Israel's Strategic Challenges

Amos Yadlin

At this time, one the eve of a new calendar year and the start of a new decade, I would like to review the strategic challenges facing the State of Israel. We are celebrating this Hanukkah as a powerful free nation, enjoying – despite the gloomy prophecies and lamentations over the loss of our deterrence – a very peaceful year from a security perspective. In the summer, fall, and winter of 2009, not a single soldier or civilian was killed in an act of hostility or terrorism, an unprecedented phenomenon in recent decades.

At the beginning of the year some people were preoccupied with the question whether Operation Cast Lead, then at its peak, would bring about the hoped-for calm in the southern part of Israel or would escalate also to the north. Now, as the year draws to a close, there is only the small voice of silence. Hamas is not firing anything at us; on the contrary, it is even preventing the launch of rockets by defiant organizations. Likewise, Hizbollah did not intervene in the fighting in the south, and it has continued to hold its fire since the Second Lebanon War.

The source of the calm on the borders does not lie in the fact that our enemies, near and far, have suddenly embraced Zionism, rather in the conjunction of several restraining factors, some the result of our doing and some the result of circumstances beyond our control. The most important element in the calm we have experienced is Israel's deterrence. The deterrence, which started as the toll taken of Hizbollah in the Second Lebanon War, continued via very concrete understandings about the capabilities of the IDF, culminating in Operation Cast Lead.

Deterrence is slippery and problematic, and it is difficult to predict its future course. Nonetheless, in hindsight, it is possible to see clearly that

the enemy avoided pulling the trigger and harming the State of Israel. At its base, deterrence rests on the simple arithmetic of profit and loss as calculated by the enemy: the profit of harming us versus the loss resulting from the cost and the ramifications of defiance. The cost derives from the enemy's understanding of our ability to inflict harm and its readiness to take that risk. Today, the enemy estimates the cost of aggressive activity as high and doubts its ability to predict our moves, as it failed to do in Lebanon in 2006 and in the Gaza Strip in 2008-9.

In the past, claims were made that because terrorist organizations have nothing to lose it is impossible to establish any sort of deterrence in their regard. In practice, the State of Israel has succeeded in establishing deterrence vis-à-vis both Hizbollah and Hamas. The change in the character of the two organizations lies at the core of this success. They have become part of the establishment and joined the political apparatus, and therefore must be accountable and responsive to public demands. In fact, the military actions in Lebanon and the Gaza Strip persuaded Hizbollah and Hamas – which are beset by an ongoing identity crisis marked by tension between sovereignty and resistance, and the need to position between government and conflict – to choose to maintain the calm, at least for now.

Nonetheless, the calm we have experienced cannot be attributed solely to deterrence and accountability. Other elements have also contributed to the quiet period; these must be understood correctly so that we do not mistakenly assume that the fronts will remain calm indefinitely. The fronts are calm now because our enemies are busy reconstructing their forces in preparation for the next round of fighting. In addition, on the Lebanese, Palestinian, and Iranian arenas they are engaged in internal power struggles, which require energy and resources. Clashes with Israel do not always help strengthen their internal status. Finally, terrorist organizations have become aware of the importance of legitimacy. The sympathy of the world and the international media, the need to acquire legitimacy for their regimes and status, and the opportunity to damage Israel's legitimacy are additional incentives for them to hold their fire.

Let us now turn to seven strategic challenges that confront us: the challenge of Iran becoming nuclear; the challenge of cooperation and learning within the radical axis; the challenge of the hybrid battlefield before us; the challenge of the two Palestinian entities; the challenge of

preserving our legitimacy; the challenge of coordination with our allies; and the challenge of preserving our technological superiority.

The challenge of Iran becoming nuclear: In recent years we have witnessed Iran establishing itself in the region in a way that will allow it to "break out" towards nuclear weapons, should it decide to do so. Iran is promoting its nuclear program on the basis of a strategy it has formulated for itself. This strategy is not one of attaining a nuclear bomb by the fastest possible route, rather a measured, sophisticated strategy that is built on advancing on a wide front to establish a nuclear infrastructure and shorten the distance to a bomb while paying minimal costs.

Iran has constructed a varied infrastructure of plants and has advanced nuclear capabilities on many tracks, following the principles of redundancy, dispersion, and fortification. The Iranians have a plutonium-based track and a uranium enrichment track; the program is underway in a number of locations, known and secret, civilian and military. Iran is advancing its nuclear capabilities laterally to ensure itself the ability to break out at a time it deems appropriate. Until Iran chooses the timing of the breakout, the rate of the nuclear program's progress will be determined by international pressure exerted against Iran. The move towards the bomb will occur at some future time that Iran assesses to contain the necessary strategic conditions to allow it a relatively safe breakout.

There are two alternative scenarios for the breakout: one is resigning from the NPT, while the other is proceeding on a clandestine track, as Iran had intended to do at the recently uncovered secret facility in Qom. This site should serve as a warning sign for all those who accepted Iran's claim that its nuclear program is civilian in nature, designed only for energy production. The moment they understood that foreign intelligence services had discovered the site, the Iranians, as is their wont, hurried to make it public and transfer it from the clandestine part of their nuclear effort to the public, open, and supervised part of the program.

In the context of the Iranian nuclear challenge, three clocks must be watched: the technological clock, the diplomatic clock, and the regime stability clock. The hands of the technological clock have almost come full circle. In 2008, Iran took complete command of enrichment technology, and in 2009 it amassed enough material for a first bomb at the enrichment facility in Natanz. To be sure, the material is LEU of about 4.5 percent.

In order to manufacture a bomb, uranium must be enriched to military grade – at least 93 percent. At the moment, Natanz has amassed over 1,700 kg of LEU. Every day some 4,000 centrifuges, of the many thousands installed there, spin out a few more kilos of LEU. That is what the ticking of the technological clock sounds like. At the same time, Iran is hard at work improving its surface-to-surface missiles. It is developing solid fuel propelled missiles and enlarging their ranges to reach other continents. Furthermore, Iran is maintaining its capabilities in the field of developing a nuclear detonator facility and is undertaking activities that do not jibe with its "peaceful nuclear goals" alibi.

The diplomatic clock, which had stopped in recent years, has started to move a little faster in political terms. About a year ago, we indicated that successful dialogue would be a good option for dealing with the issue of a nuclear Iran, but we also estimated that the chances of success were low. Unfortunately, our estimate is close to being confirmed; the attempt at dialogue has encountered a bold, defiant response from Iran. Still, it was important, perhaps even crucial, to have the train stop at the dialogue station, in order to hitch all six major powers to the sanctions wagon.

Currently in the world there is some argument about the effectiveness of sanctions. Some feel that sanctions would have no real impact on Iran and might even cause the Iranian people to rally around the regime. In contrast, the supporters of sanctions use the South African example as proof of the power of sanctions to achieve political ends, and I agree with them. In 2006, relatively low key sanctions, certainly compared to those currently under discussion, were imposed against Iran, and they managed to cause Iran a great deal of worry. The Iranian economy is dependent on oil income and extensive subsidies. The decrease in oil prices has hurt the stability of Iran's economy. As a result, the regime has had to cut back its support for terrorist organizations abroad and discuss cutting subsidies at home, a crucial but unpopular move in those segments of the population on which the Iranian president depends. Furthermore, the concern that sanctions would cause the Iranian people to rally around the establishment has been greatly diminished as a result of the events surrounding the recent elections. It is doubtful that the large number of opponents would tolerate the cost incurred by the leadership's continued challenge of the world at large.

What changed in 2009 was the ticking – albeit slow – of the regime change clock; until recently this clock seemed broken and thus correct only twice a day. At present, about six months after the crisis spurred by the elections, we are noting increased oppression by the regime against a protest movement that refuses to die. The bad news is that the regime has handled the protests efficiently and stopped their momentum; this without making the streets of Tehran flow with blood, yet by operating against the protest centers in a determined, undercover, and effective way. The protest movement failed to find charismatic leadership and lacks the classic revolutionary fervor of workers, students, intellectuals, and the military that is capable of overturning regimes. The protest movement's leadership is cut from the same cloth as the regime: a former prime minister and former presidents are among those fanning the smoke of protest.

The good news is that two growing cracks are emerging in Iran: one, between the regime and the people, and the other, within the regime itself, among the "children of the revolution." The regime's bogus claim that it is a model regime, resting on the will of the people and the principles of justice and freedom, has been exposed. After the election fraud and the repression of the demonstrations, no one in the Muslim world or Iran is still buying the narrative of "the pure revolution" that changed history.

These developments in Iran present us in the intelligence community with the tremendous challenge of forecasting the stability of regimes and trying to time their collapse. This is a highly complex intelligence challenge, demanding both caution and humility. It is difficult to measure the strength of undercurrents in the marketplaces, mosques, and factories. We lack sufficient historical experience in order to assess the impact of the internet and global communications on toppling dictatorial regimes in the twenty-first century.

However, aside from the three clocks, it is important to understand that from the moment Iran finally succeeds in establishing its status and image as a threshold state with the knowledge and capability to cross that threshold, it will enjoy the same advantages as those enjoyed by nuclear states, without having to construct a nuclear detonator facility and incur all the negative ramifications involved in a breakout. In such a situation, the allies of the radical axis would feel much more confident in taking steps that they currently do not dare to risk. By contrast, the pragmatic Arab

nations are liable to accelerate their own nuclear planning, a phenomenon already evident as Persian Gulf states, Egypt, and Jordan are all beginning to develop their own nuclear programs – at this point civilian, but bearing the potential for expansion into other directions as well.

The challenge of cooperation and learning within the radical axis: The radical axis includes Iran, Syria, Hizbollah, and the Palestinian terrorist organizations. In light of the blows inflicted on the axis in the last three years and the internal difficulties they have experienced in the last year in the Lebanese and Iranian arenas, the ties within the axis have grown closer and the level of cooperation has reached unprecedented heights. There are well known locations in Iran and Syria where during testing of various weapon systems one can identify Iranian and Syrian military officers, Hizbollah activists, and even members of Hamas and Palestinian Islamic Jihad who have been invited to participate in the event. This is how it works: the ideology, financing, technology, military doctrine, and training are all supplied by Iran. They prefer the manufacturing to take place in Syria, and the product is distributed among all members of the axis.

The Middle East is covered by a number of networks jointly operated by Iran, Syria, Hizbollah, and even Hamas. Some deal with smuggling arms and materiel by land, sea, and air: in the south, through Sudan to the Gaza Strip, and in the north, into Syria and Lebanon. The Iranians and Syrians have removed virtually every restriction on transferring weapons to Hizbollah and Hamas. Our working assumption is that any weapon system in Iranian or Syrian hands, no matter how advanced, will sooner or later show up in Lebanon and other places the radical axis seeks to fortify. Intelligence gathering and early warning systems are additional networks that supply information about Israel's activities and those of the IDF. The sensors are stationed in Syria and Lebanon, while the ultimate consumer is far to the east.

As the head of Military Intelligence, my job is to provide early warning about cannons starting to boom again. However, I would like to point to a different level, less visible though no less interesting, in which the cannons do not boom. When they are quiet, there is plenty of activity on a different clandestine level among the radical axis, which is usually referred to as "the learning contest." The elements of the radical axis studied the lessons of the Second Lebanon War with care, and are applying and assimilating

them in both the Syrian and Iranian armies. The confrontation in the Gaza Strip is analyzed in Tehran and Beirut with the same measure of diligence devoted by Hamas. Thus intelligence insights, outlooks, and understandings of weaknesses and strengths pass from one end of the Middle East to the other. The openness with which Israeli society discusses its own weaknesses and strengths, and the information available on the internet and in the media give the radical axis's learning curve a significant advantage. This readily available information, the advanced technologies at the enemy's disposal, and its impressive ability to learn from experience are facts we must balance through counter-learning and our own high quality intelligence gathering, debriefing skills, analysis, and initiative. The victory in the learning competition is a challenge growing ever more significant as time passes.

The challenge of the hybrid battlefield: The next challenge Israel must deal with is the ongoing change in the dynamics on the battlefield. In the past, we talked about the transition of the battlefield from symmetrical with two conventional armies, to asymmetrical with a regular army facing networked, low signature terrorist organizations having the capability of vanishing and leaving the battlefield empty. We must be simultaneously prepared for three different types of threats. The first remains the symmetrical threat; it is important for us to remember that we have not been relieved of the symmetrical threat. The enemy is equipping itself with the best weapon systems from the East and the West, whose performance is no worse than that of our systems. Israel's quality advantage is challenged and the international weapons market is open to anyone with the money to pay. The second threat is the asymmetrical, which continues to pose a risk. This type of threat is also trickling and expanding into the regular armies. Booby traps, suicide bombers, short range rockets, and so on in the hands of an enemy that does not wear a uniform, harms civilians, and hides behind civilians – this will continue to exist as a battlefield.

The third and most significant threat is the one called the hybrid threat. This is a concept that in recent years has also been developed by researchers here at the Institute, combining elements of weapon systems, command and control capabilities, intelligence gathering, and organization from the symmetrical arena but adopted by the asymmetrical one. The

threat interfaces between preservation of the capability to harm an army and civilians, and tools characteristic of the asymmetrical battlefield.

Alongside the many difficulties presented by the hybrid threat to operating the IDF force is one marked advantage. The organization of Hizbollah and Hamas on the model of a military structure makes them more vulnerable to intelligence leaks and physical harm. The signature of terrorist organizations is growing. The challenge for the IDF is to identify a military doctrine that takes maximum advantage of the disadvantages of the hybrid threat, and prevents the enemy from realizing the threat's various advantages.

Two prominent phenomena concern the enemy's growth of power. The first is the ongoing stockpiling of high trajectory weapons in their increasing quantities, ranges, and precision. This very auditorium we are gathered in today is threatened by high trajectory fire from three different fronts. Syria, Iran, and Hizbollah, the only terrorist organization in the world with surface-to-surface missiles, all have the capacity to threaten the greater Tel Aviv area. Hamas has also been trying to attain this capability. Our enemies do not rest for a moment and do everything in their power to improve their capabilities and amass more warheads with greater precision and variety, and with the ability to penetrate deeper into Israeli territory.

The second phenomenon characterizing the battlefield – or perhaps it is more accurate to say that it is occurring underneath it – is the transition to underground fighting. Our experience from the Second Lebanon War taught the enemy the advantages of digging in and fortifying itself in the face of Israel's precision guided arms and aerial superiority. It prepared to fight the battle from trenches, to launch rockets from tunnels, and to move from one location to another without ever setting foot outside and exposing itself to Israeli fire.

With high trajectory fire and descent into tunnels as the primary elements of the enemy's force construction, it is important to provide a framework of correct operational and tactical proportions. Tens of thousands of rockets are imprecise terrorist weapons. It is impossible to conquer territory or decide the outcome of a war with these alone. The effect on the battlefield of an enemy that hides underground is problematic and limited. The challenge the IDF faces is to develop a doctrine of war that will emphasize

the drawbacks I described and wrest a decision in battles, notwithstanding these characteristics.

The challenge of the two Palestinian entities: In recent years, a clear difficulty has emerged in trying to establish a coherent response to the Palestinian arena, thanks to the differentiation and establishment of two geographically, ideologically, and politically different and separate entities. It would seem that neither is in any particular hurry to arrive at a settlement with Israel because in its view, time is on its side. Both in the Gaza Strip and in the West Bank, there are institutions of a state-in-the-making, striving for internal and external legitimacy while bypassing Israel.

A radical entity hostile to Israel has become entrenched in Gaza. It views Islamic resistance as the primary means for eradicating the State of Israel and, as per the Hamas charter, establishment of a *sharia*-based nation in the entire territory of historic Palestine, from the river to the sea. This is an entity with political and military dimensions rife with terrorist organizations other than Hamas, such as Islamic Jihad and global jihadists of various stripes.

Currently heading the Palestinian Authority in Judea and Samaria are people led by President Abu Mazen who disavow terrorism, shrink from it, and view a political settlement as the only viable solution to their national plight. On the ground, stabilization processes are underway in a relatively calm atmosphere, but here too a more complex trend is developing. On the political level, as a kind of belated response to Israel's 2005 unilateral disengagement idea, the PA is developing a new concept of unilateral progress. The PA is signaling to Israel that it is still interested in advancing the political process and views it as the preferred channel for progress, but only on condition that Israel respond to the opening conditions it has proposed. In its view, the claim "there is no partner" has changed direction, and the PA has other tools at its disposal should Israel be unwilling to meet basic conditions. To be more precise, at stake is not the unilateral declaration of a state, rather an approach that says that if it is impossible to arrive at a satisfactory settlement with Israel, there will be an attempt to force the main results of the agreement before beginning negotiations.

To realize this idea, the PA is operating using a pincer approach. From the ground up, Salam Fayyad continues to build the future state institutions with the economic and political support of the international community. At

the same time, from the top down, Abu Mazen and other senior PA officials are leading a move in which the conditions of the settlement will be dictated by the international community. The negotiations that will take place will deal with implementation of the parameters determined by the Security Council or any other forum before they even start. The Palestinians' success in putting Jerusalem at the top of the political agenda demonstrates their capability in bringing to the fore issues that are problematic for Israel and receiving international support. This may be compared, although with some qualifications, to the Syrian model, in which Israel is asked to agree to the central features of the solution as soon as entering the negotiations track rather than at the end of the process.

In addition to this pincer move, we can identify a third effort, i.e., damaging the legitimacy of Israel and dragging it before international institutions, such as the through the Goldstone report and moves at the ICC and ICJ. To a certain extent, the declarations made by the international community in support of Palestinian demands are meant to prod the sides back to the negotiations table, but they in fact attain the opposite result by persuading the Palestinians of their ability to ensure the parameters of the solution before they are asked to exchange a word with Israel.

The challenge of legitimacy: Israel's actions and positions are awarded decreasing legitimacy by the international community. Absurdly, one of the primary reasons is the calm that I mentioned earlier, the impressive successes in curbing Palestinian and Hizbollah terrorism.

Everyone loves the underdog. The fact that in recent months Israel has not suffered from terrorism in practice or from any immediate military threat makes it easier for the international community to demand that Israel change its positions, become more flexible, and make concessions. By contrast, Israel views its security and political needs somewhat differently, and thus when the political process fails to take off Israel's political status is further eroded.

Another clear example of the political difficulty and the deteriorating legitimacy balance is the improvement in Syria's standing. Formerly an isolated pariah state, it has become a legitimate, sought-after state without having changed any of its negative activities with regard to Iraq, Lebanon, or Israel. Every week President Asad hosts respectable European foreign ministers, senators, members of the American Congress, and kings and

princes from Arab states in his palace, all of whom are waiting to thank him for not interfering in the Lebanese elections and for having assisted in assembling a government in Beirut. However, those who are familiar with the intelligence know full well that Asad intervened in the elections using money and threats, and in fact overturned the election returns and the process of installing a government with an independent agenda. While the queue of noted guests waiting outside the president's office grows longer, the likes of Hassan Nasrallah, Khaled Mashal, and Iranian security personnel, who have just completed their despicable deals to purchase military materiel and exchange information, sneak in and out of his back door.

Given this situation, it is no wonder that Asad feels safe enough to reject European demands regarding the economy and human rights, and has refused to sign the association agreement he was so eager for in the past. Thus he also continues to turn a blind eye to the stream of global jihadists making their way through Syria to Iraq. This challenge, of a Syrian ruler being accorded new legitimacy despite his negative activities, is one that will be with us for years to come.

Furthermore, as time passes, the negative Syrian role grows more entrenched and Asad's place on the radical axis becomes more fixed. Asad is not a natural member of the radical axis. Syria is a secular state and unlike Iran, does not rule out a peace agreement between Hizbollah and Hamas on the one hand and Israel on the other. A peace agreement, should one be reached, carries the potential for a positive change in Israel's strategic environment. The removal of Syria from the circle of hostile elements, snapping the link connecting – geographically and in other ways – the radical axis, and Syria's withdrawal of support of terrorism would reduce the threat potential against the State of Israel.

The challenge of coordination with our allies: We are not alone in facing the challenges I have described. In our struggle against Iran and the radical axis, we have more partners than ever before, Western and Arab, headed by what is currently the biggest power in the world, the United States. The alliance between Israel and the United States is firm, based on shared values, overlapping interests, and a tradition of decades of bilateral, inter-organizational, and interpersonal cooperation.

The challenge of preserving the alliance, understandings, and coordinated moves is a challenge of the highest order. We are dealing with an administration burdened with many difficult problems. The economy, the stability of the financial system, the health insurance issue – all these are vying for the top spot on the US national agenda. Regarding foreign policy, Pakistan, Afghanistan, Iraq, North Korea – in terms of their importance and the attention paid to them – figure well ahead of the Israeli-Palestinian conflict, and sometimes before the Iranian issue. The difference in the agendas of the two nations forces us to try to understand the view as seen from Washington and try our best to share our view with the administration. In a period when there are casualties among American soldiers in Afghanistan and Iraq on a weekly basis, alongside the tremendous challenges to US society and the domestic economy, it is only natural that Israel's concerns fail to command the same center stage of the past. At the same time, I feel that a year into its term, the administration understands better the enormity of the challenges it faces in this region. It understands that alongside the significant challenges in giving greater weight to the diplomatic instruments in its tool box to shape policy, these tools have their limitations, as President Obama so eloquently put it in his Nobel Peace Prize acceptance speech.

Among our allies there are those who feel that solving the Israeli-Palestinian conflict is the key to solving all the conflicts in the Middle East. All of us would like to see an end to the ongoing confrontation between us and the Palestinians. However, it is doubtful if the key to solving the conflicts in Pakistan, Afghanistan, Iran, Sudan, and Somalia is to be found in Ramallah or the Gaza Strip. If there is one problem we need to solve first with the hope of improving all the ills of the Middle East, the key is in Tehran. If that happens, the Iraqi problem becomes much simpler; Afghanistan is likely to become less complex; Syria's tendency to behave badly will be mitigated; Nasrallah will be forced to consider his moves with more care; and even the Palestinian problem may perhaps become solvable if the rug of support is pulled out from under Hamas' feet.

The challenge of preserving our technological superiority: The seventh and final challenge I see is preserving the technological edge Israel gained relative to its neighbors in the last quarter of the twentieth century. Gleaning an insight formulated to a large extent on the basis of the Yom

Kippur War, the IDF learned that technological superiority is a critical component in deterring the enemy and wresting a decision if necessary. This understanding is clearly reflected in the development and advancement of Israel's aerial and intelligence-gathering superiority and the meeting between these two on a battlefield where precision weaponry is fired at essential targets that must be destroyed. The ability to harness technology to construct an advantage in these three areas became a cornerstone of Israeli national security.

This technological gap is now threatened in various sectors. Our enemies are challenging – both defensively and offensively – Israel's aerial superiority, our precision weaponry, and our intelligence gathering superiority. Some of the capabilities that were once exclusive to the IDF are now available also to the enemy. Using precision-strike missiles, advanced generation anti-tank weapons, advanced computerizations, satellite observations, and so on, our enemies are attempting to threaten security assets and reduce our offensive and defensive capabilities. At the same time, though better equipped than ever before, the enemy's capabilities are still far below the IDF's. Our challenge, then, is to preserve that gap.

The challenge of preserving Israel's technological lead and developing capabilities to tackle the enemy's advanced systems is an important issue worthy of full discussion. Nonetheless, I would like to touch on one important aspect linked to the technological gap, i.e., the cybernet dimension. At times it seems that our enemies would like to award a special prize to software companies in the West that turned the computerization capabilities that were once the exclusive property of superpowers into turn-key products available at reasonable prices. At present, the enemy can develop command and control systems, store and share enormous volumes of information, encrypt information, and protect its systems with an ease that only a few years ago was unfathomable. This dramatic revolution is occurring is a new dimension – cyberspace.

Until the late nineteenth century, enemy armies fought in two dimensions only: on land and at sea. Ground forces and navies were the primary components of power until the twentieth century. When the first airplane took off on December 17, 1903, a new dimension entered the picture. Even before World War I, less than a decade after the Wright brothers' plane first got off the ground, airplanes were already used in the military, particularly

for the purpose of intelligence gathering. World War I was the first time extensive use, though still limited and primitive, was made of airplanes in warfare. In World War II, airplanes were used tactically and operationally and for strategic bombing. The strategic bombing of England, Germany, and Japan were an inseparable part of the war, though for many years historians debated its effect on the final outcome of the war. It was only towards the end of the century, in the 1980s and 1990s, that technology, intelligence, and precision weapons came together with a doctrine that allowed the formation of an aerial force capable of wresting decisions, as was proved in Lebanon in 1982, in Kosovo in 1999, and in both Iraq wars.

As a veteran fighter pilot and great believer in the air force, I take a great deal of interest in the new dimension of warfare developing in the twenty-first century and joining the ground, sea, and air forces. It is hard to tell if cyberspace has already passed the point of the aerial force of 1914 or is at the point of the aerial force in World War II. But there is no doubt in my mind that cyberspace has taken off as a military dimension.

Cyberspace encompasses three areas: intelligence gathering, attack, and defense. Take intelligence gathering: consider for a moment your own personal computer. Think about your innocent picture folder, and what it says about your areas of interest. Spend a few moments thinking about professional documents saved on your computer and what a stranger could infer from them, from your bank account, from the plane tickets you've ordered, and from the email addresses saved in your account. Today our lives center on computerized worlds, from handheld devices through mobile devices to the internet, and whoever manages to break into these worlds can, to say the least, know a lot.

Attack: These days, not only information is stored on computer networks. The systems supporting our lives are controlled in their entirety by computer networks. In April 2007, government, bank, and newspaper sites in Estonia were attacked as the result of moving a statue, a remnant of the Communist era. Estonia pointed an accusing finger at Russia, but to this day it has not been conclusively proven who was behind the attack. In the summer of 2008, during the war in Georgia, the citizens accused the Russians of attacking local government institutions. My final example on this very partial list is the attack on computer networks in the United States and South Korea. The South Korean intelligence agencies accused

their neighbors to the north, but to this day, this claim has not been verified. However, let us for a moment ignore attacks in the past and focus on the future. Imagine the scope of the damage a solitary skilled hacker can do should he or she manage to penetrate computerized control systems of infrastructure, transportation, and communications companies.

Defense: Having mentioned the potential of intelligence gathering and attack inherent in cyberspace, it seems to me unnecessary to expand on the importance of defense. It is a less glamorous field, but the importance of this effort by far exceeds that of the two preceding areas. Today, when appropriate discussions are held about how to tackle the cyber challenge, many are of the opinion that defense must go hand-in-hand with intelligence gathering and attack capabilities.

It is still difficult to assess the manner in which cyberspace will change the world of warfare. Cyberspace bestows on small nations and even individuals the kind of power that in the past was reserved only for the biggest world powers. Similar to the development that took place in the field of unmanned aircraft, here we see the potential for force operation that does not endanger the lives of soldiers but is capable of inflicting damage on military forces and on states' economic lifelines, without limitations of time or range.

Activity in cyberspace raises complex questions we must discuss not just in back rooms but also openly. These questions touch on the nature of deterrence that prevents war in cyberspace, and the nature of deterrence against potential attacks. How does one establish liability for acts committed in a virtual space, and how do you contain a confrontation that escalates between anonymous keyboards? These questions are only now beginning to be answered. Our friends in the world share deliberations about these questions. In the United States, a cyberspace command has been established. In Great Britain, there is an official body responsible for the field. The powers have recognized that there is a new world to be reckoned with and there must be a responsibly authority for it.

Cyberspace warfare fits well into Israel's security concept. We are talking about a dimension that does not require significant budgetary resources or natural treasures. We are talking about an undertaking operated with made-in-Israel capabilities independent of foreign aid or technology. We

are talking about a field familiar to young Israelis in a nation that was recently defined as a start-up country.

In conclusion, today I have enumerated seven of the central challenges we face. Naturally, as an intelligence person, I look at the world around us rather than at Israel, meaning that the picture I have presented may sound somewhat imbalanced with an overly threatening reality. It is important to remember that at each and every moment someone is working hard to counter these challenges. On the basis of my own familiarity with those working to provide a response, I am sure that the State of Israel can and will surmount these challenges and will remain a secure, thriving place in which to live.