

Dropping Your Tools

Organizational adaptability and making sense of change

by LtCols G.P. Gordon & Aaron Lloyd

On the afternoon of 4 August 1949, a lightning storm ignited a small fire in Mann Gulch, a three-mile long valley located in Montana in the Gates of the Mountains Wild Area just off of the Missouri River. The fire, slowly smoldering and sputtering, was spotted by forest rangers the next day—a day marked by extreme heat and an extraordinarily high fire danger rating. Dispatched in a C-47 transport plane, fifteen smokejumpers jumped into the south side of Mann Gulch at just a few minutes after 4:00 pm to put down the blaze. Less than two hours later, thirteen of them lay burned to death on the rugged slopes of that gulch.

Norman Maclean's 1992 national bestseller, *Young Men and Fire*, tells the story of the 1949 Mann Gulch fire that claimed the lives of those thirteen young men. This fire, and the study of it, provides a poignant example of organizational sensemaking, the disintegration of cohesion, and their ramifications when a unit's mission is to meet uncertain and dangerous circumstances. Maclean called *Young Men and Fire* the story of a race, but it is also the story of how organizations, and the humans within them, react when the world no longer makes sense.

Sensemaking is the process of making sense of or giving meaning to something, especially new experiences, and developing a plausible understanding of a shifting world.¹ It often requires a willingness to set aside cultural and organizational biases and to question long-standing maxims. The firefighters at Mann Gulch, a highly elite group eminently sure of themselves and their previous accomplishments, found themselves out-matched by an unpredictable fire that did not behave according to their expectations. Their inability to un-

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derstand and appropriately react when the world around them no longer fit into their mental models cost them their lives.

The Marine Corps is having a Mann Gulch moment, and history will judge us by our ability to quickly understand the changing competitive environment where traditional roles may no longer prove relevant to future conflict. The only thing known for certain about future conflict is that we do not know. The Marine Corps should strive not to be absolutely right but to be less wrong than our adversaries and better able to quickly adapt in a complicated world.

Mann Gulch 1949

After landing in the upper northern portion of Mann Gulch on that August afternoon, the firefighters immediately gathered their equipment and prepared to fight the fire. Left without communications when their radio's parachute failed to open, they conducted an in-person link up with a fellow ranger already on the scene, Jim Harrison, who had been fighting the fire alone for several hours. Foreman Dodge, the highly experienced leader of the crew, and Ranger Harrison departed the group to scout ahead while the others continued to collect their gear and prepare for action. The second-in-command, William Hellman, then took the crew across to the north side of the

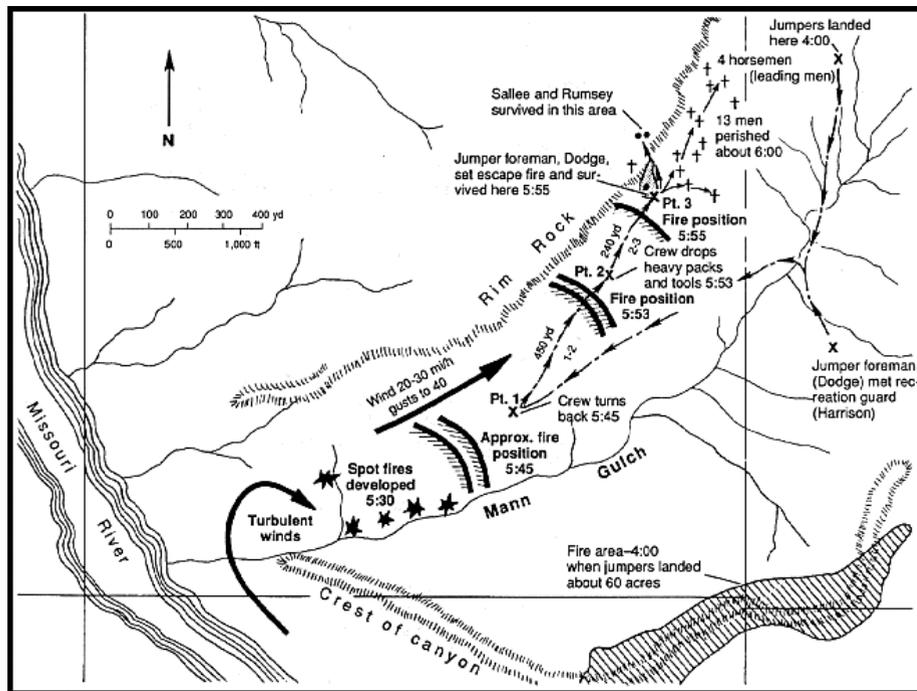
gulch and began moving to establish a fire line. When Dodge and Harrison rejoined the group at 5:40, Dodge immediately realized the fire had exploded into a swirling conflagration and crossed the gulch in front of the crew, blocking them in from both sides. He ordered the crew to reverse course away from the fire, eventually telling them to drop their tools with the intention of reaching the relative safety of the top of the ridge. Most of the firefighters complied and dropped their tools, but some did not, slowing their rate of march and inhibiting their ability to climb the steep ascent, measured after the fact as a 76 percent slope.

Modern fire science now tells us the inferno was moving at a rate of seven miles an hour and producing flames as high as 30 feet. Foreman Dodge realized the footrace was unwinnable and did what he had done over his entire life—he improvised. He lit his own fire, now commonly called an escape fire, then unknown and not part of smokejumper training, and ordered his crew to lie down inside the freshly burned area. Only Dodge, however, sought refuge inside the confines of the escape fire. The crew found Dodge's escape fire to be inexplicable, and with no time for Dodge to fully explain his thought process, they hiked right by the relative safety of it, even remarking "to hell with that, we're getting out of here."

Dodge survived by laying down within the ashes of his escape fire. Two of the smokejumpers made it to the safety of the ridge, but all others lost the race, succumbing at 5:56, the time told by the melted hands of a smokejumpers recovered watch.

The crew lost that day was not a cohesive unit. They believed the Mann Gulch fire to be routine, referring to it as a “10 o’clock fire,” meaning it would be contained by ten the next day. The lack of communications, minimal cohesion, lost time, and differing perspectives combined to create tragedy. Karl Weick, an American organizational theorist, described what the firefighters experienced that day as a cosmology event.² Cosmology is a philosophy and causes us to believe events occur in an orderly way, with change unfolding along the same continuum. When these assumptions are disrupted by change, it is referred to by social scientists as a cosmology episode. A cosmology episode is the opposite of *déjà vu*, in which instead of a feeling of having seen something before, it is a feeling of “I’ve never been here before.” At this moment of great uncertainty, the cognitive tendency is to rely on old tools and paradigms that have worked in the past, despite evidence to suggest the game has changed. As the fire pressed on the crew, they were unable to understand the fire’s behavior and unable to make sense of Dodge’s escape fire. This cognitive collapse contributed to the disaster at Mann Gulch. Understanding this collapse and recontextualizing it to the present force design efforts of the Marine Corps creates a powerful analogy for organizational change.

The Marine Corps has a strong history of innovation and change. Gen Holcomb’s efforts to modernize the Marine Corps prior to World War II, taking the Marine Corps from a prewar constabulary force to six divisions and nearly half a million Marines, is equally as significant as any current changes being executed. When foreman Wagner Dodge told his firefighters to drop their tools, he brought into question the very nature of their existence. Much like foreman Dodge, the Commandant has asked us to do something unfamiliar



Like the firefighters at Mann Gulch, the Marine Corps may be facing a situation where unpredictable events do not behave according to expectations. (Map: U.S. Fire Service General Technical Report INT-GTR-299.)

with *Force Design 2030 (FD2030)* and to exercise sensemaking to understand our role in future conflicts.

Marine Corps Force Design

The Marine Corps now stands on the northern slope of Mann Gulch in Montana, a forest fire of change chasing it ever faster. The current National Security Strategy shifted the Marine Corps, and the nation, from a relatively benign footing dealing with small wars to one of direct competition with great powers. *FD2030*, the *Commandant's Planning Guidance*, and force shaping directives are all moving the Corps toward that change. To adapt to emerging threats, a substantial adjustment in the way the Marine Corps fights, as well as with what equipment and under what concepts is due.

The required changes have been evaluated through extensive problem framing, war gaming, and analytically rigorous study. The Commandant’s release of *FD2030* and subsequent efforts to explain, justify, and convince, however, may be repeating history. As the smokejumpers were told to “drop their tools,” an existential crisis manifested in their minds. The question of “who

am I, if not a firefighter?” immediately snapped into being, and their ability to make sense of their world failed. The skewed answers to their questions led to bad decisions and individual actions resulting in disaster. Today, skeptics, both inside the Marine Corps and out, are asking the same questions. The solution proposed, and being executed, is at the receiving end of the inevitable push back from stakeholders, retired officers, and commentators of numerous leanings. The development of a solution out of perceived thin air, akin to Dodge’s “Eureka” moment escape fire, will not in and of itself create the institutional “buy in” needed to reach amicable shared consensus.

Context of the magnitude of change is important as well, as only fifteen to twenty percent of the structure of the Corps is being shaped and molded into something new.³ While the introduction of highly capable rocket artillery and anti-ship missiles are of value at specific times and in specific areas, their overall utility and adaptability remains to be seen. Reductions to infantry forces will be balanced by maturation and modernization of the force as additional drone squadrons cre-

ate potential mismatches in capability when viewed across the entire range of military operations. These changes are significant. Marines *are* asking the question right now, “who are we?” and “where are we going?” As the smokejumpers chose to ignore their foreman and continued up the slope, so could the Marine Corps, moving through the motions as the situation passes it by, resulting in a disjointed team, without cohesion or greater purpose, all to the point of disaster.

Change is necessary, but the Marine Corps is a bureaucracy, and like the RMS *Titanic*, does not turn on a dime. Additionally, a large ship requires a team—a crew—to ensure that when the wheel is thrown over hard to port, the response is as the captain expected. The risk of inaction would be similar to what Wagner Dodge experienced on the northern slope of Mann Gulch that hot day in August 1949. As he led his highly capable—but unfamiliar—team of elite smokejumpers up the slope and away from the roaring fire, trust and understanding were the coin of the realm for everything that happened next. Without trust, built of familiarity, experience, and implicit communication, disaster bore down and rent asunder the best plan that the foreman could come up with—the escape fire. This is not to say the Commandant does not hold the trust of the Marines—institutional trust is a built-in feature of the organization—but implicit trust must come from a shared sense of vision, and that vision is lacking at this point.

With change inevitable and the vision fuzzy, recognition that the primary weapon the Marine Corps wields is not a material solution but rather adaptability clears the haze. Rapid competitive adaptability, as Sir Michael Howard first said, is the primary weapon of great power competition.⁴ The likelihood of *FD2030* being completely accurate is slim; however, the likelihood of our adversaries being completely accurate in their future war predictions is equally slim. Similarly, the likelihood of being completely wrong, for both the United States and its adversaries, is equally unlikely. Great power competition, and the role of the Marine Corps in supporting

it, will happen somewhere in between. Nuanced arguments about specific platforms have their place; however, rapid competitive adaptability is platform agnostic. In this view, the Marine Corps should continue to seek adaptive frameworks to be whatever the nation needs it to be.

To achieve change in an organization, the members of that organization must be grounded and focused in who they are and what their mission is while their belief in the mission and the organization must be deep seated and their trust in leadership significant. To achieve that level of cohesion and belief in the team is important, and the Corps has cracked the code on esprit de corps and belief in itself. Today, however, the Marine Corps finds itself in a position whereby recognition of the rapidly evolving environment and how to compete effectively in that environment is vital to creating advantage. The fact is, again, that rapid competitive adaptability *is* the weapon. The vehemence with which opponents attack *FD2030* is misplaced; the risk of accepting the status quo is greater than the risk of change.

“Wars,” as Cathal Nolan puts it, “are won by grinding.”⁵ Upon a single battle will rarely, if ever, turn a whole war. He also says conflict between great powers will drag on until, typically, “exhaustion settles the matter.”⁶ The force being crafted by the Commandant is not meant to win a war, but instead to participate in battles that can create favorable conditions within that war and to control the conditions of war to our advantage. The primary advantage the Corps will bring will be its ability, honed during the period between 2020 and the near future, to change. Its ability to out-cycle its opponent in the competition between offensive weapon and defensive system will complicate enemy systems development. New, unique conceptual models employed in innovative ways will create the cascading waterfall of bad options for an adversary, eventually crumbling their ability to resist in each instance. Hence, the crux of the matter—rapid adaptability to the unforeseen cosmology episode is the Corps’ real weapon.

Conclusion

The Marine Corps has demonstrated time and again the ability to reinvent itself as well as to adapt to rapidly changing conditions and requirements. This ability to prove itself up to any challenge is the value the Corps provides and should be capitalized on in every way possible. The organization has the responsibility and duty to be the most ready—for any challenge—when the nation is least ready. Accordingly, adaptation, change, and preparation against the most dangerous potential course of action of a potential great power competitor is consistent with good decision making and prudent action planning. As those adjustments are made, however, it must never be forgotten where those changes may lead and that they could take individual Marines into a place they have never been before, a place where understanding fails, and they are unable to support radical shifts in methodology or conceptual employment schema. If the organization is not simply to follow along obediently, but instead to enthusiastically respond to unfamiliar directions, the Corps from private to general must drop their tools and execute the comprehensive change management plan laid out by the Commandant.

Notes

1. *Google Dictionary*, s.v. “Sensemaking,” available at <https://www.google.com>.
2. Karl Weick, “The Collapse of Sensemaking in Organizations,” *Administrative Science Quarterly*, (Thousand Oaks, CA: SAGE Publishing, December 1993).
3. Gen David Berger, *Force Design 2030*, (Washington, DC: March 2020).
4. Michael Howard, “The Uses and Abuses of Military History,” in *The Causes of War and Other Essays*, Sir Michael Howard, (Cambridge, MA: Harvard University Press, 1983).
5. Cathal J. Nolan, “Wars are Not Won by Military Genius or Decisive Battle,” *Aeon*, (May 2017), available at <https://aeon.co>.
6. Cathal J. Nolan, *The Allure of Battle: A History of How Wars Have Been Won and Lost*, (New York: Oxford University Press, 2017).

