

# OE CONDITIONS FOR TRAINING:

## A CRITERION FOR MEETING “OBJECTIVE TASK EVALUATION” REQUIREMENTS

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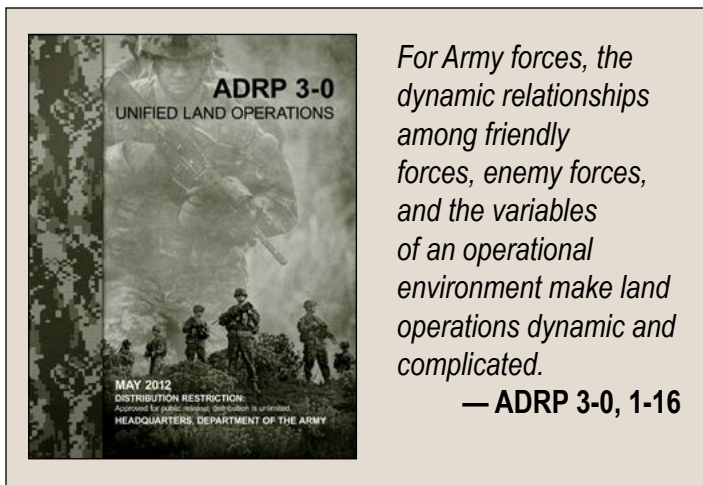
The Army Operating Concept directs us to “win in a complex world.” To accomplish this directive, the Army must develop leaders who can innovate and thrive in “complex and dynamic” environments that reflect conditions we will likely face. To that end, unit commanders leading a seasoned force must train in such operational environment (OE) conditions and against an uncooperative opposing force (OPFOR), making their scrimmage as hard, or even harder, than any anticipated real-world fight. By understanding the process of creating training conditions that introduce increasing levels of OE complexity, commanders will challenge the next generation of Army leaders to learn, be agile and adaptive, and figure out a way to win!

This article seeks to expand the concepts established in Army Doctrinal Reference Publication (ADRP) 3-0, *Unified Land Operations*, in easily understood language by defining terms that describe required OE training conditions (*complex, dynamic, simple, and/or static*). It serves as a guide to assist leaders, units, and training developers until FM 7-0 and other training doctrine are updated, based upon Army efforts to improve training and readiness. Applying these definitions will help leaders present the minimal required conditions needed to develop leaders, achieve training objectives, and build unit readiness.

### Illustration of OE Training “Conditions”

In the early stages of the war on terrorism, a training unit conducted an out-of-sector mission at one of the Army’s premier Combat Training Centers (CTCs) to destroy an improvised explosive device (IED) manufacturing facility with an insurgency training camp. The camp was located in high mountainous terrain, accessible only through a tough steep climb or via an air assault movement; the unit chose the latter. The training camp consisted of a fortified defensive position in which the training center directed the OPFOR to fight in place with no special weapons or environmental circumstances. The unit’s objective provided “simple and static” training conditions in that the OPFOR and environmental circumstances were singular in nature and did not change throughout the execution of the task.

In a similar out-of-sector mission at a different CTC several



years later, another training unit conducted an attack against a similar IED facility with an insurgent training camp. However, to make the objective more challenging, the OPFOR held three hostages and were equipped with man-portable air defense systems. CTC trainers also directed the OPFOR not to fight in place, but rather create multiple dilemmas for the training unit on and off the objective. Finally, the CTC directed the training unit to incorporate local national forces into their operations process and coordinate their plan through the replicated host-nation government. This objective presented “complex and dynamic” training conditions in that the training unit had multiple variables to contend with while the OPFOR had the freedom to create a plan and change conditions in response to anticipated training unit actions.

Figure 1 — Objective Task Evaluation Criteria

Plan and Prepare				Execute					Assess		
Operational Environment		L U X	Training Environment (L/N/C/G)	% Leaders Present at Training/ Authorized	% Present at Training / Authorized	External Eval	Performance Measures	Performance Measures Critical	Leader Performance Measures	Task Assessment	
Dynamic & Complex	Night	Hybrid Threat	Yes	Proponent Establishes Training Environment (FTX, STX, CPX, STAFFEX, TFWT, etc)	≥85%	≥80%	Yes	≥90% GO	All	≥90%	T
	Dynamic or Complex				75-84%			80-89% GO		80-89%	T-
Static and Simple	Day	Regular or Irregular Threat	No	Proponent Establishes Training Environment (FTX, STX, CPX, STAFFEX, TFWT, etc)	65-74%	75-79%	No	65-79% GO	<All	<80%	P
					60-64%			51-64% GO			P-
					<60%			<50% GO			U

Task Dependent
Task Independent

These actual training events serve as ideal examples of how the Army is moving to create increasingly more realistic and challenging training conditions. Within the *task, condition, and standard* framework for training, creating appropriate OE conditions are becoming a critical criterion for training and unit readiness reporting. These OE conditions will serve as one of several criteria for achieving task proficiency ratings of “Trained, needs Practice, or Untrained” (T-P-U).

**Complex:** *Hybrid threat/OPFOR with multiple OE variables*

**Dynamic:** *Threat and OE change during task as a cause and effect*

**Simple:** *Regular or irregular threat with minimal OE effects*

**Static:** *Threat and OE do not change during execution of task*

### Required OE “Conditions” for Unit Training

The Army spent several years contemplating the need for creating a more objective method for task proficiency reporting. After extensive deliberations, as part of the Army Training Summit in the summer of 2014, senior trainers from across the Army began to develop criterion-based standards for achieving task proficiency ratings with both task-dependent and independent variables. At the annual Army Training Leader Development Conference in July 2015, these were proposed to the Chief of Staff of the Army and the most senior Army leadership, who directed that these criteria be added to Army training doctrine.

For company and above level mission essential task list (METL) training events, task-dependent criteria, defined during the “plan and prepare” phase of exercises, include three sub-components, of which the first is the OE. The OE sub-criterion is further defined by operational variables, whether the task is completed during the day or night, and whether the OPFOR features a hybrid threat or a regular/irregular threat. Deliberate planning about each element influences a unit’s potential proficiency rating — the more complex, the higher the achievable rating if the task was completed correctly.

### Defining OE Terminology

Each criterion sub-standard links its definition directly to ADRP 3-0. The ADRP dictates that it is the relationships among friendly and enemy forces, coupled with operational variables, which make land operations “dynamic and complex.” Hence, ideal training conditions needed to achieve “T” proficiency ratings should also contain “dynamic and complex” OE conditions. Conversely, the lack of such can be defined as “static and simple;” hence, the four terms

of OE criteria are: *dynamic, complex, static, and simple*. But before each is defined, trainers must understand what operational variables are.

Operational variables, as defined by the ADRP, include eight interrelated aspects: political, military, economic, social, information, infrastructure, physical environment, and time (PMESII-PT). What makes these variables *complex*, is when multiple variables (four or more) influence

military operations or have a direct or secondary effect from the outcome of military actions. Both OPFOR and training unit leaders have to contend with these variables. Conversely, merely fighting an opposing force without any other environmental factors bearing on the task is a *simple* environment. *Dynamic* conditions imply that one or more of the operational variables and the OPFOR disposition change (freethinking) during the period of execution. In a dynamic OE, the disposition, composition, strength and/or tactics of the OPFOR might continue to develop as the unit executes its task. *Static* OE means that conditions do not change throughout the unit’s conduct of the task.

The second primary sub-criterion, other than day or night conditions that are self-descriptive, encompasses the type of threat a unit must “spar” against. The Army Operating Concept (as well as the Army Training Strategy) spotlights the need to train against hybrid threats, which combine regular and irregular with criminal organizations into mutually benefiting threats to U.S. forces. The term “insurgents” is purposely not used as it represents an irregular force with ideological aims, typically focused on the overthrow of a government, but is not a separate threat category. As displayed in the Objective Task Evaluation Criteria chart (Figure 1), units seeking a “T” rating in collective training **must** replicate the hybrid threat. Training Circular (TC) 7-100 provides detailed information for the construct and tactics of a hybrid threat for training purposes.

*A hybrid threat is the diverse and dynamic combination of regular forces, irregular forces, terrorist forces, and/or criminal elements unified to achieve mutually benefiting effects. Hybrid threats combine regular forces governed by an international law, military tradition, and custom with unregulated forces that act with no restriction on violence or their targets.*

— ADRP 3-0, 1-9

*Army planners describe conditions of an OE in terms of operational variables. Operational variables are those aspects of an OE, both military and non-military, that may differ from one operational area to another and affect operations. Operational variables describe not only the military aspect of an OE but also the population’s influence on it. Army planners analyze an OE in terms of eight interrelated operational variables.*

— ADRP 3-0, 1-9

### Creating OE training Conditions

The theory is simple: create increasingly complex training conditions to achieve higher objective training evaluations (Trained). To achieve objective ratings for:

- **Trained:** Planners must create complex and dynamic training conditions against a hybrid threat during limited visibility (night). This is further defined as training

against a regular and irregular OPFOR within an environment that consists of multiple (four or more) OE variables (PMESII-PT) which change the task in a cause-and-effect relationship.

- **Trained (-):** Planners must create complex or dynamic training conditions against a hybrid threat during limited visibility (night). This is further defined as training against a hybrid OPFOR within an environment that consists of *multiple* (four or more) OE variables that do not change, OR against a regular or irregular OPFOR with *minimal* OE effects, but that change during in a cause-and-effect relationship.

- **Needs Practice or Untrained:** Planners can create simple and static training conditions against a regular or irregular threat with minimal OE effects (three or less) that do not change during the execution of the task (typically used during crawl-walk stages of training).

For operational variables to be relevant, they must be linked to the unit's mission variables — known as METT-TC (mission, enemy, terrain and weather, troops and support available, time available, and civil considerations). Army doctrine states that incorporating the analysis of operational variables (PMESII-PT) with mission variables (METT-TC) ensures that leaders consider their OE in relation to their mission (see Figure 3). Therefore, to create complex training conditions, operational variables must be relevant to a unit's mission or task.

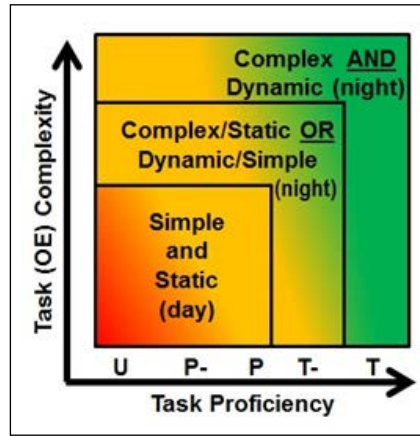


Figure 2

Upon receipt of a warning order or mission, Army leaders filter relevant information categorized by the operational variables into the categories of mission variables used during mission analysis. They use the mission variables to refine their understanding of the situation.

— ADRP 3-0, 1-9

### Available Resources

The U.S. Army Training and Doctrine Command (TRADOC) G2 is the Army's responsible official for understanding, describing, delivering, and assessing the OE. Leading an OE enterprise of key stakeholders to support the training, education, leader development, and concept & capability development communities, TRADOC G2 supports both the institutional and operational force. It achieves this through its Analysis & Control Element (ACE), with elements located at Fort Leavenworth, Kan., and Fort Eustis, Va., and through the OE Training Support Center (TSC), located in Newport News/Fort Eustis, Va.

The TRADOC G2 ACE provides analytical support for understanding and describing the OE and its associated threats, working closely with the Combined Arms Center at Fort Leavenworth in support of training and education, and with the Army Capability Integration Center at Fort Eustis for future concept and capability development. The ACE Threats directorate at Fort Leavenworth provides training support products, such as the TC 7-100 series of hybrid threat manuals, as well as the Decisive Action Training Environment (DATE) for scenario design. This element also publishes the Regionally Aligned Forces Training Environment (RAFTE), the Exercise Design Guide (TC

Figure 3 — Examples of Relationship for Operational & Mission Variables

	Political	Military	Economic	Social	Information	Infrastructure	Physical Terrain	Time
Mission	Type and relationship to U.S. forces; influence or impact on local political, tribal, or religious order	Joint, NATO, or multinational partners required to accomplish task or mission	Impact on local and regional economic trade and influence; local manufacturing and farming/ranch	Local support for U.S. forces; cultural, religious, and language barriers	Public perception; availability of cellular, TV, radio, news, literacy, etc.	Housing and road network; electricity, water, sewage, roads, transportation	Mobility and restrictions, complex urban terrain/subterrain with cover/conceal	Mission timeline in comparison to civil consideration or perception
Enemy	Governmental relationship, support/control or influence on local leaders, including religious leaders	Conventional, unconventional, regular/irregular, armed criminal elements, other combatants?	Dependence and support to and/or from local populace for supply and services	Ability to camouflage into populace or coerce/control local opinion and actions	Use of local info infrastructure and resources for coercion, IO, and perception management	Use of local infrastructure to provide mobility, sanctuary, cover, concealment, and deception	Advantaged by known terrain, use of unnatural routes and extensive caches	Use of time against US mission timeline; trade space to buy time
Terrain & Weather	Is political/tribal structure terrain oriented or implicated; control/historic?	Impact of terrain and weather on Red, Green & Blue routes and actions	Trade routes, marketing and economic dependencies on terrain/weather	Historic, religious and social importance of certain terrain (burial)	Restrictive or void locations for information influence; weather degraded	Impact or limitation on local roads and infrastructure; impact of natural disasters	Availability or restriction of weather on natural terrain	Consideration for extreme or flash weather conditions
Troops & Support	Existing relationships; key leader engagements, local support/threats to troops	Coalition and cultural/language implications, maintenance and supplies	Localized battering relations to simulate or stifle economic interests	Populace support for U.S. and coalition; religious and cultural implications	Ability to communicate with locals via media/ other to promote inform/influence	Use of local infrastructure for movement and sustainment; knowledge of hidden areas	Knowledge of key terrain, choke points, limited routes vulnerability to IED/ambush	Available time to influence OE and defeat/remove enemy influence
Time	Time availability to stabilize, gain and/or influence political/ leadership changes	Red versus Blue timelines, Green perception of military actions over time	Key events and time for markets, trade events, crops, herding, etc.	Holidays, religious and/or special occasions and events	Activity level of social media, time needed to inform and influence	High vs low use of infrastructure resources (electric, rush-hour traffic, etc.)	Seasonal terrain and weather implications	Perception of time on mission and operational variables
Civil Considerations	Strength or weakness of current system and leadership to influence population	Civil perspective, influence, and support of U.S. and enemy military operations	Civil perceptions of U.S. influence on economic growth (CERP)	Perception and relationships of U.S. purpose and interactions (CREL)	Gained or lost trust in messaging, inform and influence efforts	Advantages and disadvantages of U.S. assistance (ASCOPE)	Impact on military ops on locality (farms, rivers, etc.)	Acceptable expectations of time management for military operations

7-101), and the Red Diamond Magazine. Additionally, ACE-Threats also provides a semi-annual five-day course on the OE and threat tactics, and provides mobile training teams for home-station training upon request. The TRADOC G2 ACE-Threats information is readily available via the Army's Training Network.

The TRADOC G2 OE TSC is the Army's primary delivery center for creating OE training conditions. The OE TSC, a restructured organization formerly known as the Training Brain Operations Center (TBOC), now also includes delivery capabilities of the Intelligence, Surveillance, & Reconnaissance (ISR) Directorate, the OPFOR Program Directorate, and an enhanced Modeling and Simulations Directorate, bringing to bear all OE delivery capabilities within one center. The OE TSC delivers innovative capabilities aimed at helping units to create operational manifestations of the OE at home station, particularly the information factor. These capabilities currently include those listed in Figure 4.

### Conclusion

There is no cookie-cutter solution to creating complex and dynamic OE training conditions, just as there is no one "correct" solution for creating conditions necessary to achieve a "Trained" task proficiency rating. Trainers and exercise planners must understand the construct

and influence of operational variables (PMESII-PT) and relevance to the mission variables (METT-TC). Success in training will lead to success in combat — even under "complex and dynamic" OE conditions.

To "win in a complex world," as our Army Operating Concept directs, requires leaders who can innovate and thrive in complex and dynamic environments. Unit commanders must train in such conditions against an uncooperative and freethinking OPFOR, making their scrimmage as hard as the next fight. Understanding the aforementioned process for creating *complex, dynamic, simple* and/or *static* training conditions enables commanders to increase the intensity and realism of training, challenging the next generation of Army leaders to learn, be agile and adaptive, and figure out a way to win!

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**Figure 4 — Example of OE TSC Capabilities to Support Training**

Resource	Capability Description
<b>Training Brain Repository - Exercise Design Tool (TBR-EDT)</b>	Enables commanders and staffs to become better training managers and exercise designers. This web-based tool provides access to a growing repository of previously developed training products and scenarios for reuse, along with authoritative data sources to create new products. Next steps for the tool include integration of EDT capability into the Joint Staff J7 architecture, development of control tools to execute the training plan during the actual conduct of the exercise, and expanded data exchanges with mission command and simulation systems and architectures.
<b>Opposing Forces Program</b>	Provides commanders the programmatic means and expertise to "spar" against a replicated threat. This includes assistance for understanding and validating the application of threat doctrine, usage and assessment of replicated threat weapons and systems, and responsibilities of the TRADOC Project Office (TPO) for OPFOR Modernization efforts. This function, regulated by AR 350-2, also mandates the accreditation of OE/OPFOR replication at Combat Training Centers annually, Reserve Component Training Support Divisions semi-annually, and Army Centers of Excellence and Schools tri-annually.
<b>Information Operations Network (ION)</b>	ION is an HST capability under development that adds realism and complexity to exercises by replicating the social media. Content from Twitter, websites, blogs, Facebook, Instagram, and YouTube that is in context with a specific exercises, will be emulated for the training audience. Exercise designers and trainers access the ION cloud via the web, where it can also be tailored and reused for subsequent exercises. The ION data manager tool allows content to become available to training audiences at the appropriate time as content is linked to exercise storylines and threads.
<b>Network Effects Emulation System (NE2S)</b>	Contributes to home station training of cyberspace operations, assisting staffs to plan, coordinate and integrate these operations into exercises. NE2S emulates and replicates environmental effects on both individual machines and the network itself. NE2S emulates actions from adversaries and friendly-force insiders, as well as actions to deny, degrade or disrupt command and control of systems or networks. The OE Training Support Center/TBOC deploys the NE2S on the unit network and manages it via a master control station in the exercise control cell.
<b>Virtual OPFOR Academy</b>	The OPFOR Academy provides a virtual, cloud-based, interactive, multimedia, and password-enabled learning experience for OPFOR counter-tasks. It will describe the tasks, conditions, and standards associated with each of the TC 7-101 listed OPFOR counter-tasks and present such within the Combined Arms Training Strategy (CATS). It will also provide multimedia presentation to expose users to specific descriptions in how to execute OPFOR tasks at HST, and allow to experience such in various preferred methods, including video, simulations, and constructive representations.
<b>ISR Integration</b>	The TRADOC Intelligence, Surveillance, and Reconnaissance (ISR) Integration, also known as ISR TOP OFF, provides Joint/Theater ISR expertise to G27 OE delivery, setting training conditions by replicating Theater ISR processes, capabilities and application to OE-specific problem sets. ISR Integration also provides staff coaching and mentoring to deployed forces and at all CTCs, and as required, support home-station training requests.
<b>Advanced Network Analysis and Targeting (ANAT)</b>	Training simplifies analysis by enabling analysts to find quickly key nodes within a complex human network. By employing the Organizational Risk Analyzer (ORA) software tool and using the ANAT methodology, analysts are able to hone in on social networks formed by "people" nodes linked through resources, communications, or events. Analysts can apply social network analysis techniques using ORA to rapidly identify and visualize people with special characteristics that, if targeted, will affect the network based on the commander's intent.
<b>System Integration, Modeling and Simulation (SIMS)</b>	Visualizations and gaming products that are compliant with Army Learning Model (ALM) by replicating aspects of the OE via customization of gaming technology to fit a range of virtual, constructive, and gaming challenges. The visualizations and virtual practical exercises use real-world data to provide student-centric blended learning. Visualizations present complex information in a 3-D visual medium that is much more efficient than text or image-based media, while micro-simulations efficiently train the "walk" phase of the Army's "crawl-walk-run" paradigm.
<b>Athena</b>	An effects model (PMESII-PT) that assists commanders in understanding, visualizing, and conducting course of action analyses of complex OEs by anticipating the likely mid-term consequences of actions, both planned and unplanned. Athena runs in a stand-alone mode on a laptop but will likely migrate to the OE cloud. Enhancements to Athena that would enhance its usability and applicability include data exchange with mission command programs of record to facilitate course of action planning and improvements to the user interface to increase ease of use by non-experts.