JUSTIFYING COGNITIVE AUTHORITY DECISIONS: DISCURSIVE STRATEGIES OF INFORMATION SEEKERS

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Patrick Wilson's concept of cognitive authority provides a framework for understanding the basis on which an individual decides whether a particular information source is authoritative for her or him. However, a cognitive approach treats authority as a stable assessment made by individual information seekers, and it may not fully consider the ways in which individuals' cognitive authority decisions operate within the prevailing forms of authoritative knowledge that are held as legitimate and official by participants in a particular context. Constructionist approaches, specifically Jonathan Potter's perspective on everyday fact construction and Rom Harré's positioning theory, can offer strategies for understanding the ways in which information seekers represent and justify information sources as authoritative. An analysis of transcripts of interviews with a specific group of information seekers (pregnant women) identifies the context-specific discursive techniques that they used in enhancing or undermining the authority of peer and professional information sources.

Introduction

Recently, library and information science (LIS) writers have called for a constructionist perspective on LIS research. Kimmo Tuominen, Sanna Talja, and Reijo Savolainen [1] classify the central metatheories of LIS as the information transfer model, constructivism, and constructionism. While the information transfer model posits that "the sender, the knower, is able to transmit his message intact from his own mind to the receiver through the mechanism of language" [1, p. 274], constructivism "sees individuals as the true originators of knowledge and meanings. Individuals' cognitive structures are influenced by language, history, and social and cultural factors such as domain and cultural

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environment but, essentially, the creation of knowledge and interpretations is assumed to take place in individual minds" [1, p. 276]. Although there are important differences between these two metatheories, Tuominen, Talja, and Savolainen hold that both "argue that the mind constructs reality in its relationship to the world" [1, p. 273]. For both, language is therefore "essentially a neutral instrument for reporting observations" [1, p. 276].

Contructionism, on the other hand, sees knowledge as dialogically constructed through discourse and conversation rather than produced within individual minds. The focus of constructionism is on linguistic rather than cognitive processes: "The primary emphasis is on discourse as the vehicle through which the self and the world are articulated, and on the way different discourses enable different versions of selves and reality to be built" [1, p. 273].

Tuominen, Talja, and Savolainen invite LIS scholars to work within the constructionist metatheory, analyzing information, information systems, and information needs "as linguistic and conversational constructions, as entities that are produced within existing discourses" [1, p. 281]. They suggest that taking a constructionist approach to research can recontextualize the findings of studies conducted within other paradigms, shifting the focus of research from "understanding the needs, situations, and contexts of individual users to the production of knowledge in discourses, that is, within distinct conversational traditions and communities of practice" [1, p. 278].

Patrick Wilson's "cognitive authority" [2] is an example of an LIS concept that could be understood in different ways if considered from a constructionist perspective. Cognitive authority has recently received renewed attention in LIS research, with several studies considering user evaluations of World Wide Web resources [3–6]. Soo Young Rieh [4], for example, identified several facets within Web searchers' assessments of cognitive authority. To date, the research has considered cognitive authority from a constructivist perspective: cognitive authority decisions are seen to be the result of underlying cognitive processes, that is, based on the information seeker's interpretation of source characteristics in light of a body of beliefs and attitudes that the information seeker has developed from an initial childhood stock.

This article accepts Tuominen, Talja, and Savolainen's invitation by arguing for a constructionist approach to the study of cognitive authority, one that considers cognitive authority descriptions in relation to the local discursive encounters in which they are produced. A discursive focus calls for a deeper analysis of the language used to create descriptions of authority and considers descriptions of cognitive authority not as accurate representations of preexisting beliefs or atti-

tudes but, rather, as examples of everyday fact construction: discourse created to fulfill a particular function within a particular setting.

Tuominen and Savolainen [7] suggest that a constructionist discourse analytic approach to information-seeking-in-context research enables a researcher to develop a deeper understanding of the role of information in people's everyday lives by studying information use as discursive action: the ways that discursive constructions of previously sought or received information are put to use in talk or writing, for example, to make or justify claims. This article takes a related approach and analyzes the discursive action taken by information seekers' descriptions of the authority of information sources within the setting of the researcher-participant interview. I use Jonathan Potter and Margaret Wetherell's [8] work on the construction of discursive accounts, Potter's [9] analysis of the construction of factual descriptions, and Rom Harré and Luk van Langenhove's "positioning theory" [10] as the basis for analyzing the ways in which individuals make or dispute claims about the authority of information sources. The findings reported here are part of a larger information-seeking-in-context study of pregnant women [11].

Cognitive Authority and Authoritative Knowledge

Wilson's concept of cognitive authority [2] provides a framework for understanding the basis on which an individual decides whether a particular information source is authoritative for her or him. Faced with a world in which most of what we know comes from "second-hand knowledge," Wilson argues that we develop cognitive strategies for determining the authoritativeness of information sources: "All I know of the world beyond the narrow range of my own personal experience is what others have told me. It is all hearsay. But I do not count all hearsay as equally reliable. Some people know what they are talking about, others do not. Those who do are my cognitive authorities" [2, p. 13].

Wilson made several points about *cognitive authority*. First, authority is a relationship between two people: "No one can be an authority all by himself; there has to be someone else for whom he is an authority. Having authority is thus different from being an expert, for one can be an expert even though no one else realizes or recognizes that one is" [2, p. 13]. Second, "cognitive authority is a matter of degree; one can have a little or a lot of it" [2, p. 14]. Third, cognitive authority is relative to a sphere of interest: "On some questions, one may speak with authority; on other sorts of questions one might speak with none at all. A person might be an authority for many people but in different

degrees or in different spheres" [2, p. 14]. Fourth, cognitive authority is a kind of influence, unrelated to administrative authority: "Those who are my cognitive authorities are among those who influence my thinking" [2, p. 14]. Although Wilson acknowledged that those who are not cognitive authorities may influence one's thinking, the difference between them and cognitive authorities is "that I recognize the latter's influence as proper and the former's as not proper. . . . The person whom I recognize as having cognitive authority is one whom I think should be allowed to have influence on my thinking" [2, p. 15]. Finally, Wilson outlined the relationship between cognitive authority and credibility, competence, and trustworthiness, and he described several bases on which individuals make authority decisions, including occupational or educational expertise; success in an endeavor in the field; a good reputation among others in the field; endorsement by someone else whom one considers a cognitive authority; and intrinsic plausibility, persuasiveness, or personal trust [2, pp. 15–25].

A cognitive or constructivist approach treats authority as a more or less systematic assessment made by individual information seekers and assumes that an individual's cognitive authorities will retain their status unless there is good reason for them to change: "If a source repeatedly tells me things that I find illuminating and that ring true, I may come to expect more of the same from him, to count on him, refer others to him, quote him to others. He will have acquired cognitive authority for me. As can any other authority, he can lose it too by failing to continue to say things that impress me in the same way" [2, p. 24].

A focus on the decisions made by the individual may not fully consider the ways that individuals' cognitive authority decisions operate within the prevailing forms of authoritative knowledge that are held as legitimate and official by participants in a particular context. As Carole Browner and Nancy Press [12, p. 114] observe, "In non-hierarchical settings, individuals choose from among several equally legitimate sets of rules or forms of knowledge. In situations of structural inequality, however, one set of rules or form of knowledge often gains authority, devaluing and delegitimizing others in doing so."

Brigitte Jordan offers the concept of *authoritative knowledge,* or "the knowledge that participants agree counts in a particular situation, that *they* see as consequential, on the basis of which *they* make decisions and provide justifications for courses of action. It is the knowledge that within a community is considered legitimate, consequential, official, worthy of discussion, and appropriate for justifying particular actions by people engaged in accomplishing the tasks at hand" [13, p. 58; emphasis in original]. Jordan's concept provides a particularly useful counterpoint to Wilson's because it explicitly acknowledges the

broader community's role in determining what forms of knowledge (and, correspondingly, what information sources) should carry weight. Jordan allows that authoritative knowledge is not something stable, but that, as Suzanne Kettler [14] shows, participants can redefine what constitutes authoritative knowledge within particular settings. The work of Jordan and Kettler is particularly relevant to this study as it is likewise set within the context of pregnancy and childbirth.

Pregnancy as an Information-Seeking Context

Pregnancy, childbirth, and early parenting offer an extremely rich site for studying issues of authoritative knowledge. Jordan's and Kettler's work forms part of a larger body of research undertaken by anthropologists, sociologists, and scholars in health communication, nursing, and literary and women's studies.[2] In a North American pregnancy, the boundaries between "medical" and "natural" are under tension and are open to renegotiation. Although pregnancy and childbirth are natural biological functions, Ellen Lazarus [20, p. 135] contends that the dominant ideology of birth in the United States is one in which medical control and intervention are the norm. The tension between medical and natural understandings of pregnancy is particularly acute in a pregnancy deemed "high-risk," not because of some underlying maternal or fetal pathology but because a healthy woman is carrying more than one healthy fetus.

A variety of risks are associated with multiple pregnancy, childbirth, and parenting. For example, a multiple pregnancy has been identified as more physically and psychologically taxing than a single pregnancy [21–22]: multiple pregnancies are associated with a higher proportion of premature birth (before thirty-seven weeks gestation) and of both maternal and fetal morbidity and mortality than single pregnancies [23–24]. The perceived risk does not end with birth: some researchers suggest that parents may have difficulty bonding with more than one infant at a time [25]; multiple-birth children are at increased risk of disability [26] and of language and cognitive delays [27–29]; and families with multiple-birth children have been demonstrated to experience higher rates of financial strain, postpartum depression, alcoholism, and child abuse than families with only singly-born children [30–33]. A multiple pregnancy, then, offers a context in which a biological function is problematized as being of high risk and the variety of risks involve a wide variety of potential sources of information and associated

2. See, for example, [15–19].

forms of authoritative knowledge. Consistent with the findings of studies of other health and social service-related information-seeking contexts (for example, [34]), the larger study on which this article is based found that women pregnant with multiples described having a complex set of information needs and required a wide range of published, informal, and institutional sources to meet them ([11]; see also [32–33]).

Data Collection Methods

Data analyzed for this article come primarily from interviews with nineteen women. Participants met three basic criteria: all were pregnant with twins during the data collection period, all lived within the catchment area of a specific tertiary care teaching hospital, and all were fluent in English. Because of the relative rarity of multiple pregnancies (an average of one twin pair per 104.7 Canadian confinements, 1974–90 [35]), the number of women who met the selection criteria was quite small. As in other studies of this population [36], participants constituted a convenience sample, and recruitment strategies were designed to reach as wide a variety of potential participants as possible. These included placing newspaper ads and making contact with local individuals and institutions (health care providers, businesses, agencies, and parenting organizations) to post brochures, obtain referrals, or speak directly to potential participants.

   All participants were representative of the central Canadian region in which they lived in terms of first language, visible minority status, and urban versus rural place of residence. They tended to be older and better educated than the general population of childbearing women in the area. Participants ranged in age from nineteen to forty years old, and education levels ranged from noncompletion of high school to completion of graduate degrees. All were living with the fathers of their babies, and sixteen of the nineteen were married. This was the first successful pregnancy for thirteen participants. The other six had between one and three children. Four participants were unemployed or at home with other children. The others had jobs in occupation areas ranging from clerical, industrial, and food service to library, health care, and education. At the time of the initial interview, participants were from eleven weeks to thirty-five weeks pregnant, and the multiple pregnancy had been diagnosed between one and twenty-one weeks previous.

   Data collection and analysis conform to the ethical guidelines on research on human subjects of both the University of Western Ontario and the Social Science and Humanities Research Council of Canada.

I conducted, audiotaped, and transcribed nineteen initial, semistruc-
tured interviews and seventeen semistructured follow-up interviews
with participants.[3] The initial interviews ranged from twenty-five to 110
minutes in length, and the interview schedule reflected the four major
questions of the larger study [11]. Each interview began with a general
question concerning the impact of multiple pregnancy on the woman's
previous life situation. Descriptions of cognitive authority arose in re-
sponse to general questions about concerns and information needs
and also to specific questions in which participants were asked to de-
scribe instances of receiving advice or information that they did not
want, that was untrue or wrong, that was not right for them, that con-
flicted with something they knew previously, or that disagreed with in-
formation from another source. Follow-up interviews ranged from six
and a half minutes to seventy-four minutes in length and took place
at the participants' convenience between five and thirteen days after
the initial interview. The follow-up interview schedules varied across
participants. Questions addressed both issues arising from the initial
interviews and incidents occurring in participants' lives between the
time of the initial interview and the follow-up interview. The transcripts
of the initial and follow-up interviews, together with published docu-
ments about twin pregnancy—a current obstetrics textbook [37], a
best-selling popular pregnancy book [38], and a popular book on mul-
tiple pregnancy and parenting [39]—provide the raw material for dis-
course analysis.

Data Analysis: Constructionist Perspectives on Cognitive Authority

Tuominen and Savolainen propose a constructionist discourse analytic
approach for analyzing the ways that "discursive constructions of infor-
mation are contextually designed to serve different communication
purposes" [7, p. 92]. A variety of discourse analytic approaches have
been used in LIS research, including conversation analysis [40], inter-
actionist approaches [41–42], and approaches based on the work of
Michel Foucault [43–49]. However, as Bernd Frohmann notes, some
LIS researchers have conflated different forms of discourse analysis,
treating "the ideas of Foucault, Brenda Dervin, and conversation analy-
sis as the same theoretical kind" [45, n. 20]. The situation in LIS par-
allels that in social science as a whole, where distinctive forms of
discourse analysis share some vocabulary and analytic procedures al-
though they have very different theoretical underpinnings. What dis-

3. Two participants were hospitalized and were therefore unable to do a follow-up interview.

cursive approaches share is a focus on "the study of language in use" [50, p. 2]: the understanding of language as constitutive and constructive and of meaning as emerging from complex social and historical processes. However, there are important differences in the kinds of questions that each form can ask and the kinds of claims that each form can make. A recent text categorizes several forms of discourse analysis into three domains or foci:

1. The study of social interaction: this form of discourse analysis interrogates the nature of social action, and the focus is on the "interactional order."
2. The study of minds, selves, and sense-making: the interest in this form is on the "psychological order," and the focus is on the production of social actors.
3. The study of culture and social relations: this form is concerned with the historical and institutional features of discourse and addresses such questions as: How has meaning-making been organized over time? How has it sedimented into certain formations of making sense, and why those and not some other forms? In this form of analysis, speculations on order and pattern in discourse are speculations on power and the organization of social relations, whether locally or more broadly [50, p. 5].[4]

Data in this study were analyzed according to a form of discourse analysis that falls into the second category. It was developed by social psychologists such as Potter [8–9], Wetherell [8], Harré [10], and others [15–16]. Although less familiar in LIS than Foucault-inspired forms, this form is well established in other social science disciplines and has been called "discourse analysis in social psychology" (DASP) [53]. Drawing on several theoretical traditions (including social studies of science, ethnomethodology, conversation analysis, semiology, poststructuralism and postmodernism), this form of discourse analysis seeks to incorporate insights from a variety of discourse analytic approaches. Potter takes a focus on discourse to mean that "the concern is with *talk and texts as parts of social practices.* This is somewhat broader than the conversation-analytic concern with talk-in-interaction, but rather more focused on the specifics of people's practices than the Foucauldian notion of a discourse as a set of statements that formulate objects and subjects" [9, p. 105; emphasis in original].

This form of discourse analysis is concerned with the ways that accounts are structured and made to appear factual (the epistemological

4. A large number of recent texts describe a variety of forms of discourse analysis. See, for example, [50–53].

orientation of discourse [9]) and the rhetorical purposes to which accounts are put (the action orientation of discourse [9]). The DASP form focuses on the ways that people assemble their versions of the world and on the consequences of the descriptions they assemble: what social functions the descriptions perform; how versions become accepted as real, solid, or independent of the speaker; and how they are designed to counter real or potential alternatives. Rather than viewing discourse as an indicator of "below the surface" cognitive processes such as attitudes and beliefs, DASP considers the discourse itself to be the site of interesting processes and focuses analysis on the production of evaluative accounts and what those accounts are meant to do. The DASP form is therefore an ideal method for studying cognitive authority from a constructionist perspective and focusing on the ways that explanations of cognitive authority decisions are put together and the kinds of claims that are made to convince a reader or listener that a source is authoritative.

The DASP form has recently been employed in LIS by Neil Jacobs [54], who studied the ways that "technology" is reproduced as a series of interests and the ways that formal scholarly communication acts as a resource within researcher/participant interviews. I argue that constructionist discourse analytic approaches have much to offer to LIS researchers in understanding the ways that information seeking and information sources are constructed in local discursive encounters. One form of local discursive encounter is the actual or described encounter between an information seeker and an information source. As Jacobs [54] reminds us, however, research interviews constitute a second form of discursive encounter. Research participants' accounts of seeking information and their descriptions of authoritative sources are produced in response to a question from the researcher and fulfill the function of presenting oneself and accounting for one's actions to the researcher [55]. This article analyzes research participants' descriptions within the context of the research interview.

Data analysis within DASP involves [8] (*a*) paying close attention to the details of language use by examining transcripts or written texts rather than numerical summaries or remembered notes of interactions; (*b*) focusing on the discourse itself as the primary object of research rather than as a transparent medium revealing the true nature of an individual's attitudes and beliefs, or the true nature of events; and (*c*) making a close study of variations in the ways discourse is constructed, both within and across accounts, in order to derive some understanding of the functions that discourse might be serving and the specific discursive components used to construct the versions.

In analyzing the data for this article, I focused on two specific discur-

sive strategies: the ways that individual information seekers "positioned" themselves and others in their descriptions of cognitive authority and the means by which participants used positioning and other discursive techniques to make their versions seem plausible and truthful.

Harré and van Langenhove [10] describe positioning as "the assignment of fluid 'parts' or 'roles' to speakers in the discursive construction of personal stories that make a person's actions intelligible and relatively determinate as social acts" [10, p. 17]. In a conversation between a teacher and a student, for example, the right to speak in a certain way (such as to make a correction or reprimand) varies between the two speakers. The teacher and student therefore occupy different discursive positions, and the social meaning of what is said depends upon the position of the speakers. "For instance, if Jones says to Smith: 'Please iron my shirts,' then both Smith and Jones are positioned by that utterance. Jones as somebody who has the moral right (or thinks he has the moral right) to command Smith, and Smith as somebody who can be commanded by Jones" [10, p. 20].

Positions, however, are not fixed to roles: Smith may contest or negotiate this position in the course of subsequent conversation with Jones or with someone else. Positions consist of both a "moral order" (the institutional aspects of social life that assign roles to people in discursive encounters—teacher/pupil, physician/pregnant woman, and so on) and a "personal order" (relating to individual idiosyncracies). As Harré and van Langenhove point out, "when people are positioned or position themselves, this will always include both a moral and a personal positioning" [10, p. 22].

Descriptions of moral positioning in participants' talk and published texts emphasized that multiple pregnancy and parenting are experiences quite distinct from bearing and rearing a single child and therefore experiences that all mothers of multiples have in common. This commonality of experience is woven into descriptions of source authority. Personal positioning, on the other hand, insists that each person, and therefore each mother of twins, is unique.

Participants called upon individual differences to establish an individual stake for themselves and to describe the ways in which their particular situation makes them different from other people. They described themselves as distinct individuals, not necessarily like other people in similar situations. Christine made it clear that being pregnant with twins did not compromise her individuality: "You hear stories of people . . . that have had twins and like what *they* did and blah blah blah blah and like, I'm not them, am I?"[5]

5. Pseudonyms have been assigned throughout.

Attending to the forms of positioning underlying accounts of source authority can provide a deeper understanding of the ways in which information seekers position themselves with respect to information sources [56–57]. Here, the purpose is to explore the ways that participants used moral and personal positioning to construct descriptions of the authority of information sources.

Potter's framework for analyzing everyday fact construction provides a means of analyzing how positioning can be employed to build up or undermine the authority of information sources. In particular, it permits a close examination of the ways that individual information seekers represent two forms of authoritative knowledge found to be particularly relevant during pregnancy: biomedical authoritative knowledge [17] and knowledge that derives its authority through the lived experience of the information source [18–19, 58–60]. In this way, it can shed light on the relationships between the ways in which pregnant women are positioned and position themselves and the ways they describe information sources as "authoritative."

An example from a participant's transcript demonstrates some of the techniques speakers and writers may use for making or dismissing authority claims. Here, Jacquie responded to a question about whether she had ever received information or advice that she did not want by describing a chance encounter with a mother of twins: "She was just very against ultrasounds, and then, I've asked a few people that I know that work in that related field. I've looked it up in my book, *What to Expect When You're Expecting.* I just kind of did a little bit of research, because I just took the doctor's word that everything, you know, ultrasounds were safe. Everybody that I've talked to or the research or the books that I've read, they've all said that, so it's probably just her opinion. She has twins but I don't really know her. I just met her at a baseball game."

Potter [9, p. 107] suggests that speakers and writers use several techniques to construct a description as factual. Offensive (ironizing) rhetoric undermines the credibility of alternative descriptions, while defensive (reifying) rhetoric works to present a version as solid and factual. Offensive and defensive rhetoric can work together to reinforce the authority of one source or the credibility of one version while undermining another. In this passage from Jacquie's transcript, it is evident that she has set up two competing claims, one stating that ultrasound is safe and the other claiming that it is not, and that she used several discursive techniques to build up or undermine the authority of different kinds of information sources.

A description can undermine the credibility of an information source through *interest management,* that is, by demonstrating an inappropriate stake or interest that contributes to bias. Early in the passage,

Jacquie positions her acquaintance as "just very against ultrasounds," therefore casting any subsequent statements the acquaintance makes about ultrasounds as biased. Jacquie can then simply dismiss subsequent statements as opinions with no cognitive authority for her: "she was entitled to her opinion," "to each their own," "that's what *she* believes, and that's what *she* thinks, and I'm not going to worry about it."

Alternatively, a description can present an information source as credible based on authority derived from membership in a particular category, such as "obstetrician" or "mother of twins." ("I just took the doctor's word that everything, you know, ultrasounds were safe.") Potter calls this technique *category entitlement*. Membership in a particular category is not automatic nor are the characteristic entitlements of specific categories fixed. In the practice of discursive construction, participants can rework category entitlements, for example, by questioning the individual's right to legitimate membership in a particular category.[6] Having twins herself is not sufficient grounds for Jacquie's source to be an authority on ultrasound. Jacquie downgrades the experiential entitlement by positioning her source as a stranger, refusing to accord her the authority of a trusted friend or acquaintance: "But I don't really know her. I just met her at a baseball game." Both interest management and category entitlement work to represent the authority and status of the information source rather than the content being reported.

Other discursive techniques draw attention away from the speaker's or writer's stake in the description, attempting to construct the description as something existing independently of the person producing it; this is what Potter calls a quality of "out-there-ness" [9, p. 150]. Scientific or empiricist representations can build up support for a position, as can impersonal constructions in which the description is not attached to any individual source. As Jacquie said a few lines after the passage quoted above, "if [ultrasound] wasn't safe then they wouldn't do it."

An individual can build a body of evidence by representing a description as a factual consensus of several independent observers. Dorothy Smith [62, p. 28] describes this process in terms of the children's story in which Henny Penny recruits more and more followers to the belief that the sky is falling. Jacquie calls several independent and reliable sources into service: "I've asked a few people that I know that work in that related field. I've looked it up in my book, *What to Expect When You're Expecting*. I just kind of did a little bit of research, because I just took the doctor's word that everything, you know, ultrasounds were

6. For LIS application of the concept of the category entitlement, see [53] and [61].

safe. Now and, everybody that I've talked to or the research or the books that I've read, they've all said that [ultrasound is safe]." Conversely, a consensus can be undermined by calling the independence of the observers into question and representing the observations as collaborative and therefore subject to stake or interest concerns.

These techniques-using positioning to create ironizing and reifying rhetoric through interest management, enhancement or downplaying of category entitlements, creating "out-there-ness," and building a body of evidence-were all used to make, defend, and justify cognitive authority claims for a variety of information sources. The specific techniques were used in different ways that were often related to the type of information source being discussed and the variety of authority being claimed for it. For example, participants defended or challenged biomedical authoritative knowledge and experiential authority by using moral positioning to reinforce or challenge the category entitlement of a biomedical or experiential source. In some cases, however, participants used personal positioning to accept or discount the authority of information sources. Rather than managing their interest to downplay their own stake in a question, they in fact highlighted their own stake and subjectivity, accepting or rejecting the authority of a source based on its congruence with their set of values. The following three sections provide specific examples of applications of discursive techniques to descriptions of biomedical, experiential, and individual authority.

The Construction and Undermining of Biomedical Authority

Jordan and others [17] suggest that biomedical authoritative knowledge underlies a "prominent belief system" [63, p. 262] or representation of pregnancy as risky that serves to enhance the category entitlements of medical practitioners. Browner and Press [12] suggest, for example, that pregnant women cannot neutrally refuse prenatal diagnostic technology because adhering to technological models of care "is women's only culturally approved means of reassuring themselves, and others, that they are doing 'all that can be done' to ensure a healthy pregnancy" [12, p. 127; see also 20, p. 135]. Lisa Mitchell and Eugenia Georges [64] posit that the use of prenatal diagnostic technology, in particular, the ultrasound exam, is a locus for conflicts between the woman's bodily awareness of fetal movement and the "expert" knowledge of the ultrasound technician. Carol Brooks Gardner holds that a discourse of risk extends medical control and intervention to "the pregnant woman's task of learning about pregnancy practices, everyday measures that individuals believe they should take in order

to achieve a 'successful' pregnancy" [65, pp. 30–31], even though *pregnancy practices* are often quite far removed from a woman's official medical care.

Authoritative knowledge and constructions of the pregnant woman/mother may be reinforced through published material. Gardner [65] found that representations of risk are not limited to medical textbooks but also pervade popular pregnancy books. Others have found that popular pregnancy and parenting manuals present psychological or medical knowledge as more authoritative than parents' own knowledge [15–16]. My own reading of popular and professional works on pregnancy indicates that these texts represent the medical caregiver as the most authoritative source of information over the entire course of pregnancy and childbearing. The published pregnancy books that I examined positioned the physician variously as (1) a partner or collaborator: "To try to go it alone [without prenatal medical care], even for a few months, is to abuse the concept of self-care—which is built on the foundation of a cooperative partnership between patient and health professional. Regular professional input in pregnancy is crucial. One major study found that women who had many prenatal visits . . . had bigger babies and better survival rates than those who had only a few prenatal visits" [38, p. 116]; (2) an expert providing direction and guidance: "Your practitioner has most likely 'been there, done that' when it comes to guiding couples through multiple pregnancies. Take advantage of all that wonderful experience. . . . Ask questions: communicate with your practitioner" [39, p. 68]); or (3) an authority to be obeyed: "Travel . . . does not adversely affect a pregnancy, but separation from the physician may be hazardous. For this reason, instruct patients with a history of spontaneous abortion and those who have experienced vaginal bleeding in the course of the present pregnancy to avoid travel to distant places" [37, p. 200]).

The focus on risk as an element of any pregnancy enhances the authority of medical professionals as information sources. Representing multiple pregnancy as unusually risky and threatened by premature delivery enhances the category entitlements of institutionalized biomedical providers, raises the stakes for failing to comply with directives, and discredits other sources of information.

Descriptions of risk can correspondingly undermine the category entitlement of the pregnant woman. Robert Hahn, having examined obstetrical texts, noted that "with regard to her own condition, a childbearing woman is said, by definition, to have at best subjective knowledge of limited events of her pregnancy, while attending physicians have the best available, definitive knowledge" [66, p. 268]. The books I examined also contained examples of questioning women's

knowledge about their pregnancies and suggestions that their knowledge of their own bodies may be lacking or erroneous: "The fact is that body signals relating to food are notoriously unreliable, probably because we've departed so significantly from the food chain that we can no longer interpret these signals correctly" [38, p. 124].

When writers of pregnancy books describe risks, in this case the risk of prematurity, they abandon previously used terms such as "advice," "guidance," "working with you," "partnership," "informed decisions," and "consultation" in favor of constructions such as "instructions," "what your practitioner wants to see," and "Do not . . ." A sidebar written by a perinatologist in the popular multiple-pregnancy book expresses this message strongly: "I really want to stress that bedrest means exactly that! While it may seem like the perfect time to organize your closet or assemble the crib you've bought for the nursery, your job is to plant yourself in that bed and follow your practitioner's instructions to the letter" [39, p. 126]. By emphasizing the physician's authority in managing and minimizing risk, the author positions the pregnant woman and the physician in a worker-employer relationship ("your job is to . . .") and clearly outlines the kinds of work that are appropriate and inappropriate in this situation.

Study participants used risk to bolster the category entitlements, and thereby highlight the cognitive authority, of medical practitioners. Karen referred to the low chance of conception—"The odds for my age group was one in five chance it would work. So I wanted to make sure that I was one of them"—when describing her rigid adherence to the regimen of an in vitro fertilization program: "I just treated it like it was a military exercise, and if they said 'Drink water,' I drowned myself in water. Like I just drank until I couldn't drink again. And when they said, 'You give yourself this needle at twelve o'clock midnight,' at twelve o'clock midnight it went in my leg, you know?" By representing the risk of failing to conceive as both high and significant, Karen could present her to-the-letter compliance as an appropriate course of action in response to the directives of an authoritative information source.

Donna explained how her doctor might be the most reliable source about the state of her body, more reliable than her physical symptoms: "For example, if I'm feeling fatigued, or I'm feeling a little bit tired, I would stop, I would take a rest, or I wouldn't do something that was uncomfortable or, or so forth. Um, but this has got me thinking about, those cues maybe are, not the best way to go in terms, like, it's almost, the sense I have from [my doctor] anyway was that, with, with a twin birth, by the time you're getting those cues, it might be too late. Like it's more about prevention. So not *getting* tired [laughs]." Here, Donna set up competing authority claims between her own body and her doc-

tor. She emphasized the distinctiveness of multiple pregnancy ("with a twin birth") as a riskier occurrence than a single birth, implying that, in a low-risk pregnancy, her body's signals might be an appropriate source of information. In this case, however, her body's cognitive authority is suspect, and her doctor's version of events becomes more authoritative.

Participants drew on the confirmatory opinions of colleagues, friends, and family to reinforce the authority of the doctor as the primary source for information about minimizing risk. Lynn initially reacted negatively to her doctor's suggestion that she leave work early, but justified her subsequent change of perspective by citing a colleague's construction of her pregnancy as a risky event—"One of my co-workers said, you know, she said, 'I wish that I had followed my doctor's orders when I was pregnant.' And I thought, yeah, if anything went wrong or, you know. It's more important to, to obey the orders even though maybe I felt fine"—then by means of her own confirmatory symptoms:

Lynn: "And actually, I've been really tired. So I thought, maybe he's right. . . . I think actually, I think I'd made up my mind. And then I started thinking, you know [laughs], I've been really exhausted, and I've been really tired and, it's just an additional stress, going to work. I mean, it's not that much of a stressful job, but, it just adds, how much more to my life, right? In terms of running around and trying to get things done. Yeah, so I thought, so now I'm completely [laughs]. Like now I'm . . ."

Researcher: "So you're okay with it."

Lynn: "I'm fine with it now, yeah."

Lynn uses her symptoms to reinforce the authority of her doctor and the force of his recommendation and thereby to account for her change of attitude.

Browner and Press found that many women, reacting to representations of risk in popular literature and media, feel that being informed is "foremost among the responsibilities conferred by pregnancy" [12, p. 117]. Gardner suggested that the rhetoric of endangerment that pervades descriptions of pregnancy practices in writings for pregnant women "could (if taken seriously and taken up) disadvantage [pregnant women], overwhelm them, or simply make them anxious about their ability to act the pregnant role" [65, p. 29]. There is also evidence, however, that pregnant women do not always uncritically accept the validity of biomedical authoritative knowledge in relation to their own experience but rather weigh it against their own experiences and, like other people faced with doctors' recommendations, accept some recommendations and reject others [12, 67–70].

In studies by Susan Markens, Browner, and Press [12, 67–68], pregnant participants who refused amniocentesis (a prenatal diagnostic test) did not necessarily reject the role of medical science and technology in pregnancy. Rather, these women called on biomedical categories, in particular the concept of "risk," to justify both acceptance and refusal of the intervention. The differences between acceptors and refusers was in their "perceptions of what was medically necessary and what posed a 'risk.' In contrast to acceptors, though, refusers did not see the test as an integral part of their routine pregnancy care. Seeking to act in the best interests of their fetus/baby, refusers declined what they considered 'risky' information, information that would upset them or which was linked to abortion" [65, p. 364]. A woman in my study used similar strategies to account for the refusal of amniocentesis.

Although Karen accepted her doctor as an authority and allowed that, because of her age, he likely had legitimate concerns about her high risk for genetic abnormalities, she downplayed the significance of his category entitlement by managing interest: she suggested that the level of his concern was undue and possibly related to a personal stake or a hypothesized biographical reason: "I don't know why he seems to be painting this as . . . the worst thing that could happen. So I think he's got personal politics. For all I know he has a Down Syndrome child, and it's been very difficult. I don't know." As she used ironizing rhetoric to cast doubt on the objectivity of her doctor, she also used reifying rhetoric, in the form of personal positioning, to construct a competing category entitlement for herself as an individual patient and pregnant woman. This entitlement justified her refusal: "I should be listening to him. But I just feel, no. Like it's sort of a strong 'no' in my head." Explaining, she stated: "I was not willing to do anything with the information [have an abortion] if I [did] have [a] Down Syndrome [child]." Karen supported her position by using the evidence of an ultrasound image to justify a moral stance. "I saw those babies. They were babies. They weren't like little shrimp or, you know, *becoming* babies. I guess twenty years ago you didn't know at what point your baby became a baby. But I *know* that it's a baby." The doctor's category entitlement remains intact, and Karen manages his stake, not to undermine the biomedical authority of his advice but to place that advice in conflict with her individual entitlement to her own opinion as constructed through a moral stance and justified by the cognitive authority of the ultrasound image.

Women used several interest management techniques to undermine the category entitlements of their health care providers. Irene suggested that a doctor was old-fashioned: "Maybe he's older. Kind of,

you know, a little bit more old school." Participants also positioned
the category entitlement of one medical professional against another
or pitted medical training against professional experience to demon-
strate which was superior. Gayle did not "have a lot of faith in med
students. They don't really know everything. They don't have the expe-
rience." Natalia expressed a lack of confidence in a nurse who had
come to the Department of Obstetrics and Gynecology from the Emer-
gency Department: "And so right away I think, oh well, she hasn't been
doing this for a long time or she hasn't been in the gynecology de-
partment for a long time so she probably isn't going to know for sure
stuff. So I'd be hesitant to ask her." On the other hand, experience
in caring for pregnant women could enhance otherwise questionable
category entitlements. The same participant held that her doctor's sec-
retary was uniquely qualified despite her lack of medical training—
"Just because she's a secretary and not trained in medicine doesn't
mean that she isn't familiar with the psychology of pregnant
women"—and therefore able to provide authoritative and reassuring
advice to a worried patient.

Women also used the category entitlements of professionals to legiti-
mize their own lack of authoritative knowledge. They pointed out that
they could not be expected to have expertise in particular areas of
knowledge since they did not possess the corresponding category enti-
tlements. Christine represented her knowledge of her own body as sub-
ordinate to her doctor's expertise. "I didn't want to come out and say,
well, 'Can you check for sure? Are you positive?' Cause I'm trusting
her, I mean *she's* [the doctor]. I've never been pregnant before. I don't
know how it's supposed to feel." During another encounter, Chris-
tine's knowledge of her fetuses' positions would have helped a group
of medical staff who were unsuccessfully attempting to detect both
heartbeats, as Christine explains, "I didn't bother saying anything
cause I'm like, well, I'm just the patient here [laughs]. I don't know
anything about this. So, kinda trust them." Karen described how doc-
tors, because of their many years of practice, "sometimes might give
you credit for knowledge that is automatic for them. . . . Sometimes I
think doctors forget that, we're not even rookies. We are just, you know
what I mean? Like we don't even have the basics sometimes on a certain
subject." Emphasizing their difference from those with biomedical cat-
egory entitlements allowed participants to account for their inexpertise
in a way that both maintained their competence as an individual and
vested authoritative knowledge elsewhere. Positioning themselves as in-
expert permitted participants to tell particular kinds of stories about
themselves as information seekers [55].

A constructionist analysis of cognitive authority descriptions shows

that, although biomedical authoritative knowledge is associated with risk and firmly entrenched in North American pregnancy practices, participants did not unquestioningly represent it as a sufficient criterion for cognitive authority. By analyzing cognitive authority descriptions in detail, it is possible to see how participants undermined the cognitive authority of specific biomedical providers without necessarily discounting biomedicine as authoritative knowledge.

The Construction and Undermining of Experiential Authority

Another form of authority often called upon by pregnant women (although much less commonly referred to in published pregnancy texts) is that acquired through lived experience. Marsha Schubert and Thomasina Borkman [59, pp. 228–29] define experiential knowledge as "based on wisdom and know-how gained through reflection upon personal lived experience." Experiential knowledge, Borkman argues, constitutes a distinctive frame of reference, separate from the understandings of professionals ("professional knowledge") and of those who have not themselves lived through the experience ("lay knowledge") [58, p. 3]. Experiential knowledge is transferred through the sharing of individual stories, often in self-help or mutual aid groups. Experienced peers can offer some specific forms of help [58, p. 29], including veteran modeling of ways of coping that can provide hope to a newcomer that lay or professional helpers cannot give and the experientialist's assessment of the applicability of professional knowledge to one's life.

Research on parenting suggests that several aspects of Borkman's conceptualization may be particularly relevant for pregnant women and mothers of young children. Tardy and Hale [18] reported that mothers of young children have used peer communication about health concerns both to "crack the code" of medical terminology and practice (with pregnancy, childbirth, and breastfeeding mentioned as three specific concerns) and to "bond" with one another through the building of common experience through shared narrative. Kettler [14] found that pregnant women and prenatal instructors redefined what constituted authoritative knowledge by sharing experiential knowledge and demedicalizing pregnancy.

While research has demonstrated that social support, including contact with experienced others, has an impact on obstetric [71] and developmental outcomes [72], the rarity of multiple pregnancy means that mothers of twins may find that advice from, or intended for, mothers of singly-born children does not help them [36, 60, 73]. Kristin Glaser

suggested that social network members who were not themselves parents of twins might "present a stereotyped view of the situation, offer inappropriate solutions to the problem, and may not be able to understand the emotional texture of the experience. Friends and family, at some level, may be offering 'foreign aid'" [60, p. 55]. A similar construction of the importance of experiential knowledge was evident in participants' representation of the category entitlements of parents, and specifically of parents of twins.

The pregnant women in this study relied on the moral positioning of themselves as mothers of twins to build up the category entitlement of others who have lived through the multiple pregnancy and birth experience. Participants drew on the shared distinctiveness of multiple pregnancy to describe an immediate and automatic kinship with other mothers of twins, even those they had never met. Karen, who had just attended her first Multiple Birth Association meeting, said "there's a sense that we're *different*" and that "even though there was one woman there with triplets, I felt closer to her than to someone who just had one [baby]."

Women used entitlements of experiential knowledge for several rhetorical purposes. Some undermined the category entitlements of other sources. Rachel questioned her prenatal teacher's expertise about breastfeeding twins: "She doesn't *know* know. I mean, it's easy for her to say, this is how you can feed two but, she's never done it before." Gayle used the stories of several other mothers of twins to build a body of evidence to create "out-there" support for an alternative interpretation. She reported that, at the previous night's Multiple Birth Association meeting, "most of the women [said that they] didn't give birth until thirty-seven or thirty-eight weeks. I thought, wow! So everybody saying 'Premature, premature, premature!' might be a little off. I mean, the stats that, the people that *I've* been talking to, that just doesn't seem to be the case." Her use of "the stats" aggregates several individual anecdotes into evidence with the cachet of empirical authority. At other times, women called on the experiences of others as evidence for making claims of their own. Christine used her own mother's experience of breastfeeding twins to counter negative comments about her ability to do the same: "I threw that out [into the conversation], 'Well my mom did it.'"

As they did with biomedical authority, participants, particularly those pregnant for the first time, discounted themselves as cognitive authorities due to their lack of an appropriate category entitlement. Natalia rejected my attempt to represent her as knowledgeable about childcare by virtue of her being an aunt to several children:

Natalia: "I didn't know anything. Yeah. My life has been childless. And carefree of those kinds of things."

Researcher: "I don't know, you've got at least fourteen nieces and nephews. [laughs] From adding up two sisters-in-law [laughs]."

Natalia: "[laughs] That's right. All sorts, and my sister, fifteen. Yeah, so we knew nothing before. I didn't know anything before."

However, even experienced mothers of singly-born children used the shared experience of multiple pregnancy and parenting to demonstrate why they did not possess the requisite category entitlement to be a cognitive authority about multiple parenting. Even being a twin herself was not sufficient for Trudy to claim experiential authority about parenting twins: "Just because I'm a twin doesn't mean I know everything. I want to *know* what it's like to be raising a twin."

For some aspects of parenting twins, women comfortably referred to the authority of their acquaintances with singly-born children. Christine drew encouragement from women in her prenatal class: "It was quite encouraging. Cause it was all people who had been through the experience and stuff. So they all knew what it was like." But for others, the category entitlement of parents of singletons was not sufficient for claiming cognitive authority about multiples. Gayle could not "ask *them* questions about twins cause they haven't had them. And they don't understand." Despite their lack of authority, however, Gayle represented her friends as helpful in the very recognition of their limitations. She continued: "But they also recognize that. That they *don't* understand. And I've had some of them say, 'Look, I have a girlfriend who *had* twins, this is her phone number.' " The friends saw twins as something different enough that they were not qualified to give advice on it, which Gayle characterized as "honest. That's a *good* thing." In this way, the acceptance of parenting twins as distinctive—in effect, the acceptance of the legitimacy of a moral positioning of mothers of twins as a distinctive group—allows nonauthoritative sources (parents of singly-born children) to be helpful. A constructionist analysis allows for the identification of this important distinction between helpfulness and cognitive authority that warrants further research in other contexts.

Individual Differences and the Construction of Individual Authority

Pregnant women used several forms of personal positioning to validate or contest the authority of information sources. They sometimes relied on themselves as cognitive authorities, using their own reasoning, bod-

ies, or experience as evidence against which to test the authority of
another source. Mandy's observations led her to dismiss the authority
of an ultrasound technician. "Actually, when I was pregnant with my
second [child], Jake, I just got the tech to, guess what she thought [the
sex was], and she thought he was a girl so I knew that [the opinions
of ultrasound technicians were subject to error]." Stacy described her
reasons for cutting back on physical activity in terms of the authority
of her body: "I firmly believe that your body will tell you."

When managing the interest of their own selves as individuals,
women did not necessarily try to minimize their own stake in some
debate. Rather, they often drew on their category entitlement as an
individual and emphasized their individual differences or their own
opinion or perspective to downgrade the very importance of factual
truth as a criterion for authoritativeness. In this way, stake took on an
enhanced importance and issues were constructed not as absolutely
right or wrong but as contingent. Participants used their individuality
to change what Wilson [2, pp. 16–18] called "closed" questions into
"open" questions.

Constructing an area of knowledge as contingent or open allows that
different people may legitimately have different opinions. There is no
fixed right or wrong, but there is a "best for me." Women used a prac-
tice that I call "drawing from a range of scripts" selectively to accept
or reject other people's advice or experience as applicable for their
own situation. Several women described occasions on which they
picked and chose from a variety of options. Karen received conflicting
advice on nutritional supplements from her doctor and from a pharma-
cist who was also a mother of twins: "I realized that it's a grey area.
And I have to do what I can do. . . . So I listened to both of them, and
I tried her advice, I tried his advice, and [laughs] none of them exactly
worked for me. So I'm trying to stay within the parameters that both
of them talked about." Lynn found a book written by five mothers of
twins to be very useful "cause they all had different experiences."
Women used their own individual differences to justify reserving judg-
ment on the helpfulness or authority of other people's stories and to
explain the limited transferability of their own or anyone else's experi-
ences. Jacquie was not bothered by her neighbors' stories of sleepless
nights: "I just think, like, [laughs] that was their experience, and we'll
have our own experience." Finally, Gayle recognized the limits of her
own expertise: "I'm the parenting expert for *me*. I don't know about
anybody else's family. I don't know what's going to work for them. I
don't know what their temperament is like." By revealing the flexibility
of participants' accounts of individual authority and describing the
ways in which they moved easily between authority claims based on

shared (moral positioning) and subjective (personal positioning) criteria, constructionism demonstrates the complexity of participants' cognitive authority claims.

Conclusion

Although, as Gardner predicted [65], there is evidence that pregnant women "take seriously and take up" the rhetoric of risk and endangerment to enhance the category entitlement of biomedical authoritative knowledge, participants themselves took up representations of authority in a wider variety of ways. Specific varieties of broadly accepted "authoritative knowledge," such as biomedical and experiential forms, were not necessarily sufficient to constitute an ascription of "cognitive authority" as it was developed, presented, challenged, and accepted in a conversational interaction. As others have found [14, 74], placing experiential knowledge at the center of discussions does not necessarily require the exclusion of biomedical authoritative knowledge in pregnancy contexts. Rather, participants in conversation create very flexible and versatile descriptions of cognitive authority to suit the needs of the interaction. Tuominen, Talja, and Savolainen observed that "communicating is always a two-way process, taking place between two or more human beings sharing the same conversation space. Knowledge (about reality) [or indeed, cognitive authority] is a linguistic and social product created between people, in conversation and communication, not in the hidden recesses of individual minds" [1, p. 278].

Constructionist discourse analytic methods are particularly appropriate for identifying the specific strategies used by participants in creating their cognitive authority descriptions. Using Potter's [9] focus on fact construction enables researchers to bring an increased sensitivity to the study of the discursive elements present in representations of cognitive authority. Identifying the forms of positioning [10] used in descriptions of the authority of information sources and understanding the relationship of such forms to representations of authoritativeness (both "cognitive authority" and "authoritative knowledge") can enhance our understanding of the role of context-specific factors in authority descriptions.

Finally, a constructionist perspective draws the researcher's attention away from the constructivist understanding of discourse "as a window to the minds of the informants. When data elicited by interviewing or asking the informants to think aloud is set under the analytic microscope, the researcher is believed to be able to differentiate the linguistic expression from the underlying cognitive or mental model (or from

knowledge structures)" [1, p. 276]. In constructionism, attention is focused on the dialogic nature of the researcher/participant interview as a localized discursive encounter, one in which each member is using a variety of discursive strategies to present herself or himself in particular ways to the other. Working within a constructionist paradigm forces the researcher to attend to, as Jacobs urges, the assumption "that all action, including that associated with research, is indexical, that is, it is concerned with the practical conduct of the interaction at hand. This . . . constitutes the research fieldwork itself as such an interaction, rather than as an information gathering exercise" [54, p. 1123].

I join Tuominen, Talja, and Savolainen [1] in inviting LIS researchers to explore constructionism as a research paradigm. In adopting constructionism, researchers open themselves to new and potentially illuminating discourse-based interpretations of familiar LIS concepts and gain an understanding of the ways that cognitive and system processes are situated within social interaction.

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