

ANCIENT CAMPFIRES — THE ORIGINS OF TACTICAL SCIENCE

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All science is based on observation, so it should come as no surprise that the origins of tactical science began with ancient hunters sitting around a campfire talking about the next day's hunt. Despite the fact that these humans had no fangs, tusks, horns or claws and were pitifully weak and slow when compared with their prey, they were hunters par excellence. Their advantage was that they could think and anticipate the actions of their game. Faster animals could be driven into a canyon, to the water's edge or even over a cliff. Large bison and mammoths could be chased into swamps or deep snow to offset their massive strength. Even ferocious animals were no match as they succumbed to humans with tactics and technologies that left them vulnerable. So efficient were these tactics that some animals were captured and domesticated.

Humans also learned by watching predators, and acquired knowledge of the advantages provided by surprise, ambush, stalking and swarming. Likewise, watching prey revealed the importance of camouflage, terrain shielding, sentries and speed. It wasn't long before humans adapted these basic lessons and began employing their own versions with subterfuge, diversions, traps and lures. They also began using their mental acuity to become more efficient by exploiting the habits of

their prey when eating, drinking or sleeping. As their plans became more elaborate and sophisticated, so too did their social order as leaders emerged and families banded together as clans and tribes. Eventually, they formed enclaves and vigorously defended their shelters, watering holes and hunting areas.¹

The knowledge gained from observation and experience was passed down from generation to generation and the best hunters were prized for their skills and abilities. It was only natural that these same individuals were those most often selected for leading larger groups, and so the kings of historical city-states and regions, and even many nation states, were also proven warriors. At the same time, the "science" that provided the advantages was also becoming more advanced.

The invention of writing allowed this knowledge to be compiled and preserved for the ages. Sun Tzu, a high-ranking Chinese general, wrote a book called *The Art of War* about 500 B.C., which is generally accepted as the oldest written treatise devoted to the subject. He explained concepts such as the use of terrain, maneuvers, intelligence and offense. This book not only remains popular but is required reading for contemporary military theorists in military service academies. Since then, countless authors have written

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innumerable works that have either added to the body of knowledge or clarified and elaborated known concepts to make them easier to grasp and apply.

It wasn't till the 1800s, however, that the collective knowledge began to be recognized as a science, particularly when a book called *On War* was published in 1832. The book was written by Prussian general and military theorist Carl von Clausewitz. It provided a comprehensive

look at military theory and strategy, as well as the nature of conflict. It was also about this time that the term “military science” was coined to describe this emerging discipline.²

By the early 1900s, rules and concepts were being excerpted and cited as rationale for understanding situations and identifying appropriate courses of action. Perhaps the most famous are the “Principles of War,” which are often cited as the foundation of understanding for modern theory. They began as a simple list in 1912, which was continually refined until about 1925 when the “Nine Principles of War” emerged. These principles have proven so practical and reliable that they remain unchanged nearly a century later and are taught in every U.S. military academy.³

It is unfortunate that present-day sensibilities view military science as a discipline having value only in warfare. Consequently, the precepts and principles gleaned throughout the millennia are nearly unknown outside those who have been exposed to them from the armed forces. Notwithstanding, the concepts are absolutely relevant in dealing with conflicts⁴ and provide penetrating insight into the essence of crises of all types. Concepts like fog, friction, tempo, initiative, objective, simplicity and many others, are not only thoroughly grounded in science but pertinent in handling disasters and tactical operations of all sorts. It is for this reason that the term “tactical science” was coined and is gradually gaining acceptance as a substitute for the less descriptive term military science.

In the simplest terms, *tactical science* is the systematized body of knowledge covering the principles and doctrines associated with tactical operations and emergency

responses. Unlike the “hard” sciences, such as chemistry, physics and mathematics, which use formulas and algorithms to get the right answer, tactical science more closely resembles the “soft” sciences, like economics, sociology and anthropology, which use probabilities and interpretations. This is because the scientific truths cannot be determined to an absolute certainly but instead are limited to a range of likely probabilities. Likewise, tactical science is an “applied science” in that its major contribution is not in merely identifying the principles and precepts in play, but rather in applying that knowledge to forecast and influence behaviors and outcomes to enhance a more satisfactory outcome.

Planners and decision-makers who are thoroughly grounded in the science are better able to understand the “why” of a situation instead of just “what” and “how.” Accordingly, they are quicker to recognize subtleties and discern the factors and influences at play. They are more ingenious in thought and adaptive in practice and potential courses of action are based upon an intuitive application of scientific principles instead of blind adherence to rules and procedures, which may not be appropriate for the current circumstances.

To better understand how tactical science works, consider that a recent report from the FBI revealed that 98 percent of active shooters acted alone. The same study discovered that only about 3 percent were female.⁵ While the numbers are slightly different, other studies corroborated these findings with similar figures. Also, about three-quarters of the shooters will enter the location through the front door, and there is no known instance of

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an active shooter breaking down a door to kill victims in the U.S.

These statistics are the modern-day equivalent of the observations of the ancient hunters. When this contextual information is combined with the doctrinal concepts of tactical science, plans and policies can be developed based upon bona fide science and not just what worked the last time or what someone else did. Planners and decision-makers who understand and apply these scientific concepts gain substantial, often decisive, advantages over those who do not. ■

ENDNOTES

1. While this information has multiple sources, for this article it was provided during multiple conversations with Dr. Robert J. Bunker, Adjunct Research Professor, Strategic Studies Institute, U.S. Army War College.
2. *On War* is available in a number of editions, versions, languages, compilations and comparisons.
3. For more information on the principles of war, see “Nine Principles of War,” *The Tactical Edge*, Summer 2001, p. 49-50 (It should be noted that different militaries cite different principles).
4. For more information on conflicts, see “Characteristics of Crises and Conflicts,” *The Tactical Edge*, Fall 2002, p. 5758.
5. Schweit, Katherine W. “Addressing the Problem of the Active Shooter,” *FBI Law Enforcement Bulletin*, May 7, 2013. <http://www.fbi.gov/news/stories/2014/september/fbi-releases-study-on-active-shooter-incidents>.