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THE TANK – AN INSTRUMENT OF STABILITY

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By Major F.G. Auld

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INTRODUCTION

> *. . . the tank is always a target for cuts . . . but [on operations] everyone*
> *remembers why we need it . . .*

> - Yehuda Admon, Brigadier General, Israeli Defense Force

As the Canadian Armed Forces undertakes a reset after its decade long engagement in Afghanistan, the institution is taking steps to posture itself for the future. As part of this, Canadian Army force planners face the fundamental dilemma of retaining adequate and balanced land capabilities within a constrained resource envelope. To solve this, the relative value of each component will be gauged against predictions for the future security environment and Canada's likely role in it. The output of this analysis will result in much debate and, eventually, institution changing decisions will be taken, including actions to invest, divest, or expand capabilities. As part of this, the value of tank forces are often a highly polarizing subject and the future of the tank is routinely the subject of much debate. While the tank's involvement in Afghanistan temporarily quelled much of the discourse, as the institution looks to the future questions regarding the utility of tank forces have risen again. To add to this debate, this paper will argue that the reinvigorated tank forces of the Canadian Army will become increasingly valuable in a future dominated by instability, belligerent non-state actors, and operations focused on restoring peace and security. To address this, two strands will be explored: first, what does the future security environment look like and how does the Army fit within it; and second, why tank forces are eminently suitable for this future.

THE FUTURE AND ARMY OPERATIONS

> *. . . dramatic inequalities will inevitably produce new grievances. Canadian values dictate that we cannot allow their suffering to continue. Canadian interests demand that we assist the powerless before they find new and more ominous ways to make their voices heard.*
>
> <div align="right">- Canada's International Policy Statement</div>

Defending Canadians and Canada's interests are core roles for the Government of Canada.[1] This implies a need to be ready today, while also developing the capabilities and capacities to confront the security challenges of tomorrow. In order to determine the future of Army operations, the first step is to determine what the future security environment will look like.

The Future Security Environment

In the complex and dynamic environment of the 21st century, significant challenges to sustainable peace and security exist.[2] These challenges will grow and spread as the middle class in developing countries gain access to increased wealth, education, and longevity.[3] As a result, global demand for economic opportunity, education, and safe sources of food, water, and energy will increase substantially.[4] The governments of developing nations will find themselves under tremendous pressure to satisfy these demands and discontent will grow.

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[1] Department of National Defence, *The Future Security Environment 2008-2030* (Ottawa: Chief of Force Development, 2009), 6.

[2] Department of Defense, ADRP 3-07, *Stability* (Washington: Department of the Army, 2012), 1-1.

[3] National Intelligence Council, *Global Trends 2030: Alternative Worlds* (Washington: National Intelligence Council Publishing, 2012), iii.

[4] *Ibid.*, iv.

Competition for basic resources may be satisfied peacefully, but resource-centric

tensions will offer significant motivation for strife and instability.[5] While the

potential for interstate conflict will remain, the risk of large state-on-state violent

conflagrations will continue to reduce as globalization expands and deepens.[6]

However, discontent within the populations of developing countries will lead to

internal pressures and has the potential to fracture the allegiance of state organs

and the country's society at large.[7] It is this fragile scenario that will provide

disenfranchised non-state actors with the opportunity to emerge to seek redress

and challenge for control.[8] As a result, the pre-eminent threat to stability in the

future is seen to be the disaffected non-state actors who aim to challenge the

status quo using violent or oppressive methods.[9] Bolstering the power and

influence of these non-state actors are two key trends, the increasing proliferation

of powerful technologies and urbanization.

The proliferation of modern military systems, chemical and biological

agents, explosive technologies, and offensive cyber tools, is providing individuals

and groups with increasing access to capabilities that were once normally

reserved for states. This will offer a diverse array of actors the ability to exercise a

[5] Department of National Defence, *Future Security . . .*, 88.
[6] Directorate of Land Concepts and Design, *Land Operations 2021 – Adaptive Dispersed Operations: The Force Employment Concept for Canada's Army of Tomorrow* (Kingston: Army Publishing Office, 2007), 4.
[7] Chad Serena, *A Revolution in Military Adaptation: The US Army and the Iraq War* (Washington, DC: Georgetown University Press, 2011), 29.
[8] *Ibid.*, 25.
[9] Department of National Defence, *Future Security . . .*, 8.

degree of influence far beyond anything experienced in human history.[10] The US experience in Iraq demonstrated how relatively minor transfers of technology, such as remote triggering mechanisms and explosively formed projectiles, can yield significant advantages to non-state adversaries.[11] As non-state actors gain access to new technological capabilities, it is predicted that power will be redistributed away from the traditional state centres, and flow into local and transnational networks.[12] This loss of power will likely be perceived as an existential threat by the instruments of state control and may result in a heavy-handed response. In an ironic twist, the very capabilities that triggered the heavy handed response now enable the non-state actors to resist at levels sufficient to cause intrastate or even interstate consequences. Such was the case in Syria, where non-state actors employed sophisticated military equipment and modern communication technologies to challenge and resist the Syrian government. Clearly, powerful technologies in the hands' of disenfranchised and potentially belligerent non-state actors provide ominous means with which to air grievances. In this way, the proliferation of modern technologies amongst non-state actors will, undoubtedly, contribute to global instability in the future.

Increasing urbanization will also contribute to instability in powerful ways. As Brian Nichiporuk of the Rand Corporation noted, "the dynamics of

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[10] Directorate of Land Concepts and Design, *Land Operations 2021 . . .*, 5.
[11] Anthony H Cordesman, *The Iraq War: Strategy, Tactics, and Military Lessons* (Washington: The Center for Strategic and International Studies, 2003), 118.
[12] Center for Strategic and International Studies. "The 2020+ Security Environment: Describing the Demand Function for the 2021 Affordable Force," last accessed 11 May 2014. http://csis.org/files/publication/121210_painting_picture.pdf

population growth, settlement patterns, and movement across borders will have an effect on international security in the coming decades."[13] First, the global population is predicted to continue growing, with UN predictions seeing global population reaching 8.2 billion in 2025 and 9.6 billion in 2050.[14] This will naturally result in increased demands for resources. Amplifying this is the poverty and inequality induced trend of population migration to urban environments. More than half the global population currently lives in urban environments, with this number climbing to nearly 60% by 2025 and nearly 70% by 2050.[15] Perhaps unsurprisingly, this growth in the urbanscape will be most pronounced in the developing countries of the world.[16] As a result, cities will grow larger and come to possess huge, dense populations, as well as significant wealth, complex transportation networks, mass media, and warehousing.[17] This degree of urbanization will create highly concentrated demand for basic needs such as safe water, sewage removal, food, housing, and security. This will provide an ideal metaphorical petri dish for inequality and discontent to grow and spread. Further, the chaotic nature of the urban environment will provide an ideal screen behind which instigators and facilitators of discontent can move and hide. In short,

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[13] Brian Nichiporuk, *The Security Dynamics of Demographic Factors* (Pittsburgh: RAND Corporation, 2000), last accessed 11 May 2014. http://www.rand.org/pubs/monograph_reports/MR1088.html

[14] Department of Economics and Social Affairs, Population Division, *World Population Prospects: 2012 Revision* (New York: United Nations, 2013), 1.

[15] Department of Economics and Social Affairs, Population Division, *World Urbanization Prospects: 2011 Revision* (New York: United Nations, 2012), 1-2.

[16] *Ibid.*

[17] Roch Legault, "The Urban Battlefield and the Army: Changes and Doctrines," *Canadian Military Journal*, vol. 1, no. 3 (Autumn 2000), 39.

increasing urbanization will, by its very nature, amplify the destabilizing potential of non-state actors.

Summed, the future security environment is expected to be dominated by rising instability in developing nations, with large and highly urbanized populations demanding opportunity and government support. Within this chaotic soup, non-state actors with access to military weapons and advanced technologies will have the opportunity to organize, influence, and challenge for power and control. The question becomes, how does a primarily conventional force like the Canadian Armed Forces, largely trained and equipped for state-on-state combat, fit into this future?

The Canadian Armed Forces' Campaigns of the Future

Against the backdrop of belligerent non-state actors, instability, and increasing urbanization, the Government of Canada will continue to rely on the Canadian Armed Forces as a key instrument of national policy.[18] Hence, it is reasonable to conclude that the Canadian military will eventually find itself thrust into the unstable spaces of the future. It is, therefore, very important for the Canadian Armed Forces to understand and posture the force to succeed in these environments.

Within the military's institutional culture, doctrine provides the baseline for understanding and preparation for operations. The doctrinal hierarchy trickles

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[18] Directorate of Land Concepts and Design, *Land Operations 2021 . . .*, 4.

down from capstone publications that lay the foundation, to keystone publications that focus on concepts.[19] To help define the operational environment, Canadian Forces Joint Publication 01, a capstone doctrine publication, provides a foundation that defines military operations into two broad categories: War, and Operations Other Than War (OOTW).[20] War is described as a nation's use of sustained combat operations to achieve strategic aims.[21] OOTW, as the name implies, encompasses everything else a military can be used for short of War. This includes efforts to deter conflict, promote peace, and develop capacity in others.[22] To provide further fidelity within this framework, the foundational concept of the "campaign theme" was introduced. The concept of the campaign theme is intended to enable a clear enunciation and understanding of the dominant character of a military campaign, a critical prerequisite for success according to Clausewitz. Within Canadian doctrine, there are four recognized campaign themes.

First, within the broad category of War, only the campaign theme of Major Combat exists. Major Combat is the most demanding of all the campaign themes and is characterized by frequent, intense, and widespread engagements.[23] The most obvious recent examples of a Major Combat campaign are the World Wars.

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[19] Jennifer Morrison Taw, *Mission Revolution: The U.S. Military and Stability Operations* (New York: Columbia University Press, 2012), 39.

[20] Department of National Defence, B-GJ-005-000/FP-001, *Canadian Forces Joint Publication 1.0 – Canadian Military Doctrine* (Ottawa: Department of National Defence Canada, 2009), 2-12.

[21] *Ibid.*

[22] *Ibid.*

[23] Department of National Defence, B-GJ-005-300/FP-001, *Canadian Forces Joint Publication 3.0 – Operations* (Ottawa: Department of National Defence Canada, 2011), 8-2.

Given the resources and state commitment required, Major Combat is traditionally the purview of interstate conflict.

Next, within the category of OOTW, there are three campaign themes (in order of decreasing conflict): Counter-Insurgency (COIN), Peace Support, and Peacetime Military Engagement.[24]

A COIN campaign is characterized by lower level of combat that in a Major Combat campaign, an insurgent based adversary, a political problem as the root of the conflict, and the need for a comprehensive approach to solve the problem.[25] Insurgencies have been the predominant form of conflict in the last century and COIN is currently the most publically visible campaign theme owing to the west's recent forays into Iraq and Afghanistan.

Peace Support campaigns are normally multinational operations undertaken in pursuit of UN or NATO goals.[26] Operations generally do not involve combat, but combat may occur if required and authorized. Canadian doctrine sub-categorizes Peace Support campaigns into five principal activities, conflict prevention, peacekeeping, peace building, peacemaking, or peace enforcement.[27] Peace Support activities are undertaken with the intent to create the environment necessary for civilian agencies to build the structure needed for a

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[24] Department of National Defence, *Canadian Forces Joint Publication 1.0 . . .*, 2-14.
[25] Department of National Defence, B-GL-300-001/FP-001, *Land Operations* (Ottawa: Department of National Defence Canada, 2008), 3-10.
[26] Department of National Defence, *Canadian Forces Joint Publication 3.0 . . .*, 8-3.
[27] Department of National Defence, *Canadian Forces Joint Publication 1.0 . . .*, 6-9.

self-sustaining peace.[28] Examples of Peace Support campaigns include the UN

mission to Cyprus, and the NATO operations under the auspices of a UN mandate

in the Balkans.

The final campaign theme, Peacetime Military Engagement, is a type of

campaign that does not involve combat; rather, it consists of military activities

aimed to build trust and cooperation.[29] This can include visits to other nations to

improve mutual understanding, provision of experts for capacity building, and

international interoperability exercises.[30]

Defining the character of tomorrow's campaigns in doctrinal terms is now

simply a matter of superimposing the predicted future security environment onto

the aforementioned framework of campaign themes. This will result in a

prediction as to which campaign theme is most likely to dominate the military

agenda of the future. This reveals, perhaps unsurprisingly, that a majority of

future military campaigns will likely be of the COIN and Peace Support varieties.

Further, given the demographic and urbanization trends, these campaigns will

likely occur in dense urban settings in developing countries.

While this is a tidy result, generating a deduction specific to Canada

requires a final step: consideration of the effects of Canadian domestic politics.

The national memory of Afghanistan will likely remain strong in Canada for

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[28] NATO Military Agency for Standardization, AJP-3.4.1, *Peace Support Operations* (Brussels: NATO, 2001), 2-1.
[29] Department of National Defence, B-GL-300-001/FP-001, *Land Operations . . .*, 3-10.
[30] Department of National Defence, *Canadian Forces Joint Publication 3.0 . . .*, 8-4.

many years to come. This is likely to render Canadian military involvement in future COIN campaigns highly unpalatable from a political perspective. As such, the Canadian government will likely shy away from committing Canadian military assets to risky COIN efforts. Peace Support campaigns, on the other hand, are likely be received much more favourably and viewed as less politically risky.[31] Given these factors, the campaign theme that is most likely to dominate the future of the Canadian Armed Forces is that of Peace Support. With this conclusion in hand, the focus can be narrowed to how the Canadian Army, a land force optimized for Major Combat, fits into this future.

The Army Operations of the Future

Campaigns are pursued using a wide variety of land force activities. Canadian Army doctrine assigns these activities to one of four general types: Offensive Operations, Defensive Operations, Stability Operations, and Enabling Operations.[32] Offensive Operations are defined as tactical activities in which forces seek to attack an adversary.[33] Defensive Operations are tactical activities that aim to resist an adversary's attacks.[34] Stability Operations are activities conducted to maintain, restore, or establish a climate of order.[35] Finally, Enabling

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[31] Department of National Defence, B-GL-300-001/FP-001, *Land Operations . . .*, 3-13.
[32] *Ibid.*, 3-9.
[33] *Ibid.*, 3-18.
[34] *Ibid.*
[35] *Ibid.*, 3-19.

Operations are activities that link, support, or create the conditions for Offensive, Defensive, or Stability Operations.[36],[37]

Establishing this doctrinal typology is not meant to infer that these operations are executed in a sequential or exclusive manner. In fact, within a campaign, whether it is a COIN campaign or a Peace Support campaign, all four types of operations may be occurring simultaneously. For example, Stability and Defensive Operations may be occurring simultaneously in support of a COIN campaign, or Offensive and Stability Operations may be conducted in pursuit of the objectives of a Peace Support campaign.[38] The utility of the typology lies in its ability to allow commanders and planners to conceptualize and characterize the challenges they face.

Armed with the prediction for the most prevalent campaign theme of the future (Peace Support) and the Canadian Army's doctrinal typology, the two can be combined to generate a prediction regarding what operation type is likely to be the most prevalent in the future for the Army. To do this, the doctrinal tasks inherent to Peace Support campaigns are compared against the doctrinal tasks inherent to Offensive, Defensive, and Stability Operations. From this, the land force operation type that best matches the requirements of a Peace Support

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[36] *Ibid.*

[37] Enabling Operations are inherent to all operations and are not considered a character defining operation. As such, Enabling Operations will not be considered further.

[38] Nora Bensahel, Olga Oliker, and Heather Peterson, *Improving Capacity for Stabilization and Reconstruction Operations* (Pittsburgh: RAND Corporation, 2009), 6.

campaign can be confirmed. To avoid a lengthy written comparative analysis, the

doctrinal tasks of Peace Support campaigns, Offensive, Defensive, and Stability

Operations are compiled in Table 1.

Table 1 – Comparison of Doctrinal Tasks

| CAMPAIGN THEME | TYPES OF LAND FORCE OPERATIONS | | |
Peace Support[39]	Offensive Operations[40]	Defensive Operations [41]	Stability Operations[42]
Tactical Tasks			
Early Warning	Attack	Block	Framework Patrolling
Surveillance	Breach	Canalize	Route Control (Vehicle Checkpoints)
Observing and Reporting	Bypass	Contain	Curfew
Separation of Parties	Clear	Counter-Attack	Crowd Confrontation Operations
Patrolling	Destroy	Delay	Separation of Hostile Forces
Checkpoints	Follow and Support	Disrupt	Observation
Demobilization and Disarmament	Follow and Assume	Fix	Cordon and Search
Mine and Explosive Clearance	Interdict	Guard	Enforcement of Restricted Areas
Negotiation and Mediation	Isolate	Retain	Disarmament
Participate in a Joint Military Commission	Neutralize	Screen	Weapons Collection, Accounting, and Destruction
Control of Border Areas	Occupy	Cover	Protection, Escort, Transportation of Demobilized Personnel
Assist Refugees and Internally Displaced Persons	Penetrate	Withdraw	Assistance in Selecting a New Security Service
Protection for Humanitarian Assistance	Secure		Selection of Future Security Force Personnel
Restoration of Civil Infrastructure	Seize		Allocation and Control of Equipment and Infrastructure
Election Support	Support		Training, Mentoring, and Transfer of Responsibility to Indigenous Security Forces
Security Sector Reform			Provision of Mobility
Public Security Assistance			Restoration of Airfields, Harbours, and Ports
			Provision of Basic Needs
			Restoration of Essential Public Services
			Medical Assistance
			Humanitarian Aid
			Securing Critical Infrastructure

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[39] Department of National Defence, B-GJ-005-307/FP-030, *Peace Support Operations* (Ottawa: Department of National Defence Canada, 2002), Ch 4.

[40] Army Mission and Task Verb Handout, Army Operations Course.

[41] *Ibid*.

[42] Department of National Defence, B-GL-300-001/FP-001, *Land Operations . . .*, 7-91.

 A study of the table reveals close alignment between the doctrinal tasks

associated with Peace Support campaigns (left column), and the doctrinal tasks

the Canadian Army associates with Stability Operations (right column). From this

it can be concluded that, as part of the Peace Support campaigns of the future, the

Canadian Army will be primarily engaged in Stability Operations. This is not

meant to infer that Offensive and Defensive Operations will not occur, only that

Stability Operations are likely to represent the largest proportion of future Army

activities.

While beyond the scope of this paper to explore, this conclusion has

implications with respect to doctrine, organization, training, and resource

allocation. Given that Stability Operations represent the bulk of the Army's

future, perhaps they should receive greater focus and attention. Interestingly, the

US Department of Defense reached this very conclusion and issued Instruction

3000.05 in September 2009. Instruction 3000.05 officially acknowledged the

prominence of Stability Operations and assigned it as a core military mission.

Specifically, Instruction 3000.05 stated,

> Stability Operations are a core US military mission that the
> Department of Defense shall be prepared to conduct and support.
> They shall be given priority comparable to combat operations . . .[43]

Directive 3000.5 also tasked the US military to immediately begin building the

capability to conduct Stability Operations in combat and non-combat

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[43] Department of Defense, *Department of Defense Instruction 3000.05: Stability Operations* (Washington: Office of the Under Secretary of Defense, 16 September 2009), 2.

environments.[44] NATO has also expressed a similar central commitment to stability, announcing in its latest strategic concept that ". . . the Alliance [commits] to prevent crises, manage conflicts and stabilize post-conflict situations."[45] Whereas Stability Operations were once seen by military forces as a distraction from the real business of war fighting, experience in Iraq and Afghanistan have driven home the importance of Stability Operations for keeping the peace.[46]

Assembling these fragmented predications into a single picture reveals a future characterized by instability, urbanization, and well equipped and belligerent non-state actors. The Canadian Army will find itself deployed to developing nations to execute Stability Operations in support of Peace Support campaigns sanctioned by the UN or NATO. This is a daunting scenario that presents many significant challenges for a resource limited and conventionally trained and equipped force such as the Canadian Army. Overcoming these challenges is not a simple prospect and it is unrealistic to believe that the Army will be re-equipped specifically to address this emerging future. As such, the path to mission success will need to be found through the creative use of existing Army capabilities, of which the most powerful platform is the tank.

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[44] *Ibid.*, 12.
[45] NATO Public Diplomacy Division, *Strategic Concept for the Defence and Security of the Members of the North Atlantic Treaty Organization* (Brussels: NATO, 2010), 4.
[46] Taw, *Mission Revolution . . .*, 9.

TANKS AND THE FUTURE – A NATURAL FIT

> *There will always be some type of armored force . . . mother-henning infantry beyond a threatening spot.*

> - Roman Jarymowycz, Cavalry from Hoof to Track

The Canadian Army, a force organized, equipped, and trained for conventional combat, will be tested by the Stability Operations of the future. Most concerning from a military perspective is the increasing likelihood of operations in urban environments. Urban operations represent a worst-case scenario for land forces and have long been recognized as presenting unique and dangerous challenges, even when conducting "benign" activities like Stability Operations. As a result, western military doctrine generally recommends avoiding urban areas if at all possible. There are many valid reasons for this and, as demonstrated in Somalia, Bosnia, Iraq, and Afghanistan, when operations in urban areas deteriorate and become violent, they tend to become very costly for all sides, combatants and non-combatants alike.[47] Given this, do tanks forces, a conventional capability designed for decisive manoeuvre in open spaces, fit into a future that is urban-centric and focused on Stability Operations?

The Characteristics of Armour

The characteristics associated with a military capability play an influential role from a cognitive perspective in assigning value to the capability, and in determining when and how that capability is employed. The Canadian Army

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[47] Legault, "The Urban Battlefield . . ., 40.

doctrine that guides the employment of tanks resides in *The Armoured Regiment in Battle*. According to this publication tank forces exhibit the characteristics of firepower, protection, mobility, flexibility, and an inability to hold ground.[48] Firepower is a dominant characteristic and speaks primarily to the stabilized and highly accurate large calibre main gun system of a tank. A tank's main gun is capable of firing a wide range of ammunition types, from tank defeating projectiles, to high explosive and smoke ammunition. Tanks also possess several smaller machine guns capable of sustained rates of accurate fire. Protection is another dominant characteristic and speaks to the high levels of armour that a tank possesses. A tank's armour enables it to operate in environments generally considered too risky for other arms. This includes in the face of enemy fire, but also in chemical, nuclear, and biologically contaminated environments. Mobility as a characteristic speaks to both the bold mindset traditionally instilled in armour commanders, and to the mechanical performance of the tank platform. By virtue of its propulsion and suspension systems, tanks are capable of quickly traversing most types of terrain, and overcoming or avoiding obstacles. However, the weight of a tank is significant and can limit its mobility with respect to the methods and locations of its employment. The characteristic of flexibility is derived from the combination of firepower, mobility, and communications inherent to tanks. Firepower and mobility have already been touched on, but with respect to communications, tanks are generally equipped with multiple voice radios, as well

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[48] Department of National Defence, B-GL-305-001/FT-001, *The Armoured Regiment in Battle* (Ottawa: Department of National Defence Canada, 1990), 21-22.

as being connected to a battlespace management network. This allows dispersed tanks to maintain excellent situational awareness and rapidly adjust while in the midst of operations to meet changing circumstances. The final characteristic, inability to hold ground, reflects the fact that tank forces do not possess the organization, equipment, or personnel necessary to resist the pressure of a determined adversary. Tanks are designed for dominant manoeuvre and, therefore, when in a defensive role need to be paired with other arms, most notably infantry forces.

Of the tank's characteristics the most unique are firepower and protection. These are generally regarded within the military community as the two characteristics that fully distinguish tank forces from other land elements. It is these characteristics that will offer the greatest value to the Stability Operations of the future.

Firepower

In the context of Stability Operations, a tank's firepower may be viewed positively or negatively. First, from a positive perspective, tank forces possess a unique capability for accurate and sustained large calibre fire while manoeuvring in the face of an adversary. No other land force element is capable of doing this. Highly advanced fire control systems and a wide variety of ammunition types help tank forces ensure their fires are accurate and appropriate for the target. This reduces the risk of collateral damage and enables precise effects. Ideally, this capability would never be required during Stability Operations; however, given

the unstable nature of the future security environment, should the situation deteriorate and violence erupt, tank forces would provide a commander with an unmatched capability. While some will argue that non-state actors, such as the rebels in Syria and Al-Shabaab in Somalia, have operated tanks in support of their efforts, untrained crews in poorly maintained tanks do not represent a credible "capability." True capability is only achieved when doctrine, training, and equipment are successfully merged and fielded in numbers that are adequate to achieve operational effects. From a non-kinetic perspective, the firepower inherent to a tank force is arguably universally recognized and can, therefore, be wielded for its coercive effect. In this way, a commander tasked to conduct Stability Operations with tanks under his command, will possess significant psychological leverage over lesser equipped competitors. In effect, the kinetic and non-kinetic influence that results from the firepower inherent to a tank can be employed as a deterrent and stabilizing influence. An early example of this was the UN mission to the Congo in 1960.

Until the major missions to the Balkans in the 1990s, Opération des Nations Unies au Congo (ONUC) was the largest Peacekeeping operation ever conducted by the UN. ONUC ran from 1960-64 and was originally mandated to provide the Congolese Government with military and technical assistance; however, it soon became embroiled in a complex internal situation with significant potential for conflict. This resulted in the UN force assuming responsibilities well beyond the scope of traditional peacekeeping, to include the mandate of protecting the Congo from interference by foreign mercenaries, and

preventing clashes and civil strife.[49] With such a sweeping mandate and the

situation's significant potential for violence, the UN deployed a full range of

military capabilities, including fighter aircraft, artillery, armoured personnel

carriers, and tanks.[50] With such overwhelming combat power at its disposal,

ONUC was able to successfully exercise its rights of movement, force the

mercenary influence out, and prevent the Congo from sliding into a civil war.[51]

This is an excellent example of the coercive potential of the tank contributing to

the successful conduct of Stability Operations. A more recent example was

NATO's involvement in Kosovo.

In the spring of 1998, conflict began between the Kosovo Liberation Army

(KLA), the Federal Republic of Yugoslavia (FRY), and Serbia's Ministry of

Interior Police (MUP). After nearly a year of searching for a solution, a NATO air

campaign separated the warring parties. In May 1999, given the potential for

continued fighting, NATO deployed a ground force based on the UK's 4th

Armoured Brigade to help enforce a cease fire. As part of this, Canadian and

British tanks were deployed to help stabilize the situation. While the potential for

combat existed, NATO's ground elements did not engage in fighting. Instead,

they conducted Stability Operation including the provision of security, assisting

displaced persons, assisting in the provision of humanitarian relief, and assisting

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[49] United Nations, "Republic of the Congo: ONUC Background," last accessed 11 May 2014. http://www.un.org/en/peacekeeping/missions/past/onucB htm
[50] William K. Carr, "Planning, Organizing, and Commanding the Air Operation in the Congo, 1960," In proof copy of *Air Power in UN Operations* (unpublished), 1.
[51] United Nations, "Republic of the Congo . . ..

international and non-governmental organizations.[52] The fact that fighting was successfully prevented makes it difficult to provide proof of the tank's contribution; however, it is not a stretch to argue that the kinetic and non-kinetic firepower potential possessed by UK and Canadian tanks helped to deter flare-ups in the conflict.

A negative aspect of the tank's potential for firepower stems from the aggressive message associated with tanks. As a result of popular culture, their appearance, and their history, tanks are perceived as ominous harbingers of violence. Their deployment from Canada to other countries can be perceived by both Canadians and the indigenous population as an indication that a situation is becoming unstable or already out of control. Further, in many parts of the world tanks are culturally linked to either liberation or occupation.[53] Given such a polarized view, tanks have the potential to either buoy spirits or instill fear and resentment. While these psychological effects can be leveraged for positive ends, the negative psychological potential of tanks must be acknowledged. As stated in the Canadian Army's COIN doctrine publication, "Armour must be used judiciously so as to avoid the David versus Goliath psychological operations advantage for the enemy . . .."[54] This speaks to the importance of a commander's judgement and the requirement to understand local history and culture. It also

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[52] Department of History and Heritage, "Details for Canadian Forces' Operation Kinetic," last accessed 11 May 2014. www.cmp-cpm.forces.gc.ca/dhh-dhp/od-bdo/di-ri-eng.asp?IntlOpId=96&CdnOpId=110

[53] Bensahel, Oliker, and Peterson, *Improving Capacity . . .*, 27.

[54] Department of National Defence, B-GL-323-004/FP-003, *Counter-Insurgency Operations* (Ottawa: Department of National Defence Canada, 2008), 6-35.

speaks to the requirement for commanders to understand not just the physical potential of a weapon system, but also the psychological potential.

Mission success during Stability Operations requires a force to be well led, trained, organized, equipped, and armed.[55] As part of this, the tank's ability to employ accurate large calibre direct fire while manoeuvring in the face of the adversary is unique and will remain unmatched for the foreseeable future. This provides commanders resourced with tank forces with a distinct physical and psychological advantage over the non-state adversaries predicted for the future. As such, and perhaps paradoxically, the tank's potential for violence has the ability to deter violence and provide a stabilizing influence when employed intelligently.

Protection

The trend of migration to urban environments will undoubtedly result in military forces operating in and around urban sprawl. Unfortunately, for all the forecast advances in technology, it is predicted that future sensors will remain insufficient to prevent skilled adversaries from pulling friendly forces into populated areas.[56] As such, in the dense urban maze of tomorrow's Stability Operations, the high levels of protection available in tanks will be of vital importance.

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[55] NATO Military Agency for Standardization, *Peace Support . . .*, 2-2.
[56] Anthony H. Cordesman, George Sullivan, and William D. Sullivan, *Lessons of the 2006 Israeli-Hezbollah War* (Washington: The Center for Strategic and International Studies, 2007), 44.

Urban areas are exceedingly complex. Comprised of a wide range of dwellings, from sophisticated high-rises, to high density suburbs and shanty towns, urban areas are home to every strata of society. Urban environments also contain a labyrinth of underground networks, from telecommunications tunnels, gas pipelines, sewers, subways, and underground walkways. It is this complexity that creates risk for elements conducting Stability Operations in the urbanscape. Adversaries have large number of vectors from which to attack, defend, surveil, or escape. Threats may originate from street level, rooftops, sub-surface positions, and everything in-between. Further, in comparison to the open spaces of non-urban areas, threats are usually close to military forces and mixed amongst non-combatants. As seen in Iraq and Afghanistan, belligerent actors nimbly blend in with the pattern of normal life and quickly close with their intended targets when the time is right. This proximity provides threat countermeasures, including the latest generation of automatic defense systems, with very little time to react. The implication of this is that forces operating in urban environments will have to rely on passive protection; in other words, armour.[57] Essentially, should Stability Operations in urban environments suddenly turn violent, military forces will not have the time to react and will need to be able to absorb hits without taking casualties. The importance of armour in this respect was decisively demonstrated during the 2006 conflict between Israel and Hezbollah.

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[57] Cordesman, *The Iraq War: Strategy . . .*, 357.

While clearly not a Stability Operation, the conflict between Israel and

Hezbollah in 2006 exhibited many of the characteristics that the Canadian Army

could face in a deteriorating Peace Support campaign. As such, the lessons

learned by the Israeli Defence Force (IDF) hold value for the Canadian Army.

During the conflict, the IDF, a largely conventional force, attempted to

manoeuvre against well-equipped and technologically enabled Hezbollah

elements (similar to the predicted adversaries of our future). Hezbollah,

understanding they were outmatched from a conventional perspective, embraced

an asymmetric strategy of urban defence (again, similar to the predicted

adversaries of our future).[58] In this environment, tanks proved the only arm

capable of manoeuvring. After the conflict, despite the loss of thirty eight tanks,

Israel was convinced that tanks were vitally important for the urban environments

of the future.[59] Further, tanks were attributed with saving lives when compared

with other ground force elements not capable of taking hits. As a result of their

experience, Israel rescinded an earlier decision to ramp down tank production and

instead re-energized their program.[60] The importance of the tank in urban

environments was eloquently summed up by Israeli Major General (retired) Haim

Erez,

> . . . one of the lessons is that . . . heavy armour will remain the
> central element of the ground force structure, with a continued role
> of primary importance in the future . . .[61]

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[58] Cordesman, Sullivan, and Sullivan, *Lessons of the 2006 Israeli-Hezbollah War . . ,*81..

[59] *Ibid.*, 130.

[60] *Ibid.*, 129.

[61] Haim Erez, IDF Major General (retired) quoted by Barbara Opall in Cordesman, George Sullivan, and William D. Sullivan, *Lessons of the 2006 Israeli-Hezbollah War*, 129.

The IDF learned from the 2006 conflict that a tank capability was, in fact, ideal for urban environments and had to be preserved. In the non-contiguous and densely-packed urban spaces of the future, conducting Stability Operations in the face of asymmetric threats will demand plenty of armour.[62]

There is a significant drawback associated with a tank forces' high level of protection, weight. At over seventy tons, the sheer weight of main battle tanks greatly affects their strategic agility. While aircraft can be used to transport tanks to trouble spots, Canada's C-17 aircraft are capable of carrying only one tank per sortie. This can result in significant deployment times for a complete tank force (depending on the size of the force). However, transporting tanks by air is still faster than using shipping, the traditional method of tank strategic deployment. The weight of tanks also has operational impacts, namely, there are routes and bridges that are unable to accommodate the weight of the vehicle. This can restrict the employability of a tank force and may be compounded when operating in a country with nascent or shattered infrastructure. However, given the inherent mobility of tank forces, alternate routes can usually quickly be found. Finally, a tank's weight has the potential to cause unintended collateral damage. Innocent tank manoeuvre can collapse ditches, culverts, and curbs, damage asphalt, and destroy structures and fields. This is obviously counterproductive if the aim is to

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[62] *Ibid.*, 129-130.

build trust with a local population and needs to be mitigated through smart employment practices and well trained crews.

The protection levels of tanks are a wholly unique and distinguishing characteristic of the platform. Despite the drawbacks associated with its weight, the tank's ability to absorb hits and minimize casualties will remain unmatched for the foreseeable future. With a casualty-adverse domestic audience, and a dense, urbanized, and unstable future, the high levels of protection available in tank forces will prove increasingly valuable.

CONCLUSION

> *Few peace support operations now follow the traditional template . . . the*
> *military requirements . . . far exceed those of traditional missions . . .*

> - Peace Support Operations, Joint Doctrine Manual, Canada

In a future characterized by resource competition, population growth, urbanization, and influential and enabled non-state actors, discontent will be expressed in ways that increase global instability. Dense urban populations will find themselves negatively affected by insecurity, famine, and disease. This will result in increasing calls for international intervention and, given Canada's proud history of global involvement, it is highly likely that Canada will use its national power to assist in alleviating the suffering.[63] As such, the Canadian Armed Forces should expect to deploy to these challenging environments more often than in the post-9/11 past. It, therefore, is important for the Canadian Army to grasp the full

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[63] Department of National Defence. *Peace Support Operations . . .*, 1-1.

implications of a future dominated by complex Stability Operations rather than traditional interstate war. This raises important questions regarding the Army's current doctrine, organization, training, and equipping, and also points towards a need to re-evaluate the Army's persistent assertion that war is its core business. This, however, is a discussion for another day.

Looking forward, it is safe to conclude that the Army will not be re-equipped specifically for future Stability Operations; instead, the Army will have to adapt and pursue mission success in novel ways using existing capabilities. One such capability is the tank. Invented to break the stalemate of trench warfare, tanks have rapidly evolved into highly sophisticated networked platforms capable of dominant manoeuvre under the most demanding of circumstances. While cognitively associated by most with combat, the tank's potential for overwhelming and precise firepower and unmatched protection can be extremely valuable for deterring violence. US and UK experience in Iraq, Israeli experience in Lebanon, and Canadian experience in Afghanistan, have all served to reconfirm the value of tanks in operations other than war. As a result of the lessons learned from these campaigns, other land force elements have begun adopting tank-like characteristics in an isomorphic shift to emulate a tank's firepower and protection. As eloquently concluded by Gudmundsson, " The age of the tank is over. The age of tanks has begun."[64] Tanks will be a valuable capability for the dangerous and complex Stability Operations of the future.

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[64] Bruce I. Gudmundsson, *On Armor* (Westport: Praeger Publishers, 2004), 179.

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