EARTHQUAKES AND TIDAL WAVES

In a social science class one day, a boy named Harvey sat thinking wretched thoughts. In the midst of his reverie, he heard a dull roar. Then a sharp thud. The room creaked and groaned. The floor rolled like a ship's deck. Books fell from the walls, and the lights went out. When Harvey and his desk slid out the door into the hall, he decided from his new perspective that the fates were punishing him for his uncharitable daydreams. Harvey quickly made one of those desperate bargains people make in time of crisis. "If I am spared," he promised, "I will devote my whole life to good deeds."

Harvey lived. Two days later he punched his little sister in the stomach and stole her piggy bank. Clearly, it is not enough to make promises during an earthquake. Instead:

During the Shaking:

1. Try to stay cool and take in what's happening. An earthquake is really a marvel, unless you're standing under a tottering wall. The roaring and rolling can be very terrifying, but unless something falls on you, it probably won't hurt you. The earth does not swallow whole neighborhoods and close up again.
2. If you're indoors, stay there. Get under a heavy table or desk to protect yourself from falling debris; or move into a doorway or against inside walls. A door frame or the structural frame of the building are its strongest points, and least likely to collapse on your head. Stay away from glass; the rocking motion can shatter it.
3. If you're outside when the shaking starts, get away from buildings and electrical wires. Stay in the open. Falling debris can kill you.
4. What if you're in a moving car? Don't stop on or underneath a bridge or overpass. Don't stop where buildings can come crashing down on you. If in the open, pull off the road, stop the car, and stay inside until the shocks stop.

Immediately After an Earthquake:

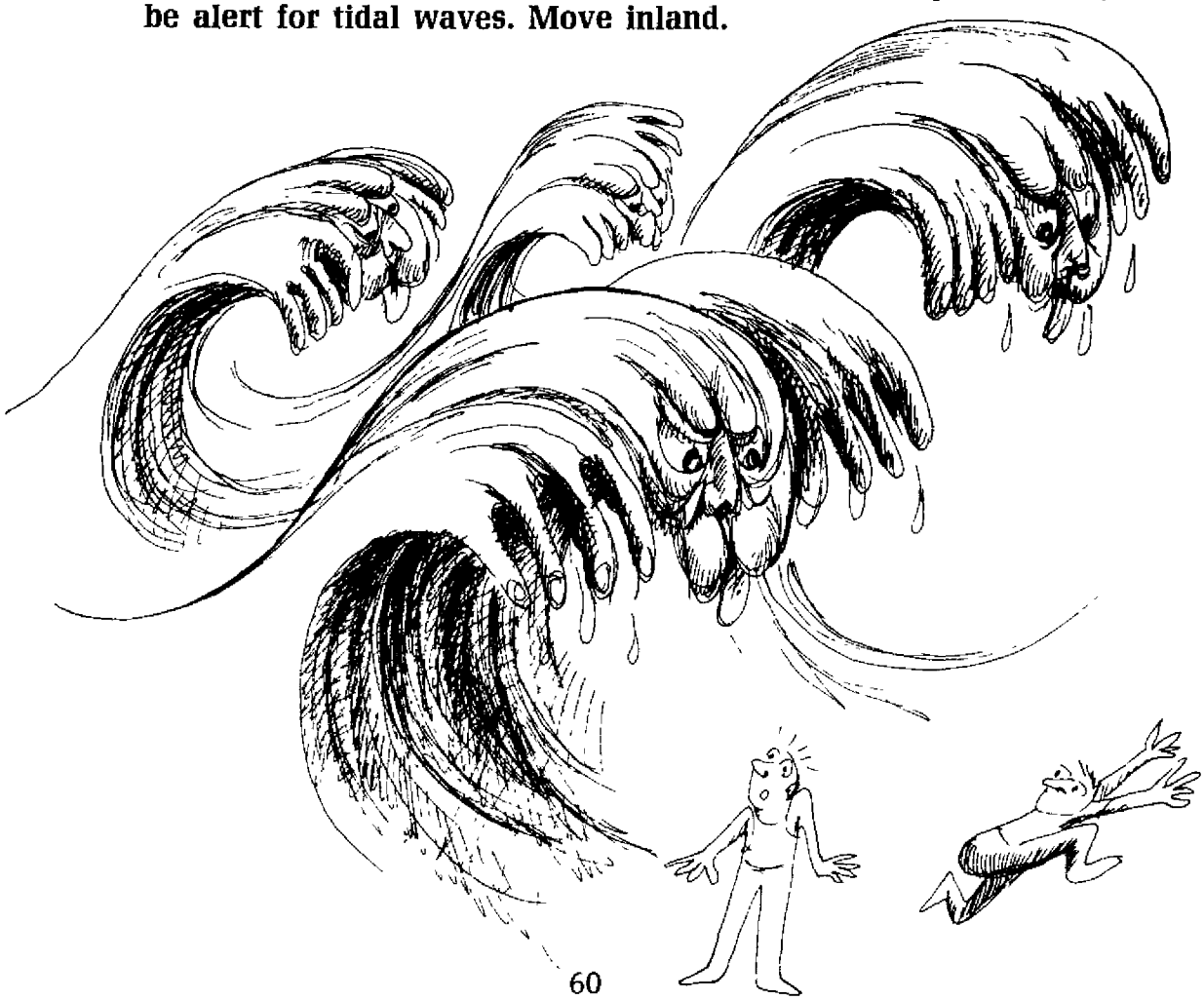
1. Earth movement can break water, gas, and electrical lines. If there is a gas line into your home or building, turn off burners—including pilot lights. Don't light candles, matches, or lighters until you're sure there are no gas leaks. If you smell gas, open the windows. Leave the house or building and report the leak to the fire department. A gas leak can cause an explosion. Stay out of the building until the leak is fixed.
2. Turn on your radio or television to get official emergency information and instructions.
3. Don't use the telephone unless you have a real emergency to report. Don't tie up lines that are urgently needed for emergency operations.
4. Stay out of damaged buildings. Aftershocks can cause sudden collapse.
5. Don't go sightseeing. The area probably will be cluttered enough, and you will hamper emergency work.

If You Live in a 'Quake-Prone Area:

1. Don't hang heavy objects on walls unless they are lashed securely.
2. Locate cut-off switches for gas, electricity, and water. (Check with your utility companies on what to do with these controls in an emergency.)
3. Stockpile enough food and water to keep you and your family and pets for at least 3 or 4 days. For each healthy adult, 2 quarts of water per day is the recommended minimum for 3 or 4 days. Beyond that short amount of time, if the climate is very hot, or if a person is extremely active, the amount of water necessary is greater. Store food that doesn't need cooking, and a can opener.
4. Keep a first aid kit handy, along with any medicines you may need.
5. Keep the gas tank of your car filled, so you can move to a safer area if necessary, following an earthquake.
6. Keep a battery-operated radio so you can receive emergency information and instructions. Also keep on hand a flashlight with extra batteries, and blankets.

Tidal Waves (Tsunamis)

1. Not all earthquakes cause tidal waves, or tsunamis, but many do. If you're near the ocean or tidal inlet following an earthquake, be alert for tidal waves. Move inland.



2. The earthquake may generate a series of higher-than-normal, fast-moving waves. Listen for tidal wave warnings, and stay out of danger areas until an "all-clear" is issued.
3. A warning means a tsunami is coming. The tsunami of May, 1960, killed 61 people in Hilo, Hawaii, who thought it was "just another false alarm."
4. Don't go down to the beach to watch for a tsunami. If you are close enough to see the wave coming, you probably are too close to escape.
5. Approaching tsunamis are sometimes heralded by a noticeable rise or fall of coastal water. This is nature's warning. Believe it.
6. During a tsunami emergency, your local emergency organizations will try to help save your life. Cooperate.
7. Sooner or later, tsunamis visit every coastline in the Pacific. Warnings can apply to you if you live in any Pacific coastal area.

Earthquake Stories

You sit down to dinner. As you lift your fork, the sudden tinkling of crystal causes you to look up. The chandelier is shaking. It is November 1, 1755, and you are in the United States. The shocks you feel are from an earthquake in Lisbon, Portugal.

You are feeding chickens on your small farm just outside New Madrid, Missouri. It's December 6, 1811, the middle of winter. Suddenly, you are knocked off your feet by the first in a series of shocks that will continue for nearly 2 months, with long stretches of quiet in between. The largest of these shocks is felt from the Gulf of Mexico to Canada, from the Atlantic Ocean to the Rocky Mountains. And when the whole thing is over, there is a new lake on the map: Reelfoot Lake in Tennessee, 20 miles long and 5 miles wide.

It is April 18, 1906; 700 people around you lie dead; the great San Francisco earthquake and fire has left the city a pile of rubble. Even greater in magnitude is the Great Alaskan Earthquake of Good Friday, March 27, 1964. It releases nearly twice as much energy. Ground motion near the epicenter is so violent tree tops are snapped off. People as far away as California are killed by tidal waves, and the shocks can be felt over 500,000 square miles.

What and Where Are Earthquakes

The earth's crust is constantly subjected to stresses from deep inside the earth. First the crust bends, and when the stress exceeds a certain limit, the crust breaks and "snaps" to a new position. In the process of breaking, vibrations are caused; they are called earthquakes. Some vibrations have a frequency high enough to be heard, other frequencies are quite low. These vibrations cause the entire planet to quiver or ring like a tuning fork.

A fault is a break in the earth's crust where two crustal blocks have parted company. One block may move right while the block facing it moves left, or one block may move up while the other moves down. Movement along California's San Andreas fault is mainly horizontal. This is called a "strike-slip" fault. A fault having vertical movement is called a "dip-slip" fault.

Earthquakes tend to recur along faults, which are zones of weakness in the earth's crust. Though earthquakes may strike any place, at any time, they tend to occur in the same general pattern—mainly in three broad zones.

The largest earthquake belt in the world, called the "ring of fire," borders the rim of the Pacific. Eighty-one per cent of the most violent earthquakes occur there. The belt extends from Chile, north along the South American coast, through Central America, Mexico, the west coast of the United States and the southern part of Alaska; through the Aleutian Islands to Japan, the Philippine Islands, New Guinea, the southwest Pacific Island groups and on to New Zealand. Peru, where the earthquake of May 1970 caused 72,000 deaths, is in this 'quake belt.

The Alpide, the second major earthquake belt, runs from Java through the Himalayas to Sumatra, through the Mediterranean and out into the Atlantic Ocean. The Iranian shock of 1968, which killed 11,000, occurred in this zone.

The third major belt is the mid-Atlantic. Earthquakes in these three zones are expected, but major 'quakes sometimes occur outside these areas.

Maybe Death Is Unnecessary

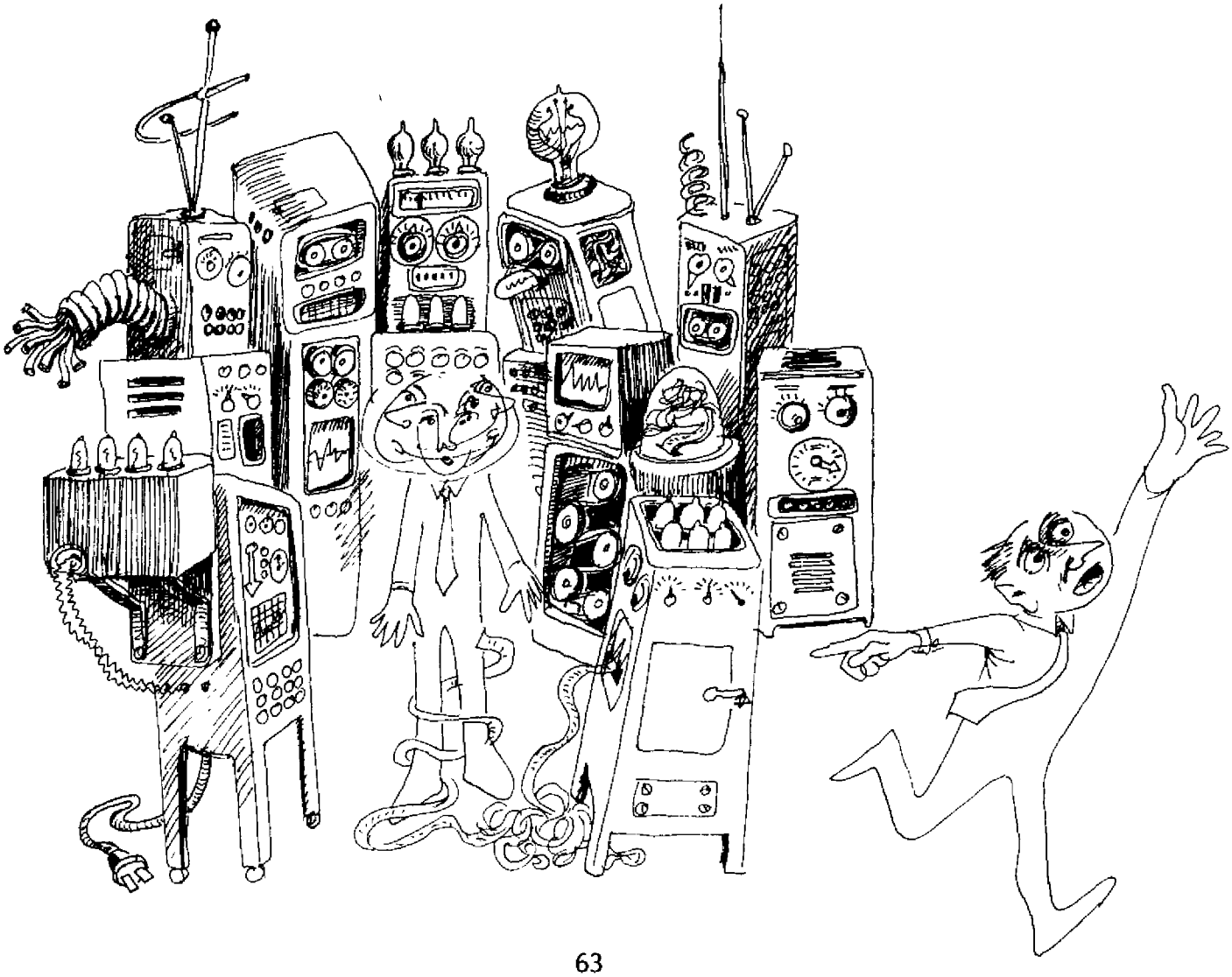
When Charles F. Richter, the widely respected earthquake expert, was asked in the summer of 1971, "What are the most interesting aspects of California earthquakes?" he replied, "The unnecessary death and destruction they cause."

Many experts feel that we have the technology to build "earthquake-proof" structures that will withstand the most powerful earthquakes, but the general consensus is that they "cost too much."

Death and human suffering cost a lot, too. People are usually unwilling to think about a danger they can't see, preferring to believe that destruction "won't happen here."

Americans who live along known faults in the earth's crust have building codes to protect them; but these codes are not always earthquake proof. Many schools do not come up to present-day structural safety requirements. The cost of making buildings safe is really a question of *when* to pay; before the quake, to prevent the disaster; or after it, to repair the damage.

TECHNOLOGICAL FAILURES AND EMERGENCIES



Structural Fires

Reginald lay on the sofa, tired out from the day's exertions. He'd been planning beans on toast for dinner, but somebody close by was having barbecued steak; a delicious smoky aroma was creeping up on him.

Suddenly his friend Huey burst into the room. "Hey man, don't just lie there, put it out."

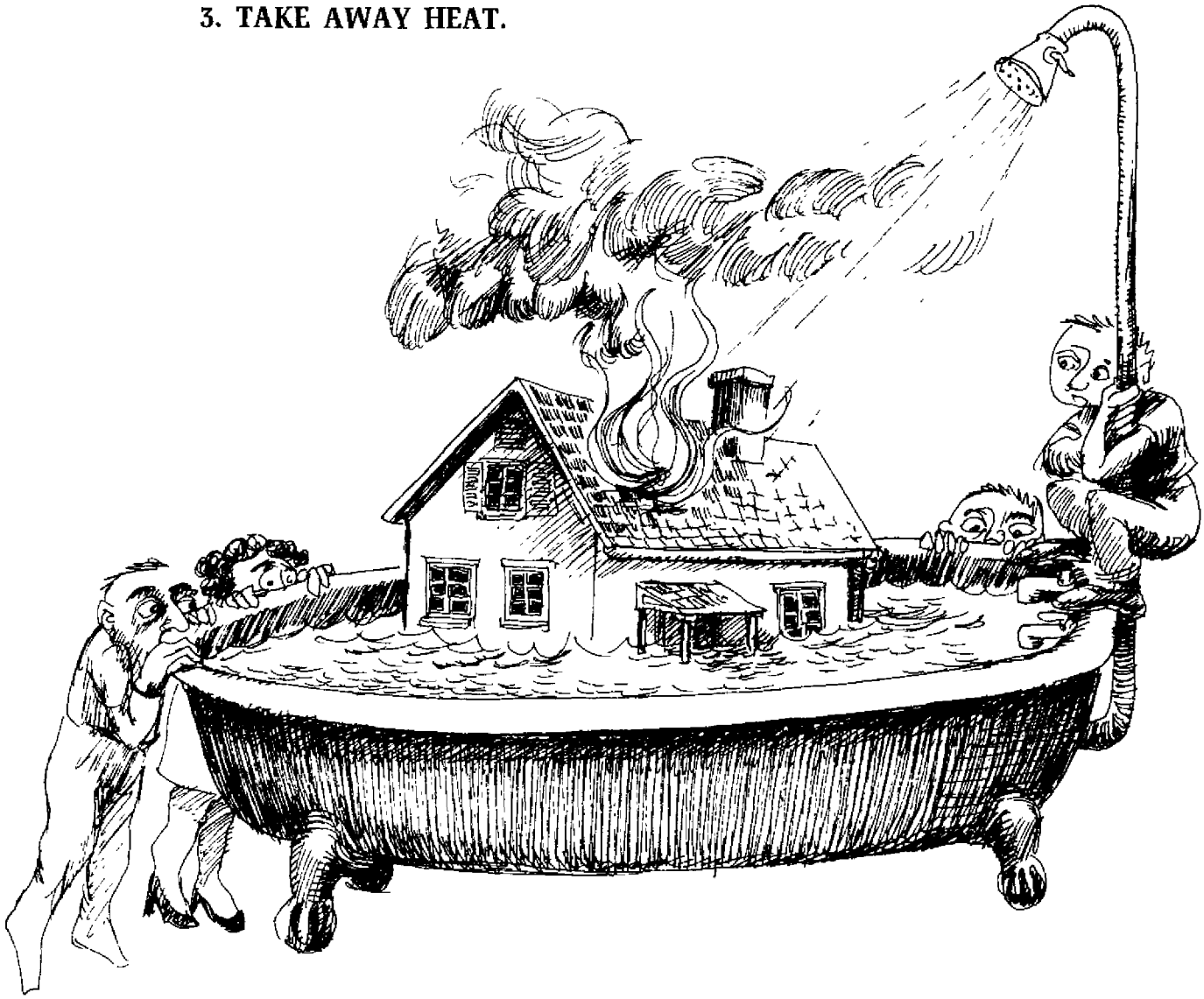
"Put what out?"

"The fire, man, the fire."

Sure enough, smoke came wisping out of the kitchen. Reggie leaped to his feet. "Huey, help me. What am I going to do?"

"There are three basic ways to put out a fire," said Huey cooly, as he removed the burning pot from the stove and dunked it in the sink:

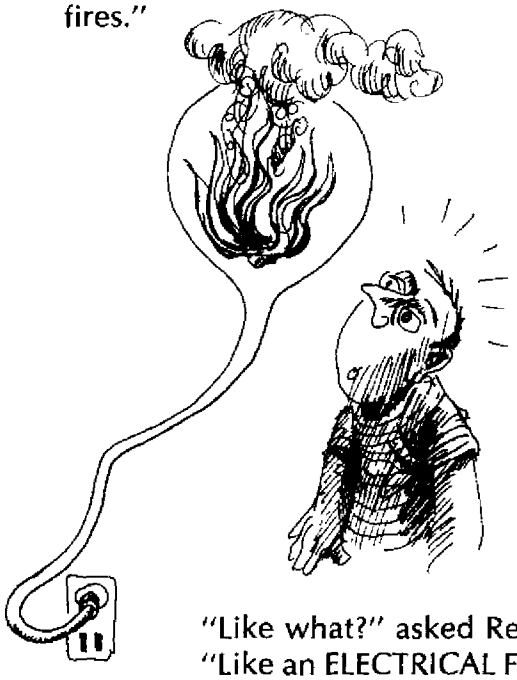
1. **TAKE AWAY FUEL.**
2. **TAKE AWAY AIR.**
3. **TAKE AWAY HEAT.**



"If you aren't positive you can put it out at once, don't fool around. Call the fire department right away so the fire won't get a head start," continued Huey.

"What should I do after I call the fire department?" asked Reginald, feeling a little foolish. "Maybe I can help before they get here."

"Well," said Huey, "get the burning material out of the house if possible, or into a small contained area where there is water or where the burning matter can be held safely without spreading. A shower is ideal if there are no shower curtains. A tub or sink is good if there are no flammable materials close by, like curtains or wood. The tile in a shower or the porcelain in a bathtub won't burn, and there is water right there to quench the burning objects. Of course this won't work with certain kinds of fires."



"Like what?" asked Reginald.

"Like an ELECTRICAL FIRE, when you first have to shut off the electricity. Then you treat it as you would any other fire."

"Why the electrical shutoff?" asked Reginald.

"You can get a strong electrical shock if you mix water and electricity," answered Huey, "and I mean strong enough to kill you. If you can't shut off the electricity, don't use water. You could try to smother the fire with sand; or better yet, use a CO_2 fire extinguisher."

"Are there other kinds of fires where you shouldn't use water?" asked Reginald, busily opening windows, and coughing slightly.

"Well, an OIL or GREASE FIRE will spread if you pour water on it," said Huey. "That's because oil and water don't mix. You should try to shut off the supply of heat to the burning oil or grease and then smother the flames with dirt, sand, or heavy rugs and blankets."

"What about a gas fire?" asked Reginald.

"First thing, shut off burners if you can. Call the fire department. Get out of the house or building. Gas can cause explosions and more fires. If you have managed to cut off the gas flow at the burners, you can choose your method to fight remaining fire: water, sand or earth, wet blankets or rugs."

"What should I do if I wake up in a burning house?" asked Reginald fearfully.

"Get out of there as fast and as safely as you can," answered Huey. "Then call the fire department."

"What is the fastest, safest way to get out of a burning house?"

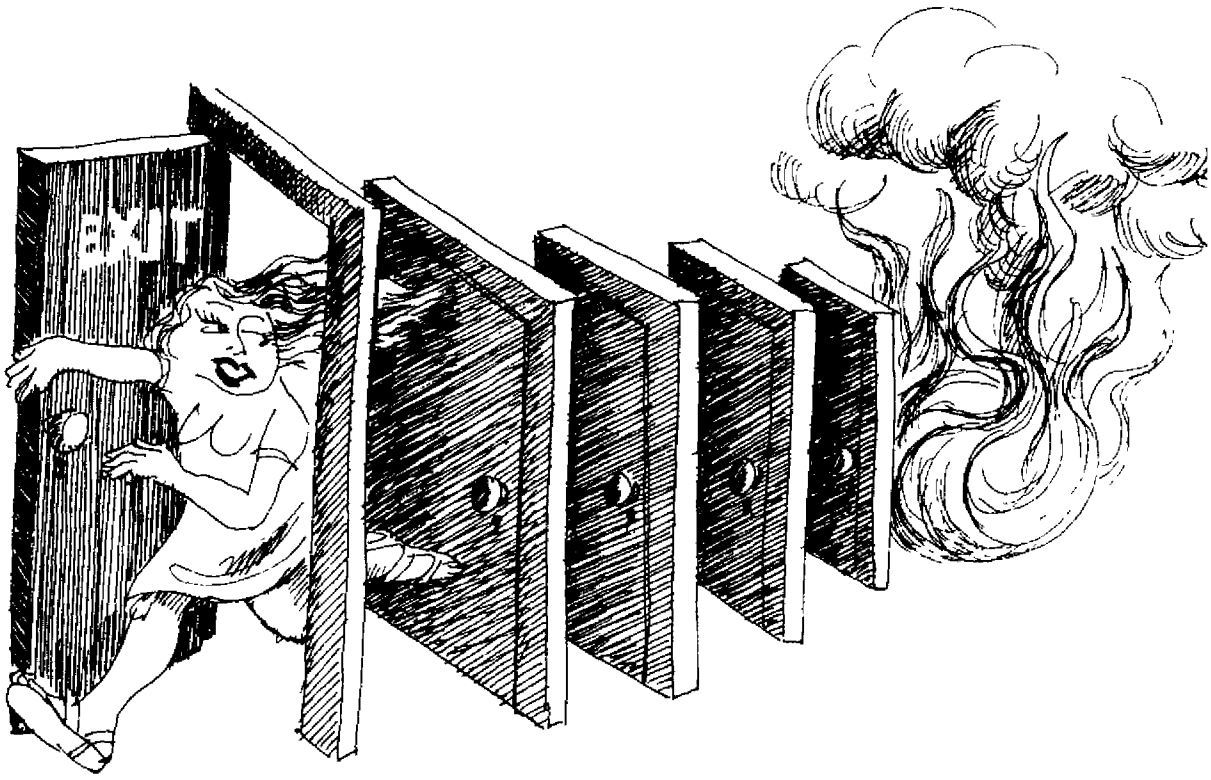
"Well," said Huey, "it depends. Jumping out of the window is just fine if you live on the ground floor; but it's not so bright if you live on the 14th floor. You should have an evacuation plan for your home and family now, before you need it. You should know escape routes from every room in your house and how to get out if one path is blocked by fire. For instance, if you're in an upstairs room and the stairway is blocked, how can you get out a window? Do you have a rope or ladder you can use to climb down? Can you knot sheets or clothing together to make a rope? Plan now. Always get downstairs as fast as you can. Upstairs is the most unsafe place to be. Heat and flames rise.

"If you are at home and you smell smoke or feel heat, remember: don't ever open a door without first feeling it. If it's hot, don't open it at all; the fire is probably just outside and will blast you in the face. Go out a window instead."

"If you must go through a smoke-filled room, or if you are trapped in one for awhile, remember the air closest to the floor is the freshest, for smoke rises. So cover your nose and mouth and crawl along close to the floor to avoid being overcome by smoke."

"What should I do if I'm somewhere like a crowded theatre and a fire occurs?" asked Reginald.

"Do your best to be calm, or at least reasonable," answered Huey. "More people are killed in a mass fire situation by being trampled or smothered by other people than by the flames."



"You know," said Reginald, "when I think of the Great Chicago Fire of 1871 I can't imagine that it was started by a cow kicking over a lantern in the barn."

"Oh," answered Huey, "there were a lot of things involved in the Chicago Fire. Before it started there had been a long drought in the Midwest. The temperatures were very high and the humidity was low. Besides, most of the buildings in Chicago in those days were wood frame, and burned easily and quickly. You know, 300 people were killed and hundreds of buildings on 2,124 acres burned in that fire."

"I didn't know," said Reginald thoughtfully. "The poor cow never should have gotten all the blame."

Blackouts and Brownouts

"Fires are only part of the problem," said Huey practically. "What would you do in a blackout or a brownout?"

"A what or a what?" said Reginald. "I don't know what you're talking about."

"I will answer my question by telling you a story," said Huey. "There is a power grid serving a large population in the northeast section of the United States; let's call the grid "Charlotte." On November 9, 1965, Charlotte had a mechanical failure on one line and one switch, which produced an overload. Charlotte reacted to this by developing numbness in several fingers—some of which were lighting Manhattan. Most of Manhattan turned off like a big, tired firefly. Much of the city had no electricity at all. Refrigerators and radios, heaters and hair dryers fainted quietly away.

"In spite of how everyone talks about mass panic, no masses are known to have panicked. They lit candles in the dark, and played cards. People stuck in elevators told ghost stories and went to sleep.

"Part of the reason for the New York blackout was a lack of generation capacity. During the summer, unusually heavy demands are made on electricity sources, to keep things cool. To avoid overloading of lines so there isn't another blackout, the electric companies have reduced the voltage a number of times during recent summers to conserve power. This cutback of power is called a BROWNOUT. During a brownout, you can help prevent power failure by cutting back your own use of unnecessary equipment:

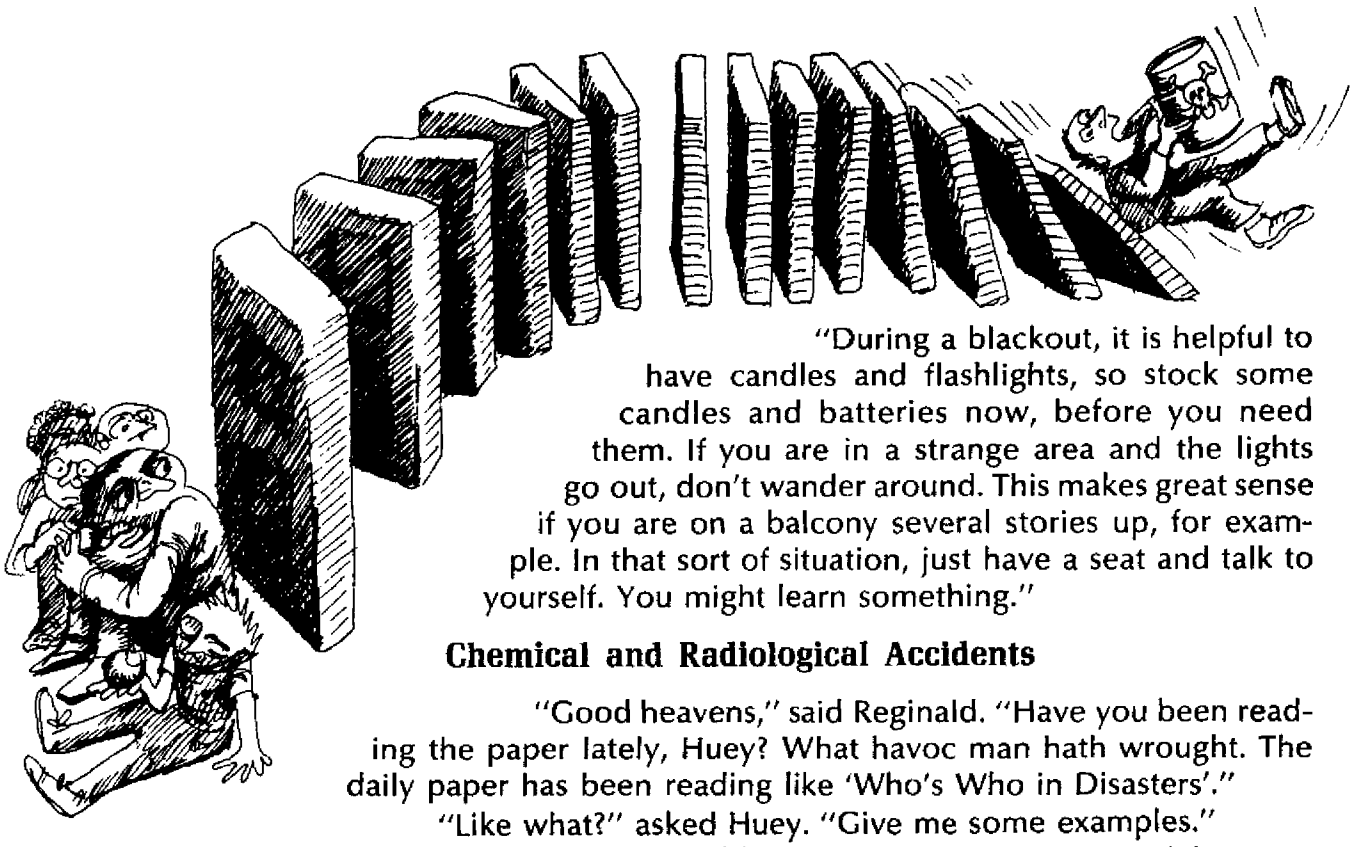
1 **Don't use electric "convenience objects" like the electric dishwasher, hair dryer, or motor equipment. Think of all the things using electricity that you don't really need. Make a list and see how many things you could live without.**

2 **Turn your air conditioner down or off.**

3 **Turn your refrigerator to the warmest safe setting. In an emergency, did you know you can unplug your refrigerator or freezer and it will keep food safely for a minimum of 2 days, if you leave it closed the entire time?**

4 **Turn out the lights when you leave a room, and don't use more lights in any room than you need.**

5 **Put lower-watt bulbs in your light fixtures.**



"During a blackout, it is helpful to have candles and flashlights, so stock some candles and batteries now, before you need them. If you are in a strange area and the lights go out, don't wander around. This makes great sense if you are on a balcony several stories up, for example. In that sort of situation, just have a seat and talk to yourself. You might learn something."

Chemical and Radiological Accidents

"Good heavens," said Reginald. "Have you been reading the paper lately, Huey? What havoc man hath wrought. The daily paper has been reading like 'Who's Who in Disasters'."

"Like what?" asked Huey. "Give me some examples."

"Well," said Reginald, "the August 3, 1964, issue of the *Journal of the American Medical Association* included an article entitled, "Parathion Residue Poisoning Among Orchard Workers." It seems that between 1959 and 1963, more than 275 cases of parathion poisoning were documented among workers harvesting citrus crops in California."

"What's parathion?" asked Huey.

"An extremely lethal insecticide," answered Reginald.

"That's really scary," shuddered Huey.

"And listen to these," said Reginald. "In the past year it has come to light that part of Grand Junction, Colorado, is built on radioactive material. Contractors apparently used tailings from uranium mines for land fill in constructing much of the town. It has now been discovered that these tailings are radioactive.

"In February of 1970, the tanker *Arrow* became impaled on a rock in Chedabucto Bay, Nova Scotia. It is estimated that 1.5 million gallons of heavy residual fuel oil spilled from the forward cargo holds. The oil that escaped polluted roughly 125 miles of shoreline. By February 14, over 2,000 seabirds had been killed. As the oil slick spread, the death toll rose."

"You know, Reggie," said Huey, "where there are people, there are accidents; no one can be blamed for the fact that human beings make mistakes. It's just that when someone does make an error of that kind, so many people and animals are killed as a result. It seems to me terribly important to somehow control all the deadly materials around us."

"Besides," said Huey, "it's not just that these lethal chemicals and gadgets and industries exist; they pose a constant threat of death and destruction. Just look at any week's collection of newspapers."

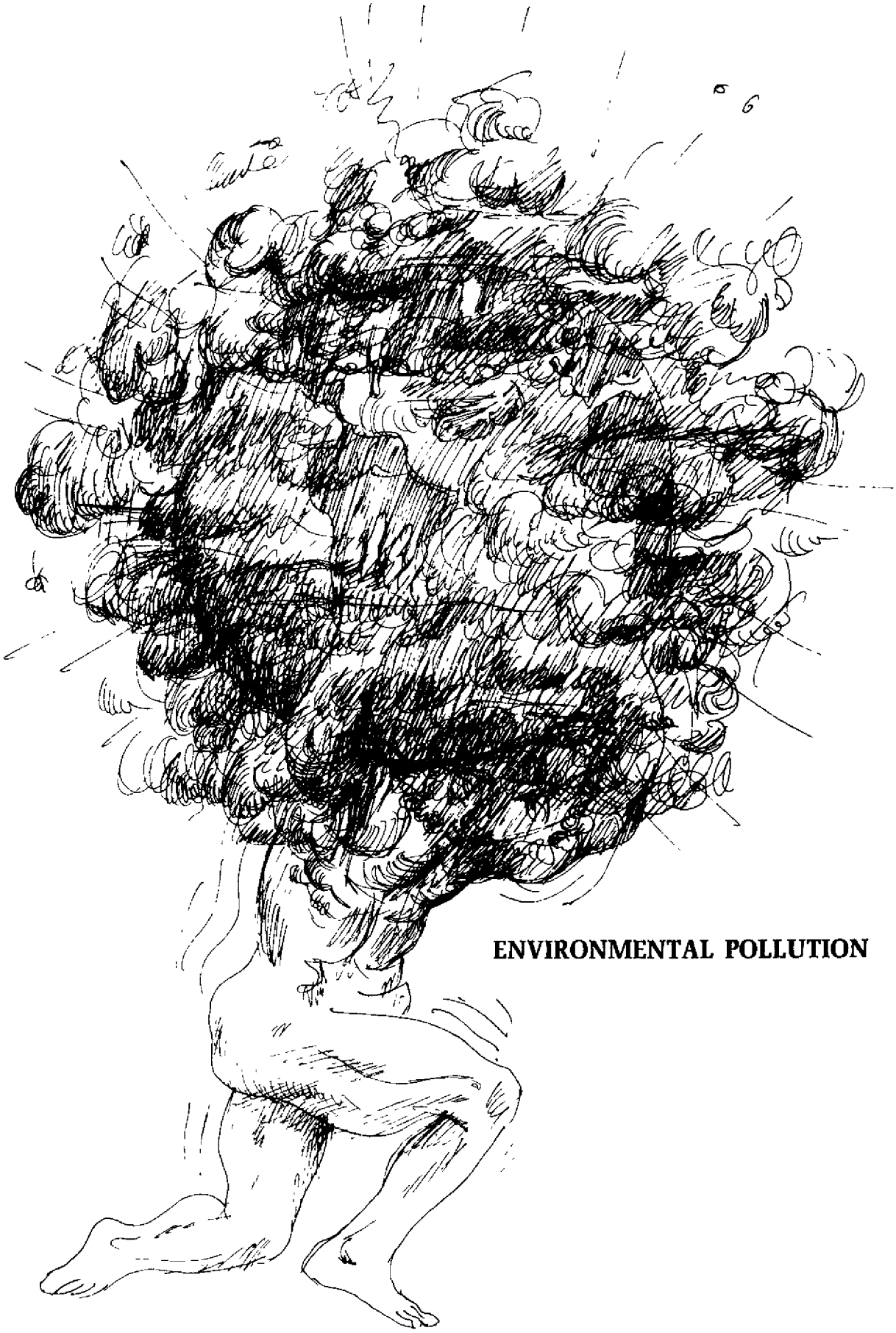
"What should you do about a chemical or radiological accident in your area?" asked Reginald.

"Well," said Huey, "there's not much you can do once some accident has happened; listen to the radio or television and follow the guidance of local officials."

"You know, Reginald, just 10 years ago few people were aware of how dangerous chemicals and radiation are. But recently more information has become available. It is important that people have a reasonable degree of knowledge about the hazards to which they may be exposed.

"Huey," said Reginald, "how can I find out what's happening, and what to do about it?"

"Well, the best place I know of to find out about all these things is your local health department, the environmental agency in your State, or even the Environmental Protection Agency in Washington, D.C. And the fact of the matter is," he continued, "that hazards go along with technological advances; if we are thoroughly informed of these hazards, we at least have the chance to make and implement reasonable decisions."



ENVIRONMENTAL POLLUTION

There is a little town in Pennsylvania called Donora. It was a busy industrial center back in 1948, when this story is set. About 14,000 people lived and worked there. One still day in October, fog and factory fumes combined to cover Donora with a thick smoggy blanket. After four red-eyed days, wind and rain arrived to scatter the black cloud. Almost 6,000 people had coughs, sore throats and breathing problems, smarting, watering eyes or nausea and vomiting. People with heart disease and bronchitis were crippled by the filth in the air; many had to be given emergency oxygen treatment. In the four days before the wind and rain came, 20 people died. This story is true.

In 1952, a fog hung over the city of London. That's not too unusual, because it's called the foggy city, but this particular fog combined with stagnant air and industrial pollutants to create a filthy blanket that hung over the city and stifled its inhabitants for five days. It seeped into houses, and people groped as though blind through the muggy blackness. At the end of the five days, 4,000 people were dead; many thousands more were sick. This story is true.

In New York in 1963, smog cloaked the city. It was different from previous smogs. This time the deaths of between 200 and 400 people could be traced directly to the foul air which lay over the city for that brief time. This story is true.

In a city called Berington, in 1980, stagnant air produced by lazy winds and high temperatures trapped concentrations of smoke, sulfur dioxide, carbon monoxide, small particles and other irritants beneath it. The city was like a pan and the air was like a lid sealing it shut. The pollutants and all the people were trapped beneath the layer of stagnant air. In the first two days many people with heart disease and respiratory problems and most older people died. In the next few days, many more old and sick people died, and those who were young and healthy became sicker and sicker.

Emergency oxygen ran out. Alarming numbers of young people began to develop asthma. The chronically ill had almost all succumbed, newborn babies were dying, and bronchitis was rampant. By the end of the week, the few who were still alive tried to get into their cars and leave the city. Many died in the attempt. When the smog finally lifted, rescuers said Berington looked like a ghost town. *This* story is *not* true. But it's not exactly a fairy tale either. The conditions which combine to produce such a disaster exist right now, here in America. The cleansing winds are still kind, so Berington hasn't happened. Yet.

Sobering Facts

United Press Report, Thursday, March 30, 1972: "The Environmental Protection Agency regional office said yesterday evidence indicates that the Mississippi River is so contaminated by industrial wastes that its water could cause cancer in humans....The EPA indicated the 60 industrial plants tested were contributing to the pollution although a few of them already had made some changes in their waste disposal systems."

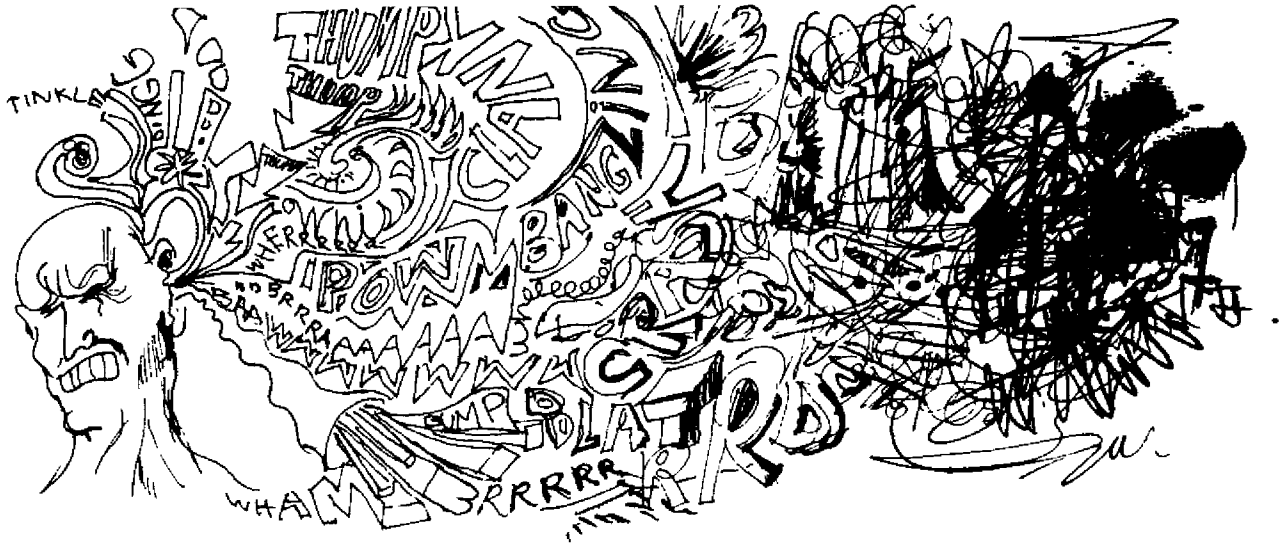
"Wastes from industries discharging into the Mississippi River from the Baton Rouge area to below New Orleans have been analyzed and found to contain metals in concentrations which may endanger human health and the health of aquatic biota." Two cancer-producing compounds had been found in the water supplies of the Public Health Service hospital at Carville and the Carrolton plant at New Orleans.

"The EPA said the Mississippi River serves as the source of raw water for 1.5 million people along the 258 miles from St. Francisville, La., to Venice, La.

"Cyanides, phenols, arsenic, lead, cadmium, copper, chromium, mercury and zinc have been found in samples taken during the last 18 months."

EPA Environmental News bulletin. Due to noise pollution in certain industries, "...hearing loss looms as a major health hazard. Today it is estimated that up to 16,000,000 workers are threatened with hearing damage and that excessive noise costs industry about $2,000,000 each day in compensation claims, loss in worker efficiency, and reduced property values...."

In 1969, in *The New York Times,* Dr. Rene Dubos said that environmental pollution "...now affects the whole earth. Smog produced in urban and industrial areas is hovering over the countryside and beginning to spread over the oceans....



Cities will not benefit much longer from the cleansing effects of the winds for the simple reason that the wind itself is contaminated."

Industries discharge the greatest abundance of the most toxic pollutants into the waters of the United States, according to the Department of the Interior's Federal Water Quality Administration in its June, 1970, Status Report. In a 1969 report, *The Cost of Clean Water and Its Economic Impact*, the FWQA noted that 51 separate pollutants are now being discharged into U.S. waters from industrial processes. The list is partial rather than comprehensive."

We are *all* polluters. We all use cars and consume electricity and buy throwaway products in throwaway packages and produce waste in the water and in the air. Until the environment reflects your efforts to clean it, air pollution problems will remain with us, particularly in urban areas.

So, during heavy air pollution:

1 Cut down on physical activity, indoors and out. The more active you are, the more pollutants you take into your lungs.

2 Stay indoors as much as you can, and keep your windows closed.

3 Avoid smoke-filled rooms. Don't smoke.

4 Don't light fires in fireplace or incinerator.

5 Don't drive. If you must travel, use public transportation. That may seem inconvenient; but so will choking. If there is no public transportation available, and you MUST go somewhere, walk, bicycle, or form a car pool. Avoid busy streets and highways where you are likely to sit in your car, pouring exhaust into the air.

6 Cut down on water and electricity. Don't use nonessential electrical appliances, such as washing machines, dryers, and dishwashers, until the emergency is over.

7 Keep smog outside by drawing shades, keeping doors and windows closed.

8 Don't wear contact lenses; they irritate eyeballs when it's smoggy.

9 Postpone jobs that circulate dust indoors and out; sweeping, raking, beating rugs.

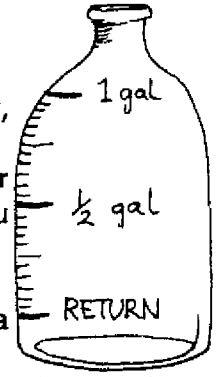
10 If a bus, truck, or car emits a cloud of fumes, hold your breath.

It is worth remembering that the public outcry has already proved powerful enough to make public and private officials begin to *talk* about cleaning up the environment. They realize they are dependent on you as a future voter and as a current consumer.

Each of us must set his own priorities. If a manufacturer pollutes the local waters, or if his product is "over-packaged" (it looks pretty but puts tons of plastic back into the environment), you must make up your own mind, as an individual, what you're willing to do about it.

No one wants to give up the entertaining, satisfying, and convenient goods and services our society produces. It's truly a question of priorities. Up to this time, our priorities have clearly been economic rather than humanistic. But we may have to modify our present pattern, or the problem will just continue to get worse and worse. Something must be done—and the first step is education. Each of us can re-educate himself; together we can re-educate our society. If we don't care enough, who does?

How To Fight Back



First find out what your local government is doing, or not doing, about the situation and what it can do.

It is possible to discuss the matter with the industry involved, or with your local environmental agency. But get your facts straight before you do it:

What is the location of the pollution? Be specific.

What is the nature of the pollution? (Try hard to find out; ask a chemist at the local university.)

Get a description of the pollutant, color, odor, form, and a general idea of how and where it was spreading.

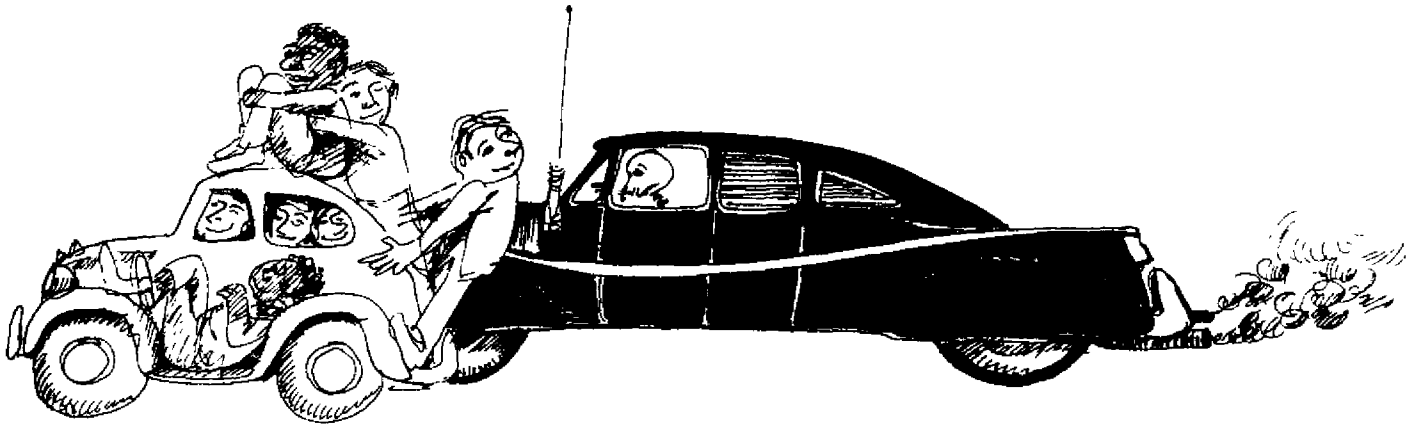
What is the source of pollution? Oil rig, industrial plant, municipal sewage plant?

You, as a polluter yourself, can and probably should:

1 **Buy beverages only in returnable bottles. Return throwaway bottles and glass jars to redemption centers run by the Glass Container Manufacturing Institute in many States. (For a list, write to the Institute at 330 Madison Avenue, New York, New York 10017.)**

2 **Reuse paper and plastic bags from the store.**

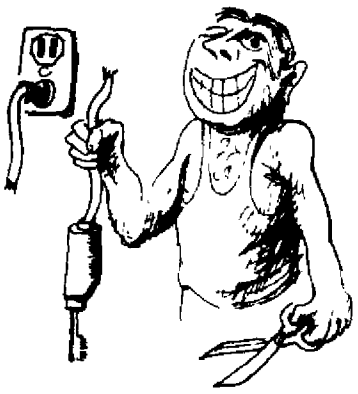
3 **Don't use colored tissues, because the dye may form a harmful residue in water.**



4 **Rather than drive to work alone, form a car pool or take public transportation and thus cut down on air pollution by cars.**

5 **Conserve electricity and water at home.**

6 **Use sand instead of de-icing salts. Sand is less destructive of vegetation, highways, and cars, and doesn't pollute ground water.**



7 Try to buy only things packaged in paper or glass. Some other types of packaging cannot be recycled and are virtually indestructible. Write to manufacturers of products packaged in polluting materials and tell them why you can't buy their materials.

8 Form a neighborhood collection system for old newspapers.

9 Locate existing aluminum scrap reclamation centers or establish one. (Ask locally at newspapers, community organizations, beverage retailers, etc.)

10 Store a jar of water in your refrigerator instead of running the tap to cool it.

11 Buy laundry, dishwasher, and other cleaning products with minimum phosphates.

12 Live without whatever electrical convenience products you don't truly NEED.

13 Use and teach others how to use organic farming and gardening procedures; avoid pesticides.

14 Wash your plants with water or mild, nondetergent suds to keep them free of bugs.

15 Use compost piles composed of things like sawdust, corn husks, leaves and grass cuttings, fat-free table scraps, coffee grounds, and tea leaves (small amounts of paper help too).

16 Walk more. Limit use of recreational vehicles and appliances. Skiing, hiking, biking, and canoeing don't pollute.

17 Become concerned with and active in the planning and use of land in your area.

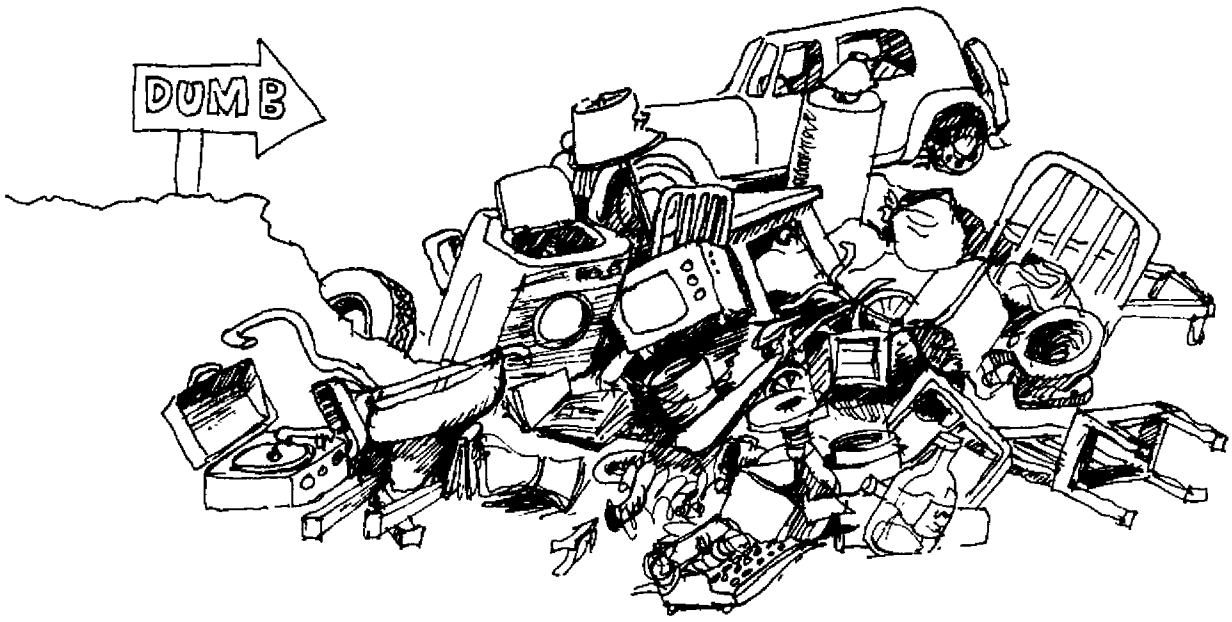
18 Buy gasoline with the least amount of lead required to operate your car satisfactorily.

19 Keep your family's car in good repair.

20 Know where your legislators stand on ecological issues.

21 Avoid littering and clean up any litter you see. If you need a neighborhood cleanup, organize one.

22 Plant trees and shrubs which replenish oxygen in the air; take care of growing plants.



And think up your own solutions to pollution problems. They're probably best of all, especially if you really care what happens to the environment around you.

There's a classic story of how no one thought it was important enough to put up a warning sign on a dangerous curve until someone drove over the edge and got killed. But the sign is up now and still people drive straight for the edge. The main problem is, the driver is *us.*

SAVE AIR
SAVE WATER
SAVE SOIL
SAVE ENERGY
SAVE YOURSELF!