

They all have two things in common: Mass communication systems are readily available to them — and they are extremely articulate. The group includes free-lance professional writers, college professors, newspaper men and women, prominent figures in radio and TV, politicians and members of societies and clubs devoted to the outdoors as a hobby.

Who knows what their respective motives are? We can only speculate — which is what **they** do in all of their writing and speeches.

The free-lance writers secure income from their books or articles.

The professors receive public recognition — something they can never get by writing to professional journals.

The newspaper men find the subject of pesticides a way to fill their daily columns.

The politicians get their names in front of their constituents.

The radio and TV personalities are practicing good public relations by jumping on the bandwagon created by the others.

And the nature groups are reacting honestly to their sincere feelings. Their perspective is questionable, since it is not readily apparent as to where they stand on the sufferings of man, but their true love of the **other** plants and animals in our kingdom is real and evident.

The Critic's Formula

More important than who the critics are, or why they react as they do, is **how** they go about their work.

They all use "The Silent Spring" as their model. And they should — because it was a document containing a masterful technique that very few could improve upon.

The formula, and it has now become a formula, is a well-written introduction which uses numerous contrasting adjectives and nouns. There is a subtle transition made from wildlife, flowers and trees to "mysterious" ailments, "evil" spells, "strange" happenings and "nuclear" explosions.

A foreboding atmosphere is established. Then follows an interesting dissertation on some subject. Fascinating, accurate but irrelevant discussions of such items as bacteria, algae, fungi, a stretch of road, a conference of scientists, Greek mythology — and life cycles of organisms take place. In these discussions facts are used and the word "may" never appears.

With an aura of authenticity established, pesticides are injected into the picture. Then the word "may" suddenly sprouts like weeds. We are told that we "may" alter human germ plasm by use of chemicals. We are told that we "may" alter our future by choosing a chemical spray.

One writer implied that pregnant women "might" have deformed children if they sprayed with a certain fungicide.

Many writers have stated that pesticides "may" be causing cancer in man.

All this and much, much more in spite of statements to the contrary made by responsible men of science. The American Medical Association, a House Investigating Sub-Committee and prominent toxicologists have all stated that there are no known instances of pesticides injuring man when they have been properly used.

Pesticides are a poison. Accidents have happened. Again, accidents happen with innumerable chemicals, even with table salt and aspirin. But no one passes laws to get rid of salt or aspirin!

As the anti-pesticide article unfolds, all sorts of interesting words are placed before the reader. These include "insidious," "lethal," "biocide," "strange," "mutation," "notorious," "weird," "fearful."

One part of the formula is to seek out the exceptions. There are over 200,000,000 people in the U.S. alone and about 3-1/2 billion in the world. Some of these people have accidents. They burn to death; they fall off cliffs; they slip in the bathtub and break their necks. And a few of them die from the **accidental** ingestion of pesticides.

The writers search for these isolated cases and describe them. Their facile pens leave the reader with the impression that such accidents are commonplace.

Irrelevant statistics are part of the formula. For example, one writer tells us that ocean water contains 5-100,000 thousands of **one** part of DDT for every **million parts of water**. He then states that the average human has about seven parts per million of DDT in his body. Having thrown these figures at us, he exultantly states that man has over a million times the amount of DDT found in water!

These figures really only tell us two things: We have sophisticated equipment available which can measure **traces** of anything. And — there isn't very much DDT in a cup, a bucket or a whole ocean of ocean water!

These figures **do not** tell us what our scientists know! Seven parts per million of DDT is far, far below man's tolerance for DDT. Volunteers have been tested, scientifically, after eating a dietary intake of DDT 200 times the normal traces found in food. And, years later, they were found to be completely healthy. Workers in a DDT factory have been found to have 600 parts per million of DDT in their fatty tissue. And scientists, including M.D.'s, found these men to be perfectly healthy after 19 years of steady exposure to DDT. This is over 80 times the normal parts per million found in the average man!

But our writer-statistician doesn't tell us about these facts. He gets more impact out of his article by scaring us to death.

Fantasy Replaces Fact

Because the writer has few facts to use in making his case, he resorts to **fantasy**. This was a prominent part of the introduction to "The Silent Spring" wherein the **mythical** town was introduced.

It was recently used again by a professor turned writer when the major part of his article was based upon the "end of the ocean." To reach this dreadful situation, the writer dreamed up a fictitious chlorinated hydrocarbon discovered by the Russians. Naturally, this new product did us all in—Russians included!

Fantasy is always helped along by another element found in the writing formula: A small fact is grotesquely blown up. Capabilities never found in the laboratory by serious scientists are attributed to the chemical.

Speculation, a part of the formula, is then injected. The writer can then, if he chooses, and he usually does, come to the wildest of conclusions.

Example: All the phytoplankton of the sea are destroyed, all the zooplankton are destroyed, all the fish disappear.

The results are effective. The lay reader gets fearful and the true scientists get demands to show **negative proof**.

Negative proof is another part of the anti-pesticide writer's formula. It means that the scientists must show that a given chemical will never, under any circumstance,—taken in any quantity — and over an infinite period of time — do damage to us.

Negative proof can't be established for anything — including water and bread. After all, we've only been eating bread for a few thousand years. How do we know what it **might** do to us 100,000 years from now?

Sophistry runs through the writer's work. It's a big part of the formula. Sophistry is the use of a misleading, unsound, but clever, plausible and subtle method of reasoning. For example:

"Most people don't know the difference between a chlorinated hydrocarbon, a group of the most deadly pesticides, including DDT, and water."

This is a three-pronged example of the anti-pesticide writer's formula: It contains a truth, a misstatement of fact — and the example, overall, qualifies for the definition of sophistry.

The truth? Most people probably can't identify a chlorinated hydrocarbon — perhaps even from water.

The misstatement of fact? Chlorinated hydrocarbons may have deficiencies but they **are not** a group of the most deadly pesticides.

Many of the old inorganic chemicals such as lead, zinc and arsenic are much more deadly. Most of the organo-phosphates are decidedly more deadly.

The sophistry? The whole passage. Injecting a truth prior to the punch phrase is part of the technique. Getting across the idea of deadliness establishes the reasoning that will follow from a false premise.

Slanting reports to the mood created is a favorite technique: One reporter covered a meeting of scientists several years ago and then wrote an article called "The Lethal Spring?" (Note how the writer called upon help from the master in using this title!)

She summed up the meeting with this quotation:

"None of the scientists at the four-day conference indicated that their findings had alarmed them to a point where they were ready to picket companies or petition Congress to ban one or more pesticides."

Note the subtle, negative conclusion used! Reading between the lines of this negatively slanted passage, I get the following:

"Scientists expressed no alarm at the use of pesticides — when properly applied."

I'll grant the writer one point, some pesticides are being banned now...but it's not due to the picketing of scientists — it's the work of the politicians.

So you see how we got to where we are today. Reams of print, most of it following the formula, has appeared during the past seven or eight years. Most of the articles and books have been well and cleverly written. While this was going on, the public has, fortunately, become aware of the fact that we do have environmental problems.

Ignoring the Costs

Unfortunately, no one likes facing up to the costs which must be paid to correct our sewer systems, clean up our factories and automobiles, secure proper garbage disposal procedures and embrace numerous other anti-pollution practices.

Meanwhile, pesticides, which are poisons, lend themselves to horror stories that might have been written by Edgar Allen Poe. They have been swept into the ecological storm as a No. 1 whipping boy.

What has been accomplished by all this anti-pesticide literature? Plenty!

In 1969, a group of prominent scientists from Indiana, Wisconsin, Illinois, Michigan and Minnesota prepared a report titled: "Lake States Agriculture Committee Pesticide Report."

The report was compiled because many restrictions are being placed on these states right now—restrictions pushed zealously by politicians from the area.

Some of the conclusions: With chlorinated hydrocarbons eliminated, the loss in value of production will be \$160,000,000 per year and the added cost of substitute materials will be another \$23,000,000.

If all chemical pesticides are eliminated, the loss will be \$1-1/2 billion per year!

And this estimate only covers a five-state area.

These estimates don't include such an item as termite control. The committee says that: "Chemical treatment for termites have provided \$4.6 billion in savings from damage to dwellings alone during the period of their existence." Chlorinated hydrocarbons are used for termite control.

This, again, involves only a five-state area.

Do your own projecting to 50 states and you can see what is involved!

"We Can Do Something"

Can we do anything about this onslaught of negative, vicious anti-pesticide publicity? Yes, we can do something. But it will be a long, uphill struggle.

Remember, we are all involved. Growers, packers and, most definitely, consumers are involved. So, first, read the article or book straight through. Next, and this is extremely important, reread it with a pencil in your hand. Look for the formula — it's there! Circle the speculative words — they are there in profusion. Circle the passages with a false premise. They are there too — especially in the early part of the article. Circle, too, the colorful, descriptive and fearful adjectives used. Then review this second reading and know the writing for what it is: A poison much more poisonous to our well being than pesticides ever have or ever will be.

Then interpret this article to your neighbor, your minister, your priest, your fellow club member, your child's biology teacher.

And write. Write your politician, the editor of the magazine, the author, the actor, the newspaper editor and writer involved, the college professor who wrote an article and the radio and TV star who is getting a free publicity ride.

But don't bother to write the "nature" clubs. I'll explain.

Tell the politician he's thinking of votes instead of the public good.

Tell the editor of the magazine and the author that they have a tremendous responsibility to be objective. These are troubled times and we need help, not more confusion.

Tell the college professor that he shouldn't ride on the prestige of his degree while writing science fiction. He should revert to his training as a man of science.

But leave the nature clubs alone. They do act from the heart. They are sincere. They even want green forests, clear water, wildlife and fresh air as much as we do!

They will be equally horrified if they are suddenly confronted by a world inhabited by billions of starlings, oodles of flies and mosquitoes, myriads of reptiles, worms and bugs. And they, too, appreciate a beautiful fresh apple.

So leave them alone. Their heart is in the right place.

Even if you do nothing, it will all, ultimately, turn out all right. This is because pesticides, and the need for them, are basically very sound. Of course, you may have to wait 10 or 15 years for it all to become apparent. This means it will be your children who have nothing to worry about.

Meanwhile, we only pass through here once.