

chapter

four

THE

MAJOR

TRIAD

One of the most dramatic and revolutionary of Freud's achievements was his elaborate analysis of the role of the unconscious. Those who are familiar with his writings will recall how much time he spent trying to convince people that such events as a slip of the lip or pen, as well as dreams, were all evidence of hidden forces in man over which he exercised no conscious control. This revelation of an unconscious world led to further psychological explorations which introduced a new dimension into human behavior. No longer was man considered to be entirely rational, ruled by logic. No longer could he be conceived of as an elegantly tooled machine run from the higher centers of the brain. Man became much less predictable but much more interesting when he was viewed as a battleground of conflicting drives and emotions, many of them hidden. After Freud it

became common to think of man as a being who existed on a number of different levels at once.

Freud also relied heavily on the communicative significance of man's acts rather than his words. He distrusted the spoken word, and a good deal of his thinking was based on the assumption that words hid much more than they revealed. He depended more on communication in the larger context; on the symbols of dreams and the meaning of insignificant events which would ordinarily go unnoticed and were therefore not subject to the censors that we all have within us. Despite his massive discoveries, what Freud really lacked was a theory of communication. Today, years after the major part of his theory was laid down, psychoanalysis still lacks a systematic way of describing the events of communication which occur between doctor and patient.

Revolutionary as Freud's conception of the unconscious was, his view that it is inaccessible to direct examination was a stumbling block to further systematic analysis for a time. Among those who did not agree with the Freudian scheme was the late Washington psychiatrist, Harry Stack Sullivan. Sullivan regarded the unconscious as the [dissociated facets] of the personality that are out of the person's awareness. His formulations were of great value to the social scientist because they cleared the way for further research. Sullivan believed that man has an ideal self which he approves of though it is not realized in everyday life. His workaday, actual, operating self is a composite of behavior patterns which Sullivan called dynamisms. The dynamisms are ways of integrating with other human beings. A person is aware of some of them, while others are dissociated and therefore hidden to the individual but revealed to the world. This notion that there are significant portions of the personality that exist out of one's own awareness but which are there for everyone else to see may seem frightening. The

point, however, is a crucial one and will grow in importance as men begin to grasp its implications. What Sullivan said, in effect, was that the [unconscious is not hidden to anyone except the individual who hides from himself those parts which persons significant to him in his early life have disapproved. While they are dissociated or hidden from himself, they are there for trained observers to see and they can therefore be analyzed.

Sullivan's contribution was a great one. It helped to dispel a good deal of psychoanalytic mumbo jumbo, and it opened up wide horizons for research into the interpersonal process.

Both Freud and Sullivan drew heavily on the works of anthropologists—Freud indirectly, using anthropology to support his views, Sullivan in a more immediate way. Sullivan worked actively with the greatest descriptive linguist of our time, Edward Sapir, the man who laid the foundations for modern descriptive linguistics. While the psychologists were looking to anthropology to learn more about man as a social being, the anthropologists were using the theories of psychoanalysis in their attempts to formulate more satisfying theories of culture. One of the most significant of these borrowed theories was that culture existed on two levels: overt culture, which is visible and easily described, and covert culture, which is not visible and presents difficulties even to the trained observer. The iceberg analogy was commonly used when teaching this theory to students and laymen alike. When it soon turned out that this theory was inadequate to describe the cultural picture, anthropologists like Kluckhohn started speaking of explicit and implicit culture. Explicit culture, such things as law, was what people talk about and can be specific about. Implicit culture, such as feelings about success, was what they took for granted or what existed on the fringes of awareness.

Much has been written about the implicit assumptions

of various cultures, including our own. This approach is a good one and has been responsible for a number of valuable insights. However, the level of abstraction in the implicit-explicit culture concept is so high that it is impossible to build on it easily. The discovery that one of the implicit assumptions of American life is that hard work will be rewarded may explain a good deal about behavior in this country, but it is difficult to combine with other similar insights to form a broader generalization of American life. Like many other abstractions about culture, this one leaves us with the feeling, "Where do we go from here?" Despite its level of abstraction, the view that culture comprises some aspects that can be talked about and some that cannot remains a valuable one. It also provides another example of how we have come to see behavior on two levels.

Freud distinguished between conscious and unconscious; Sullivan between the in-awareness and out-of-awareness. Anthropologists like the late Ralph Linton spoke of overt and covert culture; others used terms like implicit and explicit, which were applied to the assumptions underlying behavior as well as the patterns controlling it. This bipolar way of analyzing events soon spread to other fields, such as political science and scientific management. Both disciplines adopted the terms formal and informal when describing behavior patterns, management procedures, and organizational structure. The use of these polarized categories made it possible to make distinctions which were important and which had not been made before. Moreover, they were consistent with the American tendency to see things as opposites—in black and white. The ease with which Americans tend to polarize their thoughts about events may make it difficult for them to embrace an approach which employs three categories rather than two. Yet that is what I would like to propose here: a theory which suggests that culture

has three levels. I have termed these the formal, informal, and technical, familiar terms but with new and expanded meanings.

Trager and I arrived at this tripartite theory as a result of some rather detailed and lengthy observations as to the way in which Americans talk about and handle time. We discovered that there were three kinds of time: (formal time,) which everyone knows about and takes for granted and which is well worked into daily life; (informal time,) which has to do with situational or imprecise references like "awhile," "later," "in a minute," and so on; (technical time,) an entirely different system used by scientists and technicians, in which even the terminology may be unfamiliar to the non-specialist. Having observed how these time systems are used and learned, and knowing something of their history, we realized that in other areas of his life man also approaches activities as formal, informal, or technical. In other words, we discovered that man has not two but three modes of behavior. Our generalizations about time had much broader applications than we originally supposed.

The sport of skiing offers an excellent example of the formal, informal, and technical modes. Some years ago in the town of Grand Lake, Colorado, on the snowy western slope of the Rockies, there was a tradition that everyone had to use skis to get around in the wintertime. New school-teachers transferred into the area had to learn to ski, and even the school principal and the school band were on skis. Small children learned to ski soon after they could walk. When one watched these people move about it was as though the skis were an actual extension of the foot, a highly adapted organ for locomotion. Each person had developed his own highly individualistic style, just as everyone has his own way of walking. When skiing competitions took place some of the villagers were better than others, while many

did not compete at all. The main thing was that everyone skied. No one questioned the fact that this was desirable. Skiing was taken for granted as a part of the daily life of the town; it was, to use the term which will reappear in these pages again and again, a *formal* tradition.

At the same time, there were a few hardy souls in Denver and other nearby towns who used to take to skis for pleasure, as a part-time activity. There was no pressure on these persons to ski. They simply liked to get out in the open. Some of them had very real talent, others weren't so skilled. This group skied because it enjoyed the fun and the exercise and the beautiful scenery of the mountains and the camaraderie of the sport. They were not highly conscious of how they skied, what technique they used, or how the skill could be taught. They would say, "Watch me," or "Do it like this," and that was about as far as they could go. I never will forget the time when one of my friends who had been watching this weekly trek to the mountains finally decided to come along. He was an excellent athlete who had once been a Golden Gloves champion, so he had no lack of natural co-ordination and control. However, when he first put on skis the result was comic and disastrous at once. As soon as he tried to take a step, down he went. Encumbered by his skis, he could barely get up. The newcomer was beset by all sorts of problems which demanded skilled and technical analysis if they were to be solved quickly. Unfortunately the best that these Sunday skiers could manage was something like this: "You bend your knees and take off. Eventually you'll get the hang of it." Their conception of skiing was *informal*, a view which is no better expressed than in the phrase, "You'll get the hang of it."

At the same time that the townspeople on the western slope were teaching their children to ski and the informal

skiers from Denver were making their weekly pilgrimage to the mountains, thousands of feet of film were being taken in the Alps of wonderfully skilled skiers rushing down slopes, turning, climbing, and coming to a stop. These films were analyzed, and the whole process was broken down into its components or isolates, as they can be called. In addition to the components, broader patterns were also analyzed. After a while it was decided that skiing was not an art which had to be restricted to the gifted. Anyone with patience and a modicum of control could be taught to ski, since the components had been so well identified that they could be talked about and described *technically*. Moreover, the uniformity of skill that could be achieved by these new technically trained skiers was so amazing that it made possible the later tremendous popularity of the sport. Few people like to fail in what they do, and with the new methods of teaching, a few hours' instruction could give enough skill and confidence so that a newcomer wasn't likely to kill himself and could still have fun.

In the light of our previous hypothesis that all cultural behavior is biologically based, it might be assumed that the formal, informal, and technical aspects of life are also rooted in man's physiological organism. Unfortunately, however, the subtle chain of connections between the physiology of the nervous system and human behavior still remains a comparative mystery. At present the most we can say is that one would expect to find that these three types of behavior spring from three different parts of the nervous system. This assumption can be inferred from a characteristic of behavior which everyone has experienced: It is extremely difficult to practice more than one element of the formal, informal, technical triad at the same time without paralyzing results. A woman who types as an informal ac-

tivity knows that if she starts thinking in detail technically about what she is doing with her fingers and where the letters are located she will have trouble. Beginners who are studying shorthand are told that they "have to get it in their fingers" or they will not pick up any speed. A friend of mine, a neuropsychiatrist, once pointed out that it was enough to draw attention to one level of activity while a person was operating on another to stop all coherent thought. He used the example of a mother who is mad at her son and is berating him. The boy looks up and says sweetly, "Gee, Mommy, your mouth moves funny when you're mad." The mother is apt to become speechless.

One more generalization that should be kept in mind about formal, informal, and technical integrations is that while one will dominate, all three are present in any given situation. To refer back to the skiers for a moment, it is easy to see that even those who approach skiing as a formal activity will have to get mildly technical about it, otherwise they would have difficulty talking about the details of skiing. Everyone has his own style (the informal), but the informal has the formal as a base. If one were to compare the three groups of skiers, one would find that the formal mountain skiers and the informal skiers from the plains had much more in common with each other than either of them had with the European technical skiers. The technical, of course, very quickly develops its own new formal systems. Science, for example, which we think of as being the very essence of the technical, actually has built up within it a large number of formal systems that nobody questions. These have to do with the methodology of science, the insistence on the objectivity of the members of the scientific community, their honesty in regard to their own work and the work of others. As a matter of fact, a good deal of what

goes under the heading of science would more appropriately be classed as a new formal system which is very rapidly displacing or altering our older formal systems centered in folk beliefs and religion.

Most medicine as it is practiced, in contrast to medical research, can be more appropriately classed as formal. This is not meant to be a criticism of doctors. If they did not develop formal systems their patients would force them into it. The so-called social sciences or behavioral sciences are shot through with procedural ritual that graduate students learn and later pass on to their own students. One zealous sociologist is reported to have developed an index to reflect the degree to which a paper was "scientific." He devised a rating system derived from the relative proportion of text to footnotes and the quantity of statistics in relation to text!

FORMAL LEARNING

Formal activities are taught by (precept) and (admonition.) The adult mentor molds the young according to patterns he himself has never questioned. He will correct the child saying, "Boys don't do that," or "You can't do that," using a tone of voice indicating that what you are doing is unthinkable. There is no question in the mind of the speaker about where he stands and where every other adult stands. In correcting their children's speech, parents will say, "Not 'goed'! Went!" The burden of this communication is that no other form is conceivably acceptable. Formal patterns are almost always learned when a mistake is made and someone corrects it. Technical learning also begins with mistakes and corrections, but it is done with a different tone of voice and the student is offered reasons for the correction.

An error made by many parents and teachers these days is to try to explain formal behavior in the same way one goes about outlining the reasons for technical behavior. This is a signal to the child that there is an alternative, that one form is as good as another! A great mistake. The details of formal learning are *binary*, of a yes-no, right-wrong character. You either break a taboo or you don't, you steal your neighbor's coconut or you don't, you say "boyses" for boys or you don't. Hundreds of little details add up until they amount to a formal system which nobody questions.

INFORMAL LEARNING

Informal learning is of an entirely different character from either the technical or the formal. The principal agent is a *model* used for imitation. Whole clusters of related activities are learned at a time, in many cases without the knowledge that they are being learned at all or that there are patterns or rules governing them. A child may be puzzled about something and ask her mother for the rules. "You'll find out about that later, dear," or "Look around you and see what people are doing; use your eyes!" Whenever statements like the one that follows are made, one can be sure that the activity is an informal one: "Mother—how does a woman get a man to marry her?" "Well, it's a little hard to describe, but when you get bigger you'll find out. There's plenty of time for learning." The child is treated to this kind of remark so often that he automatically translates it as, "Don't ask questions, look around and see what people do." In the United States the most important area in which this type of learning operates is sex. For the most part, sex is learned informally—a fact which might account for the morbid fascination it exercises on people. When someone

like the late Alfred Kinsey tried to systematize the available knowledge about sexual behavior he was commonly greeted with the question, "How do you know? Were you there?"

Hollywood is famous for hiring various experts to teach people technically what most of us learn informally. A case in point is the story about the children of one movie couple who noticed a new child in the neighborhood climbing a tree. The children immediately wanted to be given the name of his instructor in tree climbing.

Entire systems of behavior made up of hundreds of thousands of details are passed from generation to generation, and nobody can give the rules for what is happening. Only when these rules are broken do we realize they exist. For example, the writer used to ask his audience of people going abroad to give the rule for *first naming* in the United States. They could give a few, in vague terms, but pretty soon they would be floundering. In the end they would remark, "You know, when you look at it that way it's pretty hard to pin these things down."

Unconsciously a great many people recognize the validity of using models as the major instrument of informal learning. As a whole, women in the United States are more aware of this than men, though they too are apt to overlook imitation for what it is—a way of learning—a way of becoming a member of society. Everyone has seen small boys mimic their father's walk or imitate a TV hero or, at the worst, mimic some unsavory character who hangs out at the corner drugstore. In many cases the mother does not approve of Junior's selection of models, though she may not even be aware of her reasons. By disapproving strongly, she may make a hash of the informal learning propensities of her children by interfering with their early attempts at imitation.

TECHNICAL LEARNING

Technical learning, in its pure form, is close to being a one-way street. It is usually transmitted in explicit terms from the teacher to the student, either orally or in writing. Often it is preceded by a logical analysis and proceeds in coherent outline form. Some of the best examples of technical teaching can be found in the armed services, where techniques have been worked out for handling large masses of recruits. This success is further confirmation of the point that technical learning is an inevitable concomitant of teaching large numbers of people. Unlike informal learning, it depends less on the aptitude of the student and the selection of adequate models, but more on the intelligence with which the material is analyzed and presented.

During World War II, when great numbers of trained technicians were in demand, it was assumed that those who had mechanical aptitude would make good airplane mechanics. A careful analysis of this assumption proved otherwise. It turned out that a good shoe clerk in civilian life would become a better mechanic for military purposes than someone who had fixed cars most of his life and learned on a Model-T Ford. The critical trait was not mechanical aptitude but the ability of the trainee to follow instructions. The Army then worked out its instruction manuals so meticulously that the best recruit turned out to be a mildly obsessional person who could read and follow directions. The last thing they wanted was someone with his own ideas on how to fix equipment.

To recapitulate briefly: The formal is a two-way process. The learner tries, makes a mistake, is corrected ("No, not the right side of the horse, the left side! Remember, never approach a horse from the right!"). Formal learning tends

to be suffused with emotion. Informal learning is largely a matter of the learner picking others as models. Sometimes this is done deliberately, but most commonly it occurs out-of-awareness. In most cases the model does not take part in this process except as an object of imitation. Technical learning moves in the other direction. The knowledge rests with the teacher. His skill is a function of his knowledge and his analytic ability. If his analysis is sufficiently clear and thorough, he doesn't even have to be there. He can write it down or put in on a record. In real life one finds a little of all three in almost any learning situation. One type, however, will always dominate.

FORMAL AWARENESS

Compared to many other societies, ours does not invest tradition with an enormous weight. Even our most powerful traditions do not generate the binding force which is common in some other cultures. For example, the Zuni of New Mexico have a predominantly formal culture that exerts a heavy pressure on its members. People simply cannot disregard social pressures and remain in the pueblo. If they want to leave and live with strangers the rest of their lives, they can fly in the face of tradition, otherwise they have to conform. We Americans have emphasized the informal at the expense of the formal. There are, however, pockets, like old New England and certain parts of the South, where tradition plays a vital role in life. This style of life in which formal awareness predominates has been elegantly sketched in novels like J. P. Marquand's *The Late George Apley*. Formal awareness is an approach to life that asks with surprise: "Is there any other way?" Formally aware people are more likely to be influenced by the past than

they are by the present or future. Formal awareness is awareness of what Apley would call "what's right, what ought to be there."

INFORMAL AWARENESS

The term informal awareness is paradoxical because it describes a situation in which much of what goes on exists almost entirely *out-of-awareness*. Nothing, however, is hidden in any sense of the word. In fact, it is doubtful if there is any part of culture which is really hidden once we know how to go about looking for the eloquent signs.

In informal activity the absence of awareness permits a high degree of patterning. A moment's reflection will show that in walking or in driving a car awareness of the process is apt to be an impediment to smooth performance; similarly, too much awareness of the process of writing or speaking can get in the way of what one is trying to say. The informal is therefore made up of activities or mannerisms which we once learned but which are so much a part of our everyday life that they are done automatically. They are, in fact, often blocked when cerebration takes place.

All this has been known in one way or another for a long time, but no one has understood the degree to which informal activities permeate life nor how the out-of-awareness character of informal acts often leads to untold difficulty in a cross-cultural situation. The tone of voice of the upper-class English which sounds so affected to many Americans is an example of just this kind of activity which, unless properly understood, can be a stumbling block between individuals from different cultures.

What I have described is not to be confused with neuroses in which certain aspects of the personality are also out-of-

awareness. The psychological literature is filled with references to dissociated behavior, unconscious behavior, and so on, but these are deviations from the norm and should not be confused with the informal.

TECHNICAL AWARENESS

While all technical behavior has in it some of the formal as well as the informal, it is characterized by the fact that it is fully conscious behavior. Its very explicitness and the fact that it can be written down and recorded and even taught at a distance differentiates it from the other two types of integration. The very essence of the technical is that it is on the highest level of consciousness.

FORMAL AFFECT

Affect is a technical term used by psychologists to describe feelings as distinct from thought. The non-technical reader may prefer to substitute "emotion" or "feeling" whenever the term "affect" is used. Whenever violations of formal norms occur, they are accompanied by a tide of emotion. One can get an idea of how people feel about formal systems by thinking of a person who has been supported all his life by a very strong prop. Remove the prop and you shake the foundations of life. Deep emotions are associated with the formal in almost every instance.

Part of the success of the late Clarence Darrow was attributable to his being a past master at invoking formal systems to sway juries. Darrow was and remains a controversial figure. Many people used to look upon him as a scoundrel who succeeded in having thieves and murderers acquitted when they should have been executed. Today he is still a figure of great popular interest, but those who write

about him tend to see him in a new way. They like to emphasize his humanity rather than his superb command of the law. For the law is technical and dry and supposedly blind to human emotions—a cardinal sin in this age. Darrow dressed in an old sloppy suit. He appealed to the common man—people could identify with him. He was their type, the country bumpkin who outsmarts the city slicker. Now it is obvious that in addition to knowing his law well he also knew his culture. He realized that most people do not understand the law but will stand up for their own formal systems and even weep over them when they see them outraged. This was Darrow's strength, and the only time he really failed to capitalize on it was when he was called to Honolulu for the Massie case in 1932. There he faced a jury made up of members who had different formal systems. The Chinese jurors weren't a bit moved by his culture-rooted strategies.

In time, as formal systems become firmer they become so identified with the process of nature itself that alternative ways of behavior are thought of as unnatural—if not impossible. Yet this rigidity has its advantages. People who live and die in formal cultures tend to take a more relaxed view of life than the rest of us because the boundaries of behavior are so clearly marked, even to the permissible deviations. There is never any doubt in anybody's mind that, as long as he does what is expected, he knows what to expect from others. Those who are familiar with the difference between Catholicism in Latin America, where the population is so predominantly Catholic that religion is not an issue, and in the United States, where we are more technical about religion, have an excellent example of how people live under the same institution of religion yet react differently, depending upon whether it is administered formally or technically.

INFORMAL AFFECT

There is little or no affect attached to informal behavior as long as things are going along nicely according to the unwritten or unstated rules. Anxiety, however, follows quickly when this tacit etiquette is breached. Extreme discomfort is apt to occur when someone stands too close or uses a first name prematurely. What happens next depends upon the alternatives provided by the culture for handling anxiety. Ours includes withdrawal and anger. In Japan men giggle or laugh nervously. The alternative responses are comparatively restricted and automatic. The leeway for emotional response in the informal is much less than one might expect. The point is that the emotions associated with deviation from informal norms are themselves learned informally and are limited by the fact that people do not realize that their response is learned or that there is any other way to respond. A comparable situation exists in language: In English, one of the most common ways of indicating that one is asking a question is by ending with a rising inflection. That there might be other inflections which achieve the same purpose simply does not occur to one. In this sort of thing it seems "natural" that the repertoire would be somewhat limited.

TECHNICAL AFFECT

The technical is characterized by a suppression of feelings, since they tend to interfere with effective functioning. One of the great differences between the real professional and the amateur boxer is that the amateur is likely to become really angry, whereas the professional prides himself in keeping his wits about him and his temper in control. The scientist's approach to his work is so well known that we

need say little about it. In general the technical person becomes emotionally involved only when the technical rules of the game are not followed. Once a technical foundation is laid down, it seems to be terribly important to adhere to it.

Because it is so explicit, the technical in our society has become associated with authority and law and other structures which embody uncompromising attitudes. A mother who is provoked by a child may find herself using the child's full name as she calls him to account. The child immediately knows that he has stepped out of line and Mother means business because she is getting technical. The formal and the technical are often confused. For one thing, the formal is supported by technical props. It is the technical that people often resort to when all else fails.

The whole matter of deviation from norms bristles with complexity. For example, children never know where the line is until they step across it. The manner in which they are reprimanded provides the glue that holds together these systems in later life. The child never knows until he finds out by trial and error whether he has violated a formal, informal, or technical norm. There are gross differences in regard to norms from one culture to another. Within the confines of a diverse culture such as our own, what is a formal matter at one time may become informal later, what is viewed technically by one group may be informal with the next. To return to children, it seems to be important that they know that there are norms and lines beyond which they cannot go despite the leeway allowed them. They also need to know that there are some norms that are comparatively unchangeable and which can be depended upon throughout life. From a theoretical point of view the relation of the formal, informal, and technical to norms becomes of great importance.

FORMAL ATTITUDES TOWARD CHANGE

Formal systems are characterized by a very great tenacity, a trait which satisfies a deep need in all societies and individuals. Without this tenacious consistency in life, life itself would not be possible. Originally, with the very early vertebrates, instincts or innate behavior patterns provided for this consistency. With the advent of learning as an additional adaptive mechanism the role of the instinct began to fade until in man it plays a negligible part. It is formal culture that does a job closely analogous to instinct. Everybody can depend upon it almost as though it were instinctual. It is the base from which the rest of culture springs and around which it is built.

Except under special circumstances, the formal changes slowly, almost imperceptibly. It is also highly resistant to forced change from the outside—a point now well known to many of our technicians working in foreign countries. Since the formal is seldom recognized as such, the American abroad often has the impression that other people's formal systems are unnecessary, immoral, crazy, backward, or a remnant of some outworn value that America gave up some time ago. Afif Tannous, a Lebanese-American sociologist, tells of a case of the Arab villagers who refused to let outsiders clean up a water hole contaminated with typhoid and install a pump. The reader may wonder what there was about having a nice clean water supply that violated the formal norms of Arab villagers. Strange as it seems to us, Arab villagers like the water they drink. It has a nice strong taste which it gets from the camels. Water with them is thought to be almost sacred. If the men of a given village are strong or brave or fertile or smart it is because of the water they drink. In some parts of the Arab world it is considered sissy to drink clean water. The villagers saw no

relation between disease and the water that made their men strong. Babies died because God willed it, and who were they to go tampering with the will of God? This story underlines the necessity of understanding and accepting the formal systems of other peoples first in order to work effectively within them.

Alexander Leighton's excellent book, *The Governing of Men*, also provides a penetrating example of how a misunderstanding about formal systems of leadership stalled a government program with the Japanese internees during the war. Once this was corrected, these same systems were used quite successfully. The American mistake was to select construction foremen according to their qualifications—a natural error, considering the great emphasis we put on technical competence. The Japanese, who had suffered insult, the loss of their possessions, and forcible imprisonment without losing their patience, finally went on strike when this happened. They were outraged that the Americans had completely disregarded the social hierarchy which figures so importantly in Japanese society. The solution to this problem lay in allowing the internees to choose their own leaders from among those who had the proper status. It mattered little that these honored old men spoke no English and knew less about engineering. They promptly picked young engineers as their advisers.

I am indebted to John Evans, onetime superintendent of the Northern Pueblo Agency, who spent many years as a young man in Taos, for an exquisite example of a formal pattern. The Taos are a very independent people who carefully guard all their culture from the white man. They even make a secret of how to say "Thank you" in Taos. This makes it exceedingly difficult for the governmental representatives whose job it is to work with them. According to Evans, there had been some difficulty finding an agricultural

extension agent who could work with the Taos. Finally a young man was chosen who liked the Taos and who was careful to approach them slowly. Everything went along very well, and it seemed that he was, indeed, the right man for a very ticklish job. When spring arrived, however, Evans was visited in Albuquerque by the agriculturist, who was wearing a very long face. Evans asked, "What's the matter? You look depressed." His visitor replied, "As a matter of fact, I am. I don't know what's wrong. The Indians don't like me any more. They won't do any of the things I tell them." Evans promised to find out what he could. The next time there was a council meeting at Taos he took one of the older Indians aside and asked him what was wrong between the tribe and the young man. His friend looked him in the eye and said, "John, he just doesn't know certain things! You know, John—*think*. . ."

Suddenly Evans understood. In the spring the Taos believe that Mother Earth is pregnant. To protect the surface of the earth they do not drive their wagons to town, they take all the shoes off their horses, they refuse to wear hard-soled shoes themselves. Our agriculturist had been trying to institute a program of early-spring plowing!

Often, however, the conflict between different formal systems in different cultures has a tragic outcome. During the Spanish conquest of the New World one of the reasons the Spaniards were able to take so much territory was that their formal systems were so radically different from the Indian system. The Spaniards fought to kill; the Aztecs fought to take prisoners. Like the Plains Indians to the north, the Aztecs were at a loss in dealing with an enemy who killed in battle. Because this was a formal system the Aztecs were not able to change it in time to save themselves or their society. Similarly, some American prisoners of war during World War II were not able to adapt to the deference

patterns of their Japanese captors and thus save themselves needless torture. The Japanese formal view of life is that there must be order in the relations between men and that this order is expressed by people taking and demonstrating their positions in a hierarchy. People of higher status are addressed by certain polite forms; respect is shown by bowing quite low with the upper part of the body held rigid. The Americans who were captured by the Japanese felt it was a violation of their dignity to have to bow. The Japanese thought this showed extreme disrespect and threatened the very foundations of life.

The *formal* provides a broad pattern within whose outlines the individual actor can fill in the details for himself. If he stays within the boundaries, life goes along smoothly. If not, he finds himself in trouble. For instance, if two men have a business appointment in the middle or late morning and one of them is five minutes late, there is no serious difficulty. A simple apology usually suffices. Though the formal system in our culture says that one must be punctual, it also provides for a certain amount of leeway. The norm can be violated in two principal ways: first, by going way beyond the permissible limit, so that it is obvious that you are deliberately flying in the face of custom; second, by ignoring the permissible informal leeway, becoming overly technical, and demanding an apology if someone is only twenty seconds late.

INFORMAL ATTITUDES TOWARD CHANGE

Mishandling the informal can often lead to serious difficulties which are apt to become aggravated since the participants in an informal situation are not fully conscious of what is going on. They only know that under a certain set of unstated rules they can act in a certain way and depend

upon other people to react appropriately. This informal expectancy is often ruptured when there is a conflict between two patterns within the context of our own culture or in the more familiar case of a cross-cultural situation.

An example of a rather wearing cross-cultural conflict occurred in the West a number of years ago. Since no one was directly aware of what was going on, the result was a ludicrously tragic situation which persisted for some twenty years. The two cultures involved were the Spanish and the American; at the heart of the prolonged crisis was the differing view which each group takes of law, government, and family. The Latin-American Spanish have developed the institution of the family to a size, stability, and influence that are incredible to us. Their governments on the other hand do not occupy such an important position in the scheme of things as ours does. If something should happen or if something is wanted in a Latin-American country, families are apt to be better at handling the affair than the government. This informal tradition is associated with a different concept of law from our own. Law in Latin America is enforced technically (by the book), but it is mediated by family relationships. With us law courts, and particularly enforcement officers, are not supposed to be harsh and should be guided by the formal systems of the culture. That is, the law is never expected to be stricter than the rest of the culture. If it works undue hardships on people, then it has to be changed. When the American comes across a law which he considers to be unjust or which doesn't make sense, he is much more likely to violate it than if he considers it realistic and sensible.

The point at which the Spanish and American patterns collided in the western town was over the enforcement of the speed limit. For many years the town—predominantly Spanish in population and government—had a motorcycle

policeman named Sancho, of Spanish cultural descent. His job was to enforce the speed limit of 15 mph which extended to the outskirts and included a stretch of two national highways. So assiduous was Sancho in his work that he was famous to all the townspeople as well as to the *americanos* who lived in the surrounding communities. Acting on the letter of the law, he would arrest people going 16 mph—an offense which was punishable by a fine of \$12.75, a considerable sum of money during the depression years of the thirties.

The Spanish-Americans brought before the court usually had a cousin or an uncle sitting on the bench and were quickly acquitted. The *americanos*, who were rarely that lucky, became increasingly furious at the situation. Finally they began plotting against Sancho. Once he was led out of town at 60 mph and then run off the road. His legs were so badly broken that he could no longer ride a motorcycle. When he emerged from the hospital he bought a fast roadster and went back to work. But from then on for the next ten or fifteen years life for Sancho became a series of "accidents." He no longer trusted anyone and arrested speeders with a drawn pistol. Even this did not prevent him from being severely beaten up from time to time by the Americans who resented being arrested for going 16 mph and who had to pay their fines. What the Americans did not understand—and for this they may easily be forgiven—is that the two cultures treat the same point of behavior quite differently and structure the informal into different parts of their respective systems. Technically, to the Spanish, the law was the law and 16 mph was an infraction of the law. Only after they were arrested did they invoke the informal by turning to that system of relatives which is equipped to deal with a weak government. Americans, on the other hand, allow themselves a certain amount of informal leeway in their interpretation of what constitutes a violation, but they

tend to get *tough* (and technical) once the machinery of the law is set in motion. The idea of holding people precisely to 15 mph violates both our attitude toward laws (they should make sense) and our sense of informal leeway. Sancho's trouble was that he never had a model to show him how to deal with *americanos*.

On the whole, Americans have developed no system for making the law easy to live with, as have the Latin Americans. Our own formal system says that it is reprehensible to use influence and doubly so for public officials to show favoritism. We allow very little leeway here, on the grounds that unless a person is either foolish or guilty he would not have run afoul of the law in the first place. Laws may be broken in the United States, but there is a great reluctance to tamper with the legal machinery once it has got under way. As products of American culture we tend to have a difficult time overseas when the laws lack informal leeway in their enforcement. We see no alternative ways of making them livable. We find it hard to discover those points where there is leeway and, when we do, we are hesitant in using what we find out because it violates our own formal systems. What Americans really like and usually hold out for is for others to change their systems so that it "makes sense" like ours.

There is, of course, a little of the informal in everything. What is confusing to people who travel or work overseas is that there is no way of knowing just where the leeway has been built into a situation. To make this doubly difficult, the local nationals can't describe the rules either. Furthermore, a formal system with very little give in it one time may show a great deal of flexibility a few years later. Arab attitudes toward women, for example, are changing very rapidly. What was constant for centuries no longer holds.

TECHNICAL ATTITUDES TOWARD CHANGE

When American technicians are prepared to work abroad, they must be warned to avoid introducing changes that violate formal norms. The technician may ask: "In what area, then, can I try to help these people help themselves and still not run afoul of the formal and the informal? Where can I have some real control over what goes on?" The answer, of course, is in the technical. Here one can introduce changes with the greatest ease without violating the norms of the other two systems. Just as the United States suffers no disruption in the course of constant progress in such things as the design of automobile engines, fuels, oil and metals, antibiotics and medicine, so comparable changes can be made in countries that have not progressed as far as we have technologically. Whatever changes are introduced have to be made in those parts of the lives of the local people *that are treated technically* or else they must be offered *as entirely new systems complete in themselves*. In many parts of Latin America, for example, air travel was introduced before the stage of the cart and the automobile had even been reached. It was easier to build airports than a road network. The same leapfrogging technology is being applied in Africa.

Usually, however, technical changes are small changes which have to do with the details of an operation. You can change the bore and stroke of a motor without changing the over-all design. You can alter the pitch of a propeller to conform to special conditions, change the construction material for a house without violating the formal norms that dictate the over-all design, put a steel point on a wooden plow without violating formal norms, make DDT in powder or liquid form to conform to local custom concerning insecticides. By changing the emphasis from one of "making the soil

more productive" to "feeding" the soil with fertilizer, modern agriculture can be made more acceptable to the Indonesians, who, because of their formal religious beliefs, try to avoid controlling nature.

One of the most remarkable changes that have come to light in recent years is the one described by Margaret Mead in her report about the unique people of Manus in the South Pacific. The Manus Islanders treat their culture technically. They apparently have done so for such a long time that there is little evidence that they could accept any other attitude without seriously disrupting their lives. They experiment with their culture consciously, taking it apart and putting it together again to see how it works in different ways. With these propensities it was inevitable that close contact with Americans during the war would make available new systems of behavior and new ways of organizing society. This is what happened. The Manus apparently did the incredible thing of sitting down and saying to themselves, "Now let's organize a new society that's more in keeping with the outside world." They didn't wait for change to overtake them gradually, or drift off in small numbers and lose themselves among the white man. They sat down and designed a society from the ground up. What is not clear, of course, in view of the technical attitude toward life, is *where the formal core is* and what form it takes on Manus. One view that can be taken of what happened on Manus is that the things that were changed represented a relatively superficial fringe around a more stable and persisting core, just as the Pueblo potter may make variations in the designs she uses on the pot but is not likely to change the method of building up the walls, polishing, or firing.

Maria, a famous New Mexico potter, provides us with an excellent example of how small changes occur and how far-reaching their effects can be. She practices an art bor-

rowed indirectly from Mexico and carried on by Pueblo women for some thirteen to fifteen hundred years.

The Pueblo women have always been notoriously conservative in their pottery making. Since slightly before the time of World War I their pottery began to deteriorate noticeably, a sign that Pueblo life was losing some of its integrative powers. As the Indian moved farther and farther down the socio-economic scale in comparison to the white man, he began to lose his self-respect. No one knows what would have happened if it had not been for three key figures: Maria and her husband Julian, both skilled craftsmen, and Kenneth Chapman, an anthropologist who saw what was happening and dedicated himself to reviving Pueblo crafts. Julian helped Maria with the pottery by occasionally painting the designs for her. This was one of those small technical changes that leads to bigger things. Maria was the best potter in San Ildefonso. The care and attention to detail in her work were obvious even to those who were not experts. By Pueblo standards she was an individualist. Unlike many of the others, her work did not deteriorate and therefore became even more popular. Chapman selected her work for promotion in the white man's world.

Once by accident two of Maria's pots turned black instead of red. A plain black pot that is not well made is hideous. A plain black pot that is beautifully made actually enables one to appreciate both the simplicity of the black as well as the expertness of the technique. Despite this, the San Ildefonso people had no place in their world for a plain black pot. The white man, on the other hand, had no tradition in regard to pottery, no preconception that it should be white or black or red. He thought it should be well made, smooth, and symmetrical. Once when Julian and Maria ran out of the red pottery they sold through a Santa Fe storekeeper, they gave him the two black "spoiled" pots.

Before the man could get them back to his store he had sold them.

It was very easy for the Indians to make more black pots, since they were quite familiar with the mistake which caused them. Once Maria discovered that her pottery was even more popular than it had been formerly, she taught her sisters how to control this accident to satisfy the white man's taste. Eventually the rest of the women of the Pueblo were following her example. Maria's fame brought more tourists and more customers, so that everybody profited. Today San Ildefonso is associated with black pottery instead of red. The transformation of an informal, occasional black pot into a technical change in pottery making had other striking results. First it improved the over-all quality of the pottery of the Pueblo. Then this change led to additional experimentation with pottery designs and finishes and opened the way for deviations from old patterns, which even led to the making of silver jewelry, traditionally associated with the Navajo and the Zuni.

This example highlights a number of things about technical changes:

They are always specific. In this case one makes a choice as to the type of firing, one step in about a hundred steps needed to make a pot. Technical changes are readily observed, talked about, and transmitted to others. They open the way for additional changes and often improvement in the quality of a product. They often fly in the face of older formal norms and are far-reaching in their effects. Put together, they form the basis for a new formal system once they become consolidated and widely accepted.

Our own calendric system is an example of a once technical innovation, the result of many, many small technical changes built into a pattern that became widely accepted, so widely accepted that such periods as the hour and the

week are thought of as "natural" divisions of time. In fact, it is so much a formal system that when the calendar was brought up to date in England in 1752 by gearing it to the Gregorian version, there were riots in the streets and people shouted, "Give us back our fourteen days."

To this point we have been looking at the formal-informal-technical triad as a fixed and static system. In actuality these states are constantly fluid, shifting one into the other--formal activity tends to become informal, informal tends toward the technical, and very often the technical will take on the trappings of a new formal system. In this next section I suggest something of the inherent processes by which these changes occur.

THE PROCESS OF CHANGE

Theodosius Dobzhansky, the great geneticist, once observed that life was the result of neither design nor chance but the dynamic interaction of living substance with itself. He meant that life, in a changing environment, places such strains on the organism to adapt that, if this does not take place constantly, the organism as a species dies out. This process of adaptation leads to the production of the many complex forms that inhabit this earth. Different cultures are analogous to different species in the sense that some of them survive while others perish. Some are more adaptive than others. The study of change, therefore, is the study of survival. It is of more than academic interest, then, to see how the formal, informal, and technical exist in a relationship of continuous change. The theory of the nature of these relationships is a theory of change.

Because of the technical nature and complexity of the most available data I am including only one description of a changing culture pattern. (Three others will be found in

Appendix III.) Its timeliness will be immediately recognizable, and it has in it many basic elements illustrating the principles by which culture change operates. It should be apparent to the reader that much of the material included under other headings also illustrates how change takes place.

An often noted characteristic of culture change is that an idea or a practice will hold on very persistently, apparently resisting all efforts to move it, and then suddenly, without notice, it will collapse. The following case history, well known to most Americans, is a poignant illustration of this phenomenon.

Taken at any given point, culture seems to be made up of formal behavior patterns that constitute a *core* around which there are certain informal adaptations. The core is also supported by a series of technical props. A classic case was provided one time during a discussion I had with a class of young college women. They were earnestly concerned with their future role in life. A topic very much on their minds, of course, was the matter of their relations with men. In a discussion of this subject one of the girls summarized the issue very succinctly and at the same time illustrated the principle outlined above.

The problem she posed went as follows: Her family, principally her mother, had endowed her with a series of formal beliefs which stressed the importance of premarital chastity. The young lady did not want to violate these beliefs, yet here she was, riding around in cars at night alone with boys, petting, and going to unchaperoned house parties. In effect, the traditional supports (or restraints) on which sexual virtue had long been based had been cut away. Moreover, there was continual pressure on her to chuck the idea of premarital chastity. How, she asked, could she maintain her position in the absence of supports? How could she

preserve the core of a formal system when all of the important technical props had been removed?

In retrospect we can laugh at the thousand and one little props which once made it easy for a woman to keep her virtue. But how useful they were. I remember hearing about an elderly New England lady who criticized her daughter-in-law about the way in which she handled her body, especially her legs. Her admonition went somewhat like this: "My dear, in this family a woman never crosses her legs. She sits forward on her chair with her head erect, her hands folded in her lap, and her knees together. On informal occasions, in the home and in the presence of her father or her brothers, she may cross her ankles." Today this sort of talk seems quaintly comical.

There used to be a separate vocabulary for men and women. There were words that women were never supposed to hear. There were different postures and dress for the two sexes, and there were areas that were taboo to women—areas where they might not receive respectful treatment. Clothes hid everything but the face. Close chaperonage and limited times and places where young women could be seen with a man were enforced. All this occurred within the memory of a great many people living today.

In Latin America, however, the technical props which support formal virtue are still firm and elaborate. Americans have come to hold the view that the controls exist in the person and not in the situation. The Latin countries to the south make a different assumption. A man is thought of as being incapable of resisting his libidinal impulses in the face of a woman *if* the situation is such that he can succeed. Women are conceived of as frail creatures who could not possibly stand up to any man. Thus the situation has to be controlled with the full force of custom.

Obviously any change in the sexual manners of South

America will have to hinge on a new conception of the nature of man and woman. This may already be coming about as more and more Latin women are being brought into contact with men in other than purely formal social relationships. A stenographer working in an office in daily contact with men is viewed very differently from the old-style well-chaperoned girl.

The differing rate at which formal and technical systems change, however, can lead to a good deal of personal anxiety. In sex the technical props have gone first in the United States, but the fact that the formal belief still stands is manifest in the question posed by the student and many others like her. How long it can stand is questionable. A few years ago G. P. Murdock, a famous anthropologist, was reported as saying that premarital chastity would not last another generation. People were appalled. He was attacked in the press, bombarded with angry letters, and condemned. The reaction was typical of what happens when someone predicts the collapse of any formal system.

Often technical systems turn into formal ones so quickly that people react to them as though they were still technical. Much of the worshiping at the shrine of scientific methodology in the social sciences these days smacks more of a formal system than a technical one. In these times it seems to be remarkably easy for scientists to turn into priests. Though unlike the ordained priest who knows he is a priest and receives the backing of a formal organization, the ritualistic scientist is engaged in a disconcerting masquerade.

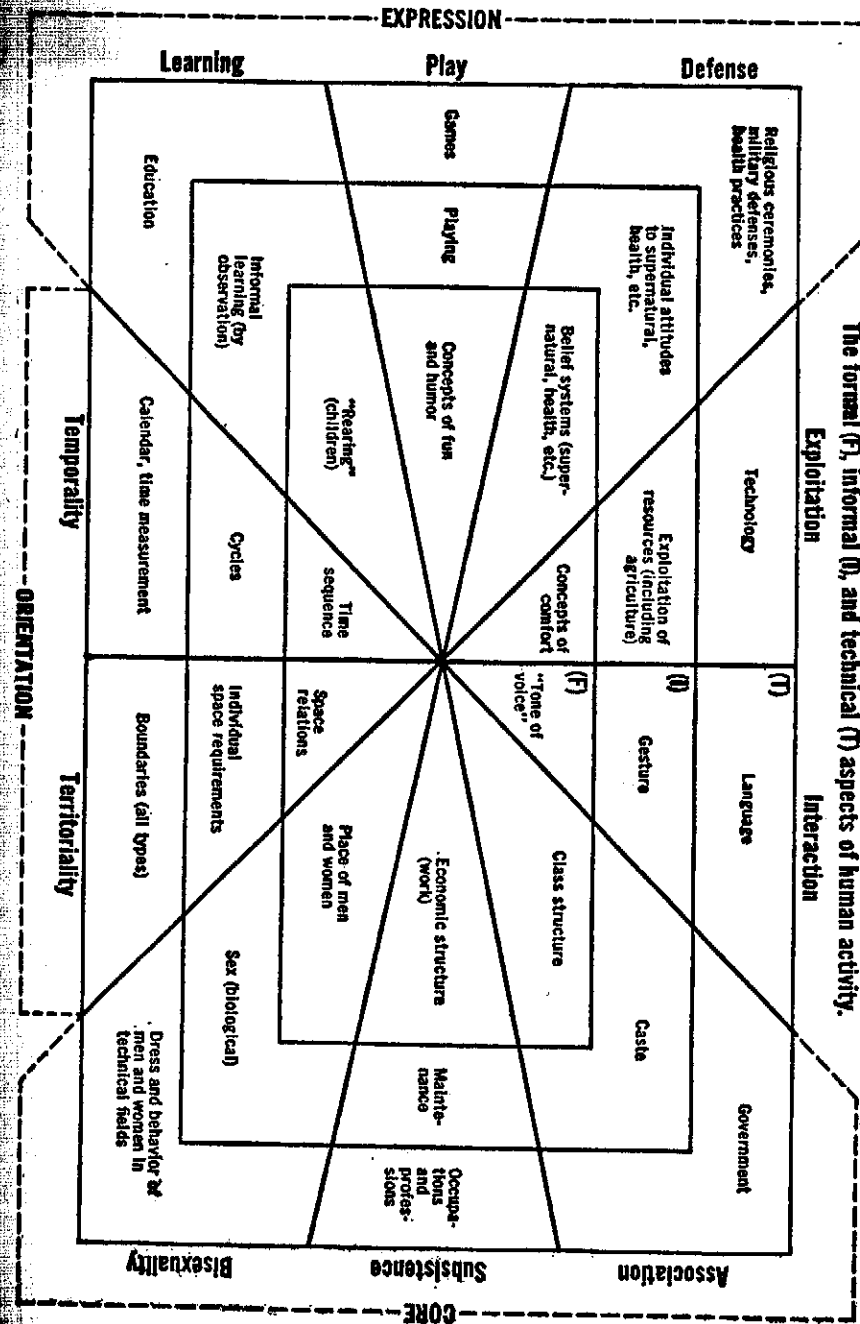
A good example of this transition is what has happened to the psychoanalytic disciples of Freud in this country. Their operations have all the trappings of religion, including the laborious re-examination of matters of dogma and a sort of excommunication for heretics. Many of them function very well within the system and manage to adapt

because they know it's a formal system they are in—not a technical one. It is time, however, that we began to realize that much of what passes for science today may have been scientific yesterday but can no longer qualify because it does not make any additional meaningful statements about anything. It blindly adheres to procedures as a church adheres to its ritual.

Sometime in the future it will be possible to say more about the two types of technical statements which presume to be scientific. Type A seems to be designed to support a going concern and provides a prop for the formal core (laws, statements about conduct and ritual, regulations, and the like), while type B often does just the opposite, tearing down existing props and building new ones in their place. Men like Darwin, Newton, and Einstein toppled old structures, clearing the way for new systems of thought. Type B tends toward the classic goal of true science, which is to explain more and more events with fewer and fewer theories. This contrast between the two aspects of the technical can best be summarized with the statement that all scientific statements are technical, but not all technical statements are scientific.

In summary, change is a complex circular process. It proceeds from formal to informal to technical to new formal, with the emphasis shifting rather rapidly at certain junctures. The rapid shifts are explained by the fact that people cannot tolerate existing in two systems at the same time; they have to approach life at any given moment from one of these three levels of integration but not more than one.

It is doubtful that anyone ever really changes culture in the sense that this term is ordinarily used. What happens is that small informal adaptations are continually being made in the day-to-day process of living. Some of them work



better than others. These adaptations eventually become technicalized as improvements, and the improvements accumulate imperceptibly until they are suddenly acclaimed as "break-throughs." Steady, small improvements in airplane design have snowballed into machines undreamed of twenty years ago.

If a person really wants to help introduce culture change he should find out what is happening on the informal level and pinpoint which informal adaptations seem to be the most successful in daily operations. Bring these to the level of awareness. Even this process can only accelerate change, not actually control it in the manner desired by men of action. This is because the out-of-awareness nature of the informal is where all changes start. To paraphrase Dobzhansky, life is due to the dynamic interaction of living substance with itself and is not the result of either chance or design.

chapter

five

CULTURE

IS

COMMUNICATION

In recent years the physicist, the mathematician, and the engineer have accustomed themselves to looking at a wide range of events as aspects of communication. A book title such as *Electrons, Waves and Messages* does not seem incongruous. Another book title, *The Mathematical Theory of Communication*, seems so appropriate that it is readily accepted, at least by the scientifically inclined layman. However, the behavioral scientists have only recently begun to examine their respective fields as communication.

The reader may wonder about the nature of the relationship between communication as I use the term and the communication theory (information theory) of the electronics laboratory. In one way it might be said that the communication theory is shorthand for talking about communication events that have already been subjected to considerable analysis, such as the phonetics of a language,

orthographies, telephone and television signals, and the like. This process inevitably seems to proceed in one direction—toward symbolization. It must be remembered that when people talk they are using arbitrary vocal symbols to describe something that has happened or might have happened and that there is no necessary connection between these symbolizations and what occurred. Talking is a highly selective process because of the way in which culture works. No culture has devised a means for talking without highlighting some things at the expense of some other things. It follows that writing is a symbolization of a symbolization. Communication theory takes this process one step farther. The principal difference, as I see it, between the electronic engineer's approach and the approach of the cultural-communication specialist is that one works with highly compressed symbolic data while the other tries to find out what happens when people talk, before the data is stripped of all its overtones.

In considering man's total life as communication we see a spectrum covering a wide range of communication events. It is possible to observe complete messages of differing duration, some of them very short (less than a minute) and others covering years and years. In general the study of culture deals with events of fairly short duration. The psychology of the individual in his cultural and social setting presents communication events of longer over-all duration. The study of government and political science may involve messages that take years to unfold. The following examples show how the duration of these messages can vary over a wide spectrum.

When a husband comes home from the office, takes off his hat, hangs up his coat, and says "Hi" to his wife, the way in which he says "Hi," reinforced by the manner in which he sheds his overcoat, summarizes his feelings about

the way things went at the office. If his wife wants the details she may have to listen for a while, yet she grasps in an instant the significant message for her; namely, what kind of evening they are going to spend and how she is going to have to cope with it.

Or take the example of a salesman who has been trying to sell something to an important client for a number of months. The client finally agrees to take up the business with his board of directors and promises to let the salesman know the verdict in a week. The first half second of the interview that follows usually tells the salesman what he wants to know—whether he has been successful or not.

A political figure makes a speech which is supposed to be reassuring. It has the opposite effect. When the words are read *they* are reassuring. Yet the total message as delivered is not. Why? For the same reason that the housewife and the salesman know what to expect. Sentences can be meaningless by themselves. Other signs may be much more eloquent. The significant components of a communication on the level of culture are characterized by their brevity as compared with other types of communication. By simply raising the pitch of the voice at the end of an utterance instead of letting it fade away, it is possible (in English) to change a statement of fact to a question. The fact that communication can be effected in so brief a time on the cultural level is often responsible for the confusion which so often occurs in cross-cultural exchanges.

As one leaves the cultural part of the spectrum and proceeds to the personality portion, the wave length increases. The analytic building blocks, instead of being sounds and the like, are whole interactions between people—mother and child, for instance. Thus first impressions may be wrong because neither person has had a chance to reveal himself fully in a brief period. As a whole, the personality comes

through rather slowly and is only fully known after years.

The portion of the communications spectrum which embraces political events is composed of units of much longer duration. Meanings must be found in the context of hundreds of years of history. In a total pattern, a government's white paper is not just another document; it may be the equivalent of a period or a semicolon or even a question mark at the end of a message that has been building up for years. The message is composed of numerous situations and acts—something which is understood by any political scientist or statesman. Diplomacy and political strategy can be seen as a kind of debate where the words cover years.

Beyond this, men like Toynbee have been trying to work out the grammar of a message which may last for several hundred years, thereby transcending the lifetime of an individual human being. They analyze the syntax of whole societies and civilizations.

The trouble that social scientists have when they talk to someone who has been working on a different part of the communications spectrum is that what one sees clearly may be a diffuse blur or a microscopic dot to the other. Yet each researcher is trying his best to establish a pattern for extracting the meaning from what he studies. In the end all these patterns are relevant to one another. The language of politics and the language of culture are a long way apart, yet each subsumes the other.

Like a telephone system, any communication system has three aspects: its over-all structure, comparable to the telephone network; its components, comparable to switchboards, wires, and telephones; and the message itself, which is carried by the network. Similarly, messages can be broken down into three components: sets (like words), isolates (like sounds), and patterns (like grammar or syntax). A breakdown of messages into these components, sets, isolates, and patterns is

basic to understanding culture as communication. A good deal of what follows is an explication of these terms and what lies behind them.

To recapitulate, man is constantly striving to discover the meaning of relationships between individuals and groups of individuals. The professional scholar soon learns to disregard the immediate explicit meaning of the obvious and to look for a pattern. He also has to learn to scale his perceptions up or down, depending upon what type of communication he is trying to unravel. This leads to an understandable occupational blindness which makes it almost impossible for him to pay close attention to communications of other types, on other wave lengths, as it were. An ability to decipher communications in a restricted area of specialization is what makes men experts. One person may be an expert in long-range events, another in short-term interactions. Further, if we return to language as it is spoken (not written) as a specialized communication system, we can learn something of how other less elaborated systems work. Most of what is known about communications has been learned from the study of language. Because the work with language has been so fruitful, there are certain analogies drawn from it which can be useful in the description of other communication systems.

In the study of languages, one can safely assume nothing. No two languages are alike; each has to be approached afresh. Some are so dissimilar, English and Navajo, for example, that they force the speaker into two different images of reality. Yet, whether a language is near or far, closely related or unrelated, there are certain steps which have to be taken in the analysis of the language in order that learning may proceed.

At first the new language is nothing but a blur of sound. Soon, however, some things seem to stand out, recognizable

events recur. There are, for instance, perceived breaks or pauses, spaces which set off one event from another. It is usually assumed that these breaks separate words. Actually, they may be words, or they may be sentences, or they may be something else. The point is that there is something which is perceived, and this is what the learner grasps. For the time being we will call the things which we perceive "words." This is only a convenience, however, because the word as we know it is very limited in meaning.

In learning the new language, we discover, after having reproduced a number of words in our mouths, that the "words" are made up of sounds of various sorts, many of which are quite different from the sounds of English. Then we find that there is a way of stringing the words together that constitutes a complete utterance which we think of as a sentence.

To repeat, in discovering how a new language works and in learning that language, one starts with something akin to the *word*, made up of *sounds*, and put together in a particular way and according to certain set rules, which we call syntax. These are the basic steps and they identify the basic components of a language.

Because the terminology of the linguist is specialized and overly complex, Trager and I introduced a new set of terms which apply to all types of communication, including language. The cover terms are used to designate the three principal elements of a message. These are: *sets*, *isolates*, and *patterns*. The sets (words) are what you perceive first, the isolates (sounds) are the components that make up the sets, while the patterns (syntax) are the way in which sets are strung together in order to give them meaning.

The idea of looking at culture as communication has been profitable in that it has raised problems which had not been thought of before and provided solutions which might not

otherwise have been possible. The fruitfulness of the approach can be traced to the clear distinction which was made between the formal, informal, and the technical, as well as the realization that culture can be analyzed into sets, isolates, and patterns. It is interesting to note that the early studies of the material culture of the American Indian were originally approached in this way but became entangled in a methodological bog because the study of linguistics had not progressed sufficiently at that time to enable the worker to draw any useful analogies from the way in which language worked. The data suggested, however, that there were things like the isolate which were called traits and catch-all combinations comparable to the word which were called trait-complexes.

In many instances the earlier attempts at handling material culture foundered because the living informant, if available at all, was not used properly to provide a true basis for the field worker's analysis. Somehow field work tended then, as it does today, to become contaminated by the culture of the scientist.

Like the philosophers and alchemists of the past who looked for the right things in the wrong way, many anthropologists have been searching for the essential building blocks of culture. Using the phoneme (the building block of language) as a model, they tried to discover its cultural equivalent, assuming in the process that culture was an entity, like language. Many of these efforts were based on incomplete understanding of the phoneme. In reality the phoneme is a cluster of sounds recognizable to the speakers of the language. The *a* as the New Englander pronounces it in the word "father," as well as its other regional variations, constitutes one phoneme. The *p* at the beginning of "pip" or "pop" is actually different from the *p* at the end,

yet they are both known as allophones (recognizable variants) of the phoneme *p*.

The phoneme, like all other isolates, is an abstraction that dissolves into a set as soon as it is pinned down. Since this was not understood by anthropologists, the phoneme did not provide a proper model for the rest of culture. The phoneme also represents just one structure point in a highly specialized communication system. It never pays to draw an analogy on the basis of structure points alone without reference to how the whole system behaves. The scientist has to be consistent in these things. If he is going to use a linguistic building block like the phoneme, then the rest of the system should be used too. It seems that linguistic analysis requires some adaptation before it constitutes a suitable model for the other systems of culture. The subsequent chapters will be devoted to an expansion of what is meant by the terms isolate, set, and pattern, which are used to replace the terms phoneme, morpheme, and syntax as used in linguistics.

chapter

six

THE

PERVASIVE

SET

As a general rule, a set is a group of two or more constituent components that is perceived as being set apart from other things. Material objects such as chairs, tables, desks, and myriad other assemblages of things can be considered sets. So can words, periods of time, special measurements like the mile, and governing bodies, to mention only a few of the less tangible appurtenances of life which fit our definition. Because there are different types of sets, however—formal sets, informal sets, and technical sets—some sets are perceived more easily than others. Formal sets, for example, are those things which people take for granted and which seem natural: words, buildings, governments, families, the day, the months, and the year. Yet all these dissolve as satisfactory sets once one begins to look at them technically. We cannot think of words without languages, buildings without a civilization, time without periods.

At whatever level, sets are seldom perceived in isolation. Normally they appear in context and as one of many in a series of similar or related events. In the cross-cultural situation the first thing that a person will learn about another society is the existence of certain formal sets. These are either pointed out right away or they are so obvious that they cannot be missed. Yet in many cases the newcomer never gets beyond this first step. For example, he may learn a great many words (or sets) of a foreign language but still use the linguistic isolates of his mother tongue—which gives him an accent. Moreover, he may, without knowing it, fit the foreign words into the constructions, or patterns, of his native tongue—which can render his thoughts unintelligible. To take another example, we in America perceive all makes of cars as automobiles, whereas in certain parts of the Arab world only one make, the Cadillac, is considered an automobile. In such cases the foreigner (i.e., an Arab) feels he has mastered a set quite different from the ones he is familiar with and has the illusion of having understood another culture. In reality only the first hesitant step has been taken. To master a foreign culture it is necessary to master its patterns and isolates as well as its sets.

Sets are limited only by the number of possible combinations of their isolates and patterns. To try to deal with a foreign culture by learning more and more sets is a hopeless task. To collect sets in your mind is easy, but to decipher a pattern is difficult. Talking about sets without bringing in patterns is like talking about bricks without saying anything about houses. Thus, though this chapter is primarily devoted to sets, it is necessary to introduce the concept of pattern frequently.

If people can recognize a pattern, it doesn't much matter what specific events they perceive. These can, in fact, be quite different and still be part of the same pattern, just as

houses are still houses even though made of different materials. Throughout the Middle East, for example, bargaining is an underlying pattern which is significantly different from the activity which goes under that name in our culture. Yet what is perceived on the surface (i.e., Arab methods of bargaining) looks familiar and is assumed to be the same. Nothing could be farther from the truth. Our first mistake is in the assessment of the value of bargaining in the Middle East and the role it plays in everyday life. Americans tend to look down on people who haggle. They restrict their serious trading to houses and automobiles. To the Arab, on the other hand, bargaining is not only a means of passing a day but actually a technique of interpersonal relations. However, it is not just the value placed on bargaining that is different in the Middle East but the pattern as well.

What we perceive on a first visit to an Arab country is a series of interactions that we recognize as something akin to bargaining. That is, we perceive the sets: the actions, the motions, the rises in the tone of voice, increases in loudness, the withdrawal, the handling of the merchandise. With all this going on before our eyes we do not ordinarily reflect on how our own pattern differs from this ostensibly familiar one. The American asks, "What percentage of the asking price shall I give as my first offer?" What he doesn't know is that there are several asking prices. Like the Eskimo who has many different words for snow, the Arab has many different asking prices, each with a different meaning. The American pattern is that the two parties have hidden prices above and below which they will not go, and an asking price which is perceived and thought of as having some sort of fixed relationship to the hidden prices. A more detailed analysis of how this all works will be discussed in Chapter Eight.

To return to sets, the principal point to remember is that

they are the first thing to be observed, their number is unlimited, and the interpretation of their significance depends upon a knowledge of the patterns in which they are used.

There are additional generalizations which one can make about sets, however. These can be of use to the field worker, for they point the way to deeper patterns.

A large part of the vocabulary of a culture is devoted to sets. By looking at the vocabulary you can get a rough idea of the content of a culture and the things that are valued. The fact that we have only one word for snow while the Eskimos have several is a case in point. A highly developed technical vocabulary reflects a technical culture. Americans think nothing of having their advertising filled with words once known only to scientists and engineers, such as chlorophyll, thermonuclear, chloromycetin, cardiovascular, and the like.

The same set may be *valued* differently. The Latin American is likely to ask, if he comes from a place like Venezuela, why we emphasize something so dirty and unpleasant as plumbing. He may even want to know why we put the toilet in the bathroom. In Japan, to take another example, emotion or feeling is ranked very high. They call it *kimochi* or *dojo*. Logic, as we think of it, is ranked low. Our ranking of these two sets is, of course, almost the reverse of the Japanese.

Comparable sets are also composed of different components in different cultures. We think of a set of china as being primarily the dishes, cups, and saucers made from the same material and bearing the same pattern or in the same style. In Japan this does not hold. One of the many sets which I saw in the modern department stores in the Ginza was a "coffee set" in a box. It included six cups, six saucers, six spoons (all china), one aluminum percolator (kitchen variety), one cut-glass cream pitcher, and one plain

sugar bowl with a plastic top. In the United States, no stretch of the imagination could put these diverse items in the same set.

Another important point is that the same sets are *classified differently* as one moves about the globe. This provides us with some additional stumbling blocks and gives us the illusion that we are really learning something different. In English, nouns are not classified as to sex. In Arabic, they are. You have to know the sex of the noun if you are to use it properly. We, on the other hand, classify everything into animate and inanimate, which would mean that a Trobriand Islander who does not make these distinctions would have to remember every time he referred to something whether we thought it was alive or not. He would also experience some difficulty with our animal and vegetable classifications, because he conceives of vegetables as being like animals and able to migrate from one garden to the next. (A good gardener to him is like a shepherd who is able to keep his own vegetables home and possibly even to entice a few, but not too many, of his neighbor's vegetables to enter his garden.)

English also has mass and non-mass nouns. Mass nouns comprise such things as sand, snow, flour, and grass. They are indicated by the phrase, "Give me some—." Non-mass nouns include such objects as man, dog, thimble, and leaf. The phrase, "Give me a —" is the linguistic clue to their existence. The foreigner always has to learn, pretty much by rote, which nouns are mass and which are not. Grass is, leaf isn't; there is no known consistent logic as to why a noun exists in one category and not another. In fact, it is true of sets generally that there is a good deal of plain old repetitious learning involved in their use. Vocabulary, wherever and however you find it, always has to be memorized.

We also distinguish between the various states of things—that is, whether they are active or passive. How the person

speaking relates to natural events also varies. We say, "I'll see you *in* an hour." The Arab says, "What do you mean, 'in an hour'? Is the hour like a room, that you can go in and out of it?" To him his own system makes sense: "I'll see you before one hour," or "I'll see you after one week." We go out *in* the rain. The Arab goes *under* the rain.

Not only are sets classified, but they are broken down into further categories. An analysis of the number of sets in a given category can sometimes tell you the relative importance of an item in the over-all culture. The first person to speak scientifically about this trait was Franz Boas in his discussion of such things as the Eskimo's use of several different "nouns" for the many states of snow. In our culture one can get some idea of the importance of women by examining the tremendous proliferation of synonyms for females, particularly the young ones—cupcake, doll, flame, skirt, tomato, queen, broad, bag, dish, twist, to mention only a few. Each indicates a different variety or a subtle distinction in the ranking scale.

An additional attribute of sets, indicated by the above, is that they are almost always ranked within their category. The ranking, of course, varies as one moves about. White men are ranked above Negroes in the United States. In Liberia it's the other way around. In fine watchmaking, gold is ranked above steel when elegance or social display is the goal. If one is a sportsman, steel may take precedence. To the American public as a whole, Cadillac ranks Buick, which ranks Chevrolet.

As a matter of fact, the ranking of sets is so subtle that one has to be more specific. It is not enough to say that sets are ranked. The categories of rankings, which reveal a pattern themselves, are of equal importance. In essence there are three different ways in which the set is ranked: (a) formally as a traditional item in a system of valued sets (lead,

copper, gold, platinum); (b) informally, according to the taste of the observer or the demands of a situation (rare, medium, well-done steaks; red, green, blue, yellow); (c) technically, as points in a pattern: "Potatoes are selling for \$5.00 a lot; yesterday they went for \$4.95." The pattern in this case is the so-called law of supply and demand. On the Trobriand Islands a comparably comestible item like the yam was valued according to a completely different pattern. It was ranked according to its size, shape, when it was harvested, and who was to receive it. Supply and demand had nothing to do with the case.

Americans treat colors informally as a whole—that is, situationally. We may use a spot of yellow or of red, or yellow and red to accent a gray wall. We would be unlikely to put the yellow and the red next to each other. The colors in themselves have little or no value. If they do the criterion is taste. To the Navajo the situation is quite different; colors are ranked just as we rank gold and silver—only more intensely. Not realizing this caused considerable embarrassment to a number of Indian Service employees years ago. In their attempt to bring "democracy" to the Indians these well-meaning souls tried to introduce a system of voting among the Navajo. Unfortunately a great many Navajo were illiterate, so someone conceived of the idea of assigning the various candidates for the tribal council different colors so that the Navajo could go into the booth and check the color he wanted. Since blue is a good color and red bad, the result was to load the dice for some candidates and against the others. Nowadays photographs are used on the ballots.

Though Westerners tend to be impressed by big numbers and have an aversion to thirteen, one number is as good as the next now that superstition has dwindled away. Numbers only become meaningful in a technical context. The Japanese, however, have numbers that mean good luck, wealth,

bankruptcy, and death. This fact complicates the Japanese telephone system. Good numbers bring a high price, unlucky ones are palmed off on foreigners.

It is quite clear then that one of the readily perceivable differences between cultures is the category to which a set is assigned and, once it is assigned, how it is treated: formally, informally, or technically.

In summary, we might point out that the only meaning which can be assigned to sets as sets is what we can call *demonstrational* meaning: This is a "dog"; that is a "man"; there goes an "airplane." By themselves, sets are neutral. In patterns, on the other hand, sets take on all sorts of more complex types of meaning. The most thorough analysis of sets in patterns has been carried on in the study of semantics, which is concerned with the meaning of words in various contexts. Though semantic studies have made remarkable progress they still have far to go. Their principal defect, as they are now conducted, is that the patterns are taken for granted.

chapter

seven

THE

ILLUSIVE

ISOLATE

If the set is that aspect of existence which is most readily perceivable by man and the pattern is the organizational plan which gives it meaning, *the isolate is an illusive abstraction*, almost a phantom. It is the element which goes to make up a set, yet, paradoxically, the moment one begins to examine the set closely for its isolates the distinction between sets and isolates dissolves. To be sure, the isolates will reveal themselves, but as soon as they are clearly perceived, they are seen to be sets on their own level. This transition from set to isolate to set is of great importance. It has caused innumerable problems for the scientist, because when the transition occurs the whole perceptual structure changes. Even the old sets become something different. For example, a set which we call a "word" is perceived. Yet, when it is broken down into its component sounds which are the isolates, we find that the word as it was thought of originally