of cultural settings. These themes included a cross-cultural perspective, an ecological model, the developmental niche, a developmental orientation, a chronological-within-topics approach, and an emphasis on practical applications. Suggestions were given for using the material in ways to help readers develop a greater understanding of, and sensitivity to, those of a different cultural background than their own and develop and improve any cross-cultural interactions they might experience.

◇ FURTHER READINGS

Axtell, R. E. (1993). *Do's and Taboos Around the World*, (3rd ed.). New York: Wiley & Sons.
> Updated and expanded guide to international behaviors. Most useful for business travelers but also of value for tourists and travelers or anyone living or interacting with a culture other than their own.

Dave Barry. (1992). *Dave Barry Does Japan*. New York: Fawcett Columbine.
> An irreverent view of Japanese culture by one of America's premiere humorists. Witty and sometimes insightful. Contains discussion of such topics as "Failing to Learn Japanese in Only Five Minutes (Very much good morning, Sir)," "Lost in Tokyo (Looking for plastic squid)," and "Humor in Japan (Take my tofu! Please!)."

Hubert J. M. Hermans and Harry J. G. Kempen. (1999). Moving Cultures: The Perilous Problems of Cultural Dichotomies in a Globalizing Society." *American Psychologist*, 54, 1111–1120.
> The authors discuss the impact of globalization and compare Western cultural tradition with the rest of the world. They comment on the potential influence of cultural connections and some of the complexities associated with cultural change.

CHAPTER TWO

THEORIES AND METHODOLOGY

Justin Tyme, a graduate student in psychology, has returned from a month in Thailand, where he attempted to collect data for his master's thesis. This was his first visit to a foreign country and it was a memorable, but unsatisfying, experience. Why? Because Justin was not well prepared and made several serious (and avoidable) mistakes. First, he traveled to a culture he knew little about (because it sounded exotic). People spoke a language (Thai) he did not understand and which he found difficult to read, write, or speak in the brief time he was there because of its complexity (44 consonants, 28 vowel forms, 5 tones, and written in script). He found the weather too hot and humid, the food too spicy, and life in the village where he was doing his research "too slow." He had difficulty finding people to help translate his English-language, Western-designed, marital-role preference scale so that it would have comparable meaning in Thai. He was upset because the few subjects he was able to get often didn't arrive exactly on time (Asians, in general, are not as time conscious as Westerners, especially Americans) and when they did, they usually told him "Mai pen rai" (Don't worry). Finally, representative samples were difficult to obtain in a rural area that would match his samples back in Chicago, Illinois.

◇ ◇ ◇

Dr. Kitty Litter, an anthropologist from Cornell University, recently spent six months doing an ethnographic field study among a group of Indians in the highlands of Peru. Not only was she fluent in Spanish, the most widely spoken language in the country, but she also had a working knowledge of two native languages—Quechua and Aymara—from two previous trips to the country. She had read extensively about the customs of the tribal groups in this area and was very fond of the food. She especially enjoyed the tropical climate along the coast and the cooler temperatures in the mountains.

She had spent considerable time designing the questions she was going to ask and had even prepared a Quechuan-language version of a psychological instrument she hoped to validate while there.

◇ ◇ ◇

Theories and methodology—sound exciting, don't they? Perhaps not, but these two topics are central to understanding what happens both in cross-cultural human development and in the chapters that follow. In this regard, we have two goals for this discussion of theories. First, to provide a foundation for those who do not have a background in human development (or could benefit from a review of major concepts) to appreciate their contributions to our efforts to better understand behavior. Second, to provide a framework for identifying complex human behavior and experience as it occurs within different cultural contexts and to explore possible reasons for the similarities and differences that are found in societies around the world. If research (cross-cultural or otherwise) is not carefully designed, conducted, analyzed, and understood, any findings that result are of little value. So, we'll try to make the discussion of these topics as simple, relevant, and interesting as possible.

◇ THEORIES OF DEVELOPMENT

Why do we study human development? There are many reasons, but basically we do it to *understand, explain, predict,* and (in some instances) *control behavior.* To achieve these goals successfully, we need to be familiar and comfortable with theories and their important concepts. As a graduate student in England, I (Gardiner), while trying to select a topic for my doctoral dissertation, was asked by my major adviser if there was an area of psychology with which I felt particularly uncomfortable. Without hesitation, I immediately replied, "Theories." (I shouldn't say this but, as an undergraduate student, I frequently skipped over theories because I found them boring, confusing, and too abstract.) When it was suggested that I devote the next three years to the development of my own theory in order to decrease this discomfort (a form of theoretical desensitization, I guess), I thought this was a "daft idea." Of course, I didn't tell this to my adviser! However, develop my own theory I did (Gardiner, 1966). Not only did I really enjoy doing my original doctoral research (on "newspapers as personalities") but, when it was over, I felt much less threatened by theoretical concepts and gained a greater appreciation for the central role theories play in the social sciences. We hope you feel the same way when you reach the conclusion of this chapter (don't skip over them; they *are* important!).

What Is a Theory?

Simply stated, a **theory** is *a set of hypotheses or assumptions about behavior.* A theory consists of guesses or speculations that allow us to answer such questions as "Why does a particular behavior occur?" For example, why are Chinese children generally calmer, less active, and easier to soothe when distressed than Western children? Why are ethnic customs and values of greater importance to some minority youths than others? What factors most influence the ways in which contemporary cultures treat their elderly?

When we study human development, we can't look at all aspects of an individual's, group's, or culture's behavior. Theories help us organize our ideas and limit what we look at, and serve as a guide (or blueprint) in the collection of data. Sometimes, it seems as if there are as many theories as there are people. In a sense, there are, because each of us has our own informal, unscientific, unverified, and highly idiosyncratic theories. Built up over years of personal observation and experience, these informal theories help us to understand the behavior of those with whom we come into contact. For example, when we meet someone for the first time, our informal theory of personality helps us decide whether we like or dislike this person, if we want to interact with this person again, and so on. However, we must go beyond these informal theories to truly understand and explain the complexity of human development. We need theories that are more formalized and rooted in scientific principles if we are to be able to compare and contrast behavior within and across cultures and draw conclusions about similarities and differences. In the pages that follow, we discuss six theories. While you may (or may not) be familiar with some or all of them, it might be helpful, in terms of our discussion, to think of the theories of Piaget, Kohlberg, and Erikson as traditional or mainstream psychological theories that focus on the individual, with primary attention to internal cognitive processes (e.g., knowing and thinking, moral reasoning, and psychosocial development). On the other hand, the theories of Bronfenbrenner, Super and Harkness, and Vygotsky can be viewed as interactionist theories because they focus on the interactions between the individual and his or her environment in specific psychological domains (e.g., ecology and the interrelationship of the developing individual and his or her changing physical and social environment, links between children's behavior and the developmental niche in which they are raised, and cultural influences on development of language, thinking, and guided participation).

Bronfenbrenner's Ecological Model

In the previous chapter, we briefly noted that one of the most important contributions to the study of human behavior within cultural contexts, and one on which much of our presentation is based, is the ecological model presented

in the pioneering work of Urie Bronfenbrenner (1975, 1977, 1979, 1986, 1989, 1993). Simply stated, this model views behavior and development as a shared function of the characteristics of the individual (biological or genetic factors and personality) and the environment (social, physical, and cultural aspects of one's present surroundings, e.g., family, school, and neighborhood) along with the larger contemporary and historical contexts of which these are an integral part, for example, society and period in which one is born and lives his or her life.

Bronfenbrenner's original model has been "undergoing successively more complex reformulations to attain its present, still-evolving form" (Bronfenbrenner, 1999, p. 4). The most recent versions of this approach (Bronfenbrenner, 1999; Bronfenbrenner & Evans, 2000; Bronfenbrenner & Morris, 1998), now called the *bioecological model*, incorporate earlier concepts, along with new ideas, into a series of propositions that focus more directly on the role of environment and the concept of time in the processes of human development. Those readers who want to know more about this evolving model, which remains more theoretical than practical at the moment, are directed to the references mentioned earlier.

In this book, we focus primary attention on Bronfenbrenner's earlier model, which we believe continues to offer advantages for viewing and understanding the connection between culture and human development. Where appropriate, we refer to some of his more recent ideas and formulations.

The **ecology of human development,** as defined by Bronfenbrenner, involves *"the scientific study of the progressive, mutual accommodation between an active, growing human being and the changing properties of the immediate settings in which the developing person lives, as this process is affected by relations between these settings, and by the larger contexts in which the settings are embedded"* (1979, p. 21). In short, an individual is seen not as a passive and static entity on which the environment exerts great influence (much like a *tabula rasa*, or blank slate), but as a dynamic and evolving being that interacts with, and thereby restructures, the many environments with which it comes into contact. These interactions between individual and environment are viewed as two-directional and characterized by reciprocity. For example, while a child's development is being influenced and molded by parents, family, school, and peers, she is, at the same time, influencing and molding the behavior of others.

Building on Bronfenbrenner's definition, the concept of environment is expanded to include increasingly complex interconnections among settings and is a considerably broader and more differentiated view than those previously presented in psychology in general and in developmental psychology in particular.

Bronfenbrenner has suggested that an individual's perception of the environment is often more important than "objective reality" and that this perception influences one's expectations and activities. A recognition and acceptance of the critical role played by the cultural or environmental context seem particularly suited to the study of human behavior and development.

In his critique of traditional research carried out on children, Bronfenbrenner has stated, "Much of contemporary developmental psychology is the science of the strange behaviors of children in strange situations with strange adults for the briefest possible periods of time" (1977, p. 513). In other words, while striving to achieve experimental rigor and control, we have often lost sight of the scientific and practical relevance of our findings by ignoring how the same phenomena might occur outside such artificial environments. One of the other major goals of this book is to stress the relevance and practicality of such findings.

The ecological model allows us to go beyond the setting being immediately experienced—whether in a laboratory, a classroom, or a backyard—and permits the incorporation of indirect, but nevertheless very real, effects from other settings as well as from the culture as a whole. Bronfenbrenner originally divided the ecological environment into four **nested systems:** microsystem, mesosystem, exosystem, and macrosystem (see Figure 2.1 on page 22). This conceptualization of the ecological environment has been retained in his more recent bioecological model and is given considerable attention in our discussions throughout this book. A fifth system, the *chronosystem,* with its focus on time and sociohistorical conditions, has been mentioned only occasionally in the literature, and seldom by Bronfenbrenner himself. However, as we soon see, the concept and importance of time has become a more significant part of the newly reformulated bioecological model.

The Microsystem. In Figure 2.1, the first level, the microsystem, represents the interactions between the child and her immediate environment (e.g., family or preschool) and resulting behaviors such as dependence or independence and cooperation or competition. This is the most basic level, the one at which individuals engage in face-to-face interactions, and their behaviors frequently reflect social position. Bronfenbrenner (1993) expanded his original definition of the **microsystem** to include *"a pattern of activities, roles, and interpersonal relations experienced by the developing person in a given face-to-face setting with particular physical, social, and symbolic features that invite, permit, or inhibit engagement in sustained, progressively more complex interaction with, and activity in the immediate environment"* (p. 15). Examples include home, church, school, hospital, or day-care center. Other factors to consider include the effects of the physical environment on behavior, including background noise, crowding, and the number and types of toys available to a child.

The Mesosystem. The second level, the mesosystem, recognizes that the individual microsystems in which a child functions are not independent but are closely interrelated and influence each other. According to Bronfenbrenner's newly revised definition, the **mesosystem** *"comprises the linkages and processes taking place between two or more settings containing the developing person"* (1993, p. 22). This is a system made up of two or more microsystems (e.g., home and day care, day care and school, or family and peer group). It is the
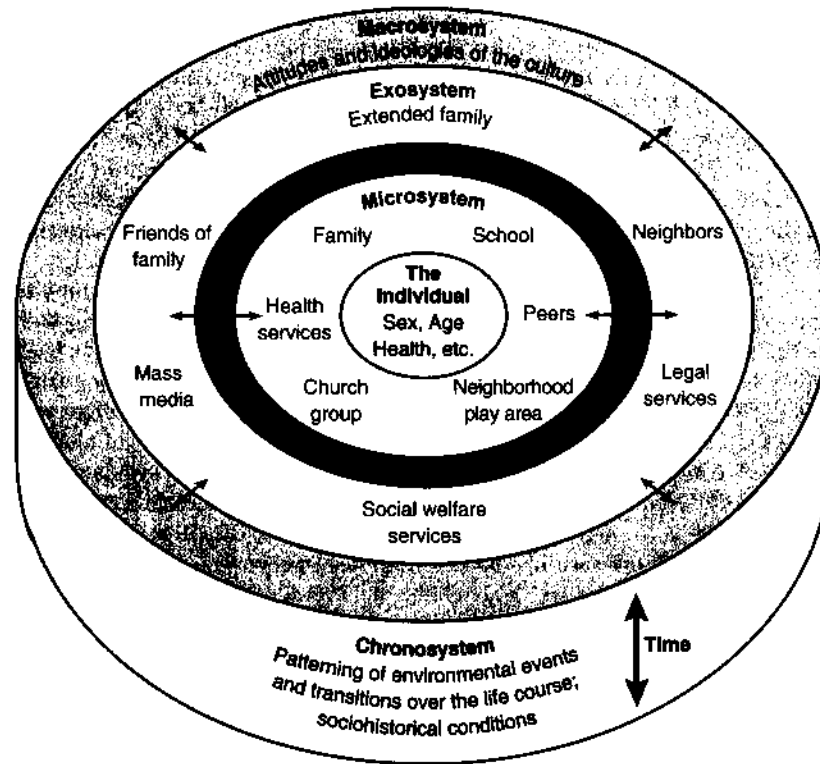
FIGURE 2.1 Bronfenbrenner's Ecological Model of Human Development

Source: From *The Ecology of Human Development* by U. Bronfenbrenner, 1979. Cambridge, MA: Harvard University Press. In *The Child: Development in a Social Context* (p. 648) by C. B. Kopp and J. B. Kaslow, 1982. Reading, MA: Addison-Wesley. Reprinted by permission of Addison-Wesley Longman, Inc.

mesosystem that links or ties together information, knowledge, and attitudes from one setting that help to shape behavior or development in another setting. For example, while parents emphasize the importance of learning at home, preschool teachers provide stimulating activities at school that motivate a child to learn more. Steinberg and Brown (1989), in an effort to define and demonstrate the properties of the mesosystem, took this idea one step further by investigating the effect of parental and peer support of academic activities on performance of high school adolescents. At the conclusion of their investigation, they argued forcefully for the need to focus on multiple environmental influences as they affect development. They suggested that a failure to do so contributes to "the typically low proportion of explained variance in developmental research" (Bronfenbrenner, 1993). More recently, Steinberg, Darling, and Fletcher (1995) looked at authoritative parenting and adolescent adjustment within the ecological setting and reported a number of benefits, including lower levels of delinquency and substance abuse among both male and female adolescents.

The Exosystem. Beyond the child's immediate environment are social settings of which he may not be a part but which, nevertheless, influence his development in significant ways. These settings or institutions make up the third level—the exosystem. As defined by Bronfenbrenner, the **exosystem** *"comprises the linkages and processes taking place between two or more settings, at least one of which does not contain the developing person, but in which events occur that indirectly influence processes within the immediate setting in which the developing person lives"* (1993, p. 22). Included here are formal settings such as parents' place of work or community health and welfare institutions (e.g., hospitals). Bronfenbrenner (1993) provides an example of the link between the home and a parent's workplace for the developing child and of the link between the home and her children's peer group for the developing adult. Other less formal settings might include the extended family (aunts, uncles, cousins, friends, and neighbors.

The Macrosystem. This is the most complex system and is found in the outermost circle and consists of the customs, values, and laws considered important in the child's culture. Bronfenbrenner (1993), in an expanded definition, states that the **macrosystem** *"consists of the overarching pattern of micro-, meso-, and exosystems characteristic of a given culture, subculture, or other extended social structure, with particular reference to the . . . belief systems, resources, hazards, lifestyles, opportunity structures, life course options and patterns of social interchange that are embedded in such overarching systems"* (p. 25). The focus is on the consistencies among a wide variety of settings within a given society or culture. For example, in many countries there are striking similarities in the form and function of such familiar settings as school playgrounds, post offices, shopping malls, and even fast food restaurants.

The Chronosystem. In Bronfenbrenner's ecological model, the exact role of the **chronosystem** is somewhat difficult to describe because it has not received the same attention as have the other four systems. In fact, the term does not appear in the reformulated bioecological model, although the elements that characterize it—time and sociohistorical conditions—constitute a major part of the new model.

When studying individual behavior, a great deal of past and present developmental research has tended to view it either at a fixed point in time or, over a long period of time (if conducted longitudinally), has assumed little or no change in an individual's personal characteristics or in his or her

environmental or ecological setting. As Muuss (1996) has pointed out, "time used to be perceived as synonymous with changes in chronological age. In the ecological model, the constancy or change over time (of both E and P) is essential to assessing the nature of the changes during the life course" (p. 320). Bronfenbrenner has used this chronosystem model to help explain how time simultaneously affects the environment (E) and the person (P). According to Muuss, Bronfenbrenner "emphasizes the interacting nature of these changes, and it is the interacting nature of (E) and (P) that Lewin, and more explicitly, Bronfenbrenner, have brought to our attention" (p. 320).

In his recent writings, Bronfenbrenner (2000), while not employing chronosystem terminology, has placed increasing emphasis on "time and timing as they relate to features of the environment, as opposed to characteristics of the person" (p. 20)—what he has called "space through time: environment in the third dimension" (p. 20). Much of the progress in this area has emerged from researchers, primarily sociologists, using what Elder has called the "life course perspective" (1998a). For a discussion of the basic principles of this perspective, see Elder, 1998b.

Muuss (1996) provides an example of chronosystem research that might be conducted to investigate behavior among family members and the role time or timing might play in it. He points to the effect the arrival of a new baby might have on parents' interactions with each other and with other children. "By assessing the mother's interaction (with the older siblings) before, during, and after pregnancy, research suggests that the mother's interaction patterns change rather noticeably as a function of these pregnancy/child-bearing conditions" (Muuss, 1996, p. 320). Steinberg and his colleagues, in several studies (1987, 1988, 1995) examined the relationship between the timing of puberty and its effects on family relationships and parent–adolescent distance.

The ecological model, with its emphasis on the analysis of specific behaviors in increasingly complex settings, nicely complements our other themes and provides one of the central focal points around which these themes cluster. In fact, such a multilevel approach significantly expands the possibilities for explaining a variety of behaviors.

Super and Harkness's Developmental Niche

The concept of the developmental niche (at least the "niche" part) was originally borrowed from the field of biological ecology, where *niche* describes the combined features of a particular animal's, or species of animal, environment or habitat (Super & Harkness, 1994a). They use the example of a robin and a pigeon, both of which might live in the same section of a city park but differ in where they build their nests, the kinds of materials they use, and the kind of food they eat from the surrounding environment. The birds create a distinct niche for themselves based on each of these behaviors. The fact that this

concept of a niche can be employed in biology and in psychology, demonstrates, as we indicated earlier, that there is some unity to scientific efforts. In fact, much of the usefulness of the developmental niche concept lies in its ability to serve as an integrative framework providing connections among culture, socialization, and ecology.

In applying the term to psychology, Super and Harkness (1994a) state that "at the center of the developmental niche, therefore, is a particular child, of a certain age and sex, with certain temperamental and psychological dispositions. By virtue of these and other characteristics, this child will inhabit a different cultural 'world' than the worlds inhabited by other members of his family—and further, the child's world will also change as the child grows and changes" (pp. 96–97). In their recent writing, Super and Harkness (1999) state that "the initial view of this scheme is to take the place of the child and look outward to the everyday world" (p. 284). While the approach has been used to analyze the niche of single individuals, it has more often been used to compare and contrast cultures or societies "widely separated in geographic place and historical background. However, flexibility in the degree of generalization is a useful feature of the framework, as it has proved useful in examining variation within a single physical community and in documenting changes in child care that are due to migration or seasonal change" (p. 284–285). See, for example, Eldering (1995).

Every child's developmental niche consists of three interrelated components (see Table 2.1 on page 26). First, there are the physical and social settings of daily life in which a child lives (e.g., nuclear family living typically found in many Western cultures versus extended family arrangements found in many Asian or African countries). Aspects of this component include (1) the kind of company a child keeps (e.g., in rural Kenya families frequently consist of eight or more children, who serve as ready-made playmates and caretakers); (2) the size and shape of one's living space (e.g., in a large North American home children have their own rooms compared with families living in overcrowded apartments in Tokyo, where small rooms sometimes serve as living, dining, and sleeping areas); and (3) presence or absence of multiple generations living together (e.g., children, parents, grandparents, and other relatives). The differences in these components are clearly observable in the case of Kamuzu and Jeremy described in the opening vignette of Chapter 3.

The second component of the developmental niche focuses on culturally regulated customs of child care and childrearing practices. These include (1) informal versus formal learning (e.g., family teaching of important skills within most rural African tribal groups versus formal in-school learning characteristic of most Western societies); (2) independence versus dependence training (e.g., independence practiced by most Western parents versus dependence or even interdependence found among the majority of Asian parents); and (3) eating and sleeping schedules (e.g., in many North American

TABLE 2.1 Components of the Developmental Niche

1. PHYSICAL AND SOCIAL SETTINGS OF DAILY LIFE

Size, shape, and location of living space

Objects, toys, reading materials

Ecological setting and climate

Nutritional status of children

Family structure (e.g., nuclear, extended, single parent, blended)

Presence of multiple generations (e.g., parents, grandparents, other relatives)

Presence or absence of mother or father

Presence of multiple caretakers

Role of siblings as caretakers

Presence and influence of peer group members

2. CUSTOMS OF CHILD CARE AND CHILD REARING

Sleeping patterns (e.g., co-sleeping vs. sleeping alone)

Dependence vs. independence training

Feeding and eating schedules

Handling and carrying practices

Play and work patterns

Initiation rites

Formal vs. informal learning

### 3. PSYCHOLOGY OF THE CARETAKERS

Parenting styles (e.g., authoritarian, authoritative, laissez-faire)

Value systems (e.g., dependence, independence, interdependence)

Parental cultural belief systems or ethnotheories

Developmental expectations

and European homes there are three meals a day at specified times versus the five to six small meals at unscheduled times customary in many Asian cultures). Again, consider and contrast the educational experiences of Jeremy and Kamuzu mentioned above. Other examples include the customary use of playpens in Holland to keep infants happy and safe and the care of younger siblings by older ones in Kenya (Super & Harkness, 1994a).

Finally, the third component relates to the psychology of the caretakers or the psychological characteristics of a child's parents (e.g., developmental expectations, parental cultural belief systems, and types of parenting styles).

According to Super and Harkness (1994a) this component "is an important channel for communicating general cultural belief systems to children, through very specific context-based customs and settings" (p. 98). These authors, like us, see a connection between the developmental niche and Bronfenbrenner's approach when they comment: "Drawing from ecological and systems theory, we suggest that the three components interact with each other as a system . . . to maintain consonance among them. The niche is an 'open system,' however, in that each component interacts independently with elements in the larger culture" (Harkness & Super, 1995, p. 227).

Super and Harkness propose that these components interact and function as a dynamic but not always completely coordinated system in which the individual and the developmental niche adapt and are mutually influential (see Figure 2.2). For example, although there is a conformity among certain elements of the niche (ecological settings consistent with parental beliefs), inconsistency can result from many factors, including external influences, limited resources, or historical change. Consistent with their recent ideas, Super and Harkness (1999) stress that these three subsystems of the niche "constitute elements of the environment as they are culturally structured in the child's experience" (p. 286). They point out that this framework can be equally well applied to adult development by
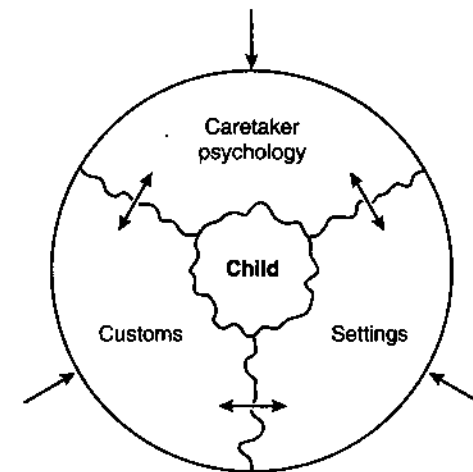
FIGURE 2.2 A Schematic Representation of the Developmental Niche

expanding the third component—the psychology of the caretakers—to include the psychology of others (e.g., mates, coworkers) who might affect the adult. For an interesting example of the developmental niche in Somalia, see Box 2.1.

In an important extension of their pioneering approach to development, Super and Harkness (1999) look more closely at "the environment as culture in developmental research." They discuss, in depth, two anthropological concepts of culture they believe are of critical importance to understanding behavior within context—the immediacy of culture and its integrating nature.

For example, as to the immediacy of culture, it is their position (similar to our comments in Chapter 1) that psychologists (primarily in the past, but many even today) have either ignored culture when considering development or have tended to "keep it at great distance from the individual" (p. 281). In this regard, they are critical of Bronfenbrenner's original model, which represents culture as the macrosystem. It is their view that "the macrosystem's placement at the top of a nested hierarchy leaves it with no direct connection to the individual . . . culture exists as the outermost of several circles, while the developing child stands at the center, insulated from the cultural macrosystem by family, neighborhood, school, and other settings and institutions in the microsystem, mesosystem, and exosystem" (p. 281). Super and Harkness go on to suggest, "The anthropological insistence on the immediacy of culture not only better reflects the phenomenological experience of daily life but also brings the cultural environment into reach for the empirical scientist" (p. 282). We agree with this, as you will see in the many examples referred to throughout this book.

The integrating nature of culture is seen in the pioneering work of many anthropologists, including Margaret Mead, Ruth Benedict, and John and Beatrice Whiting, and in much of the research being done today. As Super and Harkness (1999) point out, these efforts suggest "a relatively new and promising agenda for interdisciplinary psychologists as they seek a more sophisticated understanding of behavior and development: Look for structures that integrate experience, and look for their immediacy in everyday life" (p. 283). For more on the ways in which culture serves as an integrating force in development and why the authors' expanded cultural perspective on the environment is becoming increasingly important, see Super and Harkness (1999, 2002a, 2002b; Harkness & Super, 2003; Harkness, Hughes, Muller, & Super, 2004). Some of their suggested research methods and approaches are discussed later in this chapter.

Piaget's Theory of Cognitive Development

Jean Piaget (1896–1980), the Swiss-born psychologist, first developed an interest in cognitive development while working with Alfred Binet on intelligence testing in Paris. Piaget became curious about children's thinking and

BOX 2.1

CHILDHOOD IN SOMALIA: AN EXAMPLE OF THE DEVELOPMENTAL NICHE

In an extremely informative and detailed study, Norwegian psychologist Ragnhild Dybdahl explored childhood within the Somali sociocultural context, using the concept of the developmental niche. As part of her study, she conducted open-ended interviews in Mogadishu, Somalia, with twenty mothers, ranging in age from twenty-two to forty (mean age equals thirty), and twenty-three children (mean age equals ten). Most of the women lived with their husbands, and about one-fourth of them had been raised as nomads. The average number of family members was 7.5 and included various combinations of parents, children, grandparents, parents' siblings, and distant relatives staying as long-term guests. Topics of interest included reasons for having children, normative child care, and the roles played by parents and children in the Somali culture.

According to Dybdahl, the first component of the Somali developmental niche is characterized by the culture's economic and health problems; the nomadic way of life, with its emphasis on the extended family and clan; and the child's social and physical settings organized around school and Quaranic school, play, work, and household chores, especially care of younger siblings. The second component is characterized by socialization practices in which the infant, initially spending all its time with its mother, is gradually "distanced from the mother's back, breast and bed to be cared for by someone else." Although formal schooling plays a role, informal education is far more important and is the means by which children are taught such activities as household chores. Quaranic school serves as a mode of traditional education. The third component, based on interview comments from mothers, is characterized by mothers' focus on "physical health, obedience, resourcefulness, helpfulness and hard work," with expectations differing according to a child's age.

Dybdahl reported on the emergence of several themes associated with Somali childhood: (1) a clear responsibility for family and relatives; (2) the importance of such values as pride, hard work, loyalty, and obedience; (3) a constant struggle for survival and good physical health; and (4) the emotional importance attached to children as sources of short- and long-term security.

As a result of her interviews and observations, Dybdahl argues that Somali society represents a mix of "traditionalism and modernism, and collectivism and individualism." According to Dybdahl, her interviews with children provided a look at "the niche from the inside." She points out that "in spite of the difficult living conditions at the time . . . [just before "Operation Restore Hope" in 1989] . . . with war breaking out and relatively poor health conditions, beliefs in the future and in the possibility to change and improve

BOX 2.1 CONTINUED

one's life were recurring themes." She suggests that this may be due to a combination of factors, including the nomadic tradition of "moving on to another place," stoicism, and the belief that family and relatives will provide help if needed.

Dybdahl concludes that children must be studied in the "context and culture in which they live, and of which they are a part." Since developmental outcomes in Western societies have often come to be the norm for many of the world's children, "to avoid ethnocentrism and develop a global psychology, it is necessary to do cross-cultural research." Dybdahl is further convinced that, in order to make what she calls the "person-setting interaction" the focus of investigation, anthropologists and psychologists need to combine their efforts and that the developmental niche "might be a fruitful concept for this purpose." For a more recent report on this research, see Dybdahl and Hundeide, 1998.

In follow-up studies, the author used some of her experiences from this study in the design of a successful psychological intervention program with young children (mean age 5.5 years) and their mothers in the ecological context of war-torn Bosnia and Herzegovina. Participants were interviewed and tested to obtain information regarding their exposure to the war, psychosocial functioning, intellectual abilities, and physical and mental health. Findings revealed severe trauma with wide variations in displays of distress that were greatly helped and reduced by means of a simple and inexpensive intervention program adapted to their needs and to an understanding of the developmental niche in which they lived (Dybdahl, 2001).

Source: Adapted from "The Child in Context: Exploring Childhood in Somalia," paper presented by Ragnhild Dybdahl at the Twenty-Sixth International Congress of Psychology, Montreal, August 1996. Reprinted by permission.

problem solving and why children of the same age made similar mistakes when trying to solve problems. For years, he carefully recorded the cognitive changes he observed in his three children in their home in Geneva. From these and other observations, he theorized that individuals learn by actively constructing their own cognitive world. To Piaget, development is a dynamic process that results from an individual's ability to adapt thinking to meet the demands of an ever-changing environment and, as a result, to formulate new ideas.

According to Piaget's view, normal cognitive growth passes through four distinct periods: infancy, early childhood, middle childhood, and adolescence

TABLE 2.2 Piaget's Periods of Cognitive Development

PERIOD	APPROXIMATE AGE	DESCRIPTION
Infancy	Birth to 2 years	Sensorimotor
Early childhood	2 to 6 years	Preoperational
Middle childhood	6 to 12 years	Concrete operations
Adolescence	12 years and older	Formal operations

(see Table 2.2). Although Piaget provided age ranges for these various developmental periods, he recognized that the exact age at which a particular individual enters a specified period could be significantly affected by that person's physical, cognitive, or cultural experience—what Bronfenbrenner has referred to as the *ecological setting.*

Piaget's term for the first period of cognitive development (birth to two years) is the **sensorimotor period,** characterized by *coordination of sensory abilities and motor skills* when a child understands the world largely through immediate action and sensation. The highlight of this period is the achievement of **object permanence,** *the awareness that objects remain the same or continue to exist even when they cannot be seen* (e.g., a doll not visible because it is covered by a blanket still exists). Piaget's term for the second period of cognitive development (two to six years) is the **preoperational period,** characterized by *development of language, use of symbols, and egocentric thinking* (e.g., failure to distinguish between one's own point of view and that of another individual). From ages six to approximately twelve, children are in the third period of **concrete operations,** characterized by *performance of tasks involving conservation, in which thinking is governed by fundamental rules of logic.* **Conservation** refers to the *ability to recognize that specific properties of an object, such as amount or number, do not change in spite of rearrangement or superficial modification in their appearance* (e.g., when a child thinks one sandwich cut into four slices is more than another sandwich cut into two slices). Piaget's term for the fourth and final period (age twelve through adulthood) is the **formal operational period,** characterized by the *ability to deal with hypothetical problems and abstract thinking* (e.g., mentally thinking about two different routes that could be taken to the same destination).

It was Piaget's belief that cognitive development occurs as a result of children's attempts to adapt to their environments and to make sense of the many experiences taking place around them. The ability to do this requires the systematic development of progressively more complex mechanisms or structures. At the center of this activity lies the scheme. A **scheme** is *an organized pattern of thought or action applied to persons, objects, or events in an effort to*

make sense of them. In short, it is a mental picture of the world and the things in it. For example, infants develop a wide variety of schemes during the first few months, including schemes for mother, breast, bottle, and father's voice. Over the years, increased interactions with the environment result in these schemes becoming more sophisticated and better coordinated, so that by the time an individual reaches formal operations, they are capable of thinking about behaviors and imagining their consequences.

According to Piaget, cognitive development and the ability to adapt to the environment depends on the processes of assimilation and accommodation. **Assimilation** is *the process by which new information and ideas are incorporated or fitted into existing knowledge or schemes.* **Accommodation** is *the process of adjusting or modifying existing schemes to account for new ideas and information.* Anyone who has traveled abroad and attempted to make sense of new surroundings or tried to explain new objects or words to a foreign visitor has engaged in assimilation and accommodation—sometimes with success, sometimes with failure, and sometimes with humor! For example, what happens when Hakon from Norway tries to explain the making of a snowman to Yang, who lives in Malaysia and has never seen or touched snow? In this situation, Yang must make use of accommodation and adjust an existing scheme with which Yang is familiar (perhaps shaved ice) or create a new scheme (snow) to explain this new idea of a snowman. Another illustration of how assimilation and accommodation result in the development of cognitive operations can be seen in Piaget's classic conservation of liquid task.

Children in the preoperational period usually think that a tall, thin glass contains more liquid than a short, fat glass, because the level is higher, although they correctly say the amounts were initially the same. The problem is beyond younger children's capabilities, and they are unable to accommodate their thinking enough to understand that while the shape of the glass may be different, the amount of liquid remains the same. They simply assimilate what they see into their existing scheme, believe it to fit well, and feel no disequilibrium or imbalance in their perception of the situation. With the change in cognitive development that comes with increasing age and experience, children in the concrete operational period are able to consider the differences in the width, as well as the height, of the glasses and are no longer satisfied with their original answer, correctly recognizing that the liquid remains the same. At this point, they have achieved the concept of conservation. It is through active and open interaction with one's environment or surroundings that individuals learn to balance these twin processes of assimilation and accommodation. In terms of Bronfenbrenner's ecological systems approach, these cognitive processes can be said to begin in the family (microsystem); gradually extend to increasingly complex situations that arise in the neighborhood, at day care, or at school (mesosystem); and eventually, as the individual moves into adolescence and adulthood, operate in the workplace (exosystem) and the culture at large (macrosystem).

While there is no doubt that Piaget's theory has had a significant impact on the study and understanding of cognitive development in mainstream Western psychology, his ideas have been challenged on several points. First, some have criticized his emphasis on individual activity occurring apart from social interaction. Such a focus reflects a more individualistic cultural perspective, such as that found in North America and Western Europe, and thereby fails to consider similarities or differences in cognitive development in traditional collectivistic cultures (e.g., China, Japan, and the islands of the South Pacific). Second, some have suggested that Piaget may have overestimated the contribution of motor activity and underestimated the ages at which children are capable of learning and performing a variety of behaviors by themselves. Third, Piaget's claim that once a person moves to a new period of cognitive development, the competencies mastered at that level will be exhibited in other phases of that individual's thinking, does not appear to be fully supported by cross-cultural research findings. While advances may be apparent in some domains of a person's thinking processes, this may not be true in other domains (Wellman & Gelman, 1992).

In the beginning, when Piaget was developing his theory and conducting his early studies, he paid little attention to cultural factors and the effects differences might have on cognitive development. However, as Thomas (1999) has noted, "In later years, Piaget did admit some influence of variations in environments, but still considered genetically controlled maturation to be the primary force behind mental development" (p. 65). Whatever one's position is regarding Piaget's theory, it continues to have considerable influence on contemporary research and practice and, as we see in Chapter 5, has been applied to the study of cognitive development in many cultures throughout the world—with varying success.

Vygotsky's Sociocultural Theory of Development

As we have just noted, Piaget's position was that cognitive development is largely an individual accomplishment, directed and shaped, in part, by the environment (and, in part, by genetics). However, he said little about the importance of the social context in learning. This view was challenged by the Soviet psychologist Lev Semyonovich Vygotsky.

Lev Vygotsky (1896–1934) was one of several children raised in an orthodox Jewish family in Russia. As a young man, he frequently wrote critically about Soviet government policies, with which he did not agree. As a result, his scientific writings were banned, although his highly acclaimed and influential book *Thought and Language* was finally published in 1934, the year he died of tuberculosis. (For an interesting, and generally ignored, view of how Vygotsky's Marxist orientation influenced the development of his psychological principles and also affected his life, see Gielen and Jeshmaridian, 1999.)

Vygotsky suggested that development is the result of interaction between cultural and historical factors. He believed that the key feature of development lies in matching a child's demands with the requirements of her culture. Vygotsky suggested that there were three major components in this process: the role played by culture, the use of language, and the child's zone of proximal development (Kozulin, 1990). Briefly, the **zone of proximal (nearby) development (ZPD)** refers to the distance between a child's actual developmental level and the higher-level potential (Vygotsky, 1978). It is *the difference between what children can achieve independently and what their potential level of development might be if given help or guidance*. This concept of the ZPD emphasizes Vygotsky's view that social influences contribute significantly to children's development of cognitive abilities and that mentoring or guidance strengthens their growth.

To tie this into several of the major themes already discussed, let us consider the case of twelve-year-old Dabir, a young Saudi adolescent. We might say that the process of learning, which takes place through mentoring in a number of Dabir's diverse ecological settings (home, mosque, school), defines his developmental niche at a particular time in his life. As Vygotsky would view it, Dabir does not have his own ZPD but participates in a shared ZPD with those around him (e.g. siblings, parents, teachers, and peers). This is also true with regard to Deratu (introduced in the opening vignette in Chapter 5), who does not go to school but learns the important cultural and practical lessons necessary for living in rural Ethiopia from the daily guidance provided by her mother.

From Vygotsky's point of view, culture is a social construction, and cognition is rooted in language and cultural experience. He describes three sequential stages in the evolution of speech that are considered essential in language and cognitive development. The first is **social speech**, which is *designed primarily to gain the attention of others or to express simple ideas* and lasts until approximately three years of age. Examples include crying, laughing, and the use of first words. **Egocentric speech** is the second; this occurs between the ages of three and seven, *serves to control the child's own behavior, and is usually verbalized*. A common example is preschool or kindergarten speech in which children, playing next to each other, talk out loud to themselves about their activities, for example, "I'm going to dress up like mommy and wear this red dress and blue shoes," without expecting a reply from anyone because the comments are only directed at themselves. The third is **inner speech**; this develops around the age of seven and *consists of self-talk, during which children rehearse what they are going to say before actually saying it* (Vygotsky, 1978). An example might be when a child is preparing to walk down steps and says silently to himself, "Be careful and hold the rail so you don't fall." According to Vygotsky, early use of language helps children reflect on their behavior and, thus, plays a major role in cognitive development.

While much of Vygotsky's work has been praised for its originality and usefulness, like the pioneering ideas of Piaget, it, too, has its critics. For example, some argue that the zone of proximal development is vague and cannot be adequately measured. Others believe that parts of Vygotsky's theory have been lost or misunderstood in translation and therefore are confusing and incomplete. Nevertheless, the theory still represents an increasingly important contribution to cross-cultural human development, with Vygotsky's zone of proximal development appearing more frequently in educator's teaching methods (Thomas, 1999). As an example, Thomas points out that "Rather than waiting for children to display a particular form of reasoning before attempting to teach skills and knowledge that depend on that form, teachers who follow Vygotsky's lead will attempt to teach the new learnings somewhat before the time children might exhibit their readiness spontaneously" (p. 48).

Erikson's Psychosocial Theory

Erik Erikson, a German-born psychoanalyst and student of Sigmund Freud's daughter, Anna, was the first person to propose a developmental theory encompassing the entire lifespan. Beginning with Freud's stages of psychosexual development, Erikson, a student of anthropology, modified and expanded them to focus greater attention on the social context of development (psychosocial) and less attention on biological and sexual development (psychosexual). Unlike Freud, his emphasis was on the growth of normal or healthy (rather than abnormal or neurotic) personality development, and he was particularly interested in cultural similarities and differences in the socialization of children and the development of identity during adolescence.

Erikson's theory provides a useful framework for attempting to define and unravel some of the major changes in social behavior that take place at various points in the lifespan. As shown in Table 2.3 on page 36, he proposed a sequence of eight stages ranging from infancy to later adulthood, each accompanied by a psychosocial crisis requiring resolution if one is to move successfully from one stage to the next. These crises or periods of increased vulnerability and heightened potential involve conflicts between newly developing competencies and a desire to maintain the status quo.

When applying Erikson's theory, as we do at different points throughout the book, there are several points to keep in mind. First, although he assigns an age range to each of his eight stages, these should be considered only as a guide, because of differences among individuals . Second, successful resolution of a crisis will depend on how a particular culture views the crisis, the sequence in which a particular stage occurs, and the solution evolving from it. Third, while many of Erikson's original ideas were based on development in Western societies, we attempt to modify some of these to show their increased applicability in other cultural and ecological settings.

TABLE 2.3 Erikson's Stages of Psychosocial Development

STAGE	CRISIS	PSYCHOSOCIAL TASK
Infancy	Trust vs. mistrust	Develop first social relationship with primary caretaker(s); develop a fundamental trust in life and the world
Toddlerhood	Autonomy vs. shame and doubt	Explore the social environment outside the primary relationship; recognize self as an individual being
Early childhood	Initiative vs. guilt	Negotiate one's place within social relationships; learn about the impact of one's social behavior on others; develop a sense of power
Middle childhood	Industry vs. inferiority	Learn the importance of social norms and the personal consequences of conformity and nonconformity; develop a sense of competence
Adolescence	Identity vs. role confusion	Find social roles and social environments that correspond to one's identity and principles; form one's own identity
Young adulthood	Intimacy vs. isolation	Negotiate one's own identity within the context of intimate relationships
Middle adulthood	Generativity vs. stagnation	Make a contribution to the larger society; acquire a sense of accomplishment and a place in the world
Late adulthood	Integrity vs. despair	Become an integral and active part of one's family and community; come to terms with one's life and choices

Kohlberg's Theory of Moral Development

The study of moral development is closely identified with the work of Lawrence Kohlberg, who completed his first research as part of his doctoral dissertation. Responses to a series of moral dilemmas (hypothetical incidents involving a conflict between an individual's desires or needs and the rules of society) by seventy-two boys ages ten, thirteen, and sixteen years were analyzed to determine how moral reasoning developed. For each dilemma, subjects were asked to evaluate the morality of a specific act mentioned in the dilemma. On the basis of these findings, Kohlberg (1981) identified three levels of moral development with two stages in each level, representing a more sophisticated and complex orientation toward justice and normative moral principles (see Table 2.4).

Most children nine years of age or younger are in the preconventional level, but so are many adolescent offenders and adult criminals. Most adolescents and adults are in the conventional level. The postconventional level is not generally reached before the age of twenty, and then generally only by a minority.

One of the main assumptions underlying Kohlberg's theory is that these six stages are universal and are present in cultures throughout the world. However, Kohlberg concedes that the stage at which individuals complete their development and the time it takes to be completed may vary from one culture to another.

As we move through the rest of the chapters in this book, we refer back to each of these theories and show how they help to explain various aspects of human development within a wide range of cultural settings and niches. From time to time, we also indicate how these theories might be expanded

TABLE 2.4 Kohlberg's Stages of Moral Development

LEVEL	STAGE	BEHAVIOR
I. Preconventional	1. Punishment and obedience orientation	Obeys rules to avoid punishment
	2. Instrumental orientation	Obeys rules to receive rewards
II. Conventional	3. Good-child orientation	Conforms to rules to avoid disapproval by others
	4. Law and order orientation	Conforms to rules to maintain social order
III. Postconventional	5. Morality of contract, individual rights, and democratically accepted law	Accepts and follows laws for the welfare of the larger community
	6. Morality of individual principles and conscience	Believes in and follows self-chosen universal ethical principles

and modified to better understand and explain cross-cultural similarities and differences in behavior. We now look at some of the methodological issues and approaches related to the study of cross-cultural human development.

◊ METHODOLOGY IN CROSS-CULTURAL HUMAN DEVELOPMENT

As we noted in Chapter 1, there are many different definitions of culture; therefore, it should not be surprising that there are an almost infinite number of ways to approach and measure cultural differences and similarities. For example, psychologists generally tend to focus on individual behaviors, while anthropologists typically tend to look at the behavior of groups. Those doing cross-cultural research in human development frequently make an effort to look at both individual and group behaviors. This is not always easy to do because each culture and those who live within it, including parents, peers, teachers, and others, have their own ideas and beliefs about children and the ways in which they should develop (Harkness & Super, 1996).

Imagine you are a social scientist (e.g., psychologist, anthropologist, or sociologist) interested in studying the effects of childrearing practices on children's personality development. Looking at your own culture, you find the range of behaviors limited. So, it seems like a good idea to seek out other cultures, which may have different practices, such as swaddling (found among the Hopi Indians in the American midwest and many Russian and Chinese families), severe independence training (characteristic of certain African tribal groups), or strict dependence training (often noted in Japanese families). Taking this approach offers several benefits. First, you are able to increase both the range of independent variables (childrearing practices) and their effects on the dependent variable (children's personality development). Second, this approach allows (perhaps) for a clearer distinction between biological and environmental influences. For example, if developmental sequences or processes are found to be similar across a variety of diverse cultures, it might suggest that genetic or biological factors are a significant contributor. If, on the other hand, there are wide differences among the cultures, it is more likely that environmental factors play a larger role. Finally, by conducting cross-cultural research in another culture, one becomes aware of his or her own ethnocentric biases that could influence the design, conduct, and interpretation of the results.

Carrying out a cross-cultural study may sound easy. However, here is the heart of the problem: jumping on and off planes in far away and often exotic places can be exciting, rewarding, and great fun, but it's not all beer and curry! Think about the young graduate student, Justin Tyme, in our opening vignette and consider some other possible difficulties—getting required visas to visit certain countries is often difficult, time consuming, and expensive;

you may not be allowed to conduct your research once you get there; you and the local food don't always agree; and you can become frustrated and lonely. In short, you have a great many challenges to meet and resolve. But as Dr. Kitty Litter, the anthropologist in our other vignette, demonstrates, with careful preparation and training, an individual can survive the culture experience and return with important research data. As we see in the next section, although there may be problems in doing cross-cultural research, there are also solutions.

Studying Development Cross Culturally: Some Methods, Problems, and Solutions

Our intent is not to cover all possible methods, problems, and solutions in this section—besides being impossible, much of this work has been done very well by others. Our aim is twofold: (1) to familiarize you with some of the important information in this area so that you gain an appreciation for what cross-cultural researchers have to deal with, and (2) to prepare you to understand methods and findings you encounter as you journey through the remainder of this book.

When conducting research in cross-cultural human development, researchers are interested in discovering principles that are universal to all (or most) cultures as well as principles that are unique or specific to certain cultures, such as the emic–etic distinction we made in Chapter 1. At the same time, they are concerned that the methods they employ are (1) **objective** (unbiased and not influenced by a researcher's preconceived notions), (2) **reliable** (findings are observed consistently and accepted by independent observers), (3) **valid** (behaviors and findings are what the researcher claims them to be), and (4) **replicable** (other researchers using the same methods report the same or very similar results).

In this regard, cross-cultural methods are firmly rooted in basic psychological methodology involving the use of experiments (experimental and control groups to test hypotheses), cross-sectional designs (one-time testing of separate age groups), longitudinal designs (repeated testing of same individuals over time), sequential designs (combination of longitudinal and cross-sectional designs), and correlational studies (measurement of relationships between and among variables).

While cross-cultural psychology shares with its sister social sciences a number of similar needs in designing research (e.g., selecting subjects, defining variables, and choosing appropriate measures and methods), it has to deal with unique issues, for example, the complexity of culture, interdependence of culture and self, indigenous (or native) psychology versus universal psychology, communication across cultures, and interpretation of cultural findings. For detailed discussions of some of these issues and approaches to their resolution, see Berry, Dasen, and Saraswathi (1997); Berry, Poortinga, and

Pandey (1997); Cole (1998); Kim, Park, and Park (2000); Lonner (in press); Matsumoto and Juang (2004); Smith (2004); and van de Vijver and Leung (2000). For more specific discussions of issues related to measurement in cross-cultural human development, see Friedman and Wachs (1999), Keller and Greenfield (2000), and Super and Harkness (2000a).

Matsumoto (2000) discussed some of the critical questions and issues in this area (pp. 130–134), and because many of these also apply to the conduct of cross-cultural human development research, they are summarized here: (1) *theories and hypotheses*—can the theories under investigation be appropriately applied to all cultures in the study and do the hypotheses have the same meaning for all subjects independent of their cultural backgrounds; (2) *methods*—are the subjects representative of their culture and are they equivalent for comparative purposes, and are all measures (e.g., scales, items) reliable and valid in all cultures under investigation and do they have linguistic equivalence (determined through the method of back translation from original language to target language and back to original language until all meanings are equivalent); (3) *data and analyses*—are there any unique cultural responses operating and have they been controlled; and (4) *interpretations and conclusions*—are findings and interpretations of them free of cultural bias and value judgments based on the researcher's own cultural background. These serious and complex questions must be carefully considered and adequately answered if research across cultures is to make significant contributions to our knowledge about similarities and differences in human development.

Due to the seriousness of one of the issues mentioned above—linguistic equivalence—additional comments regarding the translation and adaptation of instruments and materials from one culture to another deserve special attention. The International Test Commission, consisting of members from a number of international psychological organizations, has prepared a set of twenty-two specific guidelines for conducting multicultural studies that anyone interested in conducting cross-cultural research should take into account before designing and carrying out a particular study (see van de Vijver, 2001 for a complete listing of these guidelines). These are divided into four categories: (1) context guidelines focusing on general principles for test translations), (2) development guidelines for enhancing equivalence, (3) administrative guidelines for attaining comparability of administration in the use of different language versions, and (4) guidelines for documentation or score interpretations describing aspects of the instrument's manual specific to that instrument that are or will be translated.

One technique widely used to achieve linguistic equivalence when a researcher is unfamiliar with or not fluent in one or more of the languages to be used in a project is **back translation.** This procedure involves translating material (instruments, surveys, etc.) from a "source" language, for example, English, into a "target" language, for example, Arabic by a bilingual translator fluent in both languages. The target translation (Arabic) is then translated by

another bilingual translator back into the source (English) language. This continues until there is agreement that the translations are linguistically equivalent. Because this technique often relies on literal translation of the material, ignoring such issues as comprehension and readability, a second procedure involving a group or committee with expertise in a variety of areas (language, culture, psychology, anthropology) carries out the translation process until there is agreement that all language versions are equivalent.

As for the use of specific methods, there are numerous ways in which these can be categorized. One approach is to consider four possible types of cross-cultural studies: (1) investigation of theories and concepts originally developed in Western countries as they may (or may not) apply in non-Western settings (e.g., Piaget's stages of cognitive development and Kohlberg's levels of moral development); (2) replication in one culture of studies previously conducted in another culture (e.g., children's acquisition of language skills, peer pressure during adolescence, expression of emotion in toddlers); (3) collaborative research in which researchers from two or more cultures participate equally in the design and conduct of a study (e.g., assessment of personality in five cultures, a cross-national study of children's behavior with their friends, and exploration of ethnic identity in Russia, Finland, and South Africa); and (4) administration of test materials designed and standardized in one culture but used in other cultures (e.g., tests of intelligence, personality, and socialization).

Matsumoto (2000) draws attention to two other approaches used with some measure of success by psychologists doing cross-cultural research. The first is the *"bottom-up approach"* in which a psychological phenomenon, observed in one culture, is then studied "across many other cultures to examine and refine theories about it" (p. 11). An example might be the willingness of mothers to seek childrearing advice when raising their first child. The second is the *"top-down approach"* in which investigators "begin with a theory about behavior and incorporate aspects of culture in testing its limitations and broadening its domain" (p. 11). An example might be studying the implications of social cognition theory for understanding behavior in individualistic and collectivist cultures.

A popular approach among psychologists, as well as some sociologists, is **cross-cultural comparisons** in which *individuals from at least two different cultural groups are measured and compared on some aspect of behavior* (e.g., European and Asian attitudes toward the criminal justice system). As for individual methods, a technique widely used by anthropologists in their cultural studies is **ethnography.** Typically, a researcher lives for a time in a culture observing, interviewing, and sometimes testing its members, and produces *a detailed description of a society's way of life, including its attitudes, customs, and behaviors.* The early work of Margaret Mead, Ruth Benedict, and others are examples. More recently, some interesting work has been done in "the ethnography of speaking" in which sociolinguists studied variations in conversational language in

American anthropologist Margaret Mead, who frequently used ethnographic methods, smiles at a Balinese infant. (Ken Heyman/Woodfin Camp & Associates)

different social contexts (Hymes, 1996, 1999; Nelson, 1992). Information contained in hundreds of these reports has been classified and indexed in the **Human Relations Area Files (HRAF)** and is frequently used in **hologeistic research,** *projects in which hypotheses about such topics as gender differences in aggression or preference for breast versus bottle feeding can be tested on a worldwide sample of more than 340 societies.*

Matsumoto points out that "In recent years, there has been an interesting merging of research approaches across disciplines, with an increasing number of scientists adopting comparative techniques for use in single-culture immersion research and comparative researchers adopting qualitative ethnographic methods to bolster their traditional quantitative approach" (p. 39). We see this as a positive sign that these social science disciplines, often at odds, may be showing signs of understanding and learning from each other.

Keller and Greenfield (2000) look more specifically at some of the contributions developmentalists and their research make to cross-cultural

psychology—methodologically, theoretically, and empirically. For example, in terms of methodology, they point to the use of "contextualized procedures, such as naturalistic observation, suitable for studying behavior in its cultural context" (p. 52). Theoretically, "developmentalists point to the fact that the culturally constructed behavior of adults can be viewed as an endpoint along a developmental pathway and that adults provide cultural socialization to the next generation" (p. 52). Finally, empirically, they point out that "a developmental approach leads researchers to investigate the culture-specific shape of developmental stages" (p. 52).

In an impressive work, particularly relevant to this discussion, van de Vijver and Leung (2000) comment on the extent to which methodological tools can be used to correct for the overemphasis on fact finding and, thereby, speed up the slow theoretical progress in cross-cultural psychology. It is their contention that, in the future, there will be two different types of cross-cultural researchers: "*natives* (whose emphasis is on culture and the methodology for the study of culture) and *sojourners* (who make brief, sporadic excursions into cross-cultural research)" (p. 48 [italics added]).

They point out that as a result of clearly different interests, each will take different methodological paths. For example, "Sojourners will be mainly interested in psychological-differences studies and generalization studies . . . [while] . . . Natives will carry out research that is central to our understanding of cultural differences and the influence of culture" (p. 48). The types of studies that will result from these different orientations and the strengths and weaknesses of each are shown in Table 2.5 on page 44. (To learn more about the methodological issues related to these approaches, see van de Vijver and Leung, 2000.)

Van de Vijver and Leung conclude that when greater emphasis is placed on the development and testing of theories and appropriate methodological tools are used in carrying out research, the replicability of cross-cultural findings will improve—a point Gardiner stresses elsewhere in this book. They believe that "impediments to progress in cross-cultural research . . . all derive from what could be called partis pris (preconceived opinions, prejudices) of cross-cultural psychologists" (p. 34). We might add this would apply to any researchers—psychologists, anthropologists, sociologists, or others.

For those who want to know more about cross-cultural research methodology, from a primarily psychological viewpoint, including additional problems and solutions, we recommend the volumes by Segall, Dasen, Berry, and Poortinga (1999), and Berry, Poortinga, and Pandy (1997). Cross-cultural research methodology, as practiced by anthropologists, is discussed in a volume by Ember and Ember (2000).

Let us now take a closer look at some of these issues and several of the research methodologies used in the cross-cultural study of human development, particularly those associated with our two major theoretical viewpoints—the ecological model and the developmental niche.

TABLE 2.5 Types of Cross-Cultural Studies and Their Strengths and Weaknesses

ORIENTATION	TYPE OF STUDY	CONTEXTUAL FACTORS	MAIN STRENGTH	MAIN WEAKNESS	EXAMPLE
Hypothesis-testing	Generalizabilty	No	Attention to equivalence and bias issues	Absence of contextual variables	Schwartz (1992); McCrae & Costa (1997)
Hypothesis-testing	Theory-driven	Yes	Examines relationship of cultural factors and behavior	Focus on single explanation; little attention to alternative interpretations	Berry (1976)
Exploration	Psychological differences	No	Open-mindedness to cross-cultural differences	Ambiguous interpretation of differences	Guida & Ludlow (1989)
Exploration	External validation	Yes	Focus on interpretation of cultural differences	Choice of cultural characteristics to which psychological variables can be related	Williams, Satterwhite, & Saiz (1998); Georgas, van der Vijver, & Berry (1999)

Source: Adapted from "Methodological Issues in Psychological Research on Culture" by F. J. R. van de Vijver and K. Leung, 2000, *Journal of Cross-Cultural Psychology, 31,* 33–51.

Methods for Assessing Components of the Developmental Niche

Super and Harkness (1999) have presented, in extensive detail, their suggestions for successfully measuring and assessing the components of the developmental niche. In this section, we provide an overview of their methodology, which, as can be seen in Table 2.6, involves a combination of psychological and anthropological research techniques. Anyone with a serious interest in the developmental niche approach is advised to consult this important work that blends theory and methodology in a way seldom done in the study of cross-cultural human development. It stands as a model for

TABLE 2.6 Methods for Studying the Developmental Niche

METHOD	COMPONENT	
	Identified	*Measured*
Participant observation and ethnographic interviewing	Settings, customs, and caretaker psychology	—
Spot observations and diaries	Settings, customs, and caretaker psychology	Settings (and customs)
Behavior observations	Customs and caretaker psychology	Customs
Semistructured interviews and focus groups	Customs and caretaker psychology	Customs and caretaker psychology
Structured questioning	—	Caretaker psychology and customs
Passive enumeration	Caretaker psychology and customs	Caretaker psychology and customs
Formal methods: free listings, clustering, multidimensional scaling, and consensus analysis	Customs and caretaker psychology	Caretaker psychology and customs

Source: From "The Environment as Culture in Developmental Research" by C. M. Super and S. Harkness, 1999, in S. L. Friedman & T. D. Wachs (Eds.), *Measuring Environment Across the Life Span.* Washington, D.C.: American Psychological Association.

others in the field and as an example of the effort to bring closer together anthropology and psychology that we hope to see more of in the future.

Looking at Table 2.6, we find several ethnographic, observational, and formal methods (column one), the component to which a particular method contributes qualitative understanding (column two), and, finally, the component for which a method can furnish quantitative information (column three).

According to Super and Harkness, the first group of methods (participant observation and ethnographic interviewing) are indispensable for selecting and understanding important components or units of the developmental environment and for providing the foundation for determining what should be measured and how to create hypotheses that will demonstrate how various components of the developmental niche are related to each other. They point out that **participant observation** (a technique in which an investigator lives for a time with or near a group of people and observes its daily life, activities, and rituals) and **ethnographic interviews** (asking group members to describe their culture's typical behaviors, attitudes, beliefs, and values), if carefully carried out, can help identify elements within each of the three developmental niche components (see Table 2.1). An example of their use in actual research is in a study by Levy (1996) in which he reports that differences in parental beliefs and practices about learners and teaching in Tahiti and Nepal may be a result of differences in the level of societal complexity in these two cultures.

Other techniques useful in identifying important aspects of all three components, but settings in particular, include spot observations and diaries. Results from **spot observations** (a series of random unannounced observations of a group, sufficient in number to allow for statistical analysis) and **diaries** (written accounts of changes in daily activities kept by participants over varying periods of time, such as a full 24-hour day) are useful for "describing the physical and social settings of daily life not only in terms of their particular qualities but also in terms of their empirical distributions . . . [and] . . . provide a basis for identifying regularities in settings and activities that may differ between groups, or that one wants to relate thematically to other elements in the niche, or to developmental trends" (Super & Harkness, 1999, p. 304).

Measuring customs (the second component of the developmental niche), according to Super and Harkness (1999), requires (1) a qualitative approach in which behavioral consistencies are identified either through **direct observation** of a cultural group or by means of **ethnographic descriptions** of its everyday attitudes, beliefs, and behaviors, and (2) a quantitative approach producing "measures of individuals' views on the nature and importance of the custom or measures of the frequency of occurrence of the identified practice, or both" (p. 308). They assert that the ideal approach to assessing and measuring the customs component "demonstrates their existence,

documents their occurrence, and explains their relationship to the settings of daily life and to the psychological theories that guide them" (p. 308).

Measuring caretaker psychology or parental beliefs and values (the third component of the niche) also requires a combination of qualitative and quantitative approaches. These may include **structured questioning** (frequently based on findings obtained from the methods previously discussed) and **formal methods** originally employed in the cognitive sciences (see Borgatti, 1992 for additional information).

Truly understanding culture and the critical role it plays in human development requires an appreciation of qualitative as well as quantitative findings. In the words of Super and Harkness (1999), "Findings in one domain suggest further exploration or reexamination in another, and replication of patterns suggests salient cultural themes" (p. 312). Their unique organizational scheme provides answers to many questions about culture and development while setting forth even more challenges for the future.

Studying Ecological Systems

Unlike Super and Harkness, who constructed their approach to human development and conducted much of their own research in support of it, Bronfenbrenner has primarily been the developer of ideas and hypotheses while others have carried out research to show the validity of his approach. To illustrate this, let us briefly look at some examples of representative research carried out on each of the four ecological systems.

First, Brown, Lohr, and Trujillo (1990), in an effort to show how the peer microsystem of adolescents becomes increasingly differentiated and influential in one's behavior, reported on the ways in which both positive (acceptance, friendship, status, and popularity) and negative (drinking, smoking, stealing, cheating) behaviors are associated with different adolescent life-style decisions. Second, Muuss (1996) has stated, "A mesosystem analysis examines the quality, the frequency, and the influence of such interactions as family experiences on school adjustment" (p. 325). An interesting example of this is Epstein's study (1983) of the longitudinal effects of family–school–person interactions on student outcomes, which, unexpectedly, reported that the interaction of family and school was of far greater importance and influence than the variables of race and socioeconomic status. Noted among the findings was a continuing influence of the family and school environments far beyond the early childhood years, lending support to the interaction effects among systems proposed by Bronfenbrenner. As an example, the author pointed out that students experiencing the greatest change in independence were those initially scoring low on this behavior (and whose families failed to emphasize decision making) but who attended schools that placed a strong emphasis on student participation.

Third, as you may remember from our original comments, Bronfenbrenner has asserted that decisions made in the exosystem (e.g., in parents' workplaces) can have an extremely important influence on the life of a child or adolescent (even though they are not a part of that setting). Flanagan and Eccles (1993) effectively demonstrated this point in their two-year longitudinal study of changes in parents' work status and their effects on the adjustment of children before and after their transition to junior high school. Results indicated that of four family types identified (based on patterns of change or stability in parental work status), children in deprived and declining families were less competent than their peers in stable or recovery families. Although most of the subjects experienced some difficulty in school adjustment, the transition was shown to be especially difficult for those whose parents were simultaneously dealing with changes in their work status.

Fourth, although the macrosystem, in many ways, is removed from the daily life of an individual, it does consist of extremely important societal influences (political, religious, economic, and other values) that clearly affect human development. Bronfenbrenner (1967) demonstrated the influence of macrosystem values in an early comparison of peer group and adult pressures on children in the United States and the former Soviet Union. At that time, in the Soviet Union, a cohesive core of socially accepted and politically endorsed values left little room for differences in expectations between the adults or peers in one's environment. In the United States, on the other hand, there were frequently unmistakable differences between these significant people, with the result that children and adolescents often found themselves being pulled in different directions. With the breakup of the former Soviet Union, the situation that once existed in the United States (and to a large extent, still appears to) now is much more characteristic of the former Soviet Union as well.

As we close this discussion, it seems only fair to give Bronfenbrenner the last word on the challenge of operationally defining elements of his evolving bioecological model as well as efforts to scientifically measure them. As he states, "Thus far, I have accorded more attention to the conceptual rather than to the operational aspects of this challenge. I did so for a reason; namely, most of the research designs and methods of measurement currently in use in developmental science are not well-suited for what I have referred to elsewhere as 'science in the discovery mode' (Bronfenbrenner & Morris, 1998). To be more specific, these designs and methods are more appropriate for verifying already formulated hypotheses than for the far more critical and more difficult task of developing hypotheses of sufficient explanatory power and precision to warrant being subjected to empirical test. . . . In summary, most of the scientific journey still lies ahead" (Bronfenbrenner, 1999, p. 24). For those interested in reading more about these issues, see any of the several references mentioned in this discussion.

◇ SUMMARY

This chapter focuses on theories and methodologies used in the conduct of cross-cultural research in general and developmental research in particular. We began with reasons for studying human development—to *understand, explain, predict, and* (in some instances) *control behavior.* To successfully achieve these goals, we need to use theories which, simply stated, are *sets of hypotheses or assumptions about behavior.* We discussed, in detail, six approaches that will receive significant attention throughout this book—Bronfenbrenner's ecological model, Super and Harkness's developmental niche concept, Piaget's theory of cognitive development, Vygotsky's sociocultural theory of development, Erikson's psychosocial theory, and Kohlberg's theory of moral development. We discussed some of the ways in which cross-cultural methods might be classified, distinguished between different types of cross-cultural researchers (natives and sojourners), and commented on specific techniques including ethnographies, cross-cultural comparisions, "bottom-up" and "bottom-down" approaches, and hologeistic studies. We concluded with a discussion of methods for assessing components of the developmental niche as well as ecological systems.

◇ FURTHER READINGS

Douglas Raybeck. (1996). *Mad Dogs, Englishmen, and the Errant Anthropologist: Fieldwork in Malaysia.* Prospect Heights, IL: Waveland Press.
   A lively account of the author's adventures and misadventures while doing fieldwork with vivid descriptions of Kelantanese society and culture, kinship, linguistics, and gender relations. Provides a real sense of how an anthropologist conducts and gathers reliable information in cultural settings where often "things go awry."

Susan Goldstein. (2000). *Cross-Cultural Explorations: Activities in Culture and Psychology.* Boston: Allyn and Bacon.
   This book contains nine chapters with ten activities each revolving around case studies, self-administered scales, mini-experiments, and a collection of content-analytic, observational, and interview data allowing "hands-on" experience. Of particular interest is a chapter on Culture and Psychological Research that explores major issues and techniques in the conduct of cross-cultural research.

Walter J. Lonner & Roy Malpass. (1994). *Psychology and Culture.* Boston: Allyn & Bacon.
   Each of the forty-three short (five- to six-page) easy-to-read chapters on various aspects of cross-cultural psychology provides personal insights into the ways in which the authors carried out their research, often with revealing comments on the mistakes they made.

Theodore Singelis. (Ed.). (1998). *Teaching About Culture, Ethnicity, & Diversity.* Thousand Oaks, CA: Sage.

> A book of easy-to-use classroom exercises intended for use in teaching about culture, ethnicity, and diversity. A practical tool for those who want to learn more about these topics and have fun doing it.

F. J. R. van de Vijver (2000). Types of cross-cultural studies in cross-cultural psychology. In W. J. Lonner, D. L. Dinnel, S. A. Hayes, & D. N. Sattler (Eds.), *Online Readings in Psychology and Culture* (Unit 2, Chapter 6), (http://www.wwu.edu/~culture), Center for Cross-Cultural Research, Western Washington University, Bellingham, Washington.

> This easliy accessible on-line article classifies cross-cultural studies along three dimensions and provides clear examples and illustrations of cross-cultural methodology.