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SCHOLARLY RESOURCES FOR CHILDREN AND CHILDHOOD STUDIES

A Research Guide and Annotated Bibliography

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The Scarecrow Press, Inc.
Lanham, Maryland • Toronto • Plymouth, UK
2007

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PSYCHOLOGY

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Children and childhood have long been fundamental topics for psychological research. Since psychology aims to understand the mind, the question of how the mind initially emerges and changes with experience and maturation over the course of an individual's development is a central theme in psychological theory. Childhood is a period of enormous changes; infants come into the world with only a limited capacity to think and act, yet ultimately end up as adults like you or I, with extraordinarily complicated mental and behavioral abilities and skills. Understanding the processes of stability and change over the course of childhood, as well as the biological, social, historical, and cultural factors that shape and guide development, are problems that pose significant conceptual and methodological challenges. Yet the answer to these problems may help solve some of the most fundamental questions about the nature of the mind.

Unfortunately, like any academic discipline, psychology has its own language, vocabulary, techniques, conventions, and culture. Those outside the field, perhaps venturing here for the first time, may feel hopelessly lost navigating through the psychological literature with its rugged landscape of abstruse concepts and technical terms. This chapter aims to provide a short "travel guide" for students of Children and Childhood Studies making their first expedition into the field of psychology. I will provide directions on some useful and interesting places to visit, tips on how to find your way around in case you get lost, and explain some of the local dialect and practices in simplified terms. Hopefully, with this guide, your journey through the terrain of the mind and behavior will go a bit more smoothly. And who knows? You may pick up a few words and phrases, enjoy the local intellectual cuisine, and return here again and again.

PSYCHOLOGY: SYSTEMS AND HISTORY

In its broadest definition, *psychology* is the study of mental processes and behavior. Whereas other social science disciplines such as sociology, economics, political science, and anthropology tend to examine the behavior of groups of individuals, psychology generally focuses inquiry at the level of the individual. Psychologists address a diverse set of questions such as how people access, process, store, and retrieve information; how the structures and connections among parts of the brain are related to behavior; how people develop uniquely individual traits such as personality or identity; how individuals understand and think about themselves and others; and how experiential and biological factors influence change over time.

It may be useful to think of psychology as a country divided into states. Each of these states represents one of the many subfields within psychology that have developed over the past 125 years since psychology declared independence from philosophy in the1870s when William Wundt founded the first psychological laboratory in Leipzig, Germany. In those early days, psychologists were mainly interested in sensory processes and their limitations, such as determining the highest and lowest frequencies detectable by the human ear. However, early pioneers such as William James, Edward Titchener, Sigmund Freud, and Ivan Pavlov explored new territories, vastly expanding the field, developing new approaches toward studying the mind such as structuralism, functionalism, psychoanalysis, and behaviorism. While some used these paradigms to explore 'normal' behavior, others studied 'abnormal' behavior such as psychopathology or antisocial behavior.

Over the past century, certain territories within psychology combined, others divided off and formed new states. The boundaries between subfields were redrawn, gerrymandered, and shifted as new theories, methodologies, and paradigms replaced the old. This disciplinary redistricting has left us today with several common subfields found in many psychology departments: biological, social, developmental, cognitive, personality, organizational/industrial, and clinical psychology. Several other fields exist but are somewhat less common in academic departments: vision and perception, health, community, and educational psychology. In recent decades, some of the most intriguing findings have occurred in new regions that fall near the borders of subfields within psychology, such as social neuroscience or cultural psychology, or fields that represent true interdisciplinary endeavors across the social and biological sciences, such as evolutionary psychology or cognitive science.

The reader of this chapter is likely to be most interested in the area of psychology that is most relevant to the study of children: developmental (or

child) psychology. Developmental psychology is concerned with the ontogeny, or origin, of the mind. Developmental psychologists focus upon how processes of stability and change over the course of an individual's development interact to create the mind. Traditionally, developmental psychologists have focused mainly on humans in the first decade or so of their lives, the period in which there is the most obvious and significant growth. In recent years, however, there has been a shift toward viewing development as a lifelong process, and a number of scholars now study developmental processes that occur within the second and third decades of life, a period known as "emerging adulthood." Still others have broadly expanded the concept of development to include the trajectory of one's entire life, a field known as lifespan psychology.

There are a number of specialties within the field of developmental psychology. Cognitive development focuses on the question of the origins of intellectual functioning and thought. Social development examines the emergence of social reasoning such as understanding the self, identity, and mental lives of social others. Developmental neurophysiology addresses brain functioning and behavior, and to a considerable extent concentrates upon the assessment and treatment of neurological disorders. School or educational psychologists address questions concerning how children learn and grow in the context of educational settings. Finally, there is a branch of developmental psychology dealing with clinical issues and mental illnesses in children.

Developmental psychology holds a unique position in the field of childhood studies in that a significant amount of research in childhood studies is in response to, or a reaction against, the traditional perspective of child psychology.[2] Some scholars have charged that developmental psychology fails to account for children's own unique voices or agency and objectifies children as subjects to be evaluated, scrutinized, and measured in studies. Others claim that developmental psychology views childhood as merely a path along the way to maturity rather than a unique stage of life. Whether or not these claims are valid might be a good topic for interdisciplinary debate; however, the work of developmental psychology has provided a strong foundation for childhood studies by providing a language for describing the mental lives of children and numerous concepts, theories, and tools that are essential for understanding childhood.

THEMES IN DEVELOPMENTAL THEORY AND RESEARCH

Several general themes run through much of the developmental literature. When evaluating different theories and studies, it is useful to keep these

themes in mind as they have, in various forms, inspired and motivated most psychological research on children and childhood.

The first, and perhaps most widely known, is the question of whether biological or experiential factors play a larger role in guiding developmental processes or outcomes. Often referred to as the "nature versus nurture" debate, this theme has its roots in antiquity, and a number of scholars fall on both ends of the continuum between biological and experiential explanations for development. Although there is still very little consensus or agreement on this issue in any topic or domain, most discussions on the origins of intelligence, personality, social learning, and cognitive development address the problem in some form.

A second theme concerns the universality of developmental processes; whether all children develop along the same trajectory, or whether there are individual or group differences in development, shaped by differences in biology and experience. This question bears a strong relationship to the question of nature versus nurture in that there is a general assumption that if development is governed by biology rather than experience, there should be significantly less variably in the outcomes of any developmental processes given the fact that all humans share a common biology but certainly not a common set of experiences. However, the history of psychology is littered with studies arguing the opposing view: that innate biological differences between individuals of different races, social classes, and genders give rise to divergent developmental outcomes.

A third theme concerns continuity and discontinuity in development; whether development progresses in a uniform, linear progression, or if there are discrete stages of development that children move through in a particular order to achieve an adult form. Various theories have described development as a series of plateaus. To name a few common theories, Piaget's stages of cognitive development, Kohlberg's stage theory of moral development, and Vygotsky's notion of the zone of proximal development all presume a nonlinear progression of development, in which children lack a particular skill then acquire that skill through maturation, experience, or social interaction. Alternatively, two positions that do not accept that development occurs in stages are the dynamic systems approach and the core knowledge proposal. In brief, the dynamic systems approach views development as a linearly increasing process driven by subtle, ongoing interactions between various internal and external factors, and core knowledge presumes that children are born with an innate understanding of a variety of cognitive and social domains, such as number knowledge or race. Some criticize stage theories on the basis that apparent discontinuities in develop-

ment may emerge only because the research tools that psychologists use do not capture more subtle progressions in the acquisition of knowledge or skills. The argument is that underlying what appears to be nonlinear stages are more slowly emerging, linear processes that are difficult to detect given the tools that psychologists often use, almost analogous to how astronomers might not observe a distant galaxy in their telescopes because the instruments are simply not strong enough to detect it.

A fourth theme is the degree to which individual psychological processes develop independently or are dependent upon one other as part of a larger emerging general psychological system, a problem known as domain generality versus domain specificity. For example, an important question in cognitive development is how language emerges separately from other cognitive abilities, such as categorization or symbolic understanding. Some argue that language, for instance, is a highly modular system that has very little relationship to general cognitive development, as evident from the fact that individuals exhibiting profound cognitive disabilities in most cases learn language as easily as those with normal cognition.

A final theme is the role of various contexts—family, historical, social, ethnic, educational, socioeconomic or cultural—in shaping development and alternatively determining what role children perform in their own development. There is a vast literature on parenting behaviors and their relationship with child behavior, or the effect of poverty on learning, or how media such as television influence children's understanding of social relationships and aggression. In an increasingly diversified world, this topic has become critical in informing psychologists about the variability of the situations in which children develop, and their resiliency in the face of adversity and various social pressures.

These five themes help organize research and guide the generation of testable hypotheses on the vast majority of questions regarding psychological development. Certainly there are other themes and issues, yet this list contains some of the most common ones you may encounter that cut across the various subfields within developmental psychology. When reading scholarly publications in psychology, it is useful to consider how these themes are incorporated into the arguments and inform a scholar's conclusions.

METHODOLOGICAL ASPECTS OF CHILD RESEARCH

To better understand psychology, it may be useful to consider how psychologists gather data to support or disconfirm their theories. Psychology is

largely an empirical science in that researchers rely extensively upon observation of phenomena for developing and testing theories of how the mind works. This section will describe, in broad terms, some of the research methodologies used in psychology more generally, and discuss several specific designs commonly used in studying development in children and infants.

As Amy Masko pointed out in her chapter on education, research in psychology also tends to fall into two broad categories: qualitative and quantitative strategies. Qualitative strategies aim to explain a phenomenon through people's subjective experiences or interpretations. Such strategies generally aim to *describe* and *understand* rather than *measure* and *quantify* a phenomenon. Psychoanalytic theory, for instance, is almost entirely founded on qualitative research, such as the analyst's interpretation of a patient's dream or the determination of a causal link between an individual's early experience and later psychopathology. In ethnographic studies, a psychologist will participate in the customs and traditions of a foreign culture by living in that cultural context and taking extensive field notes, later using these observations to elaborate upon a theoretical issue in psychology. In case studies, a psychologist will write an extensive report about a single individual or group that has some feature that is relevant to broader theories in psychology. Using the hermeneutic approach, a psychologist will identify texts or narratives and determine a strategy for coding and interpreting the data contained in light of some psychological theory.

While qualitative research is useful for describing phenomena, there are a number of limitations of the inferences and conclusions reached using such strategies. Most important, qualitative research rarely allows the researcher to determine the *cause* of a behavior. Most psychological phenomena are so complex that there may be a large number of potential causes that explain why a certain psychological process exists or how it developed. To determine the underlying cause of a behavior, one must systematically and carefully isolate each potential extraneous factor that can influence the behavior in question. Qualitative strategies, being descriptive in nature, rarely allow the researcher to rule out alternative causes. Second, there is almost always a certain subjectivity involved in qualitative research. Just as the example of the "Blind Men and the Elephant" in the opening pages of this book describes how different individuals all describe the proverbial elephant based solely on the part of the animal they touched, different psychologists might interpret the same behavior in children in very different ways based on either their own predispositions and biases, or what aspect of a particular behavior they happen to examine. For this reason, many psychologists begin with a qualitative strategy to identify a phenomenon, and subse-

quently utilize quantitative strategies to better isolate its cause and effects on development.

In contrast with qualitative research strategies, which seek to describe a phenomenon, quantitative research seeks to *measure* a phenomenon. Most quantitative research rely upon the scientific method in which a researcher first develops theories that explain a certain behavior, generate hypotheses on the mechanism or function underlying the phenomenon, gather data by observing behavior or designing experiments that test the hypothesis, then accept or reject the hypothesis based upon a statistical analysis of the data.

Let us examine a hypothetical example of the process of quantitative research. A psychologist might be interested in a theoretical construct such as "children's vocabulary size" and its relation to another theoretical construct such as the "amount of speech a child hears at home." One might have a theory that there may be a relationship between the two constructs, and hypothesize that the more speech a child hears, the larger their vocabulary size. To test this prediction, one must have some kind of test for measuring the two theoretical constructs. The psychologist operationalizes the two theoretical constructs by developing empirical constructs—some tool that quantitatively measures a certain behavior or characteristic of individuals. So, for vocabulary size, the psychologist might use the results of a commercially available vocabulary test as an empirical construct to measure the theoretical construct of vocabulary size. For "amount of speech a child hears at home," the psychologist might go to a child's home and audiotape five hours of conversation between parents and their children, later measuring the number of words spoken by caregivers in the house. If the hypothesis is correct, then children who are exposed to a significant amount of speech at home should have larger vocabularies than children who are exposed to very little speech. If the hypothesis is incorrect, then there should be no relationship between the two constructs. In fact, research suggests that there indeed is a relationship between vocabulary size and amount of speech a child hears at home, with more parental speech leading to larger vocabulary sizes in children.[3]

Just as there are several general limitations to qualitative strategies, there are a number of limitations of quantitative strategies as well. Foremost, the quality of the conclusions is solely based upon the quality of the measurements. For instance, it is possible that those days when the experimenter measured the amount of speech in the child's home happened to be days that the parent was particularly talkative, or that simply the experimenter's presence in the participant's home influenced the amount of language spoken. Alternatively, given that the psychologist only tests, say, twenty or thirty children in

any given study, there is always a concern regarding whether the results obtained from this small sample of children generalizes to all children in all societies. So even when the experimenter does find a relationship between variables, it is not altogether clear whether the conclusions are reliable or whether extraneous factors determined the observed results.

A more philosophical objection to quantitative research is that in measuring something, a significant amount of information is lost because any given phenomenon is far too complex to be adequately measured by a simple test or experiment. For example, a vocabulary test only assesses the comprehension of words; it is possible that other measurements of vocabulary size (i.e., the number of novel words a child produces on any given day) might result in very different conclusions. It is often the case that the limitations of quantitative strategies end up being the strengths of qualitative strategies, and vice versa. Unfortunately, few psychologists have successfully combined both approaches to foster a more comprehensive perspective on development. However, this limitation of psychological research may provide a unique window of opportunity for students of an interdisciplinary approach such as childhood studies. By integrating methods from various fields, childhood studies has the advantage of fostering a unique perspective relying on a diverse set of intellectual resources gathered from the toolboxes of various disciplines to improve our understanding of the mental lives of children.

TWO GENERAL TYPES OF QUANTITATIVE STRATEGIES: TRUE EXPERIMENTS AND QUASI-EXPERIMENTS

Because quantitative strategies are generally more technically complicated than most qualitative strategies, the rest of this section will describe different quantitative strategies in greater detail. There are two main types of quantitative research methods: *true experiments* and *quasi-experiments*. Imagine one is interested in the effects of mood on vocabulary size. In a true experiment, a psychologist identifies a population (i.e., four-year-old children) and selects a sample of this population, such as twenty children from a local kindergarten. The children are divided randomly into two groups, one of which receives one kind of treatment, such as reading a happy children's picture book, and the other half that reads a sad children's book. Mood in this case is considered an *independent variable*; it is the variable that the psychologist manipulates. After each child reads the happy or sad story, they are tested on some measure, such as a vocabulary test. The perform-

ance on this test is called the *dependent variable* because its value depends upon the manipulation of the independent variable. The researcher then compares performance measured by the dependent variable for the two groups (happy and sad children). The researcher compares the data from the two groups using statistical tests, and if there is a significant difference between the performance of the happy and sad children, the researcher can conclude that mood affects performance on vocabulary tests.

True experiments are powerful because they rely upon the process of randomization to prevent extraneous factors from influencing behavior. Randomization prevents the groups that are defined (e.g., happy or sad children) from being different in any systematic way that could introduce bias into the results. Unfortunately, randomization in most developmental studies is hard to accomplish, mainly because most developmental psychologists are interested in children's performance at different ages, and it is impossible to randomly assign a group of children into, say, four- or eight-year-old groups. Therefore, the most common research methodology used in developmental psychology is the quasi-experiment. Quasi-experiments are strategies in which participants are not randomly assigned into groups. For example, one could measure individual children's mood using a scale of how happy or sad they feel at the moment, then assess their vocabulary, and determine whether there is a relationship (statistically known as a *correlation*) between the two variables.

The fact that developmental studies generally employ quasi-experimental designs raises a number of concerns about the validity of a study's conclusions. Validity describes the degree to which a study demonstrates that some observed difference is actually due to the specific factor that the psychologist investigates. Let us consider a simple yet ridiculous example. Imagine a psychologist is interested in differences between a newborn baby and an eight-year-old child on their ability to measure the length of a stick. The psychologist places a ruler and pencil in each of their hands, and provides them with a sheet of paper on which to write their answers. It is not surprising that after a minute, the researcher discovers that the baby is merely sucking on the pen while the eight-year-old has written the correct answer. The psychologist concludes that infants cannot measure, but eight-year-olds can.

The problem with this quasi-experiment is that there are multiple alternative explanations that threaten the validity of the conclusion drawn from the data. For instance, the findings could arise because the eight-year-old understood the instructions and the infant did not. It could be due to the fact that eight-year-olds have a certain level of motor skills, such as

holding a pen or a ruler, while infants do not. It may also be due to the fact that eight-year-olds can measure, while infants can not. Yet because there are so many potential causes for the difference, it is difficult to determine which offers the best (or most parsimonious) explanation. In fact, I will describe an experiment showing that infants actually *can* measure the length of a stick, but one must design experiments that demonstrate this capacity but do not involve understanding instructions, answering a written test or using a ruler.

QUASI-EXPERIMENTAL DESIGNS FOR STUDYING DEVELOPMENT OVER TIME

The quasi-experimental research designs described above refer to general approaches to studying psychological phenomena. However, because developmental psychologists are generally interested in change over time, there are several more specific research designs common in psychological studies of children. The two most common are *longitudinal* and *cross-sectional* designs. In longitudinal designs, a group of children are tested in a study at age *X*, and the same children are retested again when they are at age *Y*. The researcher then compares the performance of the children at age *X* and age *Y*. In cross-sectional designs a group of younger children at age *X* and a group of older children at age *Y* are tested at the same time, and the performance of the two groups compared. Note that both of these experiments are necessarily quasi-experimental because there is no random assignment into groups. The advantages of longitudinal designs are that they allow one to observe individual growth trajectories over time and that there are no extraneous differences between the children in the two age groups because they are the same children. However, longitudinal designs have the disadvantage of being time consuming, expensive, and, especially for those designs that track children over long periods of time, no guarantee that the children who were originally tested will be available at the second time-period for retesting (i.e., families move to different states, move within the same area and leave no forwarding address). The advantages of cross-sectional designs are that they are fast, cheap, efficient, and have no problems with dropout because children are tested only once. Their disadvantages are that they do not allow one to observe growth trajectories and there are potential differences between the groups in a study other than just age (e.g., children born in 1976 entered a very different world than those born in 2006). Similar to the problem of qualitative and quantitative strategies, note

that the advantages of longitudinal designs tend to be the disadvantages of cross-sectional designs, and vice versa. There are several other less commonly used developmental designs that address some of these limitations (cross-sequential, time-lagged, or microgenetic designs); however, these methodologies are only feasible in examining specific kinds of research questions.

SPECIFIC RESEARCH PARADIGMS FOR STUDYING CHILDREN

Experimental procedures used to study older children are similar to those used with adults; however, the complexity of the task and the instructions are often simplified in order for children to understand the task. For instance, in studies that examine mood states using scale measures, instead of using words like "happy" or "sad" researchers may use schematic cartoon faces expressing varying states of happiness and ask the child to point to the face corresponding his or her mood.

Younger children present a number of challenges as participants in research studies. For certain questions, psychologists have developed specific paradigms for acquiring data with infant or toddler participants. For instance, perceptual depth perception has been studied using a visual cliff—a glass tabletop having a fake edge that appears to suddenly drop off in the center of the table. Researchers have used such visual cliffs to determine whether infants will crawl over the apparent edge when prompted by their mothers on the opposite side of the table. Another example is the rouge test, which explores self-perception in infants. A psychologist will surreptitiously place a red rouge dot on the nose of an infant and places him or her before a mirror. While younger infants either laugh or try to touch the nose of the image in the mirror, older children reach for their own nose to wipe off the rouge. Clearly, these methodologies are useless in studying older children and adults, who would perform perfectly in these tasks. However, they are very useful tasks for examining a variety of issues in younger children who have only a limited capacity to verbally respond to questions or understand directions.

Perhaps the greatest challenge for developmental psychologists is studying mental processes in very young infants. Even simplified versions of adult tasks are impossible to use with infants due to their limited understanding of language and motor skills. Developmental psychologists who study infants have developed several clever paradigms for exploring psychological processes

that do not require the production or comprehension of language. One such method is known as visual habituation.

The habituation paradigm relies on the fact that organisms pay more attention to novel than familiar stimuli. In habituation studies, infants are shown a stimulus, such as a stick of a certain length on a small puppet stage. An experimenter measures the amount of time the infant watches the stimulus. Once the infants look away in boredom, the experimenter raises a screen that blocks the infants' view of the stimulus. After a short delay, the screen lowers, and the infant sees the same stimulus again. Just as you become bored from listening to the same song on repeat on your stereo, infants tire of seeing the same object over and over again. At some point the infant hardly looks at the habituation stimulus at all. At this point, the screen raises, blocking the infant's view of the stage, and the experimenter switches the habituation stimulus with a new stimulus that differs from the original. In this example, the novel stimulus is a stick that is twice the length of the stick that the infant viewed in the habituation portion of the study. If infants perceive a change in the size of the stick, the amount of time they look at the new object increases relative to the time they look at habituation stimulus. Alternatively, if the infant does not perceive a difference between the two objects, his or her looking time will not differ between the habituation and novel displays. In fact, evidence gathered using the habituation paradigm suggests that under certain conditions, infants *do* notice the difference between two sticks that differ only in length, providing evidence that infants have a primitive ability to measure.[4]

There are a variety of resources that help explain research designs used to study children. For a comprehensive treatment of such designs, there is an exhaustive yet concise chapter by Hartman in *Developmental Psychology: An Advanced Textbook*. There are also a number of textbooks on research methodology in psychology that are not focused exclusively on developmental research, but provide a broader perspective on research in psychology. McBurney and White's *Research Methods* is a simple and readable text, Sarafino's *Research Methods* is a more intermediate-level text, and Kirk's *Experimental Design* is a very advanced text covering many of the statistical aspects of research design.

OVERVIEW OF SCHOLARLY WRITING IN PSYCHOLOGY

After conducting a study, psychologists share their findings with the world by publishing their findings. Scholarly writing in psychology appears in the

form of full-length books and monographs, edited books in which different authors contribute chapters, and in articles that appear in academic journals. This section will focus mainly on journal articles; however, it is worth mentioning a few books that are particularly useful in providing a range of information.

Psychology Books

There are a large number of undergraduate-level introductory textbooks on psychology, and many focusing upon specific subfields, such as child or developmental psychology. These textbooks serve as a good starting point for general information about research in psychology, and are typically divided into thematic section by chapter, allowing one to quickly acquire information. Unfortunately, by their introductory nature, what most textbooks provide in breadth they typically lack in depth. An excellent undergraduate textbook is Berk's *Child Development*, and a useful textbook for more advanced students is Bornstein and Lamb's *Developmental Psychology*.

Beyond textbooks there are a variety of handbooks that provide detailed information on specific topics related to psychology and childhood. Handbooks are particularly useful in providing virtually encyclopedic knowledge about multiple aspects of a single topic. In psychology, Weiner's *Handbook of Psychology* is perhaps the most significant. It certainly is the heaviest: spanning almost 8000 pages in twelve volumes, Volume 6 is devoted exclusively to developmental psychology. Similarly, Damon and colleagues' *Handbook of Child Psychology* is a five-volume series covering a wide variety of topics relevant to children and childhood. Valsiner and Connolly's *Handbook of Developmental Psychology* is a useful resource as well. There are dozens of handbooks on any of a number of more specific topics in psychology, from abnormal psychology to violence prevention. Many of these handbooks include chapters dealing with issues relevant to CCS.

There are also a large number of edited books and full-length volumes on any of a number of more specific topics in psychology. Edited volumes are books containing chapters that revolve around a specific theme. An editor asks various scholars to submit chapters to be collected and printed together as a book. Compared with journal articles, chapters from edited books are generally easier to read because they review a large number of findings rather than report data from any single investigation. Full-length books and monographs, though available, are relatively uncommon in psychology today. Generally, these books tend to summarize a particular point of view or series of studies conducted by the author(s) of the volume.

Finally, for those new to the discipline, it may be worth referencing a dictionary of psychology terms, such as Hayes and Stratton's *A Student's Dictionary of Psychology*, or for more advanced students, Corsini's *The Dictionary of Psychology*. There are a variety of encyclopedias of psychology that cover important topics in greater detail, such as Gregory's *The Oxford Companion to the Mind*, or Kazdin's *Encyclopedia of Psychology*.

You can search for all of the books described above using your library's catalogue, which may be accessible through the Internet. If your library does not have a particular volume, ask your librarian how to search other library catalogues and request the volume through the interlibrary loan service. Your librarian is perhaps your most valuable resource in finding the scholarly sources you require.

Psychology Journals

Because psychology is an evolving field in which theoretical and methodological advancements occur in rapid succession, most psychologists favor journal articles over full-length books as a forum for presenting new ideas and research. However, this fact poses a challenge for students unfamiliar with the process of conducting literature searches in psychology. Psychology journals tend to be difficult to find and locate, articles tend to be densely written using technical terms and statistical analyses, and have the structure and stylized format of a scientific report. This section addresses these issues by explaining how to find journal articles and other resources, and once you find them, how to understand what they say.

Psychology journals are specialized periodicals consisting of a set of articles written by different authors that may or may not be thematically related. Depending on the specific journal, articles can range from a page or two in length to well over fifty pages. There are three major types of articles published in psychology journals: empirical, theoretical, and review articles. Empirical articles present the results of original studies or experiments. Theoretical articles conceptually frame and discuss a particular question. Review articles summarize the most recent findings about a specific problem in the field. Theoretical and review articles are often structured like an essay, while empirical articles tend to follow the general format of articles published in other scientific disciplines.

While there is some variability in structure depending on the specific subfield in psychology and the particular research question examined, most articles begin with an abstract, which is a short (50- to 150-word) summary of the entire paper. Next, the introductory section discusses the problem

addressed in the paper by referencing prior studies and discussing the limitations of past research. If the article is an empirical study, the third section presents the method that the researcher used to obtain data and the statistical analysis of the results. Some papers contain a single study; however, many consist of several related experiments. Each experiment presents the methodology of the study. The methodology section typically consists of a section describing the participants of the study, a section describing the study's design, a section outlining the materials and procedures used to gather data, and a section describing the results and statistical analyses of the data, and a section discussing the relevance of the results. After presenting the studies, a final section presenting an overall discussion summarizes the findings of the study, discusses the results in relation to prior research, and provides some directions for future research on the topic. Finally, there is a list of the works cited in the article.

Journal articles generally utilize a highly stylized and technical language that is often difficult to read. However, many students new to the field, reading a journal article for the first time, understand almost everything until encountering the results section of the paper. There they encounter strange and exotic-sounding statistical terms such as ANOVA (short for ANalysis Of VAriance), regression, factor analysis, or partial correlation. Thrown in the mix are strange sequences of letters, numbers and Greek letters, such as $F(2, 34) = 11.16$, $p < .001$, or $\beta = 0.023$, $z = 3.4$, $p < .01$. Many stop reading there; others simply skip over the results to the conclusion section. Both responses are unfortunate because the statistics used in most papers are really quite simple, and they help clarify the conclusions drawn in the article.

While a comprehensive review of statistics is beyond the scope of this chapter, a few points are worth mentioning. The statistics used in the vast majority of psychology articles are covered in most college-level introductory statistics classes. If you are interested in seriously studying psychology, you may want to enroll in such a statistics course; it will help you understand some of the principles underlying research in general. Second, the vast majority of statistics used in journal articles simply do one of two things: describe the relationship among variables (When children get older, do they perform better on math tests?) or assess the degree to which a finding might be due to chance (Is the observed difference in average performance between males and females in a spatial reasoning experiment just random noise or a "real" or "significant" difference?). There are a variety of books that explain statistics in lay terms. Students terrified of statistics might want to invest in one in particular: Jaeger's *Statistics: A Spectator Sport*, which explains statistics in simple terms without using math.

THE PUBLISHING PROCESS IN PSYCHOLOGY

This section describes the process of publishing in psychology. A psychologist will conduct a study, write a research report (manuscript) based on their findings, and send the manuscript to a journal in consideration for publication. In what are known as "peer-reviewed" journals, an editor on the journal's staff reads the manuscript, and determines whether the paper and/or its topic is appropriate for that particular journal. At this point, the editor might reject the paper outright and explain to the author the reason for rejection. Alternatively, if the paper is of relatively good quality and relevant to the topic of the journal, the editor sends the paper to several (usually three) scholars in the field who are knowledgeable about the specific topic addressed in the manuscript. These scholars act as consultants to the editor in the decision-making process of whether to publish, reject, or request that the author(s) modify the paper in some way prior to its publication. The reviewers write a report summarizing the conclusions and provide criticisms of the manuscript for the authors to address in a revision of the paper. The requested modifications and criticisms of the reviewers are then sent to the author who revises the paper and resubmits it to the editor. At this point, the paper is either sent back to the reviewers for a second review, or the editor decides that the author's modifications are sufficient and accepts the paper. Once accepted, the paper is labeled "in press." Often, it takes anywhere from several months to over a year for the article to appear in the journal after it has been accepted.

The peer-review system ensures that the claims in a paper are reasonable and that the authors address obvious problems with the methodology or design of the study. Non–peer-reviewed journals (as well as chapters in edited books and dissertations) do not have the advantage of this review process, and one should evaluate claims in these publications somewhat more skeptically than in articles appearing in peer-reviewed journals.

There are a number of important peer-reviewed general journals in psychology that publish articles on a wide variety of topics that sometimes include children and childhood. Among the best-known are the following: *Annual Review of Psychology*, *American Psychologist*, *Cognition*, *Current Directions in Psychological Science*, *Journal of Experimental Psychology: General*, *Journal of Personality and Social Psychology*, *Psychological Review*, *Psychological Bulletin*, and *Psychological Science*. There are also a number of peer-reviewed journals that publish articles exclusively on topics related to child psychology. These include the *British Journal of Developmental Psychology*, *Child Development*, *Cognitive Development*, *Developmental Neuropsychology*, *Developmen-*

tal Psychology, Developmental Review, Developmental Science, Development and Psychopathology, Infancy, Infant Behavior and Development, Journal of Adolescence, Journal of Child Psychology and Psychiatry, Journal of Cognition and Development, Journal of Experimental Child Psychology, Journal of the American Academy of Child and Adolescent Psychiatry, Journal of Child Psychology and Psychiatry and Allied Disciplines, and *Journal of Youth and Adolescence.*

In the last decade, a number of journals have shifted to publishing their journals on the Internet and now issue online articles through a library subscription service in the form of portable document format (pdf) files. Once opened or printed, the file appears exactly like the article in the printed journal, with the correct page numbering and graphics. Usually, your library's online catalog contains detailed information on the availability of electronic versions of journals, and link to the table of contents of each issue. This topic is covered in the next section.

CONDUCTING A LITERATURE SEARCH

To write a paper or conduct a research project it is important to know what information already exists on a particular topic. Thus, you must know how to conduct a literature search and find journal articles, chapters, and books addressing a particular problem or issue. However, there are literally tens of thousands of books, and hundreds of thousands of journal articles published about psychological issues spanning well over a century. The problem is finding the seven that address the specific problem you might be interested in writing a paper about. This section addresses this problem by describing how to conduct a literature search in psychology.

One way of obtaining information is to conduct a haphazard search. For those interested in knowing what range of topics are published in psychology journals, it may be useful to go to the library, go to the section where the psychology books are shelved, and peruse any volumes and the last several issues of a journal that seem to be about a topic that interests you. This strategy may be inefficient, and you may find nothing, but you might stumble upon hidden gems that you might miss otherwise. Alternatively, you might read a textbook or handbook chapter that describes a particular paper or study and you may look up the citation in the reference section of the book and find it using your library's catalogue.

Unfortunately, few of us have the luxury of a lazy afternoon to browse around the library. More often, one must find seven to ten articles to use in writing a paper that may be due in a few days (or sometimes even a few

hours). To complicate the process, each of these articles may be published in different journals, some of which are bound and available on the shelves of your library, some may be in storage outside the library, others that can only be downloaded electronically, and others that can only be accessed through interlibrary loan service. In this situation, it is useful to use one of the academic search engines that index journal articles published in psychology journals that are available through the Internet. For psychology, the most common index at academic libraries is the database PsycINFO. It indexes a large number of psychology journals and periodicals and is available through your library's website. The online interface that accesses the database varies from library to library; some use a vendor interface, such as OVID or EBESCO, for accessing the database. The interface makes little difference in the resulting search, but there are minor differences in the way the engines work.

The most common approaches to searching the PsycINFO database is by author, title, or keyword. Depending on whether your library uses the OVID or EBESCO interface, there usually is a menu so that you can select one of these options. Imagine you are interested in the research of Lawrence Kohlberg. You select "Author Search" option and type "Kohlberg, Lawrence" in the text box, and click on the search button. A new screen may appear with the names and initials of all authors named Lawrence Kohlberg who have written articles. Select the box next to the name "Lawrence Kohlberg" and click "continue." A list of Kohlberg's article titles will appear with basic bibliographic information such as the authors, journal titles, call numbers, issues, years, etc. If you click on the highlighted title of the article, PsycINFO will provide the abstract of the article and detailed information regarding the journal and volume in which the article appears. In addition, there may be a link that allows you to determine whether the articles are electronically available (although this may vary depending upon the specific way your library accesses PsycINFO). Similarly, you may also conduct a search by article title by selecting the appropriate box. This is a useful tool if you know the title of the article but not the author.

Yet the most powerful feature of PsycINFO is its ability to search for specific terms that are in the title or abstract of the article. To demonstrate the process of finding references, we will go through the steps of a typical literature search. Imagine you are a interested in finding published psychological research on the development of ethnic identity. If you have an Internet connection available, you might want to go to your library's web page, log into PsycINFO, and conduct the following search for practice, but realize that the numbers you obtain may differ from those reported here,

which were accessed in 2006. Go to your library's PsycINFO interface and type in "Ethnic Identity." You will find that there are more than 4500 articles for that topic. It would take considerable amount of time to read just the titles of all these articles. If you did, you would probably find that very few of them have to do with children at all.

Fortunately, PsycINFO allows searching the database using what are called "Boolean operators." These are terms such as "And," "Or," and "Not" that allow one to efficiently limit and expand the scope of a search by adding additional terms. For example, if you type in "ethnic identity and children," slightly over 600 titles appear, which is still too many to read. At this point you need to use both creativity and thought in narrowing the scope of your research question further. For instance, you may be specifically interested in research on the ethnic identity of children in Latino culture. You type in "ethnic identity and children and Latino" and find twenty-three results. Twenty-three abstracts can be read in a few minutes' time.

You may subsequently need to revise your search or perform multiple searches. For instance, until quite recently, the term *Hispanic* was commonly used to indicate "latino/latina" by a number of researchers. It might be useful to search for articles that use either *Hispanic* or *Latino*. So it is possible to search using the string "ethnic identity and children and (Latino or Hispanic)," which results in sixty articles. Imagine further that you are *not* interested in studies of biracial children. You could use the following search string, "ethnic identity and children and (Latino or Hispanic) not biracial," which results in fifty articles. It is rare that you will use the right search terms on the first try. It is important to gain practice at using PsycINFO as a search tool. An hour or two trying all the options will pay off enormously in reducing the time it will take to conduct literature searches in the future. For further information about the PsycINFO database, please refer to the American Psychological Association website, which contains detailed instructions on its use.[5]

WRITING THE PSYCHOLOGY PAPER

If you are enrolled in a psychology course, you may have to write a term paper or research report. For instance, you may be writing a review paper for an introductory course in psychology, or a theoretical paper for an advanced independent study elective, or writing the results of your own empirical study. The structure and format of the paper will differ depending on the specific course you are taking; however, most professors, and particularly in

advanced courses, will assume that you know how to conduct a literature search and use APA citation format. Always ask your professor for specific details.

Regardless of the format, every paper you write should present a thesis. A thesis is simply an argumentative statement that takes a particular stand on an issue of which there is potential for disagreement. Holly Blackford points out in her chapter on literature in this work that a good thesis should be articulated as "Although [this], actually [that]." Two examples of arguments that are not theses are "Recent research demonstrates a strong relationship between watching violent television and aggression" and "Recent research on television violence and aggression fails to account for factors such as parental involvement that might influence aggressive behavior." Both of these are mere statements of fact or opinion, and leave no room for argument. Remember that a thesis must advance an argument that goes beyond the statement of fact and permits an evaluation of a complex position. So a better thesis might be, "While recent research demonstrates a strong relationship between watching violent television and aggression, these studies fail to account for parental involvement which may influence the relationship." At this point you would want to evaluate the claims of the prior literature on violent television and aggression, address the limitations of prior studies using research you have gathered on how parental involvement is implicated in aggression, and state a clear and unequivocal conclusion.

The best writing in psychology is concise and specific: state your point, back it up with evidence, and move on to the next point. Few psychologists value flowery, ornate language or digressions that add little to your thesis. Almost none appreciate personal anecdotes, such as stories about family members or friends whose experiences contradict established findings in the field. However, some felicity or creativity, used judiciously, can greatly reinforce the paper, if used in the proper context. Avoid extensive footnotes or end notes: very few psychologists use footnotes in their writing, and it is better to simply state a point in the text, or eliminate it entirely if it is too nuanced for the main body of your manuscript.

By far, the most important step in the process of writing is proofreading. As a reader, there is nothing quite as disappointing as a set of excellent ideas embedded within a poorly structured, disorganized, and misspelled document. Check your grammar for run-on sentences, fragments, or commonly misspelled words ("weather" for "whether;" "affect" for "effect"). Whenever I finish an article or chapter, I put aside the work for a few days before proofreading it in order to provide some distance between the process of writing and of reading. Then, I read the work from the last sen-

tence to the first sentence, which removes each sentence from its linear context and forces me to examine the grammar without skimming or skipping. Take considerable care with the structure and clarity of your writing, and if you are continually frustrated by your grades or your ability to write, seek the assistance of a writing tutor or composition class.

As noted above, regardless of the particular structure of the paper, a psychology professor will most likely require that you cite and reference scholarly materials using the American Psychological Association (APA) style for citations. Different professors may vary in the degree to which they will enforce adherence to the APA style, nevertheless, it is always a good idea simply to cite in APA format, and to do it correctly the first time. Note that this chapter is not formatted using APA style, and do not use it as a model for APA style. Rather, the details and numerous examples of APA citation style can be found in the *APA Manual of Style*, 5th edition, available at many bookstores and most libraries. The following introductory paragraph to a hypothetical paper provides an example of APA format:

> One of the oldest problems in the social sciences is the relation between culture and thought (Jahoda, 1993). The debate over whether all people think alike regardless of their sociocultural environment, or if people in different cultures think in unique and divergent ways has a number of implications for understanding a diverse set of psychological processes (Kitayama & Duffy, 2003). This paper reviews evidence for the "universalist" and "relativist" positions and argues in favor of Greenfield, Keller, Fuligni, and Maynard's (2003) position that a better understanding of psychological development requires how culture shapes how children experience the social world.

The following is a list of the works cited in APA format:

Greenfield, P., Keller, H., Fuligni, A., & Maynard, A. (2005). Cultural pathways through universal development. *Annual Review of Psychology, 54*, 461–490.

Jahoda, G. (1993). *Crossroads Between Culture and Mind.* Cambridge: Harvard University Press.

Kitayama, S., & Duffy, S. (2003). Cultural competence—tacit, yet fundamental: Self, social relations, and cognition in the US and Japan. In R. Sternberg & E. Grigorenko (Eds.), *Culture and Competence: Contexts of Life Success* (pp. 55–87). Washington, DC: American Psychological Association.

Note that the references differ in structure due to the fact that one (Greenfield, Keller, Fuligni, & Maynard) is an article appearing in a journal, another (Jahoda) is a full-length book, and the last (Kitayama & Duffy) is a

chapter in an edited book. Note also that when the citation is within a parenthesis the ampersand sign (&) is used to link the name of authors, while when embedded within a sentence, "in favor of Greenfield, Keller, Fuligni, and Maynard's (2003) position that," the writer must write out the word "and" as a word. In addition, if the writer were to cite Greenfield's article again, he or she would drop all but the first author and simply write (Greenfield et al., 2003), "et al." being an abbreviation for "and others." There are specific citation formats for citing movies, websites, music recordings, and so on. APA citation style can be complex, and generally differs from other citation styles (e.g., MLA, Chicago), so take care to follow the guidelines in the *APA Manual of Style.*

Some professors may require that you conduct an original study on children. Your study may be nonobtrusive (observing children interacting with their mothers at the food court in a local mall) or obtrusive (directly interacting with children by testing them in an experiment such as a Piagetian conservation task). Either way, such projects require both conducting a literature search and collecting data. Before starting such an empirical study, be sure to read the ethical standards for research practice outlined by both the American Psychological Association and the Society for Research in Child Development, both of which are available online.[6] If you hope to eventually publish your findings, you must apply to your University's Institutional Review Board (IRB) *before* collecting data. The IRB is an organization at universities that review projects and determines whether the study potentially violates any ethical standard. Once the IRB has approved your proposal, you may begin to collect data. However, your first step should always be scheduling a discussion with your professor before testing any children; he or she will be able to assist you in clarifying the ethical issues involved in your research, such as obtaining parental consent.

If you do decide to collect original data, it is useful to remember a few practical points. First, children may be extraordinarily fun to play with, but are notoriously uncooperative research participants. Their limited attention span and cognitive and social competencies severely limits their ability to fully cooperate as research participants. Try to design your study to be simple, quick, and fun—much like a game. For instance, in a recent study on kindergartener's ability to measure, I introduced children to a stuffed animal—a dog named Toby—and I presented the task as a game in which the children were helping Toby find a bone he hid the previous day. This allowed children to feel part of a cooperative experience, and helped engage their attention to the task at hand. Second, it is best to conduct your research in a space where there are few external distractions. I conducted the "Toby" experiment in a coat closet in the back of a kindergarten classroom

where no other children were allowed to play. Third, if you are collecting data in a classroom or school, try to spend a few hours with the students before running your study so that the children become acquainted with you. This helps reduce the anxiety many children experience around strangers, and it provides you with experience in observing children in a natural context. Some excellent resources containing practical suggestions for conducting developmental research are Christensen's *Conducting Research with Children*, Graue and Walsh's *Studying Children in Context*, and for observational research, Emerson, et al., *Writing Ethnographic Fieldnotes*.

While it is always useful to collect original data, there are a variety of publicly available data sets accessible through the Internet that you may download and analyze yourself. For instance, the *Child Language Data Exchange System* (*CHILDES*) and the *TalkBank* project out of Carnegie Mellon University are databases of hundreds of transcripts of children and adult conversational interactions in English and over a dozen other languages.[7] These databases also store audio and video files of interactions between parents and children. These resources can be used to study language acquisition, or simply to understand what kinds of topics children discuss in everyday life. If you are interested in mathematical reasoning, the *Trends in International Mathematics and Science Study* website provides access to data sets concerning math education in several countries.[8] A wealth of data and information on more general social trends that influence childhood can be found at the National Opinion Research Center's General Social Survey and the United States Census.[9] Finally, one may be both creative and ingenious in finding data. For instance, a number of parents now write online "baby blogs" in which they describe the development of their own children. Such online journals may provide unique insight on a variety of questions regarding the psychology of children and parents alike.

For further reading and tips on the process of writing in psychology, please refer to Robert Sternberg's *The Psychologist's Companion: A Guide to Scientific Writing for Students and Researchers* and for more advanced students who are interested in publishing their work, *Guide to Publishing in Psychology Journals*.

FURTHER RESOURCES ON PSYCHOLOGY AND CHILDREN

There are a number of professional associations and organizations in psychology that serve as excellent resources for information. Most of these organizations have information and resources for psychologists and the general

public, and hold regular meetings that members can attend and give presentations in. Most also publish their own journals, many of which are available through the organization website, or through your university's library.

The major professional organization for psychologists in the United States is the American Psychological Association. The APA publishes a number of important journals and periodicals, maintains the PsycINFO database, and sets the ethical standard for clinical and research practices, and maintains the APA citation style used by almost all journals. Apart from APA, there are a variety of other professional organizations that are geared toward research and practice with children. The largest and most general organization in the United States is the Society for Research on Child Development (SRCD). The SRCD publishes the important journal *Child Development*, provides a set of ethical guidelines specifically for conducting research with children, and holds a large conference every other year. There are a variety of smaller professional organizations that hold annual or biennial meetings on topics relevant to childhood studies. These include the Jean Piaget Society, the Cognitive Development Society, the International Society for Infant Studies, and the Society for Research in Adolescence. There are a number of other professional organizations that are not dedicated exclusively to the study of children or childhood, but may be of interest to some due to their specific disciplinary focus. Some such organizations include the American Psychological Society, the Society of Personality and Social Psychology, the Cognitive Science Society, and the International Association for Cross-Cultural Psychology, among others.

All of the major psychology professional organizations have extensive websites with information on publications, conferences, and e-mail listservs. If you have designed your own study, you should discuss with your professor the possibility of attending a conference sponsored by one of these organizations and presenting a poster or talk. You will gain experience in presenting your ideas to professionals in the field and have the opportunity to discuss your ideas with other scholars and students. Often, professional societies have special travel scholarships specifically to promote undergraduate and graduate student attendance at the conference; you typically can find this information on their websites.

If you are interested in pursuing graduate education in child psychology, there are many master's and doctoral programs in both the United States and abroad. *U.S. News and World Report* issues a yearly evaluation ranking graduate programs in several psychology disciplines, including developmental psychology. While useful as a general guide, it is important to look beyond graduate school rankings and search for departments having

faculty that share your particular research interests. There are a variety of teaching and research fellowships available through universities themselves and the Federal government, especially for doctoral programs. Ask your professor or chair of the psychology department at your university for more information about your options.

CONCLUSIONS

The field of psychology is young relative to most other disciplines in the social sciences. However, in little more than a century, psychology has grown enormously, becoming one of the largest disciplines in the social sciences. And while psychology has made great strides toward understanding children and childhood in the past century, there are still vast regions of this field that we have yet to fully explore. Hopefully, like those uncharted regions on the maps drawn by the first explorers, this *terra incognita* will entice you to travel to these unknown lands to search for answers to the mysteries of the developing mind.

And you come at a good time. Now more than ever, psychology requires the perspective of interdisciplinary researchers who are not afraid to transcend the boundaries of traditional theories, methodologies, and paradigms. Psychologists have as much to gain as those in other fields in promoting an interdisciplinary dialogue in order to further our understanding of children and childhood. Such research synergy would enliven discussions, raise new questions, pose new problems, and bring fresh perspectives to some of the stale debates that confine themselves within most academic departments.

So, welcome to psychology! There are countless fascinating lands to explore, and countless ways to get you there. The locals are friendly, so if you ever get lost, feel free to ask for directions, and we'll be happy to explain some of our customs or traditions. I hope you enjoy your stay here, and please come again.

NOTES

1. The author acknowledges Charlene Dunkley, Freddie Renzulli, and Danielle Renzulli for their helpful comments and suggestions on this chapter.

2. See Alison James, "Understanding Childhood from an Interdisciplinary Perspective," in *Rethinking Childhood*, ed. Peter B. Pufall and Richard P. Unsworth (New Brunswick, N.J.: Rutgers University Press, 2004).

3. See J. E. Huttenlocher, W. Haight, A. S. Bryk, and M. Seltzer, "Early Vocabulary Growth: Relating to Language Input and Gender," *Developmental Psychology* 27, no. 2 (1991): 236–49.

4. The details of this study are reported in Sean Duffy, Janellen Huttenlocher, Susan Levine, and Renee Duffy, "How Infants Encode Spatial Extent," *Infancy* 8 (2005): 81–90.

5. The APA website describing the PsycInfo database can be found at www.apa.org/psycinfo. You also may encounter a search engine called PsycArticles, which is an index to articles in APA journals that allows you to access full-text versions of these articles. However, all the journals indexed in PsycArticles are also indexed in PsycINFO, so it is better to use PsycINFO for most literature searches.

6. The APA ethical standards can be found at www.apa.org/ethics. The SRCD ethical standards can be found at www.srcd.org/ethicalstandards.html.

7. The CHILDES database website URL is childes.psy.cmu.edu. The TalkBank project website URL is talkbank.org.

8. The TIMSS website URL is www.timss.org.

9. The General Social Survey's website URL is www.norc.uchicago.edu/projects/gensoc.asp, the U.S. Census website is ww.census.gov.

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