# The Watchman Fell Asleep

- The Surprise or Yom Kippur and Its Sources



Uri Bar-Joseph



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### SUNY series in Israeli Studies Russell Stone, editor

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Uri Bar-Joseph

Cover photo: Shlomo Arad

Published by State University of New York Press, Albany

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For information, contact State University of New York Press, Albany, NY www.sunypress.edu

Production by Mike Haggett Marketing by Susan M. Petrie

### Library of Congress Catloging-in-Publication Data

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Bar-Joseph, Uri.
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[Hatsofeh she-nirdam. English]

The watchman fell asleep: the surprise of Yom Kippur and its sources / Uri Bar-Joseph.

p. cm.—(SUNY series in Israeli studies)

Includes bibliographical references and index.

ISBN 0-7914-6481-4 (hardcover : alk. paper)—

ISBN 0-7914-6482-2 (pbk.: alk. paper)

I. Israel-Arab War, 1973—Causes. 2. Israel—Politics and government—1967—1993. 3. Military Intelligence—Israel.

I. Title. II. Series.

DSI28.1.B36613 2005

956.04'8—dc22

2004016830

### For Michal

## Contents

Acknowledgments	ix
Introduction	I
Part I. The Egyptian War Decision and Its Implementation	
Chapter 1. The War Decision	II
Chapter 2. Planning the Next War: Past Experience and the Main Problems  Problem I: The Crossing of the Canal 17  Problem II: Egyptian Air Inferiority 19  Problem III: Inferiority in Armored Fighting 23	15
Chapter 3. The Egyptian Deception Plan i. The Role of Deception in Egyptian War Planning ii. Passive Deception 26 iii. Active Deception 27 iv. Assessment of the Egyptian Deception 30	25
Chapter 4. The Egyptian-Syrian War Coordination	33
Part II. Israel Prepares for War	
Chapter 5. The Balance of Forces—the Israeli View	39
Chapter 6. The Intelligence Conception and Its Sources i. The Conception 45 ii. The Empirical Evidence 47	45
Chapter 7. The Strategic Warning and Its Role in Israel's War Plans	53
Chapter 8. The Next War Scenarios	59

viii Contents

Chapter 9. The War Estimate: October 1972 – August 1973	63
i. October 1972 – April 1973 63	
ii. April–May 1973 66	
iii. June–August 1973 73	
Part III. The Dynamics of an Intelligence Fiasco	
Chapter 10. August–September 1973	81
Chapter II. Monday, October 1, 1973	103
Chapter 12. Tuesday, October 2, 1973	113
Chapter 13. Wednesday, October 3, 1973	119
Chapter 14. Thursday, October 4, 1973	133
Chapter 15. Friday, October 5, 1973	-33 I4I
Chapter 16. Saturday, October 6, 1973, 0400 – 1400	187
Chapter 17. Surprise	201
i. The Cabinet 201	201
ii. The Canal Front 202	
iii. The Golan Front 211	
iv. The Air Force 218	
Chapter 18. The Cost of Being Caught Unprepared	225
i. The Material Losses 225	
ii. The Psychological Impact of Surprise 228	
Chapter 19. The Causes of the Intelligence Failure	235
i. Obstacles Unique to the Warning-Response Process 236	
ii. Bureaucratic Obstacles 240	
iii. Groupthinking 243 iv. Psychological Obstacles at the Individual Level 246	
v. The Human Factor 248	
- <del></del>	
Notes	253
Bibliography	289
Index	299

### Acknowledgments

When the Yom Kippur War broke out, at 2:00pm, October 6, 1973, I was at home, reading a book. About 20 hours later, I arrived, together with a few soldiers of my reserve unit to Hatzav, the base camp of the 9th tank Regiment of the 14th Armor Brigade, some 25 kilometers east of the Suez Canal. The camp was deserted. The doors of the regimental store-keeping were wide open and a radio was still playing on. We loaded machine guns, ammunition and additional equipment to our two jeeps. In the rush to the front we lacked the equipment and the time to properly prepare the vehicles for combat. A few days later I learned that the 9th Regiment was almost totally destroyed in the fighting that took place during the first hours of the war. And only years later I found out that between our two jeeps and the entire Egyptian 18th Infantry Division there were hardly any IDF forces.

Like most Israelis who experienced the shocking surprise of that Yom Kippur, I too wanted to know why and how it happened. Unlike most, however, I was lucky enough to have Professor Michael Handel as my teacher at the Hebrew University in Jerusalem. Michael, probably the most serious scholar of the Yom Kippur surprise and a wonderful teacher, ignited my academic interest in this subject. He passed away in June 2001, shortly before the Hebrew edition of this book was first published. I was also lucky to have Professor Alexander George as my mentor during my PhD studies at Stanford University. It was in the framework of his course "Decision making and Strategic Interaction" that I wrote my first academic paper about the 1973 intelligence debacle and the theory of strategic surprise.

Many of the documents that are included in this study were provided to me by persons who, for obvious reasons, prefer to remain anonymous. These documents have enabled me to present the distorted intelligence picture as it was provided, on the eve of the war, to Israel's military and civilian policymakers. In order to understand how this picture was constructed, I interviewed most of the officers who were involved in its making. As far as I can judge, the interviews reflect the honest opinions of these officers as they tried to describe, as accurately as possible, the sequence of events that preceded the war. Some of them have asked to remain unidentified—a request which I have honored. The

names of the rest are included in the bibliography of this book. I thank them all for their help.

My student Dima Adamsky provided me with excellent material from Russian sources about the Soviet aspects of the coming war. My friend Shuki Teicher suggested some excellent insights to the Hebrew edition of this book. I would also like to thank my colleagues in the Division of International Relations at the School of Political Science at Haifa University and Dr. Michael Rinella and Michael Haggett of SUNY Press for their help in the publication process of the book. Lastly, I would like to thank my family for their support during this period.

On the wall at the entrance to the office of the Director of Military Intelligence (DMI) of the Israeli Defense Force General Headquarters (IDF GHQ) in Tel Aviv, on the wall of his head of the Research Department, in the offices of the analysts of the Directorate of Military Intelligence (AMAN), in AMAN's training bases, and in nearly any office of this agency, hangs a sign that quotes the words of the prophet Ezekiel:

The word of the LORD came to me: "Son of man, speak to your countrymen and say to them: 'When I bring the sword against a land, and the people of the land choose one of their men and make him their watchman, and he sees the sword coming against the land and blows the trumpet to warn the people, then if anyone hears the trumpet but does not take warning and the sword comes and takes his life, his blood will be on his own head. Since he heard the sound of the trumpet but did not take warning, his blood will be on his own head. If he had taken warning, he would have saved himself. But if the watchman sees the sword coming and does not blow the trumpet to warn the people and the sword comes and takes the life of one of them, that man will be taken away because of his sin, but I will hold the watchman accountable for his blood."

In 1973, on the holiest Jewish day of Yom Kippur, the watchman saw the sword and did not blow the trumpet. And the sword took many lives. The watchman did not blow the trumpet since for almost a year by then, he was asleep.

The sudden Arab attack of Yom Kippur 1973 is the most traumatic event in Israel's stormy history.<sup>2</sup> The success of the Egyptian and the Syrian armies, during the war's first day, in occupying the "Bar-Lev" defense line along the Suez Canal as well as considerable portions of the Golan Heights, and the loss of 300 out of the 500 tanks that defended Israel when the war started, posed the most serious threat to Israel's existence since the 1948 War. In the words of Defense Minister Moshe Dayan in the morning hours of October 7, "the 'Third Temple' was in danger."

The Arab accomplishment was the direct outcome of AMAN's failure to provide the political and military echelons with a high-quality strategic warning of the impending attack. Such a warning, which according to the nation's security doctrine was expected to be given at least 48 hours before the breakout of war, was a necessary condition for the mobilization and deployment of Israel's reserve forces—about 80 percent of its ground army. Although the IDF ultimately won the war, the heavy losses that it suffered and its failure to attain a decisive victory that would erase Arab achievements at the initial stages of the war, left Israel's security doctrine badly shaken. Consequently, since 1973 Israel has been searching for a new doctrine that will better respond to the threat of surprise attack.

In the intelligence failures class of events, the 1973 fiasco is certainly one of the most significant, equal to that of Pearl Harbor and Barbarossa. But in contrast to the case of Pearl Harbor, prior to the war Israel had an almost perfect picture of Arab attack plans, military deployment, and the intention to launch a war. And, unlike in Barbarossa—where the Soviets had excellent information about German military preparations but were misled by a sophisticated deception plan—the Arab deception plan in 1973 was rather primitive. A few days before the war, Israeli experts had already identified it as a deception. Consequently, the variance in the causes of surprise on Yom Kippur makes it a very important case also for the development of theory of strategic surprise.

\* \* \*

For more than forty years now, since the publication of Roberta Wohlstetter's classic study on the American fiasco of Pearl Harbor,<sup>3</sup> the dominant thesis among students of the subject is that intelligence failures are not the product of insufficient information or of negligence or stupidity by intelligence producers and consumers. Rather, these failures are the result of inherent pathologies of the warning-response process that affect "honest, dedicated, and intelligent men." The experience gained since the early 1940s repeatedly confirms this thesis. The most recent proof (for the time being) is the intelligence failure of September 11, 2001.

The many studies of intelligence organizations' failure to provide a timely and accurate warning prior to sudden attacks have identified, described, and analyzed a large number of inherent obstacles in the warning—response process. Some of them are more typical to the specific interaction between the surprise initiator and its victim. They include, among others, concealment, which aims at preventing the victim from obtaining information about the initiator's intentions and capabilities to attack ("signals," by Wohlstetter's terminology); deception, aimed at increasing misleading information about the initiator's intentions and capabilities ("noise," in Wohlstetter's terminology); the "cry-wolf

syndrome," which is the outcome of repeated futile warnings that erode, in the long-run, the victim's receptivity to warnings; compartmentalization, which artificially, though unintentionally, obstructs the flow of relevant information; the tendency of intelligence agencies to indulge in best-case and worst-case scenarios; and the structural disadvantage that is embodied in the victim's delayed response to incoming warnings.<sup>6</sup>

A problematic relationship between intelligence officers and policy-makers can add another source for an eventual failure. The tendency of policy-makers to serve as their own intelligence officers might lead them to reject solid intelligence estimates. On the other hand, policy-makers may also tend to automatically accept the intelligence product—a phenomenon that can lead to the creation of a dogmatic and monolithic estimate about the likelihood of war. Overcommitment of policy-makers to their own political agenda (e.g., the White House commitment to the invasion of Iraq in 2002–2003), might hamper their receptivity to intelligence products that are inconsistent with this agenda. Furthermore, the tendency of some intelligence officers to interfere with the political process and of policy-makers to intervene in professional intelligence work might further disrupt the ability of the intelligence agency to provide a timely and accurate warning.<sup>7</sup>

A third source for warning failures is general pathologies of information processing. Here, students of surprise attack use theories from fields such as cognitive and social psychology, organizational studies, and cybernetics in order to analyze the impact of specific pathologies that obstruct effective information processing in the warning—response process. Such obstacles may include cognitive dissonance,<sup>8</sup> confirmation bias,<sup>9</sup> and heuristic judgment,<sup>10</sup> which disrupt the individual's ability to perceive reality accurately. The first two obstacles explain the tendency in the individual to ignore incoming information that contradicts the belief that a sudden attack is unlikely. The third explains why the estimation process of complicated situations may fall victim to judgmental errors, and situations prior to sudden attack are always complex.

At the small-group level of analysis, Irving Janis's theory of groupthink, which analyzes the dynamics within a small and cohesive group with a strong tendency to conformity, is crucial for understanding why the collective estimation process produces in so many cases a gross misperception of reality. <sup>11</sup> Finally, at the organizational level, features such as hierarchy, centralization, the tendency toward the use of standard operating procedures (SOP), or bureaucratic politics, produce additional explanations for the incompetence of intelligence agencies to produce high quality warnings at times of crisis, and of military organizations in properly responding to them. <sup>12</sup>

Two facts make the surprise of Yom Kippur an excellent case to test the validity of these theoretical explanations: First, the persons involved in the making of this fiasco were all experienced and intelligent, and the mistake

that they made in assessing the Egyptian and Syrian war intention was an authentic one. Unlike the case of Pearl Harbor where numerous conspiracy theories claim that Roosevelt or Churchill knew ahead of the Japanese attack, and unlike the popular conspiracy theory suggested in recent years by Suvorov to explain the surprise of Barbarossa, <sup>13</sup> hardly any such theory exists in the Israeli case. <sup>14</sup> Second, Israel had excellent information about the Arab military preparations and the Egyptian and Syrian intention to launch the war. On the basis of this information, it could be concluded that the attack was highly likely. Given these facts, it is no wonder that at the focus of the academic study of this fiasco stands the attempt to explain why the main persons involved believed until the very last moment that Egypt did not perceive itself as being capable of launching war and that Syria was not ready to launch one without Egypt.

Some of the answers that have been given to this riddle cover a wider spectrum than others. Michael Handel, for example, identified three "noise barriers," which distorted the signals that had to pass through them. The first of the three involved various other sources of threat in the international and regional systems as well as a too quiet international environment (e.g., the *Détentel*), which averted the victim's attention from the real threat and destroyed its ability to correctly assimilate the signals of the coming attack. The second barrier was created by the initiator's attempt to conceal its plans and to mislead the victim with regard to its real intentions. The last barrier was the noise generated unintentionally by the victim, which farther hampered the proper assimilation of the signals of the impending threat. Not surprisingly, the interaction between the three barriers led Handel to conclude that "surprise can rarely be prevented." More than ten years later, he repeated this conclusion, adding that this was so "because at the root of the problem—the weakest link in the intelligence process—is human nature."

Most studies of the 1973 case focused on Handel's third barrier. Avi Ben Zvi, who compared the Yom Kippur surprise with other intelligence failures, concluded that the source of the problem in 1973 was the Israeli inclination to grant more importance to strategic assumptions—primarily that the risk of war was too high from Arab perspective—than to information at the tactical level that indicated that they were preparing for war. Comparing Pearl Harbor and the Yom Kippur attack, more than twenty years later, Ben-Zvi did not change much of his conclusion: The main mistake of Israel's war assessment was the underestimation of Egypt's ability to launch a limited strike while using its newly acquired Scud missiles to deter Israel from attacking its rear. Richard K. Betts reached a similar conclusion in his excellent study of surprise attack: Overreliance on a strategic conception that Egypt did not intend to launch war led to the underestimation of tactical information that indicated that the strategic assumption might be wrong. 19

Other students of the subject have focused on the causes for the Israeli adherence to the conception that war was unlikely. Avi Shlaim explained the fiasco by a number of organizational and psychological obstacles that he identified in Israel intelligence, military, and political environments.<sup>20</sup> Janis Gross Stein used the first edition of the excellent biography of Lt. Gen. David Elazar, the IDF Chief of Staff during the war,<sup>21</sup> to point out a number of symptoms of groupthink in Israel's decision- and intelligence-making processes. Later she emphasized as a major cause for the failure the unsophisticated way by which Israel perceived its ability to deter Egypt from war, primarily the use of the balance of military forces as the main means to estimate the effectiveness of deterrence while ignoring the balance of interests.<sup>22</sup> Two veteran AMAN officers emphasized the psychological milieu in which the estimation process took place. Zvi Lanir, who focused his study on the distinction between fundamental and situational surprise, found that "the shock on Yom Kippur was primarily caused by the Israelis' discovery that they misconceived themselves, their military, social, and, to some degree, their moral image."23 Yoel Ben-Porat, who served as a senior officer during the war, maintained that pretension and arrogance on behalf of intelligence officers, who believed that they could correctly grasp the complex strategic calculus of leaders such as Anwar Sadat and Hafez Asad, contributed significantly to the 1973 fiasco.<sup>24</sup> A third Israeli student of the debacle (with ample professional background as well) compared the 1973 case with the 1954 intelligence fiasco known as "the unfortunate business"—and concluded that crude violation of norms of behavior between intelligence producers and consumers contributed significantly to the debacle in both cases.25

Despite the evidence to the contrary, a number of studies maintain that the root of the Yom Kippur failure is to be found, nevertheless, in the intelligence information that was available to Israel on the eve of the war. Here, a distinction should be made between those who reached this conclusion due to insufficient knowledge of the evidence and those who are highly familiar with it. An example for the first is the work of Alex Hybel, who compared the cases of Pearl Harbor and Yom Kippur and concluded that Israel failed to reach the critical information necessary for a reexamination of the thesis that war was unlikely. This failure was, to a large extent, the outcome of a successful Syrian and Egyptian deception campaign.<sup>26</sup> Aharon Levran, a high-ranking AMAN officer during the war, maintained that at the root of the intelligence failure was the "curse of the wealth of intelligence sources" - primarily the fact that AMAN relied on one specific high-quality source to provide a war warning. As long as this source—Dr. Ashraf Marwan, a close aide to Sadat, whose identity had been disclosed recently<sup>27</sup>—did not provide a warning, AMAN's analysts were reluctant to change their "low probability" assessment. 28 Eliot Cohen and John Gooch used Levran's explanation when concluding that the Israeli fiasco

was caused not only by analytical mistakes but also by overreliance on one source that disappointed at the most critical time.<sup>29</sup>

While Levran assumed that Israel's prime source did not alert his handlers since he did not know all the details of the Egyptian plan,<sup>30</sup> AMAN's director in 1973, Major General (res.) Eli Zeira claimed that Marwan—whom he calls "the information" in his war memoirs—was an Egyptian double agent whose task was to deceive Israel with regard to Egypt's war plans. According to Zeira, Marwan was the source of the information that validated the Israeli assumptions regarding Egypt's necessary conditions to launch war, but he was also the source of a number of false warnings that were intended to decrease Israel's war awareness. Thus Zeira claims, in the summer of 1973, Marwan informed the Israelis that war would start, if at all, at the end of the year.<sup>31</sup> Consequently, Zeira regarded the possible deception by Marwan as "the jewel in the crown of Egypt's deception operation . . . and Egypt's biggest success in the War of Yom Kippur."32 Other students of Handel's second barrier were more prudent when estimating the value of Egypt's deception. John Amos concluded that Egypt's deception hampered Israel's ability to properly assess the meaning of the war indicators that were collected by its intelligence agencies.<sup>33</sup> And Aharon Zeevei—at present AMAN's Director—who is also the most prominent student of the Egyptian deception, concluded, "The concealment and deception measures taken by Egypt and Syria, especially Egypt, successfully hid from the eyes of Israel's intelligence community, and even from that of the United States, their intentions to go to war."34

\* \* \*

The many explanations for the Yom Kippur intelligence blunder are insufficient to bridge the wide gap between the excellent information that was available to AMAN on the eve of the war and the poor quality of strategic warning it produced. Hence, this book focuses on the action taken by Director of Military Intelligence Zeira and his chief estimator of Egyptian affairs, Lt. Col. Yona Bandman, who were the main (though not only) persons responsible for providing the policy-makers with a distorted intelligence picture—one that artificially gave more weight to calming rather than to alarming information. In the case of Zeira, and to a lesser extent Bandman, the bias toward a reassuring estimate was a motivated one. As a result of this behavior, the decisions taken by Defense Minister Moshe Dayan and the Chief of Staff did not reflect the graveness of the situation and did not meet even the minimal IDF deployment plans for a possibility of war. Why Zeira and Bandman acted the way they did is addressed in the last chapter of this book.

\* \* \*

Much of the evidence that this book uses to trace the process that led to the Israeli surprise comes from two types of previously undisclosed primary sources. One is documents—primarily intelligence reports but also protocols of discussions—that provide the most comprehensive description available to date of the way AMAN assessed the situation prior to the war. This source also sheds new light on additional relevant issues, such as the role of strategic warning in Israel's military doctrine between 1967 and 1970. Many of these documents were given to me privately and are publicly unavailable. As far as I can judge, they are all authentic and they provide a balanced description of the intelligence on the eve of the war. Notably, since this book (in a more detailed version) was published in Israel in September 2001, it has not provoked questions about the validity of the documental data.

The second primary source used here are interviews that I conducted with most of the relevant intelligence and military officers who were involved in the fiasco. This type of source is naturally more problematic, particularly because the 1973 intelligence debacle is still such a traumatic event in the Israeli collective history and, even more so, in the private lives of the persons who were involved in its making. To the best of my judgment the verbal evidence I received reflects the authentic memoirs of the interviewees. Some of them used records that they had kept since 1973 in order to refresh their memory; others consulted friends. In any event, I tried to limit the use of these testimonies to cases where the information that they provided could be sustained by at least another source. Despite the difficulties involved in using this type of source, it cannot and should not be ignored. Many of the persons I interviewed had never been called to testify before the Agranat Commission—the only official investigation of the Yom Kippur War. Others had never been asked the questions that I asked them. Their testimony is critical; the documents tell us what AMAN's estimates were, but the verbal evidence explains how they were born. Any attempt to trace the Israeli intelligence failure without getting into the "black box" in which the intelligence estimate was created is doomed to fail from the start.



# Part I

The Egyptian War Decision and Its Implementation



# Chapter 1

### The War Decision

The principal Egyptian decision to go to war was made on October 24, 1972. On the evening of that date President Anwar Sadat convened Egypt's Armed Forces Supreme Council at his Giza residence to declare his decision to end the no peace—no war status quo that had lasted since early August 1970, when the War of Attrition ended.¹ Explaining his decision, Sadat said:

The June 1967 defeat has made both enemy and friend doubt that we would ever fight again. Consequently, all the solutions I am presented with are based on this logic. Our commitments are being tested. I am not prepared to accept defeatist solutions or surrender. I will not sit at a table with Israel while I am in such a humiliating position, because that means surrender. In the face of our people, our enemies, and our friends, we must prove unemotionally and with careful planning that we are capable of sacrifice and can stand up and fight and change the situation with whatever means are at our disposal. . . . The time for words is over, and we have reached saturation point. We have to manage our affairs with whatever we have at hand; we have to follow this plan to change the situation and set fire to the region. Then words will have real meaning and value.<sup>2</sup>

Many of the participants—among them War Minister Mohammed Ahmed Sadiq and his deputy, Abdel Khader Hassan, and senior army officers such as Gen. Abdel Ali Khabir (the commander of the central district), Gen. Mohammed Ali Fahmy (commander of the navy), Gen. Saad Mamounn (commander of the Second Army), and Gen. Abdel Muneim Wasel (commander of the Third Army)—expressed reservations about the feasibility of

Egypt's war option. They were mainly concerned with Israel's air superiority, Egypt's vulnerability to deep penetration raids, and the challenges involved in the crossing of the Suez Canal and the establishment of defensible bridgeheads on its eastern bank.<sup>3</sup> Sadat declined these reservations, emphasizing instead his resolve to go to war even under highly unfavorable conditions:

We are confronted with a challenge. "To be or not to be." A partial solution has been presented to me [the U.S. peace proposals] and is still waiting for my approval. But, I am not going to accept it. We will simply have to use our talents and our planning to compensate for our lack of some kinds of equipment.<sup>4</sup>

Two days later Sadat dismissed his Minister of War, his deputy, and the Commander of the Navy. Sadiq's replacement was Gen. Ahmad Ali Ismail—an old foe of the Chief of Staff, Lt. Gen. Saad el Shazly. Ismail had a dubious military record and a poor health condition due to cancer. But, he had one major advantage: Unlike his predecessor, he supported Sadat's decision to launch a war and he envisioned it in the same way that Sadat and Shazly did. Consequently, for the first time since the defeat of June 1967, the President, his War Minister, and the Chief of Staff reached a consensus not only about the need to resort to war, but also regarding its goal and its operational dimensions.<sup>5</sup>

During the October 24 meeting, Sadat defined the goal of the war simply as "Breaking the ceasefire." On this basis the war planners defined its concept:

... a comprehensive "local" war in which only conventional arms would be used. The strategic aim was to upset the prevailing balance in the region and to challenge Israel's concept of security and the principles behind its military strategy. This would require time to allow for the participation of other Arab nations, the most important factors being the creation of a united Arab stand and exploring the possibility of using oil as a weapon of political pressure to influence the outcome of the war. The strategy, therefore, was an offensive military operation to liberate the occupied land in consecutive stages according to the capabilities of the armed forces, and to inflict on Israel the greatest possible number of losses in men and weapons in order to convince it that an indefinite occupation of our land was too costly to bear.<sup>7</sup>

This modest and very limited war conception reflected Egypt's strategic dilemma since the defeat of June 1967, and, even more so, since the end of the War of Attrition in August 1970. On the one hand, stood the Egyptian desire

to erase the outcomes of the Six-Day War—outcomes that were "culturally, psychologically, and politically unacceptable." On the other, was Egypt's pessimistic view regarding its ability to win a victory in the battlefield—a lesson gained in the 1967 and 1969—1970 wars and the outcome of a sober analysis of the Egyptian—Israeli balance of forces by the end of 1972.



# Chapter 2

# Planning the Next War: Past Experience and the Main Problems

Much of the Egyptian skepticism regarding the ability to win (or at least not to lose) the coming war, was rooted in the course and the outcomes of the War of Attrition of 1969–1970. Nasser initiated that war, despite the heavy risks involved, in order to raise the morale of the Egyptian public and the Egyptian army, and as a means to demonstrate Egypt's resolve to restore by force the pre–1967 War situation. In planning it in 1968, Egypt's war planners attempted to optimize their advantages in static warfare, in order to cause Israel as many casualties as possible. But, when it ended, the Egyptian army was closer than the IDF to defeat and could show only limited military achievements.

During most of the fighting, Israeli ground and air forces proved to be superior to their enemy. A 17-month Egyptian effort to shed Israeli blood primarily by heavy bombardment of the IDF's defense line along the Canal, and commando ambushes on the routes to the Israeli strongholds—yielded 260 Israeli soldiers dead. Even by the standards of a small society such as Israel was in 1970, this was a bearable cost. As the IDF Chief of Staff, Lt. Gen. Chaim Bar-Lev noted in referring to this issue, the number of Israeli road accident casualties in 1970 was 529.1 The exact number of Egyptian losses, on the other hand, is unclear but was far higher. Shazly speaks of 2,882 soldiers and civilians,<sup>2</sup> but this figure contradicts Egyptian reports of about 4,000 casualties in the spring of 1970 alone.<sup>3</sup> Israeli estimates of Egyptian losses in the war are around 15,000, and an American expert assesses them to be around 5,000.4 Even if we take the minimal figure as the real one, the Egyptian-Israeli casualties' ratio would be 10:1—an unacceptable ratio by any standard. Moreover, in almost each confrontation between Egyptian and Israeli units, the Israelis gained the upper hand. Although the Egyptian army initiated a large number of commando raids behind Israeli lines, their results—with only a few exceptions—were rather disappointing. This became even more clear when compared to the IDF's sophisticated and almost always successful special operations during the war.

The Egyptian-Israeli capability gap was even more evident in the air. Although the planes loss ratio, according to Israeli reports, was 1:7 in favor of the Israeli Air Force (IAF), Egypt's inability to protect itself against Israel's air raids was most vividly expressed in early 1970, when, after ten months of fighting, Egypt was left defenseless against Israeli deep-penetration raids that threatened to topple Nasser's regime. In contrast, the Egyptian Air Force (EAF) lacked any real capability to attack in the Sinai, and except for some hit-and-run raids against Israeli targets along the front, it was hardly a factor in the war. Shazly's conclusion regarding the air situation well reflects the pessimistic Egyptian view: "In effect, the enemy air force was ten years ahead of ours."

Despite this gloomy picture, Egypt did have some accomplishments. The most important one was the advancement, immediately after the cease-fire entered into effect, of its air defense layout toward the front and its deployment along the Suez Canal. This move had put the entire front sector up to about ten kilometers east of the canal within the range of its SAM-2, SAM-3, and, later, SAM-6 missile batteries. In operational terms, it enabled the Egyptian army, for the first time since 1967, to effectively limit the IAF freedom of action over the theater of operations—a necessary though insufficient condition for launching a war. Furthermore, the mere fact that Soviet combat units were presently positioned in Egypt constituted an advantage. As Nasser saw it, the Soviets could both deter the Americans from increasing their role in the conflict and pressure them to compel Israel to accept a peace agreement at a reasonable cost for Egypt.<sup>7</sup>

But the Soviet presence created problems as well. The most important issue involved the mere political feasibility of an Egyptian war initiative. Soviet participation in an Egyptian war initiative to reoccupy the Sinai was highly unlikely, and the Egyptian leadership was well aware of this. During Soviet–Egyptian talks after Nasser's death, Sadat was told that the USSR expected that its combat units in Egypt would be replaced prior to any decision to renew hostilities. In this sense, the Soviet military presence in Egypt limited not only Israel's freedom of action but also that of Egypt.

The same was true with regard to another Egyptian achievement—the improvement in the army's combat ability. On one hand, the War of Attrition gave the Egyptian soldier and the Egyptian officer ample combat experience, self assurance, and a closer understanding of the Israeli military tactics. On the other hand, in light of the extensive casualties that Egypt suffered in the war, especially due to insufficient anti-aircraft defense, one may wonder if the simple soldier's fear barrier, primarily from IAF attacks, was really broken.

Despite this unpromising state of affairs, the Egyptian army continued its preparations for war after the end of the War of Attrition. On the basis of planning, which had already started in 1967, it continued conducting a series of exercises called "Tahrir" ("Freedom") that had begun in the summer of 1968. At their core stood various canal-crossing scenarios by five infantry divisions, the occupation of five bridgeheads on the eastern bank of the Suez, the repulse of Israeli counterattacks, and the exploitation of success in order to break through into the Sinai. 10 After the end of the War of Attrition and the deployment of the SAM layout near the canal, Nasser instructed his army to prepare the "Granite 1" plan-a crossing plan and an armored break-through toward the Gidi and Mitla Passes. In contrast to earlier plans, which had been practiced only as a skeleton or staff exercises, "Granite 1" was fully practiced by three mechanized divisions, two armored divisions, three independent tank brigades, three reconnaissance battalions, a marine brigade, and airborne forces. 11 In the summer of 1971, Gen. Muhammad Ahmed Sadiq, who was nominated in May as War Minister, instructed the planning of a more ambitious war plan, "Granite 2," to occupy the whole of the Sinai. Later, under the title of "Granite 3," the plan was further expanded to include the occupation of the Gaza Strip as well.<sup>12</sup>

But, in light of the Egyptian-Israeli balance of military capabilities, these ambitious plans were rather infeasible. No one understood it better than Lt. Gen. Saad el Shazly, who was nominated in May 1971 to be the Chief of Staff of the Egyptian army. His main concern was neither the occupation of the Gaza Strip nor of the whole of Sinai, but rather the first and the most complicated phase of any future war—the crossing of the Suez Canal. It involved three interrelated problems: the mere crossing of the canal; the need to counter Israel's air superiority over the theater of operations; and the ability to repulse the IDF armored counterattacks.

### PROBLEM I: THE CROSSING OF THE CANAL

The Egyptian crossing plan identified four main obstacles on the road to the buildup of five stable bridgeheads on the eastern banks of the Suez Canal: a sharp tide and low ebb combined with water banks made of stone steps, which made it difficult for amphibious vehicles to get to the water and climb to the bank on the other side; a 10- to 20-meter-high embankment on the Israeli side, which had to be breached; the Bar-Lev defense line made of thirty-five strongholds and the 360 tanks of the IDF regular tank division positioned in the Sinai; and the water ignition system that Israel had installed in the canal, in order to set any crossing force on fire.<sup>13</sup>

It is unclear why the plan did not regard the linear structure of the canal as a significant obstacle. The Bar-Lev line planners estimated that the main Egyptian

problem would be an assault crossing of a linear water obstacle—each section of which was fully controlled by the defending force. <sup>14</sup> On the other hand, two of the obstacles outlined in the Egyptian plan were found, post-factum, easier to overcome than expected. The Bar-Lev line strongholds were planned from the start to have a limited role in blocking a full-scale crossing. In 1973, primarily because of lack of strategic warning, only sixteen of them were staffed and they were manned by third-rate soldiers. During the first and the most critical hours of the war, they turned out to be a liability more than an asset, since the tanks of the Sinai Division (Division 252) had to defend the strongholds rather than ward off the enemy. The Egyptian planners seem to have understood the limited ability of the strongholds to play a critical part in case of an all-out crossing. Hence, they concluded that their encirclement would lead to their fall. The war instruction that was distributed shortly before the war emphasized: "You should avoid delaying too much and wasting effort in fighting to take over the strongholds." <sup>15</sup>

The project of setting the Suez Canal ablaze—codename "Or Yekarot" ("great light")—was mostly a deceptive project, aimed at deterring the Egyptians from launching a war. On February 28, 1971, a real experiment in setting a small section of the canal on fire took place. The goal was to demonstrate to the Egyptians the dangers involved in a large-scale crossing attempt. <sup>16</sup> In this sense it was successful: When ending his tenure as a Chief of Staff in December 1971, Chaim Bar-Lev estimated that "Or Yekarot" stands as a "highly successful deceptive move . . . that has occupied the Egyptians until now." <sup>17</sup>

Following Sadat's decision to launch war with the available means, the army, under Shazly, started investing far more energy in overcoming the problems described in Instruction 41—the order that outlined in detail the crossing phase. Some of the preparations involved meticulous and systematic staff work. Under the supervision of Gamasy, the Egyptian planners located the most suitable conditions for the crossing. The parameters used included, interalia, weather conditions, tide and ebb conditions, the water speed in the canal, sunrise and sunset hours, and moon rise. The most suitable dates were coordinated with Syria. Then, the Egyptian planners looked for the most inconvenient dates for Israel—primarily holidays. On the basis of this staff work, Sadat was provided in early April with a number of possible D-days in May, August, and September–October.<sup>18</sup>

By March 1973, the Egyptian army completed the buildup of a number of crossing battalions, each equipped with 144 boats, enabling the transfer of 32,000 infantry soldiers to the eastern bank of the Suez Canal. <sup>19</sup> In addition, by the spring the Egyptians received from the USSR three PMP assault bridges (the fourth was supplied during the war), which enabled the fast reinforcement of the infantry force with tanks and additional heavy equipment. <sup>20</sup>

As well as getting the necessary water-crossing equipment, the five infantry divisions that were to cross the canal started, toward the end of 1972, a series of intensive crossing exercises. This training aimed at both improving the ability of the soldiers to carry out the complicated mission, and—in light of the military defeats in earlier confrontations with the IDF—to enhance their belief in their ability to carry it out.<sup>21</sup> In order to make the problematical crossing stage more manageable, Instruction 41 detailed the complicated operation into a small and relatively simple set of tasks, each of which were repeatedly rehearsed by the crossing forces. Thus, for example, according to Instruction 41, each soldier had to know not only the number of his crossing wave or his boat but also the names of the soldiers on his left and right. Moreover, each of them knew very well not only the amount of ammunition that was available to him but also how many rounds he was allowed to use at the assault stage and the holding defense stage, and how many bullets he was permitted to shoot against enemy planes.<sup>22</sup> By the fall of 1973, after rehearsing this phase of the crossing dozens of times, the Egyptian soldiers could act almost automatically. Indeed, many of them did not grasp until the very last moment when fire started, that this time it was not merely another exercise but rather the real crossing of the Suez Canal.

### PROBLEM II: EGYPTIAN AIR INFERIORITY

If the 1967 war demonstrated the vulnerability of the EAF to a sudden air attack, the War of Attrition showed that even under more favorable conditions the EAF was no match for its Israeli rival. But Egypt's vulnerability to IAF raids was reduced when, in the aftermath of the War of Attrition, its antiaircraft layout moved closer to the front line, thus providing air defense for the Egyptian army in the theater of operations at the first stage of the war. Neither side, however, was certain that the new deployment caused an actual radical shift in the balance of forces in the crossing sector. A sole test to the new situation took place in September 1971 when — in response to the shooting down of an Israeli C-97 Stratocruiser that was on an air photography mission 22 kilometers east of the canal—Israeli F-4 Phantom planes launched 12 air-to-ground (AGM) Shrike missiles against the radars of Egyptian SAM batteries. One of the missiles hit the cement base of a warning antenna and caused some damage. The others totally missed their targets.<sup>23</sup> On the basis of the experience gained in the war in Vietnam, the Egyptians turned off the radars, leaving the missiles without a target to home on. The Israelis concluded from this incident that in order to save the radars they had to be turned off and, thus, they became vulnerable to attacks by other means.<sup>24</sup> The Egyptians concluded from the incident that they also had the means to suppress the threat of the IAF on the

eastern bank of the canal.<sup>25</sup> Consequently, on the eve of the war they reinforced their anti-aircraft layout at the front, increasing the number of SAM batteries along the 150 kilometers of the canal from 46 to 62.<sup>26</sup> But, as they must have known, the feasibility of this defense system had yet to be tested and was far from perfect.

Beyond this source of potential weakness, the Egyptians faced three other problems. The first was the dependency of their air-defense on Soviet soldiers. Since the spring of 1970, when, in the framework of "Operation Kavkaz" a Soviet air-defense division arrived in Egypt to assist in defending the country against the IAF raids, critical segments of their air defense system had been manned by Soviet personnel. In the summer of 1971, the Soviets operated 30 percent of the Mig-21 fighters positioned in Egypt, 20 percent of the SAM batteries, and most of the electronic equipment.<sup>27</sup> The equipment operated by the Soviets was of the most advanced type—systems such as the SA-3 and SA-6—which proved to be the most effective means against the Israeli planes. Following the July 1972 expulsion of the Soviet personnel from Egypt, Egyptian soldiers—some of whom had been under training in the USSR for more than two years—started operating the SA-3 systems that the Soviets left behind. Shortly afterward they also began to man the SA-6 batteries, and by the end of 1972 this process was completed.<sup>28</sup> As Shazly put it, quite proudly: "Long before the October assault . . . our air defense was well established over the crucial strip six miles to the east of the canal."29

A second and a highly critical problem involved the ability to provide air defense for areas other than the crossing sector. The War of Attrition vividly showed that the F-4 Phantom planes that Israel started receiving in 1969 provided the IAF with an excellent capability to attack targets deep within Egypt's interior. The deployment of the Soviet air-defense division in spring 1970 caused the immediate ending of these raids, primarily out of an Israeli interest to avoid a direct confrontation with the USSR. But, once the Soviets left, the main barrier for the deep-penetration raids had been removed. By the end of 1971 the IAF had already had 78 F-4 Phantoms and 126 A-4 Skyhawks<sup>30</sup>—each with a sufficient range to hit any target within Egypt. By Egyptian calculations, in 1972 the IAF could deliver a payload of 2,500 tons of high explosives per day while the combined air forces of Egypt, Syria, and Jordan could carry only 760 tons.<sup>31</sup> Consequently, preventing the IAF from bombing Egypt's interior remained a critical problem that demanded a real solution. The construction of an air-defense system, which would cover all strategic locations, was one solution—but one that was too expensive in terms of hardware and manpower. The attainment of capabilities to hit targets within Israel, in order to deter the IAF from assaulting targets within Egypt, was another. From Cairo's perspective this, indeed, was the more promising though not perfect answer.

Egypt's request for Soviet-made long-range attack planes, especially to attack the IAF airfields, was first presented to the Kremlin during President Ni-kolai Podgorny's visit to Cairo two weeks after the end of the 1967 War. <sup>32</sup> But, in the Soviet arsenal there was no answer for the Egyptian demand. During the 1950s and 1960s the USSR developed strategic bombers and advanced fighters, but none of the fighter-bombers were a match for the U.S.-made F-4 Phantom or the A-4 Skyhawk. Gen. Ahmed Baghdady, the EAF commander, expressed his frustration with the situation in early 1972, saying, "What I need is a deterrent aircraft. A fighter-bomber, about Mach two, with a good payload and the range to reach the enemy's interior." <sup>33</sup> In late 1972, the EAF started receiving the Soviet-made SU-17 attack plane—an improved version of the SU-7—but even this aircraft was no match for the Phantom. In October 1973, Egypt had only 20 SU-178. <sup>34</sup>

Another source of support was provided by some Arab countries. Since spring 1973 Egypt had started receiving Western-made attack planes, primarily Mirage 3E and Mirage 5 from Libya and a squadron of older Hawker Hunters from Iraq. The Hunters were flown by Iraqi pilots, while the pilots of the Mirages were mostly Egyptians.<sup>35</sup> But, though the longer-range Mirage gave the EAF, for the first time since 1967, the ability to attack Israel in a low-low-low operational profile, the small number of available planes—25 on the eve of the war—was far from meeting the critical mass needed to hit Israel effectively.

Without suitable planes to counterbalance the Israeli advantage, the Egyptians had to resort to more available means from the Soviet arsenal. Two weapon systems were found to meet their demand, but only minimally. The first was the AS-5 Kelt air-to-surface missile which entered Soviet operational service in the mid-1960s. It was carried by the TU-16 medium-range bomber, which was used by the EAF, and had a range of 180-230 kilometers and a payload of 1000-1500 kilograms. The Kelt was powered by a rocket engine and was guided by an active radar or anti-radar seeker to its target, at high subsonic speeds. But, with a length of 9.5 meters and a wingspan of 4.6 meters, flying at high altitude and in a straight line to its target, the Kelt constituted a large, vulnerable target. The likelihood that it would penetrate Israel's airdefense system was rather low. On the other hand, its cheap cost and the fact that it needed no pilot made it a rather attractive option. The second possible deterrent system was the Scud B (SS-1B) surface-to-surface missile with a range of 280 kilometers. With a Circular Error Probability (CEP) of about 900 meters, the Scud was not accurate enough to hit Israeli planes in their bases, but since there was no defense against them, the Scuds could threaten Israeli cities, thus deterring the IAF from hitting targets in Egypt's rear.<sup>36</sup>

The Soviets were reluctant to sell the Egyptians such systems, mainly for political considerations. As Brezhnev told his audience in his secret speech in the Crimea in July 30, "We organized our military shipments for [Egypt and

Syria], so as to help for the consolidation of their defense, but not to give reasons for adventurous moves."<sup>37</sup> Egypt had first requested the Kelt and the Scud-B systems during Sadat's visit to Moscow in March 1971. But the Soviets agreed to supply the Kelt only on condition that it would be used against Israel with their consent. Sadat refused and the deal was put on hold.<sup>38</sup> The Scud deal did not reach even this stage. In October 1971, the Kremlin agreed to sell the Kelt system without any limitations, but the deal was delayed.<sup>39</sup> The first Kelt systems arrived in Egypt in early 1973 and a first launching test from a Tu-16 bomber took place in May.<sup>40</sup> In March 1973, the Soviets also agreed to sell the Egyptians a Scud-B brigade. The missiles and the launchers arrived in Alexandria in early August, and intensive training under Soviet instruction started immediately.<sup>41</sup> Despite this effort the Scud Brigade was not fully operational when fighting started in early October.

By October 1973 the Egyptians estimated that the combination of the available Mirage attack planes—though in small numbers—the Kelt systems that had become operational, and the presence of a Scud brigade on Egyptian soil gave them a certain ability to deter IAF from hitting their rear. As will be shown later, the Israelis saw it quite differently. This estimation gap was one of the main causes for Israel's intelligence failure.

The third problem, which derived from Israel's air superiority, was the limited ability of the Egyptian army to defend itself against Israeli air raids in the Sinai, beyond the 10 kilometer compartment of terrain that was covered by the SAM sites west of the Suez Canal. This problem had put the Egyptian planners on the horns of the dilemma: On one hand, any advancement of ground forces out of the range of the air-defense layout would have exposed it to effective air attacks. On the other, the occupation of a too-narrow strip along the canal could be insufficiently significant from a political perspective and too risky from a military one. Many senior Egyptian policy-makers, including the War Minister until October 1972, Gen. Ahmed Sadiq, estimated that such a limited move would leave the attacking force both without the defense of the canal and dependant on supply lines stretched over the canal, which could be an easy target for ground and air fire. 42

In confronting this challenge the Egyptians relied on two types of solutions. At the operational level they purchased massive quantities of mobile anti-aircraft systems—primarily the SA-6 mobile batteries capable of crossing the canal, portable SA-7 anti-aircraft missiles carried by the infantry, and the mobile ZSU-23-4 radar guided anti-aircraft guns (Shilka), which were highly effective against low-flying aircraft. By October 1973 the Egyptian air-defense system included fifteen SA-6 batteries, 5,000 SA-7, and a large amount of the Shilka systems. At the strategic level, the decision to limit the goal of the war to the occupation of a narrow strip along the canal solved much of the problem. As the course of the war shows, the combination of these two solutions