# On contexts of information seeking

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### Abstract

While surprisingly little has been written about context at a meaningful level, context is central to most theoretical approaches to information seeking. In this essay I explore in more detail three senses of context. First, I look at context as equivalent to the situation in which a process is immersed. Second, I discuss contingency approaches that detail active ingredients of the situation that have specific, predictable effects. Third, I examine major frameworks for meaning systems. Then, I discuss how a deeper appreciation of context can enhance our understanding of the process of information seeking by examining two vastly different contexts in which it occurs: organizational and cancer-related, an exemplar of everyday life information seeking. This essay concludes with a discussion of the value that can be added to information seeking research and theory as a result of a deeper appreciation of context, particularly in terms of our current multi-contextual environment and individuals taking an active role in contextualizing.
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## 1. Introduction

"we don't know who discovered water, [but] it was almost certainly not a fish" (McLuhan quoted in Lukasiewicz, 1994).
"Despite repeated appeals for contextual inquiry and sensitivity to context... no one is exactly sure what is being requested or how to produce it" (Weick, 1983, p. 27).
"Context is the quark of communication theory; everyone knows it is there, but nobody is sure where—or what—it is. In the last thirty years or so, virtually everyone writing about

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communication theory "discovers" that what is really needed is a theory of context" (Keith, 1994, p. 229).

A fundamental necessity of social action is that it must occur within a context (Allen & Kim, 2000; Branham & Pearce, 1985; Chang & Lee, 2001; Dervin, 1980, 1997; Gabbard-Alley, 1995; Jacob, 2001; Littlejohn, 1983; Poole & Van de Ven, 1989; Savolainen, 1993; Valsiner & Leung, 1994; Warriner, 1981). While context is central to all explanations of social science (Hewes & Planalp, 1987), it has been examined most often in micro, discourse-related processes (Bateson, 1972; Goffman, 1974) or situational semantics (Barwise & Perry, 1983, 1984). Generally, the persistent theoretical problem of accounting for individual action in a social context is seldom explicitly addressed and we are unaware of the different senses of context in use (Dervin, 1997). Especially lacking is the identification of 'active' ingredients of the environment that trigger changes in information seeking (Kindermann & Valsiner, 1995a,b; Rice, 1993; Thorngate, 1995). In general, in conceptualizing our world, we have a tendency to focus on objects rather than their grounds (Stocking and Holstein, 1993), focusing on messages or individuals, for example, rather than the contexts within which they are embedded (Hecht, 1984; Kindermann & Valsiner, 1995a,b). We concentrate on the processes we are interested in rather than on the more diffuse social contexts that frame, embed, and surround them.

In this essay I will explore in more detail three senses of context that I have used at differing times in my own empirical and theoretic work applying them to information seeking. First, I will look at context as equivalent to the situation in which an individual is immersed, with situations viewed as more important in determining behaviors than individual traits or dispositions (Infante, Rancer, & Womack, 1993). Second, I will discuss contingency approaches that move toward specifying active ingredients that have specific, predictable effects on various processes. Third, I will examine major frameworks for meaning systems or interpretation. Then, how context enhances our understanding of information seeking will be discussed. Finally, I return to larger themes, discussing the value-added contributions of enhanced understanding of contexts; the importance of multi-contextual approaches to understanding processes; and the active role individuals can play in contextualizing. In the end, it is fundamental to the development of any theory that we explain the conditions under which it applies, the fundamental problem that examining contexts addresses (Baker & Pettigrew, 1999).

## 1.1. Contexts and the social sciences

By and large social science is organized by its major levels, psychology, sociology, and so on, in part because of the taken-for-granted assumption that social phenomenon varies greatly across them (Infante et al., 1993; Paisley, 1984). This specialization by level, hinders the development of theory for processes like information seeking that cut across various levels, diminishing the potential impact of research. So, increasingly, because of their inherent advantages, simplified methods, reductionism, and so on, information seeking is dividing its focus of inquiry by levels. But, this can distort the broader nature of this process. To illustrate this point I will focus on how limiting the examination of information seeking, to either of two vastly differing contexts, organizational and cancer-related information seeking by the general public, may seriously distort our view of its nature.

While organizational information seeking has been a traditional focus of library and information science studies, the everyday life information seeking (ELIS) movement (Savolainen, 1995), recently has focused attention on the variety of domains in which information seeking occurs in our day-to-day lifes. Health information seeking, and more particularly cancer-related information seeking (Baker & Pettigrew, 1999; Rees & Bath, 2000; White, 2000), has been one of these areas that has received traditional (Dervin, Harlock, Atwood, & Garzona, 1980; Dervin, Nilan, & Jacobson, 1982; Dervin, 1997) and accelerating attention in recent years (Pifalo, Hollander, Henderson, DeSalvo, & Gill, 1997). This increased attention is reflected in the international Information Seeking in Context Conferences held at the University of Tampere in Finland in 1996 (e.g., Dervin, 1997); the University of Sheffield in the United Kingdom in 1998; and at the Gothenburg University in Sweden in 2000 (e.g, Allen & Kim, 2000; Chang & Lee, 2001) (see http://www.hb.se/bhs/bibvet/isic/index.htm for information on all three conferences). Essentially, this movement argues that a broadened view of the contexts in which information seeking occurs can deepen our understanding of it (Baker & Pettigrew, 1999). However, individual studies often exclusively focus on information seeking within a particular context, rather than examining information seeking across multiple contexts, the focus of this essay.

'Information seeking can be defined simply as the purposive acquisition of information from selected information carriers' (Johnson, 1996b, 1997a). There are many, often contradictory senses of information, here I will focus on the classic one of being able to discern patterns of matter and energy in the world around us. In this tradition, communication is characterized by the additional criteria of having symbols that represent these patterns that are agreed upon by a community of users (Farace, Monge, & Russell, 1977; Johnson, 1996b). Increasingly, individual information seeking has become a critical determinant of the success of organizational members and of the organization as a whole. Individual information seeking, becomes a pivotal force in explaining the handling of communication related to technical problems in an organization and in enhancing individual survival when they are confronted with a disease like cancer. Not only is the necessity for information seeking growing, but the technical possibilities for it are also increasing at an exponential pace. These trends put increasing responsibility on individuals to become active seekers, rather than passive recipients, of information, especially for decision support and problem solving (Rouse & Rouse, 1984).

A focus on information seeking develops a true receiver's perspective and forces us to examine how an individual acts within an information field containing multiple information carriers. Some of these carriers may be actively trying to reach individuals, while others contain information awaiting retrieval by an active individual. Most treatments of information seeking tend to focus on the benefits of information seeking. Yet, information seeking can be viewed as having many negative consequences. Most threatening to management and to health professionals is their loss of control, since information seeking can be inherently destabilizing. So, information seeking is a compelling area of research because of the various contextual forces currently affecting it.

## 1.2. Inherent problems in studying context

Several observers have made trenchant comments concerning the lack of a meaningful focus on context in communication (e.g., Ellis, 1980; Dervin, 1997) and organizational (Baker & Cullen, 1993; Porter, 1996) research. When there is so obvious a need, and still little is done, there must be

powerful countervailing pressures that preserve the status quo. Most researchers become embedded in a taken-for-granted reality in which context becomes a set of initial assumptions or limiting conditions on their area of inquiry. We are McLuhan's fish who do not recognize the fundamental enabling presence of water nor realize what other possibilities might exist outside this embedding medium. So contexts become conceived of in terms of constraints and limits on individual action (Valsiner & Leung, 1994), rather than enablers.

This problem is reinforced by the habitual, unchanging nature of many environments, at least within short cross-sectional temporal frames, which leads to a lack of interest in (or awareness of) them (Thorngate, 1995). For many researchers, especially ones who focus on limited time frames, it may make sense to ignore the effects of context. It is no accident that the researchers who have been most interested in contexts are the those confronted with constantly changing ones (e.g., developmental psychologists, life span, information technologies) (e.g., Bronfenbrenner, 1995a,b; Dervin, 1997; Jackson, 1996; Kindermann & Valsiner, 1995a,b; Lerner, 1995; Suchman, 1987). So, most organizational scholars examining contextual frames focus on processes of organization change or innovation (e.g., Bartunek & Franzak, 1988). In addition, context may also interact with time, with differing levels of context operative in different temporal periods. So, in the long view culture may be determinant, while in the short run structures may be critical to the success of organizations (Ranson, Hinings, & Greenwood, 1980).

There is also the problem of levels of analysis (Rousseau, 1985). In effect, for lower level phenomena (e.g., interpersonal communication) you must study the contexts of context. This introduces another problem because of the implicit hierarchy of effects in many approaches to levels, which subordinates lower level phenomena to higher order ones (Rousseau, 1985; Rickert, 1994). Many context effects in communication settings are reflections of much more encompassing organizational (Gresov & Stephens, 1993) and/or societal trends (e.g., Barley & Kunda's (1992) analysis of the normative social ideologies impact on managerial discourse over a century and a half). Specific lower level contexts may be determined by larger social, economic, or historical contexts (Thorngate, 1995). Especially for critical scholars this can become very seductive, drawing attention away from the original focus of interest (e.g. supervisor–subordinate relationships) to larger societal issues (e.g., the treatment of minority groups).

Somewhat relatedly, different approaches to studying context (perhaps implied by different levels) require such different methodological and conceptual skills that it is unlikely that any one researcher will possess a sufficient range (at least in equal degree) to conduct research of uniform quality. For example, "As a context, culture is amenable not to causal analysis but to interpretation..." (Pacanowsky & O'Donnell-Trujillo, 1982, p. 123). It also appears increasingly unlikely that a team of scholars with the necessary disparate skills could work together to start unraveling these problems, given the competition and suspicion with which differing camps increasingly view each other. However, a greater understanding of context isolates crucial explanatory variables and thereby suggests theoretical propositions between contextual and social science variables that are generalizable across situations, the traditional approach of functionalists. On the other hand, for interpretivists a greater understanding of context is necessary for the rich description of specific cases, which can lead to theoretical insights.

Differing standards for explanation and what is meaningful as an object of study also impede cross-level research. For example, network analysis researchers introduce a simplicity at the dyadic level, that is at least disturbing to interpersonal, discourse, and social interaction scholars, to

Table 1
Comparing three senses of context

| Dimension | Senses | | |
| --- | --- | --- | --- |
| | Situation | Contingency | Frameworks |
| Explanatory power | Primitive | Precise | Complex |
| Individual's role | Passive | Match | Contextualizing |
| Subjectivity | Objective | Contingent | Interpretive |
| Duality | Separate | Interactive | Inseparable |
| Theoretic orientation | Positivist | Post-positivist | Post-modern |

focus on complexity at the social system level (Burt & Schott, 1985). Somewhat similarly, cross-level studies proceed at such a high level of abstraction and are so general that they are just not valuable (Schon & Rein, 1994), raising echoes of the classic etic-emic distinction in intercultural research (Pike, 1966).

In complex social systems everyone's context is somewhat unique, giving the appearance of individual differences attributable to individual locus variables (Richards, 1993). So, individual action and choices may be context driven, but the diversity of contexts makes this difficult to uncover. Individuals may also choose contexts that best match their characteristics, which further clouds the impact of context (Kindermann & Valsiner, 1995a,b).

In Table 1, I highlight many of the differences between the three senses of context that will be elaborated on throughout the rest of this essay. For example, following a classic positivist orientation, situational approaches view the individual as separate from context, while post-modern conceptions view this duality in terms of the inseparability of individuals and context that one cannot be understood without the other. Let us now turn, then, to the earliest, and most primitive sense of context, that of it being equivalent to situation.

## 2. Context as equivalent to situation

Context. Specific situation in which communication occurs (Infante et al., 1993, p. 525).

The first, and most primitive sense, in which context has been used is as equivalent to an elaborated list of situational factors (Chang & Lee, 2001; Dervin, 1997). 'So, a situational definition of context is simply an elaborate specification of the environment within which information seeking is embedded'. For example, at the macro-level, climate, cultural, and structural approaches have all specified lists of factors, which can impact organizational communication processes. So, Monge and Eisenberg (1987) discuss national character, socioeconomic factors, and type of industry as among the environmental factors that can shape emerging communication networks.

In the case of organizational climate and culture (e.g., Pacanowsky & O'Donnell-Trujillo, 1982) these enumerated lists can be extensive. Some climate approaches sought to describe all the enduring factors present in an organization's situation that could be used to distinguish it from other organizations and that could influence the behaviors of organizational members. For example, in their seminal review of the climate literature, James and Jones (1974) describe the multiple measurement-organizational attribute perspective as one of three major approaches to climate.

This approach specifies five major components of situational variance: context, structure, process, physical environment, and system values and norms. In the multiple measurement-organizational attribute approach each of these components in turn has many elaborated elements, with context, for example, including technology, resources, goals, ownership, age, function, and so on. In this approach, climate becomes equivalent to a very elaborate specification of an organization's situation and often climate in James and Jones (1974) treatment becomes nearly synonymous with more commonly used senses of the concept of context.

Situational approaches to context seek exhaustive, objective descriptions, but do not typically move to explanations of what the linkage is, if any, between situational factors and the process of interest. For information seeking, Table 3, which will be discussed in more detail later, describes a similar list of critical situational factors drawn from the works of Johnson (1996a,b, 1997a) including: societal trends, information technology, constraints, information fields, search procedures, and so on. This listing of factors would be typical of situational approaches if it did not move to more precise linking of contextual and process factors.

Moving beyond lists is the specification of limiting conditions (e.g., technology, life cycle, environmental niche) for a middle-range theory that suggests the context in which sets of propositions are operative. Thus, a contextualist might argue that any hypothesis is plausible in certain limited situations (McGuire, 1983). So recognizing the importance of information seeking to the operations of markets, I might state that a market approach to organizational structure explains the development of networks in highly competitive technological firms where members can freely exchange information with each other (Johnson, 1996a,b). Thus, limiting conditions may be an intermediate step, specifying factors that are presumed to moderate relationships, but for which the exact nature of relationships are not specified as in contingency frameworks.

## 3. Context as contingency

Contingency approaches move beyond the enumeration of factors in a situation to specify active ingredients in a context and their relationship to processes. 'A contingent approach to context is concerned with specifying key situational factors which produce predictable states of information seeking'. Underlying these approaches is the more general assumption that an entities (e.g., individual, unit) effectiveness is determined by the match (or fit) between their features, particularly structural ones, and their surrounding environment (Allen & Kim, 2000). These congruence ideas have often been criticized on logical and theoretical grounds (Dalton, Todor, Spendolini, Fielding, & Porter, 1980, p. 61), particularly because they often appear tautological or are used to explain relationships after the fact (Drazin & Van de Ven, 1985; Fry & Smith, 1987).

### 3.1. Match, contingency, and congruency

While the general ideas of match, contingency, and congruency are powerful heuristic concepts that have been supported empirically in many contexts they are not without problems. Fry and Smith (1987) have developed a very systematic conceptual critique of this literature. Essentially they argue for consistent definition and careful distinction of these concepts within the framework of a general approach to theory building. They argue that congruence is a concept that is defined

by the relationships of a theory's variables. On the other hand, contingency is defined by system states where the integrity of the system is maintained, but in markedly different conditions.

So Lawrence and Lorsch's (1967) work on the match between differentiation and integration and an organization's environment would most clearly fall at the level of contingency, while their discussion of the importance of certain styles of conflict resolution is more of an example of congruence. Congruence is a prior requirement for contingency and a necessary, but not sufficient condition, for it. Thus, an organization in Lawrence and Lorsch's (1967) theory must have appropriate conflict resolution strategies if the match between differentiation and integration and the environment is going to occur, but this is not sufficient; the appropriate levels of differentiation and integration must also be in place.

Several other problems exist in this literature. First, often a contingency view is taken to explain research findings after the fact, but a true perspective on congruence and contingency requires specification of relationships before research is undertaken. Second, and somewhat relatedly, contingency perspectives often suffer from tautological or circular reasoning. It works because it works. It does not work because the proper match did not occur. Third, the fundamental systems notion of equifinality immensely complicates this picture. That is, many congruent systems might be established to maintain the system within the same contingent state (Fry & Smith, 1987). It is possible that both a centralized communication structure coupled with authoritarian management and a decentralized structure coupled with democratic management can maintain a productive organization within the same general environment. Fourth, only really gross differences in structures may make a difference in performance (Dalton et al., 1980), and somewhat akin to catastrophe theory notions, there may be drastic change in organizational performance when certain thresholds are reached. So, a change from decentralized to centralized decision making, or vice versa, may result in dramatic reductions in performance, at least initially.

The concepts of match, fit, congruence, and contingency have been used loosely in the literature to capture an essential idea related to organizational communication structures; there is some optimal arrangement of structural elements that promotes the accomplishment of particular functions. For example, Tushman (1978) found in an Research and Development laboratory that effectiveness was a function of matching communication patterns to the nature of a project's work, particularly at the subunit level (Tushman, 1979). Specifically, high performing research projects needed more intraproject communication than high performing technical service projects (Tushman, 1978).

The idea of match permeates most of the literature related to organizational outcomes and has become a cornerstone of organizational theory, partly in reaction to the overly simplistic focus of classical management theory, which sought to discover the *one* best way of doing things in organizations (Lawrence & Lorsch, 1967; Woodward, 1965). This notion has been applied to many organizational outcomes: the relationships between differentiation and integration in different environmental circumstances (Lawrence & Lorsch, 1967); the congruence between rules (both perceptual and actual) of the two parties in the supervisor–subordinate communication relationship and job satisfaction (Downs, Clampitt, & Pfeiffer, 1988); the relationship between organizational strategy and structure (Egelhoff, 1982; Fry & Smith, 1987); media richness (Daft & Lengel, 1986); the match between communication structures and performance in small groups (Shaw, 1971); and the relationship between technology and structure (Fry & Smith, 1987). In this section the idea of match will be explored in more detail in relation to information seeking research.

## 3.2. Contingency and congruence in information seeking research

Johnson and his colleagues have developed a comprehensive model of information seeking (CMIS) that originally was intended to apply across a wide range of contexts (e.g., Johnson, Andrews, & Allard, 2001). However, as often happens, empirical tests have clearly demonstrated that a variety of contingent factors need to be more systematically incorporated in the model. The CMIS (see Fig. 1) seeks to explain usage of particular channels for information. It has been empirically tested in cancer-related (Johnson, 1993b; Johnson & Meischke, 1993) and organizational contexts (Johnson et al., 1995). While the overall goodness of fit of the empirical tests suggests there is congruence within the system of variables specified in the model, the specific patterns of relationships suggest clear contingent effects (Fry & Smith, 1987).

The CMIS contains three primary classes of variables. The antecedents determine the underlying imperatives to seek information. Information carrier characteristics shape the nature of the specific intentions to seek information from particular carriers. Information seeking actions reflect the nature of the search itself and are the outcomes of the preceding classes.

The first two empirical tests of the CMIS focused on cancer-related information seeking by the general population (Johnson, 1993b; Johnson & Meischke, 1993). In the early stages of cancer-related information seeking, when someone is not confronted with the symptoms or disease, but may be mildly concerned with prevention, it does not appear that antecedents and characteristics are linked in any meaningful way (Johnson & Meischke, 1993). Tests in this context suggested that the model works best with authoritative channels, such as doctors, which are the object of intense,
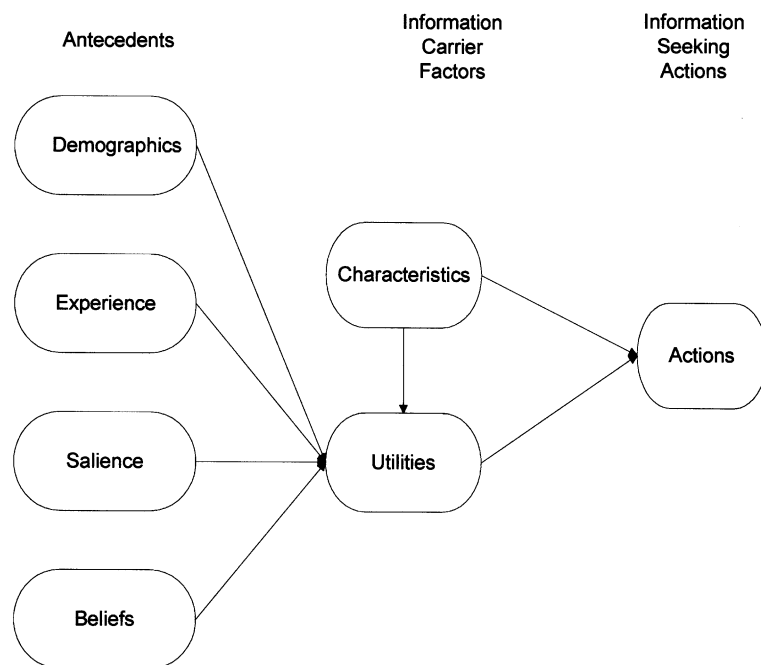


Fig. 1. CMIS source: Johnson, Donohue, Atkin, and Johnson (1995, p. 226).

goal directed searches in the later stages of information seeking (Johnson, 1993a,b). Needless to say, in later stages, when confronted with symptoms or disease, for most individuals, searching for cancer-related information is a non-recurring problem, which is novel and fraught with emotional complications. In many ways this situation is analogous to the non-programmed organizational decision processes, that led many to emphasize the irrationality and subjectivity of organizational decisions (Johnson, 1996b).

The third study focused on information seeking in the defined context of a technical organization and yielded some critical differences in this more rational, programmed, and bounded task setting (Johnson et al., 1995). The most important variables in this test were those related to an individual's existing information base, those associated with an individual's need for recurrent, programmed information seeking, and those related to channel characteristics. The general pattern of findings suggested a more sophisticated, complex understanding of information seeking among technically trained respondents. Comparing the results of the tests suggest that the level of rationality associated with the programming of the task and the relative criticality of the staging of the task produced different system states within the model (Fry & Smith, 1987).

In sum, contingency approaches are more rigorous theoretically than situational ones, specifying the active ingredients in a context and their impacts on the processes of interest. However, they have traditionally been more functionalist in character slighting interpretive approaches, to which we now turn.

## 4. Context as frameworks

The parts of a discourse that surround a word or a passage and can throw light on its meaning. 2. The interrelated conditions in which something exists or occurs. (Merriam-Webster, 1995).
If men (sic) define situations as real, they are real in their consequences (W. I. Thomas cited in Goffman, 1974, p. 3).
... a connection that I make each time when I work with someone with whom I find some ground, some shared way of thinking about things. If I do not have that connection, it is tough for me to get going working with them (Kahn, 1990, p. 707, quoting an architect on work interactions).

This section examines the various frameworks within which debates, discussions, and dialogues occur within organizations. The concept of framework has a long history in the social sciences (Clair, 1993; Hecht, 1984, 1993; Pinkley, 1990; Putnam & Holmer, 1992; Schon & Rein, 1994; Tversky & Kahneman, 1981), especially in relation to discourse processes (Bateson, 1972; Goffman, 1974). Frames have been viewed as inherently delimiting, providing individuals with a situated context for action and for interpretations of particular 'strips of activity' (Goffman, 1974).

A variety of social scientists have used the concept of frames for their particular purposes; for example, in child development contextual frames refer to cultural guidance systems that contexts provide for an individual's development (Kindermann & Valsiner, 1995a,b). A variety of terms have branched off this basic concept, with no clear consensus on meaning. The concept of frames is most commonly used to indicate both a way of viewing the world and of subjectively

interpreting it (Hecht, 1993), acting as sense-making devices that establish the parameters of a problem (Gray, 1996, p. 576). In organizational contexts, Schon and Rein (1994) have developed an extensive analysis of how frames affect policy conflicts. Similarly, Bolman and Deal (1991) argue four classic academic frames, structural, human resources, political, and cultural, contribute to a practitioner's sense making in organizations. A frame, or the act of framing, usually refers to putting a perspective into words when one encodes a message (American Heritage Dictionary, 1979) providing, for example, a definition, meaning, or conceptualization of an issue in a conflict situation (Putnam & Holmer, 1992).

Here we will focus on frameworks that provide a more encompassing context for interaction within organizations. 'A framework for interaction is the set of interrelated conditions that promoting certain levels of shared understanding of meanings, orient interactants to the nature of the event, and establish the ultimate purpose of continuing interaction' (Johnson, 1997b, 1998). Frameworks provide the basic support structures for cooperative relationships within organizations through the development of an inextricable linkage between context and meaning (Wilkins & Ouchi, 1983; Bochner & Krueger, 1979).

Developments in three areas reveal the increasing focus of attention on this problem in organizational communication. First, there has been a reawakening of interest in this area with the recent emphasis on organizational cultures, particularly in terms of sense making (Pacanowsky & O'Donnell-Trujillo, 1982), the interpretive framework for interaction (Meyer, 1984), and post-modern conceptions of organizations (Eisenberg & Goodall, 1993). There has also been a growing recognition that organizations are splintered into different functional groupings and 'occupational communities' that form subcultures within organizations (Gregory, 1983; Johnson, 1993a) in a somewhat similar manner to the formations of paradigms in scientific communities (Kuhn, 1962/1970). Second, an emerging emphasis on markets and economic conceptions of organizations has focused attention on the embeddedness of economic relations within organizations (Granovetter, 1985; Johnson, 1996a). Third, the growth of different organizational forms highlights the importance of this problem, particularly interorganizational relationships (Eisenberg et al., 1985), federations (Provan, 1983), and multinational corporations (Ghoshal & Bartlett, 1990). These new forms must discover underlying bases for interrelationships among their increasingly pluralistic subgroupings. A central issue for many organizations, then, is how to create contexts that promote cooperative climates and trusting relationships necessary to produce agreements on a course of action (Fiol, 1994; Johnson, 1997b, 1998), which some have argued is best accomplished by convergence on particular frames (Drake & Donohue, 1996) or, alternatively, ambiguous central concepts (Eisenberg, 1984).

A fundamental property of communication is that interpretation depends on context (Mortenson, 1979). Frameworks are both windows on the world and lenses that bring the world into focus, at the same time they filter out some stimuli (Bolman & Deal, 1991). More post-modern views of context suggest individuals often enact their contexts (Weick, 1969), choosing their own interpretations of the ones they are in (Dervin, 1997). Often understandings attributable to various frameworks assume a taken-for-granted reality among interactants (Collins, 1981). Indeed, frameworks perform a number of critical functions for interactants: they are shared conversational resources; they provide a common emotional tone; they insure quicker responses (Collins, 1981); and they also provide a basis for temporal stability by insuring more continuous responses (Benson, 1975; Collins, 1981).

Historically, the first basic distinction between different types of frameworks in organizations was that between formal and informal communication (see Stohl & Redding, 1987). To most organizational researchers this fundamental distinction captures two different worlds within the organization; worlds that have different outlooks and, most importantly, different fundamental assumptions about the nature of interaction. A formal approach was the earliest systematic specification of the underlying basis for interaction within organizations and in many ways the other frameworks were established in opposition, or counterpoint, to it (Johnson, 1993a). In fact, informal communication studies became a residual category including a wide array of potential frameworks (e.g., sentiments, informal influence, and so on) for interaction. Thus, exchange rests on individuals pursuing their rational self-interest, while normative frameworks depend on operations of larger collectivities and can encompass a variety of underlying values for interaction. Negotiated order, as we will soon see, often develops from idiosyncratic mixes of the first four frameworks (Johnson, 1997b).

## 4.1. Exchange

Exchange conceptions of relationships within organizations may be the most popular modern framework (see Cook, 1982 for review), partially because of their linkage to underlying market conceptions. As Bellah, Madsen, Sullivan, Swidler, and Tipton (1991) point out, the underlying cultural value of Lockean individualism is also dominant in our larger cultural frame. In this view individuals are seen as driven to maximize rewards through their interaction with each other. Basically an exchange represents: "The action, or an act of reciprocal giving and receiving" *Oxford English Dictionary* (1989).

Obviously, an exchange relationship can rest on extremely rudimentary understandings of others, based on such fundamental issues as fair price and trust that the other party will follow through on bargains. Relationships are seen from a utilitarian perspective, with the primary bases for continued relationships resulting from a perception of mutual gain. For communication scholars information exchanges are the critical focus (Eisenberg et al., 1985). However, exchange relationships, once started, develop assets in and of themselves, based on their start up costs, which make it more likely they will continue and endure (McGuinness, 1991). Thus, exchange is sometimes viewed as the most fundamental of the frameworks, at least in terms of providing the initial starting point on which others might develop.

## 4.2. Formal

Formal frameworks essentially represent the bureaucratic world of the organization, with its specification of patterns of super- and sub-ordination and the nature of relationships between parties (Weber, 1947). An hierarchy provides a framework for action by specifying control patterns, routinizing production, and implementing plans (McPhee, 1988). The kinds of behavior individuals can engage in are specified in company manuals and output targets are detailed in formal performance reports (Baliga & Jaeger, 1984). Usually formal frameworks require only a limited form of understanding, based on system rules, training, and a legalistic understanding of relationships between interactants. Actors are presupposed to be driven, or motivated, by the requirements of the positions they occupy in the formal structure of the organization.

The context of formal structure lies in the 'official world' of the organization. Most often it can be conceived of as embedded in the formal authority structure of the organization, usually associated with bureaucracy. In this context communication is conceived as flowing along the pathways delineated by the organizational chart and the content of communication is limited to those production related matters that concern the organization. While this formal approach constitutes a limited view of the role of communication in organizations, this still may be, especially operationally, the most important role of communication, and certainly one that management must at least try to control.

### 4.3. Sentiments

Often interaction, which is initially based on one of the preceding frameworks, produces collective sentiments. Friendship and other more emotional bases for relationship often provide the underlying context for interactions within organizations.

Traditionally this has been cast as a primary basis for informal communication structures within an organizational context. The shared understandings characteristic of these relationships are often dependent on the depth of emotional involvement. Sentiments recognize the often neglected place of emotions (Mumby & Putnam, 1992) and the desire for affiliation in organizational life.

The degree of affiliation felt between the interactants determines the temporal stability of relationships and the degree to which parties' sentiments may override other bases for relationships, such as exchange. Thus, exchange relationships may be essentially the same for friends as for strangers, except for the greater trust and likelihood of being involved in the first instance. However, exchange relationships between individuals with deep emotional ties may be more characterized by 'bad trades,' where equitable exchanges of material resources are not realized (Clark, 1984).

### 4.4. Normative

Increasingly over the last 15 years cultural factors have assumed a central place in our theories of organizations. Culture is seen as providing an interpretive framework within which communication is possible; a macro-medium for interaction (Johnson, 1993a; Poole & McPhee, 1983). The more elaborate and refined the framework, the more effective the communication. An advantage of strong cultures is their enhancement of shared understanding between actors. Interaction is also provided with a normative base that expresses the underlying cultural values of an organization. Shared norms of performance, or shared philosophy of management, have been seen as a basis for members of multinational organizations to communicate with each other (Baliga & Jaeger, 1984).

### 4.5. Negotiated order

The normative and formal frameworks are provided for the individual within the larger organizational context. However, it is possible for an individual to act with others with their unique mix of the forgoing frames, to choose among themselves what frame (or combination of frames)

will govern their interactions. It is also possible for two interactants to decide mutually on an idiosyncratic basis for interaction (Nathan & Mitroff, 1991). This possibility creates the underlying conditions for change (Strauss, 1978). Indeed, the absence of a dominating frame, or the lack of rigid specification when one or another applies, creates the possibility of flexibility within an organization.

Relationships formed on the bases of the unique characteristics of actors, in opposition to existing organizational forms, require substantial negotiation among interactants, especially about forms and desired outcomes. So two parties communicate with each other to arrange the nature of their future interaction by mutual agreement. This negotiation is designed to establish a stable ordering of the relationship governing interactions within it, to move to a state where the underlying base for the interaction is taken-for-granted. At times this negotiation might be explicit, verging on contractual terms, at other times it might grow out of ongoing interactions.

Within organizations, frameworks for interaction differentially impact information seeking (see Table 2). For example, strong organizational norms can severely restrict the content and interactants available to individuals in their information searches, but interestingly, because of the increased sophistication of shared understandings, they can enhance the effectiveness of information seeking and the range of topics that can be explored. They also can improve efficiency by clearly delineating roles and relationships. In contrast, exchange based information seeking has few barriers, but limited breadth and only moderate levels of effectiveness and efficiency, in part because of the differential understanding levels of the two parties. So, frameworks within organizations shape information seeking in different ways, but this process is also shaped by larger social contexts within which it is embedded.

Another example of the operation of interpretive frameworks, with potentially disastrous consequences, comes from the area of mammography screening. Before this technique was refined there was, and continues to be, an active program promoting breast-self examination (BSE). This program, when coupled with the framing effects of the consumer movement in health and the general empowerment of patients and women, promoted a high level of self-efficacy in women who were active practitioners of BSE. However, this high level of confidence led to less likelihood of obtaining a mammogram because women erroneously believed they could detect problems themselves, when in actuality mammography can detect smaller tumors. Interestingly, women who felt less confident in their ability to detect changes on their own, who operated within the classic specialized authoritarian medical model, were more likely to obtain a mammogram (Johnson & Meischke, 1994).

Table 2
Relationships between information seeking and frameworks in organizational contexts

| Frameworks | Information seeking | | | |
| --- | --- | --- | --- | --- |
| | Barriers | Effectiveness | Efficiency | Breadth |
| Exchange | Low | Moderate | Moderate | Limited |
| Formal | High | Low | Moderate | Limited |
| Sentiments | High | Moderate | Low | Limited |
| Normative | High | High | High | High |
| Negotiated order | Contingent | Contingent | Low | Contingent |

## 5. Information seeking as an exemplar

> ... in the long run, the tenor of our theorizing may amount to little more than the turning of a small cog within a larger socioeconomic clock over which no one has control (Barley & Kunda, 1992 (p. 394)).

Johnson (1996b, 1997a) has published two works related to information seeking in considerably different contexts: organizational, a very traditional focus of the information seeking literature, and the every day life problem of cancer-related information seeking on the part of individuals (Wilson, 1997). These books, or the theoretical framework associated with them, have been extensively used to describe information seeking in these contexts by others in information science (Rice, McCreadie, & Chang, 2001; Wilson, 1997). A comparison of the differences and similarities between information seeking across these contexts may inform our discussion of the benefits of a closer look at the effects of contexts, an approach others have adopted as well (Savolainen, 1995).

### 5.1. Macro-level

Information seeking has taken on increasing importance in the last several years because of macro-level trends (see Table 3) related to rapid advances in information processing technologies,

Table 3
Comparing information seeking within cancer and organizational contexts

| Dimension | Contexts | |
|---|---|---|
| | Organizational | Cancer |
| *Macro-level* | | |
| Macro-societal trends | Information society | Information society |
| Information technology | Intranet | Internet |
| Channels | Formality, Status | Classic communication typology |
| Institutional trends | Decline in middle management, etc. | Consumerism, HMO's, etc. |
| *Local level* | | |
| Content | Task-related, Culture surveillance | Various |
| Constraints | Many rules, Norms | Amorphous |
| Information fields | Rich infrastructure | Varies by demographics |
| Factors promoting ignorance | External (e.g., structure, rules, culture) | Internal (e.g., fear, denial) |
| *Individual level* | | |
| Individual responsibility | Expanding | At an all time high |
| Programmed decisions | High | Low |
| Timeliness | Variable | Need immediate response |
| Search procedures | Verges on ritualistic | Initially novel |
| Motive force | Primarily external locus | Primarily internal locus |
| Stages of information seeking | At least moderate level of readiness | Wide swings, volatile |
| Rationality | Somewhat, at least try to maintain appearances of | In early stages highly irrational |
| Experience | High familiarity | Low |

especially coupled with the advent of the Internet, and the proliferation of communication channels, e-mail, voice mail, and so on. Generally, at a societal level, given our typical normative values toward progress and knowledge, information seeking is seen as a universal good (Johnson, 1996b). It is often the first step in both individual and organizational change efforts, with heightened awareness of a problem often leading to increased readiness to change (Armenikas, Harris, & Mossholder, 1993). Information technology is at the root of many organizational changes either as a cause or an enabler (Hoffman, 1994). In the modern organization considerable attention is given to the information infrastructure, the Intranet, with richer resources than a cancer patient will have in society at large, since they do not typically have similar support structures.

At the macro-level, partly because of the consumer movement in health (Pifalo et al., 1997), individuals also increasingly find that they must choose between an array of alternatives based on often very limited knowledge. In the area of cancer, the rise of the consumer movement and shifting of responsibility from doctors to patients for decision making means patients must acquire information that literally makes the difference between life and death. The comfortable world where authority figures provided clear directives concerning goals that should be emphasized and how they should be accomplished is rapidly changing in both of these contexts. (This general trend in institutions also has the important by-product of allowing them to shift blame for bad outcomes to the individual who now must make decisions.) In the organizational context information seeking has also taken on enhanced importance. The decline of middle management and the leaner/meaner organizations associated with downsizing have contributed to these trends.

## 5.2. Local level

At the local level (see Table 3), information seeking is the major means by which an individual uncovers information about the context in which they are embedded (Goffman, 1974). The content of searches in organizations is usually related to task or to cultural surveillance, while for cancer a wide range of contents (e.g., personal adjustment, biology of cancer) may be the objects of searches.

Not too long ago, information in organizations was seen as the exclusive preserve of management (as it was for doctors and cancer information) and formal communication structures (Axley, 1984). In fact, organizational theory essentially ignored the possibility of informal communication for nearly three decades (Farace et al., 1977). Still today, in many organizations, information is kept from people. In part, organizations are designed to encourage ignorance through specialization and rigid segmentation of effort (Kanter, 1983). So there is a constant dilemma for organizations, the imperative, in part stemming from efficiency needs, to limit the availability of information, and the recognition that structural designs are flawed and circumstances change, requiring individuals to seek information normally unavailable to them. How organizations resolve these conflicting imperatives is a critical question (Johnson, 1996b).

So the constraints on information seeking in these contexts have different sources; currently (although not historically) the constraints on cancer-related information seeking are primarily individually based. In direct contrast, while there are also individual constraints, the constraints in organizational settings are often external and structural, with formal and informal rules and norms governing information seeking.

One such constraint is the information field within which the individual is embedded. An individual's information field provides the starting point for information seeking. It represents the typical arrangement of information stimuli to which an individual is daily exposed. Individuals are embedded in a physical world that involves recurring contacts with an interpersonal network of managers and co-workers. They are also regularly exposed to the same mediated communication channels (company news bulletins, local newspapers, television news, etc.). Typically an individual's local information field consists of an interpersonal communication network and information terminals (e.g., Fax machines), both of which are embedded within a physical context. This physical context in organizations serves to stabilize an individual's information field and in large part determines the nature of information individuals are exposed to on a regular basis.

The information field an individual is located in constrains the very possibility of selecting particular sources of information. For technical staff in organizations this information environment might be incredibly rich, including access to sophisticated databases, advanced satellite systems, and 'search engines' for computerized information retrieval.

Information seeking can provide individuals with a feeling of control over events: reducing their uncertainty; providing affective support; inducing attitude change; and increasing compliance with directives (Johnson, 1996a,b). On the other hand, in cancer contexts, often the factors leading to ignorance are internal, determined by fear, denial and lack of technical skills (Rees & Bath, 2000).

### 5.3. Individual level

At the individual level, with the increasing responsibility for information seeking, there is also an increasing burden (see Table 3). The public is expected to make decisions based on a range of alternatives concerning how cancer should be dealt with. This is done typically with non-programmed decisions, involving novel search procedures, in a highly emotionally charged, life or death situation, which is often approached irrationally (Johnson, 1997a). Almost exactly the opposite set of conditions typify most information seeking situations in organizations, because of their familiarity and the high levels of experience of organizational members with them (Johnson, 1996b).

In sum, while at a macro-level there are trends that affect information seeking in both contexts, there are also specific manifestations of these trends peculiar to each context that differentially affect information seeking within them (see Table 1). This section used major issues identified in two books, applying issues developed in the preceding sections, to illustrate how the process of information seeking is intimately related to context. So, while there are certainly similarities to information seeking in these two contexts, any theoretic approach to information seeking must recognize critical differences directly linked to them, which would affect the nature of specific predications and/or explanations related to information seeking within them (Savolainen, 1995).

## 6. Conclusions

In this essay I have explored three senses of context and related them to the process of information seeking. We looked first at the view of context as equivalent to the situation in which an

individual is immersed, then we discussed contingency approaches that move toward specifying active ingredients that have specific, predictable effects on various processes. These two senses share much in common, both suggesting that there are objective features of an environment that provide a 'real' context (see Table 1). The primary difference between them comes in their level of theoretical precision, with contingency approaches moving towards classic, grand theories. On the other hand, more post-modern conceptions of context are likely to suggest the differing ways in which the same world can be viewed given different underlying interpretive assumptions. This increasingly subjective view of the world was captured in our examination of major frameworks for interaction that shape interpretation and sense making.

These different senses of context, representing major historical approaches, in some ways are contradictory, revealing the split between interpretive and post-positivist camps (see Table 1). They also suggest that future developments on the interpretive side will involve moving beyond the typology represented by frameworks to more sophisticated specification of their linkages to such organizational processes as cooperation and teamwork (Johnson, 1997b). In this concluding section we point to how future work on context can build on this somewhat divided foundation, but first we should focus on the value-added contribution that context can make for our understanding of phenomena.

## 6.1. The value of enhanced understanding of contexts

For nearly 50 years scientific management, as one tenet of its positivist quest for universal principles (Kanigel, 1997), advocated clear guidelines for the span of control in hierarchical organizations, which suggested any one supervisor should have a very limited number of subordinates, usually 5–6 in the structurally oriented scientific management literature (Argyris, 1960). This principle was assumed to be invariant across organizations. Joanne Woodward's exhaustive research in the 1950s suggested that there was a considerable range in actual span of controls, all of which were higher than the number advocated in the original literature. From closer examination of her data she discovered a key linkage between the technology of an industry and span of control (Woodward, 1965). Eventually her insight laid the foundations for contingency approaches, and the much more sophisticated theoretical approaches that followed a decade later.

In addition to the basic theoretic advance that resulted from this identification of one key active ingredient, technology, there were considerable pragmatic implications as well. The original universal statement without limits, which we still have not recovered from, led to several generations of bad advice to managers, resulting in taller organizations, segmented structures, and close supervision, which have only recently been broken away from in organizational designs that stress more individual autonomy, market driven structures, and flatter organizations (Johnson, 1996a,b). The more controlling structures of scientific management had demoralizing effects on productive individuals (Argyris, 1960) and deleterious effects on organizational effectiveness and efficiency (Johnson, 1996b; Weick, 1969). Thus, a failure to specify contexts with precision led to superficial understandings and a series of dysfunctional pragmatic consequences.

One of the ironies of the consumer movement, is that cancer patients, on top of their naturally existing problems with emotional, family, and work adjustments, are now expected to also possess

the information seeking skills and decision making capabilities of a health professional. For many people, even though in principal they say they want as much information as possible, when actually confronted with cancer they do not want to be confronted with the details of medical problem solving (Deber, Kraetschmer, & Irvine, 1996) and the preferences for information are the inverse of what the general population says they would like to have (Degner & Sloan, 1996; Johnson et al., 2001). For these individuals, since doctors will not provide the authoritarian guidance they once had, they turn to others who will—dubious internet sites, friends and family members, advocacy groups, and/or support groups. A failure to understand the dynamics of ELIS, then can result in very dysfunctional information seeking behavior, at the very moment people need the best advice they can find.

## 6.2. Analysis of multi-contextual approaches to process

McGuire (1983) long ago argued that studying processes across multiple contexts was essential to advancing our understanding of them. He also argued that it was even more important to study phenomena in widely different contexts, especially ones where our hypotheses were unlikely to work. In conventional inquiry the tendency is to ignore discomforting elements (e.g., the importance of physical attraction in interpersonal relationships) by focusing on the elements of a context that conveniently fit our explanations. Certainly, the picture that would emerge from examining information seeking solely in one context would be a distorted one. While both cancer and organizational contexts have similar broad macro-trends (e.g., the growth of information technologies) and deep-seated cultural values (e.g., the advancement of knowledge) affecting them, and both require us to focus on receivers, there are also fundamental differences. The loci of constraints, whether individual or structural, are different. The impact of legal (e.g., malpractice) vs. economic forces is markedly different on sources of information (e.g., doctors and management). Cancer-related information seeking, at least in its early stages, may be somewhat frenetic, volatile, and unpredictable. On the other hand, organizational information seeking, at least for programmed decisions, may be more measured, bounded, rational, and habitual.

So, examining information seeking across a wide array of ELIS contexts broadens our understanding of it (Savolainen, 1995). It also serves to suggest the active ingredients (e.g., programmed decisions) that may serve as the essential foundations of more sophisticated contingency explanations. It also increases our appreciation of the impact of broader societal trends. In doing this, the things that do not change from context to context highlight what might be the invariant, the core, the essential being of information seeking.

## 6.3. Context vs. contextualizing

> Organizing and the consequences of organizing are actually inseparable—they are interchangeable notions… Viewing the collectivity for longer periods of time will suggest that organizing is underway; viewing it for shorter periods will suggest that *an* organization exists (Weick, 1969, p. 167 italics in original).

There is an increasing tendency to suggest that individuals and groups are not only shaped by context, the classic approach of contingency and situational perspectives, but can in turn shape

contexts (Giddens, 1991; Gresov & Stephens, 1993), if only by how they activate and interpret them (Baker & Pettigrew, 1999; Branham & Pearce, 1985). Interestingly, notions underlying negotiated order are also revealed in Giddens' arguments concerning the production and reproduction of institutions that so interest several of our best organizational communication scholars (e.g., Contractor & Seibold, 1993; Poole & McPhee, 1983). In other words, by how we perform our roles, we can change the nature of our institutional contexts.

Weick (1969) makes this point forcefully for organizations in his classic concept of the enacted environment, suggesting that instead of organizations responding deterministically to outside stimuli, actors constitute by their actions the environment which they think it is important for them to respond to. Once this environment is constituted then it becomes possible to both reduce uncertainty and to operate in a boundedly rational manner (Simon, 1991).

Context vs. contextualizing arguments also relate to a continuum of traditional positions within the social sciences, with determinism on one side and a particularistic integration on the other. This latter position, recently identified by Jackson (1996) in discussing information technologies, suggests that every interaction of communication technology and context represents an unique integration, with technologies both impacting their contexts and being impacted by them in unique ways. This position essentially argues that there are no invariant statements that can be made about either context or technology. However, while information technologies only become 'real' in a particular context, and are inseparable from it, they also have an objective materiality outside of it (Jackson, 1996). Conversely, information technologies have also had a profound impact on the nature of organizations (Jackson, 1996; Johnson, 1996b; Rice & Gattiker, 2000).

In general, there may be some mutual shaping of determinism and particularism, but some hard realities at both extremes. This is reflected in the Venn diagrams in Fig. 2. Initially, there may be both deterministic and particularistic descriptions of a communication process that do not overlap (e.g., patient's denial of the presence of cancer). However, over-time we may come to understand there are some invariances in the process through multi-contextual inquiry (e.g., studying it across age groups and cultures in different care settings). So, we discover that all patients initially pass through a stage of denial. However, as our understanding matures through empirical confrontation we uncover key active ingredients that lead to more precision in our understanding of the duration and recurrence of denial. So, older patients, in hospice environments, with supporting loved ones may be much more likely (there is still some particularism) to come to acceptance much earlier.

## 6.4. Summary

Individuals can only shape contexts if they understand their active ingredients and how they act upon them. In a pragmatic sense, there may be no richer area of study for individuals who desire to shape the world around them (and to understand how they are shaped by it) (Dervin, 1997). However, perhaps the simplest, most powerful, reason for focusing on context, on the ground of information seeking, is that we will never understand information seeking unless we do (Dervin, 1997; Georgoudi & Rosnow, 1985). It is perhaps the major area for growth, gain in social science research, since it has been so understudied. More careful delimiting of the contexts in which particular hypotheses and theories apply is a major undertaking, with inconsistent results challenging us to understand the impacts of context (McGuire, 1983; Perry, 1988). By broadening our
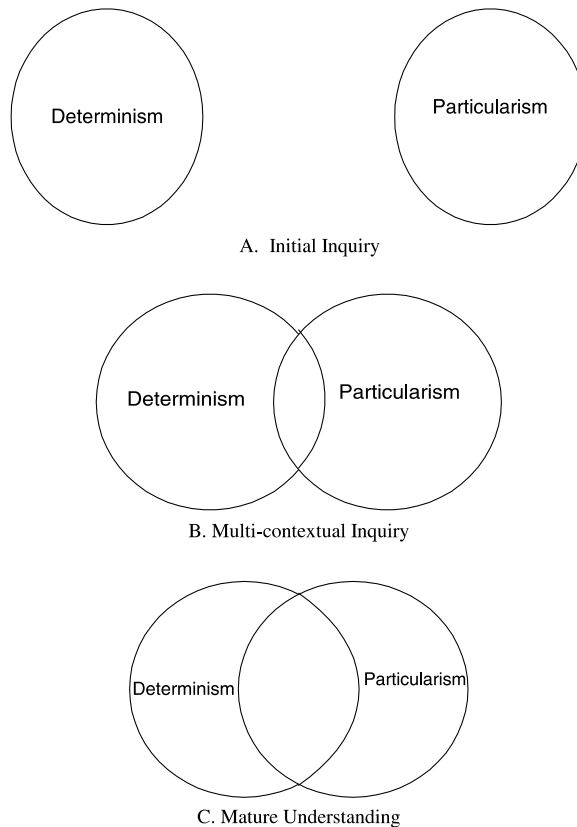
Fig. 2. The determinism and particularism continuum.

horizons and studying processes across contexts, by moving beyond the self-imposed limits of our intra-disciplinary boundaries, we may in the end develop a mature understanding of information seeking.

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