Lessons from Force-on-Force

An honest after action review
by Capt Michael Hanson

In Commandant Marine Corps White Letter 2-18, Gen Robert Neller warned of an upcoming fight with a peer adversary. In this message to the force, he outlined the need to update our Service-level training of the MAGTF and our approach to training in the Marine Corps in general to prepare for this potential confrontation. Gen Neller declared:

... the focus of the training is mainly on techniques and procedures and is minimal on tactics.

This is meant to serve as an honest after-action review of common themes observed during force-on-force (FOF) training events held at Integrated Training Exercise (ITX). It is the intent of the author to share some of the lessons learned in these exercises with the rest of the force to enable Marines to take these lessons and use them in their training, avoid common pitfalls encountered by other units, and build upon the tough lessons that they have learned through many great exercises. Applying these lessons will make our Marines more lethal and our units more effective in the future fight that Gen Neller has warned about.

ITX is held at the Marine Corps Air-Ground Combat Center in Twentynine Palms, CA. As one of the Marine Corps’ Service-level training exercises, it provides the absolute best training venue to Marines of the GCE, ACE, and LCE as well as to the MAGTF as a whole. The training that is conducted at ITX is truly unique for a number of reasons. First, the sheer size of MCCAGC offers ample space for exercises involving large units and sufficient depth for units to conduct deep as well as close air support, long-range fires, and mobile operations. Secondly, most of the training is live fire, the nature of which comes with many limitations in other locations but fewer in the desert terrain of Southern California. Third, facilitating the training of the exercise force units (Exfor) is a dedicated cadre that specializes in teaching, coaching, and mentoring the participating units in the proper conduct of techniques and procedures based on training and readiness standards within the myriad of events at ITX.

Known as Coyotes, the Marines of the Tactical Training and Exercise Control Group play the enemy force by operating the targetry, assessing the effects of Exfor fires on said targetry, and providing feedback of these effects to Exfor Marines in the form of “paints.” Furthermore, the Coyotes serve as a safety backstop, which allows Exfor Marines to use deviated surface danger zones instead of the standard ones found in the DA-PAM 385-63—which are much more restrictive. The use of these deviated surface danger zones allow the Marines to get much closer to the effects of direct fire, indirect fires, and aviation delivered ordnance than in a standard training environment. This provides the Marines a unique opportunity to test and sharpen their skills in the accuracy of their weapons systems, the distribution of their fires, scaling their rates of fire, and applying appropriate weapon to target match. As such, the training offered at ITX is the absolute best in the Marine Corps and cannot be replicated to the same degree anywhere else.

All of that being said, there are significant shortcomings with this training model. Events at ITX emphasize combined arms and integrating multiple agencies in support of a desired effect, for example, a suppression of enemy air defense to enable an aviation attack. Thus, the focus of the training is mainly on techniques and procedures and is minimal on tactics. Coyotes dictate that Exfor units do the hardest thing, even though it might not be the most expedient thing in a given scenario.
An example of this is the “Package” where Coyotes require the Exfor to successfully integrate fires from mortars, artillery, and both fixed and rotary-wing aircraft in support of a maneuver element closing on an objective. In real life, suppression from just a single one of these agencies may be sufficient enough to enable a maneuver element to close. Likewise, in real life, the effects of any one of these agencies may be enough to completely destroy a target; yet, the Coyotes will not allow targets to be destroyed without proper integration—and this includes maneuver. Many Exfor Marines have been frustrated by the continued existence of the “Titanium BMP” that survives direct hits from multiple aviation attacks until maneuver closes and ultimately destroys it. ITX is a game, and the Coyotes will hold Exfor Marines to the rules of the game. However, real combat is not a game, and unfortunately, this focus on techniques and procedures oftentimes creates totally unrealistic situations as well as heavily scripted and generally canned scenarios.

Although nothing else comes close to the realism offered by live fire training, the nature of live fire training comes with many unrealistic side effects and is largely one sided. For one thing, the targets do not move or shoot back. A unit can take up to 30 minutes to adjust fires onto the tank hulls that serve as targets for indirect and aviation fires in which time the hulls just sit there. In real life, an enemy tank or BMP would probably move rather than passively wait for artillery fire or bombs to find it. Likewise, the green “Ivan” targets that raise and lower every time Marines shoot them with small arms remain in place as well. In real life, an enemy force would maneuver on the Marines and seek to gain a position of advantage during both day and night. In the transition to defensive events, Exfor Marines will dig in and prepare fighting positions in anticipation of the coming simulated enemy attack. However, much of this is unrealistic since no one is actually coming to attack them. So, the Marines will prepare completely camouflaged and poorly concealed fighting holes and revert to their default administrative procedures until the coyotes link up with them the following morning. The effect of this, as we shall see later, is to condition them to conduct bad habits when there actually is an enemy force coming to attack them.

Lastly, the model used for training casualty treatment and evacuation is very unrealistic as well. Again, the emphasis of training at ITX is on specific training standards, which can lead to a box checking mentality and nowhere is this more apparent than how casualties are assessed and evacuated. Simulated casualties, known as “Cherry Pickers” in the event, are given to units mainly to test their ability to evacuate them. If Marines expose themselves foolishly, a Coyote will undoubtedly “Cherry Pick” them and explain to the Marines what they did wrong and why they were “hit” in the hopes of coaching those Marines to not repeat the act. Most often though, the Coyote will then bring the Marines back to “life,” so as to allow them to continue to train. Most events require a “Cherry Picker” to be evacuated to test the unit’s ability to call in a 9-line Casevac request and successfully link up with the evacuation platform. So, one “Cherry Picker” will be assessed and as soon as link-up has been affected with the evacuation platform the Marine will be brought back to “life” and sent back to their unit. Again, as we shall see, this does little to prepare units to deal with more realistic numbers of casualties anticipated when fighting a peer adversary.

The aforementioned shortcomings and others are among those the Commandant referred to in White Letter 2-18 and actions have been taken to address them. During ITX 3-18 in Spring 2018, a blank-fire FOE exercise was held as a proof of concept between the two ITX (Exfor) battalions and an Adversary Force (Adfor) battalion brought in to operate against them. This exercise highlighted some of the gaps not only in ITX but in the way the Marine Corps trains in general. Commanders kept their Marines at 100 percent security on the first day of the exercise in anticipation of attacks that never came and then had to operate with exhausted troops for the duration. Friendly units attacked out of sequence and failed to achieve mass in their efforts. Friendly units attacked toward each other without proper coordination and awareness of the effects of their fires and caused fratricide. Units misidentified other units, engaged friendlylies, and failed to engage enemies. The adversary force learned the value of enemy air supremacy. These are just few of the major points.

Many valuable lessons came from this experiment, enough that Gen Neller recognized the importance of this type of training. In White Letter 2-18, he stated,

Service Level training for the MAGTF must move beyond ‘scripted’ live-fire maneuvers and incorporate more Force-on-Force training in a free-play environment to better replicate realistic operational tempo in a peer-to-peer fight.2

He then quoted MCDP 1, Warfighting, which says, Exercises should approximate the conditions of war as much as possible; that is, they should introduce friction in the form of uncertainty, stress, disorder, and opposing wills.3

The Commandant then added, “Only through opposed, free-play exercises can we practice maneuver warfare where a peer adversary will contest us at range, in depth, and across all domains.”4 Furthermore, Gen Neller ordered the addition of a five-day force-on-force event at the conclusion of ITX to begin with ITX 1-20 in the fall of 2019.

The die was cast. The Marines of MAGTF Training Directorate and
The objectives for both Exfor and Adfor in each exercise centered around the control of key terrain inside the urban complex at Range 220 (R220), though a large part of the exercise involved moving a force from a Tactical Assembly Area (TAA) outside the city to their objectives inside the city. Naturally, these actions were resisted by the opposing force. Thus, many of the lessons learned involved tactical actions in the desert terrain outside of R220 as well as tactical actions in the urban environment inside of R220. Generally speaking, the common themes of the lessons learned in FOF have to do with superior leadership and brilliance in the basics. Across the exercises, the proper (or improper) application of these two qualities had tangible effects on the trajectory of the battle. As these exercises suggest, attention (or inattention) to these general themes can prove decisive in any future conflict with a peer adversary.

First and foremost, the most obvious lesson that stands out is survivability. Specifically, the vital importance of being undetected and therefore untargeted. The old adage, “what can be seen can be hit, and what can be hit can be killed,” remains true today. In fact, with the proliferation of unmanned aerial vehicles, this adage rings even more true than before because there are now so many more “eyes” in the sky. With the increased numbers of intelligence, surveillance, and reconnaissance (ISR) assets available, supporting arms have shown themselves to be very effective. They are effective because the Marines in the forward areas are easy to locate. They are easy to locate because they do not make themselves “hard targets.” The glaring trend across these three exercises is the woeful state of concealment that units practice. Marines have not needed to look up for many years, and their actions in the field reflect this.

To begin with, in many cases units do not use effective dispersion. One rifle company mechanized in Assault Amphibious Vehicles during 5-19 was destroyed by artillery fires on three separate occasions, and each time they committed the same grave mistake. On each occasion, the company’s Assault Amphibious Vehicles were parked tightly together in an administrative formation with all of the Marines either loaded up inside or close by outside. (See Figure 1.) The poor dispersion made their enemy’s artillery fire more effective and resulted in the company being completely destroyed each time. Second, many units have not used the terrain to their advantage and have left vehicles lined up on roads or in open areas instead of tucking into draws and behind fingers when able. Dismounted Marines have routinely skylined themselves by sitting upright on the topographical crest of hills, saddles, and ridges rather than using the military crest. (See Figures 2 and 3 on following page.) In 3-19, the very first target destroyed by enemy air assets was a battalion forward combat operations center, resulting in the death of the battalion commander. This battalion forward combat operations center was poorly located in an open area with its vehicles clustered together and was easily spotted by enemy air assets and immediately attacked. Furthermore, they remained in place even after being compromised. Most importantly, Marines in many cases do not use effective camouflage to hide their positions. Whether through a lack of camouflage netting or the clearly apparent atrophy in using vegetation or debris to blend into the environment, Marines have paid a heavy price for these shortcomings. In every exercise, both fixed- and rotary-wing assets have wreaked havoc on easily identifiable vehicle and troop positions. In addition to dispersing vehicles and troops and placing them in covered or concealed terrain, every vehicle needs a camouflage net. In fact, two would be better. (See Figures 4, 5, 6, 7, and 8 on following pages.) However, it is not enough to set up camouflage netting, Marines must stay underneath it! In 3-19, Marines

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in R220 very effectively hid their vehicles beneath camouflage netting and then compromised these well-hidden vehicles by milling around outside of their nets. (See Figures 9 and 10 on page 70.) Camouflage netting should be set up in a way that enables all essential functions to be conducted beneath it so that Marines do not need to go outside of it, and Marines must have the discipline to stay under it. (See Figure 11 on page 71.) Lastly, so as not to develop a culture of “hiders” rather than fighters, Marines should be prepared to fight from camouflaged positions.

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The same is true about buildings in an urban environment. (See Figure 12 on page 71.) During 2-19, the unit preparing to attack R220 was able to exploit the indiscipline of the unit inside the city. Using airborne ISR assets, the Exfor battalion was able to identify the main defenses of the Adfor inside R220 by observing significant numbers of Adfor Marines moving around outside of buildings and on the streets in the Sierra district. This happened to be the exact area that the Exfor planned to make entry into the city. So, the Exfor battalion commander changed the plan and attacked into the industrial district and achieved complete surprise.

Likewise, good habits have been observed as well during FOF. The British Royal Marines effectively employed a battery of 105mm Howitzers inside R220 using a combination of dispersion, camouflage, discipline, and deception. First, they dispersed and hid these by pushing the barrels of the guns into windows and covering the breech block and trails with nets and debris from their surroundings. The artillery crewmen remained hidden by staying inside the nearby building at all times. When prosecuting a fire mission, the British artillerymen wheeled the cannons out into the street, fired, and then
quickly hid the guns once again. The Howitzers were exposed for only moments at a time. (See Figures 13, 14, and 15 on pages 72.) To further complicate their enemy’s targeting of these Howitzers, the British built dummy guns out of supplies they bought at a local hardware store and placed these around the battlespace to draw the attention of American ISR assets. (See Figure 16 on page 73.) The combination of their dispersion, concealment, discipline, and deception worked as the U.S. Marines failed to destroy all of the British Howitzers before the conclusion of the exercise.

These successful methods were not limited to British artillery. The Royal Marines employed their 81mm mortars similarly, hiding them in tents where they simply had to raise a flap to fire them and lower the flap to hide them again. (See Figures 17 and 18 on page 73 and 74.) They also used hide-and-shoot tactics where the baseplate and aiming stakes were left in position while the rest of the mortar system and mortar team sheltered inside a nearby building. When firing a mission, they would run out, quickly set up the mortar, fire it, and bring the weapon back into the building. As with the Howitzers, the U.S. Marines failed to destroy all of the British 81mm mortar sections by the end of the exercise.

These successful methods were not limited to British artillery.

Another instance where the Royal Marines demonstrated superior survivability techniques came during a stalemate between the two battalions. By the last day of the exercise, the Exfor battalion occupied the West side of the city and the Adfor battalion controlled the East side. The opposing forces were separated by a notional North-South running river that divides the city and combat was sporadic along the length of the river from one side to another. Essentially, a machine gun would open up

Figure 5. 81’s A Section demonstrating good concealment by using effective terrain selection, camouflage techniques, and discipline staying underneath their nets (3-19). (Figure provided by author.)

Figure 6. 81’s A Section demonstrating good concealment by using effective terrain selection, camouflage techniques, and discipline staying underneath their nets (3-19). (Figure provided by author.)

Figure 7. 81’s B Section from same battalion demonstrating poor concealment by using ineffective terrain selection, a complete lack of camouflage, and Marines in the open (3-19). (Figure provided by author.)
on one side of the river and be silenced by a rocket from the other side. Eventually, both sides ran out of machine guns and rockets. At this point, the static combat was characterized as a battle between the riflemen of each side. As Figures 21 and 22 indicate (pages 75 and 76), U.S. Marines were often high and exposed, completely silhouetting themselves in windows while their opponent across the river was protected behind a wall of sandbags in his window and fired through a six-inch-wide aperture. The exercise ended shortly after these pictures were taken, but it is easy to infer which side would have taken higher losses had the exercise continued. As the British Royal Marines demonstrated on multiple occasions, the

Figure 8. 81’s B Section from same battalion demonstrating poor concealment by using ineffective terrain selection, a complete lack of camouflage, and Marines in the open (3-19). (Figure provided by author.)

Figure 9. Effective use of camouflage netting (3-19). (Figure provided by author.)

Figure 10. Use of camouflage netting ineffective with Marines outside of it (3-19). (Figure provided by author.)
answer to these many shortcomings is effective field craft. Field craft is a lost art, but because of FOF, our Marines are relearning it. Any observer of FOF will note the evolution that occurs from the beginning of an exercise to the end of it. By the end of the exercise, Marines are applying effective dispersion, use of terrain, camouflage techniques, use of battlefield debris, etc. They are learning. Unfortunately, they are learning the hard way and correcting themselves as the exercise progresses because they are losing lots of Marines. Why must units lose Marines before they remedy their faults? Why can they not conduct proper continuing actions from the outset?

The answer to these questions represents the next common lessons apparent in FOF. Much of the aforementioned shortcomings can be corrected with good habits of thought and habits of action, or in another word—discipline. However, effective discipline can only be maintained by vigilant leadership. Leaders that force their Marines to remain disciplined and to practice proper continuing actions from the start of the exercise are the leaders that will survive and win the fight. Leaders that allow their Marines to be overcome with boredom and complacency and be apathetic in their continuing actions will see their units decimated before they even reach their objective.

It is entirely possible for a unit to be completely destroyed before ever mak-

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Figure 13. Effective concealment of British 105mm Howitzer (2-19). (Figure provided by author.)

Figure 14. Effective hide-and-shoot tactics of British 105mm Howitzer (2-19). (Figure provided by author.)

Figure 15. Effective hide-and-shoot tactics of British 105mm Howitzer (2-19). (Figure provided by author.)
ing contact with the enemy. In 5-19, there were seven rifle companies in the exercise (six Exfor and one Adfor), and those rifle companies of the opposing sides never fought one another. In fact, throughout the whole event, they never even encountered one another. This was because they never had the opportunity to close on one another; they were consistently destroyed by enemy IDF and air assets long before they even got close to each other.

By far, the utmost lesson in FOF is the importance of effective leadership. The greatest challenge of every leader—whether fire team leaders, squad leaders, platoon commanders and platoon sergeants, or company commanders—will be to keep their Marines disciplined, to keep their Marines engaged and force them to continuously camouflage their positions and vehicles, to get proper dispersion, and to stay out of sight even after they have gone completely internal. Their greatest challenge will be to try to keep their Marines from getting even the smallest bit complacent and keeping from getting complacent themselves. (See Figures 19 and 20, pages 74 and 75.) In real life, this discipline may very well be the difference between life and death, and leaders do not get to go internal. It is something that we all know, and frankly give a lot of lip service, but somehow do not practice until it is too late. FOF has been very effective in demonstrating this.

The last major lesson of FOF involves “Cherry Picker” play. FOF has challenged units not only in how to treat these simulated casualties but how to deal with the large amounts of “Cherry Pickers” and how to continue to fight and accomplish the mission after taking such large numbers of them. Unlike the rest of ITX, FOF uses an attrition model for “Cherry Pickers.” When Marines are assessed as urgent “Cherry Pickers” or assessed as “dead,” they are out of action for the duration of the exercise and their rank does not matter as multiple platoon, company, and even battalion commanders have been “killed” in these exercises. This forces the next Marine in line to take charge and often times they get “killed” too. For example, by the end of 3-19, both of the Adfor’s CAAT platoon commanders were corporals and the 81’s platoon commander was a sergeant. So many Marines got “killed” that the remaining leaders had to completely re-task-organize their units and combine the remnants of fire teams, squads, and platoons to maintain cohesive, albeit severely diminished fighting forces.

Figures 21 and 22 (pages 75 and 76) indicate the shocking effects of this. Figure 21 depicts only the killed in action between both Exfor and Adfor infantry
battalions in a pause in the exercise during 3-19. The combat that led to these losses was characterized by close quarters infantry actions that raged building to building across R220. These were not even the final figures at the end of the exercise. Figure 22 depicts the killed in action tabulated before a partial reset and return of “Cherry Pickers” to their units in 5-19. This slide only depicts Exfor figures due to the necessity to continually respawn Adfor “Cherry Pickers” per the scenario. The heavy losses in vehicles and personnel were mainly due to the effects of supporting arms, though significant “Cherry Pickers” from Battalion 2 were assessed in battles between dismounted Exfor infantry and Adfor light armored reconnaissance vehicles in close combat in compartmentalized terrain. These slides record only those “killed in action” and do not even take into account those “wounded.”

These “casualty” figures raise the prospect that difficult decisions will have to be made if Marines find themselves in similar situations against a near peer adversary in a future fight. What will Marines do if they take casualties like this in real life? Will they have to cannibalize their support units and send cooks, bakers, and candlestick-makers to the front to replenish the shattered ranks of the combat forces? A look at Marine Corps history shows that this is very common. In fact, in many of the Corps’ most famous battles, the infantry was decimated and cooks, clerks, mechanics, etc., were used exactly for this purpose. Many Marines scoff at the slogan of “Every Marine a Rifleman,” but they do so at their own peril. Realistically speaking, every Marine must be a rifleman and must be prepared to occupy a fighting hole with a rifle or man a machine gun and know what to do with it. Marines across the Corps are only hurting themselves by not training their support Marines to be prepared for the day they become combat replacements. Though this has not yet occurred in FOF, it very well could happen in a serious ground fight with a near-peer competitor as it has on multiple occasions in the past. While the FOF lasts less than a week, Marines could be in combat with a peer competitor for months before relief comes. Marines of all units and MOSs must be prepared for this.

The introduction of FOF events to ITX has redefined training and brought it to a new level. It has done much to address the shortfalls in the ITX program and Marine Corps training in general. FOF allows the participating units an opportunity to devise their own solutions and test their decision-making abilities outside of the more prescribed training events where Coyotes test a unit’s technical proficiency rather than their tactical ability. Whereas the rest of ITX is a venue that challenges units to apply the science of war, FOF allows...
Marines a valuable opportunity to practice the art of war. Likewise, throughout the course of ITX, Coyotes teach, coach, and mentor participating units through a given problem set. In FOF, however, Coyotes do not make recommendations to Marines, to do so would go against the intent of the exercise. The conduction of the FOF is completely in the hands of the Marines involved. Coyotes are only there to adjudicate and capture points for debriefing. Participants in the FOF are free to make their own decisions and forced to live with the consequences of these decisions. If a commander loses all of his tanks while failing to accomplish his mission, the mission remains. That commander does not automatically get his tanks back and must still accomplish the mission with his remaining forces. This is realistic, and this is the intent of FOF: to test decision making.

The program of training at ITX leading up to FOF is a unit’s opportunity to learn techniques and procedures while being coached by a dedicated training cadre. FOF is the unit’s opportunity to test what they have learned. An analogy describing the different approaches to training at ITX relates the different benefits offered to a fighter seeking to gain proficiency in the use of bag drills and the experience offered in using a sparring partner. Events like Range 410A rifle platoon attacks, Range 400 rifle company attacks, the mechanized assault course, the air assault course, and Range 230 company urban attacks are like different types of bag drills. Heavy bags, speed bags, reflex bags, etc., allow a fighter to practice throwing punches and kicks in repetitions and combinations. There is much value in using these training aids, but as Bruce Lee famously said, “Boards don’t hit back.” Enter the sparring partner, whose job it is to hit back and challenge the fighter in ways that no board or bag ever could. The fighter can use pre-rehearsed combinations and techniques, but they may not be enough against a thinking opponent, capable of acting and reacting, and using combinations and techniques of their own. Perhaps the fighter even uses the wrong combination or technique because he anticipated something different from his opponent and suffers an effective counter strike. This is the purpose of FOF: to challenge our Marines against the greatest foe available—another Marine.¹⁵

As Gen Neller said in White Letter 2-18, “Just as iron sharpens iron, an aggressive FOF training regime will test the limits of our capabilities, refine our actions, and prepare us for the fight that comes.”¹⁶ The FOF has undoubtedly made a big difference in the preparation of Marines for combat. Enough so that when the fight comes, Marines will be able to take the hits landed by

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* The above figures represent the success of ITESS instrumentation during FOF 3-19

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Figure 20. Vigilant small unit leadership makes these Marines more effective (5-19). (Figure provided by author.)

Figure 21. (Figure provided by author.)
the enemy and maneuver into a position to deliver the knockout blow they learned from the aggressive and cunning partners they sparred with in the California desert at ITX.

Notes
2. Ibid.
3. Ibid.
4. Ibid.
5. Personal conversation between author and LtCol Dan Schmitt, USMC (Ret) in October 2019.