The Story Behind an Organizational List: A Genealogy of Wildland Firefighters' 10 Standard Fire Orders

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To invigorate research on the dialectic between lists and stories in communication, this study recommends adding context back to text by focusing on the enduring problems these forms are summoned to solve. A genealogy of one significant organizational list, wildland firefighters' 10 Standard Fire Orders, shows how a list's meaning resides less on its face and more in the discourses surrounding it, which can change over time. Vestiges of old meanings and unrelated cultural functions heaped upon a list can lead to conflicts, and can make the list difficult to scrap even when rendered obsolete for its intended purpose. Reconciling these layers of meanings and functions is thus not a technical problem but rather a rhetorical one. Implications for communication research are addressed.

Keywords: Organizational Communication; Dialectic of List and Story; Genealogy; Organizational Rhetoric; Wildland Firefighting

The guest list. The to-do list. The Ten Commandments. The 12 Steps. The short list of candidates. The pilot's checklist. A-list celebrities. The FBI's Most Wanted List. *U. S. News & World Report* list of Best Colleges and Universities. *The Book of Lists.* Craisglist.org.

Everyday lists like these and others shown in Table 1 play significant roles in our lives, and scholars have begun to study the list and its relationship to communication in a variety of contexts: communication theory (Hawes, 1976), interpersonal

Table 1 Everyday Lists in Various Communication Contexts

Personal and Interpersonal Context
- Friends, family, and relationships
  - address book, guest list, little black book, sh*t-list
- Hospitality
  - guest list, recipe, wine list
- Personal organization and household
  - to-do list, shopping list, honey-do list

Recovery and personal growth
  - personal goals and objectives
  - The "12 Steps"

Group and Institutional Context
- School and learning
  - alphabet, dictionary, school supply list, times tables
- Medicine
  - 4 Ps of First Aid, ABCs of CPR, DSM III
- Religion
  - Dharma, The Five Pillars of Islam, The Ten Commandments

Organizational context
- Business records
  - distribution list, inventory list, packing list, price list, recall list
- Employment
  - help-wanted ads, interview schedule, interview short list
- Workplace
  - pilot's checklist, code of conduct, meeting minutes, routing list

Cultural and Technological Context
- Crime and law enforcement
  - FBI's Most Wanted List, hit list
- Marketing
  - mailing list, no-call list
- Internet lists
  - Angie's List, Craigslist.org, email listserv
- Leisure and popular culture
  - A-List celebrities, Letterman's Top 10, nominee list, *Schindler's List*

Meta-lists (lists generated by others for our use)
- Lists of lists
  - Cyndi's List (genealogy), *The Books of Lists*, *Harper's Index*
- Financial rankings
  - bestseller lists, Fortune 500, top billionaires, top companies
- Lifestyle rankings
  - best colleges and universities, best places to live, best places to work
- Travel and tourism rankings
  - 7 Wonders of the World, best places to stay, *Zagat Survey*

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communication (Baxter, 1993), discourse analysis (Schiffrin, 1994), organizational communication (Browning, 1992), health communication (Eisenberg, Murphy, Sutcliffe, Wears, Schenkel, Perry et al., 2005), and rhetoric (O'Banion, 1992), to name a few. In addition to these explicit studies of lists, recent critical and poststructuralist studies have implicitly called attention to lists as tools that help to accomplish disciplining in larger discourses of control (e.g., Deetz, 2001b; Nadesan, 1997; Papa, Auwal, & Singhal, 1997).

Despite these explicit (and implicit) examinations of lists in everyday life, the study of lists in/as communication has never quite coalesced into a coherent and productive research area. This article proposes that such research may have stalled because it has focused too much on the list as *text*, without sufficient examination of the *context* within which the list is made meaningful. In order to know what a list means and how it might function in a particular context, it is also important to examine the enduring problem (Deetz, 2001a) to which the choice of a particular list made "perfect sense" as a solution at the time it was adopted.

Furthermore, this article argues that the meaning of a list exists less in the items on its face and more in the discourses surrounding it. Thus a search for the true meaning of a list requires a search for the story behind it. Adding back that context can, in turn, help to invigorate research on lists in/as communication.

To study both text and context of a list, this article presents the genealogical method for studying a list, or an historic analysis of authorizing discourses that shows how a list has come to mean what it has for a particular community. The article also presents an actual genealogy of one significant organizational list, wildland firefighters' 10 Standard Fire Orders, although the method could be applied to a variety of communication contexts. Most importantly, the analysis begins not with the list itself but with the enduring organizational problem to which a list, at one time, came to be viewed as a good solution: how to achieve control over people in a distributed context where they are working in a dangerous occupation that requires individual judgments in emergency situations in order to keep fires small and to keep crews safe from harm.

The analysis shows how in organizational contexts, although a list may start out as an ostensibly good solution to enduring organizational problems, its very existence can give rise to new problems to address. One of those problems stems from the fact that a list can be authorized by a variety of different managerial ideologies over time, such that the very same list of items can come to mean vastly different things at different points in time. Furthermore, vestiges of old meanings can linger; thus, unearthing these old meanings can inform present day conflicts over the usefulness and appropriateness of a list. Moreover, a list can become imbued with many cultural functions unrelated to its original purpose that can make it difficult to modify or jettison even when the list is regarded as obsolete, and even when numerous other technical solutions have emerged to supplant it. In the case of the Fire Orders, after years of controversy and numerous proposed alternatives, it took the right *narrative* to help the community to change the list. Even then, the items on the list were only conservatively reordered. Ultimately, then, reconciling a list's multiple meanings and cultural functions is a *rhetorical* problem, not a technical one.

The article begins with a description of wildland firefighting and the role of the 10 Standard Fire Orders in that occupation. Then the organizational communication literature is reviewed as it relates to the problem of organizational control in distributed environments (particularly forestry), and to lists as organizational communication. Next, the genealogical method is introduced, and a genealogy of the Fire Orders is presented. At the conclusion of the article, the discussion addresses implications of the

study not only for research on the dialectic of list and story in organizational contexts but also for understanding lists in/as communication more broadly.

Wildland Firefighting and the 10 Standard Fire Orders

Fighting fires in national, state, and private forests is called wildland firefighting, as a way to distinguish it from structure firefighting in cities and towns, where different priorities, different tactics, and different equipment are used. Most forests have their own wildland fire crews, but when fires outgrow the capabilities of local resources, crews and equipment are dispatched from an interagency network that is centralized at the National Interagency Fire Center (NIFC) in Boise, Idaho. At the height of the summer fire season, up to 20,000 firefighters can be deployed on any given day (National Incident Information Center, 2006).

Because firefighters may hail from different federal, state, and local agencies, the National Wildfire Coordinating Group (NWCG) oversees standards for training and qualifications. As part of the basic firefighter training for initial "red card" certification, firefighters learn a list called the "10 Standard Fire Orders" (Fire Orders). In addition to completing workbook exercises and passing test questions on the Fire Orders, wildland firefighters are given stickers printed with the Fire Orders to paste into their helmets, as well as handbooks and pocket guides that contain the Fire Orders on the front or back covers. As will be shown below, there are 10 items on the list, but this is not the only reason that they are sometimes referred to as the "10 Commandments" of safe firefighting (Pyne, Andrews, & Laven, 1996).

The original Standard Firefighting Orders, shown in Table 2, were introduced in 1957. Since then, the list has been revised exactly twice: In 1987 the items were reordered to spell "Fire Orders," in order to aid better memorization, as evident in Table 3. Then, in 2003, the list was returned to roughly its original ordering in an attempt to get "back to basics," as shown in Table 4. However, the seemingly stable surface of the Fire Orders as a list belies vast shifts in meaning and resulting controversies about the list that have taken place over its 50 year history.

Table 2 Standard Firefighting Orders (1957–1986)

1.	Keep informed on FIRE WEATHER conditions and forecasts.
2.	Know what your FIRE is DOING at all times—observe personally, use scouts.
3.	Base all actions on current and expected BEHAVIOR of FIRE.
4.	Have ESCAPE ROUTES for everyone and make them known.
5.	Post a LOOKOUT when there is possible danger.
6.	Be ALERT, keep CALM, THINK clearly, ACT decisively.
7.	Maintain prompt COMMUNICATION with your men, your boss, and adjoining forces.
8.	Give clear INSTRUCTIONS and be sure they are understood.
9.	Maintain CONTROL of your men at all times.
10.	Fight fire aggressively but provide for SAFETY first.

Every Forest Service employee who will have firefighting duties will learn these orders and follow each order when it applies to his assignment.

Source. McArdle (1957, p. 151).

Table 3 10 Standard Fire Orders (1987–2002)

1. Fight fire aggressively but provide for *safety first*.
2. Initiate all action based on current and expected *fire behavior*.
3. Recognize current *weather conditions* and obtain forecasts.
4. Ensure *instructions* are given and understood.
5. Obtain current information on *fire status*.
6. Remain in *communication* with crew members, your supervisor, and adjoining forces.
7. Determine *safety zones* and *escape routes*.
8. Establish *lookouts* in potentially hazardous situations.
9. Retain *control* at all times.
10. Stay *alert*, keep *calm*, *think* clearly, *act* decisively.

Source. National Wildfire Coordinating Group (1987, p. 18).

Table 4 10 Standard Fire Orders (2003–present)

Fire Behavior
   1. Keep informed on fire weather conditions and forecasts.
   2. Know what your fire is doing at all times
   3. Base all actions on current and expected behavior of the fire.

Fireline Safety
   4. Identify escape routes and safety zones and make them known.
   5. Post lookouts when there is possible danger.
   6. Be alert. Keep calm. Think clearly. Act decisively.

Organizational Control
   7. Maintain prompt communication with your forces, your supervisor and adjoining forces.
   8. Give clear instructions and ensure they are understood.
   9. Maintain control of your forces at all times.

If you consider 1–9, then
  10. Fight fire aggressively, having provided for safety first.

The 10 Standard Fire Orders are firm. WE DON'T BREAK THEM; WE DON'T BEND THEM. All firefighters have a Right to a Safe Assignment.

Source. National Wildfire Coordinating Group (2002).

Literature Review

This section reviews the organizational communication literature on control in distributed contexts, particularly in forestry, and literature that either explicitly or implicitly theorizes lists as organizational communication.

Control in Distributed Contexts

In his classic study *The Forest Ranger*, Herbert Kaufman (1960/1967) showcased the US Forest Service's ability to address the problem of control in a distributed environment. Kaufman detailed the Ranger's various administrative duties, including fire control and timber management. And although the *Forest Service Manual* had existed since the founding of the agency, he stressed that even the best strategies and policies rested "ultimately on the performance of the men[1] in the field" such that "in their behavior lies the secret of success or failure" (p. 56). Kaufman thus emphasized something more than compliance with policy; namely, the cultivation of their "will to

conform to preformed decisions" (p. 173) and "not because they have to, but because they want to" (p. 198). Pairing Kaufman's empirical observations with Simon's (1947/ 1995) theoretical observations about the decision premise, Tompkins and Cheney (1985) reframed this as a communication process: a rhetorical approach to control that was achieved through organizational identification.

The Fire Orders were created out of a similar need to achieve control in a distributed context, although in the more dangerous environment of wildland firefighting that relied on individual judgments in emergency situations. But just as the decision processes of Kaufman's Forest Rangers went well beyond the *Forest Service Manual*, the Fire Orders' role in protecting lives and natural resources also assumed a decision-making process that extended beyond the list. This decision process, in turn, depended upon certain assumptions about relationships among the individual, the group, and the organization, as well as the possibility of a list to mediate those relationships. As will be shown below, those assumptions changed to reflect the prevailing managerial ideologies of the times. In fact, the analysis of the second iteration of the Fire Orders in 1987 provides support for Bullis and Tompkins' (1989) empirical update to Kaufman's study, where they noted that waning identification was being supplanted by increased bureaucratization and specialization (see also Bullis, 1993).

Although this study is not focused on identification per se, the story behind the Fire Orders can nevertheless inform historic shifts in managerial ideologies regarding the presumed relationship among individuals, groups, and organizations, including the possibility of achieving control in distributed work contexts. Barley and Kunda (1992) define ideology as "a stream of discourse that promulgates, however unwittingly, a set of assumptions about the nature of the objects with which it deals" (p. 363). A managerial ideology of control in particular typically contains "objects of rhetorical construction" such as "corporations, employees, managers, and the means by which the latter can direct the other two" (p. 363). Because wildland firefighting is typically a government operation, the precise categories are different; nevertheless the same logic applies: managerial ideologies of control in wildland firefighting contain a set of assumptions about individual firefighters, their crews, and fire suppression[2] management, including the means by which the latter can direct the former two, including through the use of lists. These ideologies are not necessarily accessible by looking at the list itself. But they are evident by examining the discourses that surrounded the list at various points in time. To the extent that these ideologies have changed, different discourses have caused the list to mean different things at different points in time.

Lists in/as Organizational Communication

In organizational communication, lists have been classically understood as accomplishing instrumental control through techniques designed to remove individual idiosyncrasy from routine tasks (Edwards, 1979/1994; Taylor, 1911/1967), or as facilitating procedural control through bureaucratic rules that establish rational legal authority in organizations (Weber, 1947), apart from the rules associated with work

tasks. However, understanding lists as only achieving technical or procedural control may overlook other cultural functions that lists are called upon to serve well beyond their intended purpose.

Drawing upon structuration theory, Browning (1992) theorized that lists and stories actually *structure* organizations through communication by operating in dialectic with one another. (Nevertheless, since that time his work has largely been used to extend theorizing about stories—e.g., Barge, 2004; Clair, Chapman, & Kunkel, 1996—and not necessarily lists.) One exception is provided by Eisenberg et al. (2005), who recently examined the dialectic of list and story in hospital emergency rooms. They found that lists could be impediments to capturing patient stories and thus can affect the provision of care. While such research focuses on the text of a list and its potential effects, it does not necessarily account for context, or how that list came to be adopted as a sensible solution to an enduring organizational problem (Deetz, 2001a). Neither does it address how the meaning of a list may have changed over time, or the various disputes or controversies that may exist over the list's meaning by those subject to it.

Furthermore, existing work on lists and stories as organizational communication tends to be politically inert: it reflects, rather than exposes and scrutinizes managerial ideology. Although Browning (1992) had hinted that lists and stories in organizations may be influenced by larger discourses of power, he left this for others to theorize. To their credit, Eisenberg et al. (2005) also acknowledged that "there are political and rhetorical dimensions to the creation and use of lists and stories" (p. 409). However, because their study was focused on the effect upon patient stories and therefore the provision of health care, the authors did not examine the origins of those emergency room lists per se because it was outside the scope of that study.

Meanwhile, elsewhere in organizational communication, specific organizational lists are being examined as "technologies of the self," or modes of self disciplining in larger discursive formations (Deetz, 2001b). In a study of self managed work teams, Barker (1993), for example, revealed how a list of rules developed concertively by team members can exert more power than any manager could accomplish by enforcing a bureaucratic code. In an examination of the discourse of personality testing, Nadesan (1997) showed how a list of eight items has given rise to categories of personality that have become engrained in everyday conversation, such as "INTP" or "ESTJ," which influence understanding of self and other. In a multitheoretic study of control in a bank known for offering microcredit to the poor in the third world, Papa et al. (1997) demonstrated how a list tracking loan recovery pasted on the office wall struck fear in the minds of loan officers and pressured them to produce.

If it can be said that the study of lists and stories focuses on text to the neglect of context, and that the critical and poststructural studies focus on context to the neglect of text, perhaps both might be invigorated by an attempt to bring them closer together. A fuller understanding of the dialectic between lists and stories in organizations, and the functions of organizational lists in particular, may be achieved by taking the focus off the particular discursive form, and, following Deetz (2001a), reorienting to discourses surrounding enduring organizational problems. The recent

Sago Mine disaster, for example, illustrates an enduring problem for organizations that deal in dangerous work: how to accomplish "production" along with "protection" for the lives of organizational members (Reason, 1997). As Cooren (2004) has argued, texts have agency insofar as people use them to accomplish action in organizations. And, people in organizations orient to lists to solve what they perceive to be enduring organizational problems.

A genealogical approach to studying organizational lists can help to remedy these limitations, to potentially unite these perspectives, and to move the study of lists in/as communication in other contexts forward as well. Thus, just as simple stories can be analyzed for deep structure meanings (e.g., Mumby, 1987), a genealogy of an otherwise straightforward organizational list can illuminate contradictions, controversies, and conflicts surrounding its authority and use. The method is described in the next section.

The Genealogical Method

In the *Archaeology of Knowledge*, Foucault (1982) proposed the archaeological method for recovering the various discursive formations that have enabled and conscribed the limits of thought about a particular subject. However, to avoid the implication that such an analysis would be read as a progression of epistemes toward some logical end, in his later work Foucault (1990, 1995) emphasized *genealogy* to account for not only the existence of different epistemes but also the triggers that explain the movement from one discursive formation to another. Genealogy, therefore, incorporates archaeology but also accounts for power relations that may have given rise to changes in discursive formations.

The value of a genealogy is that it provides a "history of the present" (Foucault, 1982). Indeed, Ashcraft and Trethewey (2004) argued that in order to understand contradictions experienced in organizations, organizational communication scholars should conduct genealogies, or "close examinations of history—particularly the conflicted histories of organizational, industrial, and occupational cultures" (p. 174). By doing so, scholarship may even provide metadiscursive resources for members to reframe current conflicts (Ashcraft & Trethewey, 2004).

Methods

Over a century's worth of documents regarding safety in wildland firefighting, and the Fire Orders in particular, were collected for this genealogical analysis. Although the Fire Orders were the point of departure for this study, the interest was less in the features of the list per se and more in the discourses surrounding it, where members addressed the enduring problem of achieving control in a distributed yet dangerous environment that relies on individual judgments in emergency situations to keep fires small and to keep crews safe.

Data Collection

I undertook a systematic search for authoritative statements about wildland firefighter safety over the past century, and about the Fire Orders in particular.

Documents gathered include official reports and memos from 1903 to present, investigations of accidents and near misses from 1937 to present, and training materials from 1959 to present. Because the Fire Orders have recently been invoked in investigations of burnover fatalities, I also gathered recent accident investigation reports as another source of authoritative statements about the list. Many of these documents were readily available through libraries and agency websites, while others were obtained from archives with the assistance of forestry and fire sciences librarians, and from the personal libraries of veteran wildland firefighters contacted through personal communication.

In addition to these authoritative texts, texts that resisted or questioned official managerial perspectives, and those that proposed alternatives to the Fire Orders, were also collected. These include analyses and commentaries by academics, consultants, and practitioners including trainers, investigators, and other safety professionals. Sources for these statements included academic journals, paid consultants' reports, popular press articles, conference proceedings, and documents circulated among members of the wildland firefighting community on the internet. All told, the entire archive pertaining to safety contains over 500 documents, ranging in date from 1903 to 2007.

Data Analysis

After compiling the exhaustive archive of historic and contemporary documents related to safety in wildland firefighting, I read through the whole archive and identified the 50 or so documents that were most pertinent to this analysis; namely, documents that explicitly authorized, explained, resisted, or otherwise commented upon the Fire Orders, or even led to their development in the first place.

Placing the texts in chronological order, I divided the archive into four distinct eras: the time before the Fire Orders were developed (before 1956), and the periods between the three iterations of the list (1957–1986; 1987–2003; 2003–present). The goal was to identify the prevailing discourses that authorized the list during each era, in order to understand how the list was viewed as a sensible solution to the enduring problem of control described above. I also studied the dissenting views to understand what conflicts existed over the list during each era. Whenever the list was revised, I examined proffered rationales in order to understand how the previous list was viewed as deficient for addressing the enduring problem of control, including new problems its use had introduced, and how the new list would provide a superior solution for both. Finally, I organized the narrative so as to provide context for each era before analyzing each of the succeeding lists of Fire Orders.

Aside from the genealogical method, two other historic frameworks proved helpful for this analysis: Barley and Kunda's (1992) analysis of historic managerial ideologies of control from 1900 to 1990, which they demonstrated to alternate between normative and rational approaches; and Pyne's (1997) categorization of the eras of fire control in the United States from 1910 through the 1980s. They are brought into the analysis wherever they help to lend context to what was going on in either managerial thought or practice at the time.

The Story Behind the Fire Orders

After a disastrous fire called the Big Blowup of 1910, the fledgling Forest Service essentially received a "blank check" to address wildland fire on public lands (Pyne, 1997). Since the inception of this "industry," wildland firefighting organizations have faced an enduring problem which still exists today: how to keep fires small while simultaneously keeping everyone safe, but in a distributed and dangerous work context that relies on individual judgments made under emergency conditions.

Originally, this problem was managed through write-ups that appeared in Forest Service periodicals such as *Fire Control Notes*, where stories of successes and failures were shared. Success stories praised heroes like Ranger Urban Post, who had exhibited on the 1937 Blackwater Fire a seemingly "unconscious" ability to simultaneously control a fire while "providing a running accompaniment of a plan for the safety of the crew," thus limiting the fatalities in that tragic fire to only 11 (Division of Fire Control, 1937, p. 305).

Conversely, write-ups about failures shamed Rangers and others who either failed to control a fire or failed to keep a crew safe. One Ranger from Ocala, Florida, for example, pinned the blame for the growth of the 1938 Pleasant Flat Fire upon a fellow Ranger who he felt had been unable to "make efficient use of the manpower and equipment" available to him at the time (Headley, 1939/2003a, p. 21). However, the editor added sympathetically that the wayward Ranger should know that even the "big shots in fire control suffered from the same inability," but that this "should not deter him from seeking to be mentally prepared" for the next fire (p. 21).

In these early years (approximately 1937[3]–1956), the mode of control was substantive: If fire control and crew safety were achieved, then a Ranger would be singled out as a hero; if not, then he would be potentially ridiculed. Nevertheless, he would be offered the opportunity to become a hero next time. This was consistent with the "welfare capitalism" managerial ideologies prevalent in the era before 1955 (Barley & Kunda, 1992), which embraced the cultivation of personal growth on the job.

Unfortunately, relying on control through narratives meant relying on a relatively slow process of trial and error to facilitate crew leader judgments. Even though, like NASA's "Monday Notes" (Tompkins, 2005), the periodical was intended as a way for Rangers to share updates about fire suppression across the nation, *Fire Control Notes* was only published once a month. This was too slow for firefighters who faced intense and potentially deadly fires in the short span of a summer. Firefighters also started to express concerns that this mode of evaluation seemed at times to be capricious. As the Forest Service modernized into a national fire program in the 1930s and 1940s, particularly with the influx of workers from the Civilian Conservation Corps (Pyne, 1997), the agency began to bureaucratize. As a result, there came increasing calls for more "objective" standards for evaluation in fire operations.

For example, in one write-up, a Ranger from Mississippi complained that the same action that "merits commendation in hundreds of cases" could at other times be criticized as "poor judgment" based solely on the outcome of the fire (Headley, 1940/

2003b, p. 24). In that case, the Ranger proposed, it would be better to adopt a *rule* for everyone to follow in every case, and one that erred on the side of caution (p. 24). In short, a need was emerging for a tool that could help firefighters to develop good judgments in the field more quickly, and one that could apply "objectively" to most, if not all, situations.

10 Standard Firefighting Orders, 1957–1986

In 1957, Chief R. E. McArdle introduced the 10 Standard Firefighting Orders (Firefighting Orders), to be memorized and followed by all Forest Service employees who were assigned to fire duties (McArdle, 1957). This section explains how the original Firefighting Orders were developed, and how they came to be perceived as a good solution, not only to the original problem of control in the distributed and dangerous working environment, but also to new problems introduced by the narrative approach as discussed above.

"Coolheads" and "sinners." In 1956, the Inaja Fire killed 11 inmate crew firefighters in California. Yielding to public pressure, in 1957 Chief McArdle convened a task force to investigate ways to "reduce the chances of men being killed by burning while fighting fire" (US Department of Agriculture Forest Service [Forest Service], 1957). The task force conducted a trend analysis of fatal fires from the previous 20 years, paying particular attention to five fires where 10 or more firefighters had been killed at once. They identified 11 items that the worst fires had had in common, and referred to these as "sins of omission" by "men who know better" but who "just did not pay adequate attention" to small details when it mattered most (p. 8).

While their trend analysis could identify what the "sinners" did wrong on tragic fires, it could not really explain what the "heroes" had been doing right on the successful ones. All the task force knew was that they had identified 11 levers that potentially led to catastrophe. They did acknowledge that lives saved in near-miss fires could be attributed to "some coolhead [who] sized up a local change in fire behavior and figured out what would happen in time to get the men to safety" (Forest Service, 1957, p. 4). Thus, they imputed, some fires were successful because "someone did not fail in one of these critical categories" (p. 4). Therefore, the search was on for a good solution that might help firefighters to *not* forget things that they already knew in the midst of an emergency.

Because the analysis was being conducted after the Second World War, the Forest Service borrowed the military approach to controlling the individual by harnessing loyalty to the group; namely, to cause a soldier to fear letting down the men in his unit more than he feared the enemy. This approach would have been familiar to veterans who had joined the wildland fire service after returning from the Second World War (Pyne, 1997). Thus, the Standard Firefighting Orders were modeled after military "General Orders." The rationale was that using the Firefighting Orders to harness individual loyalty to the group would help to stem defects in individual remembering until such time as a firefighter's reasoning process was as "automatic" as the coolheads' judgments seemed to be. This was the same approach to judgment formation as the prior stories of praise and blame; however, now the list of Standard

Firefighting Orders offered an *instrument*, or an explicit reminder list to support the firefighter until the principles were internalized and applied seemingly automatically (cf. Kaufman, 1960/1967).

A list of virtues. Now that the context for the development of the original Standard Firefighting Orders has been explained, the characteristics of the original list presented in Table 2 can be analyzed. Originally, the task force had planned to release a mnemonic list that spelled out the warning "Fire Scalds." However, before it was issued, the Chief deleted one item, revised another, and added an additional order: "Fight fire aggressively but provide for safety first" (McArdle, 1957). In light of the discussion above, this particular Firefighting Order can be understood as capturing the simultaneous virtues of the coolheads: keeping the fire small (i.e., "fight fire aggressively") while keeping everyone safe (i.e., "provide for safety first").

Although it was borne of the impetus of standardization, the original list was not entirely bureaucratic as Edwards (1979/1994) might define it, because there were no one-for-one consequences for failing to follow the Firefighting Orders. This is particularly evident in Table 2, where the directive to "follow each order when it applies" suggests that it was not assumed that every item on the list was relevant for every fire assignment. Instead, the list represented something more like a codification of firefighter virtues, or a list of qualities that a good firefighter would come to embody in learning how to keep the fire small while also keeping the crew safe. Various experiences would presumably give the firefighter the chance to work through all nine items. Once he mastered them, the firefighter could literally *become* the 10th, or one of the praiseworthy "coolheads" who could realize the simultaneous goals of keeping the fire small and the crew safe.

10 Standard Fire Orders, 1987–2002

In 1987, the list was revised for the first time in 30 years. This section explains why the Firefighting Orders were revised and how that revision was perceived as a good solution not only to the original problem of control, but also to new problems that had cropped up as a result of the adoption of the original list.

Violators and adherents. Throughout the 1960s and 1970s the 10 Standard Firefighting Orders were included in basic training for all Forest Service firefighters. Moore (1959) directed instructors to emphasize number 10 in particular: "Fight fire aggressively but provide for safety first." In a statement reflecting the paramilitary era in which it was written (Pyne, 1997), Moore claimed that training was not complete "until the trainee is convinced that the safest, most effective way to fight forest fires is to understand the enemy and to attack it aggressively, applying sound suppression tactics until it is beaten" (p. 60). Similarly, a firefighting textbook from 1965 emphasizes "fight fire aggressively but provide for safety first" as the "overall Fire Order to which the other nine are directed" (Forest Service, 1965, p. 54).

Sometime in the 1960s, however, the Fire Orders began to shift from an individual list to an organizational one. The Firefighting Orders had clearly taken on symbolic significance when in 1967, the Washington Office of the Forest Service overrode the recommendation of a review panel who had recommended adding two more items to

the list, one of which was building fires downhill. Instead, they created a separate "Downhill Fireline Construction Checklist."

Additionally, reflecting the rise of systems rationalism of the time (Barley & Kunda, 1992), the Firefighting Orders began to be used as a checklist to evaluate individual fires. The write-up of the heroic Cherokee Incident near miss appears to be the first use of the list as such a litmus test. After a summary of the list of factors that Nix (1960) believed had led to "control of the fire without injury or worse," the editor inserted the comment, "in other words, knowledge and application of the 10 Standard Firefighting Orders" (p. 9).

Later the list of Firefighting Orders began to be used to analyze fatality fires. In 1967 the investigation of the Sundance Fire noted faulty "adherence" to the Firefighting Orders. Then in 1977, the investigation into the Cart Creek Fire cited a lack of "compliance" with the Firefighting Orders and "violation" of numbers 1, 2, 3, 4, 5, and 10. In 1979, the investigation into the Ship Island Fire recommended that trainers place strong emphasis on the message that "the 10 Standard Firefighting Orders are not to be deviated or broken" (Forest Service, 1979, p. 7). The investigators added, "Instill the attitude [to students] that [they] do not have the prerogative to deviate from the Orders" (p. 7).

In 1990 the investigation report of the Dude Fire, which killed six firefighters in Arizona, included "violations of the Fire Orders" on a list of causal factors for that tragedy. This solidified the use of the Fire Orders as a checklist for accident investigations for at least the next decade. The shift of the Fire Orders from an individual list of virtues to an organizational list of duties is most evident when comparing what investigation teams complained about in 1957 as compared to what they complained about in 1994: Whereas in 1957 the task force complained that the "sins of omission" that they had identified were appearing "time and time again" before boards of review, by 1994, the South Canyon report complained that "time and time again" fatal accidents were being traced to "violations of" one or more of the Fire Orders (US Department of Interior Bureau of Land Management [BLM], & Forest Service, 1994, p. 34).

Aside from reflecting the emergence of systems rationalism in the 1970s and 1980s (Barley & Kunda, 1992), the increasing bureaucratic use of the Standard Firefighting Orders can be traced to a shift in legitimacy for the Forest Service as identified by Bullis and Tompkins (1989): "[E]xpert management (based on values) gave way to management based on (political) public will" (p. 291). Bullis (1993) also observed increasing cultural fragmentation along occupational lines (see also DiSanza & Bullis, 1999). Indeed, Pyne (1997) identified the 1970s and 1980s as the era when the Forest Service began to harness "information" to control fires, including by expanding research about weather, prescription fires, equipment, and safety measures. As these items were processed into inputs and outputs, so were the Firefighting Orders.

Wildland firefighting was also expanding beyond the purview of the Forest Service during that time. After a disastrous fire season in California in the early 1970s, a task force nicknamed FIRESCOPE developed the Incident Command System (ICS) as the basic structure that federal, state, and local firefighters still in use today to unify

command and to coordinate resources on all large wildland fires (Monesmith, 1983). In 1976, the National Wildfire Coordinating Group (NWCG) was created to develop and maintain additional interagency standards (Wilson, 1978). In the mid-1970s, the NWCG adopted the Fire Orders[4] as "standards for survival" for all interagency wildland firefighters, not just Forest Service employees (Monesmith, 1988).

However, in the mid-1980s, Morse and Monesmith (1987) noted that firefighters were no longer memorizing the Standard Firefighting Orders. They complained that the list was like the 10 Commandments: "Individuals readily admit that they believe in their worth but they have some problems when asked specifically to identify and follow them" (p. 3). This is not to say that firefighters were necessarily fighting fires *badly*, but rather that they now tended only to pay attention to rules that actually had consequences for breaking them. This reflects the same decline in identification and move toward bureaucratization that was identified by Bullis and Tompkins (1989). As a result, the 10 Standard Firefighting Orders were reorganized in 1987 to make them easier to memorize and follow.

A list of duties. Now that the context for the 1987 revision has been explained, the characteristics of this second iteration of the Fire Orders can be analyzed. As shown in Table 3, the 1987 list, now called Fire Orders, was rearranged into a deliberate mnemonic (F-I-R-E O-R-D-E-R-S) that was meant to be memorized. Besides the rewording and reordering of the individual items, the intended use of the list had also changed. Now the emphasis was on discrete items that were all to be followed at once. Also, the 10th Fire Order, "fight fire aggressively but provide for safety first" had been placed at the top of the list, and was being promoted as the "overall safety rule" that applied to all work contexts (such as driving) and not just to firefighting (Morse & Monesmith, 1987, p. 4). Thus, the meaning of this primary Fire Order was no longer strictly literal but also metaphoric: A firefighter should always be aggressive in his or her duties, but only after providing for safety.

At this point the Fire Orders were being used to accomplish procedural control as well as instrumental control. That is, failing to follow the Orders could be construed as a duty violation per se, regardless of its outcome or effect (Edwards, 1979/1994). In other words, the Fire Orders had now become a resource for individual-organizational dissociation (Hearit, 1995) in a time of crisis.

As with most discursive transitions, however, the migration of the Fire Orders from a list of virtues to embody, to a list of duties to be followed, was not a clean break. In 1994, as in 1990, the duty frame was invoked in the explanation for the 14 deaths on the South Canyon Fire in Colorado: The report found that firefighters had violated 8 out of the 10 Fire Orders (BLM & Forest Service, 1994). Nevertheless, vestiges of the Fire Orders as personal virtues were evident in the accompanying determination that it was the supervisors' and firefighters' "can do attitude" that had *caused* them to violate the Fire Orders (Thackaberry, 2006; see also Larson, 2003; Maclean, 1999). It is unclear which caused the wildland fire community more pain: the recounting of the organizational infractions, or the public shaming of the firefighters. A parent of one fallen firefighter bemoaned that it was as if the investigators had said that "my child wasn't intelligent enough to save his own life" (in Wolfinger & Bacon, 2002).

A public struggle. Resistance soon surfaced that revealed how some firefighters had been regarding the authority of the Fire Orders, and how they had actually been using them on the ground. For example, law student and seasonal firefighter Quentin Rhoades (1994) wrote an op-ed piece for his local newspaper where he argued that safe firefighting *required* firefighters to "bend" the rules on a fairly regular basis. Not long after, Reason (1997) presented a similar claim in *Managing the Risks of Organizational Accidents.* Once rules become procedures, he argued, an employee's space of action is constricted, yet the operating environment has not changed. Thus, the true skill becomes knowing *which* rules to violate, and when (Reason, 1997, p. 51).

These kinds of sentiments received a swift official response in 1995 from the Secretaries of Agriculture and the Interior, who issued a memo admonishing that "the Fire Orders are firm; we don't bend them we don't break them" (Glickman & Babbitt, 1995). They also threatened a "zero tolerance policy" for infractions. When a similar dispute arose after the investigation into the Thirtymile Fire in 2001, where firefighters were found to have broken all 10 items on the list, the Fire Orders were now clarified as "rules of engagement" (Williams, 2002; see Thackaberry, 2004, for further discussion).

Thus, an explicit and very public tug of war was now under way over the precise authority of the Fire Orders. The next section shows how although numerous solutions were proposed, the parties were deadlocked until the right *narrative* came along to help the wildland fire community to revise the list and to move forward.

10 Standard Fire Orders, 2003–Present

The Fire Orders were revised again in 2003 in an attempt to get "back to basics"; that is, to try to recapture what was understood to be the spirit of the original 1957 Fire Orders. This section explains why the Fire Orders were revised back to something close to their original ordering in 2003, and how that revision was perceived at the time to be a good solution, not only to the enduring problem of control in the distributed and dangerous work environment, but also to new problems that had emerged as a result of the 1987 revision, including how they were being invoked in accident investigations.

The Problem of the List

The struggle over the precise authority of the Fire Orders described above continued into the late 1990s and early 2000s. One outspoken smokejumper who had become an equipment specialist argued that if the Fire Orders were consistently being found to have been violated, then perhaps they might be impossible to follow in the first place (Putnam, 2001b; see also Braun, Gage, Booth, & Rowe, 2001). Thus, he argued, their use as a checklist for blame only served management at the expense of firefighters (Putnam, 2001a; see also Thackaberry, 2005). Putnam argued instead for investigations to focus on "human factors," much like the aviation industry did in investigating accidents (Putnam, 1995; see also Thackaberry, 2004).

Various other technical solutions emerged at the time, such as to replace the Fire Orders with a different set of 10 items (e.g., Withen, 2005); to reduce the number of

items to four (e.g., Gleason, 1991), to clarify an essential subset that should never be broken (e.g., TriData Corporation [TriData], 1998); to remove redundancies among the Fire Orders and other lists (e.g., Goodell, 2002); or to revise the Fire Orders into a dynamic tool that takes sensemaking and updating into account (e.g., Putnam, 2001b; Weick, 1995). Although these proposals captured the attention of the safety community, they were largely ignored at the policy level.

Multiple cultural functions. By 2001, the Fire Orders had also been called upon to serve various cultural functions well beyond their original purpose. In addition to serving the explicit functions of explanation and prevention (1957), the Fire Orders had served as a unifying symbol for the "confederation of cultures" (Tompkins, 2005) that made up the interagency network of wildland firefighters (after the creation of the NWCG in 1976). Later, when the Fire Orders were used as a checklist for blame, they served the functions of disciplining and dissociation (e.g., BLM & Forest Service, 1994; Forest Service, 2001; cf. Thackaberry, 2006). And, when the Secretaries' zero tolerance memo clarified that the list was an absolute set of rules (Glickman & Babbitt, 1995), the Fire Orders were used to accomplish organizational purification (Thackaberry, 2005), while the list simultaneously stood as a threat of punishment. And, as "rules of engagement" (Williams, 2002), the Fire Orders became aligned with the recent military successes of the first Gulf War.

Finally, the Fire Orders began to be invoked as a kind of memorial to the dead, particularly the Mann Gulch 13, a group of smokejumpers who had been killed in that Montana fire in 1949 (Alder, 1997; Maclean, 1993; Weick, 1993). The Mann Gulch fire had been among the fires included in the 1957 trend analysis from which the original Fire Orders had been developed. In celebrating the successful survival of 73 firefighters who had become entrapped on the Butte Fire in 1985, for example, Rothermel and Brown (2000) argued that "in part they owe their lives to the lessons from the Mann Gulch fire" (p. 9; see also Dombeck, 2000).

Thus, even after the Fire Orders began to be discussed as potentially flawed for their intended purpose, and even after numerous alternatives surfaced, the multiple cultural functions now attached to the list made it difficult for the wildland fire community to modify or even get rid of the Fire Orders. For example, if this traditional list were to be suddenly scrapped in 2001, this might question the "private sacrifices of the dead" (Pyne, 1994, p. 19).

The right story to change the list. Two fire veterans, working independently, stumbled upon the right narrative that would help the wildland fire community to move past this standstill. In a sense, they both argued to reclaim what they understood to be the spirit of the original 10 Standard Firefighting Orders, although they went about it in different ways. In 2001, Karl Brauneis, a veteran firefighter turned Fire Management Officer, circulated an open letter to firefighters that instructed them to ignore the 1987 revision and to return to the original ordering of the Fire Orders. His directive also emphasized moving up and down the list to "engage" and "disengage" from the fire as a way to capture the list's "original intent" (Brauneis, 2002).

John Krebs, a veteran firefighter turned instructor, promoted a similar perspective, but instead of appealing to firefighters, he attempted to influence policy at the top.

He wrote a letter to Jerry Williams, then Director of Fire and Aviation for the Forest Service, arguing that the problem with the Fire Orders was simply that they had been reordered in 1987, and that the revision had diluted the "original intent" of the Orders. The solution, Krebs (1999) argued, was to change the list back to its original ordering (cf. Church, 2007).

Krebs (1999) argued that the original list had been "deliberately arranged according to their importance" and "logically grouped to make them easy to remember" (p. 2). Aside from this appeal to reason, Krebs bolstered the credibility of the developers of the original list by pointing out that they had been "intimately acquainted with the dirt, grime, sweat, and tears of firefighting" and thus had been very well aware of how they had ordered the list. He also enhanced his own credibility by pointing out that he had been among the first group of firefighters to learn the original 10 Standard Firefighting Orders in guard school in 1958. Krebs' letter also expressed pathos over the apparently unnecessary deaths of the South Canyon 14, and lamented, "Where have we failed to make fire behavior the most important thought in the minds of our firefighters?" (p. 1).

Aside from the persuasiveness of the letter at a textual level, Krebs' "back to basics" argument (1999) transcended the struggle that had been taking place over the authority of the Fire Orders. Specifically, it redefined the traditional meaning of the list in a way that was face-saving for both the agencies and for firefighters. Essentially, he argued, the community had had the right items all along; they had just had them *in the wrong order*. (Thus, by extension, firefighters could not really be blamed for their actions if they had been given the wrong list.) Neither was Krebs' argument a threat to the various cultural functions that had become attached to the Fire Orders, such as their emergence as a memorial to the dead. After all, the Mann Gulch firefighters' deaths had given rise to the *original* list of 10 Standard Firefighting Orders, and not the 1987 revision.

A tool for "risk management." Simultaneously, and perhaps unknowingly, Krebs also presented a view of the Fire Orders that aligned with a new managerial discourse that was emerging in fire management at the time: the insurance-industry-inspired discourse of "risk management," which had been enabled by advances in probability theory (Bernstein, 1996). This also comports with Pyne's (1997) observation that in the 1970s and 1980s the overarching approach to fire control was "fire management"; it was only a matter of time before managing "risk" would become a key part of doing so.

Williams, the original recipient of the letter, had passed Krebs' letter along to the NWCG Standards Working Team, whose members were persuaded by the argument to revise the list back to its original ordering (with the exception of Standard Firefighting Order number 10 which was changed to, "Fight fire aggressively *having provided for* [italics added] safety first"). In their rationale, the NWCG explained that the Fire Orders were, and had always been, a tool for risk management because they had been "organized in a deliberate and sequential way to be implemented systematically and applied to all fire situations" (NWCG, 2003, p. 1). Furthermore, the team argued, the 1987 revision had changed the "intent of the program as a logical hazard control system" (p. 1). Thus, the revised list would "improve

firefighters' understanding and implementation" of the Fire Orders (p. 2). In other words, the NWCG accepted Krebs' argument, but simultaneously translated it into the new discourse of risk management in passing it along to others.

Although the primary Fire Order was now back at the bottom of the list, not only its wording but also its meaning had changed: By going through each step in sequence, firefighters were presumably mitigating key risks one by one. Thus, once they reached the bottom of the list (i.e., "having provided for safety") they had earned a kind of organizational permission to "fight fire aggressively." This stands in sharp contrast to the original 1957 meaning for the 10th Fire Order as a highly personal process of *individual* judgment formation, where the firefighter could work through the list over a series of fires to become the "coolhead" who could simultaneously keep fires small and people safe, and therefore be regarded as a hero. Now, in this revisionist history, the Fire Orders were being described as a kind of "recipe" for safe organizing.

The 1957 list could not really have been a "risk management program" because that discourse did not exist in 1957. Furthermore, the subscript to the original 1957 list had clearly suggested that not all items were meant to apply to all fire situations. Nevertheless, the "back to basics" rhetoric reclaimed, but also redefined, the traditional meaning of the Fire Orders, while its alignment with the emerging risk management discourse helped the wildland fire community to revise the list and to move forward.

A permission slip for aggression. Now that the context for the 2003 revision has been explained, this third iteration of the Fire Orders can be analyzed. As evident in Table 4, the items have been rearranged back to the original order, but they have also been categorized into "Fire Behavior," "Fireline Safety," and "Organizational Control." In this way, the list of Fire Orders now resembles a PowerPoint slide. As described above, the items are presented as a recipe for organizing that applies to all fire situations, such that after each successive risk is mitigated, firefighters will have earned the right to fight fire aggressively. According to the qualification at the bottom, the Fire Orders are still considered to be "firm"; however, they are no longer called "rules of engagement." And, the admonition that "We Don't Break Them, We Don't Bend Them" is now presented in all capital letters, as if it had been trademarked.

Additionally, a new sentence was added that states that "All Firefighters have a Right to a Safe Assignment." This statement reflects the influence of the Occupational Health and Safety Administration (OSHA), who has been investigating wildland fire fatalities since 1994, and who has issued "serious" and "willful" citations to the Forest Service and to the BLM for failing to provide a safe working environment for firefighters.[5] As it applies to the Fire Orders, this statement means that employees can now question assignments that seem to violate the Fire Orders or otherwise seem too dangerous.

The revised list was first brought to bear on the 2003 Cramer Fire that killed two helitacks in Idaho. In that investigation report the Fire Orders were described as a checklist for supervisors to organize a crew safely, but also as a checklist for firefighters to pose questions "whenever they have concerns about their personal

safety" (Forest Service, 2003, p. 68). More recently, there has been a trend away from invoking the Fire Orders in accident investigations, such as in the joint CalFire/Forest Service investigation into the Esperanza Fire that claimed the lives of five firefighters in October 2006, which never mentions them at all.

Additionally, the Forest Service in particular is now starting to qualify the list of Fire Orders as "foundational firefighting principles" instead of hard and fast rules, as part of a move toward specifying fire suppression "doctrine" (Hollenshead, Smith, Carroll, & Keller, 2005). In fact, in 2006, Forest Service attorneys used the argument that the Fire Orders were *not* rules of engagement to successfully defend the agency in a civilian lawsuit brought by Montana homeowners whose houses had been destroyed by an escaped prescribed fire (*Backfire v. US*, 2006). The homeowners had sued the Forest Service on the basis that actions taken by its employees had not adhered to the Fire Orders. However, the Forest Service successfully argued that the Fire Orders were *not* rules of engagement for firefighters and thus the agency was not held liable for the losses.

Despite these recent qualifications to the authority of the Fire Orders, at the time of this writing, the list remains "on the books" in the *Forest Service Manual*, and remains an NWCG standard for all wildland firefighters.

Discussion

The genealogical analysis in this article pieced together the story behind a significant organizational list that would never have been evident by simply examining the surface of the list itself. Despite the controversies that have raged over wildland firefighters' 10 Standard Fire Orders, particularly in recent years, the list itself has actually changed very little over the course of its 50 year history. It was reordered in 1987 for better memorization and then revised back to its original ordering in 2003, with a modification to the last item.

The analysis demonstrates, then, that the meaning of a list is located less in the items on its face and more in the discourses surrounding it. Furthermore, different discourses can authorize a list over time, such that the same list can come to mean vastly different things at different points in time. In this case the discourses surrounding the very same list at different points in time made opposite assumptions about the relationships among individuals, groups, and organizations, as well as the possibility of a list to mediate those relationships. Specifically, the very same list of items, in the very same order, that in 1957 was thought to exert group control over a potentially irrational individual, by 2003 had become a tool for individuals to question a potentially irrational decision emerging from the group. This provides further support for the argument that how a list is meant to be used is only partly evident on its face and is mainly authorized by discourses surrounding it.

These changes in meaning, in turn, can explain present-day conflicts over a list. Because breaks between discourses are never smooth, old ideologies can linger. Thus, current conflicts regarding the authority of a list and its proper use may be understood as clashes among vestiges of older ideologies, such as the tug of war over

whether the Fire Orders are absolute rules or merely guidelines (Thackaberry, 2004; TriData, 1998).

The analysis also showed how a genealogy can explain what might otherwise be labeled irrationality (Ashcraft & Trethewey, 2004). Specifically, one might ask why, if the Fire Orders were perceived as problematic, they were never revised, reduced, clarified, or even replaced with something else, even though many "logical" alternatives had emerged. This analysis located the answer to that question in how, over time, a list may become imbued with so many cultural functions that organizational members still cannot let it go, even if it is no longer viewed as useful for its intended purpose. Ultimately, reconciling these multiple meanings and cultural functions is not a technical problem so much as it is a rhetorical one. In this case, the community was only able to move forward in its otherwise intractable and public fight after a veteran wrote a letter that redefined the Fire Orders of the past, potentially excused the events in the middle, and, perhaps unwittingly, aligned with a new managerial discourse of the present, all of which enabled the Fire Orders to be revised. What was significant was not the actual revision to the list, but rather the meaning accorded to it: the Fire Orders were now, and always had been, "a tool for risk management."

Implications for Lists as Organizational Communication

This study supports, but also extends, the dialectical perspective of lists and stories as organizational communication (Browning, 1992). Browning (1992) emphasized the organizational structuring properties of the dialectic between list and story. Parts of the analysis here are consistent with that view. For example, as described above the Fire Orders were intended to structure firefighter judgments, but over time they became part of *organizational* structure, culturally unchangeable until the right story came along to authorize it. However, this perspective tends to suggest that lists are the texts that are really doing the "structuring" while stories are the texts that are providing opportunities for change; indeed Browning claims that lists represent "structure" while stories provide "variety."

In contrast to this view, this genealogy suggests that an understanding of lists should not be limited to "structure" nor stories only to "variety" (cf. Browning, 1992). As Mumby (1987), Clair (1993), and others have argued, stories can help to structure organizational reality and therefore to achieve control. In this case, *Fire Control Notes* narratives that predated the Fire Orders had provided "structure" for judgment formation as they praised the coolheads as heroes, and as they publicly shamed the sinners (while also offering the opportunity for redemption). Conversely, in its first iteration the 1957 list of 10 Standard Firefighting Orders was intended to offer "variety" to the individual precisely by reminding the firefighter all of the items that it was important for him not to forget. This suggests that there is no necessary quality of either a list or a story that makes its ascendancy inevitable. Rather, that depends entirely upon the operative managerial discourse that authorizes it. Perhaps in another "normative" wave of managerial ideologies (Barley & Kunda, 1992), stories will reign rather than lists.

Multiple approaches to dialectics. The analysis also presents a different sense of dialectic between list and story that can expand our understanding beyond the structuration approach. Just as there are multiple conceptions of dialectic (e.g., Mifsud & Johnson, 2000), so there may also be multiple ways to conceptualize the dialectic between lists and stories in/as communication.

For example, the structuration perspective tends to view lists and stories as giving rise to and ultimately supplanting each other over time (such as how narratives intended to control were eventually replaced by the Fire Orders). However, this case supports another approach to the notion of dialectic, in the sense of lists and stories as simultaneous parts to the same whole. Specifically, by stressing the story "behind" the organizational list, this article has argued for the simultaneous importance of both text and context—the list as well as the story behind it—in accounting for the meaning of an organizational list. In this sense, the list and story *coexist*. They do not necessarily represent two distinct communicative structures that supplant each other across time; rather, they are two facets of the same phenomenon. Other senses of dialectic (e.g., Baxter, 2007) may be explored by future studies.

Lists and critical studies. One aim of this study has been to try to close the gap between explicit studies of lists and stories, which focus on text, with critical and poststructuralist studies, which focus on context yet implicate lists. It was proposed it may be helpful to shift the focus onto the enduring organizational problems to which members seek solutions, which includes adopting new lists that they imbue with agency (Cooren, 2004). The analysis conducted here showed how both text and context are necessary to account for how the list came to make sense at one time as a perfect solution to those problems.

Rather than imply that one should search for a seamless and coherent narrative, a genealogy is useful for revealing the story behind a list in all its messy complexity. While the analysis accounted for how *this* list and its iterations were perceived to address an enduring organizational problem, it also showed how a list, once introduced, can create new problems of its own. Many reasonable solutions were offered about what to do with the Fire Orders, but they tended to focus on tweaking the list as a technical tool (its arrangement, its content, etc.) without addressing the original problem for which the list was once regarded as a viable solution. Also, nobody ever questioned any of the particular items on the list, but rather called attention to how that list had actually been used by management and how it had been assumed to be used by firefighters.

And, ironically, despite this focused attention upon the list, these controversies never raised the possibility that while bureaucratization may have helped to organize the wildland fire service in other ways, it may have reached its absurdist limits in the Fire Orders. As a list, the Fire Orders does a good job of capturing organizational memory about omissions that have gotten firefighters into trouble in the past, but only if they are attended to. The assumption that a memorized list actually exerts control over the individual and/or the group in a dangerous situation is an assumption that needs to be reexamined, particularly when individual situational awareness is threatened by physical factors like fatigue, sleep deprivation, and smoke

inhalation, and group situational awareness is threatened by social factors like risk homeostasis and failure to share information (Ziegler & Roberts, 2007).

Preferred identities and resistance. One qualification to be made about this study is that it strictly accounts for the intended *managerial* meanings of the Fire Orders, and not the meaning of the list to everyday firefighters. Indeed there is anecdotal evidence that the "reduction" argument has taken hold among ground level firefighters in their embrace of the shorter acronym "LCES," which emphasizes Fire Orders numbers four, five, and seven (Gleason, 1991). However, addressing the meaning held by ground-level firefighters would require different methods and thus would require a separate study.

Nevertheless, even the intended managerial meanings can be examined from a poststructuralist perspective on identity by showing who was perceived to be the problem in each iteration of the list (firefighter, leader, or both), and what preferred images emerged in the discourse for those particular groups. For example, the original narrative approach targeted Rangers as firefighting leaders and presented ideal images of benevolent leader and heroic savior. In contrast, the first iteration of the 10 Standard Firefighting Orders in 1957 was addressed to the problem of forgetting among ground-level firefighters. The subsequent ideal image became one who was subservient and willing to use the list to become personally transformed (see also Kaufman, 1960/1967, p. 165). In the 1980s, both supervisors and firefighters were identified as the problem, and the expanded use of the Fire Orders eventually shifted the image of the ideal firefighter to one of obedient rule follower. Finally, the 2003 iteration reflected the discourse of teamwork that had emerged in the 1990s (Barker, 1993). The 2003 Cramer Fire report in particular presented the Fire Orders as a tool for an ideally thorough and systematic leader, but also a critical thinking team member.

Despite these images of the ideal firefighter suggested in the list and the discourse surrounding it, this study also reminds us that being subject to a list does not imply consent or agreement. At the very least, the potential for dissent (Kassing, 2002) and ambivalence (Larson & Tompkins, 2005) should be acknowledged. A few examples include the Ranger who in 1939 called for universal evaluation standards in order to challenge the seemingly capriciously applied narrative approach to control; the writers who in 1987 pointed out that firefighters were no longer bothering to remember the Fire Orders; the law student and seasonal firefighter who in 1995 challenged the Fire Orders' absolute authority by claiming that sometimes it was necessary for firefighters to break the rules in order to be safe; the smokejumper turned equipment specialist who in 2001 railed against the politics of invoking the Fire Orders as checklists in accident investigation; and, the two fire veterans who waded into the controversy at the turn of the century to propose that the wildland fire community could set aside its differences about the Fire Orders by reclaiming the "original intent" of the original 1957 list as they understood it.

A "rhetoric of" a technology of the self. This study also suggests that it is important to distinguish between a "technology of the self" (e.g., Deetz, 2001b; Nadesan, 1997) and "a *rhetoric* of" a technology of the self. Both favor the organization to

the potential detriment of the employee, but in different ways. In the case of the 2003 Fire Orders, the "back to basics" rhetoric *only* succeeds as a control mechanism to the extent that firefighters actually use it *as* a technology of the self. However, if there is a gap between the official rhetoric and the actual practice on the ground, then a list like the Fire Orders remains a resource for individual-organizational dissociation (Hearit, 1995), despite the fact that the 2003 solution seemed to be mutually beneficial to all.

Such a gap may also exist at the managerial level. Currently, the risk management discourse that informs the use of the Fire Orders relies upon a rather linear risk mitigation process. Meanwhile, others in the wildland fire community are moving toward conceptions of the fire environment as dynamic, and as dependent on sensemaking that can only be improved by continually "updating one's situational awareness" through mindfulness rather than static checklists (e.g., Weick & Putnam, 2006).

Limitations

In addition to the qualification described above, there are other important limitations to this study that are due in part to space limitations. Numerous statements made throughout the article could have been probed more critically, such as the ethics of the use of inmate crews; the appropriateness of the overtly religious rhetoric in official pronouncements of a government agency; the gendered history of the wildland firefighter (Ashcraft & Mumby, 2003); and the ill fit of the military metaphor for an admittedly dangerous but nevertheless civilian work context where there is no actually human enemy (Pyne, 1994; Ziegler & Arendt, 2006). Furthermore, the story behind the Fire Orders presented here was limited to its assumed role in saving only *firefighters'* lives. As wildfire risks to civilian lives increase, this may introduce a different dynamic with a different hierarchy of values. All of these items can and should be addressed in future studies.

Implications for Lists in/as Communication

Aside from its implications for lists as organizational communication, this study also has implications for research on lists in/as communication more generally, in a variety of contexts. First, this study calls renewed attention to generic structures of lists (Goody, 1977; Schiffrin, 1994). The three different iterations of the Fire Orders all had different generic structures: the first was a kind of taskbook for personal transformation; the second was a set of discrete yet equivalent items with a hierarchical umbrella term; and the third was a kind of checklist for organizing that promised an organizational permission slip for aggression in exchange for systematic risk mitigation. No one particular kind of list is best: all have their benefits and drawbacks.

Future research should also examine the dialectic of lists and stories in other communication contexts. Table 1 offers a sketch of some significant lists in everyday life. By addressing the original problem to which a particular list was thought to be a good solution, and by using the genealogical method to study how the meaning of

that list might have changed over time, studies of lists in/as communication can appropriately account for both text and context: the list itself as well the story behind it.

Notes

[1]   All references to "his" are historically accurate. Although women worked for state fire agencies as early as the 1940s, federal firefighters were strictly male until the 1970s (Floren, 2004).

[2]   In the move away from the historic root metaphor of the war on wildfire (Pyne, 1994), the policy to suppress 100% of fires was lifted, and prescribed fire was introduced. However, even prescribed fires are called "controlled burns," which signals that they are still supposed to be contained, and that people and property are still supposed to be kept safe. Thus the problem of achieving both fire control and crew safety in a distributed and dangerous environment endures. Also, any references to protecting lives in this article refer strictly to firefighters and other fire personnel, and not to civilians; protection of civilian lives introduces a whole different dynamic and is best left for another study.

[3]   Although *Fire Control Notes* began in 1936, evidence of shaming as a control practice was also evident as early as 1919 in the list of Common Errors in Firefighting in the *Forest Service Western Firefighters' Manual.* For example, one error reads, "failure to throw dangerous snags. He would build a three foot fence to keep birds out of his garden" (p. 1). However, those items related entirely to putting out a fire, there being no mention of safety. Kaufman (1960/1967) also addressed the Forest Service logic that "sources of guilt and shame about deviating from preformed decisions must be instilled in organizational members" (p. 211) as a control mechanism.

[4]   Although it is not widely known, the NWCG actually proposed a revision to the Fire Orders in 1980 that combined and collapsed the Fire Orders and other guidelines into a different list whose items spelled "Watch Out." This revision was never adopted; however, later a different list of Watch Out Situations was created, and now the two lists are usually paired in conversation and referred to colloquially as "the 10 and the 18" (National Interagency Fire Center, 2007).

[5]   The fact that OSHA would require agencies to provide a safe working environment for wildland firefighters reflects that agency's own particular ideology (Zoller, 2003).

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