about protecting their children—before as well as after the episode with Hanna. "But of course we were more cautious after that incident," Karl-Erik admits. "Now we have grandchildren, and we always make sure that our medicines are locked up," Birgitta concludes.

IN OUR NEXT ISSUE

Superstitions—Why So Dangerous?

Why Can't I Be More Outgoing?

Living With Cystic Fibrosis

QUALITY COFFEE

From the Tree to Your Cup

BY AWAKE! CORRESPONDENT IN BRAZIL

THE Finns call it their national drink. For many Italians, preparing it is a ceremony. In France, Germany, Mexico, the United States, and many other lands, it is an essential part of breakfast. After tea, it is the world's favorite drink. What is it? For about one third of the world, there could be only one answer—coffee!



At the nursery, seedlings get just the right amount of sun and shade

Regardless of how you personally feel about it, there is no denying coffee's popularity. What is involved in making quality coffee available? Where does it grow? How is it produced? Is there really a big difference between types of coffee? What factors affect its quality, flavor, and price?

Where Does It Come From?

Coffee is made by roasting the seeds of the coffee tree, a large evergreen shrub that has glossy deep-green leaves and grows in semi-tropical regions. When in bloom, the tree is covered with beautiful white blossoms that emit a delightful jasmine fragrance. After

only a few days, the flowers are replaced by clusters of cherrylike, green fruits that progressively grow and change from various shades of green to golden-brown to red or yellow when they are fully ripe.

Although there are about 70 different species of coffee trees, from dwarf shrubs to 40-foot-tall trees, only two species, *Coffea arabica*, or simply Arabica, and *Coffea canephora*, also known as Robusta, account for about 98 percent of the world's production. The finest coffees come from the Arabica varieties, especially those grown at higher altitudes. These trees grow to heights of from 14 to 20 feet, although they are usually pruned to keep them at a height of about 12 feet.



Groves of mature coffee trees

Robusta, which is used mostly for instant coffee, has a higher caffeine content and is more neutral in taste.

Cultivating Quality Coffee

What is involved in producing quality coffee? In a word, work! It all starts with planting specially bred seeds in a nursery

designed to provide just the right amount of sun and shade. After about six months, the seedlings are transplanted to the field, the soil of which has been prepared with fertilizer and minerals. The coffee seedlings are planted in rows that follow the contour of the slope. These are spaced to allow room for growth and the maintenance of the trees and soil and to make harvesting easier.

To be productive, the trees must have constant attention throughout the year. This includes the removal of weeds that would compete for nutrients in the soil and the regular application of fungicides and insecticides to protect against pests and disease, such as the bean borer and coffee rust.



Coffee cherries are harvested by stripping them from the branches

It takes at least two years for the young plants to begin to produce. When harvest-time arrives, the work increases dramatically. The ideal process is to handpick only the ripe cherries, one by one, as is done in such countries as Colombia and Costa Rica.

Cherries harvested in this way are usually processed using what is called the wet process. In this process the cherries are placed in a pulping machine, which removes most of the pulp from the seeds. The seeds are next placed in tanks for a duration of one to three days, during which time naturally occurring enzymes decompose the remain-

ing pulp by fermentation. The seeds are then washed to remove the last traces of pulp. Some are dried by being exposed to sunlight on concrete terraces or drying tables, and some by passing through hot-air dryers. The layers of dry skin around the seed, consisting of the parchment and the silver skin, are then removed mechanically. The fermentation, which occurs during the wet process, together with the use of only fully ripe cherries produces a mild coffee of excellent quality.



Brazilian harvester sifting cherries by hand to remove leaves and dirt

In Brazil, the world's largest coffee producer, most growers use a harvesting method known as *derriça*. The coffee is harvested manually by stripping all the cherries off the branch at the same time, regardless of their stage of ripeness. More recently, some producers are turning to mechanized or semi-mechanized harvesting methods in order to improve quality and productivity. One

method employs a hand-held pneumatic tool that has a long arm with vibrating "fingers" at the end that shake the limbs, causing only ripe cherries to fall to the ground.

The fallen cherries must be raked up and sifted, either manually or mechanically, to remove leaves, dirt, and sticks. The cherries are then put into large 15-gallon baskets. The sifted cherries are washed, in either a concrete trough or a machine designed for this purpose. The washing process separates the ripe cherries from older dry cherries that have started to rot.

Once washed, the coffee is spread out on a



Samples are classified by counting the number of defects in ten ounces of beans

large concrete terrace to be dried in the sun for between 15 and 20 days. During this time the beans are turned over every 20 minutes or so, to assure uniform drying. Mechanical dryers are sometimes used to accelerate the drying process. The moisture content of the coffee must be monitored to avoid overdrying, which causes the beans to become brittle and break, decreasing their value. Once the ideal moisture content of between 11 and 12 percent is reached, the coffee is mechanically hulled to free the seeds of their covering. The seeds are then put in 130-pound burlap sacks. At this point the coffee is usually

transported to a cooperative, where it is classified and processed further.

Classification

At the cooperative, the bags of coffee are unloaded from the trucks one at a time. Before depositing their load, the workers pass by a person who sticks a long, pointed tool into each bag and removes a small sample of its contents. The samples removed from all the bags in the same truckload are then combined into one sample, which is labeled and classified.

Once the samples have been taken, the coffee from different truckloads is combined and further processed to improve its quality. It first passes through a machine that removes impurities, next through



A taster must have a great deal of experience

a mechanical sieve that separates the beans according to size, and then onto a vibrating table that separates them according to weight. After that, the beans are conveyed to an electronic separator, which removes any black or green beans that would spoil the flavor of the brewed coffee. The rest are next conveyed to a storage reservoir and, later, poured into bags. The bags contain beans of uniform size and quality that are ready to be sold to exporters or to local buyers.

How are those samples that were taken earlier used? They are classified to determine the price each grower will receive for his coffee. First, the samples are graded by type, which is a measure of the number of defects in a ten-ounce sample. Defects include black, green, or broken beans and impurities, such as husks, sticks, and pebbles. Next, the beans are put through a series of sieves and separated according to size.

Finally comes the taste test. The sample is lightly roasted and then ground, and a portion is measured into each of several glasses. Boiling water is added, the contents are stirred, and an experienced taster smells the aroma emanating from each sample. After allowing the sample to cool and the grounds to settle, he uses a small ladle to dip out a sample, which he sucks into his mouth and quickly spits out, moving rapidly to the next glass, where he repeats the process. After tasting all the samples, he rates the coffee from mild (pleasant, smooth, almost sweet) to harsh (sharp, with an iodinelike taste).

A taster must have a refined palate and a great deal of knowledge and experience in order to distinguish the many subtle flavors of coffee accurately. Besides serving as a basis for determining the price of the coffee, tasting is essential for the next step involved in producing quality coffee.

Blending and Roasting

Blending, which is usually done with raw beans, is the art of combining coffees with complementary characteristics to produce a balanced product that accentuates such favorable qualities as flavor, aroma, body, and appearance. The challenge for blenders is to be consistent in producing a delicious beverage with exclusive characteristics.

The next step, roasting, is also crucial to the quality of the coffee. During this step complex chemical transformations take

place within the bean, liberating the characteristic coffee aroma. The roast can be light, medium, or dark, depending on the flavor desired and the brewing method used. However, overroasting can cause the bean to have a shiny appearance, caused by the loss of aromatic oils. This results in a bitter coffee with little aroma.

Proper grinding is also essential for producing good-quality coffee. The size of the grounds is determined by the brewing method to be used. For example, medium grinds are used for coffee to be prepared with cloth or paper filters, while a fine grind is used for Turkish coffee, which is not filtered.

Once ground, the coffee is packaged and shipped. Coffee packaged in plastic lasts for about 60 days, whereas vacuum-packed coffee lasts up to a year. Once opened, coffee should be stored in tightly sealed containers, preferably in the refrigerator.

Preparing That 'Perfect Cup'

After all the work of planting, cultivating, harvesting, processing, classifying, blending, roasting, and grinding, we finally come to the part you have been waiting for—preparing that 'perfect cup'! There are many different brewing methods, such as Turkish, automatic drip, and Italian *moka*, to name a few—and each requires a different means of preparation. In general, however, it is recommended that you use between six and eight tablespoons of coffee per quart of water. Prepare only the amount you plan to serve right away. Never reuse the grounds, and always wash the coffeepot, filter holder, and other utensils with water immediately after use.

The next time you sit down to savor the flavor and aroma of your favorite coffee, whether it be Brazilian *cafezinho*, Colombian *tinto*, Italian espresso, or your own special brew, why not pause and reflect on all the hard work that went into making that quality coffee available—from the tree to your cup.

WATCHING THE WORLD

"Tower of Babel"

The European Union (EU) has 11 official languages, and 10 more may be added later, reports the Paris newspaper *International Herald Tribune*. At present, the European Commission, the executive body of the EU, employs more than four times as many translators and interpreters as the United Nations headquarters, which has only five official languages. While efforts are being made to unite Europe and simplify EU operations, the opposite is happening with respect to language. Every member country defends its own tongue. "A Tower of Babel looms," comments the newspaper. The commission also faces the problem of "Eurospeak"—an in-house language replete with jargon and abstractions. According to one translator, getting politicians to express themselves clearly is a challenge when "often the aim is precisely not to be clear."

Pets—Good for Your Health?

"Puppy love may help keep a person out of the doctor's office," says *The Toronto Star*. Over the past decade, various studies have shown that "companion animals are associated with lower stress, fewer doctors' visits and even better survival rates after heart attacks. An animal may help stroke victims build strength and psychiatric patients quell anxiety." Dr. Alan Beck, of Purdue University School of Veterinary Medicine in Indiana, U.S.A., believes that "animals

relax people. They're a focus of attention, a focus of touching." Such effects can occur even if the animal is not a family pet, and this has led to the rise of "animal-assisted therapy." Some mental-health workers have thus encouraged patients with psychiatric disorders to spend time with a pet, with positive results.

Dwindling Water Resources



"We now have less than half the amount of water available per capita than we did 50 years ago," states *The UNESCO Courier*. And global reserves are expected to continue falling. This sharp decline reflects the soaring demand for fresh water resulting from increasing population, agricultural needs, and industrialization. Scientists who map the globe according to water scarcity have designated some areas as "catastrophic." According to the *Courier*, this means that reserves are "unlikely to sustain a population in the event of a crisis like drought." It adds: "Just 50 years ago, not a country in the world faced catastrophic water supply levels. Today, about 35 per cent of the population lives under these conditions."

Playing the Beggar

Though many beggars are truly destitute, a report in *The Week*, a magazine published in India, shows that some are not what they appear to be. In the Indian state of Maharashtra, a beggar on crutches approached a car stopped at a stoplight. The driver of the car ignored the beggar and continued talking to his girlfriend. The beggar therefore increased the volume of his plea. At that the driver rolled down the window and pushed him away, spilling the coins in his begging bowl. The "crippled" beggar suddenly became well and began smashing the car's windshield with his crutches. "A group of 'blind,' 'lame' and 'crippled' friends who were busy by the sides of other vehicles all came to his help," flinging stones, sticks, and crutches and finally dragging the young man from his car, said *The Week*. The opportune arrival of a police vehicle saw the beggars beat a hasty retreat.

Global Child Abuse

The World Health Organization (WHO), in Geneva, Switzerland, estimates that 40 million children worldwide suffer from abuse. As reported in *The New York Times*, studies in 19 countries on children up to 14 years of age indicated that 29 percent of the boys and 34 percent of the girls studied were victims of sexual abuse. In the United States alone, said WHO, about two million children are injured by abuse each year.

Drudgery Is Unhealthy

A study of 50,000 employees in Germany revealed that those whose jobs demand too little of them face a greater risk to their health than those who are busy. "Employees whose work is marked by frequent repetition and by a lack of independence are certified as being ill more than twice as often as persons who have a demanding job," observes the *Augsburger Allgemeine* newspaper. No other work-related stress factor has such an impact on the frequency and duration of absences from work as a job demanding too little. According to the report, those whose work is not enough of a challenge often suffer from "high blood pressure, stomach and intestinal complaints, and disorders of the back and joints."

Bird Brains and Sleep

A *Toronto Star* report notes that scientists have long understood that birds can take regular peeks with one eye during periods of sleep, which serves to protect them from predators. New findings show that the birds can decide whether to let the whole brain sleep or to keep half the brain awake to direct the peeping eye. Research conducted using mallard ducks sleeping in a row found that those at the end of the row spent a third of their sleep time with half their brain awake. Those in the center of the row were half awake only 12 percent of the time. It appears that "when the situation is risky, then birds will sleep more often with only

half their brain," says Professor Niels Rattenborg of Indiana State University.

Absolutely No Benefits

"Smoking does not keep people thin," reports the *University of California Berkeley Wellness Letter*. "Many young women, in particular, start smoking in the belief that it will help them stay thin." But a study of 4,000 adults between the ages of 18 and 30 showed that "over the course of seven years, weight gain was common (averaging more than a pound a year), whether the subjects smoked or not." The article concludes: "Weight control is *not* a benefit of smoking. There are no benefits."

Bicycles for Hamsters



A Hong Kong pet supply company has invented a "pet's bicycle," reports *New Scientist* magazine. The toy's front wheel is made like a hamster's treadmill, and when the pet runs inside the wheel, the bike moves along the ground. However, if the owner fears that his pet might run itself into trouble, he can flick a lever on the bike that lifts the front wheel off the ground. Thus, the pet can exercise safely in a stationary position.

Minimizing Traveler's Back Pain

For chronic back pain sufferers, travel can be difficult. However, *The Toronto Star* offered the following helpful tips. For walking, "wear sensible shoes. High heels throw your body out of alignment, putting extra pressure on your spine. . . . If travelling by car, stop at regular intervals to stretch and walk around. . . . Get a travel back support" for your seat. Also, shift your position while seated. The *Star* notes that the pain of carrying luggage can be eased because "it's now quite easy to find suitcases in all shapes and sizes that can be rolled along instead of lugged along. Be sure that yours has a handle long enough for you to carry it in comfort; it's no great favour to your back if you avoid carrying only to have to walk bent over."

Venting Anger

So-called catharsis, "venting anger on inanimate objects—punching a pillow or hitting a punching bag, for example—increases rather than decreases aggressive behaviour," reports Canada's *National Post*. Dr. Brad J. Bushman, associate professor of psychology at Iowa State University, noted: "Catharsis has enjoyed a run of support in the popular media that far outstrips its support in the research literature." Researchers also found, notes the *Post*, that "books and articles that recommend 'catharsis' as a good method of dealing with anger actually may foster aggression by giving people permission to relax their self-control."

FROM OUR READERS

Religious Freedom I have been a reader of *Awake!* for several decades now, and I am writing to express my appreciation for the series "Your Religious Freedom—Is It Threatened?" (January 8, 1999) I knew that religious intolerance existed in Europe during the so-called Dark Ages and that the Catholic Church had succeeded in manipulating the authorities to prevent people from exercising their freedom of conscience and religion. Now that I have learned what is happening in France today, I ask myself, "Why does this country tarnish its name by denying guaranteed religious freedoms?" Please inform your millions of readers of the outcome of this situation. I trust that France will show tolerance and set a good example for other countries.

C. C., Puerto Rico

Raising Seven Sons Thanks for the experience of Bert and Margaret Dickman as told in the January 8, 1999, issue. It really encouraged us to rear our three children in a way that will give them a good spiritual heritage. Our children enjoyed the article too. We hear them reminding one another about the lesson of Doug, who did not get his cake! Thanks for publishing such an encouraging experience.

S. J., India

Holy Spirit I would like to thank you for the fine article "The Bible's Viewpoint: What Is God's Holy Spirit?" (January 8, 1999) Although I have been one of Jehovah's Witnesses for some years, I always want to learn more about Jehovah God. This article answered the title question very well and was easy to understand. The more I understand Jehovah and his works, the more I am filled with love for him.

Y. B., Russia

Gold I read your article "Gold—The Mystery of It." (September 22, 1998) You stated

that Allied troops discovered a huge amount of gold in the Kaiseroda salt mines, in Germany, following the capitulation of Germany in 1945. Actually, the Allies captured the mine three weeks before the end of the war.

J. S., Germany

Thanks for this clarification. The Kaiseroda mines were indeed captured on April 4, 1945, over a month before the German capitulation on May 8, 1945.—ED.

Long-Distance Courtship The article "Young People Ask . . . How Can I Carry On a Long-Distance Courtship?" (January 22, 1999) came too late for me. I'm from the United States and began corresponding with a young man from Latin America. Never in my life have I experienced something so difficult. You really cannot get to know someone through the mail, even if you do your best to be honest. Since the two of you are so far apart, you tend to fantasize. In our case, our cultures were opposites. When our relationship was finally over, I felt that I had nothing left to live for. Thanks to my loving, supportive family, I've made it through this experience.

S. H., United States

I've been writing to a girl that I met at an international convention of Jehovah's Witnesses. It is difficult to explain one's thoughts to another person when differences in culture and language are involved. So I am starting to learn her language. The tip on using a tape recorder was very good. Thanks a lot.

A. S., Germany

I met an Oriental sister at an international convention in the United States. I've been very unsure of how to carry on a correspondence with her. I prayed about it, and just a few days later, I received this wonderful article. I have read and reread it. It answered all my questions.

G. R., Italy

An End to Ruin

BY AWAKE! CORRESPONDENT IN BRITAIN

"A third of the natural world has been destroyed by human activity in the past 25 years."

SO REPORTS the World Wide Fund for Nature. This startling statistic was unveiled at the release of a Living Planet Index, a new statistical analysis of the world's environment.

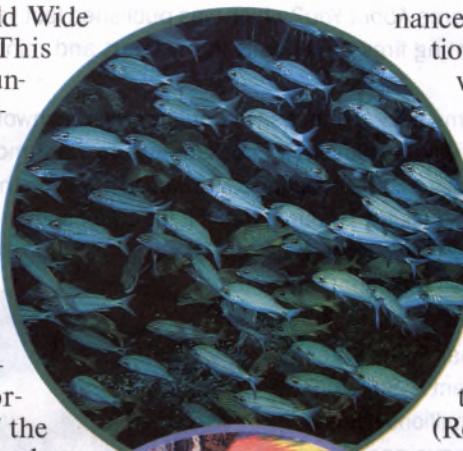
Conservationists reported a 10-percent decline in forested areas of the planet. But this figure masks greater losses in both tropical rain forest and dry forest areas, to say nothing of the loss of forest species, which probably exceeds 10 percent, notes *The Independent* newspaper of London. The marine environment has suffered a 30-percent loss, evident in the decline of such species as the bluefin tuna in the Atlantic and the leatherback turtle in Asian waters. Worst of all is the 50-percent drop in the Freshwater Ecosystems Index, blamed mainly on increasing agricultural and industrial pollution together with much greater water consumption.

"The conservation of natural ecosystems is not a luxury which only the rich can afford," comments Sir Ghillian Prance, director of the Royal Botanical Gardens at Kew, London, England, "but is essential to ensure the mainte-

nance of the vital ecological functions of our planet upon which we all depend for our survival." Each inhabitant of this planet is involved. So how can a lasting global solution be achieved?

Interestingly, the last book of the Bible, Revelation, refers to those who ruin the earth. It foretells a time when such ones will themselves be brought to ruin. (Revelation 11:18) Will there be survivors? Yes, because this will come about through the intervention of "Jehovah God, the Almighty," who has the only solution to this earth's environmental problems and the power to carry it out. (Revelation 11:17) Revelation 21:3 describes a time when God "will reside with [mankind], and they will be his peoples."

How can you become one of "his people" and have the prospect of seeing the present-day decline of earth's environment reversed? Please contact Jehovah's Witnesses in your area by writing to one of the addresses on page 5. Or talk with them the next time they visit your home. They will gladly help you learn more about what you can do right now to be ready when God shortly intervenes.



'It Creates a Desire to Know More'

THE above is what a reader from North Carolina, U.S.A., wrote about the book *Is There a Creator Who Cares About You?* which was published last year. She added: "Thank you for lighting fires of curiosity in my heart and mind." She then noted the following:


"Today, while sitting on my back porch, I saw a bright green inchworm. It moved about so carefully. Cautiously, it checked each forward movement and then, ever so gracefully, continued. However, it was on the last plank of our porch decking. I thought that if it fell off for some reason—a fall of perhaps five feet—it would probably not be seriously harmed. Yet, if a man fell a comparable distance, it would surely kill him."

The woman wondered, "What makes the little green inchworm so different?" She concluded that this is "only one of millions of questions that will be exciting to have answered. But, in the meantime, we can learn many things about our Creator from that little green worm."

J. Hester and P. Scowen (AZ State Univ.), NASA ►



Eagle Nebula (M16) "Pillars of Creation"

**Is There a
Creator
Who Cares Abo-**