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## Perspectives, Paradigms, and Theories

The word “theory” threatens to become meaningless. Because its referents are so diverse—including everything from minor working hypotheses, through comprehensive but vague and unordered speculations, to axiomatic systems of thought—use of the word often obscures rather than creates understanding.

Robert Merton (1968, p. 39)

Unfortunately, so much work has been done without reference to any theoretical framework that it must either be ignored completely or the “miscellaneous” category would be very large indeed.

Tom Wilson (1994, p. 17)

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Just as a pyramid depends on its foundation to provide stability for the rest of the structure, scholars rely on basic assumptions regarding the nature of reality and the purposes and methods of investigation. This chapter introduces the basic building blocks of inquiry and examines their relationship to specific traditions of social research.

Obviously the topics in this chapter could constitute a book in itself. I hope this brief overview of perspectives, paradigms, and theories will enable those readers unfamiliar with such issues to better grasp the concepts associated with information seeking and how they have been studied.

## 7.1

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### Perspectives and Paradigms

#### 7.1.1 Perspectives

We live in a time of intellectual ferment. For those who study the ways in which people act and think, there are a variety of perspectives available for the taking. Dervin, in an introductory chapter to a volume of studies of information seeking “in context,” identifies some of these perspectives and methodologies:

symbolic interaction, pragmatics, system theory, qualitative studies, cultural studies, hermeneutics, political economy, phenomenology, constructivism, interpretive anthropology, transactionism, contextual psychology, ethnography, perspectivism, situationalism and postmodernism. (1997, p. 15)

Dervin consciously chose the words “perspectives” and “methodologies” because her list consists of a mix of labels for different philosophies, methods, research traditions, disciplines, and in only one case, something explicitly labeled as “theory.” Dervin’s list reflects the situation surrounding information seeking research, in which there was relatively little direct usage of formal theory until the past two decades (see Table 7.1); instead, more emphasis has been placed on schools of thought (e.g., “postmodernism”) and methodologies (e.g., “qualitative studies”).

Fifty years ago there was little diversity in most social scientific and humanistic investigations of human behavior and cognition. North American psychology, for example, was in the grips of a behaviorist paradigm of research that strongly restricted what could be taken as evidence regarding the mind (Gardner, 1985). Most disciplines in the “human sciences” (Foucault, 1972) had a fairly restrictive range of theories and methods that were widely accepted by research practitioners, particularly those influential in determining the publication of study results.

The good news is that we now have a much more diverse array of assumptions, approaches, theories, and methods from which to choose. However, that can also be bad news, because there is disagreement on what kinds of perspectives or actions are most appropriate when doing research that involves people. Questions of the importance, purpose, ethics, and meaning of research abound.

For example, there are those who argue that people (e.g., their observable behaviors) should be the object of our study; others say that we can be more objective by observing only the artifacts of human behavior (e.g., the traces or records that people leave behind); yet other researchers say that there is no such thing as “objectivity,” because the investigator is inextricably bound to the “object” of their study, and the best we can do is collect “contextualized” narratives or discourses in the domain of our interest.

Perhaps most unsettling is that there is seemingly widespread disagreement about the philosophical underpinnings of research on human behavior (Bates, 2005a; Budd, 1995; Dervin, 1997; Dick, 1999; Hjørland, 2004; Sandstrom & Sandstrom, 1995; Slife & Williams, 1995). Frequently the debates about philosophical foundations use simple dichotomies, such as “explanation” versus “understanding” (Stewart, 1997), “quantitative” versus “qualitative” (Glaser & Strauss, 1967), “positivistic” versus “naturalistic” (Lincoln & Guba, 1985), “empirical” versus “interpretive” (Pavitt, 1999), or “subjective” versus “objective” (Abbott, 2004; Ford, 2004b; Hjørland, 2004). These discussions have led many researchers to reconsider their assumptions regarding ontology (the nature of *reality*), axiology (the nature of *values*), epistemology (how we *know*), and methodology (how we *find out*).

It is not the goal of this volume to enter into an extended debate about the nature of reality or knowledge. The reader is directed to the concise summary in Bates (2005a) and an entire special issue of the *Journal of Documentation* edited by Birger Hjørland (2005a, b, c) for discussion of the differing philosophies that guide IB researchers. For practical purposes I will assume that ontological and epistemological differences simply exist among investigators of information seeking (whether or not they are discussed in their publications), and instead will focus on the choices of topics, theories, models, and methods they have made in their studies. For further background, the reader is encouraged to explore some of the sources mentioned above.

### 7.1.2 Paradigms

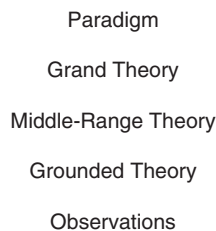
One of the difficulties in discussing the concept of theory is that it has layers of meaning. That is, there are not only different *levels* of theory but there are also overarching concepts like “paradigm” that are sometimes conflated with

the notion of theory. I will discuss paradigm and theory in the context of a hierarchy that places paradigm in the most global and encompassing position, and “observations” at the bottom—the most limited and narrowest context (Figure 7.1):

“Paradigm” is a term popularized by the work of the historian of science Thomas Kuhn, who wrote the influential book *The Structure of Scientific Revolutions* (1962). Kuhn has been criticized for using “paradigm” in as many as 21 different ways (Masterman, 1970). Nevertheless, the term has become immensely popular as a way of describing (among other things) the various points of view that researchers take in their search for explanations.

We might, for example, speak of a “conflict” paradigm that theorizes that conflicts among individuals or groups underlie much of social interaction; many social theories, such as that of Karl Marx, share this view. Alternatively, the “exchange” paradigm says that much of life is based on individual calculations of the costs and benefits of undertaking a certain action, whether the action is speaking to a stranger or getting married. Or we might speak of a “sense-making” paradigm that stresses how people create both meaning and social structure in their lives through their interactions with others. Thus, asking another person for help in solving a personal problem may reveal a solution merely by sharing views of the problem; it may also create friendship or dependency.

However vague the definition of a paradigm, it is an essential concept for describing research on information behavior. For one thing, it is not possible to talk about competing theories, or schools of theories, in information seeking research. The field is simply too diverse for that, and formal theory is invoked relatively rarely. Second, the notion of paradigm highlights the connections between research and the purposes and beliefs of the investigator. For example, a distinction has been made between “critical” and “administrative” research traditions (Lazersfeld, 1941; Rogers, 1982). Let us consider two different cases. One researcher’s worldview may be that it is not up to her to question the nature of power relationships in the world, but rather to investigate “administrative”



**Figure 7.1**

A hierarchy of ideas about theory.

problems that appear. Perhaps the researcher's focus is why more people do not make use of a social service agency, and her goal is to explain such behavior and perhaps even to make things run more smoothly.

In contrast, another investigator may feel compelled to challenge and expose what he judges to be an unfair social relationship—the failure of a government agency to provide the kind of services that most people need—with the intention of raising public awareness of an injustice and perhaps, in so doing, to change the world. Although these two researchers might choose similar methodologies to address the research problem as they have defined it, they would be using dissimilar theories and operating under quite different paradigms.

Some researchers prefer to avoid the term “paradigm” as much as possible. Anthony Giddens (1989) prefers the word “perspectives,” Hans Gadamer (1976) “traditions,” and Brenda Dervin (1991) “analytics,” when referring to strategies that guide research. Yet others may use the term “approach” to describe both assumptions and the range of methodologies employed in investigations.

I will employ the word *paradigm* in the Kuhnian sense of a “tradition” for the practice of research (Masterman, 1970); “perspective” will be taken to mean the same thing. Traditions, perspectives, and paradigms then subsume models and theories.

## 7.2

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### Theories

#### 7.2.1 What Is a Theory?

Theories are explanations. They are generalizations. Theories are statements that try to explain relationships among various phenomena (Baker, 1999; Mullins & Mullins, 1973) and from which one can make inferences and deductions. Theory results from an interplay among ideas, evidence, and inference (Chaffee, 1991, p. 14).

Beyond these simple statements, more formal definitions of “theory” show wide variance in usage among researchers. Kerlinger (1973, p. 9), for example, defines theory as

a set of interrelated constructs (concepts), definitions, and propositions that present a systematic view of phenomena by specifying relations among variables, with the purpose of explaining and predicting the phenomena.

Simon and Burstein (1985, p. 52) adhere to Kerlinger's complex definition when writing of disciplines like physics and economics, pointing out that

“there is no theory unless it is a *body of theory*,” a set of well-established definitions, assumptions, and systematically organized propositions. Nearly all explanations of theory invoke the idea that it must be systematic—relying on more than just a single, simple statement. Yet Simon and Burstein also note (as did Merton, quoted at the beginning of this chapter) that theory

has a looser meaning; it often refers to a loosely organized collection of hypotheses ... and sometimes is even used to refer to almost any speculative thinking offered as an explanation ....

Many examples of this “looser” invocation of theory can be found in everyday life, such as when a friend asks “What’s your theory about the Kennedy assassination?” But such vague use of the term also abounds in scholarly discourse. Without passing judgment on whether the author’s usage met formal definitions of theory, Pettigrew and McKechnie (2001) examined 1,160 information science articles that invoked theories, hypotheses, frameworks, principles, approaches, conceptualizations, or models as explanations. The results ranged from single concepts (e.g., “relevance” and “information needs”) attributed to particular authors, to formal theories identified with major figures like Dewey, Freud, Giddens, Habermas, and Merton. Only a minority would probably meet the formal criteria for “theory.”

Reynolds (1971) points out that the term theory is commonly used in at least four different senses: [1] a set of “laws” that are “well-supported empirical generalizations”; [2] an “interrelated set of definitions, axioms, and propositions”; [3] “descriptions of causal processes”; or [4] vague concepts, untested hypotheses, or prescriptions of desirable social behaviors (pp. 10–11).

Each of these descriptions has its place, and for this chapter I will mainly assume Reynold’s second definition, which is the *vade mecum* (received or “handbook”) view of theory more typical of social research: as an “interrelated set of definitions, axioms, and propositions.” Human behavior is seen as complex and requiring a special vocabulary to describe it. Statements about phenomena (e.g., propositions and hypotheses) are used to guide observation and the development of theories. Claims about human behavior are recognized as being probabilistic or conditional (e.g., time and context bound), rather than deterministic.

The first notion—that of theory as a set of laws—is not very satisfactory for the study of human behavior, in which relatively few absolute regularities have been found to exist. That the social sciences see themselves as uncovering universal and absolute laws regarding people is a claim that few, if any, contemporary social researchers would make.

The third conceptualization of theory—as causal processes—will only be used in the limited sense of a *model*, as discussed in the previous chapter.

It is difficult to establish causation in human behavior, especially a phenomenon such as information seeking in which many important aspects cannot be observed. However, it is certainly possible to identify key factors and their likely sequences and interactions in the process of information seeking. Models make these aspects explicit and thus guide research design and theory development.

### 7.2.2 Levels of Theory: Grand to Grounded

A theory is something more specific than a paradigm; the question is, How specific? In a quotation at the beginning of this chapter, the eminent sociologist Robert Merton complains that social scientists do not always share the same definition for *theory*, much less the same goals regarding the kinds of theory to construct. He was particularly concerned about continued attempts to create “grand” theories that tried to explain large segments of human behavior in a universal way. In their emulation of major social theorists like Karl Marx, Herbert Spencer, and Talcott Parsons (Merton, 1968, p. 44), other scholars have tried (and failed) to predict actions and tendencies across too many individuals, cultures, and societies. Recently Skinner (1985) has pointed to a “return of grand theory” in the work of still-living scholars like Jürgen Habermas and Anthony Giddens, who refuse to restrict theory to limited questions, methods, and evidence.

Davis (1986) describes how “successful” (i.e., both famous and widely applied) social theories addressed major problems (e.g., economic change) and also overturned previous assumptions about the topic (e.g., that religion is largely unrelated to economic activity, a view challenged by Max Weber). Davis examines the grand theories of Karl Marx, Emile Durkheim, and Max Weber, among others, to show how broadly they were applied to explanations of behavior. For example, Durkheim’s theory that the division of labor played a primary role in social organization has been used to study phenomena in government, law, religion, science, and the arts, as well as to explain the very notion of individuality among humans. His notion that intermediate social groups, such as occupations, helped to hold society together in the face of declining community and family ties could be considered a “grand theory.”

Rather than trying to reinvent or replace the broad theories that emerged during the nineteenth century, Merton argued that we should concentrate on the development of limited, “middle-range” theories; such theories function at a higher level than a testable hypothesis, but deal with limited settings, remain close to the level of observable phenomena, and offer the potential for aggregating findings.

To illustrate the middle-range, Merton offered the example of “reference group theory,” the idea that individuals judge themselves by referring to the standards of significant people in their lives, rather than to some absolute criteria that apply to all humans. For example, you probably judge how financially “well off” you are by considering the wealth of your friends, relatives, co-workers and acquaintances—rather than consulting United Nations statistics on average annual incomes around the world, or even those of your own nation. Referential judgments constitute a phenomenon that can be readily observed in many social settings and across cultures, such that results can be compared and related to other sociological concepts, such as class.

Theories tied to observation and meant to apply in a particular area of application are called “grounded” by Glaser and Strauss (1967). In their study of the awareness of death, Glaser and Strauss demonstrated that middle-range theory is constructed by “grounding” it in observation—that is, building a theory by relying more on observed data than on abstract ideas. Yet, the so-called “grounded theory” approach does not rely entirely on *induction* (reasoning from particulars to generalizations), but rather moves back and forth from data-gathering to *deduction* (reasoning from generalizations to particular cases) to test the theory.

Grounded theories may serve as building blocks for formal theories, while remaining close enough to real-world observations as to give us confidence in their validity. An example from information seeking would be Kuhlthau’s (1993a) model of the search process. Kuhlthau’s model was developed through close observation of the ways that information seekers construct knowledge by tying it to what they already know as they pass through various stages of uncertainty and understanding. Itself derived from a general, psychological theory (i.e., Kelly, 1963), Kuhlthau’s model could be expanded into a more general theory of information seeking through further observation and development. To see how these ideas evolve, let’s begin by looking at the foundations of information seeking theories.

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#### Sources of Theory in Information Seeking

Krikelas (1983) merely states the obvious when he says that there is no single theory of information seeking that would make possible easy comparisons among studies. Similarly, Chatman (1996, p. 193) laments that

we have no central theory or body of interrelated theories we can view as “middle range.” ... it would appear we are currently focused on the application of conceptual frameworks rather than on the generation of specific theories.



Until recently many studies of information seeking (and virtually all of those studying information *use*) made no explicit claims to theory. In the early days of information behavior research most of the investigations were administrative in nature, concerned with collecting data for the purpose of improving operations in information agencies such as libraries. However, there has never been a shortage of applicable theory from various disciplines that might be applied to the search for, and use of, information. In recent years investigators have become much more eclectic in finding and applying theory in information behavior research.

Thirty years ago, Doug Zweizig (1977) observed that theories applied in information seeking studies tended to come from three disciplinary sources: sociology, mass communication, and psychology. Zweizig did not provide examples, but we can still readily identify those first two sources in the work of both Elfreda Chatman and Brenda Dervin. Chatman (1990) invokes Durkheim's sociological grand theory of the division of labor, particularly the concept of *alienation* as it was articulated by Durkheim and related social theorists (e.g., Weber and Merton). Chatman studied the flow, expression, and use of information among janitors, relating their responses to indicators of alienation such as anomie (i.e., normlessness), powerlessness, meaninglessness, isolation, and self-estrangement. She has used various theories in other works; Chatman (1986) used Rogers's (2005) diffusion of innovation theory, stemming from both sociology and communication, to describe the diffusion of job information among workers; and Chatman (1991) employed uses and gratifications theory (e.g., Katz & Foulkes, 1962), also from mass communication, to explore how janitors used the mass media, and other sources, for information and entertainment. Chatman (2000) cites other sociological theorists, such as Erving Goffman, Alfred Schutz, and Harold Garfinkel. For her part, Brenda Dervin cites an even wider array of theoretical influences, not only from sociology, mass communication and psychology, but from the humanities as well. Her work contains many references to a number of her colleagues in departments of communication and information studies, and to theorists Pierre Bourdieu, Michel Foucault, Anthony Giddens, Erving Goffman, and Jürgen Habermas.

Some kind of psychological theory is implicit in much of information behavior research. Many of the studies of individual use of information retrieval systems (e.g., Daniels, 1986) and libraries (Mellon, 1986) assume a psychological (or cognitive) perspective, whether or not they cite a specific theory or theorist. Indeed, much of information seeking research could be said to relate to, if not descend directly from, a single psychologist: Sigmund Freud.

Freud's (1922) "pleasure principle" encapsulates the view that both social and psychological activities stem from a need to reduce emotional tension—a type of "drive reduction." People seek pleasure to alleviate unpleasant internal states—painful feelings or felt desires—and thus reduce tension

(McQuail & Windahl, 1993, pp. 288–289). Donohew, Nair, and Finn (1984), for example, believe that acquiring information is an automatic human behavior, and typically brings pleasure. Because information seeking implies that people take action in response to some disquieting internal state (e.g., an “anomalous state of knowledge,” “uncertainty” or “visceral need”), the pleasure principle could be said to apply universally to information seeking. Indeed, in recent years there has been renewed interest in viewing information behaviors as driven by uncertainty (see Cole, 1993; Kuhlthau, 1993b, 1997, 1999; and Wilson *et al.*, 2002).

Perhaps because it is common sense that people seek pleasure and avoid pain, Freud is rarely cited in information behavior research. Among those psychologists who *are* cited at times are Albert Bandura (1977, 1986), Jerome Bruner (1973, 1990), Mark DeMey (1982), Martin Fishbein and Icek Ajzen (1975), George Kelly (1963), George Miller (1968, 1983a, b), Jean Piaget (1952) and Lev Vygotsky (1978). Some of the work of John Dewey (e.g., *How We Think*, 1933, and *On Experience*, 1960) could be counted among the psychologists, even though Dewey is more noted for his contributions to philosophy and education. Similarly, Michel Foucault (1972, 1980) started his career as a psychologist, although many readers think of his work as more concerned with language and culture.

Besides sociology, psychology, and communication, there are other disciplines that either build on those above (e.g., management and business, especially consumer research) or that have closely related theories (e.g., economics and linguistics). In short, there are a number of academic fields that serve as sources of paradigms and theories for the study of information seeking and some of their theories have been actively used in such research.

In the way of theory “native” to the study of information seeking, a recent volume by Fisher, Erdelez, and McKechnie (2005) has allowed information behavior researchers to advance their own theoretical concepts, as well as to identify applicable theories from other fields. Perhaps the most prolific IB researcher in this regard has been the late Elfreda Chatman, whose admirers have written two chapters in the Fisher *et al.* book devoted to her theorizing: the “theory of information poverty” (Hersberger, 2005), based on Chatman’s experiences in studying aging women in a retirement community (Chatman, 1992); and her theory of “life in the round” (Chatman, 1999; Fulton, 2005a), which explores the influence of social norms and worldviews on information behavior. Both of Chatman’s theories suggest researchable propositions that can be tested in field research.

It would be nice if theories and their paradigms could be sorted into neat typologies so that we can compare them. Some typologies have been devised, particularly in sociology—see, for example, Burrell and Morgan (1988), Littlejohn (1983), Mullins and Mullins (1973), Ritzer (2000), and Rosengren (1989)—but without much agreement. Where information seeking is concerned,

the sheer diversity of theoretical borrowings makes a single, comprehensive comparison impossible. Therefore, the remainder of this chapter describes a selection of paradigms and theories that have been, or could be, applied to the investigation of information behavior.

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### Some Relevant Paradigms

In addition to the social and psychological theories already mentioned in this chapter, there are a number of paradigms that have been, or could be, used in information seeking research. At least the first three of these might be grouped together under the general heading of “psychological perspectives.” However, most of them retain some measure of both psychological and social aspects, and overlap to such a degree that it is difficult to categorize them fairly. Therefore, they will be discussed under the following headings:

- Principle of Least Effort
- Uses and Gratifications
- Sense-making
- Constructionism
- Play Theory and Entertainment Theory

#### 7.4.1 Zipf’s Principle of Least Effort

Several authors (e.g., Bierbaum, 1990; Buckland & Hindle, 1969; Case, 2005; Gratch, 1990; Hardy, 1982; Mann, 1993; Poole, 1985) have pointed out that a body of work by philologist George Zipf (1949) functions as a paradigm or grand theory for studies of information seeking. Poole’s (1985) analysis of the information seeking literature found that 40 of the 51 studies he sampled lent their support to Zipf’s Principle of Least Effort. Although Zipf did not claim that his principle was a formal theory, Poole demonstrates that it has the earmarks of a general theory, and that propositions may be derived from it.

According to Zipf (1949), each individual will adopt a course of action that will involve the expenditure of the *probable least average* of his work—in other words, the least effort. Zipf supports his theory with evidence from various aspects of human behavior, most of it based on studies of language usage.

For example, the statistical distribution of words in the text of James Joyce’s *Ulysses* follows the kind of pattern on which Zipf based his theory.

Ranked by frequency of appearance, the 10th most common word in *Ulysses* appears 2,653 times; the 100th most common word, 265 times; and the 1,000th, 26 times. The result is a distribution of data in which the number 26 appears as a constant. Another example comes from the 1930 U.S. census, in which a ranking of the 50 most populous cities revealed that the second-largest had one-half the population of the first, the third-largest one-third of that population, and so forth, down to the 50th-largest city. Again, a suspiciously non-random distribution.

Zipf called such relationships “harmonic distributions” and posited that any human allocation of resources (words in documents, documents in files, or people in cities) tends to fall into such arrangements. The reason has to do with economy of effort; humans tend to use short, common words whenever they can (leading to highly frequent usage of just a few words) rather than longer words that take more effort. Zipf used the analogy of an artisan seated at a desk; while working, the artisan would tend to pick up tools and lay them down in order of how frequently they were used, with the most frequently used ones kept closest at hand (Kenner, 1986).

A corollary is found in both libraries and office filing systems, in which people tend to use, borrow, or cite the same documents again and again; this has become known as the “80–20” (or sometimes “70–30”) rule: 20% of the documents account for 80% of the use. Communication media (e.g., phones, e-mail) exhibit a similar phenomenon: a minority of the population of users (20–30%) tends to account for the majority of messages sent (70–80%). Studies of prominent scientists by Robert Merton and others (summarized in Merton, 1973) found that just a few of them received a disproportionate amount of citations, funding, and other resources (the so-called “Matthew Effect”). And to echo the first example, in Henry James’s novel *The Ambassadors*, 75% of the text is composed of 27% of its vocabulary (i.e., 176 of the 665 unique words that make up the entire novel) — again, an approximation to 70–30.

Internet Web sites exhibit harmonic relationships in two ways. First, Broder *et al.* (2000) have found that about 28% of all Web sites are more “central” in terms of the strengths of their links to other Web sites — approximating the 70–30 ratio. Second, it is clear that just a few sites have vastly larger numbers of visitors, while the rest taper off in a harmonic distribution (Huberman, Pirollis, Pitkow, & Lukose, 1998).

Evidence for the Principle of Least Effort can be found in other realms of information behavior. Like links to Web sites, requests made in libraries also seem to exhibit harmonic relationships: Dorsch and Pifalo (1997) demonstrate that just 25% of medical journals accounted for 74% of the requests in their state of Illinois. The same is apparently true of citations among authors. Howard White (2001) has invoked Zipf’s principle to explain patterns of citations that authors make to the works of other authors, based on the notion that supportive

(i.e., positive, agreeing) references require more explanation (i.e., effort) than citations that are critical of the works of others. That would explain the relative rarity of critical (i.e., negative) citations.

In the practical realm, the human tendency toward economy of effort is often exploited by systems designers. Indexers of documents, whether working by instinct or with term rankings, may establish cutoff points to determine which words are indexed and which are not. Very common words like “and” and “the” are not indexed; rarely occurring words like “onomatopoeia” or “calliope” or “sesquicentennial” will not be indexed either, unless they have some central relationship to the theme of the text. What are indexed are the words in between the common and the rare—the so-called “middle-frequency” terms (Salton & McGill, 1983)—identified by a derivative of Zipf’s research, the Rank-Frequency Law of document vocabulary. Similarly, some office managers arrange files by frequency of use so that the most frequently used files are at the front of each drawer, rather than filing them alphabetically or in some subject arrangement. System designers sometimes refer to “Mooers’ Law,” (1960) which suggests that no one will use an information system if using it is more trouble than it is worth.

An oft-cited example of Least Effort at work is when a professional asks the nearest coworker whether any new reports have been published on a topic, rather than conducting a thorough search of the literature in question. As Joan Durrance put it,

research on information seeking has consistently shown that people prefer interpersonal over print sources. That finding came as a surprise to researchers 30 years ago when they looked at information seeking among scientists. An appropriate research question might be: “Why do information seekers choose oral channels first?” People may simply take the path of least resistance. (1988, p. 161)

Another example is when the professional consults last year’s handbook simply because it is in her office, when the latest version exists just down the hall. Allen’s (1977) study of 19 research and development engineers found that they operated on a Least Effort basis when selecting information channels, and easy accessibility was more highly related to the frequency of use than was the quality of the information. Rosenberg’s (1967) study of industrial personnel found patterns similar to those observed by Allen. Orr (1970) makes comparable observations about scientists. And decades of reviews and studies (see, for example, Chen & Hernon, 1982) document a strong preference among information-seekers for interpersonal sources, who are typically easier and more readily accessible than the most authoritative printed sources. Similarly, Dervin (1983b, p. 158) refers to the tendency of people in “relying on close friends and relatives for their information” as demonstrating a “law of least effort.”

However, here we are concerned with theory rather than practice. Zipf notes that the importance of his Principle of Least Effort lies in its universality in regards to human behavior. Over the long haul, humans tend toward a surprising efficiency in their allocation of effort. This tendency has enormous implications for studying the use of information.

A related approach has been called the *cost–benefit paradigm*. This perspective attempts to explain behavior in terms of a tradeoff between the effort required to employ a particular type of strategy (e.g., eliminating choices by looking at their worst possible outcomes), and the quality of the resulting action. The notion of a cost–benefit trade-off in information seeking is similar enough to the Principle of Least Effort that the two paradigms are sometimes conflated. There are differences between the two, however, not the least of which is that Least Effort claims to be a *descriptive* principle that applies across many aspects of human behavior, whether goal-oriented or not. The cost–benefit approach is more *normative* in its assumptions, and is applied toward conscious decisions regarding the expenditure of effort to achieve some goal.

According to Andy Hardy (1982), the cost–benefit paradigm proposes that as people seek information they select information channels based on their expected benefits weighed against likely costs. Under this paradigm, information seeking is highly rational and emphasizes a calculation of the benefits to be gained from obtaining the most complete and accurate information. An example is the doctor who considers whether she can render an immediate diagnosis based on the symptoms that are presented by the patient, or whether it is worth the time and money (assuming the patient must pay expenses) to run further laboratory tests before deciding on a treatment plan. The doctor must estimate the likely value of the information yielded by the tests versus the monetary cost and any potential dangers due to a delay in treatment.

In contrast, the Principle of Least Effort, which is chiefly pragmatic and not at all optimal, predicts that seekers will minimize the effort required to obtain information, even if it means accepting a lower quality or quantity of information. Hardy's study of 968 U.S. Forest Service professionals found that they were oversensitive to the costs involved in acquiring information and undersensitive to issues of information quality. On average, Hardy found, the Forest Service workers held acquisition costs twice as important in their decisions as they did the quality of the outcome (i.e., the benefits to be derived from reliable information).

#### 7.4.2 Uses and Gratifications

Elihu Katz, Jay Blumler, and Mickael Gurevitch, in their preface to 1974 collection *The Uses of Mass Communication*, describe a “perspective,” “approach,”

or “model” that has come to be known as “Uses and Gratifications.” This paradigm is concerned with

- the social and psychological origins of *needs*;
- the way in which needs generate *expectations* regarding *sources* of information and entertainment;
- the resulting manner in which people *expose themselves to media*; and
- the resulting *gratifications* of needs, along with other *consequences*, many of which may be unintended.

The Uses and Gratifications approach to research has several characteristics that distinguish it from other approaches to the study of mass media (see Levy & Windahl, 1984, and Palmgreen, 1984). First, it is assumed that the media audience plays an *active* role in the selection of sources to attend to, rather than being the passive target of messages. Second, it is the person who uses the medium, rather than the medium that uses the person. That is, if media have “effects” it is at least partly because people choose to be affected by them. Third, the various media are merely a portion of the range of options individuals may have for fulfilling needs, in a universe dominated by interpersonal contacts and intrapersonal activity. Thus, if one has a need for “entertainment” one could just as well play a card game—whether by oneself or with another individual—rather than watch TV or read. Fourth, media use can be studied by asking people directly about their interests and motives, rather than collecting data surreptitiously and/or inferring motives to observed behavior. Finally, it is best to suspend value judgments about the significance of various media and their content until the users of the media are studied on their own terms; dismissive judgments about the value of certain kinds of magazine, books, films, or television programs do not lead to a better understanding of what those sources *do* for people, and why they choose one source over another.

McQuail and Gurevitch (1974) point out that the Uses and Gratifications perspective can be approached via three research traditions: functional, structural–cultural, or action–motivation. In keeping with theories of drive–reduction (like Freud’s Pleasure Principle, discussed previously), the seeking of gratifications clearly has a functionalist flavor: audiences choose among media and content to accomplish the goal of gratification. People actively invoke that function of the mass media—usage doesn’t just “happen” to them. An example comes from Cutler and Danowski (1980), who demonstrated that as people got older they watched election coverage on TV less for the content and more for “process gratifications”—to engage their senses, to connect with the culture, and so on. Actual interest in political “facts” may decline, but not the watching of election news.

The structural–cultural tradition emphasizes the media environment that a culture has created, and how those limit choice and invoke trade–offs in uses

and gratifications. For example, Williams (1987, p. 224) suggested that differences in gratifications found in two national studies of political news is due to “structural differences in the ownership, operation, programming, or content of newspapers and television in Great Britain as compared to the United States.” Another key consideration is the role that media choices play in the forming of one’s personal identity. Here Williams cites results suggesting that the unavailability of the telephone may move some individuals to make more use of television content to form their personal identity.

The action–motivation tradition is found in the application of expectancy models such as that of Fishbein and Ajzen (1975). In fact, Rayburn and Palmgreen (1984) say that these two research traditions have enough in common to be merged. Expectancy models assume that beliefs and evaluations partly determine the gratifications sought, which in turn influence how media content is chosen and consumed. Williams (1987, p. 225) characterized the expectancy model as saying that

either behavior, behavioral intentions, or attitudes [are] a function of (1) expectancy—the perception of an object’s possession of a particular attribute or that a certain behavior will lead to certain consequences—and (2) evaluation—that is, the degree of “effect, positive or negative, toward an attribute or behavioral outcome” (Palmgreen, 1984).

Some information seeking research lends itself to more than one of these approaches. Dervin’s sense-making research, for example, involves expectations about the utility of various sources for reducing uncertainty and bridging gaps in daily experience. It also concerns the way that information needs are affected by a changing environment (Williams, 1987, p. 226).

The uses and gratifications perspective has been criticized on several grounds. Most fundamentally, concepts like needs, uses, motives, and gratifications lack some clarity, and may be used somewhat differently across investigators (Ruggiero, 2000; Rubin, 1994). Uses and Gratifications is not yet well connected to other theories of beliefs, attitudes, motivations, and behavior, many of which are surely relevant and could serve to ground these central concepts. Uses and Gratifications offers a rather simplistic explanation of why we choose certain media and content, namely “we use *X* because *X* gratifies us” (Williams, 1987). The studies themselves tend to be very individualistic, making it difficult to explain more than the behaviors and reports of those persons studied.

Investigations conducted under the Uses and Gratifications perspective tend to be compartmentalized by audience and/or medium, without many syntheses across studies. For example, Rubin’s 1983 study of the uses of television found five common motivations: information, entertainment, escape, habitual passing of time, and companionship. Would these uses apply equally to



fiction-reading? “Companionship” would seem to be less plausible, as nearby TV viewers are more open to interaction than nearby readers.

But a few studies make comparisons among such behaviors, across media. Eugenia Zerbinos (1990), for example, invokes Uses and Gratifications in her study of the uses of newspapers versus videotext, finding more specific information seeking and better recall of facts from the electronic news, but she discusses only the surveillance functions of these media. Kirsty Williamson (1997, 1998) employs the theory to study a wide range of personal, institutional, and mass media sources used by the elderly.

Another difficulty with Uses and Gratifications lies in its assumption of a universally *active* audience. Experience sampling studies by Csikszentmihalyi (1990; see Chapter 9) find little evidence to support the notion of an active television audience, finding instead that TV viewers report feeling relaxed and relatively inattentive.

Despite these possible shortcomings, Uses and Gratifications is highly relevant to the study of information seeking. Elfreda Chatman (1991) offers an example of an application of this approach. Chatman conducted interviews with janitors to test six propositions about the activities and gratifications of the working-class poor, including their use of the media. She concluded that a theory of gratification was applicable to the study of information seeking. In particular Chatman found that a focus on gratifications helps us to understand how the poor define and deal with problems in their lives, and why it is that they are not more active in seeking information. Two important reasons for this seeming passivity were that [1] respondents tended to see problems as being resolved by “luck” rather than their own efforts, and [2] they failed to see external sources of information, including libraries, as relevant to their everyday problems.

A more recent variation on the Uses and Gratifications approach, is Media Use as Social Action (abbreviated as MASA in Renckstorf & McQuail, 1996), also known as Renckstorf’s Social Action Model (McQuail & Windahl, 1993, p. 143). Like sense-making, MASA borrows from symbolic interactionism and phenomenology a microsociological perspective with an emphasis on interpretation. MASA researchers borrow their methods from Alfred Schutz (1962, 1964, 1967), Berger and Luckmann (1967), Blumer (1986), Becker (1970, 1982), Goffman (1959, 1974), Garfinkel (1967), and Spradley (1979). MASA researchers do not view information as having “effects” on the audience that receives it, but rather sees individuals as choosing to interpret (or ignore) messages in their environment; their sense-making is shaped by social situations and circumstances as well as individual characteristics. While MASA is more concerned with mass media, in its reliance on Schutz’s work, it also resembles the research programs of Brenda Dervin and Tom Wilson, discussed elsewhere in this volume. Only a few studies have been conducted under the MASA rubric, and most of these are assembled in a volume edited by Karsten Renckstorf (1996).

### 7.4.3 Sense-Making

Whether sense-making constitutes a paradigm, a theory, or a methodology—or all of these—is open to question. Brenda Dervin, the primary proponent of this approach to information seeking and use, notes that “some people call sense making a theory, others a set of methods, others a methodology, others a body of findings” (Dervin, 1992, p. 61). In a recent explanation Dervin (2005) describes her “sense making methodology” as a “theory for methodology” (p. 26) that builds a bridge between substantive theory (i.e., systematic propositional statements about phenomena) and metatheory (“assumptions about the phenomena and how to study it,” p. 25). In contrast to these two senses of “theory,” Dervin aims to create a third type of theory that connects the two.

This text will treat sense-making primarily as a paradigm that emphasizes naturalistic methods (Dervin & Nilan, 1986; Park, 1994) and that has theoretical grounding in the constructivist learning theories of John Dewey (1933, 1960) and Jerome Bruner (1973, 1990). Dervin acknowledges additional intellectual debts to many other scholars, including Richard Carter (1965, 1973), Clifford Geertz (1973), Anthony Giddens (1984, 1989), Jürgen Habermas (1979, 1984, 1987), and Robert Taylor (1962, 1968), among others. A comprehensive overview of her work is found in the collection by Dervin, Foreman-Wernet, and Lauterbach (2003).

A main tenant of sense-making is that information is not “something that exists apart from human behavioral activity.” Rather, information is “created at a specific moment in time-space by one or more humans” (Dervin, 1992, p. 63). Unlike other approaches to information seeking that see information as something “out there” that is transmitted to people (as Dervin says, an information “brick” that is put into a human “bucket”), sense-making sees information as something that is constructed internally in order to address discontinuities in life (see the earlier discussion in Chapter 3 of “gaps”). This approach uncovers the problems that people experience in life and how they face those obstructions.

The core of the sense-making research could be said to derive from the philosophy and learning theory of John Dewey (1960). Dewey’s philosophy of instrumentalism emphasized pragmatic problem-solving through actions carried out in the real world. He saw both science and individuals as cycling through five phases of reflective operations: suggestion, intellectualization, hypothesis, reasoning, and then testing a solution by action. Conscious connection and interaction with objects and ideas led on the collective level to productive science, and on the individual level to thinking and learning.

George Kelly (1963) advocated similar views in his theory of personal construct formation, a key component in his Theory of Personality. Kelly saw a person’s behavior as strongly shaped by his or her mental constructs of the

world and how it operates; constructs are knowledge structures that “enable us to anticipate events and predict outcomes” (Kuhlthau, 1988a, p. 233). Kelly’s construction of knowledge also hypothesized five phases in thinking: encountering a new experience; initial feelings of confusion that result; the formation of a working hypothesis; taking actions that result in either reconstruing a (faulty) hypothesis or validating a (true) one; and, finally, assimilation of the findings with previous knowledge, resulting in changes of behavior. Jerome Bruner’s (1990) phases of interpretation and perception parallel, to a large degree, those of Dewey and Kelly.

Sense-making has incorporated Dewey, Kelly, and Bruner’s notions of life as an encounter with problems and discontinuities in knowledge, and also the view that information is something we create through our interactions with the obstacles in our progress through life. It is an active, process-oriented view of learning and being. The end-product of the process—sense—is equated with knowledge, but also with opinions, intuitions, evaluations, and (effective) responses.

An early example of sense-making research is reported in Dervin, Nilan, and Jacobson (1982) and Dervin, Jacobson, and Nilan (1982). Donors of blood were asked to describe the process of donating: what happened, what questions they had, and how they hoped the answers to their questions would help them. By documenting a time-line of the steps in the process and analyzing responses to the interview questions, the researchers were able to demonstrate that each step in the process had a distinctive pattern of questions and information usage. The results were used to create a touch-activated, question-answering computer screen that would address donors’ information needs at each stage in the process. The answers given included not only the perspectives and responses of the medical personnel, but also those of previous donors, another useful outcome of the research.

In summary, the sense-making research agenda produces detailed knowledge of the strategies by which individuals cope with problematic situations. In doing so, sense-making research places a high value on the insights gained by the persons under study, as they reconstruct their solutions to past problems.

#### **7.4.4 Constructionism**

Although the roots of “social constructionist” (or “discourse-analytic”) research stem from different theorists and disciplines, the root theorists share a common emphasis on the importance of language and social interaction in knowledge formation and in establishing social/power relationships. Within the information behavior literature, these streams of thought are often cited together and so will be discussed jointly.

According to Tuominen, Talja, and Savolainen (2005) constructionism focuses on talk and language, as they emerge from interaction among members of a community. It is a “bundle of theoretical frameworks” (p. 329) with origins in sociology and in structuralism (Lechte, 1994). Constructionism emphasizes the ways in which individuals construct understandings, meanings, and identities through dialogue and discourse. It is a framework that emphasizes “what people do with their talk and writing and also with different sorts of cultural resources that people draw on” (Tuominen & Savolainen, 1997, p. 85). Among the functions that discourse serves is to define the nature of reality—what is real, what is true, who is responsible, and to explain our own motivations and behaviors.

The constructionist tradition builds on the discourse analysis work of Bakhtin (1981) and Foucault (1972, 1980); later contributors to this project have been Rom Harré (1984, 1994) and Jonathon Potter (1996)—although there are many others (see Tuominen & Savolainen, 1997). Other theorists often cited in this vein include Peter Berger and Thomas Luckmann (1967; on the social construction of reality); Alfred Schutz (1967; regarding phenomenology), Harold Garfinkel (1967; on ethnomethodology); sociologist George Ritzer (2000, p. 67) sees all these scholars as being “together under the heading of sociologies of everyday life.” Closely related to this theory group are works on the social construction of scientific knowledge, such as those Karin Knorr-Cetina (1981) and Bruno Latour and Stephen Woolgar (1979), and on the Social Construction of Technology (SCOT; Bijker, Hughes, & Pinch, 1984). However, Bates (2005a) makes a distinction between scholars of *constructivism* versus *constructionism*, some of whom Tuominen *et al.* group together.

An example of information behavior research in this realm is that of Karen Pettigrew (1999, 2000; now Karen Fisher). Fisher has used the social-discursive framework in several studies to examine information exchange in everyday settings. Her ethnographic study of the flow of information among nurses and elderly patients at a foot clinic led her to develop the concept of an “information ground”—a place in which people come together to perform some task but which temporarily becomes a rich environment for exchanging information on many subjects. Fisher and her colleagues (e.g., Fisher, Marcoux, Miller, Sánchez, & Cunningham, 2004; Fisher Durrance & Hinton, 2004) have also studied everyday information flows among immigrants in various community settings.

There have been various other IB studies conducted under the constructionist banner. For example, Given (2002a, b) investigated how undergraduates gave accounts of their information practices, emphasizing the ways in which the students’ everyday information needs informed their academic work, and the role of cultural capital in information seeking. Julien and Given (2003) showed how academic librarians construct the identities of the faculty members with whom they work on information literacy activities. McKenzie (2003a, b) uses Harré’s notion of “positioning” to show how discourse is used to construct

identities for self and others (social positioning is also discussed by Given, 2005). While concerned more with information technology than with information seeking, I made fruitful use of the SCOT approach in my analysis of policy rhetoric surrounding the development of videotext (a precursor to the World Wide Web; Case, 1994). Elsewhere in this book I describe a report on “everyday life information seeking” by Savolainen (1995), which is also an example of this research.

#### **7.4.5 Play Theory and Entertainment Theory**

As noted in earlier chapters, the artificial distinction between information and entertainment masks an area of investigation that, although it is clearly relevant to information seeking, has not been fully addressed. Thus, it would be useful to have a theory that addresses both phenomena. Stephenson’s Play Theory does just that.

Stephenson (1967) launched a research program based on the notion that humans manipulate their intake of entertainment and information to serve their emotional needs. What makes an input “pleasurable” is subjective, however; one person may enjoy reading today’s stock market results (whether or not it is their duty to do so), while another person may find such content unpleasant to some extent. Most messages contain some elements of both pleasure and pain, play and work, depending on the perception of the individual recipient. As Mendelsohn (1966) noted, when we have a choice, we tend to choose entertainment over information. Even while engaged in serious work we may prefer to have our information presented in a stimulating format and style—“sugar-coated” to some degree.

Play Theory is more applicable to the viewing of entertainment media than to the usual concern of the information seeking literature with factual information. Nevertheless, such theories have been usefully invoked to study events like newspaper reading as a quest for both facts and amusement (see Dozier & Rice, 1984).

At the heart of Play Theory is not only the idea that humans tend to seek pleasure and avoid pain, but also that they tend to mix work with play. Stephenson lamented that the study of communication media had been preoccupied with persuasion, public opinion, and social control; rather, he saw media as used for satisfying individual “wants,” and hence a need for “a play theory and not an information theory of mass communication” (p. 3).

An example of pain-avoidance can also be found in newspaper reading; Stephenson quotes findings from a study of reader motivation that suggest “people feel lost and anxious without a newspaper ... fearing the worst, they are

reassured to read each day that everything is well” (p. 147). The newspaper may have been replaced to a large degree by electronic media, but the hypothesis is still valid: we are reassured to learn that no major disaster has occurred, particularly one that might directly affect us.

Similarly, Kay (1955) noted that readers of newspapers may obtain the immediate satisfaction of a vicarious experience (i.e., reading about the good or bad things that happened to others) and/or the delayed reward of learning how to avoid or “handle” certain kinds of situations in their own lives. Kay also thought that news offered the challenge of “intellectual puzzles”—such as trying to understand *why* something happened—and might offer an escape or catharsis (abreaction) from the pressures of the day; both types of motivation help explain why people may read about the same things (or even the very same text) over and over again. Shepherd, Duffy, Watters, and Gugle (2001) have reviewed decades of research on newspaper reading and invoke Play Theory to describe human behavior in this arena.

Stephenson devotes an entire book to elaborating his Play Theory and the Q-sort methodology used in its application; however, relatively few other studies have been conducted using his framework explicitly. Stephenson does report several of his own studies that documented the entertainment functions of newspaper reading. A fresh investigation in this vein by Elaine Toms (1999) invokes Play Theory (along with other theories of motivation) in describing her experimental results on electronic newsreading. Toms finds support for a curiosity- or play-driven interpretation of browsing text:

There was no “need,” no anomalous state of knowledge and no knowledge gap evident. This was simply an information gathering experience without expectations or predicted outcome ... novelty stimulated curiosity (and thus exploration). (p. 202)

Studies of “creativity” (e.g., Getzels & Csikszentmihalyi, 1976; Ghiselin, 1952; Mansfield & Busse, 1981; Weisberg, 1986) also consider the nature of play. Creativity investigations have their own identity and yet overlap with information seeking studies; they interview some of the same categories of people: writers, painters, sculptors, musicians, and scientists. The applied literature on how to encourage creativity contains concepts and language that should be familiar to students of information behavior. Robert Fritz (1989), for example, emphasizes the ability of creative people to break away from commonly held views of reality. Fritz says, in essence, that what keeps most people from behaving creatively is the “reactive-responsive orientation” that we all develop as children in the normal course of socialization. In brief, we learn to follow the “path of least resistance” (the title of Fritz’s book) by avoiding “trouble” — chiefly conflict with others. Creativity springs from an ability to abandon, at least temporarily, the *problem orientation* of the reactive-responsive mindset. Creative behavior

comes from deep within, an urge that transcends the situations facing us and makes us *go beyond our current context*. Theories that attempt to explain creativity and imagination (e.g., Johnson, 1987) are well worth exploring in relation to information behavior.

Related to both play and creativity is a newly-emerging focus on hobbies and other leisure-related activities (Hartel, 2005; Stebbins, 2001). Thus far there have been various studies of genealogists (Duff & Johnson, 2003; Fulton, 2005b; Yakel, 2004), hobbyist cooks (Hartel, 2003) and coin-collectors (Case, 2006b). According to Hartel (2005), play and entertainment are typically important aspects of any casual leisure activity; she makes a strong case for hobbies as natural candidates for application of both Domain Analysis and Everyday Life Information Seeking.

Another play-related research agenda is that of University of Alabama professors Dolf Zillman and Jennings Bryant. Zillman and Bryant have advanced a related theory of deliberate media exposure that is well-supported by experimental results. Variously called "Entertainment Theory," "Mood Management Theory," or "affect-dependent stimulus arrangement" (Bryant & Zillman, 1984; Zillman & Bryant, 1985, 1986, 1994; Bryant & Vorderer, 2006), it has been used by those authors and many others in various experiments and observational studies. Mood Management Theory hypothesizes that people use entertainment sources (particularly television programming) to relieve stress by replacing anxious thoughts with positive (or at least distracting) stimuli. Anderson, Collins, Schmitt, and Jacobvitz (1996), for example, applied it in a three-part study that found some effects for families and differential effects for men and women, depending on the study design. For example, stress and TV viewing were more highly correlated among men, while among entire families stress was associated with watching more comedy and less news. Potts and Sanchez (1994) also found their subjects watching less news programming when they were depressed. Other researchers (e.g., Kubey & Csikszentmihalyi, 1990) have found that the mood-altering effects of TV tend to be less positive and shorter in duration than activities like reading or playing games with others.

Many investigations that highlight entertainment might also fall under the Uses and Gratifications paradigm. One example of such entertainment-oriented research is that of Carolyn Lin (1993), who investigated what pleasures teenage television viewers hoped to obtain from viewing, and what gratifications they actually obtained, as mediated by their viewing situations and degree of involvement with the content. Lin found that teenagers obtained five types of gratifications from TV. Obviously, both entertainment ("excitement, fun") and diversion ("helps me relax, forget about my problems") were important gratifications. TV viewing also gave the respondents fodder for conversations (thus enhancing "interpersonal communication"), and opportunities for "parasocial interaction" (identifying with TV characters and talking back to the TV to

express their feelings). Yet TV viewing also imparted “information” in the form of advice about how to make friends, get along with family members, and solve the teenagers’ own personal problems.

In agreement with a central theme of this book, information and entertainment are often inextricably entangled. It is difficult to say where “information” stops and where “entertainment” begins. Yet they are typically treated quite separately in reviews of relevant literature, and it is evident in the work of most authors that entertainment is not worthy of scholarly consideration—an attitude that deserves rethinking.

## 7.5

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### Other Theories

It is difficult to know where to stop in discussing the use of theory in information seeking. As mentioned in the introductory discussion about theory, I have taken a fairly narrow definition of the term. Many theories or principles have been invoked in information seeking research, although some of them appear in relatively few studies. Depending on what passes for theory, and how many uses of it must occur before we take it to be generally applicable, there are many other candidates that could be discussed as theories relevant to information seeking.

Anderson *et al.* (1996), Fisher, Erdelez, and McKechnie (2005), Pettigrew, Fidel, and Bruce (2001), and Pettigrew and McKechnie (2001) offer a number of examples of potentially relevant theories, paradigms, frameworks and concepts in their analyses, many of which have not been described earlier in this volume. In Table 7.1 I expand upon their examples and add some others. I include examples of theories and concepts invoked in discussions of information behavior, for which I found at least three examples in the literature reviewed in this book. This list is meant to be illustrative, rather than exhaustive, of theories used in information behavior research; it is based on what has actually been cited, rather than an intellectual history of who *should* be given credit for a particular theory. Several of these theories (or theory groups) have been mentioned earlier. Most of the publications cited are empirical investigations; however, a few merely discuss how the theory might be applied to study information behavior.

As can be seen from Table 7.1, it remains the case that much of the formal theory has been borrowed from other disciplines — although the past few years have seen an increase in theorizing by information behavior scholars. In particular, the volume by Fisher, Erdelez, and McKechnie (2005) features a number of established scholars who provide synopses of theories or concepts they have found useful in the study of information behavior. Many of the 72 entries in the Fisher *et al.* (2005) volume (prepared with the help of members of the



**Table 7.1**

Social and Psychological Theorists, Theories and Theory Groups Often Invoked in Information Behavior Research

Theorist(s)	Theory or Concept(s)	Some Publications that Cite the Theory
Bandura 77, 86	Social Cognitive (Learning) Theory/Self-Efficacy	Baker 05; Case 04; Ford 03; Hepworth 04; Miwa 05; Nahl 05; Papa 00; Savolainen 01; Wilson 99, 05
Bakhtin 81; Berger & Luckmann 67; Foucault 72, 80; Garfinkel 84; Harré 84, 99; Knorr-Cetina 81; Latour 81; Potter 96	Social Construction of Reality / Knowledge, Discursive Action, Ethnomethodology, Positioning theory, Discourse Analysis	Bates 05; Budd 96, 01; Case 91; Chatman 91, 96; Day 05; Dervin 99; Frohmann 04; Given 02, 05; Joyce 05; Leckie 05; McKenzie 02; Olsson 05; Radford 01; Savolainen 93; Sundin 02; Talja 97, 05; Tuominen 97, 05; Williamson 02; Wilson 02
Bourdieu 84, 90	Theory of Taste/Distinction, Symbolic Violence	Dervin 99, 03; Leckie 05; Olsson 05; Pettigrew 01; Savolainen 95, 99; Seldén 01; Thomas 01; Van Snippenburg 96; Joyce 05
Certeau 84	Everyday Practice	Davenport 00; Joyce 05; Ross 05; Rothbauer 05
Csikszentmihalyi 90	Flow Theory	Baker 05; Case 00; Mick 92; Naumer 05
Fish 87; Iser 78; Suleiman 80	Reader Response Theory	Mick 92; Radway 85; Ross 99, 05; Scott 94; Stern 92
Fishbein 75	Theory of Reasoned Action (Expectancy-Value Theory)	Hirschman 86; Leung 99b; Toms 99; JohnsonD 97
Folkman 84, Miller 87	Stress and Coping Theory Monitoring & Blunting	Anderson 96; Baker 96, 99, 04, 05; Bryant 84; Case 05; Josefsson 06; Rees 00; Wilson 99, 05
Giddens 84	Structuration Theory	Dervin 92; Leckie 05; Pettigrew 01; Rosenbaum 93; Savolainen 93, 95; Williamson 02
Goffman 59, 74, 83	Presentation of Self (Face)	Case 04; Chatman 96, 00; Chelton 01; Dervin 82; Mokros 95; Mon 05; Nahl 05; Radford 01; Thivant 05; Tuominen 97
Granovetter 73, 82	Social Network Theory/ Strength of Weak Ties	Chatman 91; Dixon 05; Erdelez 00; Haythornewaite 96; Hersberger 01, 05; Huotari 01; Pettigrew 00, 01; Savolainen 01; Wicks 99

*Continued*

**Table 7.1**  
Cont'd

Theorist(s)	Theory or Concept(s)	Some Publications that Cite the Theory
Habermas 84, 87	Theory of Communicative Action	Benoit 00, 05; Cornelius 96; Dervin 82, 89, 92, 99; Hagen 97; Timpka 90; Wersig 85
Kelly 55, 63	Personal Construct Theory	Bates 05; Cole 00; Julien 04; Kuhlthau 91, 93, 99, 04, 05; Williamson 05; Wilson 02
Lin 02	Social Capital	Case 06; Haythornewaite 96; Hersberger 01, 03, 05; JohnsonC 04, 05; Pettigrew 01
Merton 68, 72	Reference Group Theory (Insiders/Outsiders)	Chatman 90, 91, 96; Dawson 01; Huotari 01; Lin 72; Paisley 68; Sligo 00
Rogers 05	Diffusion of Innovation	Case 87; Chatman 86, 96; Crane 71; Crowley 05; JohnsonD 97; Lajoie-Paquette 05; McKechnie 01; Savolainen 01
Schutz 62, 64, 67	Phenomenology, Life World	Chatman 96, 00; Crowley 05; Kari 03; Marcella 05; Olsson 05; Savolainen 95; Wilson 81, 99, 02, 03
Smith 92	Optimal Foraging Theory	Jacoby 05; Sandstrom 94, 01; Williamson 97, 98, 99a
Zillman 85, 86, 94	Mood Management Theory	Kleiber 95; Stone 92; Wilson 99a

*Note:* Studies are listed by first author only, plus year. See the References section.

ASIST Special Interest Group on Information Needs, Seeking and Use) are concepts, hypotheses or models developed to explain information-related phenomena, rather than “theories” in the most formal sense used in the social sciences (i.e., an articulated set of constructs, definitions and propositions). However, many of the entries reflect constructs and theories adopted from other disciplines and are reflected in Table 7.1.

Mullins and Mullins (1973) and Ritzer (2000) explain how theories may be classified into groups by considering their core concepts, intellectual history and relationships among scholars. Table 7.1 lists theorists in alphabetical order, except in a few cases in which citations to theorists are so highly correlated that it would be difficult to disentangle them. A prime example is the close connection between Susan Folkman’s theory of ways of coping with stress, and Susan Miller’s notions of monitoring and blunting as means of emotional control. Many of the other theorists are cited in a more isolated fashion, and so are listed separately.

Among the particular theorists and theories, several have been especially influential in IB research. Albert Bandura’s Social Cognitive Theory (Bandura, 2001) and Social Learning Theory (1977), especially his central concept of self-efficacy, has influenced a number of researchers. Also with roots in psychology and education has been the constructivist (Bates, 2005a) learning theories of George Kelly (1963); the works of John Dewey (1933) and Lev Vygotsky (1978) could also be placed in this camp. Kelly’s work has been particularly influential in the works of Carol Kuhlthau. The term “constructivism” is not universally used or understood to indicate this paradigm, however, as some writers might also apply it to several of the “social constructionist” scholars.

Other highly-cited theorists include Pierre Bourdieu’s (1984, 1990) Theory of Taste, Erving Goffman’s (1959, 1974, 1983) Face Theory and Frame Analysis, Mark Granovetter’s Strength of Weak Ties (a construct within general Social Network Theory), Jürgen Habermas’ Theory of Communicative Action, Nan Lin’s (2002) concept of Social Capital, Robert Merton’s (1968, 1972) Reference Group Theory and notion of Insiders versus Outsiders, Everett Rogers’ (2005) Diffusion of Innovation paradigm, and Alfred Schutz’s writings on Phenomenology and the Life World. As Table 7.1 shows, there are many other theories cited as relevant to information behavior investigations.

Table 7.1 illustrates both the popularity of certain theories and sensitizing concepts, as well as the broad influences on some prominent information behavior scholars. Regarding the latter point, we can see that Brenda Dervin cites a wide range of intellectual precursors to her sense-making investigations, and that Elfreda Chatman, Tom Wilson, and Reijo Savolainen also have cited multiple theorists in pursuit of their research programs.

As Bates (2002, 2005a) has persuasively argued, there is room for multiple approaches in information behavior research. Empirical research on the *use of*

theory and metatheory in information seeking, e.g., Pettigrew, Fidel, and Bruce (2001), Pettigrew and McKechnie (2001), McKechnie and Pettigrew (2002), Julien and Duggan (2000), and McKechnie, Baker, Greenwood, and Julien (2002), have documented the evolution of theories, metatheories, and paradigms in the discipline. Finally, the recent collection of theory summaries by Fisher, Erdelez, and McKechnie (2005) have made us all aware of how many choices there are among the various “lenses” used to view information seeking and related topics.

## 7.6

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### Summary

I began this chapter by discussing the nature of paradigms adopted by researchers. These are difficult to place in a single framework, both because they overlap and because they operate at different levels of generality. I noted that various words may be used to describe much the same thing regarding research: perspectives, traditions, or approaches. I use the word “paradigm” interchangeably with these.

I discussed the nature of theory, describing it as a generalized explanation of the relationships among various phenomena. I described the confusions that arise with varying usage of the term “theory.” One implication of that confusion is that theories also vary in the degree to which they attempt to generalize; theorists and epistemologists refer to this as the issue of “levels of theory.” In this chapter a “theory” is assumed to be a closely related *set* of definitions and propositions, rather than a simple statement like “people seek information when they are uncertain.” The latter declaration, though perhaps true, needs to have a supporting set of concepts and hypotheses to result in a useful series of investigations of which we can all make sense.

Next, I explored a number of paradigms that have been employed in research on information seeking. These included Zipf’s Principle of Least Effort, the Uses and Gratifications tradition, sense-making (as advanced in the work of Brenda Dervin), the Social Constructionist perspective, and Play Theory.

Finally, I closed with a list of other theories that have been applied in information seeking research. These included Social Learning/Cognitive Theory, Theory of Taste, Theory of Reasoned Action, Theory of Communicative Action, Personal Construct Theory, Diffusion of Innovations, Optimal Foraging Theory, Social Network Theory/Strength of Weak Ties, Reader Response Theory, and Mood Management Theory, among others.

Most of these theories have origins that are decades old. They are likely to continue to attract adherents, as no comprehensive theory of information

behavior has emerged. A recent trend among information behavior researchers has been to embrace theories originating in the humanities. This represents a break from the past, when social science disciplines (chiefly psychology and sociology) provided most of the theoretical basis for empirical work on information needs and uses.

## Recommended for Further Reading

- Bates, M. J. (2005a). An introduction to metatheories, theories, and models. In K. E. Fisher, S. Erdelez & E. F. McKechnie (Eds.), *Theories of information behavior* (pp. 1–24). Medford, NJ, Information Today, Inc.  
*A synopsis of the various paradigms for studying information behavior.*
- Chatman, E. A. (1990). Alienation theory: Application of a conceptual framework to a study of information among janitors. *RQ*, 29, 355–368.  
*Chatman's study is a fine example of the use of theory in information seeking research, and it makes fascinating reading, too.*
- Dervin, B. (1992). From the mind's eye of the user: The sense-making qualitative-quantitative methodology. In J. Glazier & R. Powell (Eds.), *Qualitative research in information management* (pp. 61–84). Englewood, CO: Libraries Unlimited.  
*Dervin is a prolific author and has published several explanations of her sense-making research. This is one of the most accessible.*
- Dozier, D., & Rice, R. (1984). Rival theories of electronic newsreading. In R. Rice (Ed.), *The new media* (pp. 103–128). Beverly Hills, CA: Sage.  
*This study contains a capsule explanation of Stephenson's Play Theory as well as a brief critique of Uses and Gratifications research. Although the technologies it discusses are now old hat, this work contained a prescient discussion of a still-valid question: What motivates people to read text on a computer screen?*
- Hacking, I. (1999). *The social construction of what?* Cambridge, MA: Harvard University Press.  
*Philosopher Ian Hacking has made a career of bringing philosophy to bear on issues of social importance. In this book he discussed the origins of "social constructionism" and how it has been applied to social issues.*
- Rosengren, K. (1989). Paradigms lost and regained. In B. Dervin, L. Grossberg, B. O'Keefe, & E. Wartella (Eds.), *Rethinking communication: Paradigm issues* (vol. 1, pp. 21–39). Newbury Park, CA: Sage.  
*Rosengren discusses the ways in which communication scholars — and other social scientists — have been divided by different philosophical and epistemological assumptions. This chapter contains a version of Burrell and Morgan's thoughtful typology of sociological schools.*
- Weick, K. E. (1995). *Sensemaking in organizations*. Thousand Oaks, CA: Sage.  
*Weick takes a different perspective from the usual information seeking authors — who tend to focus on individuals. Here the emphasis is on the responses that social groups and institutions make in the face of ambiguous situations. Weick's fascinating explanations range from the reasons that battered child syndrome took decades to be recognized, to why it is that soldiers in battle often fail to fire their guns.*