

Lessons From Mogadishu, Part I

Application to the future of warfare

by Maj Joseph Montagna

The purpose of this study is to contribute to the ongoing discussion about the future of MUM-T (manned-unmanned teaming) in the military and to assess what capabilities non-state adversaries in the urban littorals may possess, how they may impose some level of A2/AD (anti-access/area denial), and how they may exploit U.S. critical vulnerabilities and attack centers of gravity. After carefully considering several past military conflicts, it seemed prudent to focus the case study on Mogadishu, and the United States' involvement there from 1991–1994, since it parallels so many of the forecast descriptions of future warfare that the U.S. military may be involved in. Once complete, the case study was used to design an ODG (operational decision game) that embodies a fictitious future scenario in which a non-state adversary with several future-technology concepts is embattled against the U.S. military for control of a city. After several military professionals played this ODG, the results were analyzed and used to synthesize a future concept on how a non-state adversary may attempt to use future machines and technology to fight the U.S. military.

Compared to the technology available to the Somalis in the early 1990s, today's advanced technology is smaller, cheaper, more available to a wider global market, and easier to use. Video and audio interfaces largely negate the need for literacy and are no longer limited to industrialized militaries. Militarily-outmatched adversaries will increasingly be able to use technology to increase their ability to perform all the various

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warfighting functions as well as to conduct information operations. Additionally, modern technology will invariably bring a broader array of inexpensive but effective weapons systems onto the battlefield, increasing the ability of non-professional militaries to conduct intelligence, fires, and maneuver operations. By offsetting a clear technological disadvantage, they will be able to influence the United States' strategic policy at a faster rate than the tactical situation

can adapt, thus shaping the operating environment to their terms.

The events surrounding the United States' involvement in Somalia and, more specifically, in the capital city of Mogadishu in 1991–1994, were examples of what so many recent military documents claim will be the future of warfare for the United States. The U.S. military conducted operations in a dense urban center along the littorals rife with civil war, among an impoverished population whose central government had collapsed and been replaced by warring non-state actors, and against fighters with arms and equipment originally from top-tier militaries. An additional similarity seen in Mogadishu that will be present in the future was an obser-



Marines exercise the employment of small unmanned aircraft systems to ensure familiarity with the systems capabilities/limitations. (Photo by PFC Taylor W. Cooper.)

vant, thinking, and adapting enemy who sought to use what resources it had available to gain whatever advantage it could. The Somalis learned tactics and techniques from foreign fighters who had recent experience fighting first-rate militaries. Perhaps most importantly, the leadership in Somalia understood not only the United States' tactical but also their strategic centers of gravity and found ways to exploit them.

As U.S. policymakers and military strategists wrestle with how to implement and realize the benefits of a third offset strategy to counter technological gains made by near-peer adversaries, experiences from Mogadishu should not be lost. Effective area denial capabilities will not just emerge from rival states as super technological innovations. The *Joint Operating Environment 2035* dually states that

placing too much emphasis on contested norms—particularly those high-tech and expensive capabilities to contain or disrupt an expansionist state power—may discount potentially disruptive low-end threats, which have demonstrated a troubling tendency to fester and emerge as surprise or strategic shock for the United States.¹

Mogadishu matters because what happened there in the early 1990s forecasts a likely scenario to be seen again: a mix of non-state actors embroiled in civil war that were technologically out-matched but fought decisively enough to strategically influence a withdrawal of U.S. forces. They used a mix of weapons and communications methods that effectively denied the U.S. military access to the city. Looking at this case through the Somali perspective produces a better understanding of how similar forces may aim to integrate technology in the future.

The idea of looking at this experience from the adversary's perspective came from a series of concepts emphasized by the Marine Corps. A basic concept that Marine Corps lieutenants learn at The Basic School is to “turn the map around” when designing their tactical actions. This learning point means to instruct the young officers to not only see the tactical battle space from their perspective but also from the enemy's.

Additionally, the Marine Corps places a heavy emphasis on the works of the late Col John Boyd, USAF. His concept, the OODA (observe, orient, decide, act) loop, stresses that one's orientation shapes their observations and that without analysis and synthesis across a “variety of domains or across a variety of competing/independent channels of information, we cannot evolve new repertoires to deal with unfamiliar phenomena or unforeseen change.”² To build a tempo of actions that will defeat an enemy morally, physically, and spiritually, decisions and actions must be based on an orientation to reality. To achieve this, it is essential to consume outside information and be aware of unfolding circumstances. Additionally, a synthesis of observations and previous experiences will prevent an adversary who can adapt to changing circumstances more quickly and more consistently over time from achieving victory.³ Evolving technology could increase battlefield tempo and refine the OODA loop process.

MUM-T

In order to contribute to the discussion about the future of MUM-T in the U.S. military, it is important to understand its basic definitions and background. Then, once it is understood how the U.S. military sees its development of MUM-T technology shaping future tactics, “turning the map around” will provide more clarity regarding how non-state actors may employ their forces. The term MUM-T has garnered an expanding level of attention in recent years, especially after the Deputy Secretary of Defense Robert Work announced the military's pursuit of a “third offset strategy,” in which and increasing reliance on technology is adopted to counter the expanding network of A2/AD capabilities.⁴ The term itself actually means very little. An alarm clock is “unmanned” and requires “manned” teaming to set the time and program an alarm to achieve the human objective of rising from bed at the correct time. The opposing, and equally radical, concept of MUM-T reduces the need for human interaction through adoption of robotics and automated intelligence. Nestled somewhere in the

middle of the two preceding extremes and displaying a perceived misunderstanding of the OODA loop, some are even apt to think that MUM-T means using machines to take the responsibility of conducting observation and orientation away from the commander, relying solely on machines for situational awareness and rendering man to just do “the DA part.”⁵ The DOD publication *Unmanned Systems Integrated Roadmap FY2013-2038* provides the most comprehensive and authoritative definition of how MUM-T should be used in the context of U.S. military application, and it is much more moderate in its interpretation:

MUM teaming refers to the relationships established between manned and unmanned systems personnel prosecuting a common mission as an integrated team. More specifically, MUM teaming is the overarching term used to describe platform interoperability and shared asset control to achieve a common operational mission objective. This term also includes concepts of “loyal wingman” for air combat missions and segments of missions such as MUM air refueling. This capability is especially vital for missions such as target cueing and handoff between manned and unmanned systems, where the operators not only require direct voice communications between the participants, but also a high degree of geospatial fidelity to accurately depict each team member's location with regard to the object being monitored.⁶

Fundamentally, this definition establishes a human-to-human relationship simply through the medium of a remotely controlled device of some sort. The focus on the human and its involvement is the key aspect since warfare is fundamentally a human endeavor, especially when one considers that the United States has been increasingly leveraging technology to project military power while attempting to decrease the level of direct involvement required of soldiers since the 1950s.

Following the Second World War and the Korean War, the American military complex and its armaments industry were unlike anything the country had ever before experienced.⁷ Presi-

dent Dwight D. Eisenhower began the New Look Program with NSC 162/2, reducing the reliance on conventional military manpower requirements by supplementing it with an asymmetrical nuclear strike capability.⁸ But within two decades, the United States no longer reigned supreme with regard to its nuclear capability; the Soviet Union possessed a rapidly growing nuclear arsenal and had an advantage with a numerically superior and modernized conventional force within the Warsaw Pact. America's military strategy, which relied so heavily on technological might, had been countered by the Soviets. As a result, Secretary of Defense Harold Brown announced the Offset Strategy in 1981. This strategy, he explained, would rely on superior technology to offset adversarial conventional strength like its predecessor. Two of the Offset Strategy's key tenants were the fielding of improved precision-strike weapons and the application of stealth technology to aircraft.⁹ Both of these tenants relied on the United States' unique ability to produce computer processing power. But, just as the advantages levied by the New Look strategy were eventually nullified by expanding military might elsewhere, Secretary Brown's Offset Strategy has been balanced by a world-wide proliferation of computer processing capability that can produce both precision strike weapons and A2/AD networks, which provide a strong counter to the U.S. military's reliance on technology for advantage.

In 2014, a generation after the Offset Strategy, Secretary of Defense Chuck Hagel announced the Defense Innovation Initiative, which he expected would lead to a needed third offset strategy. When he announced this initiative in a speech to the Reagan National Defense Forum, the first line of effort that he identified was to increase research and development in the fields of robotics, autonomous systems, miniaturization, big data, and advanced manufacturing.¹⁰ Unlike its predecessors, this endeavor for another offset strategy does include lines of effort that focus on human development, like war gaming and education, its first line of effort is machine and system based. This ap-

proach is vitally needed to help counter the symmetrical advances that adversaries are making in A2/AD capabilities and is meant to avoid competing in an impractical "fighter-for-fighter" scenario. Unfortunately, this investment to avoid a military defeat by an adversary that could pose a fighter-for-fighter advantage does not account for the risk posed by non-state adversaries, which, though technologically outmatched and forecast to become more prolific in coming years, are just as motivated for strategic victory.

"When they saw that their hero was dead, the Philistines took to flight."

—1 Samuel 17: 51

Case Study

From 1991–1994, Somalia became a significant area for unwelcome operations by the U.S. military. What started off as a violent civil war with several clans fighting against the government devolved further when the ruling regime fled into exile. Hundreds of thousands of people died as the remaining clans fought each other for power, and mass famine befell the country. General Mohammed Aideed, the leader of the SNA (Somalia National Alliance), was initially focused on ridding his country of a brutal dictator, but he later became focused on claiming absolute power for himself and was uninterested in foreign intervention, especially if it meant reducing his claim to power. The U.S. military was successful at imposing stability in Somalia, which allowed those who badly needed food and support to receive proper care. But, despite early successes, America ultimately withdrew its military forces from the African country after one critical mission that turned public opinion against the affair.

General Aideed was only interested in placating the demands of foreign governments as long as he benefitted and it

placed him in greater positions of power. Once the UNOSOM II (United Nations Operations in Somalia II) began working against and seeking to arrest him, General Aideed diligently set about to defeat the U.S. military, who he saw as the UNOSOM II center of gravity. Using outdated, low-end technology, the SNA militia effectively employed the intelligence function of warfighting to inform and mobilize Somalis to fight against foreign militaries. Using various forms of media, the SNA also controlled the message that journalists and the press reported. Additionally, the SNA used relatively unsophisticated weapons to effectively employ fire and maneuver concepts against a better-equipped and better-trained adversary. By coordinating efforts, using the terrain, and predicting adversary reactions, the SNA learned how to take the initiative away from the U.S. military and put it on the defensive. Using intelligence to prepare the battlespace and then leveraging an extended firefight with effective messaging, General Aideed created a strategic victory for the SNA on 4 October 1993. Some people argue that the battle was a tactical victory for the U.S. military, but tactical victories mean little if strategic aims are not achieved. Within six months, the U.S. military departed Somalia, leaving behind an ineffective UN peace-keeping force and enabling General Aideed to resume his quest for power.

The tactic of pulling a superior military force into channelized terrain or fighting effectively with inferior weapons goes back at least three thousand years, when David and Goliath met in the Valley of Elah. The trend that emerged in Mogadishu, Somalia, from 1991–1993 is that the Somalis, though using different equipment and a different type of terrain, nearly repeated the story in the first book of Samuel when the Israelites met the invading Philistines for battle. Militarily, the Somalis were technologically outmatched. Still, they had RPGs and a slew of heavy weapons, which they only brought to bear once their foreign adversaries became channelized in urban terrain. For intelligence and communications functions, they used outmoded

means like handhelds, broadcast radio, megaphones, and even burning stacks of tires. Since history does tend to repeat itself, future conflict will probably bring to bear similar situations as what was experienced in the 1990s in Mogadishu, differing only by the location and the technologies available on the battlefield.

Somalia Background

Somalis occupy an environmentally harsh portion of the globe and are descendants of herders that moved into the Horn of Africa two thousand years ago. The common languages are English, Italian, and Arabic, and the common religion is Sunni Islam. The historic population is divided into two major groups: the nomads (Samale) and the cultivators (Sab), from which clan-families are further non-divided, and from which present-day clans and lineages are derived. Foreigners are frequently frustrated when they attempt to conduct diplomacy within Somalia because individuals view their clan identity as fluid and capable of changing to meet the needs of the moment. A significant non-unit in a man's life is his *Diya*, which is a group sworn to avenge injustice toward one of its members if the involved parties do not agree upon a subsequent exchange of goods.¹¹

Somali political unity above the clan level is recent and was not very relevant on the world stage until the late nineteenth century, when Somalia became the subject of European colonialism. Following Italy's defeat in the Second World War, it fell solely under British rule until the United Nations placed it under a ten-year trusteeship from 1950 to 1960. During this time, the country made large advances in infrastructure and agriculture modernization in addition to democratic politics. In 1960, British Somaliland united with Italian Somaliland to form the Somali Republic. Clan politics plagued this new multi-party constitutional democracy, and Somalia became dependent on foreign aid that served only to enrich those in government while the masses remained in poverty.

In 1969, Major General Siad Barre seized control of the government in a

military coup and established a socialist military dictatorship that aggressively and oppressively dismantled social institutions and marginalized many clans. Throughout the following two decades, rivalry between the United States and the Soviet Union for influence in the region resulted in a large flow of arms to the Somali Army, making it the best-equipped army in black-Africa. Despite an apparent arms advantage, Somalia lost a war with Ethiopia in 1979 and fell into civil war throughout the 1980s.¹² Several decades of oppressive rule, an external war, and a violent civil war accustomed the Somali people to violence. When the Barre government was forced to flee in 1991, the people of Mogadishu, while fighting each other, also learned how to effectively fight against the more technologically equipped United States.

1991, Operation EASTERN EXIT

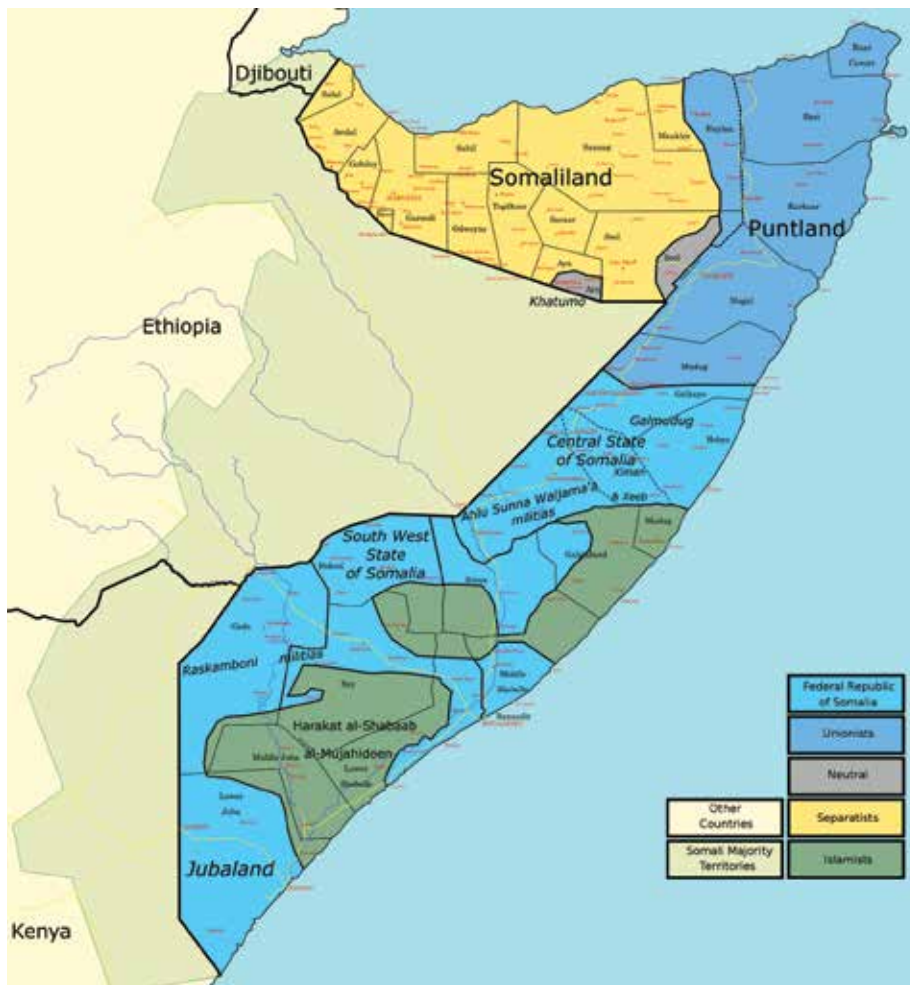
Designed to evacuate the United States embassy because of increasing violence and threat to U.S. citizens in Mogadishu, OEE (Operation EASTERN EXIT) was conducted by United States Marines on 5 January 1991. What happened leading up to and during OEE is valuable because it illustrates the types of weapons, technology, and communications equipment being employed on both sides of the fighting as well as the command and control capabilities of the Somalis at that point in the escalation of violence.

As 1990 ended, General Barre was besieged in Mogadishu with three opposition groups surrounding the city. Probably forecasting that the already bloody civil war would devolve even further when fighting entered the city, Egypt and Italy offered to host peace talks, but the rebel forces encamped around the city declined to participate. In December, fighting entered the city limits,¹³ and it is estimated that within the first month of violence 1,500 Somalis were killed.¹⁴ The most prominent rebel militia was the SNA, led by General Aideed. Though it had a limited artillery capability, the SNA did not have an air force or an armored corps. The government forces had more modern arms but to a limited extent.

Both sides had an array of weapons, including pistols, AK-47s, hand grenades, .50-caliber heavy machine guns, mortar systems, and rocket propelled grenades. By January, the city's telephone network was down, but a government radio station was still operating as was evidenced by several broadcasts announcing cease-fires. It is clear, however, that both camps lacked an effective command and control structure as neither side would heed the cease-fire agreements brokered by their nominal leaders.¹⁵ Moreover, senior Somali officials arrived at the U.S. Embassy drunk and demanding asylum or they would kill families in the street.¹⁶ Certain key leaders within the government possessed hand-held radios, and assumptions can be made that other groups in control of more sophisticated military equipment did as well.

On 3 January, the Russians, Germans, and Italians all tried to evacuate their citizens by landing aircraft at the airport, but these attempts were aborted due to a violent and non-permissive environment.* The French attempted to use the port facility to evacuate their citizens by ship, but they aborted this mission when a Somali Navy Commander threatened to attack them with combat aircraft for having violated Somalia's territorial waters.¹⁷ On 5 January, the U.S. Marine Corps conducted a successful, multi-wave, helicopter-borne air evacuation of the U.S. embassy. Arriving from the sea and from over the horizon, the first wave of helicopters landed in the 80-acre U.S. embassy compound shortly after sunrise at 0620. An Air Force AC-130 circled high overhead to provide fire support if required. The section of CH-53 helicopters immediately offloaded 60 Marines and Navy SEALs, and approximately an hour later, they departed with evacuees.¹⁸ After the departure of the helicopters, the AC-130 remained on station for three more hours.

* Many of these people were later evacuated by either the United States or fled to disparate parts of the region where they could evacuate under less hostile conditions.



The political situation in Somalia, April 2017. (Image from [wikimedia.org/commons](https://commons.wikimedia.org/wiki/File:Somalia_2017.jpg).)

Conditions around the city worsened throughout the day, and the embassy received sporadic .50cal machine gun and RPG fire, some of which was intended for the embassy and some of which was just stray fire from fighting in the streets.¹⁹ The remainder of the air evacuation effort did not come until after sunset, when four waves of five CH-46 helicopters landed sequentially within the embassy compound. As the helicopters and AC-130 gunship were inbound, they detected an active radar from a Soviet procured SA-2 anti-aircraft missile battery.^{**} This sophisticated threat system forced the AC-130

to remain over the water, preventing it from being able to provide fire support.²⁰ Major Sayed, a Somali police official, arrived outside of the embassy shortly after the first wave landed. He had a radio in his hand and threatened to have the next helicopter that took off shot down since his government had not authorized U.S. flight operations in Somali airspace. A cash payoff by Ambassador Bishop changed the major's mind and allowed the ambassador to obtain the major's radio. Within minutes, all remaining evacuees boarded and the helicopters departed.²¹

After the CH-53 flights in the morning, the Somalis had all day to prepare for subsequent waves of aircraft that would have to arrive to evacuate the large number of Americans who remained in the embassy compound. The battery's decision to become active was presumably in response to visual or au-

dible indications of the inbound CH-46 flights in the evening. It is unlikely that it was in response to the inbound AC-130 because had the Somalis had the ability to detect the high-flying gunship at night, they would have targeted the morning sortie that remained on station for more than three hours during the day. Additionally, it can be assumed that the radio which Major Sayed let the ambassador have is the same radio he would have used to enforce his threat of ordering the shoot down of the helicopters.^{***}

1992–1993, Operation Restore Hope

ORH (Operation RESTORE HOPE) was a United States-led task force called UNITAF (Unified Task Force) in response to the humanitarian crisis that befell Somalia in the years following the evacuation of the U.S. embassy. By April 1991, the Barre regime was overthrown, and it fled into exile. Victory by the rebel factions did not bring peace to Somalia but instead caused the two predominant factions under the leadership of Ali Mahdi Mohamed and General Mohamed Farah Aideed to turn on each other as each sought control of the country. Nearly two more years of fighting plunged Somalia, not just Mogadishu, into a state of anarchy ripe with slaughter, rape, murder, torture, and the destruction of the country's crop and water supplies.²² The ensuing famine added another 300,000 deaths simply from starvation by the close of 1992.²³

A tactic used by many of the warring clans was to deny their rivals access to food brought into the country by HROs (humanitarian relief organizations). Their weapons still largely consisted of those that had been so prevalent in the streets in 1991, but they also had access to the arms left behind by the Barre regime. The prevalent chaos made maintenance of armor and aircraft left behind by the Barre regime problematic,

******Based on the report, "Escape from Mogadishu, 1991," by Ambassador Bishop, this SA-2 battery was located at the airport.

*******The police officer probably did not understand that the SA-2 would likely be incapable of acquiring, tracking, or targeting low-flying helicopters in urban terrain.

so many of the militias stripped what they could from those systems and attached them to pickup trucks, which came to be known as “technical.”²⁴ The city’s telephone system, let alone any of its municipal works, continued to be inoperable since the urban fight-

monly confiscated large quantities of tanks, artillery pieces, technicals, mortars, armored personnel carriers, and five-ton truckloads of small arms and munitions. The overwhelming force and capability that UNITAF operated with actually brought much-needed peace

The United Nations passed three resolutions in 1992 authorizing peacekeeping forces to enter Somalia and provide security for the HROs.

ing began two years earlier.²⁵ Broadcast radio was, however, still working and under the control of General Aideed and the SNA.²⁶

The United Nations passed three resolutions in 1992 authorizing peacekeeping forces to enter Somalia and provide security for the HROs. The first two, called UNOSOM (United Nations Operation in Somalia), failed because the United Nations authorized only 550 and then 3,500 troops, which proved to be insufficient in size and capability. By the end of the year, the United Nations authorized UNITAF, which peaked at 39,000 troops and was fully capable of the entire range of military operations.²⁷ This was ORH, and it commenced on 9 December 1992, when I MEF came ashore in Mogadishu. The first to come ashore were Navy SEALs and reconnaissance Marines. The glare of video lights and photo flashes confronted them immediately as throngs of reporters pressed in on them, and viewers around the world watched a live broadcasting of the amphibious operation.²⁸ On 12 December, UNITAF forces received their first hostile fire when three technicals tried in vain to shoot down AH-1 Cobra gunships before being destroyed by the targeted aircraft. UNITAF quickly began heavy and persistent efforts to rid the streets of weapons, and by 11 January, as many as 60 to 70 foot patrols were conducted through the city every day. Raids and battles with upward of 900 Marines and Soldiers with tanks, artillery, and attack aviation quickly subdued opposition forces. These raids and patrols com-

monly confiscated large quantities of tanks, artillery pieces, technicals, mortars, armored personnel carriers, and five-ton truckloads of small arms and munitions. The overwhelming force and capability that UNITAF operated with actually brought much-needed peace

to the city and allowed humanitarian aid to flow more freely to the people in need. Change took place at a rapid rate as Somali leaders met with each other and were committing to a peace process and reconciliation.

Despite the momentum building behind a movement for peace, there was still a lot of danger on the streets. Somali snipers killed and wounded several Marines, Sailors, and Soldiers. Successful Somali attacks against UNITAF forces always occurred while the UNITAF personnel were away from their bases and deep inside the city on foot patrols. Further crackdowns reduced the ability of Somalis to carry weapons, so the violence evolved into a heavier use of hand grenades. When street demonstrations broke out, as they sometimes did, road blocks consisting of burning piles of tires and large, orchestrated crowds of protestors were the norm.²⁹ A predominant observation emerging from ORH, however, was that the Somali factions clearly avoided sustained confrontations against the superior UNITAF.³⁰ By the spring of 1993, it was evident that UNITAF had brought about a level of stability and peace from which a renewed nation building effort could emerge.

1993–1994, United Nations Operation in Somalia II

UNOSOM II (United Nations Operation in Somalia II) was a United Nations-led task force which took over operations within Somalia from UNITAF in the spring of 1993. UNOSOM II comprised a much larger tap-

etry of foreign militaries and started with a peacekeeping mission across the whole of Somalia. This effort aimed at fostering conditions that would lead to the rebuilding of the entire nation, but it devolved into a manhunt and combat operations largely focused within Mogadishu. On 3 October 1993, a raid conducted by Army Rangers went awry and resulted in a massive, day-long fire fight throughout the city. The press coverage and images of dead Rangers being dragged through the streets of Mogadishu ultimately influenced the American people to order the withdrawal of its forces participating in UNOSOM II. By the spring of 1994, UNOSOM II was no longer supported by the U.S. military. This resulted in a less proactive military presence in Mogadishu, and the city returned to the control of warlords and chaos.

The unraveling of the UNOSOM II mission is traced to a particular event on 5 June 1993, when the SNA ambushed two Pakistani units conducting routine missions within the city. General Aideed had become fearful that UNOSOM II was attempting to undermine his legitimacy, so he coordinated a deadly series of ambushes against the Pakistani patrols. The first attack occurred in conjunction with a routine inspection of an authorized weapon storage site, and the second attack occurred in front of a food distribution site that the Pakistanis were guarding that day. The resulting death of 24 Pakistanis and wounding of 56 others led UNOSOM II to shift its mission away from peacekeeping to a more myopic concentration on arresting General Aideed and dismantling the SNA.³¹

The Somalis used similar weapons and tactics at both ambush sites, and the total effort was well coordinated. The SNA militia used small arms, heavy machine guns, and RPGs to deliver a significant amount of hostile fire during the fight. The Pakistani unit on patrol became trapped by hasty barricades erected immediately before the attack, and Somali fighters used assembled groups of women and children as human shields at the food distribution point. Intentional road blocks and fires impeded UNOSOM II quick reaction forces



Unmanned systems will play a larger role in future operations. (Photo by LCpl Isabelo Tabanguil.)

and delayed rescue attempts by several hours. Then, following the firefights, General Aideded took full advantage of his control over Radio Mogadishu to proclaim the firefights as a victory of the Somali people against unjustified attacks by UNOSOM II forces against peaceful civilians.³² Violence and offensive operations escalated quite quickly in the following days and weeks.

As UNOSOM II transitioned to offensive operations and increased the level of force it used, General Aideded and the SNA militia responded in kind by using tactics that further stymied UNOSOM II's relative military superiority. On 17 June, UNOSOM II mounted a large raid into Mogadishu in order to dismantle the SNA's command hierarchy and infrastructure. Aideded's intelligence network observed several mission rehearsals, and when the raid occurred, several ambushes and mobs of angry protestors were in place to counter UNOSOM II operations. The ambushes and mobs intentionally targeted an outer security perimeter with such intensity that the main effort heading towards Aideded's compound had to divert. The SNA militia pushed the fighting to such close quarters that UNOSOM II aerial fire support would not open fire because of the risk posed to friendly forces. As the fighting continued to intensify, the SNA militia also

engaged UNOSOM II targets from a hospital marked with white flags,³³ knowing UNOSOM II forces would be hesitant to return fire on such a facility.³⁴ The fighting that day resulted in 51 UNOSOM II casualties, 150 Somali casualties, and it totally diverted the attention of the press away from a 30,000 Somali strong, pro-UNOSOM II rally which occurred in another part of the city. UNOSOM II's response to the day's fight was to declare mission success but then cease further operations in Aideded-dominated sectors of Mogadishu. Thus, Aideded took the initiative to continue increasing road-block, ambush, and land-mine operations against UNOSOM II ground forces throughout the summer.³⁵

On 3 October 1993, UNOSOM II operations in Somalia came to their climax during a raid meant to capture two of General Aideded's top lieutenants when they met in a building near the infamous Bakara Market and Olympic Hotel. The raid was confronted with a well-coordinated counterattack, and the ensuing 15-hour battle came to be known as "Black Hawk Down." In the months leading up to this battle, the Army Rangers conducted several raids to capture Aideded's top officials. The Rangers typically relied on surprise as one of their centers of gravity, but SNA witnessed their actions frequently

enough that they observed patterns and learned the Rangers' template for action. Under the leadership of Col Sharif Hassan Giumale,^{****} the SNA's Deputy Commander of the High Commission on Defense, the SNA was studying the Rangers and knew that if they were not stopped, they would eventually capture General Aideded.

In preparation, southern Mogadishu (SNA territory) was divided into 18 military sectors, each with its own set of duty officers on 24-hour watch and linked together with a crude communications network.³⁶ General Aideded smuggled Islamist fighters from Sudan that had experience fighting Russian helicopters into Mogadishu to teach his men how to shoot down helicopters. Aideded's men learned how to modify RPGs with timing fuses so that direct hits were not required, to aim for the tail of the aircraft by waiting until after the helicopter had flown past, and not to shoot from rooftops because the shooters could be easily observed by UNOSOM II aviation assets.³⁷ United Nations sources cited that Aideded had 1,000 militia regulars, but SNA accounts placed that number closer to 12,000. Col Giumale knew that one of the Rangers' centers of gravity was their speed and assessed that their critical vulnerability was their helicopters, which a barrage of RPGs could easily neutralize. After framing the problem, he devised a very simple plan utilizing the battlespace he had created: as Rangers and helicopters circled their target building for security while arrests occurred inside, RPGs would shoot down the helicopters, the stranded Rangers would be overcome by sheer numbers and a "swarming persistence," and finally, ambushes and barricades would impede any reinforcements. With this operation plan, the SNA militia could

****Col Sharif Hassan Giumale was a highly educated military officer who had previously served as an artillery brigade commander for the Barre regime. He was also well-studied in the ways of clan warfare and guerrilla insurgencies.

wait until the Rangers were on their turf, deep inside the city in channelizing terrain, and avoid superior military assets that UNOSOM II maintained at its bases. This concept of operations is exactly what transpired beginning at 1600 on 3 October.³⁸

In the afternoon, as the helicopters approached the objective area, Somalis began igniting tires in the city to signal a call-to-arms.³⁹ The raid, in general, went as planned, and several SNA officials were arrested. But this was the sixth such mission,⁴⁰ and it occurred during daylight hours, which worked to increase the situational awareness of the Somali fighters. The sound of the helicopters hovering overhead and increasing amounts of gunfire brought throngs of people into streets.⁴¹ The surrounding neighborhoods had been organized and were responding to prearranged signals and megaphones. Unarmed children, conducting reconnaissance and acting as spotters, approached the American soldiers who were providing perimeter security. Armed fighters also began approaching from behind women being used as shields.⁴² The first helicopter was shot down when the Americans had nearly completed actions on their objective and were as dispersed as they were going to be. Up to this point, gunfire on the street had been increasing, and the American helicopters had been circling the objective building at slow speeds and firing into crowds of Somalis to keep them away from the American ground forces. A Somali militiaman, armed with an RPG, was hiding out of sight and, at approximately 1630, when a UH-60 helicopter (call sign: Super Six-One) passed overhead, he stepped into an alleyway and fired at the tail of the aircraft. The blast separated the tail rotor from the aircraft, which then crashed immediately, dropping into the dense confines of the city.⁴³ U.S. ground forces began moving to the crash site to provide security and to recover the helicopter crew, but this movement into canalizing urban terrain afforded Somalis the opportunity to inflict several casualties upon the Americans. As rescue efforts were coordinated, more aircraft remained on station for longer periods of time, which also offered Somalis

more helicopters to shoot at. Roughly 30 minutes after Super Six-One was shot down, another UH-60 helicopter (call sign: Super Six-Four) was shot down with the same tactics; the Somali fighter armed with a timed fused RPG waited until his target flew overhead, and he had a clear shot of the back of the aircraft and its tail rotor.⁴⁴ For roughly 15 more hours, as rescue efforts of the two aircrews were attempted, a massive firefight raged inside the city between UNOSOM II forces and Somalis. On 4 October, when the battle was complete, at least 1,000 Somalis and 18 U.S. soldiers were dead. Many of the dead Americans' bodies remained in the city and were subsequently ravaged, dragged through the streets, and photographed.

General Aideed wanted to be the sole purveyor of power within the city,

... cheap, easy to use, and commercially available devices are emerging ...

which could not happen if he was being hunted by UNOSOM II. In a coordinated effort with his tactical plans, he also endeavored to control the flow of information that left the city. Earlier in 1993, he had killed several journalists and intimidated all American journalists into leaving Mogadishu. This void of Western media resulted in the battle being told mostly by video and photographs taken by Somali stringers.⁴⁵ Images of dead Army Rangers being mutilated and dragged through the streets of Mogadishu reached news networks by the evening of 4 October. These images sparked visceral reactions in America and began a rapid political fallout in Washington, DC, which influenced the American President to withdraw United States support from UNOSOM II. Secretary of State Warren Christopher, noted that President William J. Clinton was, "the [victim] in many ways of instant communications, and instant polling."⁴⁶ By 31 March 1994, the United States had completely withdrawn from Somalia, and without the active backing of the

U.S. military, UNOSOM II no longer possessed the ability to pursue effective nation-building.⁴⁷ General Aideed was then able, without external pressure, to continue as the self-appointed President of Somalia.*****

Analysis and Initial Concept Development

To perform intelligence, fire, and maneuver functions, General Aideed and the SNA used relatively crude assets. They learned that confronting large formations of the U.S. military was ineffective and that they were only successful when they could isolate smaller patrols deep within the city. The SNA learned quickly that American strength in urban operations was rooted in its helicopters, which could generate speed and combat power very

quickly. To avoid this strength, it had to find a way to get the Americans on the ground and trapped in the city. Once the SNA accomplished this by shooting down two helicopters and forcing the U.S. military to fight in the streets, it simply broadcasted images of Americans being slaughtered, and those pictures broke the United States' political will to fight. Ultimately, by pulling the small units of the U.S. military into the city and isolating them, it employed an area denial tool by affecting a total withdrawal of all U.S. military from their country.

The Somalis did not have command and control aircraft flying endless sorties over Mogadishu or the ability to collect satellite imagery of enemy formations. What they did have, however, was a crude network of low-end systems that

*****By the end of 1996, President Aideed was shot twice during a battle between warring factions and died a few days later.

capitalized on existing infrastructure to gather intelligence, mobilize, and conduct information operations. They used billowing smoke from burning tires to mark check and rally points, a local radio station to mobilize the city against the United Nations, walkie-talkies to quickly pass command and control information among key leaders, and an existing news media infrastructure to tell their story to the world. They did not have aerial gunships, orchestrated artillery, or highly trained infantry units with which to use in a combined arms fashion against the foreign military in Mogadishu. Their concept of fires and maneuver, however, evolved over the three years that the United States had a military presence in Mogadishu based on the weapons they did have. In 1991, the Somalis fought with recklessness throughout the streets, they displayed no effort to coordinate or mass fires, and they did not have any real concept of maneuver. By the Black Hawk Down incident, the SNA had found a way to control fires from various weapons systems and mass them on specific targets. Additionally, it learned to maneuver on the battlefield, and instead of fighting randomly throughout the city, it created space in which to draw the UNOSOM II forces and maneuvered to encircle its adversary with overwhelming mass and close in on them.

Future concepts that actors like Aid-eed and the SNA militia will use to conduct intelligence, information operations, and mobilize forces will rely heavily on the usage of smart devices, cellular networks, and the Internet. In 1992, the Marine Corps established a cellular network in Mogadishu for its own use during ORH. The outcome was a convenient and commercially available communications network that provided commanders a way to communicate without occupying tactical radio networks.⁴⁸ Future militias could just as easily adapt this same concept, especially considering the rapid growth and availability of these technologies in places like Mogadishu. In Somalia, access to wireless communications and the Internet is growing rapidly. In 2013, as many as 7 in 10 Somalis reportedly owned a cell phone, and some polls

show that nearly 50 percent of Somalis access the Internet each week.⁴⁹ This capability will only continue to increase as LTE and 4G (fourth generation) networks are installed across the country, an effort that began in 2014.⁵⁰ This will enable key leaders to communicate more easily, and with access to the Internet, images and videos of dead Americans will reach audiences around the world more quickly. The ability to impact public opinion 24 hours a day will more aggressively impact strategic policy by placing policymakers against “instant communications [and] instant polling.”⁵¹ Additionally, as cell phones proliferate, cheap, easy to use, and commercially available devices are emerging that can create linked and mesh networks between several phones to share encrypted voice and text data and position information without cellular towers, routers, or satellites. The advent of cheap, reliable, highly capable, and commercially available remote-controlled aerial vehicles will continue to increase the ability of non-state militias to provide increased surveillance that can collect real time intelligence. In the fights to come, the advantage that technology and helicopters gave Americans in Mogadishu will be diminished as adversaries adopt ways to gather intelligence more quickly, to mobilize more broadly and effectively, and message instantly and more persuasively.

Non-state adversaries that reside in the urban littorals will continue to evolve the ways they fight to adapt to changing environments. Over the last several years, totalitarian Islamists have been increasing their use of commercially available, remote controlled aerial vehicles to observe indirect fire. Recently, they have proven their ability to also use such vehicles to deliver small munitions with high levels of accuracy, by dropping explosives onto armored vehicles and into infantry formations.⁵² Using improvised explosives to harass adversaries has now evolved to such an extent that the Islamic State in Iraq is using unmanned, remote-controlled aerial vehicles to deliver them. This technique will continue to grow and modify. In 1993, the Somalis most effectively maneuvered when they al-

lowed superior military forces to move deep into the urban environment before encircling them with a “swarming persistence” while using unarmed women and children as human shields. This tactic will continue to persist and become more difficult to counter as urban populations become denser, the environments grow three dimensionally, and new ways to distribute information are developed.

Future adversaries of the United States that fit the profile of the SNA and General Aideed will be non-state actors in conflict-ridden areas and cities near the littorals that do not have a system to procure state-of-the-art, high-end military arms. They will not be flying F-35s or firing M-777s with fantastic warheads, but they will have discarded or stolen systems from more capable militaries that they will not be able to continuously maintain, so they will salvage them to make them fit their needs and capabilities. This trend was noted in Mogadishu after General Barre fled into exile—the rival clans were unable to keep the tanks and other equipment in an operable state, resulting in highly lethal technicals populating the city.

Despite not having their own high-end technology, future adversaries of this sort will not simply disavow its use but will watch and assess what technology the U.S. military leverages and look for ways to exploit it that would reveal a critical vulnerability. Additionally, they may attempt ways to mimic the high-end technology with low-end assets to achieve the same battlefield effects. As in Mogadishu, the SNA observed a reliance on helicopters to facilitate speed and surprise. As a result, they developed an effective method to combat helicopters. As the U.S. military continues to build its military capabilities around a reliance on technologies, they will only create advantage for a period until the enemy finds decisive ways to exploit them.

Editor's Note: Part II of this article will appear in the February 2018 edition of the MCG.

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