The Syria-Israel Military Balance:
A Pot That Bears Watching

By Edward B. Atkeson

THE SYRIA-ISRAEL MILITARY BALANCE:
A POT THAT BEARS WATCHING

by

Edward B. Atkeson

THE INSTITUTE OF LAND WARFARE
ASSOCIATION OF THE UNITED STATES ARMY

AN AUSA INSTITUTE OF LAND WARFARE PAPER

In 1988 the Association of the United States Army (AUSA) established within its existing organization a new entity known as the Institute of Land Warfare. Its purpose is to extend the educational work of AUSA by sponsoring scholarly publications, to include books, monographs and essays on key defense issues, as well as workshops and symposia. A work selected for publication as a Land Warfare Paper represents research by the author which, in the opinion of the editorial board, will contribute to a better understanding of a particular defense or national security issue. Publication as a Land Warfare Paper does not indicate that AUSA agrees with everything in the paper but does suggest that AUSA believes the paper will stimulate the thinking of members and others concerned about important defense issues.

LAND WARFARE PAPER NO. 10, JANUARY 1992

The Syria-Israel Military Balance:
A Pot That Bears Watching

by
Edward B. Atkeson

Major General Edward B. Atkeson, USA Ret., is a senior fellow at the Institute of Land Warfare, AUSA, and a private consultant on national and international security affairs. His final assignment prior to retirement from the Army in 1984 was to the National Intelligence Council, where he served as National Intelligence Officer for General Purpose Forces. He also served with the Bureau of Political-Military Affairs, Department of State, and as a fellow at the Center for International Affairs, Harvard University. He was a member of the faculty of the U.S. Army War College, first as a study group chairman in the Strategic Studies Institute and subsequently as Deputy Commandant of the College. He has served as Deputy Chief of Staff, Intelligence, U.S. Army Europe, and as Commander, U.S. Army Concepts Analysis Agency. General Atkeson is a frequent writer and speaker on military and national security affairs and has contributed more than 50 articles to military journals and other publications. His book *The Final Argument of Kings: Reflections on the Art of War* was published by HERO Books in 1988.

CONTENTS

FOREWORD

The recent successful campaign in the Persian Gulf to evict Saddam Hussein's forces from Kuwait underscored once again the volatility of the Middle East and its importance to U.S. interests and security. This Land Warfare Paper examines another frontier of potential conflict in the region, that between old enemies, the Syrians and the Israelis. The assessment illuminates some areas of remarkable convergence of doctrinal thinking — such as the mutual expectation that any aerial conflict will occur over Syrian territory rather than Israel. It also draws attention to important differences in strategy, operational art, and land, sea and air forces design.

The initiation of Arab-Israeli peace negotiations generates a ray of hope that the wars which have punctuated relations between the parties may somehow be brought to an end. But security cannot be based upon hopes. This paper makes a contribution to our understanding of the military factors affecting the balance, and thus to our ability to deal with the challenges which a new conflict in the region might pose.

This is General Atkeson's second contribution to AUSA's Land Warfare Papers. His first, *Soviet Theater Forces at the Crossroads*, was published in October 1989.
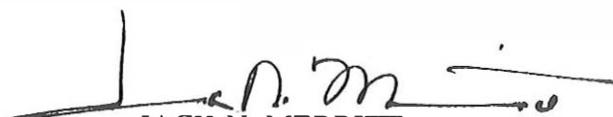
JACK N. MERRITT
General, USA Ret.
President

January 1992

THE SYRIA-ISRAEL MILITARY BALANCE:
A POT THAT BEARS WATCHING

Introduction

The onset of Middle East peace negotiations in October 1991 galvanized the imagination of the world and even provided some faint glimmer of hope to the most jaded observers. Many experts agreed, however, that the path would likely be long and torturous. Former national security advisor Zbigniew Brzezinski proved to be a relative optimist, venturing that a peace treaty could be forthcoming within a year. Former U.S. ambassador to Israel Samuel Lewis, on the other hand, guessed "five or six years — maybe a decade." Others said simply, "a long time."[1]

The caution was understandable. While all of the parties to the dispute seek peace, they harbor remarkably different concepts of equity, and their fears of the intentions of their opponents are profound. Both Arabs and Israelis tend to complicate the negotiations by evidencing equivocal positions regarding their real objectives.

While the verbal contest proceeds, the possibility of renewed armed conflict hangs stubbornly in the background. The parties are still officially at war with each other, and the dreadful costs of yet another eruption of fighting cannot be far from the peoples' minds. In the Israeli view, Syria constitutes the greatest threat, but other Arab states could become involved. As the Israeli defense minister, Moshe Arens, commented recently, "Syria is the greatest military threat. If there were a war, it is likely that Iraq and Jordan would become involved, too."[2] The commander of the Israeli Northern Front, Major General Yitzhak Mordechai, agreed with the judgment regarding Syria but added, "Syria has a balanced army and can attack Israel all by itself."[3]

These views by Israeli leaders reflect the thoughts of much of the populace. A 1986 Israeli opinion poll, measuring conditions on a scale of 1 (peace) to 5 (war), placed Syria at 4.5 — well ahead of other neighboring Arab groups — as likely to become an active adversary in the future.[4] A key question, of course, is how well prepared are the two sides?

This paper examines briefly Israeli and Syrian military strategy and points out some of the related aspects of the Arab-Israeli competition affecting the thinking of the adversaries. It assesses the balance of land, air and sea forces between the powers, illuminating particular strengths and weaknesses of each. Finally, it discusses possible types of conflict which might emerge if the peace negotiations were to come to naught.

Israeli Military Strategy[5]

As the status-quo party, Israel has assumed a strategy of defense (to include preemptive operations) and deterrence.[6] The defense element is founded upon concepts of qualitative superiority, strategic depth and rapid mobilization. The qualitative element

includes both technological and operational superiority over the Arabs. While the operational element springs from a homegrown aggressiveness inculcated in all Israeli units and leaders, the technological element depends in large measure upon a close working relationship with the United States. To a considerable extent, Israel's strategic depth is also a product of the partnership with America. The United States is, in essence, the strategic rear of the Jewish state. It provides much of the funding, the military equipment, and arguably the ultimate assurance of survival of the country.[7]

Beyond this, Israel has sought strategic depth through the annexation of the Golan Heights and the occupation of the Palestinian West Bank and Gaza Strip. Further, depth has been achieved through the declaration of a "green line" along Jordan's northern and eastern borders, across which no other Arab forces may pass without risking attack by Israel. Israel backs this policy with a capacity for mobilization of up to 600,000 soldiers in 24 hours and for launching rapid land, sea and air assaults from a standing start.[8]

The nation's deterrent strategy rests upon this general offensive capability and upon a declaratory policy of intent to inflict 100 times as much damage upon an aggressor as Israel might absorb in an attack. While this policy was reluctantly held in abeyance, at American request, during the Persian Gulf conflict, it is clear that it is again in force. According to Defense Minister Arens, Israel was about to return to the policy when the hostilities ended.[9] Presumably, such retaliation would be undertaken by air forces, but the use of long-range missiles, and even mass destruction weapons, cannot be ruled out.

This is not to say that there is great interest in Israel in attacking Syria. In the wake of the experience in Lebanon in the 1980s, Yitzhak Rabin, then defense minister, remarked:

> Israel has no political, military or territorial reason to initiate a war against Syria. It is not worth the painful price of war. Military history demonstrates that in 80 percent of the cases the countries that initiate war are those that ultimately fail, and we can attest to this in the past four years [in Lebanon].[10]

It should also be noted that Israel's treaty with Egypt serves to some extent as a deterrent to Israeli attack on other Arab states. The treaty bans Egypt from initiating hostilities against Israel or otherwise providing support to Arab states in active operations against Israel. However, the prohibition does not apply if Israel initiates the action — even if only by preemption. Thus, preemptive or otherwise, an Israeli attack on Syria could recreate the traditional Arab combination against which Israel had to contend for most of its history.[11]

It is Israel's retention of captured neighboring lands which is most controversial. The West Bank and Gaza have been in the grip of crisis for almost four years as the Palestinians have sought through nonlethal protest to call international attention to their plight. For their part, the Israelis point to the critical strategic importance of the surrounding terrain for their security. As Deputy Foreign Minister Benjamin Netanyahu

2

recently remarked, "Israel's strategic depth is provided by Jordan. Its strategic height is provided by the hills of the West Bank."[12]

There can be little question about this. Seventy-five percent of Israel's population lives on a narrow strip of land, in some places less than 10 miles wide, between the West Bank and the sea. The Palestinian hills of the West Bank rise to more than 3,000 feet in the east, offering commanding vistas, in the age of electronic sensors, to both the east and the west. "Compounding Israel's problem," a senior Israeli naval officer has said, indicating a map of the eastern Mediterranean, "is that Israel is an island." It faces Arab states on all its borders. To its back is a sea which washes uninterrupted Arab shores to the west for over 2,500 miles — to the Strait of Gibraltar.[13]

But the Israelis have undercut much potential sympathy for their cause through harsh, and decidedly lethal, suppression of their Palestinian charges. The international children's organization Save the Children reported in mid-1990 that 159 Palestinian children, averaging 10 years of age, had been killed by Israeli troops.[14] The contest between the Israelis and Palestinians at the micro-level has come to overshadow many of the strategic considerations between Israel and surrounding Arab states at the macro-level. The Israeli argument for retention of the Golan Heights, for example, might be more persuasive if Syria's President Hafez al-Assad could not credibly argue that he represents the interests of all oppressed Arabs in a struggle against a common enemy.

So powerful has the secondary issue become that it has spawned strategies of its own on both sides. In response to the Palestinian uprising *(Intifada)*, the Israelis have a strategy for settlements which, if unrestricted, could smother the Palestinian nation on the West Bank. Ariel Sharon, the Israeli minister for housing, displays a map to visitors depicting the future placement of Israeli settlements along the Jordan Valley, the ridge of the West Bank and all major routes in between. The pattern clearly breaks Palestinian areas down into disconnected pockets which may not prove economically sustainable. In the minister's view, Jordan is the true Palestinian state.[15] There is a clear implication that it would solve many problems if the million and a half Palestinians on the West Bank would chose to move there.

Syrian Military Strategy

President Assad of Syria is a man of both personal and national ambitions. Some observers believe that he is more concerned with realizing a dream of "Greater Syria" — including most of present-day Israel[16] — than he is in fostering the unity of the Arab peoples. Whatever the truth of this, he has been successful in regionalizing his cause through appeal to pan-Arab sentiment. With the defeat of Saddam Hussein, Assad is likely to gain stature with a number of groups as the leader of the sole remaining "confrontation state" resisting Jewish encroachment. Within Syria, he gains political leverage by fostering perceptions of Israel as a predatory threat and by focusing on the Israeli annexation of Syrian territory in the Golan Heights in December 1981.[17]

However, while Israel has drawn strength from a common sense of purpose and embattlement among its disparate peoples for survival in an inhospitable land, Syria has long suffered from chronic disagreements with other Arab states. Even in recent months, while participating in the coalition opposing Iraqi aggression in Kuwait, Damascus was not comfortable in its relations with its Arab neighbors.

Early Arab alliances in campaigns against Israel have not provided a basis for coordinated policy over time. Cairo's withdrawal from the conflict in 1979 and Amman's disinclination to antagonize Israel have tended to isolate Syria in its role as chief Arab protagonist. Lebanon's internal disorders and impotence for dealing with Israel creates both vulnerabilities and opportunities for Syria. On the one hand, a defenseless Lebanon represents a potential avenue of attack from northern Israel, via the Bekaa Valley, to a flanking position west of Damascus.[18] On the other, the vacuum in Lebanon has provided Syria both an excuse and an opportunity to extend its security perimeter over territory for which important elements in Syrian society have husbanded sovereign claims for half a century. As President Assad said in a speech to members of provincial councils in 1976, "Through history Syria and Lebanon have been one country and one people."[19] If President Assad harbors ambitions for a "Greater Syria," Lebanon lies well within it.

Whatever may be his greater aspirations, Assad has chosen to pursue them through continuing struggle with Israel. In 1984 he summarized his security policy in these terms:

> Our strategy requires the continuation of the war against Israel; we have to
> go on combatting it and join with it in all-out battle. Continued wars with
> Israel mould the spirit of revolution among Arab people.[20]

Syria recognizes Israeli military superiority and has little desire to challenge it in the immediate future. There are differences of opinion, however, about whether time works for the benefit of Israel or of Syria. On the one hand, time affords Israel opportunities to consolidate its position, to "create facts" through the expansion of settlements in occupied territories and the emigration of Palestinian intelligensia.[21] It also affords time for Israel to widen its well-developed technological advantage. Moreover, Israel can look with some satisfaction to the prospect of an expanded population from the immigration of large numbers of Jews from the former Soviet Union. About 350,000 arrived in the two years 1990 and 1991, and as many as a million are projected to arrive by 1995. Defense Minister Moshe Arens has pointed out that "Jewish settlements are 'blossoming' in the occupied territories," and that the Jewish population of these areas now exceeds 100,000 persons. Many of the immigrants are highly educated professionals; some 8,000 of them are physicians.[22]

On the other hand, time dulls the significance of Arab defeats, and prolonged instability in the occupied territories provides an environment in which new generations of dissatisfied Arab youngsters grow up nurturing a hatred for their Israeli oppressors. The situation is conducive to continuing regional support for Syria and for worldwide criticism of Israeli policies. While no significant changes in third-party alignments may

4

be in the offing in the short run, sympathies could shift toward Syria in the longer term, particularly if the Syrian leadership were to appear to assume a more moderate attitude, most especially toward the support of terrorism.

From time to time the Syrians have felt exceptionally vulnerable to Israeli attack, most particularly in the wake of the Camp David agreements between Israel and Egypt. Shortly thereafter, President Assad established an objective of "strategic parity" with Israel to achieve a better balance of power between the two states, defining the term broadly. It was not simply a military balance he had in mind but a "balancing of all aspects of life — the political, manpower, social, cultural, economic, and military." This, he recognized, would take time.[23]

As late as 1986 the Assad government announced that it was approaching the president's objective, but severe economic constraints soon set in, stilling such claims. In 1987 the Syrians were obliged to mothball the equivalent of two army divisions (by cutting a brigade from each of eight divisions) and to reduce their defense budget. The practical effect was to set the armed forces back to their relative strength of 1982 when they last clashed with the Israelis inside Lebanon.[24] Only since the Gulf War does Syria appear to have recovered its previous bearings and to be once again on a path to rearmament. Since the war Syria may have received as much as $2.5 billion in economic and military credits. A $2 billion arms agreement with the Soviet Union was reported in April 1991.[25]

"No Peace" for Israel?

A particularly thoughtful Arab strategist, Al-Haytham Al-Ayubi, writing in 1974, suggested an alternative approach to dealing with Israel, which while remaining within Assad's basic concept of confrontation might reduce the burden on his country. He argued that the "no war-no peace" period (1967-1973 "War of Attrition") was too convenient to Israel — or at least better than peace because it permitted them to maintain their position in the occupied territories. Further, he wrote, any future all-out confrontation between Israel and the Arabs would be limited in time, location and objectives because the superpowers would undoubtedly intervene to halt the hostilities. The option he preferred for Syria and its allies was one of "no peace," balanced with a rejection of Israeli control over the occupied territories through pursuit of moral pressure and military tension. Al-Ayubi viewed the struggle as a zero-sum game; therefore, he rejected compromise short of full recovery of Arab lands as they were in 1967. He had no objection to discussions of issues with Israel, but he saw little or no basis for compromise.[26]

Within this context, Al-Ayubi recommended conduct of occasional military attacks of limited size and scope for limited objectives. The attacks might be mounted by regular brigades or divisions; by naval units, using such tactics as submarine ambushes; or by medium- or long-range missiles. They would not be conducted by guerrillas, but would incorporate a guerrilla spirit. The attacks would give Israel "no

peace," but would be insufficient to provoke U.S. intervention. They would be optimized for the infliction of casualties since the Israelis are much more sensitive to personnel losses than to equipment or facilities losses (which, the author argued, would be more of a burden to American taxpayers than to Israelis). The raids might penetrate into Israel proper but should withdraw before American intervention might occur.

Al-Ayubi recognized that the Israelis would undoubtedly attempt to inflict heavy punishment on Syria for its raids. To deal with this, he recommended adoption of both a "sword" and a "shield." The sword would be the offensive forces to "cleave the enemy (rather than merely prick it)." The shield would consist of mobile defensive forces, strong in armor, aircraft, mechanized infantry and antitank missiles. Further, it would operate under an effective umbrella of fighter aircraft and surface-to-air missiles. The shield would not be a purely defensive force, but one designed to quickly counterattack to convert a defensive situation to an offensive one.

Whatever the feasibility of the Al-Ayubi proposal, it contains one particularly interesting aspect. Imbedded within it is a clear implication of attack without warning from a standing start. The attacks would be launched with no expectation of military victory, but in the spirit of guerrilla raiders intent on wearing down the enemy over a long period of time. As is often the case in insurgency situations, "the guerrilla wins if he does not lose."

However, Assad must consider that a blatant military attack, however limited, would be a violation of the United Nations-sponsored Israel-Syria disengagement accord, to which the Soviet Union is a signatory. Such a violation might jeopardize whatever residual support there might be in Moscow for providing support to Syria. On the other hand, less clear-cut initiatives, which might provoke overt Israeli responses as envisioned by Al-Ayubi, might not be quite so controversial in the former U.S.S.R.

It is the economic area in which the Syrians have been most limited. In December 1989, Alexander Zotov, the Soviet ambassador to Syria, said that Moscow would take a tougher approach to Syria's ability to pay for weaponry. The Syrian arms debt to the U.S.S.R. was running at about $15 billion. Zotov also expressed increased Soviet concern for the dangers of a widening availability of nuclear and chemical missile systems in the Middle East.[27] However, considering Moscow's need for hard currency exchange, and its apparent readiness to supply new arms, Syria's strategic choices may not be as constrained as they seemed prior to the Gulf War. Syria's participation in the international coalition defending Saudi Arabia has clearly facilitated Damascus' ability to secure Saudi financial support.

In addition to cash and credit gift packages, the Saudis have promised to resume annual aid payments to Damascus.[28] Syrian representatives have reportedly lost little time in inquiring into the availability of arms from Chinese sources. They appear to have already purchased Soviet-made Scud-C missiles (a more accurate and longer range version of the 280km-range Scud-B, which Syria already has) from North Korea.[29] While

6

possibly acquired primarily to deal with the Iraqi threat, the weapons have obvious implications for Israel.

The Balance on the Ground

The principal measures of ground force size and potency reveal a few rough equivalencies between the Syrian and Israeli forces as well as certain wide differences (table 1). Each side has somewhat over 4,000 tanks, including vehicles of modern design (T-72s and Merkavas). However, in artillery and armored infantry vehicles the variances are startling. While Syria may have almost twice as many artillery tubes as Israel, Israel possesses many more armored infantry vehicles (including many of very old design) than Syria. One should also note that while the bulk of Syrian artillery is towed, almost half of the Israeli guns and howitzers are self-propelled.

TABLE 1
THE ISRAELI-SYRIAN MILITARY BALANCE
Ground Forces

Country	Personnel Active (thousands)	Resv	Divisions Armd	Mech	Inf	Ind Brigades Mech	Inf	Spcl
Israel	104	494	12	1*	3	5	10	
Syria	300	392	6	3	1	8?	5?	9

Country	Tanks	APC/IFV	Arty/Mort Rkt Lnchrs	ATGM Lnchrs	SSM Lnchrs
Israel	4,488	6,300+	1,800?	?	24?
Syria	4,350	4,250	2,975	1,100	74+

* The Israeli mechanized division is composed of troops with airborne qualifications.
? Indicates doubt or lack of details.
+ Indicates that there are probably more items than the number indicated.

Source: International Institute of Strategic Studies (IISS), *The Military Balance 1991-1992*.

The Israeli army has traditionally been based upon a brigade structure, but one that could be readily grouped into *ugda* or division equivalents for operations. The division is now a regular part of the command chain and may occasionally operate as part of a corps-like structure below regional command level.[30] However, the Israeli structure is far more dependent upon mobilizable components for roundout than the Syrian structure. This places a premium on the quality of Israeli intelligence for early warning and tends to make the Israeli force somewhat more volatile than the Syrian. Israel cannot sustain a prolonged period of mobilization because of its small population base; the forces must either soon be committed to action or at least partially demobilized.

These differences in basic makeup of the forces reflect the fighting doctrine of each side. The Israeli force is designed for high mobility operations which seek decisive engagement in the shortest period of time. In the words of former Defense Minister Yitzhak Rabin, "Israel does not have the political or logistical patience to minimize its casualties by conducting an extended air campaign. ... [It] must wage immediate, offensive warfare. It cannot wait to build up its forces."[31] The Syrians, on the other hand, evidence a more conservative philosophy favoring greater reliance on fire power.

Of considerable significance in the Israeli-Syrian balance is the quantity of ground-to-ground missile systems available to the Syrians for an initial strike in the Golan Heights. The relatively small area of potential conflict and the Israeli practice of reduced manning of forward positions offer a possibility for Syrian saturation of the Israeli defenses with dense missile fire preceding heavy armored assault. As one analyst has pointed out:

> In a surprise attack on Israeli positions on the Golan Heights, Syria would have to destroy Israeli defensive positions quickly and impede the Israeli mobilization process. [Properly supplied, Syrian FROG and SS-21 missile launchers] could deliver between 36 and 54 tons of ordnance against Israeli targets. With six missiles to each Scud launcher, Syria could deliver 100 tons of ordnance with somewhat less accuracy. When supported by 200 first-line attack aircraft (including MiG-23s, MiG-29s and SU-24s), another 800 tons of ordnance could be delivered during the first sortie. Given the size of Israel's standing army in the north (two divisions), the Israeli target set is not extensive. Virtually all of these targets are within range of Syrian systems. A Syrian military planner could therefore conclude that the majority of these Israeli military installations could be targeted with at least some ordnance in an initial surprise attack.[32]

It is unlikely that Syrian planners would wish to fire their entire inventory of missiles in a single salvo or to divulge the location of all such weapons at once. Also, it seems unlikely that all of the aircraft cited would be assigned a ground attack role, considering the probable rapid Israeli response to such an attack. Aircraft delivering ground ordnance would probably not be able to return to their bases and rearm for aerial combat before Israeli aircraft surviving the first Syrian strike arrived to deliver a retaliatory blow.

Nevertheless, the situation is potentially unstable. Not only does it encourage Syrian planners to use a large number of missiles at the outset of an attack, but it also motivates Israeli planners to prevent the Syrians from so doing. In time of tension both sides would be under considerable pressure to strike first.

In manpower and in many categories of military equipment Syria enjoys a substantial numerical edge over Israel. Moreover, Syria does not necessarily have to plan on fighting alone — at least not to the extent to which the Israelis do. Iraq, Jordan, Morocco, Libya and Saudi Arabia have all sent military contingents to the northern front

in the past, and may do so again. It should be noted, however, that the formal mechanism within the Arab League for planning and coordination of operations in case of hostilities against Israel has not been active since the 1973 campaign.[33] Strong political and religious differences among the Arabs tend to make alliances loose in their structure, narrow in scope and fleeting in duration.

Saudi Arabia has recently undertaken a major armament program in response to the Iraqi threat. While it does not seem likely that much of the new equipment will ever be deployed out of the country, it is possible that the substantial increases in defense capabilities would make it easier for the Saudis to release small contingents to demonstrate support for Syria. In addition, the quality of support could be substantially greater than it has been in the past.

The earlier that third-party forces might deploy in support of Syria, especially prior to the outbreak of hostilities, most analysts agree, the easier it would be for Israel to adjust its plans for dealing with the greater threat. Conversely, however, the longer the struggle were to last, the greater would be the likelihood that other Arab states would feel a compulsion to intervene. Considering the general disarray among the Arab powers opposing Israel, the most likely initial lineup in the north would include only Syrian forces. In any event, counts of forces on each side are not accurate indications of the deployable and useful forces available. Israel has had to be particularly aware of this factor because Arab alliances have a tendency to change with kaleidoscopic alacrity.

Another factor is Israel's requirement for all-around security. However benign Egyptian and Jordanian political dispositions may be towards Israel, Israel must provide for the possibility of sudden change in the political (and hence, military) climate by the death or retirement of a key leader, by a coup or other rapid process. However great the threat on its northern border, Israel must maintain adequate security forces elsewhere in the country to guard against alterations in the posture of otherwise benign neighbors and quiescent Arab groups within its national security perimeter. This point was underscored as recently as late December 1990 when fundamentalists of the Moslem Brotherhood were brought into the Jordanian government and Jordanian troops executed their "Al-Quds" mobilization plan, deploying to the mountains east of the Jordan River.[34] Certainly, the pro-Iraqi (hence, pro-Palestinian and anti-Israeli) stance of many Jordanian citizens during the Gulf War was not reassuring.

Similarly, Syria must take prudential actions to guard against internal threats and threats to the regime from third parties. President Assad came to power through coup. He could be deposed the same way. He is a member of a small extremist Shia sect in a land where religious affiliation is of great importance, and he must consider that a number of other groups might be more comfortable with one of their own in the leading position. Recent reports have told of Syrian troops having to violently suppress pro-Iraqi demonstrations near their eastern border, killing "dozens" of people.[35]

Air and Air Defense Forces

In the air the rough equivalency of Syrian and (mobilized) Israeli forces (table 2) is deceptive. Two-thirds of Syria's tactical fighter squadrons are designed for air defense, leaving but a fraction for close support of ground forces. In contrast, virtually all Israeli fighters have a ground attack capability, and four squadrons are dedicated to that purpose.

TABLE 2
THE ISRAELI-SYRIAN MILITARY BALANCE
Air and Air Defense Forces

Country	Personnel Active	Resv	Air Super Fighters	Multi Role Fighters	Gnd Atk Fighters
Israel	28,000	9,000		416	135
Syria	100,000	?	312		172

Country	Rec/AEW/ EW Acft	Tankers	Transports	Helicopters Attack	Others
Israel	49	7	59	94	141
Syria	6		28	100	214

Country	Military Airfields	Med & Long Range SAM
Israel	11	19 Batteries
Syria	21	91 Batteries

Source: International Institute of Strategic Studies (IISS) *The Military Balance 1991-1992*. Data on military airfields taken from Ariel Levite, *Offense and Defense in Israeli Military Doctrine* (Boulder, Colo.: Westview Press, 1989).

Nevertheless, there is considerable concern that the Israeli air force (IAF) may be inadequate to support the ground forces for the first day or two of combat. Syrian air defenses and surface-to-surface missile launchers have high priority as targets for attack by Israeli aircraft. Operations against these systems, together with air defense responsibilities against hostile air incursions, are expected to heavily tax the capabilities of the IAF in the early hours of conflict. Further, as aircraft become more expensive to procure and maintain, the number of aircraft may diminish, while the number of missile sites may increase, expanding the size and types of target sets.[36]

Offsetting the drain on Israeli air assets to some extent is the Israeli capability for the maintenance of high sortie ratios in comparison with the Syrians. According to one estimate, the IAF, with superior ground technical support, can generate a maximum of 4.5 sorties per aircraft per day. The Syrians, in contrast, can achieve but two. Under sustained operations the Israelis can maintain 2.5 sorties per aircraft per day, as opposed to only one for the Syrians.[37]

In the ground-based air defense area, Syrian forces exceed those of Israel by more than 3 to 1. While not valid for calculations of the correlation of forces because air defense missile batteries do not engage one another, the ratio is a strong indication of the importance which the Syrians attach to the Israeli air threat and of their emphasis on defensive capabilities. The Syrian air defense system is superior to most of those found in Warsaw Pact states in the mid-1980s.[38]

While plentiful, Syrian antiaircraft artillery has not proved very effective against Israeli aircraft. Israeli flak suppression efforts in Lebanon in 1982, for example, were so efficient that neither Syria nor the Palestine Liberation Organization (PLO) made much use of their guns except in the curtain-of-fire mode.[39] Of course, it should be recognized that while the guns may not have engaged many aircraft, their presence may have had a deterrent effect on some Israeli operations.

The Israeli air defense warning and response systems demonstrated their worth in 1982 when, according to a Soviet assessment, "Israeli fighters scrambled simultaneously (even 1 or 2 minutes before) the take-off of Syrian military aircraft."[40] These capabilities were reconfirmed in October 1989 when a Syrian pilot flying a MiG-23 defected to a small Israeli agricultural air strip at Megiddo. A senior Israeli air force officer announced afterward that the aircraft had been monitored from the moment it took off from Blei airport in Syria.[41] The Israelis are seeking to further improve their already impressive warning system through development of a new airborne early warning (AEW) system, using an Elta Electric Phalcon "L" band radar mounted on a Boeing 707. Flight tests are imminent, if they have not already taken place.[42]

The balance of air and air defense forces between Israel and Syria leads one to believe that both sides are comfortable with the notion of conducting the air battle primarily over Syrian territory. For the less well trained Syrian aviators it facilitates ground control of operations and maximizes chances for pilot and crew recovery in case of being shot down. For the Israelis, it minimizes chances of casualties in the homeland. However, if a third party, such as Saudi Arabia or Iraq, were to assume a major role in a conflict, the air action might take place over a wider area.

Naval Forces

In the opinion of a former senior Syrian military official, the Syrian navy is too small to mount a seaborne attack on Israel (table 3). However, the Israeli navy, he ventures, could attack Syria.[43] The support which the Israeli navy provided Israeli ground forces in the initial stages of the assault on Lebanon in 1982 and the absence of any corresponding Syrian naval action would lend credence to this assessment.

The designs of the units of Syria's submarine force date from the 1950s, but the Syrians have reportedly ordered more recent models from the Soviet Union.[44] In addition to these, the Israelis must consider the possible participation of Libya's six Foxtrot-class

boats (also of 1950s design). They are remarkably quiet when running on battery and, properly employed, could cause substantial damage to Israeli shipping, either through torpedo attack or mine laying.

TABLE 3
THE ISRAELI-SYRIAN MILITARY BALANCE
Naval Forces

| Country | Personnel | | Submarines | Frigates | Mine Sweepers |
	Active	Resv			
Israel	9,300*	1,000	3		
Syria	4,000	8,000	3	2	9

Country	Missile Craft	Inshore Patrol	Amphibious Craft	Other Vessels
Israel	22	43	7	2
Syria	16	9	3	

Country	Naval Aviation	Naval Bases
Israel	provided by air force	3
Syria	17 armed helicopters	4

* Including 300 marine commandos.

Source: International Institute of Strategic Studies (IISS), *The Military Balance 1991-1992*. Data on naval bases taken from Ariel Levite, *Offense and Defense in Israeli Military Doctrine* (Boulder, Colo.: Westview Press, 1989).

The Saudi navy is not likely to attempt to extend its operations to the Mediterranean Sea, but conceivably small craft could be deployed overland to reinforce Syrian contingents on the coast. Significant systems recently acquired by the Saudis in the West include American Harpoon and French Otomat surface-to-surface antiship missiles. They also have French helicopter-launched AS-15TT antiship missiles.[45]

Israeli submarines (three ex-U.K. Vickers cruise missile boats) are designed primarily for antiship and intelligence-gathering operations. Israeli capabilities for antisubmarine warfare (ASW) operations (sonar-equipped missile patrol boats and five Seascan maritime reconnaissance aircraft) appear modest.[46] Israel has recently undertaken a naval modernization program totalling some $1.25 billion. The principal element is the purchase of two Dolphin-class diesel submarines from West Germany, using American grant aid. A senior Israeli defense official has identified this program as the "number one" priority in the ministry.[47]

The IAF is responsible for maritime patrol. As noted, however, its assets are limited. There may be some expectation that in time of emergency the U.S. Sixth Fleet

might lend support, particularly in the area of ASW. It is possible that Israel has a secret ASW program that is not apparent to the casual observer. In the process of sorting through documents in the former offices of the East German *Staatsicherheit* security service ("Stasi"), investigators found a transcription of a classified telephone conversation by former West German Defense Minister Manfred Woerner regarding a coming sale of special submarines (possibly the Dolphins) to Israel.[48] The boats could be for ASW, reconnaissance or other work, but the matter is indicative that the Israelis are aware of their vulnerability at sea and trying to do something about it. Failing this, or some form of third-party support, the Arabs could score some peripheral successes with their submarines.

Intelligence and Technology

Both Israel and Syria have capabilities for airborne surveillance of critical areas of one another's territory. In addition, each probably has access to imagery produced by the French Spot Image Corporation covering the other's principal military facilities. Since August 3, 1990, Spot has become sensitive to the ramifications of requests for coverage of Middle East targets, but American defense officials have voiced concern that controls may be inadequate for complete security.[49] Whatever the case with Spot security, there have been many reports in the press of Israeli access to American high-quality imagery, unlikely to be matched by the Syrians.[50]

Of great importance to the military balance, in both the intelligence and operational areas, is the role of technology. Here Israel enjoys a decisive edge. In Israel, almost 80 percent of children attend secondary school and 34 percent receive some college or technical education. Comparable figures for Syria are 56 and 16 percent, respectively.[51] From a military point of view, these figures afford Israel a capacity for wider distribution of high technology weaponry throughout its forces. Also, many Israeli scientists have achieved world-class recognition, particularly in the computer area. This permits Israel not only to adapt many foreign weapon systems to Israeli needs but also to design and develop important arms programs of its own — for example, the excellent Merkava tank.

In contrast, Syria has a limited domestic arms industry and limited capacity for modifying imported weapons for maximization of their value in context with the overall Syrian force structure. President Assad blamed the poor performance of Syrian air defense systems in Lebanon on faulty Soviet design. While there may have been some justification in his complaint, Syria's larger problem is its inability to adapt foreign equipment to the Syrian environment — including the less well educated soldiery.

The Nature of Future Conflict

Syria has the capability, if supported by others, to mount large raiding operations. These might be by land, air (especially missile) or submarine, for the infliction of

13

casualties and to give Jerusalem "no peace," as suggested by the Arab strategist Al-Ayubi. However, Syria's capability for defeating Israel in any sustained action is very low.

For its part, Israel appears well postured to counter most land and air attacks. With little experience in the areas of antimissile defense and ASW, however, Israel could suffer some initial reverses if confronted with novel forms of attack. There appears to be a difference of opinion within the Defense Ministry regarding the best response to the missile threat. The IAF has traditionally followed an offensive approach to deter or destroy threats to the country. In its view, the U.S.-built Patriot air defense system has sufficient missile-killing capability to defend especially high value targets. Defense Minister Moshe Arens, however, reportedly favors a defensive approach, based primarily upon the Arrow antitactical ballistic missile (ATBM) system.[52]

So keen is Arens on development of the Arrow, it appears, that he may cancel all or part of the submarine program in the navy in order to attain it. The paradox of competition of the two programs aimed at overcoming Israel's most cogent vulnerabilities is striking.

If events unfold as now appear possible, it is likely, in event of attack in the near term, that Israel would react by delivering punishing blows against all targets related to the principal threat, primarily by air but possibly also by ground-based missile. The area of greatest concern would seem to be that of surprise attack mounted in an unconventional way with minimum warning, however hopeless such efforts might seem from a Western perspective.

Israel will continue to be influenced by its concerns for casualties, and Syrian awareness of this fact is likely to shape their strategy. One analysis estimated that Israel might be able to keep its personnel losses under 2,000 dead if it elected to attack Syria and was able to achieve strategic surprise. On the other hand, if Syria were to launch a surprise attack on Israel, Israeli losses might reach 4,500.[53] Actual war losses, of course, are dependent upon many variables impossible to predict with accuracy. Nevertheless, the ratio of losses forecast in these hypothetical cases may be instructive and influential to Israeli planners. Whatever else they may convey, they sound a clear message of warning against the no-notice, "standing start" type of attack recommended by Al-Ayubi.

Leaders in both Damascus and Jerusalem claim sincerity in their participation in the peace negotiations. But the descriptions of the peace put forth by the two parties seem to have been cut from two very different patterns. If the tragedy of yet another chapter in the long and ugly war is to be avoided in the future, the leaders will have to begin to listen to each other more carefully than they have been inclined in the past.

NOTES

1. "The Middle East Talks: What the Experts Say," *New York Times* (International), November 3, 1991, p. 23.

2. Remarks made to the author and a group of retired American flag and general officers visiting Israel under the sponsorship of the Jewish Institute for National Security Affairs, April 23, 1991.

3. Remarks to the author and visiting officers, April 25,1991.

4. Asher Arian, Ian Talmud and Tamar Hermann, *National Security and Public Opinion in Israel,* Jaffe Center for Strategic Studies, Tel Aviv University (Boulder, Colo.: Westview Press, 1988), p. 35.

5. One of the best summaries of Israel's military doctrine and strategy is presented in Ariel Levite, *Offense and Defense in Israel's Military Doctrine*, Jaffe Center for Strategic Studies, Tel Aviv University (Boulder, Colo.: Westview Press, 1989).

6. Dr. Hanan Alon, Director of Foreign Affairs, Israeli Ministry of Defense, in remarks to the author and other visiting Americans, Tel Aviv, April 24, 1991.

7. The commandant of the Israeli National Defense College commented to the author and other visiting Americans that the U.S. is integral to Israeli strategic depth; Tel Aviv, April 29, 1991. This, however, is not a universally held view. Levite cites other analysts arguing that a first assumption of the shapers of Israeli security doctrine was "that no party or parties could be relied upon to assure the existence of the state." See Levite, p. 28.

8. Ariel Sharon, Israeli minister of housing, in remarks to the author and others, Jerusalem, April 24, 1991.

9. Moshe Arens, Israeli minister of defense, in remarks to the author and others, Tel Aviv, April 23, 1991.

10. *Ha'arez*, May 16, 1986 (in Hebrew), cited in Levite, p. 76.

11. Levite, p. 105.

12. Benjamin Netanyahu, Israeli deputy foreign minister, in remarks to the author and others, Jerusalem, April 27, 1991.

13. Remarks to the author and others by the commander of the Israeli naval base, Haifa, April 25, 1991.

14. C.D. Manegold, "New Fuel for the *Intifada*," *Newsweek,* June 4, 1990, p. 30.

15. Ariel Sharon, April 24, 1991.

16. See, for instance, Daniel Pipes, *Greater Syria: The History of an Ambition* (New York: Oxford University Press, 1990).

17. "Seizing the High Ground," *Newsweek*, December 28, 1991, p. 42.

18. Colonel Ben Reuven, Commander, Israeli 188th Armored Brigade, in conversation with the author, Golan Heights, April 25, 1991.

19. Hafez al-Assad in a speech to members of Syrian provincial councils, July 20, 1976, cited in appendix to Itmar Rabinovich, *The War for Lebanon 1970-1983* (Ithaca: Cornell University Press, 1984), p. 187. In 1989 the United States is reported to have acceded to Syrian interests in Lebanon and to have promised to seek Israeli acceptance. See David Ellis, "Grapevine," *Time*, March 4, 1991, p. 17.

20. Interview, *Observer*, May 20, 1984, cited in Derek Hopwood, *Syria 1945-1986: Politics and Society* (London: Unwin Hyman, 1988), p. 69.

21. Nafez Nazzal, "The Palestinian Perspective on the Future of the West Bank and the Gaza Strip," in Paul Marantz and Janice Gross Stein, *Peacemaking in the Middle East: Problems and Prospects* (Totowa, N.J.: Barnes and Noble Books, 1985), p. 81.

22. Andrew Meisels, "Rush of Fearful Soviets Strains Israel," *Washington Times,* December 25, 1990, p. A1; Jackson Diehl, "Israel's Immigration Slips," *Washington Post,* December 29, 1991, p. A1; and Clyde Haberman, "Israelis Prepare to Airlift Immigrants," *New York Times*, December 30, 1991, p. A7.

23. Hirsh Goodman and W. Seth Carus, *The Future Battlefield and the Arab-Israeli Conflict* (New Brunswick: Transaction Publishers, 1990), p. 17.

24. International Institute of Strategic Studies, *Strategic Survey 1986-1987*, pp. 119-120, and *Strategic Survey 1987-1988*, p. 123.

25. Margo MacFarland, "Reported $2-Billion Syrian/Soviet Arms Deal Sparks Concern," *Inside the Army*, April 8, 1991, p. 1.

26. Al-Haytham Al-Ayubi, "Future Arab Strategy in the Light of the Fourth War," *Shuun Filastiniyya*, Beirut, October 1974, pp. 29-44.

27. James Bruce, "Soviets Urge Defensive Deterrence on Syria," *Jane's Defense Weekly*, December 9, 1989, p. 1264.

28. Caryle Murphy, "Syrian Likely Solidarity With Saudi Arabia," *Washington Post,* December 18, 1990, p. A17.

29. Jim Mann, "Syria Goes Arms Shopping with $1 Billion in Gulf Aid," *Los Angeles Times*, December 6, 1990, p. 1.

30. Accounts of the 1982 invasion of Lebanon make frequent reference to corps structures; see Trevor Dupuy, *Flawed Victory* (Fairfax, Va.: HERO Books, 1986). Colonel Ben Reuven, however, denies this.

31. Yitzhak Rabin, Knesset member (former defense minister), in remarks to the author and others, Tel Aviv, April 24, 1991.

32. Martin Navias, "Ballistic Missile Proliferation in the Third World," IISS *Adelphi Papers*, No. 252, Summer 1990, p. 36.

33. Telephone interview with Maj. Gen. Jibrael Bitar, former member of the Syrian army, May 8, 1990.

34. Jackson Diehl, "Jordan's Troop Shifts Raise Questions in Israel," *Washington Post,* January 2, 1991, p. A17.

35. David Hoffman, "Iraq, Despite Pledge, Still Blocks Exits of Families," *Washington Post,* August 30, 1990, p. 1.

36. Goodman and Carus, pp. 62-63. Former U.S. Undersecretary of the Army Norman R. Augustine has noted, partially in jest, that if present trends in cost growth continue, the price of a single airplane in the year 2054 will equal the entire defense budget.

37. Goodman and Carus, p. 139.

38. Goodman and Carus, p. 78.

39. Goodman and Carus, p. 185.

40. S. V. Seroshtan, "Local Wars," *Military Historical Journal*, No. 3, 1986, in Joint Publication Research Service, "Electronic Combat in Local Wars in the Near East," UMA-86-047, p. 70.

41. Peter Allen Frost, "Israel Plans Inquiry After MiG-23 Defection," *Jane's Defense Weekly*, October 21, 1989, pp. 834-835.

42. Mark Lambert (ed.), *Jane's All the World's Aircraft* (London: Jane's Information Group, 1990), p. 151.

43. Telephone interview with Maj. Gen. Jibrael Bitar, former officer of the Syrian army, May 8, 1990.

44. Anthony H. Cordesman and Abraham R. Wagner, *The Lessons of Modern War*, Vol. 1, *The Arab-Israeli Conflicts, 1973-1989* (Boulder, Colo.: Westview Press, 1990), p. 252.

45. Aharon Levran and Zeev Eytan, *The Middle East Balance 1986*, Jaffe Center for Strategic Studies (Tel Aviv: The Jerusalem Post, 1987), pp. 338-344.

46. In remarks to the author and others, the commander of the Israeli naval base, Haifa, on April 25, 1991, said that all of the missile boats have been modified in Israel so that they are today the most sophisticated such craft in the world.

47. Dr. Hanan Alon, Tel Aviv, April 24, 1991.

48. Stephen Emerson, "Where Have All the Spies Gone?" *New York Times*, August 12, 1990, p. 20.

49. "Iraqis May Be Buying French Satellite Images of US Troop Movements," *Inside the Pentagon,* September 13, 1990, p. 1.

50. Cordesman and Wagner, p. 159.

51. Goodman and Carus, p. 144.

52. Scotty Fisher, "Israel's Defense Minister, Military at Odds Over Stake in Arrow Project," *Armed Forces Journal International*, December 1990, p. 30.

53. Kenneth S. Brower, "The Middle East Military Balance: Israel vs the Rest," *International Defense Review*, July 1986, p. 912.