Over the past two decades, the topics of change and the effect of change on society have been ubiquitous and discussed at length in social and cultural commentaries as well as in the literature of most professions. We struggle with all sorts of issues related to change—what it is, how it is occurring, the accelerating rate of change, and its consequences for professional effectiveness. In 1996 Karl Weick published a particularly interesting article addressing change and the need to know when to “drop the tools” of one’s profession if they become ineffective. Although he was writing at the time specifically to the field of administrative science, his points are pertinent to other professions as well.

Weick tells the story of forest firefighters in two different situations where their failure to drop heavy firefighting tools slowed them down in the face of dramatic, exploding wildfires, to the degree that they were unable to outrun and thus survive the fires. Weick explores the inability of the firefighters to drop their tools when confronted with situations of rapid change and suggests that an analysis of the incidents can serve as a framework for professions as they face issues of change. Weick uses a broad definition of tools and includes such tools as professional practices and patterns of thinking. Thus, from Weick’s analysis, “drop your tools” becomes a powerful metaphor that has value in a variety of settings, among them the field of library and information science. For our study, Weick’s metaphor of tool dropping provided an excellent backdrop for analyzing the flexibility and adaptability of the information profession.

The “Drop Your Tools” Metaphor

Tools are essential to fighting fires. Heavy axes, shovels, chainsaws, and portable water tanks and hoses are all essential forest firefighting tools. Firefighters also frequently travel with radio harnesses, camelback water packs, and heavy external protective clothing. In his article, Weick discusses two historic fires, the Mann Gulch (Montana) fire in 1949, and the South Canyon (Colorado) fire in 1994, where thirteen and fourteen firefighters respectively lost their lives because they ignored the command to drop their tools and thus were unable to outrun the escalating fires.

Weick then explores the idea of “drop your tools or you will die,” making connections to the viability of organizations. Ultimately, he concludes that the lack of flexibility and adaptability exemplified in dropping one’s tools in a quickly escalating forest fire can be compared to a lack of flexibility in a professional environment of rapidly escalating organizational and market change, with the same potential for serious consequences.

Weick proposes ten explanations for the resistance to dropping one’s tools based on an analysis of the stories told by each of the fire’s survivors. Following is a summary of these explanations and their relevance to organizational cultures and professions. This summary serves as a foundation for our study about responses to change in the library and information science profession.

Listening

In his description of the forest fires, Weick notes that the intense volume of the raging fires may have prevented the firefighters from hearing the command to drop their tools and run. The broad parallel to the professions is that the dissonance and confusion that often accompanies situations of rapid change may obscure the ability to “hear” critical signals for change.

Justification

Weick proposes that without a clear reason for change, people continue to operate in familiar patterns. In the historic fires that Weick examines, the group leaders who gave the command to drop tools did not give supporting reasons for their command. “What was clear to Dodge [the group leader] may not have been clear to the other 15 . . .” and, in South Canyon, “no one told them that they were at the head of any onrushing fire . . ..” It also was possible that their own visual perspective prevented them from seeing all aspects of the situation. The implication is that in situations of organizational or professional change, a basis or rationale for altering familiar modes of operation should be provided. In other words, a justification for change needs to be conveyed.

Trust

In the historic examples the firefighters had not worked together as a group for very long. The combination of hear-
ing unusual orders (to drop their tools) and having those orders come from a section leader with whom a basic level of trust had not yet been established may have worked to create a situation of generalized resistance and doubt. In practice, the implication is that those involved in situations where significant change is present must trust their leader(s) so that effective responses to changing conditions can occur.

Control
Keeping one’s familiar tools helps to retain a sense of control over a frightening situation. In the firefighters’ cases, the tools were likely one of the few familiar elements in a situation of growing unfamiliarity, and their tools had always helped in past situations. Knowing what to keep and what to drop is essential for success. Yet, the tried-and-true tools that have worked in past situations may not be the most effective or appropriate tools in a new situation. The tendency to rely on what is most familiar, even when it may become a hindrance, is also common in organizations and professions. Weick warns against maintaining a false sense of control.

Skill at Dropping
Knowing how to drop one’s tools is also essential during times of rapid change. Weick acknowledges the apparent absurdity of the statement “People may keep their tools because they don’t know how to drop them.” However, the point is very well taken in most professions. Indeed, do we know how to identify tools that may be too heavy to carry forward in a rapidly changing environment?

Skill at Replacement Activity
In the same vein, we tend to hold on to what we “know” works, especially in an unknown and uncertain environment. We usually do not get much practice in creating innovative tools to replace older tools. In Weick’s example the section leader of one crew lit an escape fire, which was a puzzling, unrecognized practice for many of the firefighters. None of the firefighters followed the section leader to a newly created area of protection. Risk taking, then, may be an essential skill in learning to effectively drop one’s tools, because it requires one to adopt what is likely to be a new, untested, and unfamiliar tool.

Failure
Psychologically speaking, dropping one’s tools may be seen as an acknowledgement of failure. Faced with the alternative of leaving their tools behind or dying with the fire, some people may opt to hold on to their tools and face the fatal consequences. Within any profession, we must learn to hold on to what is essential but also develop the capability to move forward when necessary without the tools that may have successfully brought us through a previous era.

Social Dynamics
Weick refers to O’Gorman’s theory of pluralistic ignorance, which occurs in situations where individuals do not share their knowledge or feelings with one another, and thus do not learn essential information from one another that might indeed confirm the presence of a potentially dangerous situation. Weick comments that “the actions of the last person in line, the one who feels most intensely the heat of the blowup, are observed by no one, which means it is tough to convey the gravity of the situation back up to the front of the line.” Without a common openness to dialogue and conversation within organizations, valuable information confirming the need for action may be lost.

Consequences
In situations of change, people need to see that dropping one’s tools can make a difference. In the firefighters’ case, “changes on the order of eight or more inches covered per second” may have made the difference between death and survival. Thus, even small, incremental changes may be significant. The cumulative effects of incremental change should be acknowledged and even celebrated in an organization undergoing shifts in practice and function.

Identity
Weick is interested in the “distinctive trademarks” that define an organization or profession. As he notes, “Firefighting tools define the firefighter’s group membership, they are the firefighter’s reason for being deployed in the first place, they create capability . . . and they are meaningful artifacts that define the culture.” He encourages us to consider our own professional identity and whether our identity is defined by our values and essential functions rather than by the heavy tools that may actually encumber us.

The Metaphor Applied to the Library and Information Science Profession
The purpose of our study was to examine Weick’s conclusions in light of changes facing the library and information science profession. Some of the issues that the profession has wrestled with in recent years reflect this climate of change and lead us to question whether we might be encumbered by our traditional tools. Just a few of these issues include:

- The “L” Word—Is the term library still relevant and appropriate?
Outsourcing—Which functions and services do librarians and information specialists perform that are essential to defining our profession?

The MLS—Is the MLS degree the best (and only) route for professional preparation?

Library As Place—How is technology, and the Internet in particular, redefining the library’s role in a community?

Core Competencies—What set of core competencies is necessary for work in libraries and information centers?

These questions and many others have been a constant part of our professional conversation in recent years. While our study did not focus specifically on these or other particular concerns, the impetus for our study and a desire to create a forum for the discussion of change in the information profession came from the prevalence of such questions.

These questions also highlight the influence of evolving economic, social, cultural, and political conditions on libraries, and any discussion about the library profession and the future of libraries should acknowledge the complex and interdependent set of factors at work. For our study, we were particularly interested in examining the capacity for change within this context. We focused on the tacit knowledge of seasoned leaders in our profession to increase understanding about the nature of change in libraries and the barriers to and opportunities for effectively addressing and managing change.

Methodology

Focus group sessions with library leaders provided a means for generating rich discussions about their perceptions, attitudes, and feelings related to change. The participants in our study were Illinois library managers and administrators who are recognized leaders and innovators in the profession. The librarians were selected using criteria that reflect innovation and leadership, including such identifiers as being recipients of professional awards, recognition in the professional literature for innovative services or programs, and grant funds for developing model programs. The thirty-four librarians identified as potential participants for the study received letters inviting them to participate in a focus group regarding their experiences as library managers and administrators.

Five focus groups were conducted to gather data for this study. The groups ranged from three to seven participants, with a total of twenty-five participants in the final study. The participants represented all types of libraries—academic, public, school, and special—as well as library cooperatives and associations. The majority of the participants (75 percent) were directors of their respective organizations and institutions, and the remaining 25 percent were department or unit heads. The focus group sessions were held in a meeting room on the Dominican University campus. In each session the participants were asked a predefined series of open-ended questions designed to generate discussion about opportunities for and barriers to change in libraries (see figure 1).

The two principal research investigators conducted the sessions. One research investigator posed the questions and facilitated the discussion, while the second recorded key points from the discussion on a flip chart. Each focus group session lasted approximately two hours. During the sessions, every effort was made to avoid using Weick’s language or any indication of his findings in the questions and discussions. Would patterns nevertheless emerge that correspond with Weick’s conclusions and support the “drop your tools” metaphor? If so, the metaphor could offer a fresh perspective and serve as a powerful tool for understanding professional change and the current organizational culture of libraries.

Findings

In the focus group discussions, several kinds of successful organizational changes were mentioned by the participants, including:

- moving from a library-centered to a patron-centered approach to providing services;
- mediating broad organizational change, which had direct implications for staff workflow and responsibilities;
- initiating construction and renovation projects;
- establishing new partnerships locally and regionally with community groups and with other libraries;
- creating new programs and services centered on diversity;
- guiding the implementation of ongoing technological adaptations; and
- changing staff attitudes about evolving technologies from a reactive stance to a proactive stance.

What do you consider to be one of your most successful change initiatives?
What made the initiative successful?
What conditions existed that signaled to you that change was needed?
What challenges or barriers to change did you encounter?
At times the profession has been criticized for not responding or adapting quickly enough to the changing needs of our users. What professional practices or patterns of thinking do you think might contribute to this type of criticism?
What other issues related to change and innovation need to be noted that we have not yet addressed?

Figure 1. Focus Group Questions
These examples of change and others that were mentioned by the participants highlight the complex mix of external and internal organizational factors that often come into play during periods of transition.

After completion of the focus group sessions, the participants’ comments were reviewed and coded using Weick’s ten explanations as a framework for analysis. We were particularly interested to see if patterns emerged that corresponded with the explanations but that also reflected a different approach, one that exhibited effective leadership behavior during a time of change. For example, Weick indicates that the failure to drop one’s tools may result from the inability to separate “noise” from important signals that indicate the need to change. When we analyzed the focus group data, we looked for patterns that reflected the library leaders’ abilities to “listen” and distinguish an important “message” from insignificant “noise.” As indicated in the discussion that follows, Weick’s explanations indeed proved very effective as a framework for examining change in libraries and the profession in general.

Listening for Signals to Change

The ability to listen for signals that indicate the need to drop or replace ineffective tools is essential; however, during times of rapid change, distinguishing important signals from inconsequential noise can be particularly difficult. The librarians who participated in our focus groups noted the importance of listening and looking for signs of change, and they highlighted three distinct mechanisms to enhance their ability to “listen” for critical messages: take a proactive stance, focus on the user community, and recognize the potential influence of external factors on libraries.

As a group, the library leaders are proactive rather than reactive. In fact, they saw a proactive approach as essential for responding to change. They frequently mentioned the importance of staying in touch with the needs, interests, and preferences of their respective user communities through continuous needs assessment. In addition, the librarians are involved in activities and events in the communities in which their libraries operate.

A proactive stance was also apparent in the emphasis that the librarians placed on listening to their user communities and then developing programs and services in response to the needs and interests heard. As one librarian commented, “It’s important to listen to stakeholders and respond with solutions.” Rather than developing services and programs with the hope that the user community will then see their value, the librarians respond directly to users’ expressed needs and interests.

Finally, the focus group participants noted the importance of understanding the context in which their libraries operate. They do not see the library as operating in isolation, but rather they see it as part of a larger social, cultural, political, and economic context. The potential influence of these external factors on the library needs to be recognized. The following comments by the focus group participants illustrate this perspective: “Sometimes it’s hard to step outside our environment and look at what we might need to change” and “We need to be continuously aware of shifts and cycles with legislation; it requires scanning the environment and being attuned to these factors so that we can respond.”

In sum, the library leaders are continuously and actively “scanning the environment” for important messages that may signal reasons for change, and they are consciously attuned to the needs and interests of their communities.

Providing a Rationale for Change

Weick notes in his article that many of the firefighters were given no clear reason to drop their tools. The need to change might seem obvious to the leader—that is, the person likely to have the most information—but without an adequate rationale for change, people tend to persist in ways that are familiar. In our focus groups, the library managers discussed the importance of planning and “doing the necessary homework” before implementing change. The involvement of library staff and external stakeholders is seen as critical to successful change, because through a participatory planning process, the necessity for change becomes more apparent to those involved. One librarian noted, for example, that change was expected when he was hired for a position, but he felt it was important to gather the necessary evidence and involve staff before actually implementing any changes.

To provide a rationale for doing things differently, one needs to be able to present cogent, persuasive reasons. Several of the focus group participants recognized their ability to synthesize, articulate, and communicate a necessary course of action during a time of change. This skill is important, because a clear rationale and framework for change from the leader give clarity to a situation that might otherwise seem murky and uncertain.

Promoting Trust

In addition to having an ability to articulate reasons for change and making the process of change comprehensible to those involved, the library leaders strive to develop strong relationships among the staff in their libraries and to promote an atmosphere of trust and open communication. These leaders consider it essential to create opportunities for staff to discuss change and the potential intended and unintended consequences that may result. By acknowledging concerns and difficulties associated with change and providing opportunities to discuss concerns, they promote an atmosphere of trust.

An organizational culture of support and trust also fosters collaboration, which the library leaders view as essential. As one participant put it, “A collaborative environment facilitates change and generates creativity.” The
library leaders consider it to be their responsibility to create an atmosphere of trust and, thus, an organizational culture more conducive to successful change.

**Dropping Tools That Hinder Change**

Effective change requires an awareness of the tools one uses everyday and a willingness to drop tools that may be familiar and trusted but that may actually be an encumbrance. Rather than hold onto tools that simply give a sense of control, the librarians recognize the necessity of dropping tools that are no longer appropriate or that may actually prevent change. They listed specific strategies and approaches to counter the tendency to hold on to patterns and practices that are familiar but not necessarily productive, including the following:

- **Use open versus closed definitions of library services and functions**: In general, the librarians prefer maintaining open definitions of library services and functions, because this approach assumes the potential, even the likelihood, that change will occur. In other words, it is assumed that definitions and terms undergo change and evolve over time. The terms reference desk and youth services were two examples provided to illustrate where simple changes in traditional library terms may respond to new user preferences and perspectives. Alternatives to reference desk might be help desk or information desk. Likewise, kids' library might be preferable to youth services.
- **Counter peer pressure**: One of the most frequently mentioned barriers to change was staff negativity and opposition to modifications in organizational practices. The focus group participants discussed the importance of involving all staff in change initiatives to help counter unproductive negativity.
- **Foster public relations**: At times, expectations or traditional perspectives held by individuals and groups outside the library may exert undue control and hinder change. A strong public relations and library awareness program is necessary to curb the potential negative influence of outside groups.
- **Challenging negative influences of the profession**: The profession itself may also hinder change. In the classic work *The Structure of Scientific Revolutions*, Thomas Kuhn describes the resistance to change inherent in each discipline of study or professional community as one paradigmatic view is replaced with another. Each profession has a stake in the status quo, and frequently resistance to new ideas comes most forcefully from within a strong professional community.

An added dimension to Kuhn’s rational view of the nature of revolution within a discipline is the emotional attachment that librarians may feel toward their work. As one participant put it, “We fall in love with libraries at a certain point in time, and we are frequently resistant to letting go of that idealized view of the profession.” The beautiful old card catalogs were mentioned as an example, even though we “know” electronic record storage and retrieval is tremendously more effective. Another participant reasoned that, by nature, we are a profession that includes preservation as one of our core functions. We don’t make changes quickly or without considerable analysis. Frequently, professional staffs with a great deal of organizational longevity feel these attachments most keenly and may offer the strongest resistance to innovations in the library.

**Unlearning Behavior (and) Adopting New Tools**

Two of the reasons that Weick presents for resisting change are closely related: in order for someone to adopt new behaviors and tools, he or she first needs to unlearn familiar, but ineffective, behaviors. This ability, probably more than any other, is central to successful change. To test the efficacy of familiar, trusted patterns of professional practice, the librarians often use periods of change as opportunities to reconsider traditional patterns of service and practice. Building and renovation projects were frequently mentioned as situations that provided opportunities to rethink services and functions of the library. Another example is the resignation or retirement of a staff member, which creates an opportunity to take a renewed look at the library’s workflow and practices. Rather than simply fill a vacant position, the library can reexamine the roles and responsibilities associated with the position in light of potential changes and needs.

Finally, contacts and partnerships with individuals and organizations not within the library’s familiar circle of operation were mentioned as ways to introduce new ideas and prompt discussion that may lead to necessary change. The librarians often read literature and attend conferences outside the library and information science profession to provide a fresh perspective on their work. The emphasis on developing outside partnerships and looking at professional practices beyond librarianship were mentioned repeatedly, indicating the importance that successful library leaders place on breaking away from insular practices and thinking.

**Supporting Risk**

Any change involves the potential for mistakes and even failure, but the librarians who participated in our focus groups value risk and consider it an essential element of leadership. Not only do they see risk as an integral part of their own jobs, they also think it is a critical skill for their staffs to learn and practice. The librarians discussed the necessity of creating an organizational culture conducive
to risk taking, one that incorporates many of the aspects associated with the promotion of trust noted earlier.

Several of the librarians also mentioned that it is helpful to take time for reflection during periods of change. Mistakes occur, and reflection through discussion can provide an opportunity to learn and a means for self-correction. The focus group participants also noted the value of discussing the challenges associated with change, and one participant stated that it is important for librarians to share not only the successes but also the failures through professional publications and at conferences.

Countering “Pluralistic Ignorance”

To avoid tunnel vision and a lack of shared information that may be crucial to effective change, the librarians noted strategies to increase communication. Staff time is set aside on a regular basis in many of their libraries for discussion and problem solving related to change initiatives and the consequences. Supportive staff relationships and a solid network of communication are valued and fostered, and are not viewed simply as a by-product of working together. Ongoing dialogue is infused into the everyday operations of the library.

Focusing on the “Big Picture”

Change within an organization or a profession is usually not a cataclysmic event. More likely the changes occur in small steps, and progress may not be easy to see. Staying focused on the big picture is crucial, and small steps toward the goal should be acknowledged and valued. One librarian specifically commented on the importance of regular celebrations to acknowledge positive incremental change.

An aptitude for seeing the big picture also encompasses an ability to forecast consequences. One librarian, for example, said, “I had a clear view of what was the potential result.” In other words, successful change requires a capacity to see how the various pieces will fit together to form the whole.

Creating New Tools and New Identities

In the focus group discussions of change, the day-to-day work of library staff was distinguished from the strong values that imbue the profession. Many of the participants felt that the core values of the profession remain constant, even in times of rapid change, but the ways in which we transform these values into programs and services may shift. Equitable access to information, for example, remains an essential ideal of the profession, whether in a print or a virtual environment. In brief, the values that hold the profession together are not questioned, but the effectiveness of our tools in practice should receive close scrutiny and be part of our ongoing professional conversation. To again defer to Weick, knowing what to keep and what to drop is essential for success. Several librarians also felt that a change in the public’s perception of the roles and functions of a library needed to accompany shifts occurring within the profession.

Conclusions

Weick’s conclusions proved very effective as a framework for understanding and addressing barriers to professional and organizational change. It is particularly interesting to note that the study’s participants spoke consistently in positive terms about successful change mechanisms. In group after group the library leaders used positive language, making few references to barriers. For example, when questioned specifically about “barriers,” participants’ responses included positive words such as “opportunities,” “support,” and “flexibility” rather than repeating the word “barrier.” This difference, while subtle, was a pattern that emerged in sharp relief as we reviewed the notes from the various focus groups. Clearly, leaders spoke in terms of success. Where failure occurred, it happened within the context of the road to success and was not viewed as an endpoint. Indeed, in many cases participants spoke of mistakes as important steps in an ongoing process of positive evolution. In the words of one participant, “Failure is simply an opportunity to grow. It frees you from trying to be perfect!” On numerous occasions participants spoke proudly about librarians’ ability to change. “Librarians are remarkable in their ability to adapt.”

A particularly interesting finding was the similarity in their comments regarding various aspects of change. Even though the types and sizes of the libraries and library organizations varied widely, the themes and patterns that emerged from the discussions were consistent among the participants. In other words, type of library or size of library did not seem to influence, to any great extent, the approach or response to change.

Another clear pattern was the library leaders’ uniform understanding of and passion for traditional values of the information profession. The librarians frequently emphasized the importance of equity of access, providing information and information services to their specific constituencies, and librarianship as a service profession. References were made to the importance of entrepreneurial behaviors within a service context; even librarians in
corporate and commercial environments saw their niche as information service providers. References were made consistently to preserving the essence of library and information services in a democracy through stewardship of the human record, support of education, preservation of intellectual freedom, and service to all populations.

Weick’s metaphor of tool dropping proves to be a fascinating and highly instructive model for analysis of professional change. Library leaders, as evidenced from an examination of our focus group discussions, exemplify positive behaviors that counteract barriers to change. Understanding Weick’s metaphor is thus an excellent tool for further use in the information profession as we address ongoing radical change and as we consider why professionals can be slow to change and slow to recognize impending dangers to professional survival. In addition, the attitudes and skills of these successful librarians provide powerful instruction for positive leadership.

To continue the analysis, additional groups should be studied. If indeed successful library managers can see the value in dropping encumbering tools, can the same be said of information professionals in frontline jobs? What are the perceptions of new recruits to the profession, and how do their experiences compare to those of seasoned managers? And, perhaps most crucial, do information professionals in general have a clear sense of the distinction between important professional values as opposed to the tools of practice? Are there behaviors evidenced in other professional groups that cause alarm about successful change toward survival?

Our study of a small group of library leaders is a beginning point for further analysis. As Weick indicates, “Remembered values . . . need to be modernized rather than sacrificed.”11 Our profession must recognize the heavy tools that might encumber us as we move toward new practices and functions, ones which will help us escape the wildfires of rapid societal change.

References
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3. Ibid.
4. Ibid., 306.
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8. Ibid.
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