

A CONCEPT FOR ALL SEASONS

The COE and its Relation to Real-World Events

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The contemporary operational environment (COE), introduced in February 2000, has proven surprisingly adept at maintaining its training relevance to the present day. The number of changes and seemingly “new” occurrences in current conflicts are staggering; yet those who understood the COE would have been prepared for just such occurrences. Essentially, those with a thorough grounding in the COE would be able to replicate any real world environment for any preparatory, pre-deployment, training or experimentation purpose. Armed with a thorough understanding of the COE and opposing force (OPFOR) operations and tactics, today’s trainers can prepare the Army for any conflict — both today and tomorrow.

Describing the Environment: A Look at the Revised COE

The contemporary operational environment is the synergistic combination of all the critical variables and actors that create the conditions, circumstances, and influences that can affect military operations today and in the future. An operational environment (OE) consists of all the conditions, circumstances, and influences which affect military operations, to include the application of other instruments of national power within a specific area. An OE is a subset of the COE and is defined as here and to the foreseeable future (determined to be 15 years), according to Joint Publication 3-0, *Joint Operations*. COE environments described more than 15 years into the future are considered to be the future operational environment (FOE).

The COE is the holistic view of the environment of the conditions that exist within the operational environment that best and most realistically challenge Army units, leaders and Soldiers in the execution of Army and joint tasks (FM 7-100.4, *Opposing Force Organization Guide*). Variables of the COE are used to describe distinct operational environments whether real or contrived for training. The strength of the COE is that it is flexible and scalable, capable of replicating any environment U.S. forces might encounter along the full spectrum of conflict, from a peacetime military engagement to major combat operations. A simple look at the conditions as they exist in the world today will give an observer a series of considerations to prepare and train our Army for successful engagements, regardless of contingency.

The COE was based on a few key assumptions. First, we will not be able to predict what and where, with any degree of confidence, the threats are we must train for in the near- to mid-term. Second, the missions of the Army are widespread and disparate, covering the range of operations including disaster relief, nation building, full spectrum conflict, or a conglomeration of all three occurring simultaneously.

When introduced, the COE initially used 11 variables to describe the operational environment. Due to how Joint doctrine describes the respective parts of an OE, these 11 variables were changed, adopting the Joint OE framework of PMESII: political, military, economic, social, information, and infrastructure. In an effort to ensure a complete capture of the environmental conditions that the Army would face, the Army adds +PT (physical environment and time) to the framework of analysis. As a memory aid to ensure consideration of all the variables in describing an OE, one uses the acronym PMESII+PT to fully describe a COE environment.

Revised, though fundamentally unchanged, the new COE variables still maintain all of the original variable considerations, albeit packaged in a more ubiquitously accepted context. To understand the power of the COE, we must first understand the interacting variables — what they mean and their effects. Included is a brief overview of the OE and COE variables for reference. Each description captures the gist of the variable as it is currently defined. A more in-depth look at the variables and their effects can be found in FM 3-0, *Operations*, and the soon to be published FM 3-0.2.

The Variables of the COE: PMESII+PT

Political (P): This variable provides an overview of the political system and political power within an OE. In essence, the nature of political authority within the state refers to all actors within an OE with political authority and the degree of legitimacy. The political variable includes the analysis of all relevant political, economic, military, religious or cultural mergers and/or partnerships of the key entities of a given OE. Another aspect this variable deals with is the idea of “national will” in the political sense.

Military (M): This variable explores the military capabilities of all relevant actors in a given OE. This includes conventional forces, police forces and special forces and these capabilities typically include equipment, manpower, training levels, resource constraints and leadership issues. The variable focuses on an actor’s ability to field forces and leverage them for use domestically, regionally or globally. Moreover, the variable also analyzes the flexibility, innovation, and adaptability of an actor.

Economic (E): The economic variable provides an overview of the economic conditions/indicators within an OE. A study of this variable establishes the boundaries between the “haves” and the “have-nots.” Control of and access to natural or strategic resources are also considered as this can cause conflict. Being able to affect another actor, positively or negatively, through economic not military means, may become the key to regional

hegemonic status or dominance. Economic deprivation is also a major cause of conflict. One actor may have economic superiority over another for many reasons, including access to natural resources or power.

Social (S): A social system is the people, groups, and social institutions of a society, with shared characteristic values and beliefs, which are organized, integrated and networked by relationships, interacting within their environment. A subset of this variable, culture, is a system of shared beliefs, values, customs, behaviors and artifacts that the members of society use to cope with their world and with one another. This variable includes the cultural, religious and ethnic makeup of a given OE. Analysis is conducted on the network of social institutions, statuses, and roles that support, acculturate, and enable individuals.

Information (I): The information variable discusses the nature, scope, and characteristics of the information environment of a given OE. Information involves the access, use, manipulation, distribution, and reliance on information technology systems, both civilian and military, by an entity (state or non-state). Understanding whatever communication infrastructure exists is important because it ultimately controls the flow of information to the population and the threat. Moreover, communication availability acts as a leveling function with regards to mitigating our technical advantages to a surprising extent.

Infrastructure (I): The infrastructure system is composed of the basic facilities, services, and installations needed for the functioning of a community or society. The degradation or destruction of infrastructure will impact the entire OE, especially the political, military, economic, social, and information variables. This variable also reflects the technological sophistication of a given OE. Technology encompasses the ability of an actor to conduct research and development (R&D) and capitalize on such research for both civil and military purposes. The variable reflects the technological level of the OE in terms of sectors of technological success or

advancement, scientific and research institutions, technology acquisition policies and the education and training facilities that support the acquisition of technology.

Physical Environment (P): The physical environment defines the physical circumstances and conditions surrounding and influencing the execution of operations throughout the domains of air, land, sea and space. The defining factors are complex terrain and urban settings (super-surface, surface and subsurface features), weather, topography, hydrology and environmental conditions.

Time (T): The variable of time influences military operations within an OE in terms of the decision cycle, tempo of operations and overall planning; it may also influence popular support for operations, success of operations and final victory. How much time is available and how long events might take will affect every aspect of military planning, to include force package development, force flow rate, quality of intelligence preparation of the area of operations, and the need for forward-deployed forces and logistics. Time is the one variable that is invariably unfavorable to us.

A deeper look at "M" — the threat: the capabilities-based, thinking enemy

Gone are the "space invader" armies of yesterday: predictable, mechanized and well understood formations. Today's threat is extremely lethal, adaptive and capable of reaching niche parity or superiority with our own force capabilities. Moreover, this threat is innovative, leveraging adaptive tactics in an effort to negate our military superiorities and tactics, techniques and procedures (TTPs). The thinking, capabilities-based and adaptive threat is, and will likely be, the threat norm for our nation's military forces — today and in the foreseeable future. A merely cursory study of our most elusive and stubborn threats demonstrates this reality. COE accommodates this new reality.

For example, no one on September 10, 2001, would have easily foreseen the invasion of Afghanistan and the speedy

defeat of the Taliban three months later. Moreover, five years on, few could truly have foreseen a resurgent Taliban, successfully employing guerilla tactics, either. Our inability to predict future conflict enhances the value of the COE. Also, the COE conceptual framework reflects much of the "new" tactics that have been employed recently, in Lebanon, Afghanistan, and Iraq with an astonishing degree of accuracy.

Originally proposed in the February 2000 white paper "Capturing the Operational Environment," adversaries will opt to avoid conventional maneuver battles with U.S. forces, seeking to draw U.S. forces piecemeal into urban fights — which constrain precision guided munitions (PGM) employment and truncates our intelligence, surveillance, and reconnaissance (ISR), limiting our standoff capabilities. Additionally, the threat will employ effective asymmetric countermeasures to increasingly nullify our technological prowess.

Adversaries understand the power of adaptation and, as a result, will continuously change their tactics to try to gain advantage over U.S. forces. Perhaps the threat's greatest success today is the threat's adroit use of mass media to attack the U.S. national will. Ironically, though not specifically predicted, much of recent years' activity and asymmetric threats have been presciently foretold by COE: from unique environmental conditions and influences, operational restrictions and challenges, to threat tactics and niche capabilities.

The Operational Environment Assessment

To help trainers analyze, then incorporate the different variables of an OE into conditions for training, including relevant threat capabilities, Training and Doctrine Command - Deputy Chief of Staff for Intelligence (TRADOC DCSINT) publishes a series of operational environmental assessments (OEA) to help the training base accurately and correctly replicate the appropriate training environment.

OEAs are assessments of OEs in specific geographic areas. They help trainers replicate conditions of a specific OE in a training environment for mission rehearsal or deployment. They are an encyclopedic look at an environment, providing a full view of all variables present in an environment, their interactions, and the possible manifestations of those variables. OEAs also provide another helpful feature: predictive events based upon analysis of conditions three, six and 12 months into the future based on analyzed trends in the specific OEs variables.

While intended to support mission rehearsal or contingency training, these OEAs have in some cases provided significant insights that help deployed units understand their particular OE. OEAs also serve as examples of how to use an analysis of the PMESII+PT variables to gain a holistic understanding of any specific OE. Using the OEA, trainers can not only replicate today's conditions, but tomorrow's as well — all without using today's news as a training aid (still a disappointingly common practice). Instead, using the future trends analysis of the OEA, we can anticipate and train for tomorrow's challenges while not being tied to the present day threat tactics and techniques.

Presently, DCSINT has produced OEAs for OIF, OEF, North Korea, and Azerbaijan. Other OEAs are currently under development for other locations.

A Matter of Description: the Range of Environments Possible Using the PMESII+PT Framework

Although OEAs are instrumental in helping trainers replicate an environment, today and in the future, it is not necessary to have an OEA to create a training environment. A solid knowledge of the COE framework empowers trainers to design their own training environments. To do this, trainers must simply define the PMESII+PT variables to create a relevant environment for the specific training conditions desired.

The environments capable of description are widespread and limitless. From a

potential future environment to the environments of today's conflicts and events, the OE framework enables any environment, whether real or imagined, to be replicated or created. The most demonstrative examples of this capability can be seen in COE framework's ability to accurately describe disparate, though recent, world events. Events such as the tsunami rescue missions in Indonesia, Hurricane Katrina disaster relief efforts, and the Israeli/Hizbollah conflict can all be described using the PMESII+PT variables. To do this, a trainer needs to capture descriptions of the individual variables. Using the COE framework, all of these real-world conditions could also be combined to create an excruciatingly challenging training environment.

To demonstrate the resilience of our COE, a dissection of a real world event using the PMESII+PT variables is in order: specifically the Israeli/Hizbollah conflict (See figure 1). Although this conflict was unique (state vs. paramilitary or non-state actor), the tactics and techniques used against the Israeli Defense Forces by Hizbollah are not new. Indeed, the majority of the Hizbollah militia strategy and tactics are more than adequately described by the FM 7-100 series on COE OPFOR (FM 7-100.1, .2, .3), respectively. The uniqueness of the Lebanese conflict arises from the confluence of events and the Israeli reaction to those events, not the threat's (Hizbollah's) courses of action or tactics. A look at how the variables are described illustrates this point and the power of our COE framework of analysis.

Once an environment is described, whether real or artificial, the environment described can and should be modified to fit the unit commander's specific training objectives. This is a key capability of the COE framework: the ability to create any training environment imaginable, governed solely by a unit's training objectives.

This flexibility is embedded in the COE framework. Within COE, training objectives play the dominant role in the creation of the training environment. For instance, if a commander desired more non-

lethal effects to be trained, a trainer could augment existing OEA variables or create their own social, political, economic and possibly infrastructure variables to accommodate the training scenario. Such an artificial combined environment could challenge both a unit's lethal and non-lethal capabilities in a realistic and synergistic manner. Although this is a simplistic example, the possibilities for adoption or creation of a training environment are truly limitless.

The recent revisions to the OE chapter of FM 3-0 (the adoption of the PMESII+PT framework) have only increased the capability of the COE framework to describe accurate, realistic training conditions for the Army and other services in a joint context. It is a powerful framework, able to create challenging, realistic training environment for any Army contingency. Incorporation of appropriate manifestations of the OE variables, including a flexible, adaptive OPFOR, capable of countering or negating US military and technical prowess, is a realistic and necessary facet in our training exercises. Future threats, though not yet fully described or comprehended, are both lethal and capable. Understanding the current OE framework and COE OPFOR operations and tactics will enable Army units and their commanders to cope with myriad threats and challenges that we face today and in the future. The COE framework's importance and relevance in our training methodologies cannot be overstated.

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Figure 1 — COE Description of the Israeli/Hizbollah Conflict, 2006

Political (P): Hizbollah is a non-state actor that has integrated itself in to the legitimate Lebanese government. The militia maintains political control of 21 percent of the Lebanese municipalities and holds 11 percent of the Lebanese parliament seats, and two cabinet positions. The organization is a state within a state — meaning that Hizbollah can initiate any sort of unilateral action outside of the Lebanese government influence. Conversely, however, the Lebanese government cannot act without Hizbollah's consent and influence. As such, the Lebanese government will be reluctant to interfere with Hizbollah activities and, at times, actively seek to leverage its international standing in support of the Hizbollah. National will is held exclusively by the Hizbollah organization. As an organization, the militia will fight with a "kill or be killed" mentality, using every resource at its disposal to thwart Israel. Moreover, its regional relationship with Iran provides the organization maximum flexibility in maintaining its independence from Lebanon or any other state.

Military (M): The militia is essentially a stateless army, possessing a wide variety of military arms and capabilities. Their typical weapons are ATGMs and small arms. Additionally, Hizbollah has built a strong fire support capability with large quantities of rockets and launchers. They possess robust ISR capability, to include UAV and a redundant C2 capability. Internal weapons production capability and extra regional assistance in the form of weapons and training has enabled the militia to assess, design and build a defense in depth: a series of mutually supporting positions and redundant C2. Hizbollah fields a force of approximately 3,000 to 4,000 active fighters in Southern Lebanon with a large reserve/auxiliary pool of supporters who provide intelligence, logistics support and a fighting augmentation capability for the main force.

Economic (E): Southern Lebanon is still a very fragile economy due to its recent occupation by Israel and its ongoing reconstruction efforts. Hizbollah has inserted itself into Southern Lebanon by providing relief services and reconstruction assistance. The total lock on municipality control in the Southern part of the country prevents any economic activity except Hizbollah sanctioned works and activities. Providing the primary source of economic support in the region, Hizbollah enjoys widespread popular support. The organization itself does not internally possess the resources for such activity and is heavily subsidized by both the Iranian and Syrian governments.

Social (S): Lebanese society is fractious and extremely diverse. Active religions in the Southern part of the country include Christianity, Sunni and Shi'a Islam. Shi'a Muslims

comprise the majority religious concentration followed by Sunni and Christian Druse populations. Among groups there is a tenuous relationship and mutual suspicion. A large degree of nationalist sentiment has reduced these tensions, but they are present during periods of heavy stress and difficulty.

Information (I): Hizbollah maintains a large information operations establishment in Southern Lebanon. They possess active television, radio, newspapers and, since they control the municipalities in the South, the militia also controls the official sources of news, information and propaganda. Their unique relationship with the Lebanese government provides the militia with an international information operations capability as well. Domestically, the political arm of Hizbollah has engaged in direct humanitarian support for decades, ensuring an enduring relationship with the populace. Those that are not swayed are targeted or pressured through non-lethal means to support the militia. Domestically and internationally, the Hizbollah militia possesses ample capability to shape information operations against any regional or extra-regional adversary with a high degree of prowess and skill. Their media apparatus is well-suited to manipulating information to achieve their strategic aims.

Infrastructure (I): Though urbanized, much of Southern Lebanon's geography can be characterized by urban blight, congestion and poor infrastructure.

Physical Environment (P): The terrain is that of rolling hills with numerous urban built up areas and towns. These towns are within mutual supporting distance of each other and are densely populated. The Litani River separates the southern part of the country from northern Lebanon and provides the only true physical obstacle separating the two regions.

Time (T): Hizbollah has spent more than six years planning and preparing for a defense in-depth of Southern Lebanon. The majority of their efforts have been invested into this endeavor with the primary purpose of complicating and stifling any sort of high-tech, combined arms operations. The goal of these efforts is to create a never-ending "quagmire" effect, causing the Israeli army to become locked into an extended, protracted conflict — costly in terms of both money and time. Internationally, the pressure of time forces Israeli forces to seek a quick, succinct victory, since the international community, the press and Israeli citizens will not tolerate a long drawn out conflict in the region. All aspects of the Hizbollah planning have taken these vulnerabilities into account to create a prolonged conflict with little definitive resolution.