**Correlation of Forces and Means**

* A History of the Second World War: 1939–1945, Marshal Georgii Zhukov of Red Army, 1985
  + correlation of forces began to tilt in favor of the Soviet Union.

Table

Description automatically generated

* 1980 Soviet Military Encyclopedic Dictionary:
  + During World War II depending on the echelon of command and control the COFM was determined based on personnel; the number of formations (divisions, brigades, battalions), tanks, and self-propelled artillery, equipment and mortars, antitank weapons, and aircraft (1980, Vol.8 as cited in Reach et al., 2020, p. 14). There is no mention of qualitative factors in comparing the troops (Reach et al., 2020, p. 14).
* **Concept of Combat Potential: Ananev, 1958**
  + To resolve the issue of accounting for quality in COFM assessments, the Soviets adopted an approach with this concept. This was a theoretical tool that allowed the Soviets to account for qualitative characteristics of a variety of weapons and military equipment, in addition to quantitative indicators (Brezgin and Buravlev, 2010, p. 42, as cited in Reach et al., 2020, p. 15).
* The 1986 Soviet Military Encyclopedic Dictionary:
  + COFM is an objective indicator of the combat power of opposing sides, which allows for a determination of the degree of superiority of one of the sides over the other. A correct determination of correlation of forces and means and its evaluation facilitate substantiate decision making and the timely formation and sustainment of the necessary superiority over the enemy along selected axes. [COFM] is determined through a comparison of the quantitative and qualitative characteristics of subunits, units, formations, and weapons of friendly and troops (forces) and of the enemy. [COFM] is calculated at the strategic, operational, and tactical levels along the entire stretch (area) of activity, along the main and other axes. To expedite the calculation various manuals, tables, and computational equipment are used(Soviet Military Encyclopedia, 1986, p. 691 as cited in Reach et al., 2020, p. 16).
* To summarize, a COFM assessment was used by the Soviet military to determine the superiority of one group of forces over another and to substantiate commander decisions. For cases in which there was a clear disparity in the quality of arms and equipment, the Soviets developed a method of combat potentials to account for qualitative factors in key areas such as firepower, mobility, protection, and command and control (Reach et al., 2020, pp. 16–17).
* **Working definition of COFM:** Military-Encyclopedic Dictionary (MED), Russian Ministry of Defense, 2007
  + The result of a correlation (comparison) of quantitative and qualitative characteristics of forces and means (subunits, units, military weapons, military equipment, etc.) of friendly and enemy troops (forces). It is calculated at operational and tactical levels within an entire area (region) of action, along primary and other axes, and it allows for a determination of the degree of objective superiority of one of the opposing sides. The assessment of COFM facilitates the adoption of an informed decision on the operation (battle) and the timely creation and maintenance of necessary superiority over the enemy through improving (or changing) decisions during military (combat) actions(cited in Reach et al., 2020, p. 17).
    - One key difference is that in the 2007 definition, COFM is considered only at the operational and tactical levels, whereas previously the strategic level was considered. This suggests that a COFM assessment is understood within the Russian military primarily as an operational planning tool(Reach et al., 2020, p. 17).
  + Combat potential of a weapon or military equipment as an “integral indicator that characterizes the maximal total of executed tasks using the full purpose [of the weapon/equipment] in implementing the finite tactical-technical characteristics in a given time under average (typical) hypothetical conditions (Bonin and Gorchitsa, 2010 as cited in Reach et al., 2020, p. 19).
  + **Put simply, combat potential** in the context of a COFM calculation is a means to quantify the value of a weapon with a single numeric indicator, or the coefficient of combat potential(Reach et al., 2020, p. 19).
  + The coefficient of combat potential, according to Bonin and Gorchitsa, is the “relationship of the quantitative measure of **combat potential** of a given weapon to the value of combat potential of a standard weapon, conditionally taken as the reference.” (Bonin and Gorchitsa, 2010 as cited in Reach et al., 2020, p. 19).
  + In the Soviet military, the reference weapon with which all other weapons were compared was the T-55 tank while today it is possibly the T-72A or T-80B.32 To give an example, the Soviets in the late 1970s assessed an F-15 to have a combat potential value of 9.5 T-55 tanks.33 Typically the coefficients (koeffitsienty) of combat potential of weapons and military equipment are added together and multiplied by the quantity of a given weapon or equipment type to find the combat potential of a formation, such as a motorized rifle division. This single value is then compared with opposing forces for a final COFM assessment. Equation 2.1 shows how combat potentials factor into the COFM formula, which is: P A / PB.

Xi and Yj: number of weapons of type i=1 . . .I and j=1 . . . J

Ci and Cj : combat potentials

Tsygichko and Stoeckli, 1996, p. 100

* + COFM is, conceptually, a numerical indicator of superiority of one side over another incorporating both quantitative and qualitative characteristics of assets and formations of both sides in a specific area of responsibility. A Soviet law of armed warfare stated, “The dependence of the course and outcome of armed struggle is on the correlation of forces and means of the parties.”
  + Equation 3.1 presents the most common mathematical formulation of the COFM, also referred to as the qualitative-quantitative COFM, and hereafter abbreviated as COFM:

Xi: number of friendly assets or formations of type i,

I: total possible types of friendly weapons or assets (forces).

Xj: number of enemy assets or formations of type j,

J: total possible types of friendly weapons or assets (forces).

Ci: Combat potential of a friendly type i asset or formation.

Cj: Combat potential of an enemy type j asset or formation.