
The Mythology of Information Overload

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ABSTRACT

LIBRARY AND INFORMATION SCIENCE WORK has often focused on the study of solutions to the effects of information overload. For this reason, and because the concept is frequently identified as a problem in popular culture, it is logical to assume that the existence and description of information overload has been documented through rigorous investigation. Such is not the case. This article looks at the functions of myth and brings together ideas about the information society, information, and information overload to conclude that information overload is a myth of modern culture. In this sense, myth is a "nonscientific" process that confirms the reality of an elusive phenomenon. The article also reports results of a pilot project intended to describe information overload experienced by a particular folk group composed of future library and information professionals. In addition to trying to enhance the description of information overload, the pilot project represents an attempt to test the idea of the folk group as a remedy for this condition.

INTRODUCTION

This project combines ideas from mythology, folklore, and library and information science in an effort to make sense of an aspect of modern culture that is frequently perceived as troublesome. Discussions of information overload, "data glut," or "information anxiety" are abundant in popular culture but do little to shed light on the origin of this problem. Library and information science work sidesteps the need to verify the

existence of information overload, seeking instead to mitigate its effects. The discipline has produced a vast literature that addresses user perceptions, information needs, and information-seeking behavior. Information management, information retrieval, and attendant notions such as relevance have also received much attention. Within both popular culture and library and information science research, information overload is usually described or defined by means of anecdote or by associated symptoms. However constituted, popular and scholarly attention confirms information overload as a recognized and resonant cultural concept that persists even without solid corroboration. Mythology and folkloristics are used here as analytic tools to suggest that information overload can be viewed as a myth of modern culture. Here myth does not mean something that is not true but an overarching prescriptive belief.

Studies of mythology and folklore recognize the importance of cultural context and alternative ways of knowing. Moreover, these areas of inquiry also acknowledge social processes involved in the origin and sustenance of enduring beliefs that promote shared understanding of, and response to, "superhuman" phenomena. This article first presents various interpretations of mythology and its relationship to folklore in order to build a composite frame of reference that demonstrates how myth operates today. Next, an examination of library and information science literature reveals an idea of the information society as a superhuman force to be reckoned with, defines what information is, and discusses how people use it. LIS literature, along with writing that circulates in popular culture, also shows how the concept of information overload functions as a modern-day myth that shapes comprehension and coping strategies in an era when information—whether as definitive of society, or as society's chief economic product—has taken center stage.

Viewing information overload as myth validates its existence without requiring proof. However, the occasion of developing arguments to focus this view, along with the absence of systematic cohesive library and information science study of information overload, indicates a need for documentation. The final section of this article reports on a pilot project intended to provide evidence and description of information overload as experienced by a particular folk group.¹ The opinions of this group are of special interest because its members are studying to become library and information science professionals. Because folk group membership affords shared context and meaning consistent with functions of myth, the pilot project also attempts to learn if a folk group can be considered an information resource that serves to reduce the effects of information overload.

MYTHOLOGY AND FOLKLORE

The language of myth, folklore, story, and fairytale is intertwined, and (except in technical folkloristic writing) these terms rarely seem clearly

differentiated. Sometimes the terms are used interchangeably, which has made it difficult to uncover one concise and coherent definition of mythology and its cultural implications for use in this project. In general, myth, folklore, and story provide cultural continuity and structure, encompass or inspire ritual, and serve instructional purposes. Mythology can be considered a somewhat broader or more universal form than the folktale and is often linked to the sacred or divine. However, the word *myth* is also used to mean the opposite of fact. This discussion includes various views of myth² and its relationship to folkloristics in order to extract the nuance of meaning each offers for a description of the mythology of information overload.

The following discussion from a standard reference work, *Funk & Wagnall's Standard Dictionary of Folklore, Mythology, and Legend* (1950), articulates the traditional connection between myth and folklore and locates the distinction between the two at the intersection of divine intervention. Here myth is identified with certain "powers" and unexplained phenomena (p. 404). This source explicitly defines myth as:

a story, presented as having actually occurred in a previous age, explaining the cosmological and supernatural traditions of a people, their gods, heroes, cultural traits, religious beliefs, etc. The purpose of myth is to explain . . . the myth must have a religious background in that its principal actor or actors are deities; the stories are thus systematized at least to the extent that they are related to a corpus of other stories in which the given god is a member of a pantheon. Where such interrelation does not occur, and where the gods or demigods do not appear, such stories are properly classified as folktale. The interchange between myth and folktale—attachment of a folktale to some member of a pantheon, or loss of the divine element in a popular retelling—is constantly occurring. Many folktales, as the Grimms noted, are obviously "broken-down" myths; many myths utilize motifs and themes common to folktales the world over. A myth remains properly a myth only as long as the divinity of its actor or actors is recognized; when the trickster becomes human rather than divine, when the hero is a man rather than a god, myth becomes legend, if explanatory or limited to some specific location, or folktale, if more generalized. (p. 778)

Thus, according to this classic source, while myth and folklore serve similar functions, myth does not exist without reference to a higher power.

Funk and Wagnall's and Thompson (1977) agree on the significance of the divine in myth. They also agree on the link between myth and folklore, but Thompson more clearly acknowledges the difficulty in distinguishing myth from other folkloristic structures. He states:

of all the words used to distinguish the classes of prose narrative, *myth* is the most confusing. The difficulty is that it has been discussed too long and that it has been used in too many different senses. The history of such discussion is interesting but inconclusive. As

used in this book myth will be taken to mean a tale laid in a world supposed to have preceded the present order. It tells of sacred beings and of semi-divine heroes and of the origins of all things, usually through the agency of those sacred beings. Myths are intimately connected with religious beliefs and practices of the people. (p. 9)

Thompson invokes Boas's (1940) "final words of wisdom" to reinforce similarity of myth and folklore. "The data show a continual flow of material from mythology to folk-tale and *vice-versa*, and that neither group can claim priority" (p. 405).

Thompson also discusses the function of mythic narrative and problems and questions attendant to its definition, indicating that humans have, and continue to use, myth to process experience. He highlights Boas's observations about the origins of myth, stressing that mythologies did not begin with the simple observation of natural phenomena. Boas argues that the interplay of human imagination, emotion, and everyday occurrences is inherent in the process of myth. He also recognizes the importance of understanding how connections between past and present provide context for myth-making and states, "[w]e have no reason to believe that the myth-making processes of the last ten thousand years differed materially from modern myth-making processes" (Boas, 1940, p. 406). What is most interesting and useful for purposes of this discussion is that both Thompson and Boas advocate a notion of the historicity of myth and its longstanding ability to help relate supernatural forces to everyday existence.

Other scholars whose work is relevant to understanding myth, including Dorson (1972) and Levi-Strauss (1966), identify additional specific roles for myth in culture. Dorson says that—along with riddles, satirical songs, and tales—myth reinforces custom and taboo, releases aggression, and governs behavior by validating conduct. He also discusses the relationship of myth to a long-standing psychoanalytic tradition of dream interpretation, significant for discovery of subconscious links to the universal (p. 21). Dorson reviews various ways of looking at myth and folklore and introduces the work of Levi-Strauss and Propp in developing theories that assist in translating folklore genres into universal structural models and formulas (pp. 35-36).

Levi-Strauss (1966), for example, asserts that, like scientific thought, mythological thought structures human knowledge and experience. Science structures "concepts," which are "transparent with respect to reality." Mythological thought, on the other hand, structures "signs" which "allow and even require the interposing and incorporation of a certain amount of human culture into reality." For Levi-Strauss, mythical thought is a form of "intellectual bricolage" that inventories, orders, and reinterprets the "remains of events" in order to construct meaning (pp. 19-22).

The notion of myth as structure is upheld by Roemer (1995) who claims that story connects and frames humanity by providing a system of

explanation. He observes that “like all structures, story integrates and relates” (p. 11). Roemer believes that people are not necessarily aware of this defining framework as they move through life. The framework is, however, connected to context and situation, which exist “before the figures appear in it.” According to Roemer, situation is “an attenuated crisis and crisis an exacerbated situation. In myth, fairy tale, and both comic and tragic drama, the figures are transfixed by a crisis.” He also notes that the situation may originate within the figures rather than outside them (pp. 12-13). Finally, Roemer realizes that our present experiences resonate with “ancient” mythical tales and that even “escapist fictions” may “confirm a ‘reality’ we continue to encounter even if we no longer have a way of accommodating it” (pp. 178-79). This last statement speaks to the power of myth to provide an emotional outlet that confirms experience without tangible or rational evidence.

In the *Encyclopedia Mythica*, Doyle (n.d.) offers several ideas about myth that have been combined in the following succinct definition:

a story of forgotten or vague origin basically religious or supernatural in nature, which seeks to explain or rationalize one or more aspects of the world or a society. . . . All myths are at some stage actually believed to be true by the peoples of the societies that used or originated the myth. . . . myths are often used to explain human institutions and practices as well, or to provide reinforcement of or a framework for an existing system of myths. Sometimes myths serve all of the above purposes. (unpaginated)

Although Doyle excludes references to deities stressed in preceding discussions, he brings the process and necessity of myth-making fully into the present in spirit and terminology. He acknowledges the capacity of myth to render “aspects of the world or a society” that are equivalent to “superhuman forces” understandable within the context of daily life. For the sake of argument in this article, economic, political, or social structures or processes, and the “institutions and practices” embedded in, or emanating from, them can be considered “superhuman.” All such creatures need to be explained and put into context, which propels creation of modern day myths. The origin of myths in modern culture may be hard to determine, but they endure because they afford emotional expression and are understood by many.

In *Myths and Politics in Western Societies*, Girling (1993) supplies a model for analysis of the function of modern day myths developed in response to social processes. He identifies and examines myths that governed economic, political, and cultural behavior in the United States, Germany, and Great Britain during the period surrounding World War II. Girling touches on elements of myth and organizes them in a fashion relevant for this project. He states:

- Myths are emotionally charged beliefs that reflect how people experience formative periods in their history. Myths are symbolic representations of reality that, from a rational standpoint, contain incorrect assumptions, but they are nonetheless authentic deeply felt responses to critical social conditions.
- Social conditions cannot be understood solely from conventional analysis of a rational mode of production and power structure. Fuller understanding should also take into account belief systems, including that fusion of concept and emotions by which economic, political, and ideological “drives” are represented in mythic cultural forms.
- Modern myths provide a key to people’s attempts to come to terms with powerful economic and political forces.
- Myths are not timeless creations, although the capacity to respond mythically to critical situations would be; myths are the product of specific historical conditions.
- Formative periods of history result in evocation of myth in response to both positive and negative processes. New crises often produce new myths (Girling, 1993, pp. 2-3).

Girling shows how myths shaped the actions of those who believed in them. He identifies capitalism and democracy as influential myths in the United States, national pride as the myth that fueled fascism in Germany, and the “illusion of progress” as the mythic motivator of cultural expression in Great Britain. These myths were developed in response to what Girling terms “the crisis of modernity” (pp. 11-18). For Girling, the very notion of myth enables us to come to terms with the emotional sources of human behavior. He also stresses the importance of understanding myths in their historical context. Myths can serve to legitimize the existing order or be created to challenge that order. Newly created myths are no less emotionally charged than their predecessors. Girling finds that myths render the social world intelligible, although in a metaphysical and symbolic idiom. They may also represent “rallying signs by which a group renews its sense of identity and solidarity” (pp. 11-18).

Tension between sustaining and challenging the status quo identified by Girling corresponds to Toelken’s (1996) “twin laws of folklore.” The twin laws—conservatism and dynamism—are essential to the process of folklore. Conservatism results in retention and dissemination of information, beliefs, styles, and customs over time and space. “Myths (stories that relate or embody sacred or cosmic occurrences) are expressed in terms of a ‘time before time began’ and are supported by a whole range of religious beliefs that are conducive to a sense of ultimate truth. Although it can be demonstrated that myths do in fact change through time, the attempt on the part of the believer is to transmit them intact. The conservative dimension promotes retention and discourages change” (pp. 39-40).

Dynamism “comprises all those elements that function to alter features, contents, meanings, styles, performance, and usage as a particular traditional event takes place repeatedly through space and time” (p. 40).

Myths are found closer to the conservative end of Toelken’s (1996) “continuum of folklore types” and their “function in most cultures is to provide dramatic experiential models of protected truths and laws which would otherwise be very abstract” (p. 40). Girling and Toelken permit an interpretation of myth as a process that blends ingredients found in other definitions. Myth explains, reflects history, and shapes current response. It supports shared understanding and emotional expression. Finally, it is a vital mechanism, repeatedly invoked in response to societal change. It is therefore possible to see how, even with the advent of the twenty-first century, myth structures human experience. The following discussions of the force and character of the information society, the nature of information, and the problem of overload suggest that information overload can be thought of as a myth developed in response to an overwhelming social process.

THE INFORMATION SOCIETY

Whether or not the information society is heir to post-industrial society is still a subject of debate. What is essential to most descriptions of the information society is that it involves the engagement of most people in “brain work” rather than physical work, and that this development is accompanied by various social, economic, and political changes (Cawkell, 1987, pp. 1-12). However such changes are described, it is clear that they are keenly felt in proportions that are significant for determining the mythic nature of information overload. Several aspects of the information society illustrate its force as a supernatural occurrence.

There seems to be uncertainty surrounding the origin of the phrase “information society” itself. Duff, Craig, and McNeill (1996), in “A Note on the Origins of the Information Society,” report the results of a literature search and analysis that credits Michiko Igarashi of the Japanese journal *Hoso Asahi* for invention of this phrase in 1964. They base their claim primarily on a series of articles appearing in the journal in the mid-1960s, which linked the phrase “information society” to descriptions of post-industrial society. Although the authors credit the Japanese with originating the term, they acknowledge that, in the early 1960s, American economic analysts were also trying to envision a post-industrial society based on production of information. Duff, Craig, and McNeill (1996) cite American economist Fritz Machlup’s (1962) *The Production and Distribution of Knowledge in the United States* as a primary source of ideas about the “information society” (p. 118).

Cawkell (1986) agrees that most people believe that Machlup initiated thinking about an information society. He also states that Machlup

referred to "The Knowledge Industry," and "made rather sensational assertions that 'Knowledge Production,' was growing more than twice as fast as the average of other GNP components" (p. 87). Cawkell also references Porat's work as inspiring notions of the information society. Porat claimed that half of the U.S. labor force soon would be engaged in "information processing occupations," which "really launched the Information Society concept in earnest" (p. 87). In addition to Machlup and Porat, Daniel Bell is also credited for seminal thinking about economic aspects of the information society (Cawkell, 1987, p. 4).

The authors listed above were primarily concerned with changes in the economy that they felt signified the advent of the information society. Others have considered how social or political changes occur in conjunction with emergence of an "information economy." Puttnam (1996) asks if it is "really true that information—and the way we produce it, process it, and trade in it—constitutes *the* most significant distinguishing characteristic of our times, or will we look back in 40 years. . . and find ourselves describing the last decade of the Millennium in rather different terms (p. 1)?" Puttnam examines the effect of connectivity on how people live their lives and the accompanying evaporation of "the more obvious divisions of earlier industrial societies." These include separation of home and office or work and leisure. He feels that, while the information society includes a move to smaller pollution-free industry, some people are still not able to participate fully and that the gap between the have and have-nots is ever widening. Puttnam calls for thoughtful policy development to redefine the role of education, traditional information services (such as those provided by libraries), and potential big business control of access to information. He states, "if this is truly to be an Information Society, rather than simply a marketplace full of information companies, then the process of policy formulation and implementation must be a matter of public debate conducted, as far as is practicable, in the interests of the many and not just the few" (p. 4).

Like Puttnam, Cawkell (1986) acknowledges the potential for class divisions in a society that emphasizes information production. He believes that "ordinary people" may well encounter computer-conveyed information in the workplace. However, the information society will not truly have arrived until the private lives of ordinary American citizens and the lives of their counterparts in other countries are a part of it (p. 91). According to Cawkell, the information needs of ordinary people are primarily about living, and access to this kind of information is free in forms and forums that rival the cost and utility of being "plugged in." Moreover, he claims that information providers "have not identified the information needs of ordinary people, presumably believing that they do not constitute a market" (p. 91). He also states that "ordinary people, even if they have a home computer, are unlikely to use it for information retrieval"

(pp. 91-92). Ordinary people, it seems, place more emphasis on the entertainment function of the home computer, according to Cawkell. Puttnam expresses similar sentiments:

[t]here is certainly ample evidence, for example, that the most distinguishing single feature that drives the present revolution in communications technologies is entertainment. The most effective information technologies, whatever their purpose or content, increasingly depend on the graphic skills, the story-telling techniques, the effects, the music, the marketing strategies; in fact, the whole compelling panoply of entertainment. Entertainment is not simply an adjunct, albeit a significant one, of our new Information Society; it is rapidly becoming the dominant force, "colonising" the whole world of information with devastating speed and power. (p. 2)

The foregoing perspectives suggest that a variety of information interests and needs exist in society.

Kochen (1987) proposes an alternative concept of the information society that incorporates ideas of increased choice and interest in information; mixes focus on economic, social, and political change; and speaks to conservative and dynamic processes in the transition from a pre- to post-industrial era. Kochen's vision is based on certain characteristics of society deemed essential for "quality of life." He calls these "invariants of social transformations" (p. 145), which are constant, even though their features may change. Kochen categorizes social invariants as: (1) welfare and survival (demographic); (2) wealth and economic security (economic); (3) affection, belongingness, or love (social); (4) enlightenment or informedness (informational); (5) skill (technological); (6) rectitude, morality, appreciation, or celebration (religious); (7) power (political); and (8) deference or prestige (cultural) (pp. 145-46). He claims invariants express "consensually held beliefs that reflect basic values" (p. 147). The public is more aware of invariants when society faces external challenges. For example, contradictory values held by other nations may be interpreted as a call to war. However, "[i]n the absence of outside shocks, the invariants are not always in the public consciousness nor even that of its leaders. This is apparent when choices must be made" (p. 148). Additionally, introduction of new technologies—computers and their networks, for example—increases the number of choices available to society. Moreover, "increased interdependence and interaction of all kinds among the world's new societal units may stimulate cultural diffusion and change and call into question traditional beliefs and values. The constant interplay between what is to remain invariant and what should adapt is characteristic of a dynamic information society" (p. 148).

While many descriptions of the information society and its effects exist, it is instructive to look at one description in detail to see how overwhelming the concept can be in modern culture much like Puttnam (1996),

Kochen (1987), and Schement and Curtis (1995) question the dimensions of the information society. They conclude that the U. S. economy might indeed be centered on the production and dissemination of information, but that these activities are supported by the continuation of industrial capitalism. Thus, for Schement and Curtis (1995), the "information society" is an "updated" version of the traditional economy. In the United States, the information society is currently delineated by "its reliance on information as an item of value and economic exchange. [A] new consciousness has accelerated the restructuring of society to explicitly promote the production and consumption of information. [A] complex cultural attitude that sees and treats information as a thing," is also a part of this realization (p. 10).

Schement and Curtis develop their position by exploring the historical context of information as a product. For example, they cite sixteenth-century copyright law as an early source of information commodification. Like Kochen, they explicitly include continuity and change (conservatism and dynamism again) in their discussion, which reinforces the appropriateness of applying mythology of information overload as a framework of analysis to understand how people cope in an age when information is the chief economic product:

The key to understanding the information society depends on recognizing elements of both change and continuity. American industry. . . is now educator, banker, entertainer, data processor to the world, and for the same reasons as before—because of the profit motive and the industrial character of these activities. To view the information society as unique or historically unprecedented reinforces a myth, albeit a powerful one. . . we now see the U. S. producing and distributing information as its primary economic activity precisely because capitalism remains the motivator and industrialism remains the organizing principle. (p. 39)

Although the authors deny a pure notion of the information society as something new and different, they are aware that having information as the economy's chief product has produced certain social changes. Schement and Curtis identify the principal social event in operation as "increasing interconnectedness." They explain the operation and impact of interconnectedness on three levels and analyze it in a way that serves to ground the mythology of information overload.

Schement and Curtis claim that interconnectedness has produced change on micro, meso, and macro levels of human interaction. At the micro level, interconnectedness has increased the nature and number of personal social relationships. For example, people now have more secondary roles in relationships where they establish and maintain connections that are computer-mediated. Social and material technology, developed for gathering and processing information, as well as for applying

information to decision-making, has also generated increased interconnectedness at the meso level. This has resulted in new models of information management with more elaborate structures and processes to acquire and distribute information, but more streamlined decision-making processes for businesses. Finally, at the macro level, global interconnectedness is manifested in multinational corporations that have money and power equal to that of nations (p. 47).

Public and private spheres merge as people work at home by computer. Information is a "symbolic ephemeral good that poses a challenge to the American culture of display" (p. 105). Identity is distinguished through purchase of the "containers" of information. Ownership of VCRs, cellular phones, and computers, for example, is the means by which Americans enact conspicuous consumption in the information society. People have a "rich menu of media goods and services" and select from and manipulate elaborate media environments. All of the above are hallmarks of the information society identified by Schement and Curtis (1995, pp. 105-09).

Additionally, although different social classes experience differing environments of work and leisure and construct their media environments accordingly, there is one thing they share—a "torrent of potential messages spew into the filter of personal attention. The few messages that are actually attended to can still overwhelm the individual. Of those, fewer still are internalized. From the receiver's perspective, this is information overload, meaning that by far most messages are lost. . . the denser the media environment, the more lost messages" (Schement & Curtis, 1995, p. 123). This experience has also been linked to "information poverty" as another effect of the information society. Information poverty of this type can occur in any economic class. It refers to lack of skill and experience in using various kinds of information systems, receipt of too much or repetitious information, or "bias against using certain information channels" (Sweetland, 1993, pp. 8-9). Another dimension of information poverty is ignorance as a consequence of the inability to know everything or of getting incorrect information—both of which are more likely to occur in "the information society" (Diener, 1986, p. 23).

Although conceptions of an information society may differ, they nevertheless inspire complex descriptions of its effects. It is therefore reasonable to assume a view of the information society as an inexplicable overwhelming entity that must be managed somehow. Before taking a closer look at how it is possible to use a mythology for this purpose, we must examine information itself to learn what it is, what it does, and how it is used in a cultural sense.

INFORMATION

What information is, does, and how it is used in culture has been

considered in several interesting ways that can help shape a description of the mythology of information overload. For Buckland (1991), "information-as-thing" is "evidence" that exists in many forms, including traditional sources like data, books, or documents, and nontraditional sources like events and objects. As "thing," information is situational—it is relevant or useful in context. This multifaceted definition of information lends itself easily to fashioning a mythology of information overload for several reasons. First, mythological process does not discriminate among types and modes of transmitting information. Material, ritual, story, and performance are considered equally important communicative forms for moving "evidence" through time and space. Second, mythological practice takes a long and broad view of time and space that allows information and its many manifestations to work together or be combined in innovative ways that demonstrate individual and collective expression. Third, because of its elastic perception of a time/space continuum, mythology is inclined to see information operating in contexts or situations that can be simultaneously relevant in the past, present, and future.

Buckland's inclusive view of information is easy to reconcile with tenets of mythology. Other contributors to library and information science literature have also considered information in ways that lead to understanding it in process, which further supports developing a mythology of information overload. According to White (1994), information is "that which reduces uncertainty; it is symbolic data or expression stored outside the human body through artificial means; it inheres in statements or propositions that are meaningful, new, and relevant, true, and authoritative" (pp. 258-60). These phrases describing information are common throughout library and information science literature. However, White takes the definition of information further. For White, information is not static. It is the "medium of exchange between internal and external memory" (p. 258). Internal memory "is the province of cognitive psychology and its cognates (learning, representation, imaging, and imagining)" (p. 250). External memory exists in two forms—that of other people, which might be called social or collective memory, and that stored through human artifice in records.

White (1994) believes library and information science and information system professionals are concerned with *records*—which he defines as "externally stored, content-bearing memories." He claims that information professionals "are irrevocably committed to understanding and improving this kind of external memory" (p. 252). White stipulates, however, that "[s]ocial memory—that is, other people regarded as stocks of knowledge, lore, and opinion—is of the utmost importance; it is the source to which most persons, including the very learned, turn most often when uncertainties arise, as countless studies in IS [information systems] and L & IS [library and information science] attest . . . for most persons, sources

of information other than people are not a *main stock* but a *reserve stock* to be used only when necessary (and often not then)" (p. 251).

White (1994) identifies information professionals as filters, but observes that a common strategy for avoiding "information overload" (which he does not define) is to avoid information professionals. This avoidance occurs: (1) because information professionals lack a social mandate to prescribe, and (2) because information professionals might be "neurologically different" from their potential customers (p. 280). From White's discussion it can be inferred that "potential customers" of the information professional choose to mediate their own exchange between internal and external memory, preferring to manage information overload on their own. This might be because people have more immediate access to context that makes sense of information.

The "sense-making" approach to information enhances understanding of the interplay between White's (1994) "main and reserve" stocks of information. Dervin (1983) has applied sense-making to look at how "the average citizen" constructs information needs and uses. Dervin states that "sense-making is defined as behavior, both internal (i.e. cognitive) and external (i.e. procedural) which allows the individual to construct and design his/her movement through time-space. Sense-making behavior, thus, is communicating behavior. Information seeking and use is central to sense-making (as it similarly is seen as central to all communicating). . .". Dervin sees information not as something that exists independent of, and external to, human beings but as a product of human awareness. Observations are mediated by human minds that guide selection of what to observe, how to observe, and how to interpret products of observation. Consequently, "information producing" is internally guided, subjective, and constrained.

Like Toelken (1996), Dervin feels that individuals are bound by time and space, which constrains what they can observe at any given moment. People may be bound by the past, but present observations are influenced by personal histories and by visions of the future as well. Observations made today may not be applicable tomorrow. Dervin (1983) characterizes the sense-making approach to information-seeking and use as a constructing activity rather than simply a transmitting activity (p. 3). The sense-making approach thus not only takes into account information in context but also information need and use that occurs through time and space. Like Toelken and Buckland, Dervin recognizes that "information" circumstance and process, internal and external perception, and context of use that establishes meaning are indispensable to that which is called information. One final point should be added to the mix of ideas about how information functions. External memory embodied in other people, and the need for context, suggests that ease of accessibility is an additional component of information "processing."

The Principle of Least Effort supports this observation. Thomas Mann (1993) claims that "most researchers (even serious scholars) will tend to choose easily available information sources, even when they are of objectively low quality, in preference to pursuing higher-quality sources whose use would require a greater expenditure of effort" (p. 91). Mann devotes an entire chapter to this Principle of Least Effort and research that supports the principle in *Library Research Models: A Guide to Classification, Cataloging, and Computers*. He asserts that various library research models have failed to take the principle into account, and, as a result, the best sources for researchers' inquiries, or *at least the most promising avenues of research*, are obscured (p. 92). From Mann's discussion there is implied explanation for White's claim that people avoid information professionals in the interplay of internal and external memory. The principle also supports the idea that sense-making is achieved by seeking information from friends and colleagues.

INFORMATION OVERLOAD

Library and information science literature about information overload is relatively thin.³ From 1976 to 1996, the term appears only four times in the indexes of *Information Science Abstracts*. Fifteen citations in *Library Literature's* online index led to few articles useful for defining and examining information overload.⁴ White's claim that library and information science professionals focus on external memory stored in records resonates throughout literature traced from the indexes referenced above. Information overload is equated with "the proliferation of available data and publications and ever-more-comprehensive and widespread automated means of access to them" (Biggs, 1989, p. 411). Moreover, research that purports to address the dilemma of information overload does not define or measure it in a fashion that supports its "taken for granted" cultural status. Solutions to information overload include renewed or revised input from the human intermediary (Biggs, 1989; Hopkins, 1995), or prioritizing operations performed in electronic environments (Losee, 1989). Studies suggesting solutions to overload are conducted in business settings and embrace decision-making theory and profit motives (Iselin, 1989; Losee, 1989).

One important study, sometimes referred to in the library and information science literature, examines information overload as an important socio-behavioral phenomenon. Miller (1978) summarizes relevant research on information overload (with references to concepts and names familiar to information professionals: information theory, Toffler, Gasset, and Vannevar Bush), discusses its form and effects, and shares results of his own experimental research to demonstrate the effects of overload on "modern man."

Miller's (1978) observations about the form and effects of "information input overload" on the individual include the following:

- when input increase continues, output eventually decreases and is accompanied by a state of confusion;
- habit and familiarity with how information is coded affects rate of carrying out tasks and of processing information;
- time factors and channel overlap affect information processing; and
- overloads of information may have some relationship to schizophrenic behavior, indicated by use of withdrawal or escape as coping mechanisms (pp. 147-67).

Miller (1978) found that many forms of information overload exist and that they are becoming more common and stressful. People differ in how they adapt to overload based on their particular circumstances. Furthermore, “[w]hatever modes of adjustment they select exert influences on the norms of social behavior in their cultures” (pp. 151-52).

Miller’s (1978) experiments measured how people compensate for information input overload and measured adjustment processes of omission, error, queuing (falling behind), filtering, and abstracting. He suggests there are two types of filtering: omission filtering (the preferential processing of certain sorts of information), and error filtering (preferred or frequent use of a particular response or repetition of a single response to avoid losing an opportunity to respond). The experiments revealed that, when participants were “overload free,” filtering was rare. Conditions of moderate overload elicited omission filtering as the preferred response. Under conditions of great overload, omission filtering diminished and error filtering increased (pp. 173-82).

Library and information science literature also refers to Klapp (1986), who suggests that boredom and anxiety are key responses to information overload. He explores the impact of information overload on human experience in a series of thoughtful essays infused with terms common to information theory (like noise, redundancy, and entropy). Klapp defines information overload as degradation of information. Degradation of information occurs when information is noiselike, irrelevant, and interferes with desired signals and when it is redundant, banal, or does not tell enough of interest (p. 2). Information overload is a result of boredom based on satiation. Satiation comes from: (1) too much stimuli; (2) habituation, which results in a loss of responsiveness due to loss of novelty; and (3) desensitization—a loss of sensitivity to increasingly strong stimuli (p. 36). Information overload also results from “bad redundancy” (repeated receipt of useless information) and noise. Techniques for coping with information overload embrace extremes of “selective exposure” and attempts to scan everything.

For Klapp, overload manifests itself in culture as a widening gap between social problems and their solutions where meaning lags behind increased amounts of information. “Meaning lag” is based on the “rapid

accumulation and diffusion of information beyond human capacity to process it." Klapp emphasizes the human need to ponder, wonder, and dream in order to put information into perspective and implies that such a holistic approach is a solution to meaning lag (pp. 105-15).

Meaning is also central to Wurman's (1990) description of information anxiety. He introduces the role of expectation in information processing and claims that "information anxiety is produced by the ever-widening gap between what we understand and what we think we should understand. Information anxiety is the black hole between data and knowledge. It happens when information doesn't tell us what we want or need to know" (p. 34). Moreover, Wurman identifies "several general situations are likely to induce information anxiety: not understanding information; feeling overwhelmed by the amount of information to be understood; not knowing if certain information exists; not knowing where to find information; and, perhaps the most frustrating, knowing exactly where to find the information, but not having the key to access it" (p. 44). Custom and context are implicated in Wurman's definition, because he includes pressure of expectations to "measure up." Wurman (1990) adds another new wrinkle to the definition of information overload by explicitly connecting information anxiety to concern about access to information. "We are dependent on those who design information, on the news editors and producers who decide what news we will receive, and by decision makers in the public and private sector who can restrict the flow of information" (p. 34).

In contrast with the opinions of Klapp and Wurman, Neill (1992) and Wilson (1976) suggest that information overload is not an actual problem because people respond with a variety of coping skills. Neill supports his assertion with evidence of the adjustment processes identified by Miller (1978). He specifies that decision-making in a world of infinite information choice follows models of bounded and intuitive rationality. These models recognize that decisions are made in constrained contexts and are based on past experience. Neill (1992) also emphasizes the importance of alternative information systems such as rumor, gossip, and story. Story is mentioned as particularly significant for providing an organizing framework in contemporary society (p. 116).

Wilson (1976) minimizes the importance of information overload. He claims the concept does not need to be clarified because it is a "phantom" and argues that information overload "does not exist for most people in most circumstances" (p. 59). Wilson feels that people tend to ignore what they don't need or that which is irrelevant. When threatened by potential overload, people cope by practicing avoidance or seek information that supports their customary decision choices and practices. (The latter observation is akin to Neill's discussion of bounded and intuitive rationality.) When information is needed, people take what is easy to get

(an argument parallel to Mann's discussion of the Principle of Least Effort). Wilson also points out that "mechanical-electronic communication systems are usually built with some specific information purpose in mind," which ignores the "multi-purpose structure of man" (p. 62). The multi-purpose essence of human beings incorporates the need to eat, sleep, and socialize, and dictates moving away from overload confusion and on to other business.

The foregoing analysis shows that beliefs about the nature of information overload are as diverse as are those about the information society. Some scholars reject the notion that information overload is a problem because people have found ways to cope. Others, however, claim its effects are far-reaching and potentially damaging. Those who work with information assume overload exists because of increased media and channels associated with a post-industrial era. Mythology affords a method to accommodate coexistence of these viewpoints.

THE MYTHOLOGY OF INFORMATION OVERLOAD

Myth and folklore studies furnish conceptual frameworks—ways of understanding the supernatural, notions of historicity and continuity, conduits for emotional expression, strategies for dealing with change or "crises of modernity"—to build some understanding of the mythology of information overload. Library and information science literature shows that information is variable in form, mitigates gaps between "internal and external memory," must make sense, and should be easy to get. Uncertainty about the origin, nature, and complexity of the information society, combined with its visible and invisible power, leads to thinking of it as a surrogate for the supernatural, a force that must be rendered intelligible for living day-to-day. The mythology of information overload, in light of the foregoing, can be described as a story of vague origin, developed in response to change from an industrial to an information-based economy. The story confirms the "perceived" reality of the information society, while simultaneously allowing room for expressing emotions like anxiety or boredom that arise from living in this society. The story also provides common understanding and serves as a justification for strategies such as filtering or avoidance in order to cope with a proliferation of information and information sources that seem beyond the individual's control. At the heart of the mythology of information overload is the need to make meaning and the need to adjust. Meaning maintains continuity and preserves connection and encompasses the first (conservative) law of folklore. Adjusting, or coping, by selectively engaging with the information environment incorporates the second (dynamic) law of folklore. Thus, the twin laws operate to allow people to remain sane in the information age. An account of one group's perception of information overload is offered as an attempt to link mythological process and life experience.

STUDY OF A FOLK GROUP

The project described below was conducted as a pilot effort to find out how information overload functions as a modern day myth that shapes comprehension and coping strategies. This project was also used as an opportunity to learn if a folk group could serve as an information "filter" to reduce the effects of information overload by virtue of providing context and relationship. Data for this project were collected through surveys of members of LIS 450FL, *Folklore, from Fireplace to Cyberspace*, offered by the Graduate School of Library and Information Science at the University of Illinois (GSLIS-UIUC) during Spring 1998. All class members were GSLIS students, although their areas of specialization and backgrounds were diverse. The total pool of potential respondents was ten of eleven students enrolled in the class (the researcher was excluded). Ten students completed surveys for a response rate of 100 percent.

Survey questions were developed to get a picture of class members' definitions of information overload in work, school, and other aspects of daily living (or "lifeways"⁵). Students were also asked about their perceptions of information overload with regard to the *Folklore* class in particular, and about their view of the class as a "community" or folk group. Questions about overload related to the class requirements and were designed to get opinions about the class as a community. The aim was to demonstrate a connection between the folkgroup as an alternative information resource that might reduce information overload deriving from class requirements. The survey was conducted near the end of the semester in the belief that the class would have developed a sense of community that would be reflected as identification as a folk group.

Questions were pre-tested in consultation with the instructor and a colleague with significant experience in survey questionnaire design and interview techniques. The survey was conducted by e-mail. Responses were analyzed to build a description of information overload and for evidence of the folk group as an information resource. Survey questions are included in the appendix.

FINDINGS

It is clear that class members of LIS 450FL perceived "information overload" in the area of work. Several members noted an "overload overlap" emanating from research assistantship work and schoolwork, which could be expected for graduate students. Some noted this overlap as a by-product of "life in the information age." Information overload was expressed in terms of having to deal with a variety of input channels such as e-mail, meetings, listservs, and in-basket paper piles. A few respondents also reported headaches and feelings of pressure or confusion as physical and emotional responses to information overload. Filtering was the chief

mechanism for dealing with overload in areas of research and schoolwork. Responses implied that what is filtered out is then ignored.

A majority of those responding felt that information overload extended to their leisure hours and described themselves as experiencing conflict or confusion about choosing what to do with scarce free time. Leisure seemed to be confounded with the demands of “lifeways” in respondents’ descriptions of overload. For example, some respondents listed tasks that needed to be done during “time off” that were similar to those listed as lifeways. In the latter area, coordinating multiple activities was the primary source of information overload. Procrastination and avoidance were identified as methods for coping with lifeways overload. Only a few people felt that leisure time provides an escape from overload, but they stated this emphatically.

The class did not identify strongly as members of a folk group or feel that class membership served to diminish information overload. When asked about motivation for enrolling in the class, all but one respondent listed the instructor’s reputation as a primary reason. “Subject matter” made a strong showing as the second factor for enrollment. Overall, respondents did not seem to feel a shared sense of community. While a majority felt some sense of community, their responses indicated a weak association with the idea of being part of a folk group. Additionally, respondents assumed that others felt little sense of community. Ironically, a few people responded that they felt “left out” of the class at large, which begs the question: What did they feel left out of? This indicates that perhaps a community did indeed exist marked by the observation that one feels excluded from it.

Group members felt that they developed a command of folklore concepts and vocabulary and an appreciation for multiple points of view as a result of participation in the class. Presentations of other class members were listed as the class activity most beneficial for understanding folklore concepts. Numerous and varied responses confirmed that students felt their class project was informed by things they learned in LIS 450FL. Respondents also indicated that this experience would influence their attitude in future work. While class projects were listed as the most informative assignments, these were also considered the chief source of information overload. Readings were also noted as a source of information overload—in other words, simply having the class as something else to do generated a feeling of overload. It was clear that the class was not viewed as an alternative information system or filter for information overload. This observation does not directly contradict ideas that the folkgroup can be an antidote for information overload. It is logical that class members would not perceive this particular “folk group” as an information filter if they report feeling no strong sense of community and perceived the class itself as a source of overload. Studies based on lessons learned from this pilot

project should first verify member identification as part of a folk group before asking if group affiliation reduces the effects of overload.

CONCLUSION

Mythologizing can indeed be considered a timeless process invoked to cope with modern dynamics that sometimes seem beyond individual power to affect. The "information society" has generated concerns and consequences shaped by the interplay of its titular elements—information and society. Information overload has become a convenient code phrase for many of these concerns and consequences. The abundance of solutions proffered for overload reduction emphasizes presumed cause and effect, precluding any need for systematic investigation of how people actually experience and cope with this modern-day problem. The coincidence of these conditions—respectful attention to something unproven—is an essential feature of the mythological process.

The findings of a pilot project confirmed the presence of information overload associated with "the information age." While it is true that the project revealed people coping with overload, it also confirmed the presence of negative effects cited in library and information science and other literature. The results of the project add descriptive detail to the story of information overload. This story—like most mythology—illustrates the continuing ability of human beings to adapt to altered circumstance.

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NOTES

- ¹ Folk groups are clusters of people who have something in common that makes communication "meaningful or rewarding." Most people belong to more than one folk group, and group delineation is no simple task. Essentially, shared language and inherent group dynamics combine to make the folk group an important source of context that shapes and affects interaction of members. Language and communication in the folk group can take many forms, including both verbal and material (Toelken, 1996, pp. 37-58).
- ² For the purpose of this article, myth is used in a broadly cultural, rather than a technically folkloristic sense.
- ³ This comment reflects observations made by Neill (1992). Additionally, the review of indexes was conducted in an attempt to "update" his search for evidence of information overload as a subject of concern for library and information science.
- ⁴ Of eighteen citations listed in the online index, fifteen led to English language articles available for review.
- ⁵ In the discussion that follows, such information is referred to as "lifeways" and represents activities like chores, errands, and household responsibilities that are essential to maintaining the "infrastructure" of day-to-day living.

APPENDIX

Survey Questions Submitted to Members of LIS 450FL, *Folklore, from Fireplace to Cyberspace*, Offered by the Graduate School of Library and Information Science at the University of Illinois

1. Please briefly define what “information overload” means to you with regard to:
 - (a) work
 - (b) schoolwork
 - (c) leisure
 - (d) lifeways (day-to-day aspects of dealing with things like ordering books on amazon.com or getting information about tax forms).

(If it makes more sense to share an anecdote or example for any of the above, please do so.)

2. What drew you to take LIS 450FL?
3. Did you think of LIS 450FL as a community? Please briefly explain why or why not.
4. If you thought of LIS 450FL as a community, what aspect(s) was (were) most valuable?
5. What did you learn that informed your project for this class or for your work in other classes?
6. What class activities (presentations, discussions in or out of class, assignments, etc.) were most useful to you? Did any of these activities generate a feeling of information overload? Please explain briefly.
7. Do you feel you developed a vocabulary, worldview, community, framework, or “story” about folklore that enriched your class work and your experience? Please explain briefly.
8. Do you feel you developed a vocabulary, worldview, community framework, or “story” about folklore that was shared by others in LIS 450FL? Please explain briefly.
9. Did the class readings provide you with folkloristic ideas, terminology, or methodology that will be useful for other work? Please elaborate if desired.
10. Did the study of folkloristics add to the types of “information overload” that you defined in question 1? If so, in what ways?
11. Did the study of folkloristics add to your material, verbal, and/or customary ways of thinking about or dealing with “information overload,” as defined in question 1? If so, in what ways?

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