Dr. Walter Dorn illustrates how technology may be brought to bear on the problems of peacekeeping.
Peacemaking has become a part of the Canadian national identity. Its symbols are found on the national currency: the ten-dollar bill features a female soldier wearing a UN blue beret looking through binoculars under a bilingual banner “Au Service de la paix / In the Service of Peace,” and the 1995 issue of the dollar coin features the National Peacekeeping Monument, a prominent landmark in the nation’s capital.

Most Canadians credit Canadian Foreign Minister (later Prime Minister) Lester B. Pearson for “inventing peacekeeping” just over 50 years ago. While UN observer missions existed prior to 1956, he made the key proposal for the UN’s first peacekeeping force. In the 1956 Suez crisis, the great powers France and Britain, along with Israel, invaded Egypt, and then resisted US and UN demands for a withdrawal. Pearson’s proposal for a UN Emergency Force (UNEF) broke the deadlock. Secretary-General Dag Hammarskjöld then worked with Pearson to draw up a plan for UNEF soldiers to be interposed between the Egyptian and invading forces, making it easier for the latter to withdraw. The first UNEF commander was Canadian LGen E.L.M. (“Tommy”) Burns. For UNEF and other contributions, Pearson won the Nobel Peace Prize in 1957. The creation of UNEF was one of the great moments in post-war Canadian foreign and defense history. It was an unprecedented example of international action that created a model for future operations. After 1956, peacekeeping became a centre-piece of Canadian contributions.

---

### Table 1. Four types/generations of UN peacekeeping operations.

<table>
<thead>
<tr>
<th>TYPE OF OPERATION AND PURPOSE</th>
<th>MEANS AND METHODS</th>
<th>UN OPERATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Observer Missions</strong></td>
<td>Monitoring through foot and vehicle patrols, observation posts, checkpoints, etc.</td>
<td><strong>UNTSO</strong> (Palestine), <strong>UNMOGIP</strong> (Kashmir), <strong>UNOGIL</strong> (Lebanon), <strong>UNYOM</strong> (Yemen), <strong>DOMREP</strong> (Dominican Republic), <strong>UNIPOM</strong> (India-Pakistan), <strong>UNIMOG</strong> (Iran-Iraq), <strong>UNGOMAP</strong> (Afghanistan/Pakistan), <strong>UNAVEM I</strong> (Angola), <strong>OUNCA</strong> (Costa Rica, El Salvador, Guatemala, Honduras &amp; Nicaragua), <strong>UNAVEM II</strong> (Angola), <strong>MINURSO</strong> (Western Sahara), <strong>UNAMIC</strong> (Cambodia), <strong>UNOMIG</strong> (Georgia/Abkhazia), <strong>UNOMUR</strong> (Uganda-Rwanda), <strong>UNOMIL</strong> (Liberia), <strong>ONUSAL</strong> (El Salvador), <strong>UNASOG</strong> (Chad), <strong>UNMOT</strong> (Taijikistan), <strong>UNMOP</strong> (Pevlaka/Croatia), <strong>MINUGUA</strong> (Guatemala), <strong>MONUA</strong> (Angola), <strong>MONUC</strong> (DR Congo)</td>
</tr>
<tr>
<td><strong>Inter-positional Forces</strong></td>
<td>Placing peacekeeping troops, mostly battalions, between combatants, using patrols, checkpoints (fixed or mobile), searches, escort, show of UN presence/force.</td>
<td><strong>UNEF I</strong> (Egypt), <strong>UNIFCYP</strong> (Cyprus), <strong>UNEF II</strong> (Egypt), <strong>UNDOF</strong> (Syria), <strong>UNIFIL</strong> (Lebanon), <strong>UNIKOM</strong> (Iraq/Kuwait), <strong>UNPREDEP</strong> (Macedonia), <strong>UNMEE</strong> (Ethiopia/Eritrea)</td>
</tr>
<tr>
<td><strong>Multidimensional Operations</strong></td>
<td>All of the above, plus: - protection of assembly areas and civilians, storage and destruction of surrendered weapons, escorts and protection of key personnel/facilities, oversight of police forces and other parts of the security sector, etc. - humanitarian aid convoys, road clearing, evacuation plans for vulnerable persons, securing sites and territory Uses military, civilian police and civilian personnel.</td>
<td><strong>ONUC</strong> (DR Congo), <strong>UNTAG</strong> (Namibia), <strong>UNPROFOR</strong> ( Bosnia, Croatia), <strong>UNTAC</strong> (Cambodia), <strong>UNOSOM I &amp; II</strong> (Somalia), <strong>ONUMOZ</strong> (Mozambique), <strong>UNMIH</strong> (Haiti), <strong>UNAMIR</strong> (Rwanda), <strong>UNAVEM III</strong> (Angola), <strong>UNMIBH</strong> (Bosnia), <strong>UNSMIH / UNTMHI / MIPONUH / MINUSTAH</strong> (Haiti), <strong>MINURCA</strong> (CAR), <strong>UNPSG</strong> (Eastern Slavonia), <strong>UNAMSIL</strong> (Sierra Leone), <strong>UNAMA</strong> (Afghanistan), <strong>UNMISET</strong> (Timor Leste)</td>
</tr>
<tr>
<td><strong>Transitional Administrations</strong></td>
<td>Comprehensive missions covering all aspects of society (from military to legal to education to sanitation) Uses soldiers, police, civilians of all sorts</td>
<td><strong>UNTEA</strong> (West Papua), <strong>UNSF</strong> (West Papua), <strong>UNTAES</strong> (Eastern Slavonia), <strong>UNMIK</strong> (Kosovo), <strong>UNTAET</strong> (East Timor)</td>
</tr>
</tbody>
</table>
to the war-torn areas of the world, helping to prevent them from becoming major clashes between the superpowers.

During the Cold War, Canada contributed more soldiers than any other nation to UN peacekeeping operations (PKOs). Furthermore, Canada was a part of every UN PKO, the only nation with such a record. By the time UN peacekeepers won the 1988 Nobel Peace Prize, Canada had sent about 80,000 soldiers to UN operations, some 10 percent of the UN total. Canada became widely identified as a peacekeeping leader.

But this contribution came at a cost. During the Cold War, Canada suffered the highest number of fatalities of any nation in UN missions. Even at present, Canada is number 2 on the list of UN fatalities (at 114 deaths in almost 60 years), exceeded only by India (at 121). On the tragic day of 9 August 1974 Canada experienced its largest single-day loss: nine Canadian peacekeepers died when their plane was shot down over Syria. August 9 is “Peacekeeping Day” in almost all Canadian provinces, a day to honour the sacrifice and celebrate the work of those who served in peacekeeping missions. This commemoration is due to the efforts of the Canadian Association of Veterans in UN Peacekeeping (CA VUNP). The organization also provides a means for former and current peacekeepers to get together, “to perpetuate the memories and deeds of fallen comrades,” and to foster greater awareness about the ongoing work of peacekeepers.1

After the Cold War ended in 1989, Canada continued to participate in the new generation of “multidimensional” peacekeeping missions, in which soldiers joined with police, humanitarian workers and many other types of civilians to deal with messy internal conflicts—a great challenge to Canada and the United Nations. Then, when the UN was given the even greater responsibility to govern territories like Kosovo and East Timor, Canada also lent a hand. Thus, Canada had a role in the evolution of four generations/types of missions: from the original observer missions (Middle East, Kashmir) to the peacekeeping forces (starting with Suez) to the multidimensional missions (Cambodia, Central America, many African missions) to transitional administrations (Kosovo, Timor). Table 1 provides a summary list of all the UN missions, grouped according to these four mission categories. Those in which Canada participated are in bold and the ongoing missions are underlined. The list of missions in which Canada did not participate is short.2 The table uses a four-generation model for peacekeeping developed by the author to describe the evolution of peacekeeping.

Even after the end of the Cold War, for a half-decade Canada remained a top contributor (number one at times in 1991 and 1992). As the total number of UN peacekeepers escalated dramatically in the early 1990s, up to a peak of 78,000 soldiers, Canada also reached its peak. In April 1993, some 3,300 Canadians served under the UN flag, mostly in the former Yugoslavia (UNPROFOR), Cyprus (UNFICYP), the Golan Heights (UNDOF) and Cambodia (UNTAC). But when UN peacekeeping sagged in 1995-96, Canada’s contribution fell even more precipitously, as shown in Figure 1.

In 1997, Canada began a long relative decline: slipping from a top-ten position to 30th-35th position in the 2000s to 59th place today. The small humps and peaks in the 2000s are due to contributions to missions in Ethiopia-Eritrea (UNMEE) and Haiti (MINUSTAH). The Canadian contribution took its most recent dive in March 2006, when the Conservative government withdrew 190 soldiers from the Golan Heights (UNDOF). There have been no replacement missions. At present, Canada has only 141 uniformed peacekeepers in PKOs: 86 police and only 55 soldiers. Canada is no longer in the league it once was: for much of peacekeeping history, Canada provided 10 percent of the UN’s forces. Currently it provides only 0.1 percent. This is a hundred-fold decline!

To understand this steep decline, it is necessary to review the Canadian and UN experience in the first half of the 1990s. This period offered a great many difficult and painful experiences, and some potential lessons worth revisiting. In Somalia, a few unruly and improperly disciplined Canadian soldiers in a unit unfit for peacekeeping, committed atrocities that shocked the nation: they tortured and killed a Somali thief and shot others. To atone for these deeds and the perceived failings of the military during a prolonged inquiry, in addition to courts
marshals of the soldiers, the Canadian government disbanded the entire Airborne Regiment. The UN’s Somalia mission also proved a failure since the peace did not hold and US-led efforts to apprehend one factional leader ended with over a thousand deaths in the span of two days, including 18 US soldiers. After the US withdrawal from Somalia, there was little hope for the UN and other countries to make a difference, so the UN Operation in Somalia (UNOSOM) folded as well.

In Bosnia, the warring factions took advantage of the United Nations Protection Force (UNPROFOR) for purposes of “ethnic cleansing.” UN soldiers escorted buses of fleeing refugees out of territories that were threatened with attack. In 1995, Canadian soldiers were held hostage in Serb facilities to act as a shield against NATO bombings. Canada and other Western nations learned that it was not possible to “keep the peace” in Bosnia without stronger action. NATO, which had been quite reluctant to use force earlier in the conflict, took a strong stand against the dominant (Serb) side, and after forceful action, the parties sued for peace. With the 1995 Dayton Peace Accords, a lasting peace was finally found. Canadian soldiers, disgusted with the weak Rules of Engagement (ROE) that the UN had given them in UNPROFOR, were much happier with the robust peacekeeping operation Implementation Force (IFOR), mandated by the UN but led by NATO.

Most Western countries also made the switch to NATO “peace support operations” (PSO)—no longer called peacekeeping because there was no guarantee that they could “keep the peace” but merely a promise to support it. When NATO set up a UN-mandated peacekeeping force in Kosovo (KFOR) after the 1998 NATO aerial bombing campaign, Canada contributed 1,400 troops for each of two rotations. The NATO-led Kosovo Force (KFOR) worked closely with the United Nations Mission in Kosovo (UNMIK), which was given the demanding role of transitional administration. It still “governs” the territory, pending a decision on the final status of the disputed territory.

This move to NATO operations was further solidified with Canadian deployments to Afghanistan, in 2003 to a PSO in Kabul and then a “three block war” mission in Kandahar in 2006—where emphasis was placed on the first block, “combat,” with little to show thus far for the other two blocks (stability and reconstruction) in the area of operation. Canada currently has over 2,500 soldiers under the NATO-led International Security Assistance Force (ISAF), mostly located in the Kandahar province. The huge investment required to support an offensive combat operation means the Afghanistan mission is currently consuming the lion’s share of Canadian Forces’ personnel and energy, as well as costing the lives of soldiers (45 fatalities at time of writing). When the UN sought Canadian soldiers for its field missions and Canadian officers for important positions at UN headquarters, none were made available. At present, Canada has no officers in the military division of UN Headquarters in New York. It appears to many in New York that Canada is becoming a “single mission military,” unable to deploy a significant number of forces under the UN.

This inflexibility was clearly seen in the recent case of post-war peacekeeping in Lebanon. After the Security Council finally passed resolution 1701 on 11 August 2006, calling for a UN force of up to 15,000, Canada would not provide a single soldier. European nations became re-engaged in UN peacekeeping, sending over 5,000. Four European nations were in the list of top-ten UN contributors. By contrast, Canada, in effect, made a negative contribution: it informed the UN that its six soldiers serving in the United Nations Truce Supervision Organization (UNTSO), with an important role in observing the Israel-Lebanon border, would no longer be permitted to travel to Lebanon. Such national caveats, though common in UN operations, are the bane of UN force commanders. To critics, this seemed like a case of “cut and run” from UN duties after Canada suffered the death of a UNTSO officer during the war in Lebanon. Not only is Canada contribut-
ing no personnel to the UN Interim Force in Lebanon (UNIFIL), it is hampering the UN by imposing constraints on UNTSO’s monitoring work in Lebanon.

The recent decline of the military contribution is shown graphically in Figure 2, which covers the period 2000–2006. The sharp peak in June 2004 is due to Canada’s re-hatting of forces from a US-led stability operation, coming after the forced removal of Haitian President Jean-Bertrand Aristide, to a UN force (MINUSTAH). The most significant drop in troop contribution was a fall from 198 to 18 soldiers in the month of March 2006 when the government withdrew logistics personnel from the Golan Heights after 32 years of service.

At present, Canada’s police forces contribute more personnel to UN PKOs than Canada’s armed forces. (These police are stationed mostly in Haiti, where Canada has been involved in security sector reform for many years.) Furthermore, the generous commitment made two years ago of armoured personnel carriers and other equipment to the struggling African Union peacekeepers in Darfur is to be withdrawn by the end of 2007.

By contrast, UN peacekeeping has been rapidly expanding with new missions and mandates. Since 2000, UN forces have experienced two dramatic surges, as shown in Figure 3. The first peak, in November 2001, was due mostly to the large and successful missions in Sierra Leone (UNAMSIL) and East Timor (UNTAET) and the second peak, in November 2006, was due mostly to strong demands for troops in the Congo (MONUC), Liberia (UNMIL), UNMIS (Southern Sudan) and Lebanon (UNIFIL). The UN now deploys more soldiers to the field than any other entity in the world, except the US government. In addition to about 81,000 uniformed personnel, there are almost 20,000 civilians, bringing the total to about 100,000 personnel in the field today.3

To fill the vacuum left by Canada and other middle powers who had served as the traditional backbone of peacekeeping, the developing world stepped in. It now provides the vast majority of troops. The developed world (i.e., countries of the Organization for Economic Cooperation and Development) slipped from about 80% of UN troops in the 1970s and 1980s (mostly middle-power countries) to roughly 50% in the early-mid 1990s and now only provide 10%. But Europe is re-engaging in UN peacekeeping, as mentioned, with a large contribution to the mission in Lebanon.

Financial Contributions

Though developed nations like Canada contribute few of the “boots on the ground” at present, they do provide the large majority of the funding. The UN’s mandatory fees for peacekeep-
ing are billed on a scale of assessment based on the nation’s ability to pay—unlike NATO where each contributor generally pays its own costs. The UN assessments of the top-ten contributors are shown in Figure 4. In 2005, Canada had the seventh largest assessment, at $133 million (all figures in US dollars). On a per capita basis this is a small amount, only $4.30 per Canadian. The US was expected to pay $1.28 billion, also about $4.30 per person. But the US has been in considerable arrears for many years. By the end of 2005, the US had “contributions outstanding from prior periods” of $343 million.

In the first half of 2006, Japan paid over $800 million. Germany—like Japan, a major power without a permanent seat in the Security Council—is the third largest financial contributor. Then two Permanent Five (P5) members, the UK and France, are followed by Italy and Canada. Two other P5 members are even further down the list: China (number 9) and Russia (not in the top 15). But China is quickly rising as a contributor and is scheduled to equal Canada in payments in 2007, when both have an assessment rate of 3.25% of the peacekeeping budget.

Assessments for national contributions to the UN’s peacekeeping budget, as well as the UN Regular Budget, are made on the basis of the Gross National Income (GNI) share of the world’s gross income (sum of all national incomes). But the US managed to negotiate with Secretary-General Kofi Annan a reduction in its share in the late 1990s. The UN General Assembly agreed to this reduction on the expectation and promise that the US would pay its arrears. But the world was to be disappointed, as well as further burdened. The consequences of the reduced US share were significant increases for other major contributors since they had to “pick up the slack” as the US share was reduced. Figure 5 shows that while the US has 30.1% of the “gross world income,” it contributes only 26.7% to the Peacekeeping Budget (and even less to the regular budget, just 22%).

By contrast, Canada has 2.2% of the world’s income but pays 2.8% of peacekeeping costs. That means that because of the reduction in dues from the US and some other nations, Canada is paying a 26% higher rate. For Japan, the difference is even greater: 56% higher. While Japan is not a super-power, it is a much appreciated “super-payer” at the UN, though it has, like the US, fallen into arrears. Canada can boast an almost unblemished record of paying its dues “in full, on time and without conditions.”

Technology: an Untapped Force Multiplier

Since Canada has a difficult time putting boots on the ground in UN operations, it is worthwhile to explore other ways of contributing beyond personnel and finances. This could include the provision of equipment, specialized skills and intellectual leadership. In the past, Canada often provided much-needed signals officers to set up the communications networks in PKOs. In 2005, Canada loaned over one hundred armoured personnel carriers (APCs), as well as some contracted helicopters, to the African Union (AU) force in the Sudan. Canada has repeatedly declared that it is not in a position to contribute a substantial number of troops, ostensibly because of the large commitments in Afghanistan. Again, it could make a significant contribution with a small numbers of forces having advanced equipment and specialized expertise.

One gap in UN capability is between its capabilities for monitoring, a key task in all PKOs, and its mandate. It lacks technology. The UN still relies almost exclusively on human observation (the “Mark 1 Eyeball” as it is sometimes called). But advances in science and technology have made much more effective observation possible. As science, commercialization, miniaturization and globalization advance, the devices are becoming increasingly cheaper and better, as well as more effective.

Sensors can do many things that humans cannot. They can increase the range and accuracy of observation and permit continuous (day/night) monitoring over much larger areas. Figure 6 shows a large array of sensors that can potentially enhance both the safety and effectiveness of UN peacekeepers. It includes aerial monitoring by planes, helicopters, UAVs, tethered balloons and satellites. On the ground, video cameras (and close-circuit TV) can be positioned at important transit points or areas where breaches of the cease-fire might be anticipated. Underground seismic sensors are useful in determining movements of vehicles and personnel through restricted areas (e.g., demilitarized zones, lines of control or protected areas) or on the approaches to checkpoints. Most importantly, night vision devices (image intensifiers or infra-red viewers) allow surveillance at night, when most of the illegal smuggling (arms and resources) and atrocities occur.
By contributing smaller numbers of highly specialized personnel with advanced remote sensing expertise, Canada could make a contribution far greater than numbers would suggest. These units could also be a significant and cost-effective “force multiplier.” Fewer peacekeepers might be needed overall, with rapid reaction forces providing more effective responses to violations and threats. The UN has shown in recent operations (for example, in the Eastern Congo) that it is capable of robust responses and can apply the minimum of force needed to fulfill a mandate.

Specifically, Canada’s Radarsat 2 (due to be launched this year) could provide valuable information on movements of relevant objects day and night and in all weather conditions since its Synthetic Aperture Radar (SAR) will have a ground resolution of three metres. Canada’s Coyote reconnaissance vehicle can, for instance, detect at night a person walking 10 kilometres away using its ground-based radar. Even greater ranges can be obtained from planes and uninhabited (or unmanned) aerial vehicles (UAVs), such as a pioneering Canadian heliborne UAV with two sets of blades: the Canadair CL-289 (aka “the peanut” for its shape). Though the prototype has not entered into production (at least not yet), it is an example of early innovation in monitoring technology. UAVs are now becoming a key tool in the spectrum of operations.

The night vision devices (NVD) the UN currently use come mostly from Canada, but the UN is poorly stocked and has not upgraded to third-generation NVD or to thermal imagers. These viewers and imagers, deployed on the helmets of peacekeepers or in cameras near hot spots, could greatly increase the effectiveness of patrols at night, when most of the nefarious activities take place.

Technology can not only make peacekeepers more effective at their jobs, it can also make them safer. With better situational awareness, they are better able to protect themselves from intruders and those who might wish to spoil the peace process. A Canadian contribution of a Coyote reconnaissance vehicle, a UAV and a dozen specialists would be more meaningful than a thousand boots on the ground.

Many UN member states are cognizant of the need for monitoring technologies. The UN’s Special Committee on Peacekeeping (the “C34”), made up of the current and former troop-contributing countries, seeks to develop “a dialogue” with the UN’s Department of Peacekeeping Operations (DPKO) on the use of...
monitoring technology, especially aerial reconnaissance. In accordance with its request, a comprehensive study, completed by this author, was tabled in March 2007 on the UN’s past and potential uses of technology. The troop-contributing nations welcomed the study by consensus and asked DPKO to standardize the use of advanced technologies.

Canada has now opportunities to foster the use of such technologies on many possible levels: policies in DPKO, diplomatic discussions in New York, defence science projects and partnerships with international experts pooling their knowledge on certain remote sensors, and with the deployment of sensor packages to the field. For instance, Canada is gaining valuable expertise with UAVs and some of its experiences could be shared with other countries and the UN. Soldiers from the developing world, aware of their limitations, are eagerly seeking more access, training and experience with advanced technologies.

Finally, Canada can provide intellectual leadership at the UN on this and other topics. Canada remains the chair of the Working Group of the Special Committee on Peacekeeping. Canada led in the negotiation and ratification of the 1994 Convention on the Safety of United Nations and Associated Personnel. New opportunities for innovation are constantly arising in the UN’s effort to save lives and alleviate suffering in the most war-torn places on the planet where there are strong prospects of success, including in Haiti, the Congo, and most recently Nepal.

Canada’s contribution to UN peacekeeping may not be what it once was, but there are still many ways that it can contribute. It maintains an advanced military force that is bilingual, well-trained, well-equipped, and well-experienced. It is a nation without the baggage of colonialism and perceived imperialism. It still has a strong international, as well as national, reputation as a peacekeeping nation. It has a legacy worth living up to.

The views expressed are those of the author and do not necessarily reflect the views of the Institute or its members.

Notes

1 The website of the Canadian Association of Veterans in UN Peacekeeping is www.cavunp.org.
2 The list of UN missions to which Canada has not contributed up to 2004 is: UNAVEM I & III (Angola), UNOMIL (Liberia), UNOMIG (Georgia), UNASOG (Chad), UNMOT ( Tajikistan), UNTAES (Eastern Slavonia), MONUA (Angola), UNPS (Croatia), UNOMSIL (but Canada did participate in UNAMSIL).
3 The figures for UN peacekeeping personnel on 31 October 2006 are: 69,742 troops, 8,488 police and 2,746 military observers, for a total of 80,976 uniformed personnel. In addition, there are about 15,000 civilians in PKOs: 4,500 international civilians, 9,000 locals, and 1,812 UN Volunteers for a total (in 18 PKOs) that is quickly approaching 100,000. Source: Peace and Security Section, Department of Public Information, United Nations. See “Background Note,” www.un.org/Depts/dpko/dpko/bnote.htm, accessed 4 September 2006.
6 A UN force was recently authorized to deploy into Darfur, to replace the AU, but the Sudanese government opposes the move. A hybrid AU/UN force is currently envisaged. The UN is now seeking to provide a substantial “support package” to the African Union force, involving the deployment of over 100 UN peacekeepers and possibly monitoring technologies such as Unmanned Aerial Vehicles.