New technology and the preparation of urban warfare: what prospects for active and passive precautions?

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It is my great honor and pleasure to be here today. I would echo at the outset what my partners have also said, that I am here to share my individual thoughts. The policy of the Department of Defense is reflected in the Department of Defense Directives in a DoD (Department of Defense) Law of War Manual. It is especially an honor to participate in the Roundtable as we recognize the 70th anniversary of the Geneva Conventions. I am Brigadier Susan Escallier from the US Army Judge Advocate General’s Corps. This is my first time in Sanremo and I now fully appreciate the “Spirit of Sanremo”. That spirit, to me, is one of hope and optimism, of open dialogue. The U.S. Army is so committed to the important work done here in Sanremo, that we send one of our top NSL legal advisors here for a year-long fellowship to learn from our partners and the world. That program is now in its sixth year. I could not be more proud of our Fellows or the support IIHL has given to them.

The organizers asked that I discuss “new technology and the preparation of urban warfare. What prospects for active and passive precautions?” I view our approach to using new technologies in urban warfare to the spirit of Sanremo. With hope and optimism but also, as the drafters of the Geneva
Convention no doubt were—informed by pragmatic considerations and mindful of the intersection of the law and realistic assessments of current and future conflict.

I want to start with the most fundamental of statements—the basics matter. In this case I mean the Law of Armed Conflict, or International Humanitarian Law (IHL), a term that is also often used. As such, when we must fight, the principles and rules of LOAC are our guide. In accordance with the principles of necessity, distinction, humanity, and proportionality, we all aspire to eliminating civilian casualties and eliminating the destruction of civilian objects, but that is not the law or always feasible in practice. Again, this should not surprise you coming from an American Soldier. And, I don’t mean to come across as cavalier, but if yours is the profession of arms, and if called upon, the goal is to win and that often means, even with our best efforts to minimize civilian casualties; they will still occur.

It was not long ago when the world was watching with great discomfort North and South Korea come close to armed conflict. Commentators, policymakers, and strategists alike provided sobering predictions of what a war between the Koreas would do to the civilian population centers. That served as a wake-up call for many to think through the next fight and the human toll. LOAC and IHL are sufficient for the full range of conflict—the conventions that we honor with this 70th anniversary celebration were written with full understanding of the devastation of urban areas such as Dresden, Tokyo and London. And we are here as practitioners to ensure that the principles apply to any future conflicts.

As our National Defense Strategy identifies, and US Army senior leadership has stated, we are shifting focus away from two decades of counter-terrorism and preparing for the next fight—a peer-to-peer, or near-peer conflict. When considering how to man, train and equip for future conflict, we must be mindful that we have operated with policy layered on top of law—between ROE and LOAC. For example, legal advisors individually advising every target engagement authority has been a reassuring check for commanders in recent engagements, but in a fight for survival across multiple domains there will not be time nor manpower sufficient to expect a legal review for every use of force—policy required that process, not the law. (As an aside, there is an excellent article written by then DoD General Counsel Jennifer O’Connor who described the operation of a targeting cell during her visit to Baghdad). Instead, service members and commanders (who will be dispersed), to be ready for the next fight, must understand what the LOAC requires and how to adhere to LOAC immediately and likely without the assistance of an on-hand LEGAD.
Similarly, pages upon pages of ROE—something much of the forces fighting today are accustomed to—won’t exist. In a war for survival, service members must understand and know how to immediately apply the basics, the LOAC.

We train our Soldiers in LOAC and these principles are incorporated and evaluated at our combat training centers. We frequently partner with our allies as we go through these crucible exercises and LOAC is factored in to the scenarios.

At the outset I mentioned I view new technologies with hope and optimism. In short, we, along with our Allies and partners, are developing technologies to help better achieve the aims of LOAC—to increase our lethality and survivability to be sure, but always in compliance with LOAC.

What potential do the new technologies possess for our future? The ability to gather and synthesize data faster; better situational awareness—the time and space to understand the situation before taking action; and, the ability to provide our forces flexibility. For example, if an autonomous vehicle can replace an infantry squad in scouting a route through enemy territory, the commander can preserve his force and penetrate deeper. In addition to collecting valuable information for the commander to make a decision, if the autonomous vehicle does draw fire, the exchange produces at least two additional benefits: 1) potentially eliminating the need to return fire (because a human is not in danger), and 2) helping the commander identify the real threat without directly exposing humans. Or, in LOAC parlance, the use of new technologies will help a commander exercise additional feasible precautions to distinguish friend from foe.

What are these technologies? They are tools for the commander—tools for our forces to better engage the enemy more discriminately, which help them end fights sooner. States (in accordance with jus ad bellum) decided these wars were necessary. If we must fight, shorter is better—and doing so with greater precision is better. The new technologies we are working on are designed to accomplish those objectives. Now, as I mentioned, the US is preparing for a peer or near peer conflict which means the US may not have the technological advantage against an adversary. In fact, our Multi-Domain Operations Concept anticipates that every domain (land, sea, air, space, cyberspace) may be contested. Lack of overmatch does not change our obligation to comply with LOAC—it merely changes what is feasible. If our technology is rendered ineffective, we will still need to fight and to apply LOAC with reasonable available information.

And as we imagine the future world, we must be mindful that the world itself will be full of artificial intelligence and autonomous means to
accomplish many tasks. It will be an autonomous battlefield with potential for logistics, maintenance and other functions to happen enabled by artificial intelligence and the world itself may see similar changes.

Because we do not know what the future will bring, the US trains and exercises across the full spectrum of contingencies. We run massive training exercises around the globe testing our ability to operate in the dark (analog)—this includes how we will operate under ground in tunnels and caves; we have bodies such as the Defense Innovation Board, which brings together industry experts, government officials, and legal advisors as well as policy makers, who look at new technologies for functional and legal feasibility. Recently the Defense Innovation Board ran a mock weapons review (Article 36 Review) assessing systems with various levels of autonomy to understand the appropriate level of human judgment necessary for a given platform. They worked through these issues to identify what technology can do to provide increased lethality to our forces and also better enable a commander to comply with LOAC. All of this directly impacts the conduct of hostilities in urban areas.

This level of attention is not new to technologies like AI and autonomy, but we are cognizant of the perceptions and concerns surrounding AI and autonomy (some not based at all on fact or law). The current Chief of Staff of the Army, General McConville’s top priority is people. Ensuring our forces are equipped with the tools they need to prevail lawfully (readiness), and adhering to the LOAC to protect people are all part of this discussion. So too is ensuring the public is informed with facts. Judge Advocates factor heavily into these tasks and we are remaining ready for whatever the future holds.

It bears repeating. States, and their armed forces, are comprised of people. People are running these exercises and interrogating these systems. People will employ this technology. The armed forces of states developing these technologies to win wars are also taking great pains to protect—people.

Hopefully, the days of indiscriminate attacks on cities are a thing of the past, especially given the tools available to the many responsible armed forces around the globe. The bar is rising for what is a “feasible precaution” under the circumstances. Commanders have more information available to them to make better decisions. With that said however, if the lights go out and the technology fails, the fight does not stop. Moreover, the analysis for what is a “feasible precaution” will change in the information denied environments we will certainly face in a peer to peer or near peer conflict.
LOAC exists to provide hard limits, to be sure, but it also allows flexibility for States, through commanders of their armed forces, to do what must be done—violently at times—under the circumstances. The technology in development, and the technology not yet even imagined, must facilitate the quick and humane cessation of hostilities. I am optimistic we won’t see the “terminator” or its offspring any time soon. But technological advances will change the battlefield and this isn’t a two hour Hollywood film. What we will see are commanders with tools enabling them to make better and faster decisions with more and better data. Maybe that looks like a microscopic electronic device looking at people in a building to distinguish civilian from combatant. Maybe it’s an algorithm that can measure electricity consumption or track financial transactions unique to enemy forces. Maybe it is a longer lasting battery that helps a soldier on the ground maintain better communications with her commander enabling her to obtain as much information as possible from her higher HQ before executing an assault. We can all think back into history to battles that did not need to be fought—but for a delay in a communication. September 1, 1939, marked the first day of WWII. What technology would have made that war less bloody?

We are better equipped today to handle those issues and we are far more deliberate in our analysis of technology employed on the battlefield than ever before. Regardless of the technology, we must focus first on the basics. With LOAC. As I mentioned above, people will drive the application of technology and determine how or if it may be employed on the battlefield—be that urban spaces or open oceans. Just as the drafters of the GCs were reflecting upon and working to address the atrocities they witnessed people today must anticipate the impacts of technology now and in the future and be mindful of LOAC and ever aware of the changing environments where conflict occurs.