

ENVIRONMENTAL INTERPRETATION

A Practical Guide for People with
Big Ideas and Small Budgets

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North American Press
Golden, Colorado

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 Book and cover design by Barbara Ham
 Cover: Interpretation is enjoyable, relevant, organized, and thematic, University of Idaho
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Library of Congress Cataloging-in-Publication Data

Ham, Sam H.

Environmental Interpretation: a practical guide for people with big ideas and small budgets/Sam Ham.

p. cm.

Includes bibliographical references and index.

ISBN 1-55591-902-2

1. Natural areas - Interpretive programs. 2. Environmental education. 3. National parks and reserves - Interpretive programs.

I. Title.

QH75.H36 1992

92-17212

333.7'014 - dc20

CIP

Printed in the United States of America

0 9 8 7 6 5 4

North American Press
 350 Indiana Street
 Golden, Colorado 80401-5093
 USA

Part One

Important Concepts

CHAPTER ONE



WHAT IS INTERPRETATION?

Interpretation is simply an approach to communication. Most people think of it as the process through which a person translates one language into another, for example Spanish to English or English to Spanish. At its most basic level, that's exactly what interpretation is, translating. Environmental **interpretation** involves translating the technical language of a natural science or related field into terms and ideas that people who aren't scientists can readily understand. And it involves doing it in a way that's entertaining and interesting to these people. Simply put, that's the topic of this book.

The first author to define interpretation formally was Freeman Tilden (1957). He wasn't a scientist, a naturalist, a historian, nor a technician of any kind. Rather, he was a playwright and philosopher. He was not well grounded in the biological or physical sciences-frequent subjects of interpretive programs-but he was an unusually sensitive person with a profound intuitive understanding of how humans communicate best. This understanding guided his view of interpretation which he defined as, "An educational activity which aims to reveal meanings and relationships through the use of original objects, by firsthand experience, and by illustrative media, rather than simply to communicate factual information."

As his definition suggests, Tilden saw interpretation as an approach to communicating which stresses the transfer of ideas and relationships rather than isolated facts and figures. Although an interpreter may use factual information to illustrate points and clarify meanings, it's the points and meanings that he or she is trying first to communicate, not the facts. This is what distinguishes interpretation from conventional instruction. In the classroom, the teacher's goal often is to communicate facts alone, a process necessary in the long-term education of students. In interpretation, we present facts only when they help the audience understand and appreciate what we're trying to show or explain. In instruction, presenting facts may be the teacher's ultimate objective; in interpretation it never is. Carefully selected facts can be supportive, illustrative and illuminating-but they're never ends in themselves. In interpretation, as we'll see shortly, the goal is to communicate a message-a message that answers the question "so what?" with regard to the factual information we've chosen to present. In this respect, there's always a 'moral' to an interpreter's story.

Interpretation Versus Formal Instruction

One of the difficulties many interpreters have is understanding that their job is not to "teach" their audiences in the same sense they were taught in school. Many interpreters enter their jobs without formal training or prior experience, and they are unsure just how they should approach their role as communicators. The only role models that many interpreters have are their former teachers. There is nothing inherently wrong with this because there are some very good teachers; but as we shall see, communication methods appropriate in the classroom may not be acceptable to audiences outside of the formal education system.

Look at the example in Figure 1-1. Mr. Jones is a high school science teacher during the school year and an interpreter at a nature reserve in the summers. He's fascinated with rocks and minerals and tends to emphasize them in his science classes as well as in his talks at the nature reserve. Notice Mr. Jones' classroom teaching methods. He tells his students to read from a geology book so that they'll learn terms he feels they should know in order to identify several kinds of rocks. Among these terms are cleavage, silicates, tetrahedral bonding, volcanism, metamorphosis and sedimentation. Whether you know much about rocks, you might agree that these are important terms for Mr. Jones to teach his students. He also gives lectures using his extensive notes, and writes and draws a lot on the blackboard. The students, on the other hand, know it's their role to copy the material from the black board and to take notes on everything Mr. Jones says during his lectures. There will be an exam soon and they'll be expected to know everything they've read and everything Mr. Jones has said. In other words, the students will have to demonstrate to Mr. Jones that they remember the facts he taught them about rocks. But they don't mind; although Mr. Jones demands a lot of work from them, he's a nice man, he tells a lot of jokes in class, and he gives fair exams. Most students enjoy his classes.

Now look at Mr. Jones, the interpreter. He likes to give talks about geology to visitors at the nature reserve. He photocopies pages from the geology book, the same pages his students read, so that the people in his audiences can learn terms like cleavage, silicates, tetrahedral bonding, sedimentation, and the rest. He passes these out to the visitors and then presents his talk using a portable black board that he borrowed from the school. He didn't have to work too hard preparing the talk because he was able to rely on some of the lecture notes he uses in his classes at the high school. The only trouble is that, unlike his students who usually enjoy his lectures, the people attending his talks always seem bored. Mr. Jones can't understand why. He decides that people who visit the nature reserve simply aren't interested in rocks, and he considers changing the topic of his talk to something they'd be more interested in.

The problem, of course, wasn't with the visitors and certainly not with the topic. No topic is inherently boring or interesting. There are only people who make them that way. Mr. Jones' problem was that he failed to understand that what made Mr. Jones, the teacher, effective would not necessarily make Mr. Jones, the interpreter, effective. He needed a different approach for the nature reserve visitors. As we will see, they were a

different kind of audience than his students, and Mr. Jones needed to change his communication methods to suit his audience.

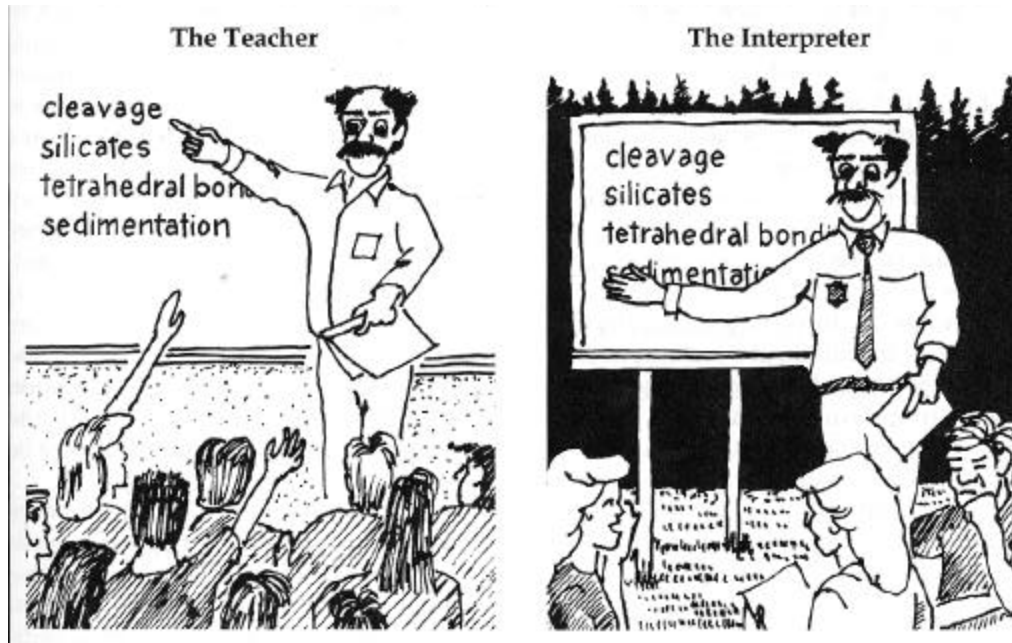


Figure 1-1. Contrasting formal education and interpretation. (Drawings by Jeff Egan)

Captive Versus Noncaptive Audiences

Let's further analyze the problem in Figure 1-1, this time in terms of the audience Mr. Jones is trying to communicate with in each setting. It's probably already clear to you that his error at the nature reserve was that he treated his audience like students. Why should this make a difference? Are his students different kinds of people than visitors at the nature reserve? If some of his students attended his talk at the nature reserve, would they be interested in his presentation even when the rest of the audience wasn't? The answer is probably not.

People act according to the environment or situation they're in. Where we are influences much of our behavior including how we talk, how we conduct ourselves, what we're interested in and what kinds of behavior we expect from other people. If you and a close friend were at the beach together you'd behave and expect others to behave much differently than if the two of you were in church, at a restaurant or at a wedding. Your ideas about what's interesting, funny, out-of-place, etc., would probably be very different in each of these settings. What might seem funny at the beach or restaurant, for example, might seem terribly inappropriate at church or the wedding. In the classroom, Mr. Jones' students expect certain kinds of behavior from him, behaviors that are consistent with his role as "Mr. Jones, the teacher." At the nature reserve, they'd expect a different Mr. Jones, not the teacher. The reason is that at the nature reserve the students probably don't see themselves as "students," but rather as visitors.

Interpreters who understand why and how audiences such as these differ, and even more important, how to tailor communication methods to suit them, have a distinct advantage over interpreters who don't. Although there are many physical differences in the two settings, there's one overriding psychological difference. The classroom is a setting in which the audience has to pay attention. The nature reserve or park is one in which it doesn't. Boiled down to a single defining characteristic, it may be said that the students in the classroom are a captive audience because they're forced to stay and pay attention if they want to get good grades or avoid the trauma of getting poor ones. They've come to expect and to accept certain forms of information transfer that they associate with the classroom setting. On the other hand, the visitors at the park are a **noncaptive audience** because they don't have to worry about grades. If they decide to stay and pay attention, it will be only because they want to. If the presentation isn't interesting, if it seems too academic, or if it requires too much effort to follow, they probably won't pay attention. In the classroom, students will try to pay attention regardless of how boring or difficult the information is. They have to. There will be an exam.

Figure 1-2 lists the key differences between captive and noncaptive audiences. Although the most common captive audience is the student in a classroom, there are many kinds of noncaptive audiences: visitors in forests, parks, zoos, museums, botanical gardens, etc., participants in extension programs and people who read magazines and

newspapers, watch television and listen to radio. As Figure 1-2 suggests, any audience that has the option of ignoring the information without punishment or loss of a potential reward is a noncaptive audience. Noncaptive audiences are driven to pay attention not by some external reward (like a grade), but rather by their own intrinsic satisfaction with what they're hearing, seeing or reading. The only reward noncaptive audiences seek is internal. As long as the information they're receiving continues to be more interesting and entertaining than other things around them, noncaptive audiences will pay attention to it. However, if the information loses its interest or entertainment value, the audience

Differences Between Captive and Noncaptive Audiences	
Captive Audiences	Noncaptive Audiences
▪ Involuntary audience ▪ Time commitment is fixed ▪ External rewards important ▪ Must pay attention ▪ Will accept a formal, academic approach ▪ Will make an effort to pay attention, even if bored ▪ Examples of motivations: • grades • diplomas • certificates • licenses • jobs/employment • money • advancement • success ▪ Typical settings: • classrooms • job training courses • professional seminars • courses required for a license (e.g., driving)	▪ Voluntary audience ▪ Have no time commitment ▪ External rewards not important ▪ Do not have to pay attention ▪ Expect an informal atmosphere and a nonacademic approach ▪ Will switch attention if bored ▪ Examples of motivations: • interest • fun • entertainment • self-enrichment • self-improvement • a better life • passing time (nothing better to do) ▪ Typical settings: • parks, museums, reserves, etc. • extension programs • at home watching television, • listening to radio, reading a magazine

Figure 1-2. Typical characteristics of captive and noncaptive audiences.

will switch attention to something more immediately gratifying. This response may be overt as when someone puts down the magazine, switches the television channel, turns off the radio, or walks out of the movie theater early. It may also be quite involuntary, as when we find ourselves daydreaming in the middle of a conversation.

The mind tends to go where it finds the most gratifying information. Psychologists have linked this tendency to two kinds of chemicals called endorphins and dopamine that the brain produces. Some of these chemicals are a lot like morphine in their chemical makeup, and like morphine, they're addictive. Pleasurable thought stimulates the brain to produce endorphins and dopamine. Boring or excessively difficult information causes the brain to look for more gratifying information elsewhere. This is essentially what happens when we daydream. Consider the student, part of a captive audience, who knows he must pay attention in a class on a certain day because the next exam will stress the information that will be covered. Subconsciously, perhaps, he's saying to himself, "Okay, brain. We've got to pay attention today. Please pay attention today, there's going to be an exam!" With determination to commit to his notes every piece of information the teacher presents, our student finds himself an hour later being awakened from one of his better daydreams by the sound of his own name. It's his teacher telling him that he should pay better attention if he wants to do well on the exam! The brain is in control of our attention. So powerful is its tendency to find pleasure that even a student consciously trying to pay attention to an important lecture is unable to do it if the presentation isn't interesting. Going back to Mr. Jones' experience at the nature reserve, it's easy to understand why the people in his audience weren't able to pay attention. They didn't even try; they didn't have to.

The Interpretive Approach to Communication

If Mr. Jones had been aware of the differences between his captive classroom audience and his noncaptive nature reserve audience, what changes might he have made in his approach? What might he have done to hold his audience's interest and make them want to pay attention to his talk? Although there are many possible answers to these questions, all of them would boil down to four general qualities that Mr. Jones should try to give his presentation. Taken together, these qualities distinguish interpretation from other forms of information transfer and define the **interpretive approach** to communication. They are:

1. Interpretation is pleasurable.
2. Interpretation is relevant.
3. Interpretation is organized.
4. Interpretation has a theme.

Quality 1: *Interpretation Is Pleasurable*

Interpretation is entertaining. Although entertainment isn't interpretation's main goal, it's one of its essential qualities. All good communication is entertaining in the sense that it holds its audience's attention. As Mr. Jones discovered, if noncaptive audiences aren't entertained, they're likely to switch their attention to something more interesting.



Figure 1-3. Interpretation is enjoyable. Children in an environmental education program have fun searching for seeds in a friend's sock. Parque Residencial del Monte, Costa Rica. (Photo by Sam Ham)

As explained earlier, this may be an involuntary action such as daydreaming, or it can be more blatant such as getting up and walking out in the middle of a presentation; audiences viewing exhibits or signs may simply stop viewing them; boring publications may end up in a garbage can, or worse, on the ground.

How to make learning fun will vary depending upon the communication medium one is using. Entertaining exhibits, for example, have different qualities than entertaining audiovisual programs or entertaining talks. Yet one thing which seems to stand out in all successful interpretation is that it's informal and not classroomlike.

Interpreters can create an informal atmosphere in many ways. For example, a

speaker like Mr. Jones could use a conversational tone of voice, rather than the artificial and stuffy tone that some academicians and politicians are known to use, especially when they read from notes. (A good speaker avoids reading from notes. In fact, most interpreters don't use them at all; referring to notes creates a formal or even academic atmosphere.) Also, research on exhibits has shown that people will pay less attention if the exhibits utilize media or communication strategies that remind them of formal education, such as Mr. Jones' portable blackboard. Generally, the best exhibits are those that are gamelike, participatory, three-dimensional or which contain movement, changing scenes or lively colors—all characteristics more commonly associated with entertainment than with traditional classroom media. Likewise, talks, tours and other kinds of presentations have been found to attract greater attention if they incorporate humor, music, or two-way communication. For similar reasons, an audiovisual program containing background music will usually hold an audience's attention longer than one containing only a narrator's voice; and a publication which has illustrations or which uses colors other than just black and white is more likely to be read than one which has only

text photocopied on white paper.

Contrary to some people's opinion, you don't have to be a gifted communicator to be entertaining. In fact, there are a number of straightforward techniques that anyone can use to increase the entertainment value of technical information. Some of these are listed in Figure 1-4.

There Are Many Ways to Make Technical Information More Entertaining

Smile: A smiling face indicates pleasure in most cultures. An old saying goes: "When you're smiling, the whole world smiles with you." This means that your audience will take its cue from you. If you look like you're relaxed and having fun, they'll begin to feel that way too. Being too serious can create a formal atmosphere.

Use Active Verbs: Verbs are the power in any language. Don't take away their power by making them passive (e.g., "The bat pollinated the tree," not "The tree was pollinated by the bat.") Academic writing stresses passive verbs too much. Use powerful, active verb forms.

Show Cause-and-Effect: People like to know what things cause other things to happen. Try to show direct relationships between causes and their effects.

Link Science to Human History: Research shows that nonscientists are more interested in science if it can be related to people from a different time. For example, weaving information about plants into a story of how indigenous people utilized those plants in their diets, art, religion, etc., may be more entertaining than the same information would be by itself. Telling about any aspect of a natural or physical science through the eyes of those who explored it, discovered it, described it, wondered about it, overcame it, succumbed to it, worried about it, died from it, were saved by it, empowered by it, hindered by it, or who otherwise affected or were affected by the thing in question, will generally make it more interesting to nonscientists.

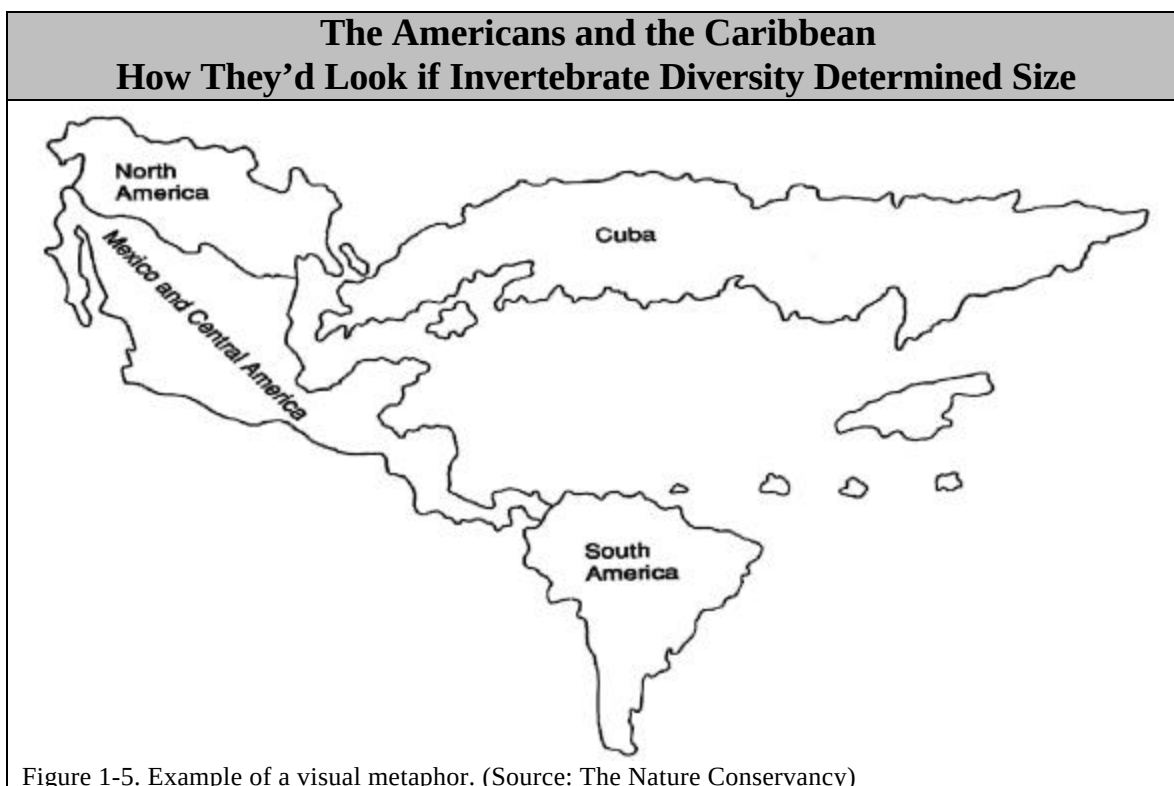
Use a "Visual Metaphor" to Describe Complex Ideas: A visual metaphor is an illustration which shows visually what might be difficult to describe convincingly with words alone. For example, one way to describe the rich diversity of tropical invertebrate species would be to show a map in which the sizes of countries and continents were based on the number of invertebrate species they contained. As Figure 1-5 shows, the countries in the tropics would be much larger than those elsewhere. The small island country of Cuba, for example, contains more invertebrate species than all of North America.

Use a "Vehicle" to Make Your Topic More Interesting: A vehicle is part of a communicator's strategy to make a topic more entertaining by telling about it in the context of some overriding scene, setting or situation. Examples:

- **Exaggerate Size:** "If we were small enough to actually walk inside of a wasp's nest, you'd be amazed at what you'd see."
- **Exaggerate Time Scale:** "If time were speeded up so that a thousand years went by every second, you'd be able to stand right here and watch continental drift for yourself."

- **Use an Overriding Analogy:** That is, an analogy that your entire presentation revolves around (e.g., likening the earth to an onion's layered skin in order to tell about certain geologic processes; comparing a volcanic landscape to an ocean; relating forest succession to the construction of a house; or comparing natural resource management (use and protection) to a person with a split personality).
- **Use a Contrived Situation:** Demonstrate the need for forest conservation by making up a story about a town in which there is no such thing as wood or wood products; go forward or back in time; pose a hypothetical problem or set up an illustrative situation (e.g., "What would life on earth be like if its average temperature increased just 5° C?" or "What if there were no predators?")
- **Use Personification:** Give selected human qualities to nonhuman things (e.g., "What might trees say if they could talk?" or "How might ants view humans?") Give the narrator of a slide/tape program an animal's identity or point of view. Walt Disney made personification famous in his many movies about animals and stories in which the audience experienced certain adventures through the eyes of the animal characters. This technique has been criticized (sometimes rightly and sometimes not) by biologists, because it involves giving human qualities to animals that are not human. Be careful when using personification. Don't imply that animals and plants really think and act like humans.
- **Focus on an Individual:** That is, make up a fictitious but scientifically accurate story about one particular person or object (e.g., an animal, plant, rock, water molecule, ice crystal, etc.). Give an account of what this person or thing experiences in terms of the technical information you are trying to get across to your audience. [Examples: Follow a single water molecule as it goes through the entire water cycle, or a mass of rock as it gets changed from sedimentary to metamorphic to igneous states; describe what happens to a particular parrot after it is taken from its tropical forest home and transported with other birds to a pet store in another country; tell about the final days of the last individual of a particular species; describe a specific smuggler's attempt to transport ocelot skins out of a country; follow the mishaps of a particular bear that had to be killed by park rangers because it had become dependent on park visitors for its food, etc.] Sometimes, giving the individual a name or other identity adds to the entertainment value of the story (e.g., Walter Water Drop, Bear Number 74, Smuggler Smith, etc.).

Figure 1-4. Examples of ways to be more entertaining.



Quality 2: Interpretation Is Relevant

Information that's **relevant** to us really has two qualities: it's **meaningful** and it's **personal**. Although related, being meaningful and being personal are different things. As we'll see, information that's meaningful isn't necessarily personal. When we succeed in giving interpretation both of these qualities, we've made it relevant to our audiences.

What Does Being "Meaningful" Mean?

When information is meaningful it's because we're able to connect it to something already inside our brains. Meaningful information is said to have "con text" since we understand it only in the context of something else we already know. Some psychologists say that we humans have a lot of words floating around in our heads, and that when something we hear or see reminds us of one or more of them, we attach a meaning to it that's based on the words it awakened in our minds. When something we hear or see doesn't connect with anything we already know, it's meaningless to us. The trouble with a lot of interpretation is that it's meaningless to its audiences. Mr. Jones could probably do at least two things to make his talk more meaningful to the visitors at the nature reserve.



Figure 1-6. Interpretation is meaningful. An interpreter compares the eruption of a volcano with a pot of percolating coffee. University of Idaho. (Photo by Gerry Snyder)

First, he could avoid using technical terms unless they're necessary for his audience to understand some important concept or idea he's trying to get across. In this case, however, it appears that Mr. Jones is simply trying to teach his audience the terms, just like he teaches his students the same terms. Since few nongeologists have words in their heads that would be awakened by terms like tetrahedral bonding, silicates, or sedimentation, these words probably aren't very meaningful to Mr. Jones' audience. Second, he could try to **bridge** the unfamiliar world of geology to things that his audience is likely to already know something about. He might do this using **examples**, analogies, and **comparisons**. Common everyday things make the best "bridges" (see Figure 1-7).

What Does Being "Personal" Mean?

Being meaningful is only half the challenge if interpretation is going to be relevant. The other half is being personal. In his first principle of interpretation, Tilden captured the essence of this idea when he said, "Any interpretation that does not somehow relate what is being displayed or described to something within the personality or experience of the visitor [audience] will be sterile." By this he meant that interpreters must not only find a way to link the information being presented to something their audiences know about, but to something they care about. With noncaptive audiences, this is especially important because they'll almost always ignore information that seems unimportant, even if they understand it perfectly. Consequently, we can understand why it's hard to sit through presentations we've heard before, or to read something we've read before. Although the information is very meaningful, it lacks the promise of new insight, and is therefore unimportant to us.

The reverse is also true. That is, noncaptive audiences can be expected to switch their attention to any information that is highly personal. Highly personal things include ourselves, our families, our health, our well-being, our quality of life, our deepest values, principles, beliefs and convictions. As we'll see, any communication that connects itself information. In fact, our tendency to pay to this inner circle of our lives will capture and hold our attention more so than other kinds of attention to personal information is so powerful that we do it even when we're consciously trying not to.

Examples, Analogies, and Comparisons

Three Ways to Bridge the Familiar and the Unfamiliar

Examples: Quickly refer to something or someone that is like or in some way represents that kind of thing or person you are talking about.

- "These orchids are a good example of a plant that grows on other plants."

Analogies: Show many similarities of the thing you are talking about to some other thing that is highly familiar to the audience.

- "To understand how volcanoes work, think of a covered pot of boiling water."

Comparisons : Show a few of the major similarities and/or differences between the thing you are talking about and something else which can be related to it. The result is that one or both of the objects becomes clearer in relation to the other.

- "These two pine trees are a lot alike. Both have three needles to a group, and they grow in the same kinds of places. But if you smell the bark, you'll notice that one of them smells like vanilla and the other like turpentine!"

Two Special kinds of Comparisons: Similes and Metaphors

Similes: Compare some characteristic of two things using the words "like" or "as."

- "This tree has spines like daggers on every limb."
- "At this stage of their development, the spiders are as black as coal."

Metaphors : Describe something with a word or phrase usually used to describe something very different.

- "The canoe plowed through the rapids."
- "It was as though every tourist on the bus decided at that moment to throw what was left of his lunch out the window. For 10 minutes, it rained garbage."

Figure 1-7. Techniques for making information more meaningful.

*"Shadowing" and the
Power of Being Personal*

The best communicators always try to connect their ideas to the lives of their audiences. The power this gives their presentations has been shown repeatedly in laboratory experiments utilizing a technique called shadowing. In these experiments, a person wears stereo headphones and is given very different tape recorded messages in each ear. In the left ear the person might hear a story about some city, for example Paris while simultaneously hearing a description of a complex process in the right ear, for example photosynthesis. The person is told to pay attention to the message about Paris, and to ignore the message about photosynthesis. This is a difficult task in itself, but there's more. Besides having to listen to only one of the two messages, the person is told to "shadow" or repeat back the message he or she is listening to as it is heard, all the while trying to ignore the other message. Few mental tasks require as much concentration and sheer effort as shadowing.

Moray (1959) and Cherry (1966) conducted shadowing experiments and found that not only was it difficult for their subjects to shadow, but when they tested their recall of the information they were supposed to pay attention to, the subjects could remember very little. Of course, when the researchers tested their recall of the ignored message (in our example, the description of photosynthesis), the subjects remembered even less. In Cherry's experiment, they didn't even notice a switch from English to German, and in Moray's experiment, they didn't recognize that some words were repeated thirtyfive consecutive times! In both studies, however, when the researchers prefaced some part of the ignored information with the subject's name, the subjects were able to remember it later, even though they remembered nothing else! Studies like these dramatically show why interpretation needs to be personal. We will pay attention to information we care about, even if we're trying to concentrate on something else.

As Solso (1979) pointed out, most of us have experienced this kind of thing at one time or another: You're at a noisy party or social gathering and someone on the other side of the room says, "I heard that George and Alice ." Until then completely involved in their own conversations, every George and Alice in the room turns an attentive ear to the speaker. Consider also how well parents can distinguish between their own children's shouting and that of other children at a noisy playground. Psychologists call this selective attention, and it's something that all audiences have. They'll predictably switch their attention to things they care about, and as we saw, even when they're consciously trying not to. But how could Mr. Jones make his presentation on geology more personal? Certainly, he couldn't mention the names of all the people in his audience. Even if he knew them, there'd probably be too many. But he might try two other simple techniques that are almost as effective. These are self-referencing and labeling(see Figure 1-8).

Self-Referencing and Labeling

Two Ways to Make Communication More Personal

Communication that appeals to those things we really care about—such as ourselves, our loved ones, our strongest beliefs, values and deepest convictions—attracts our attention. Information which is somehow related or connected to this inner circle of our lives will seem more important to us than it otherwise might. That's because it's more personal, and therefore, more relevant. Interpreters can make their communication more personal in many ways. Two simple techniques are self-referencing and labeling.

1. *Self-referencing* means getting people in your audience to think momentarily about themselves as you give them some new piece of information. This makes them relate to that information at a personal level and, according to research, increases the likelihood that they will pay attention to it, understand it, and be able to remember it later. You can use self-referencing by issuing a simple phrase (the self-reference) and then relating to it the information you want your audience to remember. For example:

- "Think of the last time you..."
- "Have you ever ... ?"
- "How many of you have ever...?"
- "At one time or another most of us have... "
- "How many of you can remember the very best teacher you ever had? Think about that person for a second. What do you suppose made him or her such a good

teacher? One thing you probably noticed was that...etc."

2. *Labeling* is classifying people (or kinds of people) in either a positive, negative or neutral way. When the label is issued, most people in your audience will either associate themselves with it, or disassociate themselves from it. Either way, they'll have to identify themselves in relationship to the label. Information that you relate to the label therefore seems more personal to them.

- Examples of positive labels: "People who understand the value of a forest know that...," "If you're the kind of person who cares about wildlife, then you probably...," "The most advanced farmers around here are doing a lot to control " "Parents who care about... ," "Choosy mothers choose Jif!"

- Examples of negative labels: "The worst criminals are the ones who commit crimes against nature," "The biggest headache for land managers are those people who think that ... " "If you don't care about protecting endangered species, then you probably don't believe that... ."

- Examples of neutral labels: "People who live in the Northwest " "We Oregonians...," "Children...," "Parents...."

Warning: Be careful using labels. They classify (stereotype) people. Even positive and neutral labels have the potential to offend.

Figure 1-8. People pay attention to things they care about.

Self-Referencing

Self-referencing is getting people in the audience to think about themselves and their own experiences as you give them new information. This causes them to connect the new ideas you're giving them with something they already care about, themselves. Mr. Jones could do this by using simple phrases like, "Think of the last time you " "Have you ever ?," or "At one time or another, most of you have probably " Self-referencing phrases are simple, and research has shown that using them will considerably increase the interest level of your communication, as well as what people will understand and remember from it.

As you may have noticed, self-referencing often utilizes the word you. This is a powerful word in all languages, and the best interpreters use it frequently. But variations can also be effective. For instance, try substituting other words for "you" in the previous examples. You'll see that although the effect is different, the new phrases still help to personalize the information which follows them. For audience: example, "Think of the last time a person you know did such and such...," or "Have your kids ever or..." "At one time or another, most of us have probably...."

How could Mr. Jones use self-referencing to make his talk on geology more personal? If he were trying to explain the process of sedimentation, for example, might he say something like:

"How many of you like to skip stones across water? Have you ever noticed that the best skipping stones are found near rivers? Why is that, do you think? That's right, they're smooth and polished from the water's current just the way wood is smooth after you rub it with sandpaper. And if you've ever used sandpaper on a piece of wood, you know that all that rubbing can cause quite a mess. 'Sediment' is just another word for the mess. In a river, the mess comes from small particles of rock that have been rubbed off by the water, and, of course, all the soil and other material that washes in from the sides of the river. Over time, the mess piles up, and the whole process is called 'sedimentation.' If you're like me, you're thinking that one of the best things about rivers is that you don't have to clean up after them. Or do you? Where do you suppose all the sediment goes?"

In this statement, Mr. Jones did two important things to make his description of sedimentation more personal to his he used three self-referencing phrases, and he used the word "you" ten times. He also made sedimentation more meaningful to his audience by using an analogy (comparing wood sanding to sedimentation) ' and he tried to be light hearted and informal in his tone. It appears that Mr. Jones is more interested in helping his audience understand how the process of sedimentation works than he is in teaching them the terminology and facts he might expect his high school students to know. Contrast the above description with the more formal definition Mr. Jones gives to his students from his lecture notes:

"Sedimentation is the process by which particulate matter is freed from parent material by the erosive power of water, and subsequently deposited as strata at a point downstream directly proportional to the mass of the particles and the velocity of the stream."

Had Mr. Jones, the interpreter, relied on his class lecture notes instead of on his knowledge of techniques like self-referencing and analogies, his audience would have received a very different presentation. Yet something you might be thinking, and which school teachers everywhere should consider, is whether the interpretive approach would be better even in the classroom. If teachers want their students to be interested in their subjects and to feel that what they're learning is really important in their lives, they would be well served to think more like interpreters than some teachers currently do.

Labeling

A second technique for making interpretation more personal is **labeling**. It's based on the idea that people will pay attention to things that remind them of themselves. Used frequently in advertising, a "label" is simply a statement that's made about a "kind" of person or group of people in relation to some idea, point, or object that the communicator is trying to describe. A successful peanut butter advertisement seen in many countries states, "Choosy mothers choose Jif." This message says that mothers who really care about their children will select the brand, Jif, presumably because it is better. The label is "choosy mothers." Since most mothers like to think of themselves as being careful about the food they give their children, they pay attention to the advertisement. An extensionist once said to his audience, "If you really care about the water, air and soil you'll leave for your children, then you'll be very interested in what I'm going to show you this afternoon. If these things don't interest you, then you might leave now and send me your children, instead. Certainly, *they* will care."

Although it was probably too strong a statement, you can see in the latter example that labels can be negative as well as positive. The idea is that people like to see themselves as having good qualities, and they'll often pay attention to a negative label in order to reassure themselves that they're not like the people being described. Another example is a ranger at a campfire program in Grand Teton National Park in the United States who told his audience, "The worst criminals are the ones who commit crimes against nature."

Labels can also be neutral and non-judgmental: "People who live in a warm climate " 'Most Hondurans...', "We Ticos...', "'People from the United States...', "Trinidadians over the age of thirty...', etc. As in the case of positive and negative labels, neutral labels can help the interpreter personalize the information he/she's presenting because when the label is issued, most people will either associate themselves with it, or disassociate themselves from it. In either event, the label requires them to identify with something personal as the information is presented. A frequent result is that the information is more interesting to them.

Be thoughtful when using labels. They classify people, and therefore have the potential to offend if they're not chosen carefully. In addition, you should be



Figure 1-9. Interpretation is organized. Although it's a little busy, this bilingual interpretive sign has four conspicuous main ideas. Volcan Irazu National Park, Costa Rica. (Photo by Sam Ham)

careful not to exclude part of your audience with a label that's too restrictive, unless, of course, that's your intention. Finally, try to select labels that are important to people in your audience. An extension specialist might be more effective using the label, "People who want to make sure they'll still be able to grow crops five years from now...", than if he/she simply said, "People who have farms around here" Both are good labels, but the first one's better because it refers to something that's probably more important to his or her audience. Likewise, an interpreter at a zoo might say, "All of us who care about preventing the extinction of this animal believe that...", instead of just "A lot of people think that..." Practice using labels and self-referencing. The better you get at recognizing and capitalizing on opportunities to use them, the more personal your communication will become.

Quality 3: Interpretation Is Organized

That is, it is presented in a way that is easy to follow. Another way of stating this idea is that interpretation, at its best, does not require a lot of effort from the audience. Noncaptive audiences will switch attention if they have to work too hard to follow a train of thought. In advertising, this relationship is well known. Mass media experts have even developed a formula to express it:

$$\begin{array}{lcl} \text{Probability that} & & \text{Reward} \\ \text{a noncaptive} & & \text{(potential benefit)} \\ \text{audience will} & = & \text{Effort (amount of} \\ \text{pay attention} & & \text{work required)} \end{array}$$

The formula, developed in 1971 by Wilbur Schramm, says that audiences that don't have to pay attention, won't, if they have to work too hard. As the amount of work they have to do increases, the likelihood that they'll continue to pay attention decreases. Put another way, the best interpretation is highly entertaining and easy to follow.

What Does Organization Really Do? *An Example*

Think of the last time you entered a movie theater late. If you're like most people, your first concern was trying to figure out what was going on in the movie so that you could make sense out of what you were hearing and seeing on the screen. If you weren't too late, you were probably able to figure things out pretty quickly. But if you missed more than fifteen minutes or so, you probably missed the introductions of the key characters, and even more important, the plot.

Undoubtedly, you then spent the next several minutes trying to piece things together. When you thought you'd finally figured it all out, you probably felt you could relax; that is, until one of the characters said something or did something that didn't fit with what you thought was going on. Then you had to start all over again trying to figure things out.

If you paid a lot of money to see the movie, you probably continued this trial-and-error process as long as it took to get things straight. However, if you were home watching television free of charge, you probably switched channels or turned off the set long before you spent a lot of effort. Likewise, if you were at a park viewing an exhibit, reading a brochure, watching a slide program, or listening to a talk, you probably either started to day-dream or just got up and left altogether. Why?

The reason, of course, is that noncaptive audiences won't spend a lot of time and effort to follow a difficult presentation. As our formula suggests, they usually decide early on whether the benefits of paying attention are going to be worth the effort it will take; and a major factor in their estimate of the effort is how well the message is organized. If the ideas being presented follow a logical train of thought, little effort is needed to keep things straight. A movie's plot, the introduction of a talk or audiovisual program, and the title, headings and subheadings of an exhibit or brochure, all help to provide this logic. The result is that the information presented is easier to follow because it can be put into categories, and therefore, not seem like so much. But, as in the example above, if the ideas being presented can't be attached to some organizational framework, they become mere isolated facts. And, as we shall see, humans have definite limits in their ability to keep unorganized information straight in their minds. If too much information builds up out of context, we become hopelessly confused and eventually quit trying to sort it out. With noncaptive audiences, this can happen in a matter of seconds.

Organizing information is like putting a piece of tape or "Velcro" on every idea and fact that you're presenting, and then sticking each one to some larger idea. When we can connect a piece of information to some idea (like a plot or major point) that we already have in our memory, that information seems easier to remember. If we keep the main ideas to a manageable number, we can present an amazing amount of information within them. But what exactly does a "manageable number" mean?

The Magical Number Seven Plus or Minus Two

The answer to the above question is five or less. That is, talks, exhibits, publications, audiovisual programs, etc., that try to present five or fewer main ideas, will be more interesting and more understandable than those which try to communicate more. The number "5" comes from studies on just how much information we humans are capable of handling all at one time. The most famous of these studies was done by George Miller in 1956. His article, "The Magical Number Seven, Plus or Minus Two," demonstrated a principle that still stands: on the average, we humans are capable of making sense out of only 7 ± 2 separate and new ideas at one time. Therefore, it makes sense that the number of main ideas in a presentation of information unfamiliar to an audience ought to be limited to 7 ± 2 . But since some of us can handle only as many as 5 (that is 7 minus 2), the actual number of main points should be five or fewer (see Figure 1-11).

This important guideline applies to all types of presentations whether they be spoken or written, auditory or visual. The only requirements are that: (1) the audience can easily distinguish between the main points and the subordinate information you attach to them, and (2) the number of main points you present doesn't, in fact, exceed five. Intelligently applied, this principle will help make any factual presentation easier to follow, more understandable and more memorable.

In our example, how could Mr. Jones improve the organization of his talk on geology so that his audience could follow him more easily? Besides keeping the number of main points to five or fewer, the key will be that Mr. Jones selects them carefully, based upon the main message or theme he wants to get across to his audience. This leads us to the final quality of interpretation.

Quality 4: Interpretation has a Theme

Interpretation is thematic if it has a major point. As we'll discuss in Chapter 2, a theme is not the same as a topic, even though the two words are often used interchangeably in English and Spanish. Virtually any presentation of ideas can (and should) have both a

topic and a theme. Their major difference is that the topic is merely the subject matter of the presentation, whereas the theme is the main point or message a communicator is trying to convey about that topic. Experienced interpreters will tell you that there are few, if any, concepts more important than "theme" when it comes to selecting and organizing ideas for a presentation. How you can put this important idea to use is the subject we now consider.

The Story's the Thing

In discussing the characteristics that make interpretation different from other ways of communicating, Tilden (1957) said: "The story's the thing." By this he meant that presentations, whether written, spoken or conveyed by electrical devices, should have the qualities of a story. That is, they should have a beginning, an end,



Figure 1-10. Interpretation has a theme. The theme of this old sign is obvious: Only you can prevent forest fires. Apparently, thematic communication is nothing new to natural resource managers. Gifford Pinchot National Forest. (Photo by Sam Ham)

In Interpretation, It Pays to Keep Main Ideas to Five or Fewer

People have definite limits in their ability to make sense out of new information. Research has shown that the sheer amount of information, as well as how it's organized, make a difference in how well we're able to sort it out and use it. Studies have shown that most people are capable of handling about "7 ± 2" different pieces of information at a time. That is, some people can keep as many as nine different ideas or facts straight in their heads, whereas others can only deal with five or fewer. This relationship has less to do with the person's intelligence than it does with the amount of prior experience he or she has with the topic at hand. It stands to reason, then, that since some people in your audiences will have difficulty when the number exceeds five, you should limit the number of main ideas in your presentations to five or fewer. Doing so will make it easier for people in your audience to follow your ideas, and this will increase the likelihood that they'll continue paying attention to you.

Some examples:

If you limit yourself to no more than one second, which group is easier to count, A or B?

A

B

How about this one, A or B?

A

B
++++*****

Notice how organization can make a difference. Even though B has the same amount of information as A, it's easier to sort out because it's organized into two easy-to-see categories. So actually, there are only two pieces of information in B (two groups of four), whereas A contains eight. In communication, good organization reduces effort. Remember, though, that the audience is likely to remember the categories later, but not all of the information contained in them.

Now try this one.

A
TWAFBIPHDIBMCIA

B
TWA FBI PHD IBM CIA

Obviously, if our ideas are organized around things the audience already can relate to, our presentation will be that much easier for them to follow.

Figure 1 -11. The "magical number, seven plus or minus two."

and most of all, a message or moral. The message may be short and simple: "Water pollution is getting to be a serious problem." Or it may be more involved: "Water pollution threatens both our health and our economy, and there is something we can all do about it." As you probably noticed in the two examples, each theme requires its own set of facts, concepts and main points. This is because every theme involves telling a different story than other themes would tell, even if they share the same topic. Although both of the above themes stemmed from the topic "water pollution," the development of each would require a fundamentally different approach. With a theme clearly in mind, a communicator enjoys the luxury of knowing exactly what he/she needs to say, write or show in order to get that message across to the audience. Obviously, a mere topic does not provide that kind of insight.

The trouble with a lot of interpretation is that it has only a topic (for example, "soil erosion," "birds," "ecology," etc.), and since there's almost no limit to the number of themes that one could develop around a given topic, such a presentation proceeds without focus or direction, as if it were trying to say everything and nothing at the same time. Think of the teachers you've had in school. Were there any that you just couldn't seem to take notes from? Were you ever frustrated because you would sit for an hour, listening and understanding what you were hearing, but still unable to write it in your notebook? Did you walk out some days asking yourself "H so what?" after listening to what seemed to be an endless list of unrelated facts? Contrast those teachers with the ones you found it easy to take notes from. What do think accounted for the difference?

Presentations which don't have themes beg the question, "so what?," and unfortunately, most of us have read or listened to information that has left us asking this question. But presentations which do have themes seem to be "going somewhere," and it's easy for us to organize all the facts and supportive details in our minds because we can "stick" them to the theme. This is what the plot does for a movie or story, as we saw previously. And as we noted, when audiences don't know where a presentation is going, they have nothing to "stick" all the facts to, and they become lost in a sea of irrelevance. The theme of a presentation and the five or fewer main ideas used to develop it, provide the "adhesive." In this important respect, themes not only help interpreters select from their wealth of knowledge which few facts and concepts to put into their presentations, but if they reveal in advance what the theme is, and how it will be organized, their audiences also benefit in terms of understanding and comprehension. As Figure 1-12 illustrates, there are many ways to do this, and they vary depending upon the form of your presentation (i.e., whether it's a talk, exhibit, brochure, sign, trail, etc.). For this reason, we'll give separate attention to organizational techniques in each of the chapters on interpretive media.

All presentations ought to be able to stand up to the question, "so what?" Good stories, poems, songs, dramas, and classroom lectures offer an answer. So do good talks, exhibits, brochures, signs and other interpretive media, if they have a message. You may know it by other words: the big picture, the moral to the story, the punchline, the main idea, etc. But all these words mean about the same thing, and regardless of which term you prefer, you

Some Ways to Show Audiences Your Theme and Organization	
Type of Interpretive Presentation	Example Applications
Talks, scripts, etc.	Tell your audience in the introduction what the theme is, what the main points are, and the order in which you will present them. (See Chapters 2 and 3.)
Guided walks, hikes, tours, excursions, etc.	Tell your audience in the introduction what the theme is, what the main points are, and a little about the key stops you will be making. (See Chapters 2 and 5.)
Brochures and publications	Indicate in the title or subtitle what the theme is. Use headings within the text to show the main points, and subheads and paragraphs to show the subordinate information. (See Chapter 2.)
Exhibits	Indicate in the title or subtitle what the theme is. Use headings within the text to show the main points. Break up main points with illustrations, photographs or three dimensional objects. Use subheads, paragraphs or illustrations to show subordinate information. (See Chapters 2 and 8.)
Signs	Indicate in the title or subtitle what the theme is. If appropriate, use headings within the text to show the main points. (Signs usually contain only one or two main ideas.) (See Chapters 2 and 8.)
Self-guided trails	If you're using a brochure, consider an opening paragraph that states the theme of the trail and that briefly tells about some of the most interesting stops. If you're using signs, consider installing an introductory sign at the trailhead which tells what the theme is, and which briefly tells about some of the most interesting stops. (See Chapters 2 and 9.)

Figure 1-12. Techniques for revealing the theme and organization of main points in several kinds of interpretive presentations.

should make sure your presentations have one. In Chapter 2, you'll see how easy this is to do and just how important the placement of the theme can be in an oral, written, visual or audio presentation.

Going back now to Mr. Jones, what might he do to make his talk on geology more organized and thematic? By now the answer is probably obvious: he should select a theme from his topic, decide which five or fewer main ideas he should present in order to get the theme across, and then, at the time of presenting his talk, reveal the theme and main ideas to his audience, so that they can follow him without a lot of effort. Although as we'll see in Chapter 3 there's more to consider in developing a talk, having a theme and an organization to support it is critical to the success of any interpretive device. Recall the segment of Mr. Jones' talk that we looked at earlier:

"Sediment' is just another word for the mess. In a river, the mess comes from small particles of rock that have been rubbed off by the water, and of course, all the soil and other material that washes in from the sides of the river. Over time, the mess piles up, and the whole process is called 'sedimentation.' If you're like me, you're thinking that one of the best things about rivers is that you don't have to dean up after them. Or do you? Where do you suppose all the sediment goes?"

His topic seems to be geology, and more specifically, soil erosion and sedimentation. But what do you think his theme might be? Of course, it's hard to tell from such a small piece of his talk, but Mr. Jones seems to be building up to the idea that we do, in fact, have to "clean up" the mess that sedimentation can cause. His statement about the "soil and other material that washes in from the sides of the river," and the question he poses to his audience at the end of the paragraph, provide a clue to his thinking. Where's he taking us with this question? Perhaps to the realization that the sediment ends up in the river where it fouls and contaminates our drinking water, spoils our fisheries, and potentially blocks shipping channels. If so, Mr. Jones' theme is easy to see. He's trying to tell his audience that *soil erosion not only threatens agriculture, it threatens our water, fisheries and major shipping corridors.*

If this were Mr. Jones' theme, what five or fewer main ideas might he want to include in this talk? What other information would he want to include under each of these points? This would depend on Mr. Jones' interests, knowledge and beliefs about the topic he's dealing with, wouldn't it? If three different people were independently developing this talk, they'd probably come up with three different ways to do it, and all three would probably be different from Mr. Jones' approach. For the sake of example, however, let's assume Mr. Jones settled on the outline of ideas in Figure 1-13.

What's important to notice about Mr. Jones' outline is that he obviously selected his main points based on the theme he wanted to leave with his audience. Having done this, he then asked himself what subordinate information (facts, concepts, anecdotes, analogies, etc.) he'd need to include under each main point in order to get it across. His approach makes a lot of sense because it capitalizes

Outline of Mr. Jones' Talk on Sedimentation and Erosion

Topic: Soil erosion and sedimentation

Theme: Soil erosion not only threatens agriculture, it threatens our water, fisheries, and major shipping corridors.

I. Soil erosion and sedimentation are natural processes that humans can affect.

A. Soil erosion

1. How it happens and what causes it
2. Where the run-off goes

B. Sedimentation

1. Sand paper analogy
2. Rubbing makes a mess.
3. The mess piles up

II. Soil erosion affects agriculture.

A. Story about my grandfather's farm

1. Didn't terrace, didn't seed vulnerable areas
2. In two heavy rain years, lost top soil, no crops
3. Went broke, lost his farm
4. My father grew up poor and under fed

B. Our future depends on agriculture

III. Sedimentation affects our drinking water.

A. Run-off carries dirt and contaminants

1. Dirties the color of our water
2. Chemicals and bacteria in the run-off poison our water
 - a. Story about the Lopez family
 - b. Story about the Anderson's baby

B. Statistics about diseases and deaths due to water contamination

IV. Sedimentation affects fish habitat.

A. Fish have to "breathe" clean water

B. Fish eggs need clean water to develop and hatch

C. Death rates and survival of fingerlings in certain rivers

1. Clean rivers
2. Dirty rivers

D. Importance of fish in many people's diets and economy

V. Sedimentation affects shipping canals.

A. How sedimentation builds up in the channel

1. The Panama Canal problem
2. The Columbia and Mississippi Rivers in the United States

B. Costs of dredging are enormous

Figure 1-13. Example of the outline of a thematic talk.

on the fact that people learn big ideas (like themes) by combining smaller ideas (like main points and subordinate information).

Little Meanings Add Up to Big Ones

Think of the last time you were standing around with a group of friends telling jokes. Probably, one person's joke reminded someone else of a joke, and that joke reminded someone else of another joke, etc., until finally, you were reminded of a joke that you decided you'd tell the others. Of course, before you could tell the joke (that is, before you could tell it well), you had to reconstruct it in your mind and silently rehearse it.

Think about how you did this. If you're like most people, you probably thought first of the punchline. If you couldn't remember the punchline, you probably couldn't tell the joke. Why? Because everything you'd say in recounting the joke would have the single purpose of building up to the punchline. If you didn't know the punchline, you didn't know where you heading.

Let's say that you were able to recall the punchline. What did you think of next? Obviously, you began to think about the individual pieces of information that you'd have to give so, at the end of the joke, the people would see (and hopefully appreciate) the humor in the story. It's almost always important that you remember to tell all of the things that lead up to the punchline, isn't it? Have you ever gotten to the punchline of a joke only to realize that you'd earlier left out a crucial piece of information? Have you ever had to say: "Oh, I forgot to tell you that right as you were about to surprise your audience with the punchline?"

Of course, as any good joke teller knows, the order or sequence in which you give the individual pieces of information can also be critical. How many times have you been in the middle of telling a joke and realized that you'd revealed an important piece of information too soon? This mistake usually causes the joke teller to say something clever like, "Oh, I shouldn't have told you that yet!" or "Pretend I didn't say that, OK?" By then, of course, it doesn't much matter; the joke has been spoiled.

If you've been in situations like these, then you already understand why thematic communication is so important, and you understand very well just how little meanings add up to bigger meanings. There's really not much difference between the way you remembered your joke and the way you should plan an interpretive talk, script, or other presentation which will be heard by an audience. In most presentations, of course, you won't want to wait until the end to reveal the "so what?," as you do when telling a joke. In fact, as we'll see in Chapter 2, thematic interpretation is usually most effective when the audience knows at the very beginning what the theme and five or fewer main ideas are. (An exception might be presentations on controversial topics.) We'll also see that how we apply this idea in preparing an oral presentation is different from the way we apply it in written presentations.

In our joke example, the punchline can be thought of as the theme, because when it's heard by the audience, it answers the "so what?" question with respect to all of the information that preceded it. That is, after hearing the punchline the audience will understand immediately why you said everything that you said in telling the joke.

If you gave them a lot of information that didn't relate to the punchline, they probably didn't laugh at the joke. This is because they tried to connect everything you said to the punchline, and any information which didn't relate served only to confuse them. It's our nature to try to connect little pieces of information to some larger idea, and the audiences that you'll encounter everyday in your work are no different. They'll try to connect every piece of information you give them to a theme. In other words, they'll always be asking themselves, "so what?" even if the question is posed subconsciously.

Going back to the joke, you've probably already noticed that the information you had to give the people before revealing the punchline is nothing more than the five or fewer main ideas we've been talking about in this chapter. With the theme (punchline) in mind, the interpreter selects the main ideas that he/she considers most important to get the theme across to the audience. Remembering our upper limit his audience's attention to the problems of five, it's important that we include in these main ideas those facts and concepts that we think are crucial to understanding the theme. Underneath these ideas, we can include whatever other details (including facts, concepts, comparisons, analogies, etc.) we think will add color, interest, and meaning to the story. But we should do this with full knowledge that our audience is not likely to remember much about them later. Usually, however, they'll remember the theme and the five or fewer main ideas used to support it. We'll return to this idea in Chapter 2.

Finally, as our example illustrated, the order in which we present our ideas can determine whether the audience will understand the theme. With some themes, the sequence may not be particularly important. But with others, the train of thought you're trying to establish en route to the theme may depend on a logical sequence. Most jokes are like this, as are interpretive strategies which show cause and-effect, or which present concepts that build upon one another. Mr. Jones is presenting such a talk. Before his audience can understand his theme, they must have a pretty clear idea of: (1) what soil erosion and sedimentation are, and how they're related; (2) how soil erosion affects agriculture; (3) how sediment affects drinking water; (4) how sediment affects fish habitat; and (5) how sediment affects shipping canals. The order in which these main ideas are presented here, and in Figure 1-13, makes sense because before Mr. Jones' audience can appreciate the effects that erosion and sedimentation have on agriculture, drinking water, fish habitat and transportation, they must first know what he means by these terms, and how erosion accelerates sedimentation. These ideas presented, Mr. Jones can then call that erosion and rapid sedimentation can cause. On the face of things, the order in which he presents these four problems doesn't really matter, but since "threats to agriculture" appears first in his theme statement, followed by "drinking water, fisheries and major shipping corridors," it makes sense that he'd also present the problems in that order.

Glossary terms : analogy, bridge, captive audience, comparison, example, interpretation, interpretive approach, labeling, magical 7 ± 2 , meaningful, metaphor, noncaptive audience, personal, relevant, selective attention, self- referencing, shadowing, theme, topic.

CASE STUDY**Good Interpretation's
Worth Money:
Financing Programs
with Donation Boxes**

Todd Cullings, Lead Forest Interpreter
Mount St. Helens National Volcanic Monument,
Amboy, Washington



Your budget's been cut. You don't have enough funds to meet visitor needs. These are common problems that all managers face sometime during their career. I faced these same problems one season when my budget was reduced by more than half. The impact of the budget cuts was devastating and I needed creative solutions to serve the 650,000 visitors who travel every summer to the field interpretive sites. We had to conduct fewer programs per week, but it was important to us to still maintain the quality and diversity of our programs.

One way to raise money is through partnerships. Chief Naturalist Jim Gale, Naturalist Ralph Naess and I sought out partners and successfully established \$18,500 in partnership funding. We then looked at other possible funding sources. As managers, we didn't think twice about establishing donation boxes in visitor centers. Although we were uncomfortable with the idea of establishing donation boxes at live interpretive program sites, we believed this might be the solution we needed. We felt strongly that visitors would support quality interpretive programming at Mount St. Helens.

We approached the Monument's Public Service Assistant, Reed Gardner, regarding the legality of donation boxes and our concern about being able to apply the funds where they were needed most. He informed us that the Forest Service Manual permitted the collection and expenditure of donations. We quickly developed the following message for the donation boxes: "Your contributions support interpretive services at Mount St. Helens." The message was placed next to the Forest Service shield to identify the agency and beneficiary of the contributions. We then developed criteria for the fabrication of the boxes. We determined that the most important criteria were that they be secure yet transparent for visitors to see what had been contributed. They also needed to be compact for easy installation and transport, and mounted on an interpretive/managerial message which would be there when the boxes were removed. We decided on a strong plexiglass design and had five boxes and their mountings made for \$103 per set.

One donation box was set up at Windy Ridge viewpoint, which receives an annual visitation of approximately 320,000 visitors. Interpretive programs about the May 18, 1980, eruption and current biological events are conducted in a 150-seat amphitheater. Initially, most naturalists were uncomfortable about asking visitors to donate to the interpretive program; most of us felt this was a service that visitors' tax dollars already should have paid for. As their supervisor, I felt uncomfortable pushing them on this issue, so during the first two weeks of operation, we didn't promote the donation box program. I was disappointed with the amount of funds being donated (\$35 per day), because I felt that we were offering excellent interpretive programs.

The Forest Service was concerned that naturalists would sound as if they were begging for money, and they didn't want visitors to feel that they were obligated to donate to the program. I felt that it was critical to develop sincere, service-oriented messages about the donation boxes. That's when I decided to enlist the help of a veteran naturalist who I knew dearly loved the interpretive program at Mount St. Helens. As an experiment, I instructed him to present the following message at the end of each of his programs: "Due to budget constraints, we are conducting twenty-nine less interpretive programs per week, but we feel that we are providing you (the visitor) with an important service. If you feel that this service is important to you and would like to see more interpretive programs offered for you and future visitors, you can help support the interpretive program." (I asked the naturalist just to point to the donation box without mentioning the word.) That evening, the naturalist returned with the donation box stuffed full. He had conducted three programs and received \$119.51 in donations. The cost of his salary to the Forest Service was \$67.20.

I instructed each naturalist how to present the donation message in a positive, heartfelt manner, and then carefully worked with them to develop smooth transitions from the conclusions of their interpretive programs to the donation box message. Some naturalists even incorporated the donation message into the theme of their program. Within a week, the single donation box was being stuffed so full that visitors had difficulty pushing money into the slot on the top of the box! A second donation box was set up on the opposite side of the amphitheater.

Due to the success of the donation box program, we were able to hire two naturalists solely from the money generated. Creative energy and a \$206 investment generated over \$11,000 in less than three months. The interpretive program was self-supportive (operating without any government funding) for an entire month. Why was this program so successful? Because visitors gladly donated \$5, \$10, \$20, and even \$50 bills for quality interpretive services. And we have a quality interpretive program because we diligently practice the basic principles of thematic interpretation. Does good interpretation pay? We think so!

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CHAPTER TWO



PRACTICING THEMATIC INTERPRETATION

As we saw in Chapter 1, when interpretation has a theme it has a **message**. We call this thematic interpretation. When our communication isn't thematic, it seems unorganized, difficult to follow, and less meaningful to our audiences. This is simply because they can't easily see where the communication is going, and they don't know how to connect all the information they're receiving. But when the information we present is thematic—that is, when it's all related to some key idea or central message—it becomes easier to follow and more meaningful to people.

Most people practice thematic communication every day. Think of what you do when you call someone on the telephone. Usually, you say hello and then tell the other person why you're calling. Generally, the reason you give for calling will carry some kind of message or theme. For example, you might say, "I'm calling because I'm going to be near your office next week, and I'd like to see you if you'll be available." In another call you might say, "I'm calling just to say thanks for the nice birthday card you sent me." When we give statements like these at the beginning of the conversation, they help the listener connect all the information that follows to our main message. Rarely do we make a call and then just start talking—giving information, facts, etc.—without first saying something that helps the person listening put it all into perspective. In other words, we naturally assume the listener will be confused if he or she can't connect the information we're giving to some central message. So practicing thematic communication is something most of us do every day, more or less intuitively.

Although preparing an oral or written presentation differs from making a telephone call, the notion that we should try to connect the information with a theme is the same. Research has shown that when audiences know the theme in advance, not only are they more apt to pay attention to the rest of the presentation, but they'll remember more of it later. Interpreters who think thematically therefore have a distinct advantage over those who don't. They can more easily decide which facts and supportive information to include in their written and oral presentations, and even more important, their presentations will be more interesting and memorable to their audiences. How to think thematically is the subject of this chapter.

Topics Versus Themes

In Chapter 1, we saw that even though a lot of people use the words topic and theme interchangeably, they're quite different. The topic of a presentation (whether written or oral) is simply its subject matter, whereas the theme of the presentation is the specific message about the subject we want to communicate to the audience. In other words, it's the story we've decided to tell. As Figure 2-1 illustrates, an interpreter could select any number of themes from a single topic. But since any one theme constitutes a different story, the interpreter will find that different kinds of information will be needed to develop different themes. For example, Figure 2-1 lists eight different themes that an interpreter might develop regarding the single topic "birds." Look at the first two themes listed. The first one says: "Birds are a very interesting group of animals because of their special adaptations for flight." The second theme is: "Native birds in this country are rapidly disappearing." Even though both themes have something to do with the topic "birds," they focus on very different stories, and therefore would require very different kinds of information.

You could probably add to the list of themes in Figure 2-1. Think of what you'd like other people to know about "birds" or a particular species of bird that lives near you. Is there some message about birds you think is important for everyone to hear? How many ways can you complete the following sentence?

"When it comes to birds, I think it's important for people to understand that..."

Try it. When you're finished filling in the sentence, you'll have written a theme. Try writing themes for some of the other topics listed in Figure 2-1. Remember to write them in complete sentences. After you've written each theme, ask your self what kinds of information you'd need to present in order to get the message across to an audience. You'll discover that once you have a theme in mind it's surprisingly easy to select the needed information-much easier than if you had only a topic in mind when you started. At this point, you'd be able to outline the presentation (whether it be a talk, an exhibit, a publication or an audiovisual script) in a relatively short period of time. In communication, things always seem clearer when you know ahead of time what you want to say.

How to Write a Theme Statement

Interpreters who are just beginning to think thematically sometimes have trouble writing themes, even though they

Thinking in Terms of Themes – Not Topics

The *topic* of an oral or written presentation isn't the same as its theme. The topic is simply the subject matter of the presentation. The theme, on the other hand, is the principal message about the subject that you want to get across to your audience. The theme always answers the question, "so what?" with respect to the topic.

Look at the following list of topics. Notice that each topic is a sentence *fragment*. It tells the *subject matter*. Now look at the list of themes. Even though each theme relates to the topic "birds," it suggests a very different approach from all the other themes. That's because any topic can have many themes depending on what the interpreter wants to communicate to the audience.

Examples of Topics

- | | |
|------------------------------------|------------------------------------|
| 1. Birds | 6. Nocturnal snakes |
| 2. The forest | 7. Rivers |
| 3. Volcanoes | 8. Erosion |
| 4. Competition between plants | 9. The importance of tree planting |
| 5. Animals that live in the desert | 10. Maintaining water quality |

Examples of Themes for the Topic "Birds"

Obviously, it would be possible to develop any number of themes for each topic. The following eight themes, for example, correspond to the first topic listed above, "Birds." Notice that the themes are expressed in *complete* sentences. They each have a subject, a verb, and a period at the end.

1. Birds are a very interesting group of animals because of their special adaptations for flight.
2. Native birds in this country are rapidly disappearing.
3. Hummingbirds are a lot like helicopters. Their special wings allow them to fly backwards or hover in the air.
4. Cattle egrets play an extremely important role in rural areas.
5. Eagles and falcons help humans.
6. The turkey vulture fulfills the role of "garbage collector," which is an extremely important, though undervalued, ecological function.
7. Studying how birds fly led to the invention of early airplanes.
8. Because they're rarely seen, nocturnal birds are the subject of many superstitions and potentially threatening misconceptions.

Figure 2-1. Examples of topics and themes.

understand what a theme is. Usually, the problem is that they forget to write their themes in complete sentences. Sentence fragments (e.g., "adaptations for flight" or "native birds that are rapidly disappearing") express topics, not themes. They describe the subject matter of a presentation, but not the central message that the interpreter wants to communicate to the audience. Therefore, they provide few clues to the interpreter about what kinds of information to include, or how it should be organized. Such statements are good in that they help the interpreter to narrow the topic. But they fall short of answering the question "so what?" with respect to the topic.

Figure 2-2 presents three easy steps for writing theme statements. To help you see the difference between topics and themes, you're first asked to describe the topic in general terms (Step 1), and then to say it in more specific terms (Step 2). Sometimes, new interpreters think that the specific topic in Step 2 is a theme statement. But as Step 3 shows, the theme needs to be written in the form of a complete sentence. In order to fill in the sentence in Step 3, you'll have to write a complete sentence which expresses the message you want to get across to your audience. Notice how much clearer and more informative your theme statement is Step 3 is, compared to the comparatively vague descriptions of the topic in Steps 1 and 2. The theme tells what's important about the topic, and having this clearly in mind before you start to develop the presentation will make your job much easier and your communication more effective. The best interpreters will tell you that as you get better at writing theme statements, you'll become a better communicator. As an aid to beginners, additional examples of themes are listed in Figure 2-3.

Why It Helps to Build Your Presentation Around A Theme

In Chapter 1, we emphasized that thinking thematically helps a communicator in two important ways. First, with a theme in mind, you'll know almost immediately what kinds of information will be needed to get the thee across to the audience, including the five or fewer main ideas and all the supporting information. This gives you a big advantage because it also helps you see what *not* to include. In this way, starting with a clearly defined theme simplifies not only your planning and design of a presentation, but also the research and information seeking you'll have to do. Put differently, thinking thematically focuses your attention and therefore reduces your work.

The second advantage is that most audiences find thematic communication easier to comprehend and more interesting than communication which isn't unified by a clear theme. In Chapter 1, we noted that when audiences know in advance what your theme is going to be, they're able to see the relevance of the rest of the information you give them. Educational psychologists like David Ausubel (1960) call this an "advance organizer" because when we know in advance where a presentation is going, it's relatively easy for us to connect other information to it. This makes it easier for us to keep everything sorted out. So themes not only help interpreters by focusing their attention on the few facts and concepts that will be needed to present the theme,

In Three Steps, Anybody Can Write a Theme

Sometimes interpreters have difficulty writing good themes simply because they aren't yet used to thinking thematically. Expressing a theme is easy, however, if you remember the difference between the topic (subject matter) of the presentation and the theme (the principal message you want to communicate to your audience about the topic). As a communicator your task is to relate *themes* to your audience, not just information about the topic.

Steps in Theme Writing—An Example

1. Select your general topic (for example, "our soil") and use it to complete the following sentence:

"Generally, my presentation (talk, exhibit, etc.) is about
our soil ."
 (put your general topic here)

2. State your topic in more specific terms and complete the following sentence:

"Specifically, I want to tell my audience about
the importance of conserving our soil ."
 (put your specific topic here)

3. Now, express your theme by completing the following sentence:

"After hearing my presentation (or reading my exhibit, etc.), I want my audience to understand that it's necessary to conserve our soil in order to increase our crops and to protect the quality of our water ."
 (put your theme here)

Figure 202. An example of thinking thematically.

What is a Theme

A theme is the central or key idea of any presentation. When a good presentation has been completed, the audience should be able to summarize it in one sentence. This sentence would be the theme. Development of a theme provides organizational structure and clarity of understanding. Once the theme of a presentation has been decided, everything else usually falls into place. Theme should:

1. Be stated as short, simple, complete sentences.
2. Contain only one idea.
3. Reveal the overall purpose of the presentation.
4. Be specific.
5. Be interestingly worded (if possible using active verbs).

Examples of Themes

1. Our children depend on us to take care of their natural resources.
2. Preserving biodiversity is like having a life insurance policy.
3. Three kinds of frogs live in this forest, and knowing which is which could save your life.
4. Some species are capable of adjusting their behavior to conserve body heat.
5. All life is dependent on the sun.
6. Energy is found in various forms, some very surprising.
7. Energy flows in only one direction, and is neither created nor destroyed.
8. Blue grass makes our water cleaner.
9. Everything is on its way to becoming something else.
10. Careless spelunkers can upset a delicate balance of life.
11. Exploring caves is a sensuous experience.
12. Everything in life is related to everything else.
13. The mosquito plays an important role in nature.
14. Underneath the ground is a fantastic plumbing system.
15. Mosquitos are fascinating insects once you get to know them.
16. Three main factors determine how geysers work.
17. The grizzly bear is a doomed species.
18. Lincoln's life was often marred by tragedy.
19. Charles Manson is a lunatic, but a brilliant one.
20. Much of the literature about the Mayan culture is incorrect.
21. To understand the Mayans, one must understand their fascination with the stars.
22. Robert E. Lee was a famous soldier, but his personal life is poorly understood.
23. Knowing a foreigner's culture is the fastest road to friendship.
24. A tiny rare plant in Mexico saved the U.S. corn crop.
- Baseball is America's greatest gift to the world.

Figure 2-3. More Examples of themes. (Adapted in part from Lewis 1983)

but they tell their audiences in advance what the theme is, most people will find the presentation easier to follow and comprehend.

Experiments by Thorndyke (1977) show why thinking thematically makes such a difference, and how a smart communicator can take advantage of it. Thorndyke developed four different versions of the same story and presented them to different people. The four versions were all basically the same with one key difference: one version of the story told the theme in the beginning; another version gave the theme just at the end; a third version told the theme in the middle of the story; and in the final version, no mention of the theme was made at all. After presenting the different versions of the story to many different people, Thorndyke gave them a test to see how much of the story they comprehended and how much they remembered. You probably won't be surprised to learn that the version people comprehended and remembered best was the first one, the one in which the theme was given at the beginning. The next best version was the one in which the theme was given at the end. (Like the punchline of a joke, hearing the theme at the end naturally causes us to try to connect everything we've just heard to it. However, as Thorndyke's results suggest, we may forget a lot that we wouldn't have forgotten if we'd known the theme in advance.)

The least comprehended and remembered of the four versions in Thorndyke's experiments was the one in which no theme was ever given. Thorndyke wondered just how bad the no-theme story was, so he did an interesting follow-up experiment. First, he created a new version of the story—this time by randomly ordering the sentences of the story so that it was completely jumbled and mixed up. Next, he presented the jumbled story to some new people and then gave them the same tests to determine what they comprehended and remembered. What Thorndyke found says something important about thinking thematically: He discovered that the jumbled version was no less comprehensible nor any less memorable than the no-theme version. In other words, even though its sentences were presented in a normal sequence, *the version without a theme still was no more easily understood or recalled than a completely jumbled story comprised of unrelated sentences.*

People Remember Themes— They Forget Facts

Another important lesson from Thorndyke's experiments has to do with what audiences remember—and what they forget—after hearing or reading a presentation. When he tested to find out what people remembered from his stories, he discovered that they tended to recall the plot structure and the main ideas, but that they tended to forget the subordinate facts and details. This is typical of how humans learn, and it's why we stress thematic communication. That is, most audiences will remember the theme, along with the five or fewer main ideas used to present it, but they'll forget most of the rest (recall the "Magical Number 7 ± 2 " from Chapter 1). For this reason, in interpretation it's important that everyone in the audience comprehends the theme. And since some people may not pay attention for very long, they need to learn the theme *quickly*—before they switch

attention or leave. If you practice this idea, you can be fairly sure that everyone in your audience will get the same message regardless of how much time they actually invest reading, viewing or listening to your presentation. Of course, someone who pays attention longer will get more details and a fuller explanation of your theme, but with time, most people will forget the facts and remember only the theme.

So having a theme, and then sharing that theme with your audience at the very beginning of a written or oral presentation, makes a lot of sense. How it applies to this important idea is the topic we take up next.

Being Thematic in Oral and Written Presentations

Since audiences listen differently than they read, techniques for communicating thematically depend on whether you're preparing a presentation that audiences will hear (such as a talk, a tour, a script for an audiovisual program, etc.) or one that they'll read (such as an exhibit, sign, brochure, etc.). As we'll see shortly, the strategy in both cases is to make sure that our audiences learn the theme as quickly as possible, but how we accomplish this in **oral presentations** isn't the same as our approach in **written presentations**. Let's consider oral presentations first.

Thematic Oral Presentations

Oral presentations are those in which spoken words are heard by an audience. They include talks, demonstrations, tours, guided walks and hikes, narrated audio recordings, and soundtracks for slide and video programs. What makes them different from most other kinds of presentations is that *the interpreter controls the order* in which the audience receives ideas and information. This is fundamentally different than an exhibit for example, because in an exhibit people can start reading anywhere they choose, and they can finish reading anywhere they choose. But in an oral presentation, it's the interpreter, and not the audience, who controls the sequence. In this important respect oral presentations are **linear** because they proceed in a definitive sequence which is defined by the person speaking.

Being thematic in an oral presentation is easy, whether it's a personal presentation like a talk or tour or a non-personal presentation such as a narration recorded on tape. All that's necessary is that we put into practice what we learned from Thorndyke's (1997) study. Recalling that he found the best stories were those in which the theme was given at the beginning, and that the second best were those in which the theme was given at the end, imagine how much better any oral presentation would be if the interpreter told the audience the theme in *both* places—that is, at the beginning and again at the end. Although we'll return to his idea in each of the chapters in Part Two (Conducted Activities), the approach will be basically the same regardless of the kind of oral presentation you have to prepare. Simply put:

In oral presentations, you should reveal the theme to your audience at the beginning of the presentation, and then reinforce it at the end.

Thematic Written Presentations

Written presentations are those in which *printed or written words are read* by an audience. They include exhibits, signs, most brochures, and just about any presentation that requires an audience to read. With the possible exception of short stories, novels and other sequential book-length manuscripts (topics we won't cover in this book), it's the *audience*, and not the writer who controls the order in which the information is read. In this sense, written presentations are **nonlinear**. In an exhibit, for example, there's no definite sequence the audience must follow in looking at it. Viewers can start reading anywhere they wish, and they can decide to read some things while choosing to ignore other parts of the exhibit. This makes it more difficult for an interpreter to establish a logical sequence of ideas as he or she can in an oral presentation. A written presentation requires a different approach because all people probably won't read the text in the same order, and research has shown that most of them probably will read only a fraction of the information that's presented. As we'll see in Chapter 8, one of the most common errors interpreters make in preparing the text for an exhibit is that they try to write a linear, sequential presentation of ideas. But exhibits, signs and most brochures don't lend themselves to that approach because the interpreter can't control the order in which different parts of the message will be read.

You may already be thinking that there's one major exception—*the title*. In most cultures, people will predictably read the title of a written presentation first. Although there are many possible reasons for this, one thing is clear: if you give an audience the theme in the title of a written presentation, virtually everyone is going to get the main message regardless of how much time they might spend reading the rest of it. This is a powerful technique, and it's easy to apply for anyone who understands the difference between a theme and a topic. Most titles (especially in exhibits, signs and brochures) give only the topic—for example:

"Agriculture"

"Soil Erosion"

"Benefits of Trees"

"Medicinal Plants"

But when a title goes beyond the topic to communicate the theme, it ensures that the central idea of the exhibit sign, or brochure will be read by people, even if they read nothing else. In addition, titles based on themes are often more interesting to audiences because they express a complete idea rather than just a topic. For example, which titles do you think are more interesting, those above that are based on topics, or those following that are based on themes?

"Our Lives Depend on Agriculture"

"We Are Losing Our Soil"

"Trees Help Us"

"This Forest Is Your Pharmacy"

Although we'll return to this idea in Chapter 8 (exhibits), the approach is basically the same for almost any written presentation:

In written presentations, you should reveal your theme in the title.

Glossary terms: linear, message, nonlinear, oral presentation, theme, topic, written presentation.

Case Study

Thematic Interpretation— The Price Is Right!

Jim Gale, Chief of Interpretation
Mount St. Helens National Volcanic Monument
Gifford Pinchot National Forest, Vancouver,
Washington



Meaningful interpretation doesn't cost anything; it only requires a theme.

At Mount St. Helens National Volcanic Monument we've found that the interpretive programs people enjoy most are thematic—that is, they have something clear and important to say to our audiences. Whether we're communicating orally or with exhibits and signs, everything we do is guided by a single, simple objective: to communicate a theme as forcefully as possible. In 1984, we adopted a policy that requires all interpretive efforts to be thematic, conveying a complete, identifiable message that is easily understood by the visitor. For our seasonal interpreters, this requires an annual intensive training program built squarely on a thematic approach. We start with an understanding of how to communicate to a noncaptive audience, combine it with research on how the human brain works, and help our interpreters apply this knowledge in designing their own programs. Lectures and field trips led by scientists and indigenous people are then held to provide the subject matter expertise the interpreters will need. This formula has worked well for us over the past eight years and our interpreters are lauded as being among the best in the country. We believe our thematic approach makes the difference.

During the summer, each interpreter develops a theme with three to five supporting concepts for each program. Programs include talks, walks, hikes, car caravans and evening programs. We provide an average of six talks, and six walks daily, with an additional campfire program, two hikes and a car caravan on weekends. Complementing our conducted activities are more than fifty interpretive signs, dozens of brochures, thirty-eight information boards, two videos and an auto cassette tour. Every one of these has been developed using the thematic approach presented in this book, and although we continually make changes and improvements we are immensely satisfied with the results. Over 90,000 people attended our live programs in the summer of 1992, and we have been over whelmed by the number of verbal and written compliments we have received about the quality of our interpretive programs. We believe this is due to the fact that they leave each of our programs not only with the satisfaction of having had a fun time, but with something far more enduring—a theme.

Enduring messages are organized and conveyed thematically using the interpretive approach outlined in the first chapter of this book. After eight years, it's clear that the interpreters at Mount St. Helens have truly internalized this philosophy, to only by practicing it, but by teaching and mentoring each other in the techniques of thematic interpretation. Through this coaching process, interpreters have their activities evaluated throughout the summer, with priority given to how well the theme was communicated to the audience. Video recording of interpretive programs is also used to allow interpreters to see themselves in action and to determine for themselves how well their audiences are grasping their themes.

Since we began in 1984, we have grown into a strong and innovative interpretive team bonded by our focus on the thematic approach. As one who has been with the team since its inception, I am absolutely convinced that what we are doing at Mount St. Helens is applicable everywhere there are interpreters. What ever stories you interpret, no matter what kind of ecosystem or technical subject matter you must explain, no matter where you are or how big or small your program is, you should be practicing thematic interpretation. Artfully carried out, the results are undeniably positive. And the best part is that a good theme doesn't cost a penny.

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APPENDIX A

GLOSSARY OF KEY TERMS

Analogy: A bridging technique that shows many similarities between an object of interest and something else that's already familiar to an audience.

Bridge: A figurative description of communication techniques that are used to make new information more meaningful by connecting it to things that are already familiar to an audience.

Captive audience: Audiences that feel they must or should pay attention to a presentation even if it bores them.

Comparison: A bridging technique that show a few of the main similarities and/or differences between an object of interest and something else that can be related to it. The result is that one or both of the objects becomes clearer in relation to the other.

Example: A bridging technique that quickly refers to something that is like or in some way represents an object of interest.

Interpretation: A communication process in which one person translates a language he/she speaks very well into terms and ideas that other people can understand. It is an educational method that aims to reveal meanings and relationships through the use of original objects, by firsthand experience, and by illustrative media, rather than simply to communicate factual information.

Interpretive approach: A way of communicating that strives to make information enjoyable, relevant, organized and thematic.

Labeling: A communication technique in which new information is presented to people in the context of some social group they either associate themselves with or disassociate themselves from.

Linear: Sequential. Linear presentations include talks, guided tours, scripts for audiovisual programs and other presentations that proceed in a pre-planned order from a definite beginning to a definite ending.

Magical 7 ± 2 : The maximum number of separate ideas that most people can deal with simultaneously. Since many of us can handle only seven minus two, five is generally considered the maximum number of main ideas that should be presented in a communication program.

Meaningful: Information is meaningful when we can understand it in terms of something we already know about.

Message: The theme of a presentation.

Metaphor: A phrase that describes something with a work or words usually used to describe a very different thing.

Noncaptive audience: Audiences that pay attention to a presentation only if they find it gratifying to do so.

Nonlinear: Nonsequential. Exhibits and short publications such as brochures are examples of non-linear presentations. The reader, not the designer, decides the order in which different parts of the message will be read, and whether they will be read at all. Nonlinear communication has no definite sequence and no definite ending.

Oral presentation: Illustrated and non-illustrated talks, guided tours, narrated audiovisual programs and other presentations that rely on the spoken word. Oral presentations are linear.

Personal: A quality that information has when it pertains to something we care strongly about.

Relevant: A quality that information has when we can understand it in terms of something we already know and care about.

Selective attention: The tendency of people to pay attention to those things they find immediately gratifying.

Self-referencing: A communication technique in which new information is presented to people as they are asked to think about their own experiences related to it.

Shadowing: An experimental technique used in studies on the importance of personal information to human beings.

Theme: The central message about a topic of interest that a communicator wants to get across to an audience. It's the answer to the question "so what?"

Topic: The subject matter of a presentation.

Written presentation: Exhibits, brochures and most short publications. Most written presentations are nonlinear.