



U.S. military and Japan Self-Defense Forces personnel engage in missile defense planning during Integrated Air and Missile Defense Wargame V, February 2014 (U.S. Air Force/Nathan Allen)

Waffles or Pancakes?

Operational- versus Tactical-Level Wargaming

By Dale C. Eikmeier

Ask people what the difference is between pancake batter and waffle batter,¹ and some will quizzically return the question, asking

if there is a difference; after all, the batter looks the same. A few might acknowledge some differences but not know exactly what they are. Experi-

enced chefs, however, will tell you the difference is the amount of eggs and oil in the batter. You can put pancake batter in a waffle iron and waffle batter on a griddle and both will cook, but the products will disappoint, especially if you were expecting crispy waffles or fluffy pancakes.

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Wargaming at the operational and tactical levels is a lot like waffle and pancake batter: it might look the same and share many of the same ingredients, but it has important and subtle differences. Ask military planners what the difference is between operational-level and tactical-level wargaming methodologies used in course of action (COA) analysis, and you will probably get the same pancake-versus-waffle-type answers, with many telling you that the difference is nonexistent or not important. The truth is the wargaming processes may look the same, but the “ingredients” and outcomes are very different. Using a tactical-level wargaming focus at the operational level can result in the direction of well-planned and synchronized tactical actions at questionable operational tasks and the aiming of mismatched capabilities at ill-defined effects that fail to achieve operational and strategic objectives.

Many planners agree that operational-level wargaming using the Joint Operation Planning Process is different from tactical-level wargaming using the Military Decision Making Process or the Marine Corps Decision Process. But they struggle with understanding the differences because Service doctrines and joint doctrine describe only the processes and do not compare or point out differences between them. Not fully understanding the subtle differences, planners default to what they know best—which is usually the tactical level—and will apply tactical “pancake techniques” to the operational “waffle processes.” This manifests itself when planners lose focus on the operational-level issues and drift toward trying to maneuver and fight functional or Service-component tactical actions rather than focusing on identifying and validating operational-level tasks. Planners can avoid this tactical drift only if they understand the difference between “tactical pancakes” and “operational waffles.”

What versus How

The two wargaming processes are similar but not identical, and when things are not identical, the differences are important. The key difference between the operational- and tactical-level wargame

is the type of questions and issues each focuses on. Simply put, the difference is a focus on *what to do* versus *how to do it* questions. This is important especially for operational-level planners because their level is the bridge that connects broad strategic guidance and aims toward tactical actions. That bridge is built out of *what* questions—what endstate, what effects, what objectives, what tasks, what capabilities—that are arranged with *when* and *where* questions. If operational-level planners do not understand this difference, they tend to wrestle with the easier and more concrete tactical *how* questions rather than the more difficult conceptual *what* questions. Operational wargaming asks, “Are we doing the right things?” Tactical wargaming asks, “Are we doing things right?”

The purpose of the wargame, at both levels, is to collect information to determine the advantages and disadvantages of each COA when compared to an evaluation criteria.² The operational-level COA and its wargame analysis are largely concerned with identifying and arranging the right endstates, objectives, effects, and tasks, along with matching the tasks to capabilities and resources in the correct sequence. These arrangements in time (when and sequencing), space (where), and purpose (goals) to achieve an endstate form the core of operational-level courses of action. Therefore, the operational level deals primarily, although not exclusively, with the *what* questions—what is the endstate, what objectives will achieve it, what effects must we create to achieve the objectives, and what tasks and action will produce those effects—and lastly the other *what* questions—when, where, and who will execute those tasks and actions. This is not to say there are no *how* questions at the operational level, but they are secondary to the more critical *what* questions; if they are wrong, it does not matter how well tactical actions are executed. So think big *what* and little *how* at the operational level, but keep in mind both are present; the scale simply is tipped toward *what* questions.

The tactical level is concerned with how to achieve assigned missions and objectives using the resources provided.

Arrangements of unit capabilities in time and space to achieve effects and objectives form the core of tactical-level courses of action. Therefore, tactical-level wargaming deals primarily with the *how* questions: how are capabilities used, how are they brought to bear, how are they maneuvered, supported, and sustained. Like the operational level, the tactical level is also a continuum of *what* to *how* questions, but the scale at the tactical level is tipped toward the *how* side. So at the tactical level, think big *how* and little *what*.

Other Ingredients

The following discussion highlights some of the other important but subtle differences planners need to be aware of. These differences may be generalities, but they do represent key divergences between the two levels.

Aim. The aim of wargaming at the operational level, according to joint doctrine, is to determine the feasibility and acceptability of a course of action.³ At the tactical level, according to Army doctrine, the aim is to refine, identify, analyze, develop, and determine key elements of the COA.⁴ This doctrinal difference reflects some of the *what are we doing* versus the *how we are going to do it* approaches of operational and tactical levels. COA development at both levels uses the screening criteria of adequate, feasible, acceptable, distinguishable, and complete.⁵ The tactical level, however, assumes that a COA has already met the screening criteria and that the aim of the wargame is to determine the *how to* details of the COA. The operational level does not assume the screening criteria have been met. With its focus on *what* questions, the wargame is the tool to determine feasibility and acceptability.⁶

Focus. The operational-level commander is concerned with identifying what to do, and the wargame helps validate the selection of objectives, effects, and tasks that will create the endstate conditions. The commander then resources, sequences, and synchronizes those tasks, and subsequently assigns those tasks to components. The COA is an arrangement of these elements, and the wargame

helps determine if the arrangement will accomplish the mission and discern any advantages and disadvantages.

The tactical-level component or Service commander figures out how best to accomplish the assigned mission/task. Most of the *whats* have been determined and provided, so the tactical focus is on how to apply capabilities against them. The tactical-level wargame uses creative combinations of standard doctrinal schemes of maneuver, drills, techniques, and procedures against the situation.

Process. Both levels use the same action-reaction-counteraction model. However, there are slight nuances. The reaction in the tactical wargame is generally confined to the enemy and local population in the immediate area of operations, while the operational level considers the reaction of a broader community, including domestic and international audiences as well as adversaries.

Certainty. Operational-level planners may start with a blank sheet of paper and a vague directive to begin planning. They need to realize that some of their questions may be unanswerable at the time of planning or have no answers at all. Therefore, operational-level planners must be comfortable with higher degrees of ambiguity and working with a greater number of assumptions. While details and specifics are desirable and planners should work diligently to obtain or produce them, their absence cannot be an excuse not to plan.

Tactical planners, while also working in ambiguous environments, normally have the benefit of an operational- or higher level plan or planning guidance, which has attempted to reduce ambiguity, on which to build detailed plans. They should strive to reduce uncertainty and put as much detail as possible into tactical plans.

Method. The methods described in doctrinal manuals include the timeline analysis, critical events, and phasing of joint doctrine and the belt, avenue-in-depth, and box procedures of wargaming.⁷ These methods are all temporal or spatial variations and offer options on which actions to wargame. The main differences between these

methods are scope and detail. The operational level is larger in scope, broader and less specific on details, and makes more assumptions. It is a macro approach that focuses on doing the right things at the right time and leaves fine details of execution planning for component planners. The tactical level is smaller in scope, more specific and detailed, and strives to turn assumptions into facts. It is a micro approach that places importance on the details of how to execute the tasks and accepts that the operational planners correctly selected and assigned the tasks.

Media. Both levels use maps and matrices. However, the operational level's primary focus on *what* questions and the arrangement of objectives and tasks to capabilities, resourcing, and sequencing are generally more suited to a matrix supported by a map. The tactical level's primary focus on *how* questions deals more with schemes of maneuver, ranges, and time-distance relationships and is more suited to a map supported by a matrix.

Purpose and Outcomes. The purpose and outcomes are essentially the same at both levels: to generate and collect data so that advantages and disadvantages, strengths and weaknesses can be determined and used in COA refinement and the comparison process.

Elements of Power. The generally accepted elements of power are diplomatic, informational, military, and economic. The operational level considers all the elements in the development and analysis of COAs and is the primary integrator and synchronizer of the elements. Therefore, the wargame considers all the elements. The tactical level can consider all the elements, but it focuses mainly on military execution. At the tactical level, the other elements of power to be considered generally are environmental factors. Unless otherwise tasked, the tactical level leaves the integration or synchronization of the other elements to the operational level.

Participants. Because the operational level considers all the elements of power and synchronizes, coordinates, and occasionally integrates them, it is normal to include some unified action partners in the wargame. Unified action partners include interorganizational representatives,

multinational forces, and nongovernmental and private sector organizations.⁸ If a unified action partner cannot participate for security reasons, a responsible subject matter expert should replicate its actions, reactions, and counteractions. The inclusion of unified action partners (other than military) can occur at the tactical level, but it is the exception rather than the norm.

Higher Authority. The approving higher authority at the operational level will include military and/or civilian political leaders and possibly multinational organizations. Their guidance can tend to be broad, vague, and open to interpretation. At the tactical level, the higher authority, with few exceptions, is a military organization. Its guidance tends to be direct, specific, and less subject to interpretation.

Time-Space Factors. Time-space factors at the operational level help define the realm of possibilities, which are often defined by logistics and force structure. The operational level uses these factors primarily to determine the approximate sequencing of tasks. However, estimates of these factors are generally rough figures for a number of reasons. Exactness and precision at the operational level during planning are rarely possible, and there are too many variables and decisions to be made. In addition, the pursuit of precision can be counterproductive if it wastes time and results in rigidity. For example, an estimate that it takes x days to destroy an enemy capability may be sufficient for wargame purposes. Attempting to know the exact number of assets and amount of time required moves the operational-level planner to a tactical level that has not yet been planned. The tactical level attempts to use precise time-space factors for the synchronization and execution of operations because it is wargaming the actual execution of a specific assigned task.

Number of Levels Down. Army doctrine recommends wargaming two levels down; while joint doctrine does not explicitly state two levels down, it does hint at it.⁹ This reflects the difference in the amount of detail necessary at the operational and tactical levels. Both look two levels down in practice, but they are looking at different things and asking



Soldiers provide covering fire for platoon during assault on enemy position during wargame exercise at Fort Bragg (U.S. Army/Michael J. MacLeod)

different questions. The operational level looks for the correct assignment of tasks to components one level down and asks whether the component has the correct capabilities two levels down to achieve the assigned task. The primary questions asked are who has the task and whether they have the resources or capabilities to accomplish it. Resourcing the right capabilities at the right time is the operational level's primary focus; how the capabilities are used is secondary. The tactical level looks at how the subordinate one level down will use assets two levels down to accomplish the task. Using capabilities is the tactical level's primary focus; resourcing them is secondary.

The processes of wargaming at the operational and tactical levels are similar but not identical, and it is the differences that become important. The key difference is a primary focus on questions of *what* at the operational level and questions of *how* at the tactical level. Planners, especially at the operational level, need to fully understand the differences. The operational-level wargame strives to determine if we are doing the right things and creating the right effects. The tactical-level wargame strives to determine the right way to accomplish the right thing.

Not recognizing these differences can result in the wrong things done right, just like putting pancake batter in a waffle iron. JFQ

Notes

¹ Credit for the pancake/waffle analogy goes to Dwayne Wagner, Command and General Staff Officers Course Instructor, Fort Leavenworth, Kansas.

² Joint Publication (JP) 5-0, *Joint Operation Planning* (Washington, DC: The Joint Staff, August 11, 2011), IV-27.

³ *Ibid.*, IV-29.

⁴ Field Manual (FM) 5-0, *The Operations Process* (Washington, DC: Headquarters Department of the Army, March 2010), B-32–B-33.

⁵ JP 5-0, IV-24–IV-25; FM 5-0, B-15.

⁶ JP 5-0, IV-29.

⁷ *Ibid.*, IV-32; FM 5-0, B-26.

⁸ JP 3-0, *Joint Operations* (Washington, DC: The Joint Staff, August 11, 2011), I-8.

⁹ JP 5-0, IV-30; FM 5-0, B-31.