Making Firefighters Deployable

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Published online: 27 October 2010

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Abstract Although sociologists have devoted a considerable amount of research to exploring high-risk organizations, they have not yet developed an adequate explanation as to why individuals working within such organizations place themselves in harm's way and how organizations ensure they remain there. This article addresses this gap by analyzing how the United States Forest Service motivates wildland firefighters to participate in life-threatening activity. Drawing on ethnographic research and content analyses of official documents, it describes the process by which firefighters come to develop a specific disposition towards risk taking, a disposition through which they view firefighting as an activity void of danger, and how this disposition maintains its shape, and even grows stronger, after confronting its biggest challenge: the death of a firefighter.

Keywords Firefighting · High-risk organizations · Risk · Human error · Death

Since 1910, the year the Great Fires of Idaho and Montana killed 72, over nine hundred wildland firefighters have died fighting fire; most of them burned to death. From 12 to 22 wildland firefighters die every year. After a firefighter's death, one question seems to

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¹This article draws on a significant number of primary sources from the Forest Service and similar organizations; to conserve space, these sources have been excluded from the text but are available upon request.

²In absolute terms firefighting does not appear to injure or kill as many workers as some industrial occupations (see Bureau of Labor Statistics 2005), especially those strained by taxing production pressures that force workers to take unnecessary risks (Heimer 1988). Workers in fishing and fishing-related occupations die on the job at a higher rate than any other workers, and drivers/sales workers and truck drivers (followed by structural metal working) have the highest injury rates, far outpacing those of firefighting. However, in relative terms, firefighting is very dangerous. That is, firefighting is much more likely to kill or injure its workers than are other jobs to which members of the Elk River Firecrew have access: firefighters are twice as likely to die on the job as painters and automobile mechanics, six times more likely to die than janitors and cashiers, and 14 times more likely to die than those working in food preparation and serving occupations.

This article was accepted by the former editor-in-chief Javier Auyero. The current editor, David Smilde, has approved of its publication.

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resonate above all others: What went wrong? Sociologists (e.g., Driessen 2002; Vaughan 1997), psychologists (e.g., Weick 1993, 1996), and journalists (Maclean 1992, 1999) have pursued this question, attempting to understand why firecrews break down. This article, by contrast, pursues a more fundamental set of questions: How are individuals working in hazardous occupations socialized by their host organizations to perceive safety, danger, and death? In this specific case, how are firefighters socialized to risk by the Forest Service, and what can that teach us about how high-risk organizations motivate workers to undertake life-threatening tasks?³

Theories of Risk Taking

In his famous essay "Where the Action Is," Goffman (1967, p. 185) sought to uncover individual motivations for risky behavior (or "action"), "activities that are consequential, problematic, and undertaken for what is felt to be their own sake." To Goffman, action could be explained in large part by one's pursuit of character. "The voluntary taking of serious chances," he remarked (1967, p. 238), "is a means for the maintenance and acquisition of character; it is an end in itself only in relation to other kinds of purpose." One risks to gain social recognition, and he must risk again and again lest this recognition expire. I rely on the masculine pronoun here because the risky activities that commanded Goffman's attention were male-dominated games (e.g., gambling, bullfighting). By "risk" Goffman, by his own admission, meant "men's risk," and by "character" he meant "masculinity." Although space limitations prevent me from lingering on the complexities of Goffman's essay, it is clear that a major thrust of his argument was that the pursuit of masculinity is the driving motivation behind risky behavior.

Ever since Goffman (1967, p. 257) stated that "men must be prepared to put up their lives to save their faces," social scientists have argued that men take dangerous risks in order to acquire masculine recognition (Bourdieu 2001 [1998]; Kimmel 1994). Most researchers investigating arenas of risky work have suggested that the hallmarks of a good firefighter, police officer, or soldier are hypermasculine traits such as aggressiveness and toughness (Chetkovich 1997; Manning 1977). The story does not change when we review the literature on dangerous jobs in the industrial sector (e.g., Haas 1972, 1977). And several scholars (e.g., Dwyer 1991; Paap 2006) have suggested that men working in especially dangerous occupations often ignore safety procedures and refuse to don protective gear to avoid violating a masculine ethos by showing weakness.⁴

Lacking from these accounts is sufficient attention to the influence of organizations (Heimer 1988; Short 1984). As Mary Douglas (1986, p. 83) points out, "If it is conceded that institutions play any role, then it would follow that much of the inquiry about risk perception has been applied to the wrong units, to individuals instead of institutions." Of course, ever since the work of Coleman (1974) and Perrow (1999 [1984]), social scientists increasingly have turned to high-risk organizations, investigating the factors that lead to system breakdowns and successes (e.g., Clarke 2005; Vaughan 1996; Weick 1993). These

⁴ Another theory of risk taking is exemplified by Georg Simmel's (1959 [1911]) writings on adventure and has to do with self-actualization (Lyng 2004). As this theory has been employed mainly by analysts investigating risky leisure activities, (e.g., skydiving), this article concentrates primarily on the theory of risk taking exemplified by Goffman.



³ I prefer the term "motivates" because it occupies a delicate position between volunteerism and determinism. One is motivated when an outside force (e.g., an organization) nudges one toward a position or course of action to which one already is predisposed, which firefighters indeed were (see Desmond 2007).

scholars have done much to advance our knowledge of how organizations unravel at the seams, sometimes with deadly and far-reaching consequences. Yet they have paid less attention to why individuals working within high-risk organizations place themselves in harm's way to begin with and how organizations make sure they remain there (though see Hutter 2001; Vaughan 1996).

Thus, many social psychologists, following Goffman, have overlooked processes of organizational socialization, explaining risky behavior by relying on notions of masculine performativity carried out in interactional contexts. Though many organizational sociologists have paid attention to such processes, they have been more concerned with how high-risk organizations succeed or fail than with how they socialize workers to risk. In this article, I attempt to offer insight into how organizations shape workers' perceptions in such a way as to ensure they place themselves in harm's way and stand firm when things begin to fall apart.⁵ After a discussion on method, I explain how the Forest Service socializes firefighters to understand risk. I then evaluate the degree to which firefighters accept this socialization process, demonstrating that they are trained to view firefighting as an activity dangerous only for the incompetent and exploring how this position holds up when confronted with the death of a firefighter.

Traditional theories of risk-taking that decontextualize risk by grouping all types of risk-takers (e.g., firefighters, soldiers, bull-fighters, drug dealers, downhill skiers) into a unified class supposedly driven to the edge by some single, ascendant motivation—"adrenaline," "masculinity," "character"—overlook processes of organizational socialization. But if we wish to comprehend how professional risk-takers understand and acclimatize to perils of their professions, we must dissect the internal logic of their host organizations. This paper argues that the US Forest Service—an organization known for its ability to successfully "[inject] its own outlooks into its men" (Kaufman 1960, p. 237)—exerts considerable influence over the workers who come under its command. It equips firefighters not only with a skill set to deploy on the line but also with a tailored mode of thinking through which firefighting fatalities become, not inevitable outcomes of placing oneself between one of nature's most devastating forces and that which it seeks to destroy, but wholly preventable consequences brought about by the incompetence of the dead.

Methods and Setting

Mine was full immersion fieldwork—the method that requires investigators to become, as completely as possible, that which they wish to understand (cf. Wacquant 2004)—of a wildland firefighter crew attached to the Elk River Fire Station, an isolated compound situated in the woodlands of northern Arizona. A member of the firecrew, I worked, ate, slept, socialized, and fought fire with the 14 other men stationed there. Most of my crewmembers were in their late teens and early twenties, although one was 40 and another 55. These two older men had over 20 years of experience, while, for the rest of the crew, the modal number of seasons was three. The Elk River Crew was racially diverse—comprised of Native Americans, Hispanics, blacks, and whites—and most crewmembers came from working-class homes, though all came from rural America. With respect to age, gender, and class characteristics, the Elk River Firecrew is fairly representative of other wildland

⁵ In the interest of space, I must bracket questions of selectivity (e.g., what brings people to this line of work), which I have addressed elsewhere (Desmond 2007), and focus instead on what happens to people once they commit themselves to firefighting.



firefighting crews, in particular, and other workforces staffing high-risk organizations, in general (Bureau of Labor Statistics 2005; US Office of Personnel Management 2004).

After securing crewmembers' permission to conduct fieldwork from crewmembers, every day I carried a small notebook and recorded conversations and events. I was able to document interactions as they unfolded or shortly afterward, recording conversations accurately. This was not always possible, especially when firefighting. In such cases, I took notes during breaks and after my crew and I were dismissed, double-checking my representations with crewmembers.

Although all data recorded here are drawn from the summer of 2003, I had served as a wildland firefighter at Elk River before (from 1999 to 2000, and again in 2002). While my insider status offered me several advantages—I was able to earn the trust of my crewmembers quickly, and my prior experience and certification allowed me to be a full participant—it also came with disadvantages. Namely, when the field is familiar, one is more likely to leave unexplored commonsense ways of viewing the world. Although I attempted to objectify how the Forest Service conditioned my thinking throughout my fieldwork, I suspect that interactions that would have piqued an outside observer's curiosity eluded my scrutiny.

I also conducted in-depth, semi-structured interviews, lasting anywhere from 45 minutes to 3 hours, with all 14 of my crewmembers and several Forest Service supervisors. All of the interviews were recorded and, later, transcribed. Although I had entered the field with a set of interview questions in hand, many of these questions were tweaked or discarded altogether as more interesting ones emerged from fieldwork. Ethnography, after all, is never fully inductive or fully deductive but a determined search in which deductive orientations, with loyalties to theory, and inductive orientations, with loyalties to the field, join together in a dialectical fashion (cf. Burawoy et al. 1991; Glaser and Strauss 1967).

Finally, to reconstruct the process through which the Forest Service responds to firefighting fatalities, I collected and analyzed four accident investigation manuals and 21 fatality, entrapment, and injury reports—many hundreds of pages in length—along with dozens of press releases and materials I received in training courses. After leaving the field, I coded these documents based on themes that emerged during my ethnography, documenting, in particular, those having to do with socializing firefighters to dangerous work. These documents provide insight into routinized organizational processes and formal protocols actuated after a firefighter is injured or killed, revealing something about how the Forest Service "thinks" (Douglas 1986) and which pieces of information it selects to pass along to its on-the-line workers (and which it obstructs from view). These processes and protocols are juxtaposed against my crewmembers' interpretations of them to reveal the degree to which firefighters accept the common sense of their host organization.

Training

During my first few days back on the job in the summer of 2003, I sat through Safety Refresher Training with some other crewmembers from Elk River and Jameson, a neighboring station. All returning firefighters were required to enroll in this 2-day course, where firefighting fundamentals were reinforced. The instructor handed each of us a 24-page booklet titled "Think While You Fight Fire," which would serve as our training guide. The booklet began grimly, citing statistics on firefighting fatalities, entrapments, and shelter deployments. Then it turned swiftly to explaining how we



could avoid such fates, how firefighters could sidestep the dangers of wildfire and keep themselves safe on the fireline. In so doing, it featured the Ten Standard Fire Orders and the Eighteen Situations that Shout "Watch Out!" or simply the Ten and Eighteen. With the exception of cursory lessons on wildland-urban interface fires and downhill line construction, the whole of our refresher course was devoted to the Ten and Eighteen (Tables 1 and 2).

During one exercise, we were asked to apply the Ten and Eighteen to various firefighting scenarios taken from previous seasons, one of which was Colorado's Thirtymile fire, which killed four firefighters in 2001. Our instructor reconstructed the fire and the crew's "fatal mistakes," regularly asking, "Now, if you guys were on the crew, what would you have done differently in that scenario?" Subtly, the instructor found fault with the four dead firefighters and their supporting crew; he drew our attention to their inadequate preparation and multiple violations of the Orders and Situations. And following his example, we began offering criticisms of our own. We would have done better, we assured the instructor; we would have adhered to the Ten and Eighteen—and survived.

In both the 2-day refresher class for returning firefighters and the 2-week basic training course for rookies, the Ten and Eighteen structured training. Firefighters are taught to revere the Orders as rules they must never break and to interpret the Eighteen Situations as dangerous circumstances they should always approach with extreme caution.

The Ten and Eighteen

Firefighters are regularly quizzed on their knowledge of the mandates. If crewmembers miss just one Order, they are severely chastised. I learned this lesson the hard way one morning when I failed to recall the third Order after questioned by Rex Thurman, the widely-feared forty-seven-year-old head supervisor of the Elk River Firecrew, questioned me, I failed to recall the third Order. Thurman promptly assigned me and a fellow crewmember, who also failed the test, one hundred pushups, telling us, "Desmond, Masayesva. If you don't want to practice your Fire Orders you can practice with your fire *shelters*!" What Thurman meant was that ignorance of the Ten and Eighteen would land us in a deadly situation—a situation where we would have to deploy our fire shelters during an entrapment (a firefighter's last resort).

Thurman and other supervisors administered such tests throughout the season because they understood these rules to be a firefighter's safety net—a promise of protection in bold print. As Thurman once put it, while leading a meeting in the conference room, "We can

Table 1 The Ten Fire Orders

Fight fire aggressively but provide for safety first.

Initiate all action based on current and expected fire behavior.

Recognize current weather conditions and obtain forecasts.

Ensure instructions are given and understood.

Obtain current information on fire status.

Remain in communication with crew members, your supervisor and adjoining forces.

Determine safety zones and escape routes.

Establish lookouts in potentially hazardous situations.

Retain control at all times.

Stay alert, keep calm, think clearly, act decisively.



Table 2 The Eighteen Situations that Shout "Watch Out!"

- 1. Fire not scouted and sized up
- 2. In country not seen in daylight
- Safety zones and escape routes not identified
- Unfamiliar with weather and local factors influencing fire behavior
- Uninformed on strategies, tactics, and hazards
- 6. Instructions and assignments not clear
- No communication link with crewmembers or supervisors
- 8. Constructing line without safe anchor point
- 9. Building fireline downhill with fire below

- 10. Attempting frontal assault on fire
- 11. Unburned fuel between you and the fire
- 12. Cannot see main fire, not in contact with anyone who can
- 13. On a hillside where rolling material can ignite fuel below
- 14. Weather is getting hotter and drier
- 15. Wind increases and/or changes direction
- 16. Getting frequent spot fires across the line
- 17. Terrain and fuels make escape to safety zones difficult
- 18. Taking a nap near the fireline

send you to training until we fill up this room with certificates, but unless you know these things, these Ten Orders, these Eighteen Situations, then you're gonna fail. And you're gonna drag down those who are with you to fail. . . . Damn it, we want you here tomorrow. We want you here next year, and it's pretty simple what you have to do to stay safe: Know your Ten and Eighteen."

Making Luck

If we search for the bedrock understanding on which the Ten and Eighteen rests, we soon discover that accepting these rules requires accepting unspoken institutionalized principles that influence the way firefighters understand risk. These principles primarily personal accountability and individual responsibility—buttress the Forest Service's conception of risk, safety, and death. In this vein, consider how Jack MacCloud, a 49-year-old high-level Forest Service supervisor, responded when I asked him how he stayed safe during his 13 years on the fireline: "Just lucky I guess. But you make your own luck a lot of times. . . . Like, take Rick Lupe, for example." During a prescribed burning operation in a nearby forest, Rick Lupe, a 43-year-old supervisor of an elite firefighting unit, was burned over on May 14, 2003; he would die from his injuries roughly a month later. "Here he goes on a dang prescribed burn, and uh, shit, makes a mistake, basically. And costs him his life. And, he just wasn't so lucky that time. And, you know, we didn't get to talk to him or ask him any questions, so what happened for sure, who knows? . . . So he didn't make any luck for himself that day. ... The bottom line is that when we are out there fighting fires, we're responsible for our own safety, and we have to make good decisions."

This idea, as MacCloud said, is the "bottom line" of the Forest Service's thinking. If a firefighter falters, it is his own mistake. If he is injured, it is due to his lapse of judgment. This hearty emphasis on personal responsibility undergirds the Ten and Eighteen as well. The Orders say very little about teamwork or communication, reinforcing an emphasis on individual competence much more than cohesion or solidarity—qualities that infuse the necessarily collective act of firefighting. As the authors of a training brochure put it, "Each of the 10 Standard Orders are prefaced by the silent imperative 'YOU,' meaning the on-the-ground firefighters, the person who is putting her or his life on the line!"



What is Risk to a Firefighter?

If we acknowledge that the Ten and Eighteen are "ideally possible but practically unattainable" (Manning 1971, p. 240)—it is impossible to fight a wildfire without violating at least one Order or Situation—then we reasonably would expect firefighters to look on these rules with suspicion. (Organizational sociologists long have distinguished between the formal perspective of an organization and the perspective of its members [e.g., Powell and DiMaggio 1991; Roy 1954].) Although seasonal firefighters sometimes criticized the Ten and Eighteen whereas permanent supervisors were more reluctant to do so, every member of the Forest Service who I met valued these mandates. Consider, for example, how Bryan Keeton, a 22-year-old fourth-season firefighter, answered a brief sequence of Thurman's questions.

"Mr. Keeton," Thurman bellowed in the conference room.

"Yes sir," Bryan answered.

"If you go out here on a fire and get hurt, who's responsible for it?"

"I am!"

"Are they [the Forest Service] going to do anything to me if y'all go out there and get killed?"

"No."

"Why not?"

"Because it's our responsibility."

Although one might think Bryan was providing exactly what the boss wanted to hear, when I asked Bryan on a separate occasion, when we were alone, if injured or deceased firefighters could be said to have faltered in a serious way, his response was strikingly consistent: "Yeah, I mean, you look at the research now, and they give you the Ten and Eighteen, and I'm not trying to sound like Thurman here, but in the research that they have shows that something was broke among those guidelines."

Peter Ferguson, a 27-year-old engine operator, employed a similar logic when making sense of firefighting fatalities: "When they do kill people, and they look in the investigations, that's the first thing they look at: the Ten and Eighteen. They look at how many they broke. Almost always: no lookouts, no escape routes, no safety zones, no communication....They don't have to look any further than that. It was right there in what they'd been taught."

If crewmembers believe in the Ten and Eighteen even though it is impossible to fight a wildfire without violating some of the Orders and Situations, it is because they have internalized the *organizational common sense* of the Forest Service— the set of unquestioned assumptions beneath organizational behavior and dialogue, tacitly agreed on by members of that organization, that buttresses organizational orthodoxy and ensures consensus between members of the organization. The degree to which individuals comply with the practices and doctrines of an organization depends, above all, on the degree to which they accept the elementary set of givens, the unspoken common code, that makes organizational thinking and behavior possible.

Once crewmembers accept the organizational common sense of the Forest Service, they begin to develop a disposition toward firefighting, a disposition through which they place their faith in their individual abilities alone. And if they are competent, so goes the logic, if they know and observe the Ten and Eighteen, they have nothing to fear from fire. What is surprising about the moments when firefighters do doubt their ability is not the doubt itself—a reaction that seems completely reasonable given their opponent—but the rarity of such moments. Although there are times when they are more cautious, firefighters usually march forward with marked



confidence. And this is because, although they recognize that fire is not completely within their control, they believe they can rely on their knowledge to steer clear of the deadly flames. George elaborates: "To a point you can control all fire, but in some cases, like last year with the Rodeo-Chediski, that fire was burning so hot, nothing we could do was going to put an immediate stop to that fire. . . . That's one of those cases where you know that if you get in front of it, even on the sides of it, I mean, you're gonna get hurt. . . . So, to a point on fires, you can stop it in certain ways, but when it's burning hot, there's really nothing you can do."

"Were you scared during the Rodeo fire?" I ask.

"No."

"Why not?"

"'Cause, personally, I don't consider my life in danger. I think that the people I work with and with the knowledge I know, my life isn't in danger. . . . If you know, as a firefighter, how to act on a fire, how to approach it, this and that, I mean you're, yeah, fire can hurt you. But if, you know, if you can soak up the stuff that has been taught to you, it's *not* a dangerous job."

At the center of the logic of firefighting, therefore, lies not the lust for danger, or even the recognition of danger, but a kind of disposition or *illusio* of self-determinacy (cf. Goffman 1967, p. 184), a disposition molded by the organizational common sense of the Forest Service that erases the perils of their profession. As Kris put it, "But if you go in with an emphasis on really being alert and really trying to be able to accept if not control your situation and respond to that situation, then I believe you are perfectly safe."

Guided by this belief, crewmembers disrespect firefighters who value bravery over prudence, who think with their guts instead of their heads. Despising the rash paladin, they believe aggression and courage to be *negative* qualities in firefighters. When I asked Donald Montoya, a 22-year-old firefighter in his fourth season, what qualities define a good firefighter, he responded: "Common sense, a great big one. . . . And, I mean, it's pretty cut-and-dried what's going to happen . . . so you have to have that common sense."

"... Have you had an example where you were on a fire or in a sticky situation where you felt that this person, you wouldn't want to listen to that person?"

"Yes, I have had that. We'll be fighting fire, and a tree will be torching, and you say, 'Ok, let's move back,' and someone's saying, 'No.' The other person is thinking about it, you can see the wheels working in their head, saying, 'Hmm,' and the person's saying, 'We

⁶ I have witnessed firefighters hesitate and doubt their own abilities during moments when things get too hot, when the flames get too violent, when the smoke is too thick, or when something does not feel right. Sometimes, they push forward, feeling disconcerted and edgy. (Once, George, reluctant to take a chain saw to a red-hot log, did so only when Allen, his supervisor, pushed him to.) Other times, they step back and let the fire calm itself. (On another occasion, Bryan, Diego, and Scott attempted to cut off the head of a fast-moving grassfire by punching a scratch line in front of it. They vigorously dug line in front of the fire, but the flame lengths grew and the fire increased in intensity. The firefighters soon found themselves in front of a powerful wave of heat and five-foot flame lengths. Accordingly, all three of the men pulled back and ran to a safe spot. They let the fire die down before returning to the line.) But in all cases, after the action has quelled, there await the Ten and Eighteen, providing firefighters with a vocabulary to make sense of their actions when reflecting, retrospectively, on them (cf. Mills 1940). These rules are pre-formed, satisfactory responses to questions, responses that firefighters rely upon to comprehend firefighting as orderly and safe activity. Crewmembers draw upon these vocabularies of motive to interpret, analyze, and justify their actions on the fireline after the smoke settles, and in so doing, they alter these actions by substituting the logic of practice (based on practical strategies) with the logic of procedures (based on rules). How firefighters interpret their actions are not the same as the motivations driving them during the action itself; however, these interpretations, however selective, are crucial to understanding how firefighters make sense of the perils of their profession.



can do it! We can do it! And you say, 'No. Let's get the hell out of here!' . . . That's just someone saying, 'Yeah, I think we can do it.' But you're saying, 'I seriously doubt it."

Donald does not respect the fearless but fears those who disrespect fire. His crewmembers feel the same way. If the men at Elk River prize competence above all else and perform masculinity through displays of cool-headed skill and restraint in the face of danger—not acts of daring, as previous theories have predicted—it is because they come to understand their enemy as undeserving of their courage. The Forest Service does not train firefighters to be confident when facing wildfire; it trains firefighters to perceive wildfire as something so harmless (for the competent and capable) that confidence is superfluous.

The Death of a Firefighter

It would be unproblematic for firefighters to maintain that their job lacked danger if no one were ever hurt or killed. But what happens when the body of an experienced firefighter is "burned beyond recognition" and is brought before firefighters? The death of a firefighter poses a significant problem for the organizational common sense of the Forest Service because at first glance it seems to contradict its fundamental tenet: that fire is safe and controllable, that properly trained firefighters should never incur harm on the fireline. If the Forest Service strives to cultivate within firefighters a disposition of self-determinancy, how does the organization react when this disposition faces its biggest challenge, the death of a firefighter?

Two Eulogies

After Rick Lupe died, the familiar public announcements that usually follow the death of a "public servant" commenced (cf. Goode 1978). Newspaper articles explained this "warrior's" death, this "hero's" fall, as the result of a powerful force of nature and nothing else; flags flown over state buildings were lowered to a half-mast; the Fort Apache Indian Tribe declared a month-long mourning period; and Lupe was named "Firefighter of the Year." This *external eulogy* was the one most people witnessed after Lupe died. The Forest Service presided over many of the ceremonies that constituted the external eulogy, but it also presided over another kind of eulogy, one observed by those who must return to the

⁷ This does not mean that firefighters do not perform masculinity—only that they do so in ways unanticipated by previous literature and conditioned by their host organization. Within the same context, masculinity can express itself in a myriad of ways. Indeed, opposite modes of action can stem from the same motivation: to assert one's masculinity. This occurs, for example, when a teenager chooses to fight another "because real men know how to scrap," while his rival declines the challenge "because real men walk away." (And masculinity perhaps functions just as often as a convenient vocabulary of motive—a reason one applies, post factum, to one's behaviors—as it does a motivation for action [cf. Mills 1940].) My crewmembers understood the act of firefighting as connected to their sense of manhood, not because it required crude bravado or mindless guts but because it allowed them to display clear-headed competence amidst the roar of an emergency. In fact, they sometimes criticize women firefighters, not for their unwillingness or inability to take risks or for their lack of courage, but for being too daring. Consider Peter's comments: "Some of them ladies, they think that since they're women, people look at 'em like, 'Oh, they can't do the job since they're women.' So they, some of them, try to make themselves tougher than they are when all they're going to do is hurt themselves. But I think that men are more like, 'Fuck that shit! I'm a fat lazy fuckin' slob. I'm not going to fuckin' hike up that goddamn hill!' . . . You tell that to another female, and she—" Peter squeals in a high-pitched voice, "'Oh fuck it, 'cause I'm a female!' And WHOOM, there she fucking goes."



line the next day. This *internal eulogy* served a wholly different function and constructed an entirely different picture than the external one.

Fifteen days after Lupe was burned, Ronald Crasser, the head forest supervisor, traveled to Elk River to hold a safety meeting. Among other things, Crasser discussed Lupe's burnover. After explaining vague bits and pieces of the scenario on Sawtooth, he remarked, "There are some things he did wrong, uh, but we don't know what it was because we can't talk to him."

Similarly, Jack MacCloud, as I mentioned earlier, speculated that Lupe's mistakes resulted in him not making "enough luck" for himself on the fireline. And Thurman, for his part, often presided over internal eulogies with statements like this one, tendered shortly after receiving word of two fatalities: "Whether the pilot was at error or the weather contributed, the pilot still should have known better. With the fire in Idaho, if you look at the report, it shows that *they blew it*!" The external eulogy holds firefighters to be innocent victims whose altruistic and sacrificial deaths can be explained simply by the violent and volatile nature of wildfire. The internal eulogy holds them to be failures whose fully preventable deaths were the outcome of incompetence.

In the case of Rick Lupe, Crasser and MacCloud assumed that the findings of the fatality report would support their predictions that Lupe was responsible for his burns. A careful reading of the *Sawtooth Mountain Prescribed Fire Burnover Fatality Factual Report*, however, reveals that Lupe conducted most of his actions by the book. If this is the case, then why did the supervisors claim that he erred? To answer this question, we must examine the unfolding processes through which the Forest Service manages death—dynamics that come into view after close examination of official documents.

Processing Death

After any firefighting fatality, and many nonfatal entrapments, an interstate and interagency team of fire behavior analysts, safety officers, chief investigators, and fire operations specialists is dispatched to investigate. Each team bases its investigation on guidelines established in manuals distributed by the Forest Service, the Department of the Interior, and the Bureau of Land Management. Its job is to identify the causes of the accident and to generate recommendations that one hopes will help prevent future incidents.

All the manuals developed to guide accident investigations emphasize the need to identify multiple causes of fatalities. For example, one often-cited manual instructs investigators to organize the causes of an accident into four categories: "people causes," mistakes made by those injured or killed; "management causes," oversights or blunders made by supervisors; "equipment causes," mechanical breakdowns or failures; and "environmental causes," how fire weather or fire behavior functioned as a factor in the accident.

Although such accident investigation handbooks stress the importance of different factors, they devote significantly more attention (and pages) to people causes than to the other types. Moreover, accident investigation manuals not only coach investigators to downplay management, equipment, and environment causes, they also instruct them to think about these factors as somehow linked to people causes. One guidebook directs:

⁸ Whereas only a few paragraphs are allotted to examples of management, equipment, and environment causes, handbooks devote several pages of examples to people causes. One manual provides a nine-page list of ways the dead or injured can err, while devoting only one page to managerial causes and no pages to environmental or equipment causes.



"Environmental causes occasionally are the cause of an accident. A lightning strike is the classic example. When this occurs, look for human errors that may have exposed the employee to the environmental hazard." Therefore, if investigative teams follow the instructions set down in their manuals, they will ardently look, while scrutinizing the burn scene, for evidence of incompetence by the dead or injured.

Given this, it is not surprising that many fatality reports focus on the incompetence of the dead, manifest in violations of the Ten and Eighteen. However, all 21 fatality and injury reports that I analyzed also identified management, equipment, or environment factors as consequential causes of the accident. Consider, for instance, the investigative report for Washington's Thirtymile fire of 2001, a report that explains the entrapment in terms of 42 environment causes, 23 equipment causes, 42 people causes, and 36 management causes. Violations of the Ten and Eighteen receive significant attention in fatality reports—after all, as another report put it, these rules "serve as an analytical tool to help assess what errors might have occurred during an incident"—but such violations always are accompanied by other causes.

Sometimes, however, what matters is not the message but the messenger. Because, as one accident investigation handbook instructs, "it is imperative that information about specific entrapments and the 'Lessons Learned' from these situations be disseminated to all firefighters in a thorough and timely manner," information about fatalities is speedily circulated throughout the wildland firefighting community once the investigation is concluded. This is primarily accomplished through truncated reports widely distributed within firefighting organizations in memos and press releases. As information is selectively harvested from the prolix and scholarly fatality reports (rarely read by firefighters) to produce these small and manageable minor reports, a trimming and erasing occurs. Despite the emphasis fatality reports place on the role of poor leadership, broken equipment, or extreme environmental conditions, in the truncated reports these causes regularly (though not always) fade into the background (and sometimes out of existence), while the mistakes of firefighters and low-level supervisors are accentuated. The news release that followed the Thirtymile fire, for example, listed only five "key conclusions" about the causes of the four fatalities: "There were inadequate fire and safety briefings; potential for extreme fire behavior was not accurately assessed; firefighters disregarded 'watch out' situations and the ten fire fighting rules; fire suppression tactics were not reassessed once problems arose during the incident; and there was inadequate preparation for the deployment of fire shelters."

Trimming and erasing continues as this institutional message makes its way into training pamphlets and other official handbooks distributed throughout firefighting organizations. These documents (regularly read by firefighters and assigned in training classes) overlook all other causes and treat people causes as the leading *and only* causes of accidents. The authors of a 14-page booklet on fatalities observe, "Many of the wildland fire fatalities from burnovers can be directly attributed to the failure to follow the basic guidelines that are the basis for all wildland fire strategy and tactics: 10 Standard Fire Orders, 18 Situations that Shout 'Watch Out.'... Self-discipline can reduce fatalities." Another document, which I acquired during basic training, boldly makes the same case: "Fire shelter deployments have always been attributed to violations of the Ten Standard Fire Orders or the Eighteen Situations that Shout Watch Out.... [W]hen we violate BASIC SAFETY STANDARDS AND RULES—BAD THINGS HAPPEN!... There is no excuse for not doing what we are trained to do, yet we continue to do just that."

We can therefore identify four stages in the organizational process of managing death: *investigation*, in which a team of professionals advances several factors that led to the fatality, including managerial, equipment, and environmental causes; *dissemination*, in which trimming occurs, as fatalities often are attributed to the mistakes of firefighters and



low-level supervisors; *generalization*, in which trimming continues, as causes of accidents are reduced to people causes and universal claims about the incompetence of the dead are advanced in widely-circulated training materials and small handbooks; and, finally, *reproduction*, in which the organization's elite reinforce the internal eulogy of the Forest Service. The multifarious and complex causal factors behind fatalities presented in investigative reports are filtered through the individualizing screen of self-determinancy, and this sanitizing process produces only one clear, consistent, and convincing cause: incompetence of the dead. As we already have seen, some crewmembers would agree with supervisors in perceiving fallen firefighters as incompetents. But to understand their complex perceptions—and, moreover, to apprehend their acceptance of and resistance to the organizational common sense of the Forest Service—we must explore this topic in greater depth.

"The Fault Lays on Everybody"

"Listen up," said Allen, the 55-year-old Elk River supervisor, to a restless firecrew sprawled around the conference room table. "This just came in from over there in Jameson. It's a 'critique of the incident' about two firefighters that died, uh, died up in Idaho."

He put on his bifocals and squinted as he pulled the white pages closer to his face. He began: "During the afternoon of July 22, 2003, an incident occurred on the Cramer fire. . . . Two firefighters were involved in the incident resulting in two fatalities. . . . At this time, we cannot confirm what took place but will do so as soon as it becomes available. . . . The Cramer fire . . . is burning in extremely steep terrain on the Salmon River front . . . extreme fire behavior was experienced causing 'blow-up' conditions"

"That sucks," J.J. said.

"Someone fucked up," Donald responded. "I'll tell you what happened: Someone fucked up."

Heads nodded.

Craig Neilson, a 45-year-old fire prevention officer, added, "Their communications might have been fucked. . . . The fire was under them and burned up."

"They probably weren't paying attention," Donald said.

"Were they informed on the current weather conditions?" Craig wondered out loud.

"They're probably stupid. Probably weren't talking to their crew," Peter guessed.

"Yep. They're fuckin' stupid, not talking to anyone. They should've known better than to build a helispot [a makeshift landing spot for helicopters] on top of the fire," said Donald.

Heads continued to nod, and crewmembers soon shifted their attention to another topic. No one spoke a word about the incident for the rest of the day.

When news of the Cramer fire reached my crewmembers, most did not resist the internal eulogy of the Forest Service but participated in it. Although Craig suggested that communication and command failure may have led to the entrapment, Donald and Peter quickly shifted the blame back onto the shoulders of the dead. In this instance, crewmembers transformed equipment causes ("Their communications might have been fucked") and management causes ("Were they informed on the current weather conditions?") into people causes ("They're fuckin' stupid, not talking to anyone").

Although some firefighters entertain as suspicions of powerlessness in the face of wildfire (Peter once told me: "They teach us all this stuff, and what if you do have your communications in place? . . . What if shit just fucking goes nuts?"), suggesting the Forest Service should blame less, the majority inclined in the opposite direction. Steve, for



example, wanted the Forest Service to blame up, holding administrators responsible for putting firefighters in deadly situations: "If it goes wrong . . . [crewmembers are] gonna be at fault, but who put them in that position? . . . If you [a supervisor] go down there, and you think it's safe, you put 'em down there, it's your fault. . . . The fault lays on *everybody*. . . . It's like Thurman was saying, 'You're responsible for your own safety.' . . . The supervisor should have more responsibility for what happened. But these [crewmembers] aren't stupid."

"... So if someone dies on a fire, they probably made a serious mistake?" I asked.

"Serious mistakes? I mean, people make the same mistakes on other fires and get away with it, and some people make those same mistakes and they end up getting killed. . . . What's always really bugged me is they say . . . to follow these Ten and Eighteen, and this one was violated, this one was violated, and this one was violated. That's because on those Ten and Eighteen . . . no matter what . . . they can say that you violated one of those. There's not been one instance where some of those wasn't violated." He lowered his voice. "And still, I don't think they really preach those enough. I mean, obviously, those are basically everything in the fire."

Erasing Risk by Exaggerating Deviance

Although Steve observed that violations of the Ten and Eighteen can be documented everywhere for anything—which suggests they are vacuous—he went on to reaffirm the importance of these firefighting fundamentals by arguing that the Forest Service should stress the Ten and Eighteen even more. J.J.'s reasoning exhibited a similarly circular pattern. "You can't put the blame on one certain person because, as firefighters, we know what to look for," he told me regarding Thirtymile. "And as supervisors, they know what to look for. And there were a lot of the Ten and Eighteen that were broken. But why didn't the firefighters, uh, so why *did* the firefighters break them? I know they were tired, fatigued, but I wouldn't use that as a reason or excuse to say, 'Hey, the supervisors *burned them up*,' because it's as much our job to see what's going on as it is theirs. . . . You know, I trust *one person* and that's myself. It's *all* their fault, from the people that burned up to the supervisors. . . ."

"Right, but have you ever been in a fire where the Ten and Eighteen were broken?" I asked.

"Can't say that I have."

"On every fire that you've been on, has there been a lookout?"

"No. I think on a lot of fires they don't post lookouts. I think more than half the time they don't post lookouts on the fires."

"So does that violate a Fire Order?"

"I guess it does. It does. Lookouts not established or whatever."

"Do you think that you'd ever know if instructions were not given clearly or understood?" I questioned, referring to the fourth Fire Order.

"At the time it happened, if it actually didn't concern me, I don't think I would."

"So would you concede, then, that you've been on fires where Fire Orders were broken?"

"I guess I'd say I would, more than once. And we are breaking them too!"

"On the Beaver Creek fire, we must have broken like ten of the Eighteen, dude," I disclosed, regarding a fire in which my crewmembers and I had to drop our tools and run.

"No joke?"

"No joke."



"You're lucky that they didn't burn anybody up, you know. I guess it probably happens a lot like that in the Forest Service. I bet more than 90% of the time you're probably breaking a Fire Order on a fire, but you don't hear about it if somebody doesn't die, you know."

"So why do you think we have the Ten and Eighteen?"

"For reason to fall back on," J.J. observed. "Say somebody got burned, well, there's an excuse. 'Oh, it was broke,' you know. 'That's why they burned up, 'cause they broke the Ten and Eighteen.' It's an excuse to fall back on. You'll never hear them say, you know, so and so burned up, you know, because of the *truth*. They're not gonna say, 'Well this person burned because *we fucked up*.' They are gonna say, 'Ah, they burned because there are all these rules, and they didn't abide by the rules, therefore he burned.' They're not gonna admit *they* messed up, you know. No, they are gonna find an excuse. That way, they can get their ass out of trouble."

J.J.'s views resembled a labyrinth of mirrors that always reflect back on that which is most familiar. In no more than 2 minutes, J.J. claimed always to abide by the Ten and Eighteen, retracted that claim by guessing that these fundamentals are violated on most fires, placed his faith once again in the Ten and Eighteen in response to my observation about the Beaver Creek fire, then renounced his newfound faith by describing the Ten and Eighteen as empty rules useful only to supervisors for insurance purposes.

When J.J., Steve, and other crewmembers tried to resist the common sense of the Forest Service—when they attempted to challenge the thought categories provided them through all the vehicles of organizational socialization—they quickly discovered that their universe made little sense. To be sure, they did not accept the common sense of the Forest Service without raising skeptical questions and retaining stubborn doubts, but they accepted it nonetheless, because without it fire is a dangerous chaos.

By exaggerating individual deviance, the Forest Service erases risk. This allows firefighters to rub out the dangers of their occupation by concluding that firefighting is dangerous only for the idiotic and the irresponsible. Firefighters are trained to distance themselves from fallen friends and crewmembers (thereby avoiding the consternation that results when one slips his feet into the shoes of a corpse) and instead to clutch onto the belief that, as George once put it, "people are gonna die, but just because *stuff happens*, I mean, it doesn't necessarily mean it's gonna happen to *you*."

Discussion

Firefighters prize competence and control above all other attributes and (contrary to most accounts) view aggression and courage as negative qualities. The distinctive mark of a good firefighter is his ability to know—not to test—his limits. Far from understanding risk as an avenue to a euphoric "adrenaline rush" or a route to acquiring masculine character, firefighters are socialized to view risk as something that can be tamed, safety as something for which they are personally responsible, and death as completely avoidable through competence. Although there is a long tradition of theorizing commonsense (Bourdieu 2000 [1997]; Geertz 1983), there are relatively few actual empirical accounts of the cultivation of collections of commonplaces deeply recognized, albeit rarely specified, that allow

⁹ Supervisors never criticized the Ten and Eighteen in this manner. In fact, the elites whom I observed and interviewed seemed to believe in the importance of these rules just as much as (perhaps more than) seasonal firefighters.



organizations to run smoothly and secure worker compliance. I have attempted to offer one here, demonstrating that the Forest Service acclimates firefighters to the perils of their profession by cultivating within them a belief that their job is no more dangerous than the next. When this belief meets its ultimate challenge—the death of a firefighter—the Forest Service reacts by minimizing hazards and exaggerating deviance, thereby allowing firefighters to distance themselves from the dead and the objective dangers of their job. ¹⁰

The Selective Mimesis of Organizations

As organizational structure is grafted into the social structure, organizational processes of socialization are grounded in processes of socialization at work within society writ large (Meyer and Rowan 1977; Powell and DiMaggio 1991; Scott and Meyer 1994). Although organizational socialization never can be completely disentangled from cultural socialization, an organization can *select* which aspects of the larger culture it wishes to mimic, endorsing certain elements while rejecting others. The Forest Service chooses from a vast repertoire of culturally-appropriate responses to death and selects certain principles (individualism, self-reliance) over others (solidarity, collectivism, honor) when crafting a firefighter's illusio of self-determinancy. Sometimes it connects to different cultural principles depending on its aims: Whereas the external eulogy gains meaning by connecting to widespread convictions of symbolic honor and masculine sacrifice, convictions linked to ideas of nationalism and heroism, the internal eulogy borrows from ideas of American individualism, autonomy, and responsibility. Through the former, the Forest Service maintains legitimacy with the surrounding community; through the latter, it hopes to gain legitimacy in the eyes of its workers.

Thus, the Forest Service provides firefighters with a cognitive winnowing device, a "focus of attention" (March and Simon 1958, p. 152), that espouses a definite response to death (one that harmonizes with American individualism), while discouraging others (which would correspond to equally appropriate cultural beliefs). Indeed, if this were not the case, if firefighters naturally and effortlessly came to such conclusions about risk and death, why would the organization need to dedicate so much effort and so many resources to socializing its workers to think in such a fashion?

The Behavior of High-Risk Organizations

Do other high-risk organizations behave this way? Wildland firefighters differ from many other professional risk takers on at least one important score: they can abandon their tasks if they feel threatened, and they are frequently encouraged to do so. We can imagine a

¹⁰ One might wonder if, along with my crewmembers, I, too, internalized such a belief during my fieldwork. I did and began questioning how my crewmembers and myself made sense of risk and death, what the latter had to do with the former, and how my thinking had been influenced by the Forest Service only after I witnessed how my crewmembers reacted to Rick Lupe's death. Their reaction produced in me a double effect: I began thinking of ways to reconstruct the logic of firefighting and processes of organizational training and discipline; and I began assuming a skeptical posture toward crewmembers' and supervisors' opinions and injunctions. The question I began asking myself again and again was, "Why do they (and I) think that?" Many fieldworkers have experienced similar encounters, unexpected ethnographic episodes that forced them to reevaluate their own ways of thinking. Full immersion fieldwork often presents the embedded ethnographer with reflexivity-inducing situations, conceptual crises that raze underdeveloped ideas and replace them with new ways of understanding (e.g., Rabinow 1977). However, I do not pretend to believe that I have broken completely with the common sense of the Forest Service. If "going native" is nothing more than a chimera for the outside observer, then so too is "going alien" for the inside observer.



continuum of control, so to speak, where on one end are astronauts and fighter pilots, who have very little agency in the face of danger and cannot survive without their machines, and on the other end are wildland firefighters who possess a high degree of control and can retreat if things start to go wrong. We can further imagine a continuum of professional dispositions mapped onto this continuum of control, ranging from a sense of powerlessness to an abundance of confidence in one's power to control one's own destiny.

But this logic assumes a robust correspondence between "actual" danger (or control) and perceptions of risk, a correspondence that several studies have disconfirmed (Douglas and Wildavsky 1982; Heimer 1988). If the illusio of self-determinancy is neither a normal psychological reaction to death nor something found only in those organizations where workers exert a high level of control (see Wolfe 1979), then we should treat it as the direct and deliberate result of organizational socialization, and we should expect to find it endorsed by other high-risk organizations and informing the worldview of other professional risk takers.

Future studies should devote themselves to understanding how high-risk organizations successfully cultivate, condition, and motivate cadets and workers to expose themselves to deadly harm—and should go beyond the limitations of this study. This study relied on the case of the US Forest Service, concentrating specifically on the Elk River Firecrew; future studies should employ longitudinal methods that trace how processes of organizational socialization unfold over time (e.g., Van Maanen 1975) or construct a comparative inquiry into different locations within a single organization or different high-risk organizations. Besides allotting its workers significant discretion in the face of danger, the Forest Service also differs from many high-risk organizations in that it is more or less insulated from production pressures, which can cause organizations to forfeit safety for profit (cf. Heimer 1988). My findings would have been enriched, moreover, had I (a) interviewed firefighters who experienced firsthand the death of a fellow crewmember, as we might expect workers whose colleague is killed to respond differently than those who learn of a stranger's death, and (b) ascended the organizational ladder to investigate elite actors responsible for overseeing the process by which the Forest Service processes death, as questions such as who, exactly, truncates the fatality reports and for what reasons remain open. Future studies of high-risk organizations that investigate more heterogeneous settings—settings that include a number of women and workers plucked from different social positions—might discover more heterogeneous responses to organizational socialization than I did (cf. Hutter 2005; Nelkin and Brown 1984), just as they might conclude, with Burawoy (1979), that organizations have the power to render similar a panoply of divergent dispositions.

Unanticipated Consequences of Human-Error Approaches

What would happen if the Forest Service did not emphasize the incompetence of the dead? Social scientists long have criticized human-error approaches for obscuring "the complexities of interaction between humans, machines and organization" (Clarke and Short 1993, p. 387) and for misdirecting our attention so that we end up "blaming the wrong people and the wrong factors" (Perrow 1999 [1984], p. 4). I would like to push the point further by arguing that overemphasizing human error actually encourages organizational practices that may themselves contribute to system breakdowns. Proponents of human-error approaches fail to realize that the problems they purport to address actually are exacerbated by such approaches precisely because the latter necessarily emphasize and reinforce an organizational ethic of individualism.



An ethic of individualism can lead to miscommunication, poor teamwork, a devaluation of leadership, and breakdowns in the chain of command. In fact, it has been identified as a leading cause of firefighting fatalities (Driessen 2002; Weick 1993). An organizational ethic of individualism, unknowingly supported by human-error approaches to accidents, increases the potential for serious accidents. This institutionalized irony is at work within the Forest Service. If the organization continues to stress the incompetence of the dead, it may be encouraging conditions that lead to entrapments and fatalities. ¹¹ If high-risk organizations responded to death differently, attributing accidents to multiple causal factors (and communicating as much to their workers), they might begin to supplant an individualistic ethic with a collectivistic one that esteems collaboration and communication—an ethic that might make dangerous work safer.

Acknowledgements I thank Mustafa Emirbayer, Javier Auyero, and three anonymous reviewers for their useful feedback. Sections of this article have appeared in *On the Fireline: Living and Dying with Wildland Firefighters* (University of Chicago Press, 2007) as well as in "Des morts incompétents," *Actes de la recherche en sciences sociales* 165 (2006), pp. 8–27, both works by the author.

References

Bourdieu, P. (2000 [1997]). Pascalian meditations. Stanford: Stanford University Press.

Bourdieu, P. (2001 [1998]). Masculine domination. Stanford: Stanford University Press.

Burawoy, M. (1979). Manufacturing consent: Changes in the labor process under monopoly capitalism. Chicago: University of Chicago Press.

Burawoy, M., et al. (1991). Ethnography unbound: Power and resistance in the modern metropolis. Berkeley: University of California Press.

Bureau of Labor Statistics. (2005). Household data survey. Washington, DC: Bureau of Labor Statistics.

Chetkovich, C. (1997). Real heat: Gender and race in the urban fire service. New Brunswick: Rutgers University Press.

Clarke, L. (2005). Worst cases: Terror and catastrophe in the popular imagination. Chicago: University of Chicago Press.

Clarke, L., & Short, J., Jr. (1993). Social organization and risk: Some current controversies. Annual Review of Sociology, 19, 372–99.

Coleman, J. (1974). Power and the structure of society. New York: Norton.

Desmond, M. (2007). On the fireline: Living and dying with wildland firefighters. Chicago: University of Chicago Press.

Douglas, M. (1986). Risk acceptability according to the social sciences. London: Routledge and Kegan Paul.Douglas, M., & Wildavsky, A. (1982). Risk and culture: An essay on the selection of technical and environmental dangers. Berkeley: University of California Press.

Driessen, J. (2002). Crew cohesion, Wildland fire transition, and fatalities. Missoula: Forest Service Technology and Development Program.

Dwyer, T. (1991). Life and death at work: Workplace accidents as a case of socially produced error. New York: Plenum.

This is not necessarily a necessary evil, for organizational legitimacy need not come at the cost of marshalling a set of rules (impossible to obey in practice) as post mortem evidence of incompetence. Just as it is unreasonable to assign blame, in virtually every case, to fallen firefighters, it would be unreasonable, in the absence of such assignments, to criticize the Forest Service after every accident. There are times when it is the individual's fault, times when it is the organization's, and times, we must admit, when it makes the most sense to blame the very nature of firefighting itself. Perhaps organizational legitimacy is not such a fragile thing, especially in the case of an organization that has been amassing it for over 100 years. The Forest Service's legitimacy would not melt away if a collectivist ethic came to replace the current ethic of individualism. Although this shift could at times throw the Forest Service's own competence into question, is it not equally plausible that, should this shift result in a marked decrease of injuries and fatalities, more organizational legitimacy could be gained in the process?



- Geertz, C. (1983). Local knowledge. New York: Basic Books.
- Glaser, B., & Strauss, A. (1967). The discovery of grounded theory: Strategies for qualitative research. Hawthorne: Aldine de Gruyter.
- Goffman, E. (1967). Interaction ritual: Essays on face-to-face behavior. Garden City: Anchor Books.
- Goode, W. (1978). The celebration of heroes: Prestige as a social control system. Berkeley: University of California Press.
- Haas, J. (1972). Binging: Emotional control among high steel ironworkers. The American Behavioral Scientist, 16, 27–34.
- Haas, J. (1977). Learning real feelings: A study of high steel ironworkers' reactions to fear and danger. Sociology of Work and Occupations, 4, 147–70.
- Heimer, C. (1988). Social structure, psychology, and the estimation of risk. Annual Review of Sociology, 14, 491–519.
- Hutter, B. (2001). Regulation and risk: Occupational health and safety on the railways. New York: Oxford University Press.
- Hutter, B. (2005). "Ways of seeing": Understandings of risk in organizational settings. In B. Hutter & M. Power (Eds.), Organizational encounters with risk (pp. 67–91). Cambridge: Cambridge University Press.
- Kaufman, H. (1960). The forest ranger: A study in administrative behavior. Baltimore: Johns Hopkins University Press.
- Kimmel, M. (1994). Masculinity as homophobia: Fear, shame, and silence in the construction of gender identity. In H. Broad & M. Kaufman (Eds.), *Theorizing masculinities* (pp. 119–41). Thousand Oaks: Sage.
- Lyng, S. (2004). Edgework and the risk-taking experience. In S. Lyng (Ed.), *Edgework: The sociology of risk-taking* (pp. 3–14). New York: Routledge.
- Maclean, J. (1999). Fire on the mountain: The true story of the South Canyon fire. New York: William Morrow.
- Maclean, N. (1992). Young men and fire. Chicago: University of Chicago Press.
- Manning, P. (1971). Talking and becoming: A view of organizational socialization. In J. Douglas (Ed.), Understanding everyday life: Toward the reconstruction of sociological knowledge (pp. 239–56). London: Routledge and Kegan Paul.
- Manning, P. (1977). Police work: The social organization of policing. Cambridge: MIT.
- March, J., & Simon, H. (1958). Organizations. New York: Wiley.
- Meyer, J., & Rowan, B. (1977). Institutionalized organizations: Formal structures as myth and ceremony. American Journal of Sociology, 83, 340–63.
- Mills, C. W. (1940). Situated actions and vocabularies of motive. American Sociological Review, 5, 904–13.
 Nelkin, D., & Brown, M. (1984). Workers at risk: Voices from the workplace. Chicago: University of Chicago Press.
- Paap, K. (2006). Working construction: Why white working-class men put themselves—and the labor movement—in harm's way. Ithaca: Cornell University Press.
- Perrow, C. (1999 [1984]). Normal accidents: Living with high-risk technologies, Second edition. Princeton: Princeton University Press.
- Powell, W., & DiMaggio, P. (Eds.). (1991). The new institutionalism in organizational analysis. Chicago: University of Chicago Press.
- Rabinow, P. (1977). Reflections on fieldwork in Morocco. Berkeley: University of California Press.
- Roy, D. (1954). Efficiency and "the fix": Informal intergroup relations in a piecework machine shop. American Journal of Sociology, 60, 255–66.
- Scott, W. R., & Meyer, J. (1994). Institutional environments and organizations: Structural complexity and individualism. Thousand Oaks: Sage.
- Short, J., Jr. (1984). The social fabric at risk: Toward the sociological transformation of risk analysis. American Sociological Review, 49, 711–25.
- Simmel, G. (1959 [1991]). The adventurer. In K. Wolff (Ed.), *Georg Simmel, 1858–1918*, (pp. 243–58). Columbus: Ohio State University Press.
- U.S. Office of Personnel Management. (2004). Demographic profile of the federal workforce publication. Washington, DC: Office of Personnel Management.
- Van Maanen, J. (1975). Police socialization: A longitudinal examination of job attitudes in an urban police department. Administrative Science Quarterly, 20, 207–28.
- Vaughan, D. (1996). The Challenger launch decision: Risky technology, culture, and deviance at NASA. Chicago: University of Chicago Press.
- Vaughan, D. (1997). Targets for firefighting safety: Lessons form the challenger tragedy. Wildfire, 6, 29–40.Wacquant, L. (2004). Body and soul: Notebooks of an apprentice boxer. New York: Oxford University Press.
- Weick, K. (1993). The collapse of sensemaking in organizations: The Mann Gulch Disaster. Administrative Science Quarterly, 38, 628–52.



Weick, K. (1996). Drop your tools: An allegory for organizational studies. *Administrative Science Quarterly*, 41, 301–13.

Wolfe, T. (1979). The right stuff. New York: Farrar, Strauss, and Giroux.

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