

at the *structure* of culture and develop a perspective on how to analyze the complex cultural landscape we encounter. In the next four chapters I will develop a "model" of the structure of culture. We will analyze several organizational cultures, illustrate how nested they are in larger cultural units. Chapter 1 gives a dynamic definition of culture. Chapter 2 describes the basic three-level model of the "structure" of culture that will be used throughout the rest of the book. In Chapter 3 this model is illustrated with Digital Equipment Corporation, a U.S. computer company that I encountered in its early growth period and in which I could, therefore, observe the growth and evolution of a culture. In Chapter 4 I describe Ciba-Geigy, an old Swiss-German chemical company, that illustrates some of the problems of a mature industry in a very different technology and the impact of national culture. In Chapter 5 I describe the Singapore Economic Development Board, which illustrates both a fusion of Western and Asian national cultures and an organization in the public sector. The cases are intended to highlight that cultures are *learned patterns of beliefs, values, assumptions, and behavioral norms that manifest themselves at different levels of observability*.

1

HOW TO DEFINE CULTURE IN GENERAL

The Problem of Defining Culture Clearly

Culture has been studied for a long time by anthropologists and sociologists, resulting in many models and definitions of culture. Some of the ways that they have conceptualized the essence of culture illustrate the breadth as well as the depth of the concept. Most of the categories that follow refer primarily to *macro* cultures such as nations, occupations, or large organizations but some are also relevant to *micro* or subcultures. As you will see from the pattern of references, many researchers use several of these definitional categories, and they overlap to a considerable degree. Culture as we will see exists at many levels of "observability." The categories are arranged roughly according to the degree to which you, as an observer, will be able to see and feel those cultural elements when you observe an organization or group.

- **Observed behavioral regularities when people interact:** The language they use along with the regularities in the interaction such as "Thank you" followed by "Don't mention it," or "How is your day going so far," "Just fine." Observed interaction patterns, customs, and traditions become evident in all groups in a variety of situations (e.g., Goffman, 1959, 1967; Jones, Moore, & Snyder, 1988; Trice & Beyer, 1993; Van Maanen, 1979).
- **Climate:** The feeling that is conveyed in a group by the physical layout and the way in which members of the organization interact with each other, with customers, or with other outsiders. Climate is sometimes included as an artifact of culture and is sometimes kept as a separate phenomenon

to be analyzed (e.g., Ashkanasy, Wilderom, & Peterson, 2000; Schneider, 1990; Tagiuri & Litwin, 1968; Ehrhart, Schneider, & Macey, 2014).

- **Formal rituals and celebrations:** The ways in which a group celebrates key events that reflect important values or important "passages" by members such as promotion, completion of important projects, and milestones (Trice & Beyer, 1993; Deal & Kennedy, 1982, 1999).
- **Espoused values:** The articulated, publicly announced principles and values that the group claims to be trying to achieve, such as "product quality," "price leadership," or "safety" (e.g., Deal & Kennedy, 1982, 1999). Many companies in Silicon Valley such as Google and Netflix announce their culture in terms of such values in all of their recruiting materials and in books about themselves (Schmidt & Rosenberg, 2014).
- **Formal philosophy:** The broad policies and ideological principles that guide a group's actions toward stockholders, employees, customers, and other stakeholders such as the highly publicized "HP way" of Hewlett-Packard or, more recently, the explicit statements about culture in Netflix and Google (e.g., Ouchi, 1981; Pascale & Athos, 1981; Packard, 1995; Schmidt & Rosenberg, 2014).
- **Group norms:** The implicit standards and values that evolve in working groups, such as the particular norm of "a fair day's work for a fair day's pay" that evolved among workers in the Bank Wiring Room in the classic Hawthorne studies (e.g., Homans, 1950; Kilmann & Saxton, 1983).

- **Rules of the game:** These are the implicit, unwritten rules for getting along in the organization, "the ropes" that a newcomer must learn to become an accepted member, "the way we do things around here" (e.g., Schein, 1968, 1978; Van Maanen, 1976, 1979b; Ritti & Funkhouser, 1987; Deal & Kennedy, 1999).
- **Identity and images of self:** How the organization views itself in terms of "who we are," "what is our purpose," and "how we do things" (e.g., Schultz, 1995; Hatch, 1990; Hatch & Schultz, 2004).
- **Embedded skills:** The special competencies displayed by group members in accomplishing certain tasks, the ability to make certain things that get passed on from generation to generation without necessarily

being articulated in writing (e.g., Argyris & Schon, 1978; Cook & Yanow, 1993; Peters & Waterman, 1982; Ang & Van Dyne, 2008).

- **Habits of thinking, mental models, or linguistic paradigms:** The shared cognitive frames that guide the perceptions, thoughts, and language used by the members of a group and are taught to new members in the socialization or "onboarding" process as it is now often called (e.g., Douglas, 1986; Hofstede, 1991, 2001, Hofstede, Hofstede, & Minkov, 2010; Van Maanen, 1979).
- **Shared meanings:** The emergent understandings that are created by group members as they interact with each other where the same words used in different cultures can have very different meanings (e.g., Geertz, 1973; Smircich, 1983; Van Maanen & Barley, 1984; Weick, 1995; Weick & Sutcliffe, 2001; Hatch & Schultz, 2004).
- **"Root metaphors" or integrating symbols:** The ways that groups evolve to characterize themselves, which may or may not be appreciated consciously but become embodied in buildings, office lay-outs, and other material artifacts of the group. This level of the culture reflects the emotional and aesthetic response of members as contrasted with the cognitive or evaluative response (e.g., Gagliardi, 1990; Hatch, 1990; Pondy, Frost, Morgan, & Dandridge, 1983; Schultz, 1995).

I have provided these many ways of defining culture to give you a sense that culture covers pretty much everything that a group has learned as it has evolved. When we look at macro cultures (e.g., nations or occupations) and want to describe their cultures, we need all of these specific concepts to capture their culture. However, in moving toward a usable definition of culture that you can apply to the organizations and groups that you will encounter and that you will want to decipher, we need a more integrative dynamic definition that highlights how culture forms and evolves in organizations, subcultures, and micro systems. The foregoing categories will help to define the content of a given culture, but defining them has to be a more dynamic holistic process.

The reason for such a formal definition at this point is to forewarn you that you will find many groups of various sizes with different shared patterns that must be understood on their own terms. You will see articles about how to change or even create cultures that don't agree with each

A Dynamic Definition of Culture

The culture of a group can be defined as the accumulated shared learning of that group as it solves its problems of external adaptation and internal integration, which has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, feel, and behave in relation to those problems.

This accumulated learning is a pattern or system of beliefs, values, and behavioral norms that come to be taken for granted as basic assumptions and eventually drop out of awareness.

other or that don't make sense. This definition is deliberately focused on the general process of how any culture is learned and will evolve, but in practice you will have to focus on different elements of that formal definition to make sense of the particular organizational situation you encounter. So let's expand on and explain the importance of each component of that definition in preparation for the more detailed analysis of these elements that occur later on in this book.

Accumulated Shared Learning

The most important element of the definition is to note that culture is a shared product of shared learning (Edmondson, 2012). If you understand that culture is a shared product of shared learning, you will realize several important corollaries that make culture complex. To fully understand a given group's culture, we will need to know what kind of learning has taken place, over what span of time, and under what kinds of leadership. Deciphering such history is impossible with preliterate culture, nations, and some occupations; however, with contemporary organizations and work groups, it is possible and fruitful to begin culture analysis with historical analysis. I will keep referring to "the group," but I mean this to include organizations of all kinds as well.

If learning is shared, all the group forces of identity formation and cohesion come into play in stabilizing that learning because it comes to define for the group who we are and what is our purpose or "reason to be." The various components of what is learned then become a pattern of beliefs and values that give meaning to the daily activities and work of the group. If the

group is successful in achieving its purpose and is internally well organized, it will come to take these beliefs and values along with the accompanying behavioral norms for granted and will teach them to newcomers as the way to think, feel, and behave. In many ways this can be thought of as the group's sense of identity, which has both an external component of how the organization presents itself to the outside and an internal component of what its inner sense of itself is.

Basic Taken-for-Granted Assumptions—The Cultural DNA

The earliest shared learning provides meaning and stability and becomes, in a sense, the cultural DNA: the beliefs, values, and desired behaviors that launched the group and made it successful. This early level of beliefs, values, and desired behavior becomes nonnegotiable and turns into taken-for-granted basic assumptions that subsequently drop out of awareness. Such assumptions come to be very stable, serving as the source of later ways of doing things and elaborating the culture. What needs to be mentioned here is that these elements, learned early and composing the cultural DNA, are the source of the group's stability and cannot be changed without changing the group altogether. This point has to be understood at the outset because culture-change programs can work only if they are consistent with the group's cultural DNA.

Solving Problems of External Adaptation and Internal Integration

One of the most consistent findings of the study of groups and organizations is that leaders and members differentiate the "task" of the group from the question of "how we will organize and maintain ourselves as a group." This arbitrary distinction has taken many forms, such as the "managerial grid," which separately measures the degree of concern for task and of concern for people, leading to an "ideal" of maximizing both (Blake & Mouton, 1964, 1969; Blake, Mouton, & McCauley, 1989). In extensive studies of problem-solving groups, it was discovered that two kinds of leadership evolved and were necessary for long-range group performance: a task leader and a social-emotional leader who were usually different people within the group (Bales, 1958).

Studies of effective organizations have always shown that successful performance and effective learning hinge on not separating these two dimensions, thinking instead in terms of "socio-technical systems," in which the external and internal are at least aligned if not integrated. In business organizations, this issue has shown up in concern for a "scorecard" or a "double bottom line" that emphasizes the need for paying attention to both the economic health of the organization and the internal organizational health that allows it to function and maintain itself (Kaplan & Norton, 1992).

One of the great dangers inherent in culture-change programs is to assume that strategy and the external adaptation issues are somehow separate from culture and to focus the desired culture changes just on the internal mechanisms by which a group makes life pleasant for itself. All the emphasis recently on analyzing which company to work for creates the risk that you will go to the best company but will be out of a job in a few years because that same company did not understand that its strategy was also part of its culture and failed to evolve that strategy according to the changing needs of the situation (Friedman, 2014).

Solutions That Have Worked Well Enough to Be Considered Valid

Groups are created for a purpose. We huddle together for safety or security or to get something done, and the group's survival depends on the degree to which it accomplishes its purpose. Groups do not exist in isolation. To get something done requires some kind of action in the various environments in which the group is embedded. As the group acts, it gets feedback on whether or not it is accomplishing its purpose. If it succeeds and continues to succeed, the beliefs, values, and behavior patterns that launched the group will become taken for granted as the way to continue. With age and continued success, those beliefs and values will become part of the identity of the group and will automatically be taught to newcomers as "this is who we are, this is what we do, and these are our beliefs." Whereas those values and beliefs might have been debated at the launching of the group, they become nonnegotiable and are treated as "assumptions" that new members are expected to adopt as the price of admission to the group.

Perception, Thought, Feeling, and Behavior

As a group grows, has success, and develops an identity, the shared learning process broadens from just the minimum behavior we need to agree on to get the job done to a language, a way to think, and a way to feel. When a company is founded, there will be a common interest focused on the technology, the product or service, and the occupational competencies required to perform. This means that some common ways of thinking and perceiving are present at the outset by the common decision to be a group and do something together.

With success and further shared experience the group develops its own "jargon," often expressed as shorthand and acronyms, forms of humor, and expressions that symbolize some of the essence of the shared experience. In Digital Equipment Corporation (DEC), a company that we will be referring to frequently, the phrase "Do the right thing" symbolized the value of technical honesty, openness, and really solving the customer's problems. In Apple the phrase was "Do your own thing," which meant feel free to contribute in the best way you can but express yourself personally, which, at the time, meant "decorate your office any way you want, bring your pet to work, but do the job well."

We tend to think of culture as mostly behavioral (i.e., "This is how we do things around here") and forget that with time and shared learning we come to share how we talk, what we perceive in our relevant environment, how we think about it, and what makes us feel good or bad. The longer the organization has existed, the more the thoughts and emotions of the members come to be alike. This process is most visible at the national level, where we find that subsidiaries of companies that move to new countries have great difficulty in functioning efficiently because of differences in language, thought, and emotional processes. In some companies the corporate culture is so strong and well embedded that the local offices in different countries look like and function exactly the same way as the headquarters organization.

I was once asked to describe the culture of the Swiss-German company Ciba-Geigy to the U.S. subsidiary in New Jersey. I had studied this culture in Basel and gave my Basel speech in New Jersey, which elicited the shocked response: "My God, you have just described us perfectly!"

What You Imply When You Use the Word Culture

The concept of culture implies structural stability, depth, breadth, and patterning or integration that results from the fact that culture is for the group a learned phenomenon just as personality and character are for individuals learned phenomena.

Structural Stability. Culture implies some level of structural stability in the group. When we say that something is "cultural," we imply that it is not only shared but is also stable because it defines the group. I have referred to this as "basic assumptions" and cultural DNA. After we achieve a sense of group identity, which is a key component of culture, it is our major stabilizing force and will not be given up easily. Culture is something that survives even when some members of the organization depart. Cultural DNA is hard to change because group members value stability because it provides meaning and predictability.

At the same time, the more surface elements of culture are defined by the interaction among the group members. The more ritualized of those interactions support the DNA and provide additional stability, but as new conditions arise and as new members with different beliefs, values, and norms enter the group, there will inevitably be both reinforcement and change as new solutions are invented for the problems of internal and external survival. Culture is both stable and dynamic, just as our body is stable if we think of the skeleton and skin and organs but constantly changing if we think of cells and the various bodily processes. The stable parts like our bones can change but not easily or rapidly unless extreme circumstances cause "breaks." When companies go bankrupt or are taken over by a turnaround manager, the cultural DNA can be destroyed and a new organization can be launched.

Depth. The basic assumptions of a culture are the deepest, often unconscious part of a group and are, therefore, less tangible and less visible. From this point of view, many of the definitions of culture that I reviewed focus too much on the visible manifestations of culture, but they are not the "essence" of what we mean by culture. This essence, best thought of as the cultural DNA, consists of the taken-for-granted, nonnegotiable beliefs, values, and behavioral assumptions. When something is more deeply embedded, that also lends stability.

Breadth. A third characteristic of culture is that after it has developed, it covers all of a group's functioning. Culture is pervasive and influences all aspects of how an organization deals with its primary purpose, its various environments, and its internal operations. As we have pointed out previously, the most common mistake is to limit the concept to the internal workings of the group while forgetting that culture also covers mission, strategy, structure, and basic operational processes. All of these have been the product of shared learning and will limit the kinds of changes the organization can make.

Patterning or Integration. The fourth characteristic that is implied by the concept of culture and that further lends stability is patterning or integration of the elements into a larger paradigm or "gestalt" that ties together the various elements at a deeper level. Culture implies that rituals, values, and behaviors are tied together into a coherent whole, and this pattern or integration is the essence of what we mean by "culture." Such patterning or integration ultimately derives from the human need to make our environment as sensible and orderly as we can (Weick, 1995). Because disorder or senselessness makes us anxious, we will work hard to reduce that anxiety by developing a more consistent and predictable view of how things are and how they should be. "Organizational cultures, like other cultures, develop as groups of people struggle to make sense of and cope with their worlds" (Trice & Beyer, 1993, p. 4).

However, we will also discover that within the cultural DNA one finds conflicting themes based on different things learned at different times and in different ways. Furthermore, as organizations evolve and develop subgroups, those subgroups develop their own subcultures, which may conflict with each other or with the larger "corporate culture." As we will see, cultural dynamics can become very complicated.

Taught to New Members: The Process of Socialization or Acculturation

After a group has developed a culture, it will pass elements of this culture on to new generations of group members (Louis, 1980; Schein, 1968; Van Maanen, 1976; Van Maanen & Schein, 1979). Studying what new

members of groups are taught is, in fact, a good way to discover some of the elements of a culture, but we learn about surface aspects of the culture only by this means. This is especially so because much of what is at the heart of a culture will not be revealed in the rules of behavior taught to newcomers. It will be revealed to members only as they gain permanent status and are allowed into the inner circles of the group, where group secrets then are shared.

However, the way people learn and the socialization processes to which they are subjected may indeed reveal deeper assumptions. To reach those deeper levels, we must try to understand the perceptions and feelings that arise in critical situations, and we must observe and interview regular members or "old timers" to get an accurate sense of the deeper-level assumptions that are shared.

Can culture be learned through anticipatory socialization or self-socialization? Can new members discover for themselves what the basic assumptions are? Yes and no. We certainly know that one of the major activities of any new member when she or he enters a new group is to try to decipher the operating norms and assumptions. But this deciphering will be successful only through experiencing the rewards and punishments that are meted out by long-standing members to new members as they experiment with different kinds of behavior. In this sense, there is always a teaching process going on, even though it may be quite implicit and unsystematic.

If the group has not evolved to the point of having shared assumptions, as will sometimes be the case, the new members' interaction with old members will be a more creative process of building a culture. But once shared assumptions exist, the culture survives through teaching those assumptions to newcomers. In this regard, culture is a mechanism of social control and can be the basis of explicitly manipulating members into perceiving, thinking, and feeling in certain ways (Van Maanen & Kunda, 1989; Kunda, 1992, 2006). Whether or not we approve of this as a mechanism of social control is a separate question that will be addressed later.

Can Culture Be Inferred from Behavior Alone?

Note that the definition of culture that I have given does not include overt behavior patterns, though some such behavior, especially formal rituals,

would reflect cultural assumptions. Instead, this definition emphasizes that the shared assumptions deal with how we perceive, think about, and feel about things. We cannot rely on overt behavior alone, because it is always determined both by the cultural predisposition (i.e., the shared perceptions, thoughts, and feelings that are patterned) and by the situational contingencies that arise from the immediate external environment.

Behavioral regularities can occur for reasons other than culture. For example, if we observe that all members of a group cower in the presence of a large and loud leader, this could be based on biological-reflex reactions to sound and size, individual learning, or shared learning. Such a behavioral regularity should not, therefore, be the basis for defining culture, though we might later discover that, in a given group's experience, cowering is indeed a result of shared learning and therefore a manifestation of deeper shared assumptions. Or, to put it another way, when we observe behavioral regularities, we do not know whether or not we are dealing with a cultural manifestation. Only after we have discovered the deeper layers that I am defining as the essence or DNA of culture can we specify what is and what is not an "artifact" that reflects the culture.

Do Occupations Have Cultures?

The definition provided previously does not specify the size or location of the social unit to which it can legitimately be applied. We know that nations, ethnic groups, religions, and other kinds of social units have cultures. I call these *macro* cultures. Our experience with large organizations also tells us that even globally dispersed corporations such as IBM or Unilever have corporate cultures in spite of the obvious presence of many diverse subcultures within the larger organization.

But it is not clear whether it makes sense to say that medicine or law or accounting or engineering has cultures. If culture is a product of joint learning leading to shared assumptions about how to perform and relate internally, we can see clearly that many occupations do evolve cultures. If there is strong socialization during the education and training period and if the beliefs and values learned during this time remain stable as taken-for-granted assumptions even though the person may not be in a group of occupational peers, then clearly those occupations have cultures. For

most of the occupations that will concern us, these cultures are global to the extent that members are trained in the same way to the same skill set and values. However, we will find that the macro cultures, the nations and religions in which members of those occupations practice, also influence how the occupations are defined—that is, how engineering or medicine is practiced in a particular country. These variations make it that much more difficult to decipher in a hospital, for example, what is national, ethnic, occupational, or organizational.

Where Does Leadership Come In?

Leadership is the key to learning. Learning occurs when something expected is not happening and the individual or the group feels hungry, hurt, disappointed, or in some other way “disconfirmed.” If we are talking about culture formation, learning occurs through the leadership of a founder or entrepreneur who uses his or her personal power to demand some new behavior directed toward achieving some purpose. If the group gets into difficulty, it will again be leadership that will propose something new to try to get out of the difficulty. If the group is successful, the culture will define what is expected of its formal leaders. If the group then gets into difficulty again, formal leaders or other members of the group will demonstrate or demand some new behavior to solve the problem, which may evolve the culture.

The learning mechanism will vary with the nature of the difficulty. If the group is not doing something that it should be doing, the leader provides it; and if the group succeeds, that behavior is reinforced and is eventually justified with the appropriate beliefs and values. If the group is doing something wrong that produces undesirable results, that behavior is punished by the other cultures in the environment and the group learns never to do that again. But again, the learning of something new or stopping something inappropriate will be mediated by leadership behavior. This will be explored further in the subsequent chapters.

Summary and Conclusions

To summarize, the most useful way to arrive at a definition of something as abstract as culture is to think in dynamic evolutionary terms, to think of culture as what the group has learned in its efforts to survive, grow, deal

with its external environment, and organize itself. If we can understand where culture comes from and how it evolves, we can grasp something that is abstract, that exists in a group's unconscious, yet that has a powerful influence on a group's behavior.

Any social unit that has some kind of shared history will have gone through such a learning process and will have evolved a culture. The strength of that culture depends on the length of time, the stability of membership of the group, and the emotional intensity of the actual historical learning experiences they have shared. As we will see in the case examples, leadership is involved in the creation of the culture and at every stage of the organization's growth and maturity.

Suggestions for Readers

- If you are a scholar or researcher, before you plunge into your research consider that you are about to study a complex, patterned, multifaceted human socio-technical system and decide what it is you are really trying to find out, what research method you will use, and how that research method might affect the system.
- If you are a student or potential employee, ask the recruiter about the history of the company and ask to meet some "old timers" to get their sense of how the company came to be.
- If you are a change leader, ask yourself the following question: If the group or organization I am trying to change has a learning history, what can I learn about that history before I begin to plan changes?
- If you are a consultant or helper who has been asked to build or change culture, be sure to ask the potential client what he or she has in mind and get as concrete a picture as possible of what problems the client is trying to solve before you agree to anything.

2

THE STRUCTURE OF CULTURE

Culture in general can be analyzed at several different levels, with the term "level" meaning the degree to which the cultural phenomenon is visible to you as participant or observer. These levels range from the very tangible, overt manifestations that you can see and feel to the deeply embedded, unconscious, basic assumptions that we are defining as the essence of culture or its DNA. In between these layers are various espoused beliefs, values, norms, and rules of behavior that members of the culture use as a way of depicting the culture to themselves and others. The three major levels of cultural analysis are shown in Figure 2.1.

Three Levels of Analysis

Artifacts—Visible and Feelable Phenomena

We think of artifacts as the phenomena that you would see, hear, and feel when you encounter a new group with an unfamiliar culture. Artifacts include the visible products of the group, such as the architecture of its physical environment; its language; its technology and products; its artistic creations; its style, as embodied in clothing, manners of address, and emotional displays; its myths and stories told about the organization; its published lists of values; and its observable rituals and ceremonies.

Among these artifacts is the "climate" of the group. Some culture analysts see climate as the equivalent to culture, but it is better thought of as the product of some of the underlying assumptions and is, therefore, a manifestation of the culture. Observed behavior routines and rituals are also artifacts, as are the organizational processes by which such behavior is made routine. Structural elements such as charters, formal descriptions of how the organization works, and organization charts also belong to the artifact level.

Figure 2.1 The Three Levels of Culture

1. **Artifacts**
 - Visible and feelable structures and processes
 - Observed behavior
 - Difficult to decipher
2. **Espoused Beliefs and Values**
 - Ideals, goals, values, aspirations
 - Ideologies
 - Rationalizations
 - May or may not be congruent with behavior and other artifacts
3. **Basic Underlying Assumptions**
 - Unconscious, taken-for-granted beliefs and values
 - Determine behavior, perception, thought, and feeling

The most important point to be made about this level of the culture is that it is both easy to observe and very difficult to decipher. The Egyptians and the Mayans both built highly visible pyramids, but the meaning of pyramids in each culture was very different—tombs in one, temples as well as tombs in the other. In other words, observers can describe what they see and feel but cannot reconstruct from that alone what those things mean to the given group. If you are entering a new culture, you will observe lots of things that may or may not make sense to you, and you will not have the insight to figure them out without asking insiders some questions.

It is especially dangerous to try to infer the deeper assumptions from artifacts alone, because your interpretations will inevitably be projections of your own cultural background. For example, when you see a very informal, loose organization, you may interpret that as “inefficient” if your own background is based on the assumption that informality means playing around and not working. Alternatively, if you see a very formal organization, you may interpret that to be a sign of “lack of innovative capacity,” if your own experience is based on the assumption that formality means bureaucracy and standardization.

If you live in the group long enough, the meanings of artifacts gradually become clear and people explain to you “why we do it that way.” If, however, you want to achieve this level of understanding more quickly, you

must ask insiders why they do what they do? You will then get what we are calling the espoused beliefs and values.

Espoused Beliefs and Values

All group learning ultimately reflects someone's original beliefs and values—his or her sense of what ought to be, as distinct from what is. When a group is first created or when it faces a new task, issue, or problem, the first solution proposed to deal with it reflects some individual's own assumptions about what is right or wrong, what will work or will not work. Those individuals who prevail, who can influence the group to adopt a certain approach to the problem, will later be identified as leaders or founders, but the group does not yet have any shared knowledge as a group because it has not yet taken a common action in reference to whatever it is supposed to do. Whatever is proposed will be perceived only as what the leader wants. Until the group has taken some joint action and together observed the outcome of that action, there is not as yet a shared basis for determining whether what the leader wants will turn out to be valid.

For example, if sales begin to decline in a young business, a manager may say, “We must increase advertising” because of her belief that advertising always increases sales. The group, never having experienced this situation before, will hear that assertion as a statement of that manager's beliefs and values: “She believes that when one is in sales trouble it is a good thing to increase advertising.” What the leader initially proposes, therefore, cannot have any status other than a value to be questioned, debated, challenged, and tested. If the manager convinces the group to act on her belief and the solution works, then the perceived value that “advertising is good” gradually becomes transformed, first into a shared value or belief and ultimately into a shared assumption (if actions based on it continue to be successful). If this transformation process occurs, group members will usually forget that originally they were not sure and that the proposed course of action was, at an earlier time, just a proposal to be debated and confronted.

Not all beliefs and values undergo such transformation. First of all, the solution based on a given value may not work reliably. Only those beliefs and values that can be empirically tested and that continue to work reliably in solving the group's problems will become transformed into assumptions.

Second, certain value domains—those dealing with the less controllable elements of the environment or with aesthetic or moral matters—may not be testable at all. In such cases, consensus through social validation is still possible, but it is not automatic. Third, the strategy and goals of the organization may fall into this category of espoused beliefs in that there may be no way of testing them except through consensus, because the link between performance and strategy may be hard to prove.

Social validation means that certain beliefs and values are confirmed only by the shared social experience of a group. For example, any given culture cannot prove that its religion and moral system are superior to another culture's religion and moral system, but if the members reinforce each other's beliefs and values, they come to be taken for granted. Those who fail to accept such beliefs and values run the risk of "excommunication," of being thrown out of the group. The test of whether they work or not is how comfortable and anxiety-free members are when they abide by them. In these realms, the group learns that certain beliefs and values, as initially promulgated by prophets, founders, and leaders, "work" in the sense of reducing uncertainty in critical areas of the group's functioning. Moreover, as they continue to provide meaning and comfort to group members, they also become transformed into non-discussible assumptions even though they may not be correlated with actual performance.

The espoused beliefs and moral or ethical rules remain conscious and are explicitly articulated because they serve the normative or moral function of guiding members of the group as to how to deal with certain key situations as well as in training new members how to behave. Such beliefs and values often become embodied in an ideology or organizational philosophy, which then serves as a guide to dealing with the uncertainty of intrinsically uncontrollable or difficult events.

If the beliefs and values that provide meaning and comfort to the group are not congruent with the beliefs and values that correlate with effective performance, we will observe in many organizations espoused values that reflect the *desired* behavior but are not reflected in *observed* behavior (Argyris & Schon, 1978, 1996). For example, a company's ideology may say that it values people and that it has high quality standards for its products, but its actual record in that regard may contradict what it says. In U.S. organizations, it is common to espouse teamwork while actually rewarding

individual competitiveness. Hewlett-Packard's highly touted "The HP way" (Packard, 1995) espoused consensus management and teamwork, but in its computer division, engineers discovered that to get ahead they had to be competitive and political.

So in analyzing espoused beliefs and values, you must discriminate carefully among those that are congruent with the underlying assumptions that guide performance, those that are part of the ideology or philosophy of the organization, and those that are rationalizations or only aspirations for the future. Often espoused beliefs and values are so abstract that they can be mutually contradictory, as when a company claims to be equally concerned about stockholders, employees, and customers, or when it claims both highest quality and lowest cost. Espoused beliefs and values often leave large areas of behavior unexplained, leaving us with a feeling that we understand a piece of the culture but still do not have the entire culture in hand. To get at that deeper level of understanding, to decipher the pattern, and to predict future behavior correctly, we have to understand more fully the category of basic assumptions.

Taken-for-Granted Underlying Basic Assumptions

When a solution to a problem works repeatedly, it comes to be taken for granted. What was once a hypothesis, supported only by a hunch or a value, gradually comes to be treated as a reality. We come to believe that nature really works this way. Basic assumptions, in this sense, are different from what some anthropologists have called "dominant value orientations," in that such dominant orientations reflect the preferred solution among several basic alternatives, but all the alternatives are still visible in the culture, and any given member of the culture could, from time to time, behave according to variant as well as dominant orientations (Kluckhohn & Strodtbeck, 1961). In the United States, the preferred solution is clearly individualism, but teamwork as a means to an end is accepted.

Basic assumptions, in the sense defined here, have become so taken for granted that you find little variation within a social unit. This degree of consensus results from repeated success in implementing certain beliefs and values, as previously described. In fact, if a basic assumption comes to be strongly held in a group, members will find behavior based on any other

premise inconceivable. For example, in a group whose basic assumption is that the individual's rights supersede those of the group, members find it inconceivable to commit suicide or in some other way to sacrifice themselves to the group even if they had dishonored the group. In a capitalist country, it is inconceivable that someone might design a business organization to operate consistently at a financial loss or that it does not matter whether or not a product works.

In an occupation such as engineering, it is inconceivable to deliberately design something that is unsafe; it is a taken-for-granted assumption that things should be safe. Basic assumptions, in this sense, are similar to what Argyris and Schon (1996) identified as "theories-in-use"—the implicit assumptions that actually guide behavior, that tell group members how to perceive, think about, and feel about things. Basic assumptions, like theories-in-use, are generally non-confrontable and non-debatable and hence are extremely difficult to change. To learn something new in this realm requires us to resurrect, reexamine, and possibly change some of the more stable portions of our cognitive structure, a process that Argyris and others have called "double-loop learning," or "frame breaking" (Argyris & Schon, 1974, 1996).

Such learning is intrinsically difficult because the reexamination of basic assumptions temporarily destabilizes our cognitive and interpersonal world, releasing large quantities of basic anxiety. Rather than tolerating such anxiety levels, we tend to want to perceive the events around us as congruent with our assumptions, even if that means distorting, denying, projecting, or in other ways falsifying to ourselves what may be going on around us. It is in this psychological process that culture has its ultimate power.

Culture as a set of basic assumptions defines for us what to pay attention to, what things mean, how to react emotionally to what is going on, and what actions to take in various kinds of situations. After we have developed and integrated a set of such assumptions, we will have created a "thought world" or "mental map." We will then be most comfortable with others who share the same set of assumptions and very uncomfortable and vulnerable in situations where different assumptions operate because either we will not understand what is going on, or, worse, we will misperceive and misinterpret the actions of others (Douglas, 1986; Bushe, 2009).

Culture at this level provides its members with a basic sense of identity and defines the values that provide self-esteem (Hatch & Schultz, 2004). Cultures tell their members who they are, how to behave toward each other, and how to feel good about themselves. Recognizing these critical functions makes us aware why "changing" culture is so anxiety provoking.

To illustrate how unconscious assumptions can distort data, consider the following example. If we assume, on the basis of past experience or education, that other people will take advantage of us whenever they have an opportunity, we expect to be taken advantage of, and we then interpret the behavior of others in a way that coincides with those expectations. If we assume that it is human nature to be basically lazy, and if we observe people sitting in a seemingly idle posture at their desk, we will interpret their behavior as "loafing" rather than "thinking out an important problem." We will perceive absence from work as "shirking" rather than "doing work at home."

If this is not only a personal assumption but also one that is shared and thus part of the culture of an organization, we will discuss with others what to do about our "lazy" workforce and institute tight controls to ensure that people are at their desks and busy. If employees suggest that they do some of their work at home, we will be uncomfortable and probably deny the request because we will figure that at home they would loaf (Bailyn, 1992; Perin, 1991).

In contrast, if we assume that everyone is highly motivated and competent, we will act in accordance with that assumption by encouraging people to work at their own pace and in their own way. If we see people sitting quietly at their desks, we will assume that they are thinking or planning. If someone is discovered to be unproductive in such an organization, we will make the assumption that there is a mismatch between the person and the job assignment, not that the person is lazy or incompetent. If employees want to work at home, we will perceive that as evidence of their wanting to be productive.

In both cases, there is the potential for distortion, in that the cynical manager will not perceive how highly motivated some of the subordinates really are, and the idealistic manager will not perceive that there are subordinates who are lazy and are taking advantage of the situation. As McGregor (1960) noted many decades ago, such assumptions about "human nature"

become the basis of management and control systems that perpetuate themselves because if people are treated consistently in terms of certain basic assumptions, they come eventually to behave according to those assumptions to make their world stable and predictable.

Unconscious assumptions sometimes lead to ridiculously tragic situations, as illustrated by a common problem experienced by U.S. supervisors in some Asian countries. A manager who comes from a U.S. pragmatic tradition assumes and takes it for granted that solving a problem always has the highest priority. When that manager encounters a subordinate who comes from a cultural tradition in which good relationships and protecting the superior's "face" are assumed to have top priority, the following scenario has often resulted.

The manager proposes a solution to a given problem. The subordinate knows that the solution will not work, but his unconscious assumption requires that he remain silent because to tell the boss that the proposed solution is wrong is a threat to the boss's face. It would not even occur to the subordinate to do anything other than remain silent or, if the boss were to inquire what the subordinate thought, he might even reassure the boss to go ahead and take the action rather than challenge the boss.

The action is taken, the results are negative, and the boss, somewhat surprised and puzzled, asks the subordinate what he would have done or would he have done something different. This question puts the subordinate into an impossible double bind because the answer itself is a threat to the boss's face. He cannot possibly explain his behavior without committing the very sin he was trying to avoid in the first place—namely, embarrassing the boss. He may even lie at this point and argue that what the boss did was right and only "bad luck" or uncontrollable circumstances prevented it from succeeding.

From the point of view of the subordinate, the boss's behavior is incomprehensible because to ask the subordinate what he would have done shows lack of self-pride, possibly causing the subordinate to lose respect for that boss. To the boss, the subordinate's behavior is equally incomprehensible. He cannot develop any sensible explanation of his subordinate's behavior that is not cynically colored by the assumption that the subordinate at some level just does not care about effective performance and therefore must be gotten rid of. It never occurs to the boss that another assumption—such as "you never embarrass a superior"—is operating, and that, to the

subordinate, that assumption is even more powerful than "you have to get the job done."

If assumptions such as these operate only in an individual and represent his or her idiosyncratic experience, they can be corrected more easily because the person will detect that he or she is alone in holding a given assumption. The power of culture comes about through the fact that the assumptions are shared and, therefore, mutually reinforced. In these instances, probably only a third party or some cross-cultural experiences could help to find common ground whereby both parties could bring their implicit assumptions to the surface. Even after they have surfaced, such assumptions would still operate, forcing the boss and the subordinate to invent a whole new communication mechanism that would permit each to remain congruent with his or her culture—for example, agreeing that, before any decision is made and before the boss has stuck his or her neck out, the subordinate will be asked for suggestions and for factual data that would not be face threatening. Note that the solution has to keep each cultural assumption intact. We cannot, in these instances, simply declare one or the other cultural assumption "wrong." We have to find a third assumption to allow them both to retain their integrity.

We have dwelled on this long example to illustrate the potency of implicit, unconscious assumptions and to show that such assumptions often deal with fundamental aspects of life—the nature of time and space; human nature and human activities; the nature of truth and how we discover it; the correct way for the individual and the group to relate to each other; the relative importance of work, family, and self-development; the proper role of men and women; and the nature of the family.

Broader assumptions about human nature often derive from the larger culture in which the organization is embedded or from occupational units that cut across organizations. In the United States, the assumption that meetings are a waste of time derives very much from our pragmatic rugged individualism, which works both against group and team work and immediately types meetings as something to be avoided, even as complex tasks become more interdependent and require more meetings.

The Metaphor of the Lily Pond

We can summarize this three-level model with a metaphorical lily pond. The blossoms and the leaves on the surface of the pond are the "artifacts"

that we can see and evaluate. The farmer who has created the pond (the leadership) announces what he expected and hoped for in the way of leaves and blossoms and will provide publicly accepted beliefs and values to justify the outcome. The farmer may or may not be consciously aware that the outcome is really a result of how the seeds, the root system, the quality of the water in the pond, and the fertilizers he put in combined to create the blossoms and leaves. This lack of awareness of what actually produces the results may not matter if the announced beliefs and values are congruent with how the leaves and blossoms turned out.

Figure 2.2 The Lily Pond as a Metaphor for Levels of Culture



Source: Artwork by Jason Bowes - Human Synergistics

However, if the observer notes a discrepancy between what the farmer claims and what actually comes up as blossoms, they will both have to examine what is present in the water and in the root system. And if they want different color blossoms, painting them a different color will not work; they will have to examine how to change the seeds, the water quality, the fertilizer—that is, the invisible DNA of the pond. Leaders who want to change culture cannot do so by painting the blossoms or pruning the leaves. They have to locate the cultural DNA and change some of that.

Given this structural model one can analyze any culture, or, for that matter, any individual's cultural identity. Let's look briefly at how this would apply at the individual or group micro-system level and then in subsequent chapters apply it to organizations and larger cultural units.

The Individual from a Cultural Perspective

The individual as a cultural entity can be analyzed in terms of artifacts, espoused beliefs and values, and underlying basic assumption. We all carry within us assumptions about the state of the world and about the correct ways to engage in relationships. Some of those assumptions about relationships have come to be taken for granted and fall into the realm of the unconscious because we learned early some of the basic rules of how to get along in different kinds of situations. These assumptions and rules derive from the macro culture in that every society has learned from its own history what level of communication and openness is workable for people to get along.

All societies (i.e., macro cultures) evolve rules of etiquette, good manners, and tact that specify what is or is not appropriate to say in any given situation. Most of us are, therefore, walking repositories of rules that were taught to us when young and that represent early layers of cultural socialization. We learn as part of our acculturation into the family that in the interests of getting along with each other, it is important to withhold some of our perceptions and feelings because to say them out loud might hurt or offend others. And if we hurt others, that permits them to hurt us back, which makes social life generally too dangerous. We learn that some of these things can be said to friends and even more can be said to intimates.

However, the basic assumptions about *why* you cannot say certain things remain below consciousness, and the process by which you learned them is probably totally forgotten.

When we enter into a therapeutic or personal-development program, the leader and the setting usually create a "cultural island" in which some of the societal rules can be suspended and people are encouraged to be more open about what they normally would withhold. When the tasks we are asked to perform in a group require a high degree of collaboration, the team learning process or "teaming" (Edmondson, 2012) similarly creates conditions where some of our basic assumptions have to be surfaced. The best example would be to give team members feedback on how we react to their participation and to own up to our own doubts and fears in relation to task accomplishment. I have called this "here-and-now humility" to indicate that in such team situations formal status and rank become less important than patterns of who is dependent on whom at a given moment in accomplishing a task (Schein, 2016).

In summary, as individuals we can all be observed at the artifact level, we all have our espoused beliefs and values that may or may not be consistent with our behavior, and we all have deeper-level assumptions about why we do what we do. It is the degree of alignment or congruity between the three levels that determine how an individual's "sincerity," or "integrity" is judged by others.

The Group or Micro System from a Cultural Perspective

Groups also evolve "hidden agendas,"⁴¹ "have elephants in the room," and, in various ways, espouse beliefs and principles to justify their overt behavior. If we apply the three-level model to group behavior by analyzing whether or not the observed behavior matches the espoused beliefs and values, we discover discrepancies that reveal the basic assumptions level (Bion, 1959; Marshak, 2006; Kantor, 2012).

A simple but telling example occurred in a company manufacturing team that was dedicated to good team work and espoused a climate of relevant participation by all members. Over several meetings I observed that one member was consistently ignored after he tried to say something, was never called on, and seemed to be very much on the margin. I pointed this

out at one of the meetings and was met with a stony silence, a pause, and then a continuation of the discussion as if nothing had happened.

After the meeting, the chair pointed out to me that this member had been one of the important inventors of several of the company's products, was still too young to be early retired, and was still potentially useful to have around for consultation, but there was no place to "park" him except in this particular group. In early meetings they had welcomed him and jointly agreed that he was welcome to participate but that he would probably find that most of his ideas were now obsolete. He understood and accepted this.

My intervention in calling attention to this embarrassed everyone by surfacing the basic assumption "we accept you as a member but we all understand that you will not be a real contributing member of the group." Any discussion of this assumption would lead to further embarrassment for all concerned. It had become part of the group's culture to accept this person as a member without, however, feeling obligated to take his ideas seriously. The group had evolved the behavioral rule of "you must be polite and pay attention to him but you don't have to use his ideas."

Do all groups have cultures? It depends on the degree to which a given group has a shared history of learning together. A group that has constant change of membership and has not had to learn to do anything together will not have a culture. But any group that has a shared task, more or less constant membership, and some common history of learning together will have its own subculture as well as being nested in the culture of the organizational unit it is in and in the macro cultures of the occupations of its members, the organization, and the nation.

Summary and Conclusions

This chapter presents a three-level model of culture as the way to describe and analyze any cultural phenomenon, whether we are talking about an individual, a micro-system, a subculture, an organization, or a macro culture. It is important to differentiate the observed and experienced "artifacts" from the "espoused values" and from the "basic underlying assumptions" that ultimately drive the observed behavior.

Suggestions for Readers

- If you are a scholar or researcher, try to classify all that you observe and know about the group that you are a member of into the basic categories of artifacts, espoused values, and basic assumptions. What additional questions do you need to ask of your colleagues to decipher the basic assumptions?
- If you are a student or potential employee, take a potential organization you are interested in, visit it to gather impressions and feelings, and then see whether what the organization claims fits what you have observed and felt. If you see discrepancies, ask questions to get at the basic assumptions.
- If you are a change leader, bring together a representative group of members of the organization you are trying to change and ask them to identify as many behavioral artifacts of the organization as they can. List these on flip charts. Then ask the group to identify the major espoused values of the organization and compare those values with the artifacts on the charts. Are they consistent? If you find discrepancies, ask the group to identify what the deeper assumption might be that would explain the artifacts, especially observed routine behavior.
- If you are a consultant or helper and are sure you know what specific changes the change leaders have in mind, invite them to bring together a group from their organization and take it through the preceding exercise to determine where identified beliefs, values, and assumptions might aid or hinder the proposed change program.

3

A YOUNG AND GROWING U.S. ENGINEERING ORGANIZATION

How culture works and how to analyze and assess cultural phenomena is best illustrated through cases that represent different stages of organizational evolution. In this chapter I review the case of an organization that I was fortunate enough to encounter in its youth and able to follow through its entire life cycle. At one level this is an "old" case from the 1960s, but the culture dynamics I encountered then continue to be visible in companies that I observed in recent years and seem to characterize technically based start-ups.

Case 1: Digital Equipment Corporation in Maynard, Massachusetts

Digital Equipment Corporation (DEC) was the first major company to introduce interactive computing in the mid-1950s, and it became a very successful manufacturer of what came to be called "mini computers." It was located primarily in the northeastern part of the United States, with headquarters in an old mill in Maynard, Massachusetts, but it had branches throughout the world. At its peak, it employed more than 100,000 people, with sales of \$14 billion. In the mid-1980s it became the second largest computer manufacturer in the world after IBM. The company ran into major financial difficulties in the 1990s and was eventually sold to the Compaq Corp. in 1998. Compaq was in turn acquired by Hewlett-Packard in 2001.

There were innumerable stories written about why and how DEC "failed," but few of them provided a cultural perspective on either its rise or its failure. I was involved with DEC as a consultant from 1966 to 1992, and therefore was privy to much of the inside story of how this