



Operational analysis (METT-T)

By Sid Heal

The law of entropy states that all natural processes tend to increase the measure of disorder in the universe. This is certainly the case in tactical operations when everything is going wrong, nothing seems to make sense and there appears to be no easy solution. Yet, if there is one common expectation for tactical commanders confronting these situations, it is to bring order from chaos — to restore the peace. But where to start? While the simple answer is to develop a plan, even that is a most daunting prospect given the disorder and confusion inherent in these situations. An operational analysis is required to gain sufficient insight to formulate an effective plan.

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In the most simplistic terms, an “operational analysis” is just a method for developing a plan. It is a fundamental, but sometimes complex, prerequisite for any commander to gain the necessary understanding to formulate an effective strategy. Accordingly, it is the first step in gaining true situational awareness¹ and is a valuable tool for translating operational requirements into tactical guidance.

While there may be any number of ways of conducting an operational analysis, one method has withstood the tests of time and trial and is routinely used by the U.S. military. It is known by the acronym “METT-T,” because it provides a mnemonic for identifying the five essential factors of **M**ission, **E**nemy (or obstacle), **T**errain and weather, **T**roops and support available and **T**ime. While it may seem that these factors are addressed sequentially, in reality, as more information becomes available, a deeper understanding of one factor often alters the

Mission
Enemy (or obstacle)
Terrain and weather
Troops and support available
Time

perspective and anticipated influence of another. Consequently, the assessment process is one of nearly constant reinterpretation and apperception.

Arguably, the most critical factor is identifying the *missions*. This factor is the most critical because it provides the basis from which all planning must eventually follow and from which the essential tasks are derived. Fortunately, the ultimate objective² is always apparent. For example, “restore the peace,” “save the hostages,” “capture the suspect,” “put out the fire,” “rescue the victims” and so forth. But there are any number of enabling objectives that must first be accomplished, such as containments, evacuations, traffic control and the like; and these are not so obvious, especially to the untrained and inexperienced. Furthermore, because of limited resources, personnel and time constraints, they are always competing with each other. Thus, a commander must develop a step-by-step process that will ultimately achieve the final objective. The *mission* portion of the operational analysis provides a clear, concise statement of what is to be done and for what purpose.

While domestic law enforcement does not encounter an enemy per se, this factor is readily adapted and just as useful by simply substituting the term “obstacle.” In its most simple terms, the *enemy* (or obstacle) factor

identifies the threat, which is whatever needs to be defeated, removed, circumvented or surmounted to achieve a satisfactory resolution to the problem. While this is often an adversary, it may just as likely be a flood, fire, earthquake or Haz-Mat spill.

The third factor is *terrain and weather*. Both will impact operations, most commonly in the form of trafficability and visibility. Trafficability is both terrain and weather dependent and will impact everything from suitable modes of transportation to where they can go. While visibility can be terrain dependent, as with terrain shielding,³ it is most often affected by weather and lighting conditions. Factors such as precipitation, sunrise and sunset, moonrise and moonset, percent illumination, winds, temperature and humidity⁴ can all affect visibility.

Troops and support available is critical for estimating the effectiveness, efficiency and sustainability of operations. Besides the number of available personnel, how they are trained and equipped is integral to planning how, when and where they should be used. Likewise, specialized units, such as SWAT, canine, detectives, custody, explosive ordnance disposal, traffic, and so forth, are better utilized if their assignment in the tactical operation exploits skills and equipment that are intrinsic to their routine assignments. In the words of one of my Marine Corps commanding officers, “Our job is to put square pegs in square holes and round pegs in round holes. But that isn’t as easy as it sounds because sometimes we have to look for square pegs to fit square holes and sometimes we have to make round holes for round pegs!”⁵ Tactical situations will always fare better when they have the right person, with the right equipment, at the right place and at the right time. Critical to this concept is the understanding that troops are always consumers. This means that in order to remain effective they must be regularly fed, rested and replenished.

Time always imposes prioritization requirements, especially when the time available and the time required may be irrecon-

cilable! This factor is essential for determining prerequisites and defining priorities. Missions, tasks and assignments can be divided into two broad categories – those that are resource-driven and those that are time-driven. Resource-driven tasks are those that are largely dependent upon the amount and type of resources that can be dedicated to them. For example, if it takes 10 people four hours to evacuate 100 homes, 20 peo-

ple should be able to accomplish it in one-half the time. Time-driven tasks are exactly as they are described; time-dependent. For example, if it takes nine months for a woman to have a baby, adding more doctors will not speed up the process. Likewise in tactical operations, if it takes five hours to drive to a location, adding more cars will not provide a faster arrival. Important to remember is that harsh time constraints

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always favor training. This is because well-trained troops tend to be more efficient than those who are unfamiliar with what needs to be done and how it should be accomplished. Consequently, enabling objectives, like fueling vehicles or staging in convoys, are accomplished without detailed instructions or advance planning by troops who intuitively understand what is needed.

From time to time, we hear some tactical commanders justify their actions with phrases like, “There wasn’t time to plan,” or “There was so much going on that we couldn’t plan.” The fact that many of these operations are successful is more due to the training and experience of the troops than any contribution of leadership. This “ready, fire, aim” mentality is a poor substitute for a tactical commander with a good grasp of tactical science and an ability to look through the inherent chaos to separate the important from the urgent and the relevant from the volume. Perhaps it was best said by General Sir John Monash when he stated, “The main thing is to have a plan; if it is not the best plan, it is at least better than no plan.”⁶ ♦

Endnotes

1. For more information on situational awareness, see “Situational Awareness and a Common Operational Picture,” *The Tactical Edge*, Spring 2002, pp. 55-56.
2. The principle of “objective” is one of the nine principles of war and essential to the success of any emergency operation. For more information, see “Nine Principles of War,” *The Tactical Edge*, Summer 2001, pp. 49-50.
3. Terrain shielding is a term used to describe using terrain features, such as hills, valleys, ridges, buildings, and so forth, to provide cover and concealment. For more information on terrain analysis, see “Terrain Analysis,” *The Tactical Edge*, Summer 2000, p. 73.
4. Percent illumination is used to describe the amount of ambient light at night, as from the moon and stars; winds routinely carry dust, smoke and other obscurants and fog is a result of temperature and humidity.
5. Col. Timothy G. Anderson, 1 MACE, Camp Pendleton, CA, during a staff meeting in 1996.
6. General Sir John Monash, in a letter in 1918. General Monash was an Australian general in World War I and was known as a meticulous planner. He achieved substantial success during a time known for its stalemates and failures.