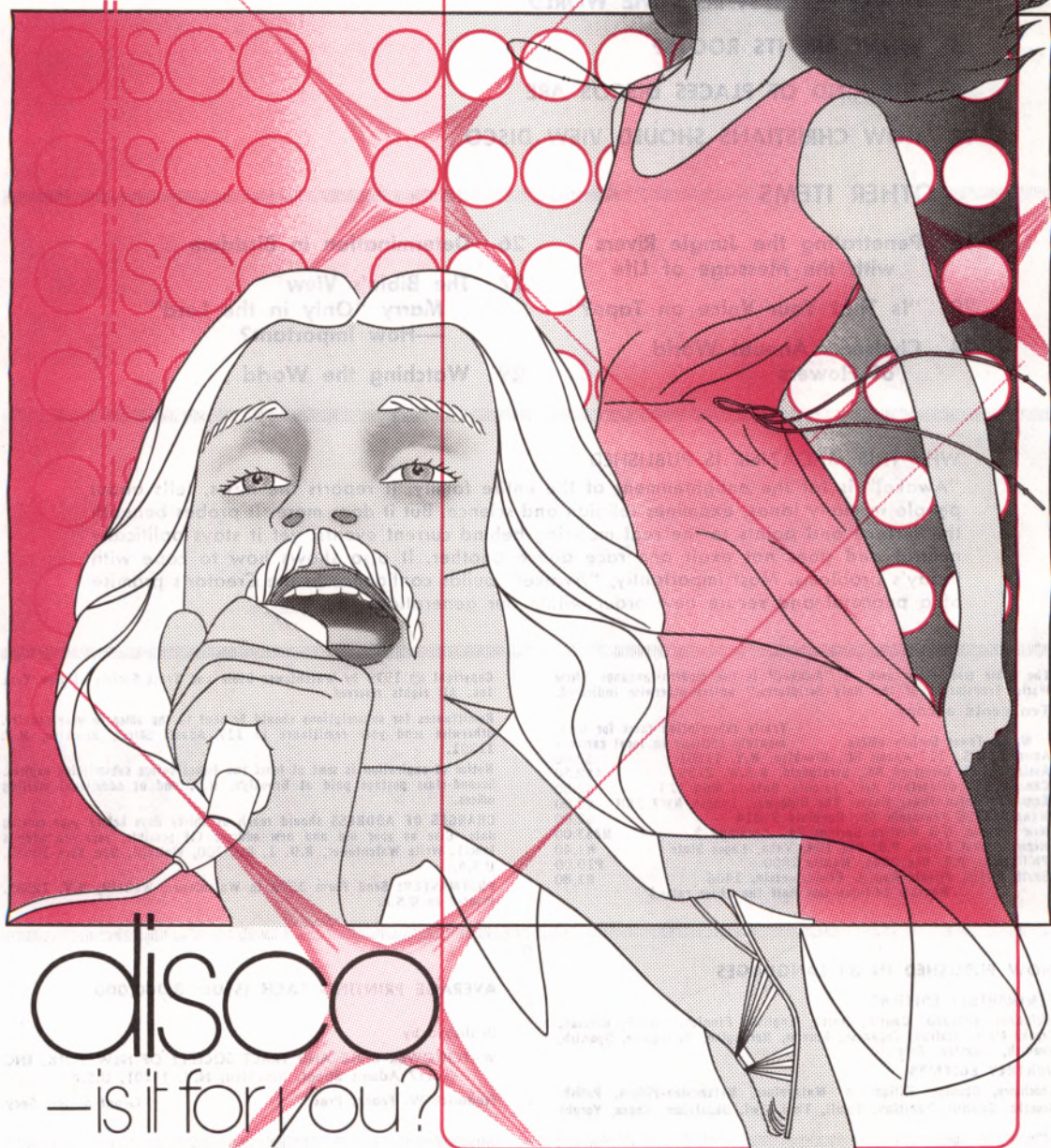


Awake!

MARCH 22, 1979



disco
—is it for you?

FEATURE ARTICLES

Disco has become the rage of the seventies. Discover what it is all about. You may be surprised to learn its origins, and, for many, what its appeal is. There are potential dangers that you will wisely consider

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WHY THIS MAGAZINE IS PUBLISHED

"Awake!" is for the enlightenment of the entire family. 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 stays politically neutral and does not exalt one race above another. It also shows how to cope with today's problems. Most importantly, "Awake!" builds confidence in the Creator's promise of a peaceful and secure new order within our generation.

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disco fever sweeps the world



IN BROOKLYN, New York, last December an international gathering of students was discussing social activities in the 20 countries from which they had come. "Are there discos (discotheques) in your country?" they were asked. "Are they very popular?"

Hands flew up around the room. "Discotheques are very popular in my country," a student from Portugal answered. Similar responses were made by persons from Mexico, the Philippines, Jamaica—country after country. This popularity has come with spectacular suddenness.

It was in the mid-1970's that disco exploded on the entertainment scene. Then, as though carried by a mighty tidal wave, it swept world wide.

Its Tremendous Impact

In some areas, practically every kind of place imaginable is being turned into a disco, and many have rushed to cash in on the profits.

In a recent year, total disco revenues are put at about \$5,000,000,000 in the United States alone, ranking it second only to organized sports in the entertainment field. In the U.S., in the past year, the number of discos reportedly increased from 10,000 to 18,000, which means that over 20, on an average, have been opening every day. Some 40 to 45 million Ameri-

cans have gone to a disco at least once; 17 to 19 million do so regularly.

Even if you don't go to discos, your life may be touched in many ways. Do you like to skate? Well, roller rinks are now rapidly converting to disco. By the end of 1978, estimated *Discotheekin* magazine last summer, 1,000 of the 6,000 rinks in the United States would be Roller Discos. The magazine said that this would expose "an additional 3 million people each week to disco music."

Do you watch television? The heavy disco beat can be heard in the background music of commercials and dramas. It throbs over the airwaves of radio stations. It is played during the half time of football games, and is piped into stores. While shopping, you may find whole sections of department stores with racks of clothes designed especially for disco dancing.

Even totally unrelated businesses are attempting to cash in on discomania. According to *Discoworld* magazine: "There exists a pharmacy actually called Disco Drugs! Seems to be a chain of drugstores throughout southern California, having nothing whatsoever to do with the disco concept, except that the popularity of the term attracts unknowing customers." The same magazine tells about boxes of Disco Chips appearing on the bread shelves in New York city.

What Is Disco?

Discotheque—disco for short—was until recently an unfamiliar word. The *World Book Dictionary* defines "discothèque" as, "a night club where phonograph records are played for dancing."

But disco involves more. *Discoworld*, one of the magazines born in 1976 in the heat of disco fever, explains: "In one way, Disco was a seventies version of returning to the juke box. Only this time around, the juke boxes were louder and larger and more grandiose than ever before."

So the term "disco" does not identify only a *place for dancing*, such as a night club, but also refers to a distinctive *type of music* that is designed for dancing.

But what makes a modern discotheque different from former places for dancing? And how does disco music differ from other music?

Distinctive Music and Places

What gives disco music its distinctive sound is the very heavy bass beat, which throbs repetitively at 4/4 time and about 120 beats per minute. The music also has a lyrical "hook"—often as simple as something like "I love you"—which is repeated over and over again. The bass speakers are usually down near the floor so that dancers literally feel the driving, insistent beat through their entire bodies. Thus totally deaf people can dance to the music because, even though they can't hear it, they feel the beat.

Generally, at modern discotheques disco music is played. But this new type of music is not the only thing that distinguishes discotheques from former places for dancing. They also characteristically have frenetic, flashing, colored lights, electric images reflecting from mirrored walls, and sparkling ceilings. All of this is designed to create a psychedelic experience.

Yet the heart of today's disco is its sophisticated, high-powered sound system,

which may cost tens of thousands of dollars. The phonograph records, too, are the product of modern technology. These records are the electronic mix of different instrument groups that have recorded their parts separately and at different times. This procedure is called multitrack overdubbing. The fancy overdubs and crisp edits are what make disco records attractive to many. As *Discoworld* noted: "Live disco performances just don't measure up to their technologically souped-up studio versions."

Also, the role of the disc jockey figures in the success of a discotheque. There is an art in moving from one song to another without a break in the beat, and in knowing exactly what piece to play when. *Spinner* magazine notes regarding a top disc jockey: "By using the right record psychology and lighting, he can create an acceleration that brings people to a pinnacle of frenzy and decelerate to the lull of a lullaby without losing their interest."

Beginnings of the Fever

The disco sound was born in recent times in New York, being derived from a combination of black and Latin music. It first became popular in the summer of 1974. About the same time, a new disciplined dance performed with a partner was also developing—The Hustle. This is the dance that gave life to disco. It is somewhat similar to the lindy or jitterbug of an earlier generation. Then, in 1975, songwriter Van McCoy wrote the catchy musical hit *The Hustle*, and disco fever started to rise.

What really sent disco fever skyrocketing, however, was the movie *Saturday Night Fever*, first released late in 1977. By last year it had grossed \$130 million (U.S.), making it one of the biggest box-office hits in the history of motion pictures. The sound-track album has sold an unprecedented 15 million copies, surpass-

ing *The Sound of Music* as the highest grossing album in recording history. And disco fever seems to keep on rising.

Why Do People Go?

More persons are dancing than at any other time in recent memory. Why? What draws them to discos?

Writing in *Harper's* magazine, Salley Helgesen perhaps summed it up well. "Listen to me," she said, "discos are going to be the next IBM. It has to happen, people need to make up for the satisfaction they lack in life, and there's nothing else out there."

It's true that many people derive little satisfaction from their work, from school or from any other facet of their lives. They

desire to find escape, to shed inhibitions, and discos provide the opportunity. As one disco operator said: "For a couple of hours a week, they can let it all hang out and just move and let the music fill their heads and push out everything else. For a little while, they can get away from their lives."

Understandably, we all need some relaxation, a change of pace from regular activities. But are discos a wholesome place for enjoying relaxing entertainment? The students from 20 countries, mentioned at the outset, expressed concern. The men were branch representatives of Jehovah's Witnesses, attending a five-week refresher course in Brooklyn. Did they have reason for concern about Christians going to discos?

What are its roots?

THE roots or sources of anything generally have a lot to do with what is produced. What, then, about disco? What are its roots?

You may be surprised. Consider the cover of the January 1978 issue of *Discoworld*. Advertising one of the articles inside, it announces:

THE PARTY PEOPLE DISCO'S GAY ROOTS

Is that startling to you? Yet it is true that homosexuals have had much to do with the development of discos. And they continue to be a major force behind them. The new book *Disco Fever* published a list of discos, and observed:

"Some readers will recognize that many of the discotheques listed are gay discos or gay clubs. 'Billboard' magazine [a prom-

inent entertainment trade journal] has estimated that at least 50 percent of the discotheques in the country are gay, which is not surprising since the disco movement got its primary impetus from the gay community. Invariably, as news about a new gay club with great sound and decor gets around, straight people who want to dance start knocking at the door."

No efforts are made to conceal disco's homosexual connections. To the contrary, the *Detroit Free Press* notes: "Disco probably will be remembered as the first cultural happening where gay participation was openly publicized."

Yet more than that, there sometimes seems to be a certain pride about such gay connections. Richard Peterson, a Vanderbilt University sociology professor whose specialty is the social implications of contemporary music, observed that in

the disco world being gay "is not only acceptable, it's even sort of chic."

There have indeed been great changes in standards of sexual morality in recent years. And discos mirror this change to a greater degree than perhaps any other feature of modern life. Pointing up this fact, *Horizon* magazine of May 1977 said:

"In the dancing of men with each other and women with each other, the disco represents a really drastic change in social convention and sexual attitudes."

"It is neither a secret nor an excuse for gossip that some of the best discos in America and Europe were started as gay establishments that began to open their doors to anyone who wanted to dance. . . . The fact that some discos are gay or 'mixed' is casually noted in night-life features of the major newspapers, which take for granted freedoms that until very recently were the basis of scandal."

A Matter of Concern?

Rather than be concerned, many applaud the changing sexual standards. They are glad to see inhibitions set aside and welcome the new sexual freedoms that are so manifest among the disco crowd. But those who have high regard for the teachings of the Bible are concerned. Why?

Because, rather than approve, or even condone, homosexuality, the Bible condemns it. In his law to the nation of Israel, God stated: "You must not lie down with a male the same as you lie down with a woman. It is a detestable thing." (Lev. 18:22) How serious was this matter?

God's Word answers: "When a man lies down with a male the same as one lies down with a woman, both of them have done a detestable thing. They should be put to death without fail. Their own blood is upon them." (Lev. 20:13) Yes, that is how God viewed homosexuality.

Has God's view changed? Consider this apostolic admonition to Christians: "Sure-

ly you know that the unjust will never come into possession of the kingdom of God. Make no mistake: no fornicator or idolater, none who are guilty either of adultery or of *homosexual perversion* . . . will possess the kingdom of God."—1 Cor. 6:9, 10, *The New English Bible*.

Yes, God's Word plainly reveals that homosexuality is wrong, and that those who become involved in that way of life will not enjoy God's blessing. In view of this, can you see why Christian overseers would express concern about the spreading popularity of disco?

Yet disco has other roots. What are they?

Roots of the Music and Dance

In the opening article it was observed that disco music is of recent popularity. But authorities say that its origins can be traced to earlier times. In a September 1977 feature article, "Evolution of Disco Music," *Discoworld* says:

"What holds it all together, what makes it Disco music, in fact, is the **beat**."

"And the Disco beat, to the uninformed, did not begin one fine morning in 1965 . . . nor even when Van McCoy first dented the charts a decade later with his version of 'The Hustle.' That beat—the basis of Disco music—is Africa talking."

"Talk about roots. When you go to a Disco today, you are basically participating in a 1977 version of ceremonies that were going on eons ago on the West Coast of Africa. Certainly, Disco music has been spruced up with the latest technological geegaws such as twenty-four track recordings, synthesizers, eardrum-busting amplification, overlaid strings and cooing vocals. But strip away all those accessories and you're grooving on the same beat that no doubt was moving the ancestors of Kunta Kinte."

Does having an ancient African origin in itself make disco music objectionable?

Obviously not, no more than if the music had an ancient Asian, European or American origin. What does bear on the matter, however, is the purpose of the ancient music. What kind of dances were performed with it?

Disco literature has commented on those ancient dances, and their purpose. In fact, the wild abandon of those ancient dancers is held up for modern disco dancers to

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-

imitate; they are urged to cast off the inhibitions that they may have. *Discoworld* of May 1977 says:

"The natives danced to exorcise devildemons and evil spirits from their frenzied bodies and to coax Mother Earth to yield new crops. In spring they danced during 'fertility rites' so women would grow healthy children to perpetuate the species. They danced to celebrate new life and even to prepare for death. But no matter what the exact purpose of their dancing was, all dance was really a display of worship of their gods, worship that either paid homage to the gods; sought the gods' good will; or tried to allay the gods' wrath . . . The energy often became so intense that a young virgin girl or lamb would be sacrificed in the hopes that the blood spilled would appease the gods."

Then, in advice to the modern disco

dancer, this magazine article goes on to say: "It's just a matter of letting yourself go. You must liberate your mind first; then your body will follow. When I dance I almost astral project and leave my body."

Another issue of *Discoworld* also draws attention to disco's roots "among Voodoo worshipers, primitive tribesmen, the Brazilian Macumba, and the Kalahari Bushmen," and then advises: "Your body is a complex of energy forces blending into one another and connected to even larger cosmic energy forces. This is how the ancients saw it and how we're beginning to relearn this. Try to become aware of every sensation while you dance until you gradually lose awareness, and blend with your surroundings."

Do disco dancers heed this type of advice? Do they commonly let go in wild abandon? Note what the new book *Disco Fever* says: "With discotheques came disco dancing—a form of dance totally divorced from the discipline of the Hustle, yet completely at home with it on the dance floor. . . . Disco dancing—whether it is called free-styling or free-form—is doing-your-own-thing dancing." Yes, it is an uninhibited, anything-goes style of dancing.

But is this objectionable? Is it wrong to adopt a style of dancing that the ancients used in the worship of their gods? Yes, for true Christians it is. Why? Because those gods of the nations were condemned by the Creator, the God of the Bible. He did not approve of the ancient fertility dances that were designed to stimulate the sexual passions of both participants and observers. Lamenting the situation that developed among the Israelites of old, the Bible says:

"They too kept building for themselves high places [sites where licentious rites were performed] and sacred pillars [phallic symbols of the god Baal] and sacred

poles [representing a Canaanite goddess of fertility] upon every high hill and under every luxuriant tree. And even the male temple prostitute proved to be in the land. They acted according to all the detestable things of the nations whom Jehovah had driven out from before the

sons of Israel.”—1 Ki. 14:23, 24; Isa. 57: 5-8.

Yet, is there really basis for comparing what goes on in modern discos with ancient places where sexually arousing fertility dances were performed? Let’s take a closer look at disco.

the kind of places discos are



AROUND the world, millions of people every week are seeking out discotheques for entertainment. What kind of places are they going to? Are they all much alike?

Not necessarily. There can be considerable variety from one disco to another, for as *Discotheekin* magazine says: “Disco

is simply music and dance, and can be shaped into any form desired. People dictate the success of a club, and if the owner/manager is astute he can determine his clientele merely by defining, via the music, the atmosphere he desires to create—be it the Seventies, the Forties or even the Gay Nineties.”

There are even kiddie discos for children; others are designed particularly with their grandparents in mind. Regarding persons who are a little older, the Detroit *Free Press* observes: "It hasn't been hard updating their lindy steps into the hustle and their fox trots into the foxy trot at subdued disco-supper lounges."

Some places are classified as "restaurant-discos." They may be restaurants during the earlier evening hours. But later at night they serve as discotheques. This enables the restaurateur to generate additional receipts during hours in which his restaurant would normally be closed. In Europe, most discos are places where one can dine and drink as well as dance.

So not all discos are the same; the name can be attached to quite differing kinds of places. But what is the *essence*—the very *substance* or *soul*—of disco? What life-style does it promote? How is this reflected in its music, its dancing, its dress, and so forth?

Disco—What It's All About

Kitty Hanson, who has researched and written extensively on the subject, says of a modern disco: "Under the glittering canopy of lights, the floor seemed to heave with the pounding of feet, and the air began to crackle with sheer physical energy. Then the room exploded. Cries and calls and a thousand wildly waving arms filled the air as the music virtually lifted the dancers off their feet and off the floor. It was a simmering, sizzling moment of pure primitive emotion. It was the essence of the disco experience."

What is this "*pure primitive emotion*"—the *essence* of the disco experience—that is elicited from dancers? *Show Business*, a professional trade journal, gives us an idea in its article "A Dynamic Decade of Disco," saying:

"An aura of acceptance surrounds the disco trend . . . Antiquated sexual mores,

which were successfully battled during the sixties, have yielded to a new sexual freedom in which people deal with their desires honestly and participate without guilt.

"Gays are dancing side-by-side with straights, and neither could care less. It is this multi-faceted freedom that constitutes the soul of the disco, and its heart is the pulsating disco beat."

Free, liberated sexual expression—abandonment of restraints—that is the *essence*, the *soul*, of disco. Surely this is reminiscent of ancient fertility dances where worshipers broke loose in frenzied, passion-arousing movements that may well have culminated with participants engaging in sexual intercourse so as to coax "Mother Earth" to yield new crops.

True, not all discos necessarily encourage the casting off of inhibitions, but disco is identified with such a 'sexually-freed' life-style. "What differentiates discomania from most of its predecessors is its overt tendency to spill over into orgy," explains *Esquire* magazine. "All disco is implicitly orgy . . . By offering the instant and total gratification of all sexual desires in an atmosphere of intense imaginative excitement, the disco-inspired orgy promotes the dawning of an exalted state of consciousness, of literal *ecstasy*, or standing outside the body."

Emphasis on Self

Some may think of disco particularly as a disciplined form of dance featuring the Hustle, and for some it may be that. Yet this really is not what disco is all about. Rather, the attention of dancers is generally focused not so much on dancing with someone else, but on doing one's own thing—"getting down"—as the saying is. The scene is one of sexual exhibitionism.

This self-indulgent thrust of the disco culture has been observed, and some thought-provoking comments have been

made. Note the editorial "Disco, Narcissism & Society" in the New York *Daily News* of March 19, 1978:

"Separated by walls of deafening music and swept up in a frenzy of bright lights, dancers do their own thing seldom touching, never looking at each other, or even speaking. It's a lot like standing in front of a mirror shouting, 'me, me, me, me . . . ' endlessly.

"This pure self-indulgence reflects a dangerously deep-rooted philosophy in our society. It preaches that anything an individual feels like doing is 100% right—no matter how it affects anyone else.

"The attitude shows up in our soaring divorce rate, our legions of broken families and in countless books and movements keyed to self-gratification and self-esteem.

"There is too little room for love in the philosophy that permeates the disco world. And that is a pity, for those who have forgotten—or never known—the joys of giving and sharing are missing the richest part of life."

The *Esquire* article of June 20, 1978, has a similar thrust, being entitled "The Disco Style: Love Thyself." "That disco has been built on a revival of 'touch dancing' or that it is focused on a step called the Latin Hustle," it says, "is either wishful thinking by instructors at the Arthur Murray schools or just bad women's page journalism. The truth is that today's hip disco dancer is into the kind of one-man show that John Travolta puts on in the most exciting sequence of *Saturday Night Fever*."

Since the movie *Saturday Night Fever* has had so much to do with the phenomenal growth and spread of disco, let's consider it. What kind of life-style does that movie feature and, in effect, promote?

"Saturday Night Fever"

The main character of the movie lives for just one thing—to shine at the disco

on Saturday night. The sexual escapades of the disco crowd are featured, including oral sex, which is performed out in the car during interludes to the dancing. The language is of the filthiest kind. Yet all of this is presented as normal—the way of life among those who go to discos. In a news article, "Why Teenagers Should Not See 'Saturday Night Fever,'" New York psychologist Dr. Herbert Hoffman says:

"What Travolta and his friends are teaching teenage boys is to become sexually involved with girls without any romantic feelings whatsoever, to use girls as sex objects, to depersonalize the entire sexual experience.

"The ideas that teenagers will carry away with them from this movie can tragically damage their entire lives.

"Young boys will be out to 'score' with the opposite sex, with the idea that a relationship with a girl is an accomplishment to brag about to friends in order to enhance group standing.

"Young girls will be convinced either that promiscuity may be required to insure popularity, or that men are after 'only one thing.' In either case, their opportunity for deep and lasting emotional involvement is jeopardized.

"It's a sick movie to allow susceptible teenagers to see."

Yet millions of youths around the world, often along with their parents, have flocked to this movie, making it one of the biggest box-office successes in history. As noted, it features what disco is all about. But so do other aspects of the disco scene.

Music, Dress and Drugs

As its popularity grows, there are few people who are not familiar with the sound of disco music. Many well-known songs of earlier decades have been blended with the pulsating beat of disco. As they get used to these tunes, even some older persons who liked the originals find enjoy-

ment in listening to the updated versions. But again, what is often a dominant thrust of disco music?

Reporting on one of the popular disco groups, *Discoworld* says: "On 'Baby I'm On Fire,' from their current album, 'Arabian Nights,' the three women pant and purr 'Oooh, I'm on fire.' A phallic saxophone enters, turning the song into a fabulous soundtrack for a Times Square peep



"Sex is monopolizing disco. . . . Dirty disco is making money—a lot of it—and more record companies and radio stations are jumping on the bandwagon."—US, January 9, 1979.



show." Then the magazine adds: "The sex-charged style of the Ritchie Family falls within the sphere of the main thrust of today's disco music, which is to celebrate pleasure."

Disco's blatant exploitation of sex, including attempts to arouse listeners sexually, was also noted in *Time* magazine. Its article "Gaudy Reign of the Disco Queen" said: "Back in 1976 . . . she got a gold record by simulating orgasm 22 times."

Disco album covers, too, give an idea of the type of music they contain. Nudity is sometimes featured, although sexual exploitation is often more subtle. *Discoworld* says of one cover: "The stances of Jaqui and Dodie, combined with Ednah's, create a three-letter symbol which on casual observation is invisible to consciousness, but instantly perceivable at the unconscious level: S-E-X."

The dress styles of the disco crowd are also in keeping with the emphasis on sex. The book *Disco Fever* shows a photograph of a dancer at a New York disco. Her dress is slit to the waist and her leg is uplifted,

showing an inside view of almost her entire thigh. The caption reads: "The scene . . . sums up the appeal of disco." Paulette Weiss, staff writer of *Stereo Review* magazine, says of those caught up in the disco experience: "I've seen women strip off their clothes on a dance floor."

In keeping with the disco emphasis on so-called "pleasure," drugs flow freely at discos. Recently a drug arrest at the best known disco in New York city hit the headlines. But the New York *Daily News* observed: "The discovery of drugs in Studio 54 will come as no surprise to anyone who has spent time in the place, according to regulars. Cocaine and marijuana reportedly have been exchanged, sold and used openly there since the place was opened in April of last year."—December 15, 1978.

Sound and Lights

Sound and lights are generally considered vital to the disco experience. The sound is not simply heard; it is so overwhelming that it is felt.

But can sound that powerful be dangerous? A recent news report from Rio de Janeiro, Brazil, said: "The possibility that discotheques are hazardous to health has caused the government to hold off issuing licenses to 20 establishments in the southern city of Porto Alegre pending a medical investigation." The question may well have been about noise levels, and understandably so.

Last year the sound was checked at discos on Long Island, New York, in the United States, and inspectors found 18 establishments that had noise levels of over 95 decibels for more than 30 seconds. Each was forced to post a warning sign at its entrance: "SOUND LEVELS WITHIN MAY CAUSE PERMANENT HEARING IMPAIRMENT." Medical research indicates that noise levels commonly experienced at discos can cause lasting dam-

age to certain people's hearing, particularly those exposed to such noise levels on a regular basis.

The lights, too, pose a possible health hazard. How so? Well, certain discos have laser light systems. "If the beam enters your eye," says Professor Paul L. Ziemer of Purdue University, "you could get a burn on the retina—a permanent blind spot." In addition, the strobe lighting, which flickers in time with the music's beat, can produce dizziness, nausea and hallucinatory fits. Among those who have issued warnings about this is the British government, which did so in a booklet on safety in schools.

Does this consideration of disco—its roots and the kind of places discos are—help you to see why those Christian overseers gathered in Brooklyn, New York, last December were concerned about the growing popularity of disco?

However, many people enjoy disco because of the very things about them that others consider hazardous. They believe that any risks are minimal, and that they are worth taking to enjoy what they consider to be a pleasurable time. Really, how great are the dangers? Does going to discos pose risks to a person's lasting welfare and happiness? These are matters for us to consider.

How Christians should view disco

IS IT wise for Christians to go to discos? Is it wise for them to see such movies as *Saturday Night Fever*? In many households questions such as these have been topics of conversation, and have given rise to some concern.

Some Christian overseers have spoken about these matters from the public platform, even before large convention audiences. Generally, they have pointed to the danger for Christians who might go to such places. How do you view their advice? Do you consider such Christian overseers 'fun spoilers,' persons who are needlessly concerned about the recreational activities of fellow Christians?

What Others Advise

Well, what is the advice of ones who know disco from the inside—the publishers of *Discoworld*? A 15-year-old from Chicago, Illinois, wrote to the magazine: "I used to attend discotheques until two

weeks ago when one of my teachers from school caught me and told my father. I am planning to start going again after things cool off. Because to me the most enjoyable form of entertainment is dancing to the sounds of DISCO."

Discoworld published the girl's letter in its May 1977 issue, along with this reply:

"Dear Lidia,

"A girl at your age attending a disco is really not a good idea. There are harsh realities in the world today and if confronted by one of them it may cause a dilemma for you and for your family. I am sure you have a record player at home and enough records to dance to your heart's desire. If you need a crowd, invite the rest of your friends over."

"Harsh Realities . . . A Dilemma"?

What "harsh realities in the world today" may one be confronted with by going to discos? How may this result in a "dilemma" for a girl and her family?

A basic harsh reality is that the *soul*—the very *essence*—of disco is freedom of sexual expression. The atmosphere at such places is designed to lower inhibitions. A person who is now one of Jehovah's Witnesses, but who formerly used drugs and went to discos, said: "There were times when I could get higher in a discotheque than on drugs due to the effect of the strobe lights, the throb of the music and the hypnotic air."

Another Witness, who regretfully had to be expelled from the Christian congregation because he became swallowed up in the disco experience and committed all forms of fornication, later acknowledged: "It's a jungle. Even if you go there with your wife and want to enjoy a little dancing, she is undressed and raped in the minds of the men there even before you get her out on the dance floor."

So the harsh realities are that going to discos exposes one to sexual encounters, as well as an atmosphere that lowers sexual inhibitions. Of course, that is what

"There can be enjoyment, yes, fun, in running with a crowd that engages in a pleasure-oriented, loose way of living, which characterizes the disco life-style. But is that way of life truly of lasting benefit?"

many, perhaps the majority, are seeking. However, a true Christian heeds the apostolic command: "*Flee* from fornication." (1 Cor. 6:18) But, frankly, how can Christians really be heeding this command and at the same time be frequenting discos?

The involvement in immorality is not some *remote* possibility. It is a very *real* possibility. Reports are received regularly about its happening to those who go to discos. And what often follows? You know

—unwanted pregnancies, venereal diseases, broken families, emotional troubles, fear, confusion, not to mention a bad conscience. Confrontation with such harsh realities can indeed cause a dilemma, yes, a really sad situation for a person and his or her family.

For What Are We Living?

There is a vital fact that Christians must face: *Not everything pleasurable is good; God may even be displeased with what we enjoy.* Consider Moses of old, of whom the Bible says: "By faith Moses, when grown up, refused to be called the son of the daughter of Pharaoh, choosing to be ill-treated with the people of God rather than to have the temporary enjoyment of sin . . . for he looked intently toward the payment of the reward."—Heb. 11:24-26.

There can be enjoyment, yes, fun, in running with a crowd that engages in a pleasure-oriented, loose way of living, which characterizes the disco life-style. But is that way of life truly of lasting benefit? Did God's servant Moses choose such a life-style? No, but because he loved Jehovah and desired the reward God offered, Moses refused that temporary enjoyment of sin.

Recently a Witness in her mid-twenties, who formerly had been involved in a morally loose, drug-oriented way of life, was asked about her previous way of life. "I can't say that it wasn't fun," she answered. "I didn't stop doing those things because they weren't fun—even though underneath I felt a certain insecurity and unhappiness—but I stopped because I came to learn what was pleasing to Jehovah God, and I wanted above all else to please him."

So what is really important to you? Is it pursuing temporary fun, something of no lasting benefit, but which may even run you up against harsh realities? Or

is it pleasing Jehovah, winning his approval and eternal life in his righteous new system? Where is your heart?

Interestingly, the second-century Christian Clement of Alexandria wrote on this matter of worldly entertainment: "No one who has his senses will ever prefer what is pleasant to what is good." As Christians, may what we choose for entertainment not be simply what we consider pleasurable, fun, but may our choice be determined particularly by what is *good*.

Music and Dancing—Need of Caution

However, some Christians may feel deprived, as though they are missing out on something. 'Not all discos are such bad places,' they may argue. 'What's wrong with having some fun?'

As noted earlier, the name disco can be attached to quite differing kinds of places. Some "discos" may be restaurants, the music and dancing perhaps even being rather incidental, or not even featured during normal dining hours. Such places, and perhaps even others, may feature a form of music and dancing that Christians find acceptable. But these "discos" would not reflect the disco life-style, which conflicts with the precepts of true Christianity.

Jehovah God surely does not condemn entertainment. His word speaks approvingly of music and dancing. (2 Sam. 6: 14; Ps. 87:7; 149:3; Matt. 11:17; Luke 15: 25) But because true Christians recognize the very real dangers of sharing in such things with persons who do not respect Jehovah's laws, many wisely choose to enjoy them alone or with fellow Christians. But does this necessarily remove all the potential for trouble? No, it doesn't. Music, for example, can be harmful even when listened to alone. These comments of a woman, who is now a Witness, illustrate this:

"Popular were songs about fun and freedom. Doing 'what you want to do'

and 'whatever feels good' were depicted as the way to live. Constantly allowing these thoughts to be carried into my mind and heart, I was deeply influenced by my musician 'friends.' Though I never personally spoke with them, they became some of my closest associates. My schoolmates and I became almost as familiar with our favorite musicians as we were with our next door neighbors!

"Because I was no longer a girl, yet not quite a woman, I overflowed with emotion, imagination and idealism. Therefore my feelings and outlook were easily 'tuned in' with those of my musician 'friends.' As they 'cried' out their songs, inside I cried too. As they 'laughed,' I laughed. Before long, this powerful impact upon my feelings led me to great harm.

"I wanted to experience romantic love, to be showered with the affection that the musicians seemed to have. My conscience, weakened by this worldly thinking, was then no protection for me when I started dating. I tried marijuana and LSD in order to feel 'in with the crowd.' My actions, without my being aware of it, were influenced by the desires my musician 'friends' had instilled in me. When one boyfriend didn't prove to be my 'true' love, I hoped to find another. Where was that blissful relationship the music had described? I went from relationship to relationship. My boyfriends could not fit into the mold I had cast for them. So I spent many hours, days at a time, in tears and frustration."

Music affects us. And much of today's disco music can have an adverse effect. So use discernment when you listen to music. Dancing, too, even when done with fellow Christians, may present potential hazards. When in close contact with members of the opposite sex in the "romantic" atmosphere of music and dancing, feelings can easily be aroused. And especially when good motive is lacking, real trouble can result.

Such lack of good motive proved a problem in the first century during the "love feasts" early Christians held. These feasts



evidently were social gatherings arranged for the enjoyment of good food and up-building association. But persons lacking proper motive exercised a corrupting influence, apparently turning these wholesome gatherings into noisy, boisterous affairs of self-indulgence.—Jude 12; 2 Pet. 2:13, 14.

Similar situations have developed during social gatherings of Christians in modern times. The introducing of improper disco music and dancing has contributed. We need to be careful to prevent this from occurring, being on guard that persons with improper motives do not slip in and take advantage of such occasions to corrupt others. Not only Christian elders, but all, young and old alike, need to feel the responsibility to keep any semblance of the disco life-style from being manifest among God's clean, holy people.

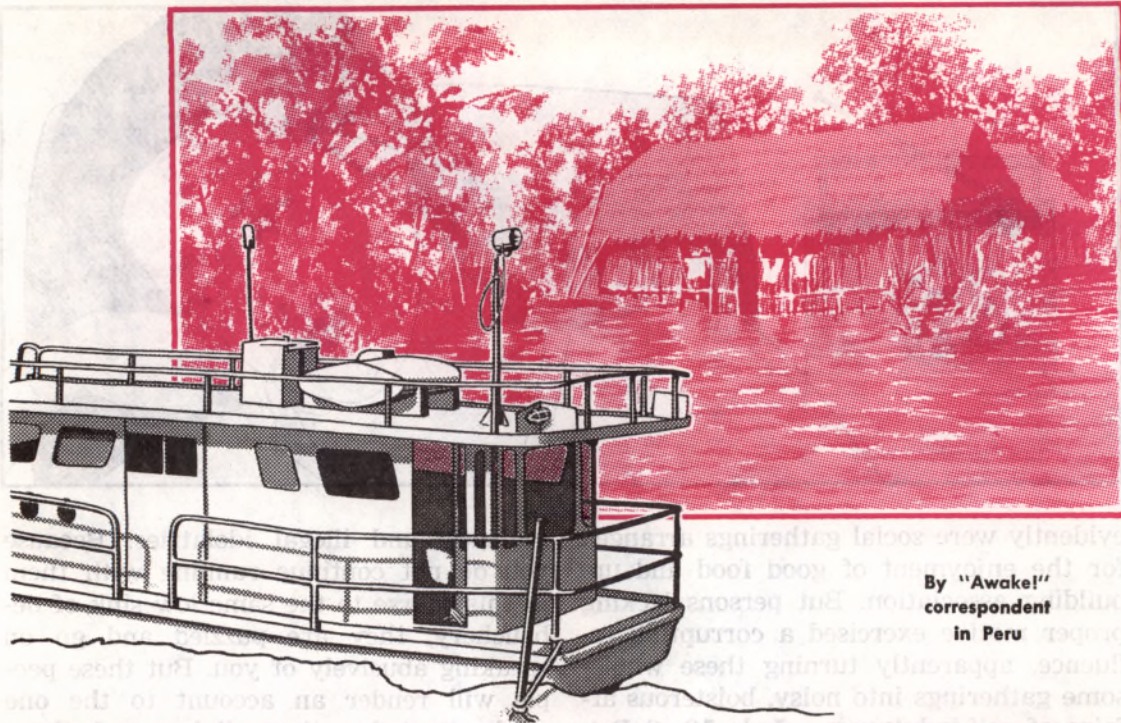
As Christians, we need to heed the apostle Peter's admonition: "Therefore since Christ suffered in the flesh, you too arm yourselves with the same mental disposition . . . For the time that has passed by is sufficient for you to have worked out the will of the nations when you proceeded in deeds of loose conduct, lusts, excesses with wine, revelries, drinking

matches, and illegal idolatries. Because you do not continue running with them in this course to the same low sink of debauchery, they are puzzled and go on speaking abusively of you. But these people will render an account to the one ready to judge those living and those dead."—1 Pet. 4:1-5.

Its Last Waltz?

Unlike members of this rapidly sinking system who have no hope, Christians have true purpose and a goal in life. Let us reflect this fact by the wholesome, upright way that we live. Reject the disco scene! It is empty and sick, and serves as just another evidence of the nearness of the system's end. Anthropologist Jamake Highwater unwittingly pointed to that fact, saying:

"Dance is the most transparent indicator of attitudes which the culture produces, because we can't lie about the way we move. . . . (the disco scene) reflects a fear on some level that we're a terminal people and that this is the last waltz. When I go to Studio 54 [a well-known New York disco], it reminds me of what I imagine the last dance would be like on the Titanic."



By "Awake!"
correspondent
in Peru

PENETRATING THE JUNGLE RIVERS WITH THE MESSAGE OF LIFE

HOW would you like to take a trip in a launch through a jungle full of gigantic trees and abundant vegetation, alive with the exotic song of a great variety of birds, the hum of countless insects and the cries of wild animals? Certainly an exciting experience, you will say.

The Area Where the "Good News" Must Be Proclaimed

The Peruvian jungle provides such experiences in abundance, for it comprises an area of 288,529 square miles (747,287 square kilometers), almost three fifths of the country. It is bounded on the west by the high Andean mountain range. This immense tropical jungle has tangled vege-

tation filled with thousands of insects, including some harmful ones, such as mosquitoes, gnats and *isangos* (a kind of borer that gets into the pores of the skin, especially on the ankles, causing excruciating pain). Also, there is a great variety of wild animals, including jaguars, alligators and *guanganas* (wild jungle pigs). The only means of communication available, for the lowlands in particular, is by river.

There are thousands of waterways, some of great size and volume. The jungle region is crisscrossed completely by three huge rivers, the Ucayali and the Marañón, which join to become the third—the mighty Amazon River. Streams of all sizes

empty into these three major rivers to form a communication network similar to the arteries and veins of the human body. This water network reaches even the most inhospitable region.

This wide area is populated with villagers who cultivate the land during certain seasons of the year. Also, a great number of Indian tribes such as the Cashibo, Shipibo, Campa and the Machiguenga, are constantly moving from place to place in this vast jungle.

Let's go into a few of the details of the Ucayali River. It (along with the Apurímac, its longest tributary) is 1,700 miles (2,700 kilometers) long. On its banks there are large cities such as Pucallpa, Contamana and others. These cities are prospering at the present time, with commercial activity and river navigation increasing daily, due to the development in recent years of the oil and lumber industries.

When Jehovah's Witnesses began to declare the Bible's message of life to the people of Peru, the coastal and mountain people were easily reached. But how could the people in this jungle region be given the opportunity to hear the "good news"?

The Solution Is Found

Jehovah's Witnesses, desirous of expanding their Christian disciple-making activity, were willing to accept the challenge that this hard-to-reach territory presented. They thought of the idea of building a houseboat that could travel on the rivers. They were encouraged by a spirited and zealous co-worker, Walter Akin, one of the first missionaries of Jehovah's Witnesses to come to Peru (in the mid-1940's). He helped to see the project through to its completion.

The boat was to be sturdy enough for river travel, and large enough to provide living quarters for six persons. The proj-

ect was presented to a group of engineers, who designed it with the following characteristics: a hull 30 feet (9 meters) long and 9 feet (3 meters) wide, weighing 5 tons, constructed completely of iron, fitted out with a 50-horse-power diesel engine designed especially for river navigation. The boat was equipped with adequate sleeping quarters and dining area, kitchen and bathroom.

The construction work began in Callao in the shop of one of the Witnesses. Callao is Peru's main port, not on the Atlantic, however, but on the Pacific coast. This presented a real problem: how to get a 15-ton iron boat from the Pacific coast across the Andes mountains, going through a pass 15,797 feet (4,815 meters) above sea level, and then down into the jungle. The only solution was to build the boat in two sections and assemble it on the other side of the mountains, right in the jungle.

The houseboat was reassembled in Pucallpa, a port on the Ucayali River. What name should this "lifesaving" boat be given? *El Refugio* (The Refuge) seemed most appropriate.

A boat of this size could navigate only on the bigger rivers. How could the people living along the unnavigable tributaries entering these rivers and all the shallow lakes nearby be reached? A small boat with an outboard motor, a *pequepeque*, was built. *El Refugio* could move in the big rivers and the *pequepeque* could take care of the small rivers and lakes. The rest of the area could be covered on foot.

Now, in Pucallpa everything was ready. A special kind of crew was needed. The branch office of the Watch Tower Society in Lima sought out six persons who could spend full time in this challenging but interesting work of reaching as many of the people of the jungle as possible—a real task, since the villagers and tribes vary greatly in customs and dialects.

Francisco Echegaray, an experienced overseer of a Peruvian congregation, was placed in charge of the launch. He had spent many years in full-time preaching and, having been a sailor, had a good knowledge of navigation. Then the five remaining members of the crew were selected. From time to time, some have been replaced, because of the difficulty of their getting used to the change in climate and environment.

The principal goals of these "pioneers" were two, namely, to reach the greatest number of people possible with the message of life and, while doing so, to maintain a high level of spirituality among themselves. Therefore, *El Refugio* began to function as a small congregation, even benefiting by the visit of the circuit overseer.

An orderly routine was established for the crew. Kitchen duty and other necessary services were to be cared for in shifts and by turns by the crew under the supervision of one designated as "home overseer." This arrangement has been adjusted and perfected, so that a day's routine can be described as follows: Rising time is 4 a.m. with, first, an active bath in the river—active, because if you stop moving, the fish, including piranhas (though these are not as voracious as piranhas found in more remote regions), begin to nibble on you. At the sound of a bell all immediately come and sit down at the table for the consideration of a Bible text, after which the cook on duty serves breakfast. The principal food at the meal is *tacacho*, which is made from bananas, oatmeal and fried fish.

Then, at 6 a.m., the group gets into the little outboard motorboat, their *peque-peque*, loaded down with literature, to begin the day's service. It has been found expedient to start early because by then

most people have already begun the activities of the day, and when night falls, around seven or eight o'clock in the evening, all activity ceases.

Experiences

What has been accomplished through the preaching of the message of life with this riverboat? From September 1976 to July 1977 the village of New San Juan, which lies south of Pucallpa, was used as headquarters. The crew traveled up and down the Ucayali River and its branches, visiting the towns and villages on both sides. They even went as far as the sparsely settled region of the Sepa River. When the "missionary sailors" arrived at one of these places, they would talk with the local authorities to make arrangements for a time when the villagers could come together for a public talk. After the talk, Bible literature was distributed to the people who showed interest. Classrooms, private homes, hotel lobbies and other places were used for these meetings.

At the settlement of New San Juan, where 500 people live, the majority are Protestants. When the brothers arrived, the people were sure that they would be able to convert these newcomers to their religion. But, in a short time, just the opposite happened. The sailors from *El Refugio* started many Bible studies with interested persons, and soon an average of 23 people attended the meetings that were held.

The Shipibo and Conibo tribes live in this area, and "missionary sailors" have been able to effect a strange trade with the natives. They have exchanged languages. The natives teach the missionaries their dialect and the missionaries teach the natives Spanish, using the publications of the Watch Tower Society.

In August 1977, the houseboat moved northward, arriving at Contamana, where

new headquarters were established. The people there showed great interest in the Bible. Day and night, people sought out the missionaries to ask questions and obtain Bible literature. Bible studies were established. These developed to the point that the study groups could be gathered into congregation meetings. It was here in Contamana that the crew of six missionaries had the words of the apostle Paul about "dangers from rivers" brought vividly to mind. (2 Cor. 11:26) How so?

Suddenly, a severe storm with hurricane winds swept the area, and the volume of the river increased rapidly. The rising waters broke the mooring ropes of the boat, and the crew member on guard went ashore to try to secure them. But the force of the elements parted all the ropes, and *El Refugio* was adrift in the river. Three who were asleep on the launch woke up and tried to start the engine in order to control the boat in the rapidly increasing current. But the river carried them violently downstream and forced them against a section of the bank just as the bank was undermined and fell into the river. This caused the boat to tilt to starboard with the brothers trapped inside. In a few minutes the boat was sinking. But a sliding door was open, enabling those inside to climb out into the raging waters and swim to safety on shore.

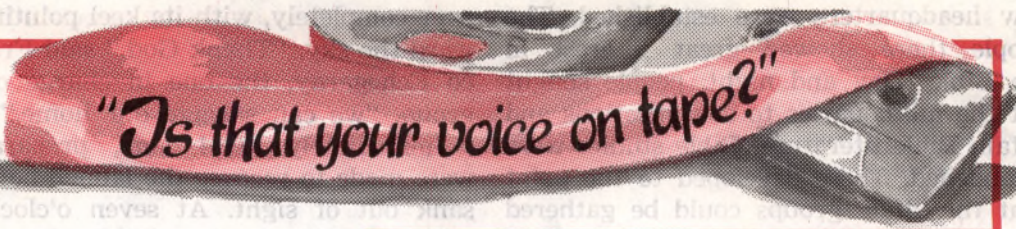
It was a moment of happy reunion for the four missionaries there on the riverbank, some with tears in their eyes due to their great fear for the lives of their fellow workers. How thankful they were to Jehovah God that no one was lost! What about *El Refugio*? It had turned

over completely, with its keel pointing toward the sky. "Thank God," said Francisco Echegaray, the one in charge of the group, "we can salvage our home."

Immediately at 4 a.m., preparations were made to recover the launch before it sank out of sight. At seven o'clock, by means of two tractors kindly loaned by the owners of the local lumber companies, the boat was pulled to the shore of the river. The crew tried repeatedly to restore the houseboat to its normal position, but it was not until a crane was brought from a place nearby that they could finally right it. This was at 4 p.m., after 12 hours of backbreaking work. At least the group could rest for a while and get something to eat. At the end of an exhausting day, though they had lost all their belongings, they were happy because they had recovered their home, the houseboat, indispensable in carrying out their purpose. After some repairs, it could again be their means of reaching the dwellers of the jungle with the "good news," the Bible message of life. With the financial assistance of Jehovah's Witnesses here in Peru and after several months in repair, *El Refugio* was ready to sail again.

What is ahead for our "missionary sailors"? The jungle, all around the Marañón River with its hundreds of tributaries and the tremendous expanse of the Amazon region, is out there waiting. We pray that this dauntless crew, with the blessing and protection of Jehovah, will be able to cover their assigned territory and help many people of the Peruvian jungle to have the opportunity to serve their Grand Creator, Jehovah.





THAT is the question my niece asked me some time ago. Capturing the sounds of animals, children and friends on magnetic tape is becoming commonplace. Voice letters are very popular. In fact, combining pictures with sound and re-playing them soon will be accomplished easily.

But what is magnetic tape? And how is it made? We decided to find out by going to a tape manufacturing plant where we could see the whole process.

The Tour Begins

Our guided tour began with an explanation of what magnetic tape is. It is made up of some 12 to 15 different components. Basically, they can be broken down into four categories. The first, of course, is the polyester base material, to which all the other components are applied. The second is the iron oxide for sound reproduction, and carbon for insulating the individual iron-oxide particles. The third is a series of binders that hold the oxide to the polyester film, and vinyls that stop the binders from becoming too hard and brittle, which would cause oxide flaking and poor tape flexibility. The fourth set of ingredients consists of the lubricants and smoothness components. These allow for smooth tape travel, good head-to-tape contact, minimal head wear and low friction. All these components combine to form the high-quality magnetic tape of today.

With this basic information, we could now better understand the procedure of making the tape.

A 300-gallon tank was our first stop. Here is where all soft solid and liquid components begin their journey toward becoming magnetic tape. This agitation tank is much like an electric blender. The components are thoroughly mixed with high speed and heat to begin the chemical reactions that form the binding systems that hold the iron oxide to the polyester. The tank must be agitated for many hours to produce the chemical reactions required to form strong binders. "Now let us go over to that machine that looks like a cement mixer," suggests the guide.

She explains that the solid chemicals are placed directly into this machine, called a ball mill. It turns much like a cement mixer or tumbler. The premix from the dispersion tank is added. Containing 5,000 pounds (2,200 kilograms) of steel balls, the ball mill grinds and regrinds the iron and other components as the mill turns. That name "ball mill" certainly is appropriate. The tremendous pressure from the weight of the balls and the constant rotation cause the mixture to become completely homogeneous, reducing the size of any single particle to less than one micron.

After some 24 to 60 hours, depending on whether audio or video mix is being prepared, the contents of the ball mill are pumped through a series of filters rang-

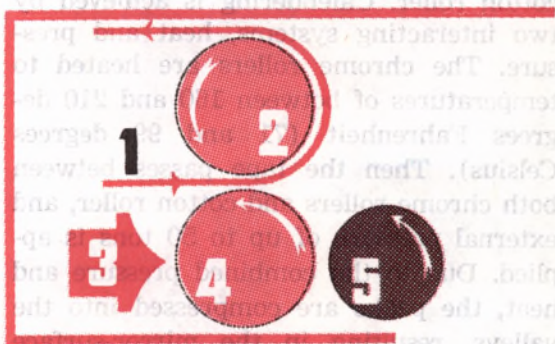
ing down to one micron. Filtration is very important. "For example," states the guide, "in video tape a seventeen-micron piece of foreign material will cause a visible dropout in a picture." After leaving the ball mill and being filtered, the oxide must be kept under constant agitation to keep the components from settling out or separating.

Precision Coating of the Film

Now we come to the very heart of the plant—the actual coating of the polyester film with the iron oxide. This can be accomplished on one of three coating systems—reverse roll, knife, or gravior. The entire coating environment utilizes clean room air systems. Also, all audio and video coaters are housed in the same environment, to eliminate dust particles.

In the reverse roll process illustrated here, the film (1) travels around the drive

roller (2). The oxide (3) is spread onto the transfer roller (4), and the distance between the transfer roller (4) and the meter roller (5) will determine the ultimate thickness of the oxide coating. The name "reverse roll" comes from the method by which the oxide is transferred from the transfer roller (4) to the polyester film (1). The film is traveling in the opposite or reverse direction to the transfer roll, and the distance between the transfer roll and the drive roll (2) is the exact thickness of the polyester film. Therefore, the oxide has nowhere to go but onto the film.



As the drum (above) rotates, steel ball bearings pulverize the mixture in the ball mill

After all of this, the film or coated tape passes through a magnetic orientation field. It is now magnetic tape. Then the tape takes a long trip through 40 or 50 feet (12 or 15 meters) of drying tunnels to the take-up system that winds the tape into a web (or spool), aligning each layer exactly on top of the last.

Calendering

The process of calendering is next. "Calendering?" questions my niece. "Yes, calendering is probably the least understood, by most people, of all the functions of a tape plant," comments the guide. All video tape, most good cassette tape, and some good audio tape, is calendered. Calender-

ing is what gives tape the smooth, glossy appearance on the oxide side.

We are reminded that if our tape machine heads are dirty, we lose voice response, and a rough surface causes virtually the same effect as dirty heads. It prevents intimate tape head contact with the main body of the tape. When tape is coated, it has millions of microscopic peaks and valleys. But calendering eliminates these, producing a very smooth surface. In addition, since there are no rough peaks, there is less oxide ruboff and less head wear.

The large calender machine has two chrome rollers separated by a compressed cotton roller. Calendering is achieved by two interacting systems, heat and pressure. The chrome rollers are heated to temperatures of between 160 and 210 degrees Fahrenheit (71 and 99 degrees Celsius). Then the tape passes between both chrome rollers and cotton roller, and external pressure of up to 50 tons is applied. Due to the combined pressure and heat, the peaks are compressed into the valleys, resulting in the mirror-surface finish of today's tapes.

Splicing the Leader

"Now, please step into our web splicing department," our guide encouraged. "If you have ever looked at the beginning or the end of a cassette," she continues, "you will notice a colored or clear leader. The reason for the leader is that cassette tape is too thin and delicate to withstand the stress of the fast forward and rewind stopping at the end of the cassette." The C30 and C60 tapes are $\frac{1}{2}$ of one thousandth (.0005) of an inch thick. Leader tape is $1\frac{1}{2}$ of one thousandth (.0015) of an inch thick, and so can stand much more pressure.

Web splicing is one of those processes

wherein mass production not only is far more economical but also produces an infinitely superior product. When 6- or 12-inch (15- or 30-centimeter) webs are spliced, rather than splicing the tape to the leader as the $\frac{1}{8}$ -inch (.3-centimeter) tape is run into the individual cassette, a perfect splice is made. How so? Well, when the web is later slit, the magnetic tape and splice and leader are cut together so that the spliced area is exactly the same width as the tape.

Slitting the Tape

One of the most difficult tape manufacturing operations is called slitting. Tolerances must be to two thousandths of an inch, and the tape must not wander from side to side. If the tape should cup or bend, the product will be ruined and all the precautions taken in the other operations will be wasted.

"The secret is exact web guiding, controlled tension and proper alignment, and built-in compensation to take into account web variation," explains the guide.

The actual cutting is accomplished by intermeshing, rotating blades built to tolerances of up to one millionth of an inch. The entire engagement of the blades is often less than two thousandths of an inch. Both edges of the web are discarded to eliminate edge fluctuations that occur in the coating operation and only the "heart cuts" are used. This is the final step for reel-to-reel audio tape. Video tape passes through an additional cleaning operation, and cassette tape passes along to the cassette assembly area.

Assembling the Cassettes

At this point it might be mentioned that each cassette must be individually assembled. An automated winder winds the tape onto the cassette hubs while the operator

puts in the stainless steel pins, flanged rollers, mu-metal shield, pressure pad, and graphite-coated polyester slip sheets. The tape, already being leadered, is wound on a photo-electric winder. Therefore, the individual operator has no control over the length of the cassette. It is all precontrolled back at the web-leadering area where exact lengths can be controlled.

After the cassettes are assembled, they must be sealed. Two methods are available. The first—sonic sealing—uses ultrahigh frequency sound (much like an electronic oven), which melts a small bead of plastic around the edge of the cassette. Up to 11,000 cassettes may be sealed per day by one operator. The second method is by using five screws driven by an automatic screw driver. Approximately 2,000 of these cassettes may be assembled per day per operator. Today many people are switching to sonic-sealed cassettes, and, should a failure occur, they buy spare screw

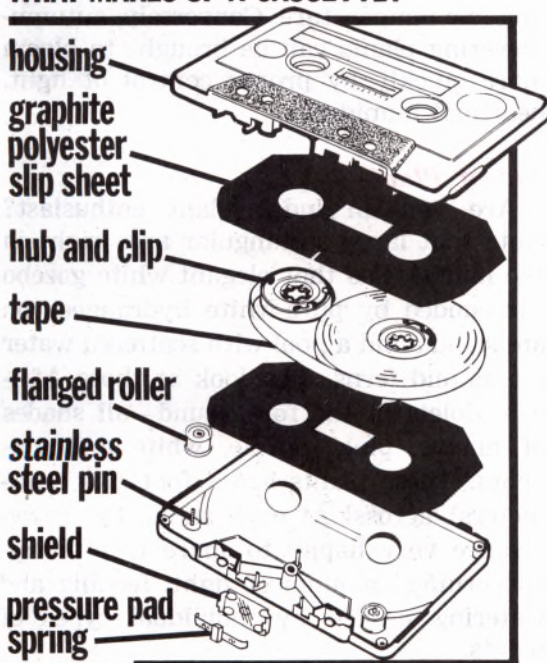
housings to reassemble the defective cassettes. Finally, the cassettes will proceed to the labeling and packaging departments.

Our Tour Concludes

As this interesting tour draws to its conclusion, we move to the quality control area, where a random check is made of each batch of cassettes. Other labs check every batch of mix of the formula, or recipe, from each ball mill, video web and audio web. In the manufacture of magnetic tape, every aspect of the process must be carefully scrutinized. The half-inch, one-inch, or two-inch video tape may be viewed or evaluated. Consistency is the all-important byword of quality control. Other labs perform wear tests, life tests and dropout tests, as well as checking microscopy, chemical variations, tension, packing, and so forth. Often, as much money may be invested in checking and evaluating the tape product as in manufacturing it. Tape has been showing a tremendous quality increase over the last few years—first with much better irons, next with calendering, then with the use of chromium dioxide, and now with cobalt and the new irons.

And so our tour concludes. We thank our guide and bid her good-bye. As we leave the plant, our thoughts turn to the many uses of magnetic tapes. Among these are the readings of the Bible book of John, released recently at the "Victorious Faith" International Convention of Jehovah's Witnesses. Sometimes these are taken to inform people who are shut-ins, and they greatly appreciate hearing these readings of God's Word. Now, reflecting on what we have learned during this tour, we better appreciate the care and work that go into the manufacturing of magnetic tape—that amazing strip of film that can carry "your voice."—*Contributed.*

WHAT MAKES UP A CASSETTE?





EXOTIC orchids from Barbados; South Africa's strange proteas and strelitzias; colorful daffodils and hyacinths from Holland and Belgium; fragrant roses of England, and flax from New Zealand—yes, gorgeous blooms from every corner of the globe brilliantly exhibited together. Where? At London's Chelsea Flower Show. The Royal Horticultural Society organizes about 13 shows each year, the highlight being this international one at Chelsea, held in the month of May and known officially as the "Great Spring Show."

Since the year 1913 the show has been staged on 23 acres in the grounds of the Royal Hospital, a stately edifice designed in the 17th century by Sir Christopher Wren. This extensive building is the home for over 500 old soldiers, "Chelsea Pensioners," as they are called. During the exhibition, many of them, dressed in long scarlet coats, distribute programs and care

for other duties. Why not join us in viewing one of these exhibitions?

Blooms for All Seasons

Despite the press of 40,000 people attending today, special arrangements have been made for those in wheelchairs. There are also guides for the blind. Though unable to see the glorious blends of color, they certainly can enjoy the variety of scents that have been cultivated so carefully in recent years.

We will go straight to the famous three-and-a-half-acre marquee, where 85 exhibitors have brought their beautiful products together. All endeavor to have their plants in bloom simultaneously. This is no mean feat when one considers that daffodils usually bloom in early spring and chrysanthemums normally flower in the autumn! How do they do it?

Spring-flowering bulbs can be held back by planting them extra deep in the earth during the winter instead of the previous autumn. Some flowers can be retarded by keeping the bulbs or plants in a low temperature. Conversely, autumn-flowering plants can be brought to bloom more quickly by proper control of light, heat and humidity.

Indoor Plants

Are you an indoor-plant enthusiast? Note that large rectangular area right in the middle. See that elegant white gazebo surrounded by pure-white hydrangeas on an island amid a pool with scattered water plants and ferns. Just look at those African violets in the foreground—all shades of mauve, pink, purple, white and magenta. These plants are a foot (30 centimeters) across! At each stand, the growers are very happy to share helpful tips concerning amounts of light, feeding and watering needed by individual types of plants.

We must not miss those oddly shaped cacti, with their startlingly large flowers. And do look over there at the miniature elegance of the Japanese bonsai trees! Though only 15 inches (38 centimeters) high, some of them are well over 100 years old and are very valuable.

Plants Without Soil

Here is an unusual exhibit of plants grown without soil. Hydroponics, as this modern science is called, has been used extensively in the past for experiments by students of plant nutrition. This is because it is a simple matter to vary at will the chemical composition of a solution, and accurate measurements can be taken.

Do you see the pebbles in place of soil? They merely serve to support the plants, as nutritional needs are met by a balanced solution of minerals regularly applied. The plants certainly seem to thrive just as well as they do in soil. Sand, cinders, gravel or vermiculite can be used instead of pebbles. In fact, suitable is any medium that will absorb the fertilizer solution and still give adequate drainage.

This method of cultivation is being used now by some growers of indoor plants. However, it is of great value for growing crops in lands where there is no natural soil covering, for example, on some of the Pacific coral islands.

Scientific Aids

In the scientific section of the great marquee, 17 specialist organizations are represented. They deal with pest control, diseases, fertilizers and aspects of organic gardening. Very timely in this age of vanishing species is a display showing fruit and vegetable varieties that are in danger of extinction. There is also a list providing available sources of plants so that they will not be lost forever.

Of particular interest to those preferring not to use chemical insecticides is a

stand where one can get information about biological control of pests. Individual gardeners can obtain predator insects to control unwanted species. For instance, there is a minute wasp that controls greenhouse whitefly in the same way as a ladybird controls the number of aphids on a plant.

Silver Jubilee

The year 1977 was the Silver Jubilee of Britain's Queen Elizabeth II, and the Chelsea Show reflected this in many of its exhibits that year. The crowd jostled to get a peek at one of the new roses cultivated specially for that Jubilee. That miniature beauty, only 10 inches (25 centimeters) high, had gained great publicity and many thousands were sold. Another Jubilee rose, a hybrid tea, was an apricot pink, sculptured like porcelain and said to be disease resistant.

Then there was the centerpiece of the whole show, an immense crown, towering regally above the visitors. It was made of silver-colored plants and succulents and purple flowers. The whole crown was 15 feet (4.6 meters) high and was mounted on a huge purple cushion with silver tassels. Most of the six and a half thousand plants were set in the wire shapes many months before.

Every year the magnificent displays of orchids are always an exciting feature and one of the biggest security risks. In early days, growers used to remove all the pollen with a small brush so that no one could steal it and breed their own plants. The right temperature is all-important. That is why each orchid grower is on tenterhooks, hoping that there will not be a sudden cold spell, which could make his plants very sick.

Now take a look over there. Those strawberries—how tempting their juicy redness! The vegetables and fruits displayed are of such mouth-watering quality that it is hard to pass them by. Indeed, one year

a child was rushed to the first-aid section, having swallowed a fruit stone. Nobody asked the youngster where it came from, but one exhibitor was not at all sympathetic about the youngster's pains!

Gardens

We could spend hours looking at the breathtaking displays of rhododendrons, roses, poppies, poinsettias, delphiniums, dahlias, carnations, iris, geraniums—the list seems endless. But let us venture out into the sun once again to see the gardens. These are designed to help us to plan our own outdoor gardens, whether small or large, and they cater to many tastes and practical uses. Nearly all of them have used water, for swimming pools, lakes, fountains or canals.

As we turn into the long avenue of shops, we could spend hours browsing in the bookstalls, or evaluating the never-ending variety of garden tools. Would you like to relax in that folding chair, or choose a statue for your pond? All these gardening requisites are for sale, and it is certainly good to be able to touch and handle them after being so careful not even to breathe on the flowers displayed in the tent!

Before we turn to leave, we can get a

snack in the adjoining Ranelagh Gardens and sit and listen to the band, which plays all afternoon from the bandstand in the center of an open glade. Here on the grass between the old trees, relax for a while and imagine this scene almost unchanged over 60 years of Chelsea shows.

Mementos

At the end of the afternoon, if this were the last day of this four-day show, we would form part of a moving flower procession. Plants are sold at the conclusion of the event and are carried home on shoulders, towering over heads, under arms, trailing from carrier bags or hanging around necks. In fact, the expression "cash and carry" so much in use today is supposed to have originated at the Chelsea Flower Shows.

After such a memorable day, what impressions are left in your mind? You have seen varieties of plants from all parts of the world in less than a day—something you might never be able to do otherwise in a lifetime. How stimulating the concentration of color, beauty of form and arrangement, along with the mixture of subtle scents! Truly, these are magnificent gifts from a bountiful Creator for our delight!

Determination in Birddom

In the world of the house wren, both male and female join in gathering material; however, much of the time the male brings it to the female, and she builds the nest. A problem sometimes occurs. "Occasionally the male brings his mate a twig that she rejects and throws out. He may have considered it a particularly fine twig, even though a bit too long and having a fork in it, or he may have become attached to this twig, only to have it spurned by the female. So the fun begins. The male takes the twig, twists it,

turns it, tries it this way and that in his efforts to place it in the nest, even dropping it half a dozen times. But give up? Never. He continues working at it until at last the twig is inside and placed in the nest. The female returns and promptly throws the twig outside. The male returns it, his mate rejects it, and so it goes until one or the other finally gives in, and the pair get on with the job of nest building."—*Pictorial Guide to the Birds of North America*, by L. L. Rue III, p. 273.



"IS IT breaking a command of Jehovah to marry someone who is not a true Christian?" On October 1, 1978, a single woman wrote asking that question, a question that many have thought about.

One reason that she was puzzled was that she knew of some Christians who had chosen to marry unbelievers. Yet she also knew what the apostle Paul wrote in 1 Corinthians 7:39. He there commented about a Christian woman (though it is also true of a man) whose mate had died. Death ends the marriage contract. (Rom. 7:2) So Paul said that the survivor is then eligible to remarry. The verse concludes: "She is free to be married to whom she wants, *only in the Lord.*" (1 Cor. 7:39) Consistently, then, she is not "free" to marry outside the Lord.

Is that statement, "only in the Lord," to be viewed as merely human, personal advice from a mature Christian, Paul? Or is it an inspired guideline from God for his servants? In fact, some have wondered, 'Is deliberately going against that advice a reason for expulsion from the congregation, as the Bible says is true for unrepentant adulterers, idolaters or homosexuals?' —1 Cor. 5:11-13; 6:9, 10.

Marry "Only in the Lord" —How Important?

Getting the Right View

Other parts of God's Word help us to get the right view of the limitation stated in 1 Corinthians 7:39. For instance, recall Abraham's course in choosing a wife for Isaac. Abraham and his family dwelt in Canaan, surrounded by people worshipping false gods. Where could he find a wife for his son? The most convenient thing might have been to select some eligible Canaanite woman who had good qualities and who broadmindedly would agree that any children be brought up worshipping Jehovah. Yet Abraham rejected that course, for it would have been disloyal to Jehovah. Rather, despite all the extra effort involved, a wife for Isaac was searched for among Abraham's relatives in a distant land. Why? Because those relatives recognized the true God.—Gen. 24:1-67; compare 26:34, 35; 28:6-9.

At a later period, when God gave his law to Israel, his servants were warned: "You must form no marriage alliance with [the nations in Canaan]. Your daughter you must not give to his son, and his daughter you must not take for your son." Why not? "For he will turn your son from following me, and they will certainly serve other gods."—Deut. 7:2-4; Ex. 34:14-16.

But what if someone did marry a false worshiper? The Law did not command that the Israelite be cut off. It was not as with the law about adultery: "In case a man is found lying down with a woman owned by an owner, both of them must then die together . . . So you must clear away what is bad out of Israel." (Deut. 22:22) Similarly, practitioners of idolatry and homosexuality were to be executed. (Ex. 22:20; Lev. 20:13) Does the lack of such a penalty for marrying a nonbeliever mean that it did not really matter? No! God's warning was firm and had good reason behind it, that the believer might not be turned away from Jehovah.

Underscoring the fact that this divine warning was not unduly harsh, the Bible tells what happened to Solomon. Though having received wisdom from God, Solomon foolishly took foreign wives. Over the years they inclined his heart away from Jehovah and toward the foreign gods. Solomon may have thought, 'Oh, I know what I'm doing. I'll never leave Jehovah.' But he did, he really did.—1 Ki. 11:1-6.

When the Jews who returned from captivity in Babylon took foreign wives, both Ezra and Nehemiah forcefully condemned them. Ezra said that those doing so "acted unfaithfully" and brought on "guiltiness"; he had them put away their pagan wives. And Nehemiah, citing Solomon's poor example, referred to the Jews marrying such unbelievers as people "commit[ing] all this great badness in acting unfaithfully against our God."—Ezra 10:10-14; Neh. 13:23-27.

This Hebrew Scripture background should help us to understand how the Christian congregation and we personally should view the matter.

The Christian Scriptures mention a number of gross sins for which an unrepentant wrongdoer might be cut off from the congregation. No, not by being stoned as in ancient Israel, but by being disfellowshipped. Among these sins are fornication, idolatry, adultery, stealing, drunkenness and extortion. A Christian's marrying an unbeliever is not given as a basis for being disfellowshipped, any more than an ancient Israelite was cut off for that. But, as we have clearly seen, that course was definitely wrong in Israel. It was unfaithfulness, disloyalty to Israel's God. Hence, Paul's words to marry "only in the Lord" cannot be dismissed as mere human opinion. They are actually a continuation of the overall counsel of God's Word on the matter. And they are now part of the inspired Scriptures that are beneficial "for

setting things straight, for disciplining in righteousness."—2 Tim. 3:16.

Being imperfect, all of us daily fail to adhere as closely as we would like to God's wise and loving counsel. Thus, perhaps by unplanned contacts on the job or at school, some Christians have let romantic attachments to unbelievers develop. This is especially a danger when it does not seem that eligible Christian companions are available. But when such feelings for an unbeliever become strong, one may be misled by a deceptive heart into believing that it is impossible to break off the attachment. (Jer. 17:9; Prov. 28:26) A person might think, 'Some becoming Christians in the first century had unbelieving mates. Evidently those Christians stayed faithful, even hoping their mates would become believers. So if we get married, maybe my mate will become a believer too.'—1 Cor. 7:12-16.

But even if some unbelieving mates have accepted Christianity, do we honestly think that God's counsel is mistaken? Do we know better than Jehovah? Unnumbered examples from Solomon's time down till ours bear out the wisdom of God's warning—the unbeliever can turn the mate from Jehovah. And even if it is not to serve a false god, but just in the sense of its resulting in continual conflicts and grief from interfering with the Christian's pursuing true worship whole-souled, is it not better to avoid getting in that spot?

The hope of all mature Christians is that those who have married unbelievers can be helped not to leave Jehovah. (Gal. 6:1, 2) However, for those who may be considering marriage, how much better and more conducive to happiness and God's blessing it is to realize that God's counsel to marry "only in the Lord" is *very* important. Each devoted Christian who truly accepts that counsel would consider as a potential mate only one who has already proved to be a devoted servant of Jehovah.



Watching the World

Lightning on Venus?

◆ When the Soviet Venera 12 landing craft soft-landed on Venus December 21, 1978, it is claimed to have made what some U.S. scientists have called an "exciting," "fantastic" discovery. "The descent took place in 'inclement weather,'" said the Tass news agency report. "The *groza* [thunderstorm] instrument recorded fairly frequent electrical discharges in the atmosphere during the descent. One weighty discharge made the surroundings resound for 15 minutes after the device had landed." Thunder may rumble for some seconds after lightning on earth, but scientists are stunned at the idea of reverberations lasting as long as 15 minutes.

Baby Mammoth News

◆ Soviet scientists were elated when a well-preserved frozen baby mammoth was discovered in Siberia during the summer of 1977. (See *Awake!* of 11/22/77, p. 30.) Now the official Tass news agency reports that scientists believe the cause of the mammoth's death was blood poisoning from a leg infection. However, they also noted that it had been buried by a mud flood shortly after death. "Such flooding in northern Siberia was quite a surprise to geolo-

gists," said Tass. Just as perplexing is why, after flooding, there was a sudden deep freeze that preserved the little creature so well.

Malpractice and Blood

◆ The American *Trial Lawyers Quarterly* observes that, contrary to popular belief, few persons receive compensation for medical negligence in their treatment. To avoid such injustice, the article suggests that the courts accept a "list of designated compensable events" in surgery and other fields of medicine without having to prove the issue each time. Interestingly, the proposed list for surgery, prepared by Professor Clark Havighurst of Duke University, contains 29 "compensable events," of which about 10 percent involve errors with blood transfusions. These include "reaction resulting from mismatch of blood types during a transfusion," "bacterial infection following a blood transfusion" and "serum hepatitis following a blood transfusion."

Japan's Safer Driving

◆ For eight years in a row, Japan's traffic fatalities have decreased, from 16,765 in 1970 to about 8,670 in 1978. This nearly meets the government's goal of halving the death toll from its peak in 1970.

Behind the Persecution

◆ Argentina's persecution of religious minorities is discussed in Canada's Hamilton, Ontario, *Spectator*. Newsman James Neilson reports: "The government's main target, clearly, is the Jehovah's Witnesses, whose refusal to pay homage to such worldly symbols as flags and national anthems has Argentina's superpatriotic military men spluttering with fury. . . . The refusal of the Jehovah's Witnesses to bear arms or salute the flag in the innumerable patriotic ceremonies mounted by the authorities is seen as virtually the same as collaboration with an aggressive foreign power. The fact that the Witnesses would not bear arms for Brazil and Chile or salute their flags either is not regarded as of any importance."

Neilson, of the Southam News Service, says that "for such minorities as the Jehovah's Witnesses, the immediate future in Argentina is bleak." Then, identifying another force behind the persecution, he observes: "The government's [Roman Catholic] religious zealotry shows no signs of abating—if anything, the clerical flavor of the government is getting more intense."

Custody—Which Parent?

◆ "What role, if any, should religion play in the judicial resolution of a child custody dispute?" asks the *American Bar Association Journal*. The *Journal* then cites a recent decision by the Supreme Court of Missouri "which held that a judge cannot determine child custody based on approval or disapproval of the beliefs, doctrine, or tenets of the religion of either party." This decision reversed a lower court's award of two children to their father, primarily because it disapproved of the religious beliefs of the mother, one of Jehovah's Witnesses. However,

the Supreme Court declared that "the state shall prefer no faith but must favor the best interests of those children whose parental custody it determines."

College Virginity—Abnormal

◆ Many in today's colleges feel guilty and ashamed about being a virgin, because of the now-prevalent moral looseness on campus. Many college counselors report 20- to 24-year-olds coming to them complaining about loss of appetite, fatigue, insomnia and irritability. After questioning the girls, one counselor said of the typical patient: "She feels rather abnormal or even defective—not only because she isn't using some sort of contraceptive, but also because she isn't sexually active with one or more male friends as her sorority sisters report that they are."

Sharing the Loot

◆ How Christlike is the average Christmas shopper? An indication comes from South Africa, where a bag with \$18,000 (U.S.) in cash broke as robbers tried to wrest it away from a shop accountant. "Shoppers joined the five or six bandits and the accountant in a scramble for the money," says the Reuters news agency report. The accountant got \$2,680, while the Christmas shoppers and bandits vanished with more than \$15,000.

Swiss Watches

from Hong Kong?

◆ Just eight years ago Swiss watchmakers controlled 70 percent of world sales. Now sales are falling below 30 percent. Increases in the value of the Swiss franc and competition from low-priced digital watches are said to have contributed to the decline. One company is reported to be moving its electronic module division to Hong Kong because of high production costs in Switzerland. Others may follow suit. The industry is also

diversifying into other fields such as precision instruments, heart pacemakers and electronic fire alarms.

Sabbath Loophole

◆ A new road to Ramot runs through a religious neighborhood in northern Jerusalem. The residents of the neighborhood consider it a desecration of the Sabbath to use the road on that day, and object strongly when Ramot residents do so. When this did not help, religious youths recently "pelted cars with stones on Friday night and Saturday afternoon," said the *Jerusalem Post*. Dozens of cars were hit. "A religious spokesman [was] asked how stone throwing on the Sabbath could be justified," reports the *Post*. He replied "that it was carried out by boys under the age of 13, to whom such rabbinical injunctions do not apply if the boys' action is for a worthy purpose."

Soviet Census

◆ A million census takers will be visiting the homes of Soviet citizens during the year for the nation's 1979 population count. Rather than using the mails for census taking, as some other countries do, each household is visited personally. Some hardy census takers may have to hike for miles to reach isolated mountain and desert settlements in the far reaches of the country's more than four million square miles (10 million square kilometers) of northern tundra. An estimated 260 million Soviets will be counted.

Synthetic Policeman

◆ The Idaho State Police recently tried a unique method to save manpower. Rather than having troopers sit in cars by the roadside all day to slow traffic, they decided that a car staffed with a pseudopoliceman—a borrowed mannequin—might do just as well. After the first day of

duty, the police-jacketed mannequin's presence was termed a success. Cars slowed from an average of 67 miles per hour (108 kilometers per hour) to the 55-mile-per-hour (89-kilometer-per-hour) speed limit as they passed the dummy in the police car. However, state police superintendent Tom Proctor had some qualms. "We'd really be embarrassed if someone stole it," he said.

Costly Education

◆ Private schools in Tokyo have raised their tuition fees an average of 40,000 yen (\$200, U.S.). Now for each child enrolled in a private school parents can expect to pay, on the average, 550,000 yen (\$2,750, U.S.) for one year. The highest tuition is 975,000 yen (\$4,875, U.S.). Since chances of entering a prestigious university are greater if one attends these private schools, many families make it a matter of pride to enroll their children, even if economic conditions of the household may make it unwise.

Is There No Mercy?

◆ Deer-hunting season opened in Norristown, Pennsylvania, with the heartless slaying of a pregnant doe caged in the park zoo. She was wounded by a bullet that lodged in her neck. Efforts were made to save the baby. "If she had hung on just a little longer she might have given birth," bemoaned the zoo curator. A buck was also missing from the zoo and presumed killed. Ironically, a picture of the caged buck appeared in the newspaper the day before with the caption that this deer would at least be safe during the hunting season.

Fooling Dolphins

◆ An international outcry arose last year when Japanese fishermen slaughtered about 1,000 dolphins said to be ruining their fishing grounds. The government fishing agency

launched research to see if there was a way to drive the dolphins away from the fishing grounds without killing them. The result: A life-sized plastic model of their natural enemy, the killer whale or grampus. However, the mere presence of the look-alike did not seem to bother the intelligent creatures. But, according to Mr. Shinichi Yajima, an official in charge of the research, when sound recordings of a hungry grampus were played through an underwater speaker, "they showed discernible signs of panic."

Litter on High

◆ In a desperate effort to force mountain climbers to stop littering the mountains, Japan's Environment Agency has appealed to the Japanese Alpine Club and the Japan

Mountaineering Association. The Agency said that if the mountains were found littered after the coming spring thaw, they would be obliged to ask the climbers to pay for cleaning costs, perhaps paying a fee before they could go onto the climbing areas. One example involves a helicopter that had to bring down 2.5 tons of garbage collected on Mt. Mae Hotaka.

High-School "Sex-Club"

◆ About 60 senior high-school students in Osaka, Japan, were recently exposed as having formed an after-school "sex-club." Police began investigating reports of students frequenting a particular hotel and learned that they had been engaging in sexual activities for about a year in such "love hotels." The stu-

dents were turned over to the schools, since "neither prostitution nor theft was involved," reports the *Mainichi Daily News*. The group collected abortion funds for pregnant members.

Expensive Children

◆ How much does it cost today to give birth in a North American hospital? \$2,463, according to a University of Idaho specialist, who says that this includes "hospital care, medical expenses, nursery supplies and maternity clothing." The total cost of raising a child to age 18 is estimated at around \$54,000. "People should really begin now thinking about where they're going to get the money to raise the child, and not after the baby is born," says the specialist.

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 How much does it cost to give birth in a North American hospital? \$2,400, according to a University of Illinois specialist who says that this includes "hospital care, medical expenses, nursery, and medical and maternity clothing." The total cost of raising a child to age 18 is estimated at around \$24,000. "People should really begin now thinking about where they're going to get the money to raise the child and not after the baby is born," says the specialist.

Maintaining Association
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