

Combat decision making - What contributes to decision-making quality?

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Since the armed conflicts in Georgia 2008 and in Ukraine, there has been a change of conceptual interest in the Swedish military. After several years of interest in concepts such as *Stability Operations* and *Counter Insurgency*, there is now more focus on traditional *Offensive* and *Defensive* combat operations between conventional armed forces, under the umbrella of *Hybrid Warfare*. This is also affecting the education of military officers at the Swedish Defence University (SEDU). Training of military officers in tactics and in command of ground force combat is a challenging task. In order to do that it is essential both to have a good understanding of the nature of combat and of the operational environment, as well as an understanding of how “quality” should be measured in (tactical) combat decisions. Another important task if we want to develop combat decision-making skills in military officers is to study whether there are behavioral skills that affect the ability to perform well as a combat decision-maker? In order to better understand such aspects of combat decision making we have initiated a research project at SEDU. Some of the initial work of this project is presented in this paper. First, we will provide a working definition of *combat* based on military theory. Second follows a discussion on the nature of the operational environment. Third we will discuss and define factors that should contribute to quality in combat decision making. Finally we will present a specific scenario that we intent to use in order to empirically study combat decision making and we also apply the quality factors to that scenario.

The basic elements of combat are sometimes expressed as *Move*, *Strike* and *Protect* (Swedish Armed Forces, 2013; Leonhard 1994, p. 13). These basic elements are probably based on a quote from Fuller (1926): “There are three essentials in fighting – namely, how to guard, how to hit, and how to move.” In the simplest way, one could argue that combat command is about how to combine these three basic elements in time and place (e.g. Leonhard, 1994). According to Storr (2009, p. 36), and from a human point of view, “...three things occur on the battlefield: men think, move and commit violence. All other activities support those functions. There is a huge premium in *applying violence at the right time and place*” (italics added).

For any commander engaged in battle against an opposing force, a key skill is therefore the ability to make decisions that will enable the own force to apply violence against the opposing force at the right time and place. However, in order to make those timely decisions the commander must master a substantial problem area. Combat decision-making is above all

characterized by the duel, or in other words, by the fact that two (or more) forces are trying to win over the other(s). This makes the decision problem complex, dynamic and laden with uncertainty (e.g., Clausewitz, 1976; Storr, 2009; SwAF, 2012). It is also agreed among many military theorists that the nature of combat makes it impossible to define laws or specific criteria how to act in order to win (e.g. Storr, 2009). This means that quality in tactical decisions can only be measured based on the actual outcome. It cannot be measured before combat has taken place, based on some criteria, law or principle. Combat is inherently antagonistic and undetermined, but as will be obvious later in this paper, there are still some general principles that seem to have at least probabilistic impact on the outcome of battle (Storr, 2009).

If we look at the more general level of quality criteria in military tactics, there are different ways to conceptualize quality. One way of understanding tactical quality and tactical competence (in military officers) is provided by Palmgren (in press). His model has six different ability levels that must be mastered by a commander in order to be a good tactician. Some of the important abilities include: understanding of the tactical latitude or solution-space available in a given tactical situation; ability to create order and systematics in a chaotic environment; ability to make timely decisions and to use force multipliers; ability to act pro-actively; ability to innovate and adapt quickly to circumstances; and finally, ability to accomplish expedient/appropriate results in line with the overall strategy and the political purpose. At least three of these abilities relate directly to timing and to the ability of timely decision-making.

Another way to approach understanding of quality in combat decision making is to study what contributes to victory or defeat in battle. Collins (2010) modeled this and concluded that in order to win it is important to accomplish an *organizational breakdown* for the opposing force. Collins argued that there are two main causal pathways to accomplish that. One is from *material resources* and *firepower at point of assault* and the other is from *maneuver*, and according to Collins (2010) there is a stronger causal link from maneuver to organizational breakdown than it is from firepower. Collins model is more complicated than this and it provides insight in how to understand quality in combat decision making. Storr (2009, p. 49) also studied factors related to victory and defeat in land campaigns and argued that just a few factors dominated the probability of success at campaign level. The first was surprise, the second was air superiority, the third was aggressive ground reconnaissance and the fourth was shock. Storr conclude (p. 50) that "... the impact of shock and surprise can be seen to be a consequence of rapid, almost chaotic changes of the situation...".

Almost any doctrine and military scholar discussing combat acknowledge the importance of *timing* and timely decision making in combat (e.g. Leonhard, 1994; Swedish Armed Forces, 2013; UK Ministry of Defence, 2014; US Army, 2010; Van Creveld, 1985). One common model used to explain the importance of timing in combat is Boyd's OODA-loop. The basic meaning of the OODA-loop is that a commander engaged in combat has to be able to implement action against the opponent faster than the opponent is able to react and implement action against the own force (thus, OODA is not only about making quick decisions). This calls for *timely*

decisions regarding how and when, and with what part(s) of the force to *move, strike* and *protect*. Leonhard (1994) in his book *Fighting by minutes – Time and the art of war* provides a comprehensive framework for understanding the importance of timing in combat. Obviously the ability to perform effective (tactical) combat command calls for a lot of different skills and a large (military) knowledge, but in our research focus is on dynamic combat command decision-making skills, and especially on how problems of *timing* are understood and handled. In the final part of this paper we present a specific tactical combat scenario and based on the theories and frameworks presented previously we propose a set of specific variables that should be studied in a two-sided scenario-based war game. The purpose of such a study is to better understand dynamic combat decision making where the ability to make timely decisions should be of crucial importance.