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## **Surprise Attacks—Are They Inevitable? Moving Beyond the Orthodox–Revisionist Dichotomy**

OR HONIG

*This study seeks to adjudicate between the two schools of intelligence: the “Orthodox School” which argues that the inherent pathologies and obstacles in the intelligence work make a significant degree of successful surprise inevitable in almost all attempts and the “Revisionist School” which asserts that the roots of surprise attacks lie in avoidable mistakes of certain intelligence officials. By examining the classic case of the Yom Kippur surprise attack, the paper finds the middle ground between the two schools. It distinguishes between the real limits facing analysts and surmountable obstacles. Based on this distinction it determines which problems can be corrected or mitigated and which cannot. It also provides criteria to determine the varying levels of difficulty for predicting attacks. Finally, it finds that intelligence inevitably involves making subjective judgments and utilizing experience correctly, and therefore successful prediction depends on the quality of the analysts.*

Is a high incidence of surprise attack inevitable, or is it the result of avoidable failures? Is it a tragedy or a blunder? These questions have received contradictory responses from the two competing schools of intelligence. The Orthodox School, which is based on more than fifteen cases of surprise attack after the Second World War, argues that inherent pathologies and obstacles

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in intelligence work make every attempt at surprise attack an almost certain success. In contrast, the Revisionist School asserts that the roots of surprise attacks lie in avoidable failures of intelligence officials.

This study adjudicates between these two schools and finds the middle ground. It distinguishes between the real limits facing analysts and other surmountable obstacles and determines to what extent methodological professionalism can make a difference.

The Orthodox-Revisionist debate is composed of two main parts: the “analysis problem” is concerned with the flaws that lead intelligence agencies to make the “wrong estimate” regarding the likelihood of an attack. The “warning-response problem” deals with the difficulties in formulating an effective response to intelligence warnings due to the problematic nature of the estimates, leaders’ lack of receptivity, or other factors that complicate the victim’s capacity to provide an adequate response in a timely fashion. Due to space limitations, I deal only with the first part of the debate. Hence, this study should be regarded only as the first step in trying to resolve the debate between the two schools.

Existing Orthodox studies typically present a long list of causes for surprise attack, the combined effects of which make prevention (and prediction) an impossible task.<sup>1</sup> Some of these factors are preventable or can be remedied, whereas others are more inherent and can hardly be overcome or manipulated by analysts or policy makers. The question of which factors are more important underlies the main debate between the Orthodox and Revisionist Schools (see below).

Revisionists have criticized Orthodox scholars for failing to trace the specific effect of each factor and thus obscuring the assessment of which variables have the most causal weight.<sup>2</sup> I recognize, however, that such a task is extremely difficult. Such cases are complex, evidence is still incomplete, and it is hard for even the analysts involved to know exactly which factors determined their decisions.

Therefore, I provide only a tentative assessment of the relative aggregate causal weight of the two types of factors (inherent barriers or surmountable obstacles) in leading to the Israeli surprise of Yom Kippur in October 1973. Fortunately, testimonies and memoirs of some of the actors are now available, so we can begin to assess which factors guided analysts’ judgment. Where such testimonies are not available I will make indirect inferences about what shaped analysts’ opinions. I will use a process-tracing method, which traces

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<sup>1</sup> Roberta Wohlstetter, *Pearl Harbor: Warning and Decision* (Stanford, CA: Stanford University Press 1962); Richard K. Betts, *Surprise Attack: Lessons for Defense Planning* (Washington, DC: Brookings Institution, 1982); and Ephraim Kam, *Surprise Attack: The Victim’s Perspective* (Cambridge, MA: Harvard University Press, 1988).

<sup>2</sup> Ariel Levite, *Intelligence and Strategic Surprises* (New York: Columbia University Press, 1987), 24–25.

changes in people's beliefs and attempts to attribute them to certain events in the environment.<sup>3</sup>

I chose the case of the Yom Kippur surprise since it was a war-initiating attack. A prominent Revisionist scholar, Ariel Levite, has inappropriately based his case on intrawar attack (Midway), which is characterized by far less uncertainty. During an ongoing war, analysts do not have to answer the question whether or not the enemy will attack, but need to be concerned only with the questions of where and when since the belligerent intentions of the enemy are already known.<sup>4</sup>

Investigating the Yom Kippur surprise seems optimal for adjudicating between the two schools also because both schools regard it as a clear case in their favor. The Orthodox School often notes that even highly experienced agencies with excellent collection and analysis capacities fail to predict incoming attacks. They point, inter alia, to the Yom Kippur case as evidence for their claim.<sup>5</sup> Revisionist scholars have stressed that the Agranat commission (for the investigation of the Yom Kippur surprise) has attributed "intelligence failure" to blatant mistakes on the part of intelligence analysts.<sup>6</sup>

I will open the "black box" of the Israeli Directorate of Military Intelligence, Aman, the agency which gave the estimate prior to Yom Kippur, in order to link specific behavior by certain officers to a particular outcome. By understanding who exactly got it right or wrong and why, we can learn how pervasive the factors were that led to the failure as well as the degree to which the causes of success are systematic.

Examining the estimates of different analysts increases the number of observations in this single case. This allows for variation in the real dependent variable—the ability of analysts to predict successfully. Thus, this case can

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<sup>3</sup> Alexander George and Andrew Bennett, *Case Studies and Theory Development* (Cambridge, MA: MIT Press, 2004), 205–32.

<sup>4</sup> On the problems of using an intrawar attack as the basis of the Revisionist argument, see Richard K. Betts, "Surprise, Scholasticism, and Strategy," *International Studies Quarterly* 33 (September 1989), 331–32.

<sup>5</sup> Avi Shlaim, "Failures in National Intelligence Estimates: The Case of the Yom Kippur War," *World Politics* 28, no. 3 (April 1976): 348–80; Michael Handel, *Perception, Deception, and Surprise: The Case of the Yom Kippur War*, Jerusalem Papers on Peace Problems, no. 19 (The Hebrew University of Jerusalem, The Leonard Davis Institute for International Relations, 1976); Michael Handel, "The Yom Kippur War and the Inevitability of Surprise," *International Studies Quarterly* 21, no. 3 (September 1977): 461–502; Janice G. Stein, "The 1973 Intelligence Failure: A Reconsideration," *Jerusalem Quarterly* 24 (1982): 41–54; Janice G. Stein, "Military Deception, Strategic Surprise, and Conventional Deterrence: A Political Analysis of Egypt and Israel, 1971–73," *Journal of Strategic Studies*, 5 (1982): 94–121; and Janice G. Stein, "Calculation, Miscalculation, and Conventional Deterrence II: The View From Jerusalem," In *Psychology and Deterrence*, eds., Robert Jervis, Richard N. Lebow, and Janice G. Stein (Baltimore: Johns Hopkins University Press, 1985), 60–88.

<sup>6</sup> Abaraham Ben Zvi, "Perception, Misperception and Surprise in the Yom Kippur War," *The Journal of Conflict Studies* 15 (Fall 1995), 5–29; and Zvi Lanir, *Fundamental Surprise: The National Intelligence Crisis* [In Hebrew] (Tel Aviv: Ha-Kibutz Ha-Meuahad and Jaffee Center, 1983).

have heuristic value for finding new causal mechanisms to explain analysts' success or failure.<sup>7</sup>

The study provides criteria to determine the varying levels of difficulty for predicting attacks. It finds that it was slightly easier to predict the attack than in many cases of surprise attack because of available suspicious information and the noncrisis strategic situation. However, subjective judgment was necessary in order to gauge Anwar Sadat's intent to go to war. Therefore, it was impossible to predict his decision even with the best social science methods or a better intelligence structure.

My main argument is that successful prediction crucially depends on having the right people since intelligence involves making subjective judgments and knowing how to utilize experience (problematic as it may be as a guide for analysis). I therefore posit that intelligence agencies are most likely to successfully predict an attack (that is, assign a probability of more than 50 percent) only under a very narrow set of conditions: when there is a unique combination of analysts with certain talents (to be specified below) occupying the most important positions in the organizational hierarchy and especially good intelligence information available in noncrisis situations. To use a medical metaphor, diagnosing a rare disease requires both the appearance of unique symptoms as well as the availability of excellent doctors.

My analysis of the case study tries to resolve the four main debates between the two schools, and its findings support my general argument that "people matter."

First, I will assess the usefulness of tactical indicators and show that it was impossible to rule out the option of a military exercise. Hence, ambiguity and uncertainty rather than negligence were at play in leading to the faulty estimate. At best, I am willing to concede to Revisionists that there were some suspicious signals that could perhaps have been picked up by the right people and might have led to a reinterpretation of existing evidence. I therefore conclude that analysis of information usually requires a heavy dose of good judgment.

Second, in order to determine to what extent methodological professionalism (using "tools" and avoiding "mistakes") can improve prediction, I will examine whether what Revisionists call "unprofessional mistakes" were really avoidable and to what extent analysts had good and reliable tools at their disposal. I will argue that analysts could not entirely avoid making mistakes due to the inherent difficulties in making intelligence estimates, and officials had no foolproof procedures to rely upon. Given that analysts have no safe procedures to follow they must utilize their experience, although I show that it may be misleading on some occasions. I conclude that methodological professionalism is hardly a straightforward matter of following procedures, but

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<sup>7</sup> George and Bennett, *Studies and Theory Development*, 75.

requires a great deal of skill and judgment in order to strike a fine balance between the different tradeoffs inherent in intelligence work.

Third, I will assess the pervasiveness of organizational and psychological “pathologies” (that is, phenomena in human psychology and organizational life that disrupt information processing). I will demonstrate that bold and open-minded analysts with certain qualifications were able to overcome these organizational and psychological pathologies in their personal thinking and behavior. On the other hand, I will also show that even these talented officials could not influence the final estimate since they did not occupy the most important positions in the agency.

Fourth, I will examine to what extent reforms of both the intelligence process and structure can help improve the accuracy of predictions. I argue that every reform step often brings with it other unexpected complications. I will show that even a better intelligence process and a different structure would not have necessarily improved prediction in the Yom Kippur case. Even with the best reforms, intelligence agencies are likely to fail if they are not staffed with the right people. Finally, I will conclude by drawing both theoretical and policy implications from my study.

Before approaching the case, I will introduce the Orthodox-Revisionist debate and present my basic argument that finds the middle ground between the two schools. A short historical background of the Yom Kippur case will follow.

## THE ORTHODOX AND REVISIONIST SCHOOLS OF INTELLIGENCE

The Orthodox School pessimistically asserts that intelligence agencies are unlikely to detect surprise attacks due to inherent limits in the intelligence process.<sup>8</sup> These limits consist of a large number of obstacles, which prevent accurate and timely threat perception and can hardly be overcome. Richard Betts explains best why most attempts to attack by surprise are likely to succeed:

Surprise attacks often succeed despite the availability of warning indicators. This pattern leads many observers to blame derelict intelligence officials or irresponsible policymakers. The sad truth is that the fault lies more in natural organizational forces, and in the pure intractability of the problem, than in the skills of spies or statesmen . . . Intelligence postmortems usually discover indicators that existed in advance but were obscured or contradicted by other evidence . . . other causes abound . . . [They] are

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<sup>8</sup> Richard K. Betts, “Analysis, War and Decision: Why Intelligence Failures Are Inevitable,” *World Politics* 31, no.1 (October 1978): 88-89; Richard K. Betts, “Surprise Despite Warning: Why Sudden Attacks Succeed,” *Political Science Quarterly* 95, no.4 (Winter 1981): 572; Stein, “The 1973 Intelligence Failure: A Reconsideration,” 51; and Kam, *Surprise Attack*, 215.

deeply rooted in the complexity of threats, the ambiguity of partial warnings, and the ability of plotters to overcome obstacles, manipulate information and deceive victims.<sup>9</sup>

The Revisionist School is much more optimistic and stresses that surprise attacks are not inevitable but are a result of avoidable mistakes and specific malfunctions that can be anticipated and remedied in advance. It argues that the pessimistic conclusion of the Orthodox School reflects a selection bias. Too much attention has been paid to surprise attacks and less to successful intelligence predictions.<sup>10</sup> Consequently, less attention has been given to how intelligence agencies can reduce the likelihood of surprise attacks. Without attention to intelligence successes, it is difficult to develop a normative-positive theory of how intelligence analysis should be done in order to improve the ratio of successes to failures.<sup>11</sup>

### Surprise Despite Warning—Do Available Warnings Matter?

The Orthodox School argues that surprise is almost certain even in cases where there is ample warning information available or, in the words of Betts, surprise occurs “despite warning.”<sup>12</sup> The analysts’ low receptivity to warnings emanates from the warnings’ inevitable ambiguity and their false interpretation due to inherent limitations of the human mind and inherent flaws in the organizational processes.

The Revisionist School challenges this conclusion, asserting that the lack of good warnings and not other obstacles hinders the capacity to predict. Hence, the principal difficulty is insufficient intelligence gathering efforts and not any inherent limitations of analysis.<sup>13</sup> When good evidence is available, faulty estimates are due to analysts’ egregious mistakes.

## THE MAIN ARGUMENT: MOVING BEYOND THE ORTHODOX-REVISIONIST DICHOTOMY

In light of the recurrent success of surprise attacks, there seems to be a great deal of plausibility to the Orthodox claim that there are real limits

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<sup>9</sup> Richard K. Betts, “Fixing Intelligence,” *Foreign Affairs* 81 (2002): 50. Notably, Betts puts most of the causal weight for surprise attacks on the consumer’s behavior rather than on the producers of intelligence.

<sup>10</sup> Levite, *Intelligence and Strategic Surprise*, 23. Although Betts does recognize this drawback, most Orthodox scholars have failed to investigate intelligence coups in order to find the systematic causes of successful predictions. Betts, “Surprise Despite Warning,” 551.

<sup>11</sup> For the most recent Revisionist attempt to create such a theory, see Loch Johnson, “Bricks and Mortar for a Theory of Intelligence,” *Comparative Strategy* 22, no. 1 (2003): 1–28. Betts also recognizes this problem. Betts, “Surprise Despite Warning,” 551.

<sup>12</sup> Betts, “Surprise Despite Warning,” 551.

<sup>13</sup> Levite, *Intelligence and Strategic Surprises*, 178.

to what intelligence can provide. The problem is that the Orthodox School has lumped together all the obstacles to warning, without examining which ones are surmountable or less severe. The Revisionist claim that all obstacles are surmountable seems equally untenable. The necessary question then is: What are the real inherent limits that cannot be overcome and what is just an overstatement by Orthodox scholars?

My middle ground between the two schools is that the prediction of an attack is hard mainly because of uncertainties inherent in international politics and to a somewhat lesser extent because of organizational or psychological pathologies. In contrast to the Revisionists' optimism, analysts can never attain an ideal intelligence picture—gaps will always remain that cannot be filled. Judgment and speculation are therefore inevitable. Even the best military data cannot eliminate these uncertainties.

I also argue that the difficulty of the task for intelligence analysts varies across cases. The level of difficulty is determined not just according to the information available, but also according to the type of "strategic situation" that precedes the attack. Not all war-initiating surprise attacks occur following an international crisis. In strategic situations where there is no "crisis instability" (the potential for inadvertent war as a result of miscalculation and reciprocal fears of surprise attack) the task of prediction is easier since it is possible to rule out the argument that the enemy is mobilizing out of purely defensive motives. As I explain below, such situations include war situations or situations of enemy mobilization that do not occur in a crisis.

Betts has distinguished between two types of strategic situations, which allow issuing two different kinds of warnings with different levels of difficulty: an ongoing war and a crisis.<sup>14</sup> I add a third type—peacetime military buildup—with a medium level of difficulty.

*An ongoing war/terror campaign (situation type 1).* Here analysts must provide what Betts called a "Factual-Technical Warning."<sup>15</sup> This involves detecting a certain tangible threat and delivering the information. The collection of observable data about what the target is doing is the crux. This is usually concrete and reliable data about the timing or location of an attack where the intent is clear, as in an ongoing war or a planning of an attack by a well-known terrorist group. Detecting the Japanese plans to attack Midway in 1942<sup>16</sup> or the plans of Hezbollah to abduct Israeli soldiers<sup>17</sup> fall into this category.

*Slow/peacetime military build-up (situation type 2).* This is a situation of the enemy's military build-up or changes in its deployments, in the context of

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<sup>14</sup> Richard Betts, "Intelligence Warning: Old Problems, New Agendas," *Parameters* 28 (1998): 26-27.

<sup>15</sup> *Ibid.*, 27.

<sup>16</sup> Levite, *Intelligence and Strategic Surprises*, 95-134.

<sup>17</sup> Zeev Schiff, "Kidnap of Soldiers in July was Hezbollah's Fifth Attempt," *Ha'aretz*, 19 September 2006.

no political tension that could account for these tactical steps (for example, crisis and political upheaval). The military indicators may be more telling of intentions in this case than in a crisis situation since it is more likely that the enemy's military deployments do not reflect defensive precautions taken as a response to the victim's military maneuvers. Instead, the enemy's threatening steps may indicate with higher likelihood one of two alternatives: true preparations or a large-scale exercise taken for either genuine training purposes or as a bluffing ploy for bargaining purposes. Such a situation also exists when the victim is a status quo state which is widely known to have no incentive to attack because it would be less plausible that the enemy state really believes that the victim intends to go to war.

In such situations the task for analysts is essentially to distinguish between exercises and real preparations for war.<sup>18</sup> This kind of task gives a greater role to the analysis of military data than in situation type 3 (see below).

Even though the military indicators in such situations cannot fully determine the intentions of the enemy, they can raise suspicions about the possibility of war and can lead to a reinterpretation of existing evidence. At the least, changes in military indicators should alert analysts to possible political indicators. Hence, when tactical indicators are alarming, the analyst should first reexamine whether there has been any change in the enemy's intentions. Subsequently, he or she may issue a warning to the effect that "the enemy's mobilization and deployments are arraying the *readiness* to attack and are consistent with the intention to do so."<sup>19</sup>

The detection of "Operation Barbarossa" falls into this category since the Soviet Union had extensive raw intelligence on German military preparations for invasion; and there was no political logic that could justify such a massive military deployment on Germany's eastern borders when the German forces were needed for fighting the allies on the western front.<sup>20</sup>

*Situations of crisis or international tension (situation type 3).* This is an interactive developing situation, where the enemy may be simply responding to the victim's moves. Estimation during crisis may be especially difficult also due to the security dilemma.

In a crisis, the military indicators are largely unhelpful for two reasons. First, the issue is not just what the enemy is prepared to do, but whether it chooses to attack. Second, international tensions provide a full explanation

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<sup>18</sup> Discerning the significance of large-scale military changes in the enemy's deployment entails integrating many bits of military data to create a whole picture or comparing a present case to prior similar incidents to trace the differences.

<sup>19</sup> Scholars have insufficiently stressed the difference between general strategic offensive capability and an immediate operational readiness/preparedness to attack. Readiness involves the capacity to shift from a current position to a combat position within a short notice and is highly significant in giving early warning. On readiness, see Richard Betts, *Military Readiness: Concepts, Choices, Consequences* (Washington, DC: Brookings Institution, 1995).

<sup>20</sup> Gabriel Gorodetsky, *Grand Delusion: Stalin and the German Invasion of Russia* (New Haven, CT: Yale University Press, 1999), 52-56.

for the military build-up. Therefore, the analysts are compelled to base their prediction primarily on their estimate of the enemy's intentions. In this type of situation, analysts can only issue what Betts calls a "Contingent-Political Warning" which means: "if the enemy believes X and we do Y, then he is likely to do Z."<sup>21</sup>

Making an estimate in this type of situation is least suited to the military analyst's skills, since even with the best information (1) the uncertainty and misperceptions are great; and (2) it requires a great deal of artful political analysis and a deep understanding of the enemy.<sup>22</sup> Egypt's task of predicting Israel's intentions during the May 1967 crisis prior to the war falls into this category since the deployments of both sides could have been construed as purely defensive.<sup>23</sup>

Detecting the Yom Kippur attack as early as 30 September falls into the second category for two reasons: first, there was no crisis on the Egyptian front that could account for Egypt's military build-up, especially since Israel had no incentive to attack Egypt; and second, Aman's main task was to provide a "tactical warning," that is, a short-term warning of the enemy's immediate plan to attack (in contrast to a "strategic warning" of a long-term intention to attack, given well in advance).<sup>24</sup> In order to be effective, the warning had to be given at least 76 hours before the attack—the time needed by the Israel Defense Forces (IDF) to make preparations according to the defensive operational plan "Dovecote."<sup>25</sup>

## THE RUN-UP TO THE SURPRISE—HISTORICAL BACKGROUND

The seeds of the 1973 war were sown with Israel's conquest of the Egyptian Sinai peninsula in 1967. Egyptian President Gamal Abd an-Nasser tried to use the War of Attrition to force Israel to make a political compromise, but failed. His successor Anwar Sadat proclaimed 1971 the "year of decision." When 1971 passed with no Egyptian action, Israel's main intelligence agency, Aman, saw Sadat's proclamation as a bluff. Later in July 1972, when Sadat expelled over twenty thousand Soviet advisers, Aman inferred that Egypt had limited its military option. Aman did not realize that this step actually provided Sadat with greater freedom of action since the Soviet Union was opposed to a war

<sup>21</sup> Betts, "Intelligence Warning: Old Problems, New Agendas," 30.

<sup>22</sup> Robert Jervis, "Intelligence and Foreign Policy: A Review Essay," *International Security* 11 no.3 (1987): 141.

<sup>23</sup> Janice G. Stein, "Inadvertent War and Miscalculated Escalation: The Arab Israeli War of 1967," in *Avoiding War: Problems of Crisis Management*, ed. Alexander L. George (Boulder, CO: Westview Press, 1991), 126–59.

<sup>24</sup> Alexander George and Richard Smoke, *Deterrence in American Foreign Policy: Theory and Practice* (New York: Columbia University Press, 1974), 568.

<sup>25</sup> Lanir, *Fundamental Surprise* [In Hebrew], 18–22; and Hanoach Bartov, *Dado: 48 Years and Additional 20 Days* [In Hebrew] (Tel Aviv: Maariv, 1978), 264.

that might hinder its efforts for détente. For Sadat, the status quo of “no war, no peace” was intolerable both politically (as it led to internal dissent) and economically (since Egypt did not receive any revenues from the Suez Canal, which was closed).

Despite the Egyptian motivation, Aman adhered to the concept that made the following assumptions: first, Egypt would not attack prior to solving their air superiority problem (by acquiring long range jets from the Soviets to attack Israeli airfields and Scud missiles to deter the Israelis from launching deep penetrating attacks into Egypt); and second, Syria would not attack without Egypt. This concept led Aman to correctly assign low probability to the possibility of war on three instances of Egyptian mobilization in the previous three years: December 1971 and 1972, and May 1973. By the summer of 1973, Aman reports showed that Egypt had partially solved the air superiority problem by getting Soviet SAMs to protect its forces from air raids. It also received Scud missiles for deterrence purposes.<sup>26</sup>

On 13 September 1973, Syria and Israel fought an air battle that ended with a Syrian loss of 13 jets. Aman expected some sort of retaliation and interpreted the offensive Syrian deployment as either preparation for a limited retaliatory strike or defense against Israeli reprisals (possibly for Palestinian terror activities). Egyptian deployments were seen as normal for an announced exercise (“Tahrir 41,” scheduled to begin on 1 October) but also as possible defensive measures for fear of being caught up in an Israeli Syrian conflict.<sup>27</sup>

On 25 September, in a secret meeting with the Israeli Prime Minister, King Hussein of Jordan relayed a warning of an impending Syrian attack to reoccupy the Golan Heights asserting that it was probably coordinated with Egypt. The Director of Aman, Maj. Gen. Eli Zeira, dismissed this warning since he thought that the Jordanian intelligence was wrong.<sup>28</sup> On 27 September, Egypt mobilized a large number of reserves, but publicly announced that the newly conscripted soldiers would serve only until 7 October. At least since 30 September, it was reported that Egyptian bridging equipment had been advanced and crossing locations were being prepared.<sup>29</sup>

Late in the evening of 30 September, a HUMINT (human intelligence) source of the Mossad (the HUMINT collection agency) warned that the Egyptian exercise (due to begin the following day) would end in a real canal crossing. Zeira passed the information on the following day and said he considered the

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<sup>26</sup> Arieh Shalev, “Intelligence in A Test: A Personal Testimony,” in *Thirty Years Later: Challenges to Israel Since the Yom Kippur War* [In Hebrew], ed. Anat Kurtz (Tel Aviv: Jaffe Center for Strategic Studies, 2003), 19.

<sup>27</sup> Bartov, *Dado*, 282–86.

<sup>28</sup> Uri Bar-Joseph, *The Watchman Fell Asleep: The Surprise of Yom Kippur and Its Sources* (Albany: SUNY Press, 2005), 90, 98.

<sup>29</sup> *Ibid.*, 97, 103; and Arieh Shalev, *Success and Failure in Alert* [In Hebrew] (Tel Aviv: Ministry of Defense, 2006), 86.

report baseless.<sup>30</sup> Reports received on 2 October included Syrian movement of bridging equipment, SAM batteries, and advancement of Sukhoi fighter jets 90 kilometers away from the border.<sup>31</sup>

On 4 October, an air reconnaissance mission in the Sinai revealed an unprecedented build-up of forces (five divisions and massive numbers of artillery). In the late afternoon it was learned that the Soviets were preparing to evacuate women and children but not military advisers. By the morning of 5 October, Aman also reported that Soviet naval vessels were departing Arab ports.<sup>32</sup> However, Zeira did not accept the interpretation that war was the reason for the hasty evacuation.<sup>33</sup> During the same day, Zeira misled the Chief of Staff and Minister of Security by telling them that Aman was using the special SIGINT means of collection (eavesdropping devices planted in strategic military locations). A week before, Zeira had refused the exhortations of his subordinates to activate those means.<sup>34</sup>

The Mossad, after learning from its “senior spy” in Egypt that an Arab attack would come at sunset that day (6 October), informed Aman Director Zeira of the warning at about 0400 hours.<sup>35</sup> Zeira became more convinced of a coming war and phoned the Chief of Staff to inform him. The Arab attack began at about 1400 hours on 6 October.

#### WAS THE WRITING ON THE WALL? ASSESSING THE USEFULNESS OF THE INTELLIGENCE DATA

I argue that tactical indicators alone cannot reveal intentions since inferring meanings from military indicators requires using good judgment. First, I present the debate between the two schools about the nature of military indicators. Second, I show that even the excellent evidence prior to Yom Kippur could not have allowed analysts to rule out the “no war” interpretations. I concede to Revisionists that there were some “suspicious signals,” but these were in no way conclusive indications of war. Third, I show that contrary to Revisionists’ expectations, it was the political analysts who got it right on the Egyptian issue and not the empiricist military experts. I conclude that due to the indeterminacy of the evidence, analysts inevitably have to rely substantially on their experience and good judgment in making inferences from the evidence.

<sup>30</sup> Arie Braun, *Moshe Dayan and the Yom Kippur War* [In Hebrew] (Tel Aviv: Edanim 1992), 45-46.

<sup>31</sup> Bar-Joseph, *The Watchman Fell Asleep*, 114.

<sup>32</sup> Uri Bar Joseph, “Israel’s Intelligence Failure of 1973: New Evidence, A New Interpretation, and Theoretical Implications,” *Security Studies* 4 no.3 (Spring 1995), 595-96.

<sup>33</sup> Bar Joseph, *The Watchman Fell Asleep*, 136-39.

<sup>34</sup> Yoel Ben Porat, *Neila* [In Hebrew] (Tel Aviv: Edanim, 1991), 103.

<sup>35</sup> Shalev, *Success and Failure in Alert*, 8.

## How Useful Are Military Indicators?

Both schools tend to agree that political indicators can be problematic since they can be manipulated by leaders.<sup>36</sup> Therefore, the real debate is about the usefulness of military data. The Orthodox School argues that military indicators are never clear-cut. It holds that there is no such thing as an unambiguous indicator of likely attack that is independent of a judgment about intent. There can only be unambiguous indications of the capability to attack. Hence, analytical judgment and speculation are an inherent part of the intelligence work.<sup>37</sup>

The Orthodox School explains that even military indicators are ambiguous for two reasons. First, tactical indicators are frequently open to several plausible and conflicting interpretations.<sup>38</sup> Second, it is almost impossible to get the golden pieces of unequivocal intelligence.<sup>39</sup> Betts notes, “Attackers seldom have communications security so poor or deception so incompetent that signals admit of no ambiguity or doubt to the victim.”<sup>40</sup>

Orthodox scholars add that since the advent of technology and quick means of transportation, it has become very difficult to trace sufficiently in advance the real-time military changes that take place as part of redeployment for an attack.<sup>41</sup> The shift from a defensive posture to an offensive attack can simply happen too fast.

Revisionists disagree. First, they hold that in most cases tactical indicators and evidence about changes in capability will be clearer and more reliable than evidence about intentions. Hence, relative empiricism allows analysts to detect an impending war, and exercising judgment is not as warranted as Orthodox scholars believe.<sup>42</sup> Second, Revisionists argue that good indicators can be picked up on time if the intelligence gathering system works hard enough and is guided properly.<sup>43</sup>

So why do surprise attacks occur? Revisionists hold that negligence and laziness of analysts are in play much more than ambiguity of indicators. The task of integrating the minute details of military indicators is so laborious that some analysts unjustifiably resort to easy speculation. It is hard to be sensitive and alert to new tactical information. Empiricism may be harder

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<sup>36</sup> Levite, *Intelligence and Strategic Surprise*, 67; and Michael Handel, *War, Strategy and Intelligence* (London: Frank Cass, 1989), 237.

<sup>37</sup> Betts, “Surprise, Scholasticism, and Strategy,” 333; and Robert Jervis, “Reports, Politics and Intelligence Failures: The Case of Iraq,” *The Journal of Strategic Studies* 29 (February 2006): 44.

<sup>38</sup> Stein, “The 1973 Intelligence Failure: A Reconsideration,” 48.

<sup>39</sup> Betts, “Surprise, Scholasticism, and Strategy,” 332.

<sup>40</sup> *Ibid.*, 333.

<sup>41</sup> Handel, *War, Strategy and Intelligence*, 231-32.

<sup>42</sup> Levite, *Intelligence and Strategic Surprise*, 177.

<sup>43</sup> *Ibid.*, 176, 185.

for some people, but at least one Revisionist has regarded it as an essential quality for analysts.<sup>44</sup>

### Examining the Diagnosticity of the Evidence Prior to Yom Kippur

A good way to examine the utility of intelligence information is to assess its degree of “diagnosticity.” The former CIA official, Richards Heuer, has coined the term diagnosticity to refer to the extent to which a piece of evidence helps determine between alternative interpretations. Highly diagnostic information must be consistent only with certain interpretations and not with others.<sup>45</sup> Measuring the diagnosticity of the evidence prior to Yom Kippur can be a good test to resolve this debate since both schools agree that Aman had excellent military data available.<sup>46</sup>

Specifically, I will examine to what extent these indicators allow the ruling out of the “no-war” interpretations. According to Heuer’s definition, highly diagnostic evidence would allow analysts to determine, solely based on the military data, whether the Egyptian and Syrian mobilizations were an exercise or real preparations for an attack. Therefore, Revisionists must demonstrate that the specific differences in indicators in October 1973 compared to the previous occasions made them unambiguously more threatening.

There was in fact a difference of quantity between the October and prior deployments in the Egyptian case.<sup>47</sup> The Egyptian maneuvers were unprecedented in scale. As Minister of Security Mosheh Dayan said “Just from the numbers you can have a stroke.”<sup>48</sup>

However, the large scale of the October military deployments could logically be interpreted as part of an Egyptian coercive flexing of muscles designed to pressure Israel to accept Egypt’s negotiations positions. Although the maneuvers of October were larger than previous occasions, so were those of May, and yet they turned out to be just an exercise. The trend of increasingly more threatening mobilizations meant that Egypt was becoming more ready for war from time to time but could not indicate when the mobilizations were part of an attack.

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<sup>44</sup> Yoel Ben Porat, “Intelligence Estimates—Why Do They Collapse?” in *Intelligence and National Security*, eds., Zvi Offer and Avi Kober (Tel Aviv: Ministry of Defense, 1987), 234.

<sup>45</sup> Richards J. Heuer, *Psychology of Intelligence Analysis* (Washington, DC: Center for the Study of Intelligence, 1999), 45.

<sup>46</sup> Ben Porat, “Intelligence Estimates—Why Do They Collapse?” 234; and Bar Joseph, *The Watchman Fell Asleep*, 6.

<sup>47</sup> The Syrian deployment, as depicted by Aman, was extremely unusual: 750-850 tanks (600 in the first line) as compared with only 250 tanks in May; 550 artillery guns (370 in the first line) as compared with only 180 in May; 31 SAM batteries between Damascus and the front as compared to only one or two in January. The Egyptian deployment as revealed by the reconnaissance picture of 4 October included the following: 1,110 artillery guns as compared to only 800 on 25 September and about 600 in May. Bar Joseph, *The Watchman Fell Asleep*, 127, 143, 158.

<sup>48</sup> Bartov, *Dado*, 315.

There were also some signals that showed a qualitative difference between the October mobilization and prior ones. First, certain tactical indicators (for example, Syrian advancement of the Sukhoi fighter jets) were unusual for training exercises.<sup>49</sup> Second, the Syrian advancement of the SAM batteries was clearly designed to defend the advancement of Syrian forces into the Golan Heights and came at the expense of defending Damascus. This was highly unusual for the Syrians who adopted the Soviet military doctrine, which emphasized the aerial defense of the regime centered in the capital.<sup>50</sup>

Yet, even these elements, which were unprecedented and unique to October, were not enough to prove that the mobilizations were preparations for an attack. They could be construed as part of Egypt's ongoing efforts to improve its future war option or as Sadat's attempt to frighten the Israelis into thinking that Egypt was seriously planning to attack in the near future.

Finally, there were some pieces of evidence that did not fit well into the interpretation of a large-scale military exercise. First, the Egyptians limited their SIGINT (signal intelligence) traffic in the exercise lines of communication; second, a convoy of 300 trucks carrying 4,500 tons of live ammunition from the emergency stocks was moving toward the front; third, the Cairo International Airport was closed down; and fourth, the exams of tens of thousands of senior officers were delayed, which should have raised the question why a military exercise had been scheduled for such an important date (thus delaying their promotion).<sup>51</sup> Yet, even these threatening signals cannot rule out the interpretation of an exercise.

Evidently, the diagnosticity, even of this excellent evidence, was insufficient. Even new, more threatening indicators could not eliminate ambiguity. But, should analysts have dismissed these signals just because they conformed to nonthreatening interpretations?

It seems that certain indicators (for example, the shutting down of the airport) should have been seen as particularly odd since unlike large scale threatening military mobilizations, they were not useful for bargaining purposes. They only hurt the ailing Egyptian economy. Similarly, moving tons of live ammunition was extremely dangerous. Revisionists are right that experts who spend years immersing themselves in the enemy's military routines should be able to notice such irregular steps. However, even these few highly suspicious signals, which cannot fit the exercise interpretation well, provide far from conclusive evidence to rule it out.

It is doubtful whether it is possible to attain the golden piece of information that can truly distinguish between different interpretations sufficiently

<sup>49</sup> Bar Joseph, *The Watchman Fell Asleep*, 123.

<sup>50</sup> Braun, *Moshe Dayan and the Yom Kippur War*, 52; Michael Eisenstadt and Kenneth Pollack, "Armies of Snow and Armies of Sand: The Impact of Soviet Military Doctrine on Arab Militaries," *Middle East Journal* 55, no. 4 (Autumn 2001): 548-78; and William J. Lewis, *The Warsaw Pact: Arms, Doctrine, and Strategy* (Cambridge, MA: Institute for Foreign Policy Analysis, 1982), 113.

<sup>51</sup> Bar Joseph, *The Watchman Fell Asleep*, 103-4.

in advance of an attack. On most occasions the enemy will deliberately delay these more “quality signals,” which are far less ambiguous (for example, removal of landmines and all the camouflage nets) to the last stages before the attack. This was also the case in the Yom Kippur surprise. For instance, Sadat cleverly opened a presidential operations room only two days before the planned attack.<sup>52</sup>

To conclude, we should not embrace both extremes: military indicators are not always ambiguous and useless, nor are they clear-cut and indicative of intent to attack. Sometimes “qualitative symptoms” can raise strong suspicions. However, Revisionists must concede that even high-quality information cannot rule out competing interpretations. The indeterminacy of tactical indicators means that distinguishing between an exercise and war inevitably involves subjective judgment. Therefore, it seems highly likely that political interpretations will most often completely color all military indicators, thus making even the highly suspicious indicators largely unhelpful.

### Was Surprise Due to Negligence or the Ambiguity of Data?

Is it true that analysts’ insufficient care for detail, rather than the ambiguity of the data, caused them to misinterpret military indicators as Revisionists claim? Although we have established that the data was ambiguous with regard to the intent to attack, another helpful test to examine this is to see who got it right and who got it wrong. This test is necessary since Revisionists could argue that what appear to scholars as minute details are actually very significant for professional analysts.

Specifically, Revisionists would predict that the empiricist military analysts, rather than the political analysts, would get it right. Yet, in fact, in Aman’s research division only the political analyst Albert Sudai, the head of the political section of branch 6 (the Egyptian affairs branch), got it right on the Egyptian issue.<sup>53</sup>

Furthermore, even empiricist military analysts made the mistake of interpreting the redeployments as an exercise. For instance, the analyst in charge of the military section of the Egyptian branch, Maj. Yaakov Rosenfeld, did not see that a war was coming until the last few days.<sup>54</sup> This shows that the limits of trying to discern intentions solely from military data play a much greater role than negligence in leading to faulty estimates.

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<sup>52</sup> Shalev, *Success and Failure in Alert*, 122.

<sup>53</sup> Bar Joseph, *The Watchman Fell Asleep*, 110

<sup>54</sup> *Ibid.*

## REEXAMINING METHODOLOGICAL PROFESSIONALISM: TOOLS AND MISTAKES

Scholars have used the term “professionalism” to refer to many areas of the intelligence job. Hence, it is important to clarify what I mean by this term. I do not deal here with analysts’ unethical behavior. My assumption is that such behavior is rare and does not reflect the normal nature of the intelligence problem.<sup>55</sup> Instead, I focus here on what Revisionists consider the sacrosanct rules that should serve as the basis of the profession—trying to avoid “mistakes” in the estimation process<sup>56</sup> and relying on the available “tools.” Since by definition any member of a profession (for example, lawyer, military officer, and professor) is a professional whether or not he does good work, I use a slightly different term—“methodological professionalism”—in order to distinguish the Revisionists’ conception of professionalism from simple, intuitive untutored analysis.

After introducing the main debate between the schools, I will examine to what extent intelligence agencies had useful techniques (that is, tools) to assess the credibility of their HUMINT sources. Subsequently, I will assess to what extent analysts could have avoided the so-called mistake of giving an estimate in the face of uncertainty. I find in both cases that the “professional principles” do not give the analysts a real guide for action due to the inherent dilemmas and contradictions of the job. Since, fundamentally, analysts cannot rely too much on these tools and procedures, they inevitably tend to rely on their common sense and experience. Therefore, in the third subsection, I examine to what extent experience can serve as a basis for predictions and find that even experience may sometimes mislead analysts.

### How Much Can Methodological Professionalism Make A Difference?

The Orthodox School argues that the analysts’ level of methodological professionalism is not a central variable since error is inherent in the nature of the job.<sup>57</sup> Revisionists will always find some analysts who got it right, but that hardly proves that they had better tools and skills than others.

The Revisionist School regards methodological professionalism as a crucial factor, which can be attained through training and argues that Orthodox scholars have underestimated the intelligence tools available to professionals. Hence, it focuses its attention on the substandard performance

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<sup>55</sup> Uri Bar Joseph has argued that Zeira suppressed the communication of raw data. Arieh Shalev who served as the head of Aman’s research division seems to disagree with him on this matter. Bar Joseph, *The Watchman Fell Asleep*, 180; and Shalev, *Success and Failure in Alert*, 94.

<sup>56</sup> “Mistake” refers here to a flawed analysis process and not to getting the outcome wrong.

<sup>57</sup> Knorr, “Failures in National Intelligence Estimates,” 458.

or unprofessional behavior of particular intelligence officers.<sup>58</sup> Yet, in the absence of a normative theory for how intelligence analysis should be optimally done, scholars lack criteria to distinguish between unprofessional mistakes and inherent difficulties that lead to surprise.

### Do Analysts Have Useful Tools for Assessing Credibility of Sources?

Intelligence analysts usually try to integrate different pieces of information into a whole picture or adjust their picture whenever a new report arrives. In order to know how to treat every new (suspicious or unsuspecting) incoming piece of information, or decide between two contradictory reports, analysts must rely on some kind of an assessment about the credibility of their different sources. But can they ever attain such a sound assessment?

Orthodox scholars have claimed that this is a major problem for which analysts have no clear solution. Analysts can never tell if a report is part of their enemy's deception plan or if their spy is lying to them.<sup>59</sup> They note that the constant possibility of disinformation forces intelligence officers to assess their sources' credibility (especially HUMINT sources) against the veracity of their predictions. Thus, false alarms paradoxically reduce the source's credibility, although the information may be true (that is, not disinformation).<sup>60</sup>

Stein claims that this phenomenon was in play in the Yom Kippur case.<sup>61</sup> Indeed, Aman received a warning from a top Egyptian spy in December 1972 and again in May 1973 that an attack was imminent. Since in each case the warnings contradicted the final outcome, they were interpreted as false, and the credibility of the source was reduced every time,<sup>62</sup> although it is possible that they were correct (that is, that Sadat seriously considered and then postponed an attack).

Revisionists respond that practitioners have a wide array of tools to perform source assessment, even without checking the veracity of their predictions. Hence, they consider Zeira's decision to dismiss the warning of the senior spy, based on the spy's prior mistakes, as unprofessional.

WHAT ARE THE TOOLS AVAILABLE TO ASSESS THE RELIABILITY OF SPIES AND HOW USEFUL WERE THEY PRIOR TO YOM KIPPUR?

First, it is possible to judge the spy's reliability by discerning his motives. Some practitioners rank the reliability of spies based on their motives: spies

<sup>58</sup> Loch K. Johnson, *America's Secret Power: The CIA in a Democratic Society* (New York: Oxford University Press, 1989), 76-99.

<sup>59</sup> Handel, *War Strategy and Intelligence*, 236-37.

<sup>60</sup> Robert Jervis, "What's Wrong with the Intelligence Process?" *International Journal of Intelligence and Counterintelligence* 1, no. 2 (Spring 1986): 29-30.

<sup>61</sup> Stein, "The 1973 Intelligence Failure," 52.

<sup>62</sup> Eli Zeira, *The October 73 War: Myth Against Reality* (Tel Aviv: Yedioth Ahronot, 1993), 119.

motivated by greed are considered the least reliable and most prone to lie or exaggerate since they try to encourage their agencies to offer them more money. In contrast, spies operating on the basis of other motives (for example, ethnic or religious identity, or ideological motives) are usually considered much more reliable.<sup>63</sup> They argue that the mode of recruitment and the rewards that the spy receives as part of his relationship with the HUMINT agency can reveal his underlying motives.<sup>64</sup>

However, there are at least two problems with this approach. First, discerning motives is a complex task since it is impossible to enter into a person's soul. The task is especially complicated because the spy may have mixed motives and one motive may overcome another under different circumstances. For instance, the spy's need to preserve a positive self-image may ultimately determine his behavior in the crucial moments rather than the money he receives from the HUMINT agency.

Second, it is hard to infer how exactly the spy would behave (that is, how prone he is to lie, exaggerate, hide information, etc.) just from his motives. It requires a lot of skill and understanding of the spy's personality. Paradoxically, some spies may be loyal to their case officers, but not to their country. Not all traitors are liars.

Assessing the credibility of the Egyptian spy, Ashraf Marwan, entailed these two problems and therefore involved a lot of subjective judgment. It was hard to trace his motives. On the one hand, there were grounds to think that he was mainly motivated by greed. Marwan offered his services in 1969 in return for great sums of money. Additionally, as Nasser's son-in-law he married into the privileges of power rather than having made sacrifices to prove his loyalty. Yet, on the other hand his conversations with Mossad agents persuaded Shalev and others that Marwan still considered himself to be an Egyptian patriot. Based on that premise Aman's analysts concluded that Marwan did not lie or exaggerate, but instead selected the information he passed on to the Mossad in order to maintain his positive self-image.<sup>65</sup> Significantly, this judgment was based more on psychological skills and deep empathy than on the technical details of his mode of recruitment. This shows the limits of the technical indices in gauging the nature of the spy.

A second method is to examine the quality of the information that the spy has provided in the past in order to determine to what extent he has access to sensitive information.<sup>66</sup> Indeed, Marwan delivered written documents to the Mossad, including the verbatim conversations between Egyptian and

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<sup>63</sup> Arthur Hulnick, "Espionage: Does It Have a Future in the 21st Century?" *Brown Journal of World Affairs* 9, no. 1 (Winter 2004): 169; and Yaakov Amidror, *The Art of Intelligence* [In Hebrew] (Tel Aviv: Ministry of Defense, 2006), 31.

<sup>64</sup> Ronen Bergman and Gil Meltzar, *Moment of Truth* [In Hebrew] (Tel Aviv: Yediot Ahronot, 2003), 177, 179.

<sup>65</sup> Shalev, *Success and Failure in Alert*, 133.

<sup>66</sup> Hulnick, "Espionage," 169.

Soviet leaders.<sup>67</sup> Yet, he failed to deliver a warning of the war in September, even though King Hussein delivered such a warning through his own HUMINT sources. This could have raised Aman's suspicions that Marwan had lost his access to the inner decision making circles.

In fact, the access of any spy to intimate secrets may change from time to time. It is possible that early successes are the exception or that the growing suspicions lead the enemy leaders to not share certain secrets with the spy. Practitioners have no way of knowing when the real status of their spy has changed.

Finally, analysts cannot fully rely on the assessment of the case officer in charge of the spy since he has a vested interest to portray his spy as credible. It is hard for any agency to admit that it spent a lot of money and received lies in return.

To conclude, practitioners do not have foolproof tools to rely upon and have no choice but to trust the skills and common sense that they acquire through experience.

### To What Extent Can Analysts Avoid Mistakes?

Revisionists have emphasized the detrimental impact of analysts' mistakes in leading to faulty estimates.<sup>68</sup> In contrast, Orthodox scholars argue that what Revisionists call mistakes, are in fact errors that are inherent in the nature of the job and cannot be as easily avoided as Revisionists believe.

#### CAN HIGHLY PROFESSIONAL ANALYSTS REALLY AVOID WHAT REVISIONISTS TERM MISTAKES?

I chose to examine a well-known type of mistake which Revisionists argue played a prominent role in leading to the Yom Kippur surprise—analysts' tendency to give bold predictions even in the face of an uncertain future.<sup>69</sup> I will show that in contrast to Revisionists' claims, analysts cannot refuse to give their best guess. I argue that they can therefore give only rough probability estimates to several possible contingencies.

Revisionists have argued that this mistake stems from overconfidence of certain analysts and the failure to recognize the uncertainty that characterizes international affairs. They hold that too often analysts are tempted to give their own judgment or give a resolute prediction where they cannot make one. They should instead insist on conveying uncertainty and must not feel

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<sup>67</sup> Ibid.

<sup>68</sup> John Stempel, "Error, Folly and Policy Intelligence," *International Journal of Intelligence and Counterintelligence* 12, no. 3 (Summer 1999): 270–72.

<sup>69</sup> Alouph Hareven, "Disturbed Hierarchies: Israeli Intelligence in 1954 and 1973," *Jerusalem Quarterly* 9 (Spring 1978): 12, 15.

pressed to predict “yes or no.”<sup>70</sup> The analyst must provide policy makers with the most precise intelligence picture possible, regardless of its complexity and ambiguity. Judgments should be expressed with less certainty—given the limitations on direct evidence.<sup>71</sup>

Indeed, Revisionists argue that it was precisely Aman’s senior analysts’ search for certainty that misled the top echelons to make a faulty risk assessment.<sup>72</sup> Two facts support their case. First, Zeira predicted Sadat’s intentions five years in advance, in contrast to his predecessor, Maj. Gen. Aharon Yariv, who was much more modest in his presumptions to predict well into the future and predicted only one year ahead.<sup>73</sup> Second, Zeira was not shown to be sufficiently careful in his own assessments. A day before the attack, Zeira estimated the probability of an attack to be “lower than low.”<sup>74</sup>

However, the Revisionist argument is somewhat politically naïve. First, it is the duty of the intelligence analysts to help alleviate uncertainty for the policy makers. They cannot just say “I don’t know.” Although analysts should never offer a firm prediction when none can be made, they cannot refuse the policy maker’s request to give their best estimate. Second, if analysts use imprecise estimative terms they will become irrelevant.<sup>75</sup> Analysts understand that they must use simple language since their consumers are usually not trained to read complex and nuanced reports.<sup>76</sup> Analysts’ boldness is often a key to influence in the policy arena.

The middle ground here seems to be that intelligence officers should give rough probability estimates rather than categorical predictions.<sup>77</sup> Therefore, Aman’s mistake was not so much in making predictions under conditions of uncertainty, but in making an unqualified prediction that the chances for war were extremely low.

To conclude, the problem is that analysts must make a hard trade-off between acting as effective agents in the policy arena and the need to remain truthful to the limits of their knowledge. Analysts must use their good

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<sup>70</sup> Yehoshafat Harkabi, “The Intelligence-Policymaker Tangle,” *The Jerusalem Quarterly* 30 (1984): 130.

<sup>71</sup> Stephane Lefebvre, “A Look at Intelligence Analysis,” *International Journal of Intelligence and Counterintelligence* 17, no. 2 (2004): 246–47.

<sup>72</sup> Bergman and Meltzar, *Moment of Truth*, 37–41.

<sup>73</sup> Uri Bar-Joseph and Arieh Kruglanski, “Intelligence Failure and Need for Cognitive Closure: On the Psychology of the Yom Kippur Surprise,” *Political Psychology* 24, no. 1 (2003): 83.

<sup>74</sup> Bartov, *Dado*, 316; and Shalev, *Success and Failure in Alert*, 116.

<sup>75</sup> Handel, *War, Strategy and Intelligence*, 197.

<sup>76</sup> See comments by two practitioners: Shlomo Gazit, “Intelligence Estimates and the Decision-Maker,” in Michael Handel, ed., *Leaders and Intelligence* (London: Frank Cass, 1989), 263, 271; and Donald McLachlan, *Room 39: A Study in Naval Intelligence* (New York: Atheneum, 1968), 357.

<sup>77</sup> They should give a probability range (for example, 30–50 percent) rather than unrealistically venture a precise numerical percentage (for example, 49 percent). Joseph Nye, “Estimating the Future?” in Roy Godson, Ernest May, and Gary Schmitt, eds., *U.S. Intelligence at the Crossroads: Agendas for Reform*, (Washington, DC: Brassey’s, 1995), 92.

judgment, based on their acquaintance with the intelligence consumers, to strike this elusive balance.

### Can Experience Serve As the Basis for Prediction?

Given that analysts have no safe procedures to follow in producing intelligence, they inevitably tend to trust their common sense based on their experience. A long serving Israeli intelligence officer Maj. Gen. Yaakov Amidror has even recommended giving greater weight to experience when the intelligence information is ambiguous.<sup>78</sup>

But to what extent can experience-related skills lead analysts to the right answer? While Revisionists extol its importance, Betts emphasizes that experience can cause greater error than ignorance when the enemy does not follow the patterns of past behavior.<sup>79</sup> The Yom Kippur case serves to demonstrate both the limitations and the potential value of experience.

Experience can be particularly misleading in two regards. First, it leads analysts to give more weight to strategic assumptions than to current tactical changes. Indeed, of all the officers in charge of interpreting the Egyptians' behavior, the one who got it right was Lt. Benjamin Siman Tov, a low-ranking intelligence officer in the IDF Southern Command, who had less knowledge of Egyptian coercive brinkmanship than the more experienced analysts in the research division, but gave more weight to tactical indicators.<sup>80</sup> Second, experience is particularly misleading in periods when the strategic environment is in flux. For instance, the years that followed the 1967 war saw much more Egyptian zigzagging between war and peace, than the clear-cut Egyptian belligerence in the decade that preceded it.

Hypothetically, Aman analysts could have used their experience to learn some generic lessons from the past. They could have learned from King Hussein's decision to go to war against Israel in 1967 that deterrence is less likely to be effective when an Arab leader faces strong domestic pressures. Unfortunately, however, the fact that Aman failed to learn such a glaring lesson from its most recent past proves the Orthodox point that even experienced analysts are less likely to produce such theoretical lessons both because they have become, with time, less sensitive to hypotheses that are inconsistent with their normally valid models of typical adversary behavior, and because they are usually too flooded with reports to have sufficient time for reflection.<sup>81</sup> Yet, it is important not to rule out that more theory-driven people could have used the same experience differently. Experience remains too often one of the few assets that analysts have, misleading as it may be for many analysts.

<sup>78</sup> Amidror, *The Art of Intelligence*, 57.

<sup>79</sup> Richard Betts, *Enemies of Intelligence: Knowledge and Power in American National Security* (New York: Columbia University Press, 2007), 57.

<sup>80</sup> Shlaim, "Failures in National Intelligence Estimates," 353-4.

<sup>81</sup> Betts, *Enemies of Intelligence*, 54, 61.

## HOW PERVASIVE ARE INHERENT PSYCHOLOGICAL AND ORGANIZATIONAL PATHOLOGIES?

Psychological and organizational *pathologies* are types of behavior associated with organizational life and human psychology that distort information processing. I try to resolve the debate about the psychological pathologies first by looking at two major barriers that Orthodox Schools have pointed to—“schemas’ resistance to change” and “noise.” I then address the debate about organizational pathologies by examining the severity of organizational parochialism. I find that only some people had the necessary qualifications and skills to overcome both kinds of pathologies. I conclude that such talented people must occupy the right positions in the hierarchy for agencies to issue the right estimate.

### The Impact of Psychological Factors

The Orthodox School asserts that intelligence surprises are not the product of analysts’ negligence or stupidity, but are the result of inherent cognitive biases that affect “honest, dedicated and intelligent men.”<sup>82</sup> It emphasizes that the cognitive shortcuts we employ to cope with the volume of the information we are bombarded with—much of it contradictory and ambiguous—inevitably lead to mistakes in judgment. Since these biases are inherent in human nature they affect all intelligence analysts and are unlikely to be fixed. A typical Orthodox claim is that:

The ideal of an analyst who is open to any and all information, able accurately to gauge its quality and always capable to detect the significant pieces of information is an ideal without an empirical reference.<sup>83</sup>

Revisionists claim that the impact of cognitive heuristics is not always so severe. Some Revisionists argue that the human mind is well sensitized to perceive threats.<sup>84</sup> Others claim that analysts can successfully overcome the obstacles caused by heuristics by substantially improving their minds’ analytic capacities through training.<sup>85</sup> Assessing the impact of specific pathologies can help resolve this debate.

### To What Extent Are Existing Schemas Resistant to Change?

A schema is a collection of stored knowledge associated with a concept. To understand the world, the individual tries to match his experience to

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<sup>82</sup> Wohlstetter, *Warning and Decision*, 397.

<sup>83</sup> Beth Fischer, “Perception, Intelligence Errors, and the Cuban Missile Crisis,” in James G. Blight and David A. Welch, eds., *Intelligence and the Cuban Missile Crisis*, (Portland, Oregon: Frank Cass, 1998), 150.

<sup>84</sup> Levite, *Intelligence and Strategic Surprise*, 143-4; and Raymond Cohen, “Threat Perception in International Crisis,” *Political Science Quarterly* 93, no. 1 (1978): 96.

<sup>85</sup> Heuer, *Psychology of Intelligence Analysis*, 49, 95-109, 173-83.

knowledge stored in memory.<sup>86</sup> In intelligence work there is always a need for some central concept (or schema) to diagnose a problem and organize a large amount of raw information. Therefore, analysts must use schemas.

Yet, schemas encourage theory-driven thinking and prevent complete openness to new information.<sup>87</sup> Schema theory would predict that the schema holder would try to assimilate discrepant information into the existing schema or dismiss it as unimportant or incredible. Hence, schemas, once formed, are relatively resistant to change.<sup>88</sup>

Aman's concept was such a schema. Indeed the use of schemas may explain why Aman's analysts integrated all the new information about the alarming buildup in the Syrian and Egyptian fronts into the existing theory of exercises in the south and a defensive alert in the north. It also explains why Zeira integrated the discordant information about Soviet evacuation of women and children to the "no war" interpretation.<sup>89</sup>

Other scholars, however, argue that some people do not always make the incoming information fit the preexisting schemas stored in their memory. Political psychologist Yuen Foong Kong has distinguished between "top down" (schema driven) versus "bottom up" (data driven) information processing and found that there is in fact a continual interplay between them.<sup>90</sup>

Indeed, we see in the Yom Kippur case that certain cues penetrated the preconceptions created by schemas and caused a sudden realization for some analysts. For each analyst it was a different cue. Two examples illustrate this.

For Lt. Col. Rami Luntz, the director of naval intelligence, the Egyptian activity to evacuate the mines along the canal indicated that a war was about to break out. Luntz rejected Aman's explanation that this activity was designed to replace old mines. To his understanding, performing this activity while an exercise was taking place exposed the Egyptian army to Israeli attacks and put it in great jeopardy.<sup>91</sup>

For Lt. Col. Shabtai Bril from the SIGINT unit, the sign of an impending war was the Syrian advancement of two squadrons of Sukhoi jets on 28 September. This step was particularly irregular. The experience of the 1967 war taught the Syrians to place the jets deep inside Syria, especially in times of tension, so they would not be exposed to Israeli aerial attacks.<sup>92</sup> Bril reasoned

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<sup>86</sup> Deborah W. Larson, "The Role of Belief Systems and Schemas in Foreign Policy Decision-Making," *Political Psychology* 15 (1994): 19.

<sup>87</sup> Larson, "The Role of Belief Systems and Schemas," 25-6.

<sup>88</sup> *Ibid.*, 27; and Susan Fiske and Shelley E. Taylor, *Social Cognition*, 2nd ed. (New York: McGraw Hill Publishers, 1991), 145.

<sup>89</sup> Bar Joseph, *The Watchman Fell Asleep*, 144, 136, 139.

<sup>90</sup> Yuen Foong Khong, *Analogies at War: Korea, Munich, Dien Bein Phu, and the Vietnam Decisions of 1965* (Princeton: Princeton University Press, 1992), 245-46.

<sup>91</sup> Amos Gilboa, "The Naval Intelligence Warned That There Will Be a War—Nobody Listened" (A Special Edition 25 Years for the Yom Kippur War) [In Hebrew] *Maariv*, 29 September 1998, 51.

<sup>92</sup> Yair Sheleg, "An Interview with Lt. Col (res.) Shabtai Bril" [In Hebrew], *Kol Ha-Ir*, 24 September 1993, 36. Israel began the 1967 war with operation "Focus," an aerial attack that destroyed most of the Egyptian Air Force while still on the ground.

that the only reason for this act was to improve the jets' capacity to attack deep into Israel as part of a surprise attack.<sup>93</sup>

Indeed, research has shown that schemas do change when there is no other way to account for contradictory data that people consider highly diagnostic. Even the strongest schema cannot withstand the challenge of strongly incongruent information, which supports a competing schema.<sup>94</sup> Although cognitive psychologists have not yet established thresholds for incongruent information, it is possible that more open-minded people have a lower threshold and therefore tend less to adhere to schemas.

### Can Pattern Recognition Overcome Noise?

The prominent Orthodox scholar, Roberta Wohlstetter, has distinguished between "signals" (accurate and relevant information) and "noise" (incorrect and/or irrelevant information).<sup>95</sup> Wohlstetter claims that signals usually come embedded in noise and thus obscure the signals that point in the right way.<sup>96</sup> She has found that it is extremely difficult to distinguish a priori between signals and noise.<sup>97</sup> Stein adds; "Only hindsight brings clarity."<sup>98</sup> But, is it possible to detect signals even in foresight?

Psychological studies have shown that the phenomenon called "pattern recognition" enables experienced experts (for example, doctors and master chess players) to connect the dots and immediately perceive patterns, even in voluminous data. Revisionists argue that there are clear parallels between the medical and intelligence professions.<sup>99</sup>

This extraordinary feat is possible since patterns stored in Long-Term Memory (LTM) enable experts to process many bits of information together as a single chunk or schema.<sup>100</sup> Larson explains:

Patterns are collections of cues that usually go together ... Birds have beaks, wings, and feathers. A state that is planning to attack will

<sup>93</sup> Ibid.

<sup>94</sup> Hazel Markus and Richard B. Zajonc, "The Cognitive Perspective in Social Psychology," in eds., Gardner Lindzey and Elliott Aronson, *Handbook of Social Psychology: Theory and Method* (vol. 1), (New York: Random House, 1985), 137-230

<sup>95</sup> Roberta Wohlstetter, *Pearl Harbor: Warning and Decision* (Stanford: Stanford University Press, 1962), 3.

<sup>96</sup> Roberta Wohlstetter, "Cuba and Pearl Harbor: Hindsight and Foresight," *Foreign Affairs* 43 (1965): 691-92.

<sup>97</sup> Ibid., 695-96. In fact Wohlstetter took the reverse point of view to that of Whaley and attributed all of the analysts mistakes to the effect of noise. As Orthodox scholars, both of them do not attribute them to the analysts' amateurishness or their wrong judgment.

<sup>98</sup> Stein, "The 1973 Intelligence Failure," 49.

<sup>99</sup> Walter Laquer, "The Question of Judgment: Intelligence and Medicine," *Journal of Contemporary History* 18 (October 1983), 533-48; and Stephen Marrin and Jonathan Clemente, "Improving Intelligence Analysis by Looking to the Medical Profession," *International Journal of Intelligence and Counterintelligence* 18 (2005), 707-29.

<sup>100</sup> Herbert Simon, "How Big Is a Chunk?" *Science* 183 (1974): 487; and William G. Chase and Herbert A. Simon, "Perception in Chess," *Cognitive Psychology* 4 (1973) 55-81.

mobilize its troops on the border, stockpile supplies, issue threats, etc.<sup>101</sup>

Heuer has also emphasized the importance of pattern recognition in intelligence work. He notes that analysts learn through their training and experience to recognize relevant patterns in data that pass undetected by less experienced observers.<sup>102</sup>

Indeed, there is some evidence that this phenomenon took place prior to Yom Kippur. A classic example of a signal embedded in noise that was successfully detected is the Syrian reinforcement of its forces along the border. This step was considered, by most observers, a usual response to the 13 September air battle and the consequent Syrian fears of reciprocal acts of retribution.<sup>103</sup> Nevertheless, the deputy chief of staff, Maj. Gen. Yisrael Tal, a general experienced in large-scale armor warfare, claimed in a meeting of the General Staff on 30 September, "the problem is not revenge for the 13 jets . . . The problem is a danger of a surprise attack in the Golan Heights."<sup>104</sup> Tal pointed out a series of cues indicating this:

First, if the Syrians rejected the Egyptian proposal to go to war during May, then since then they have received much more equipment, especially bridging tanks that closed that gap. Second, they have completed the aerial defense and ground preparations to launch an attack. Third, there is the deployment of the whole Egyptian army along the canal.<sup>105</sup>

Other experienced military generals also had the capacity to see these patterns in the data. Major Generals (res.) Ariel Sharon, Rehava'm Zeevi, and Aharon Yariv immediately recognized the true significance of the signs when they were shown, in the morning hours of 6 October, the air photographs of the Egyptian and Syrian military deployments taken the day before.<sup>106</sup> In Aman's research unit, two experienced analysts responsible for the Syrian military desk, Maj. Kuti Mor and his predecessor Maj. Amos Gilboa, also recognized at the end of September that the Syrian deployment fit the Syrian operational plans for an attack.<sup>107</sup>

However, only the generals and a few selected intelligence analysts were able to systematically see these patterns in the data. This may indicate that recognizing military patterns requires both experience and talent. Talent is

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<sup>101</sup> Deborah W. Larson, "Psychological Aspects of Intelligence Failures" (manuscript presented at the conference on Intelligence Failures, UC Davis, CA, 9-11 June 2005), 3-4.

<sup>102</sup> Heuer, *Psychology of Intelligence Analysis*, 26, 29.

<sup>103</sup> Stein, "Military Deception," 109.

<sup>104</sup> Braun, *Moshe Dayan and the Yom Kippur War*, 44.

<sup>105</sup> *Ibid.*

<sup>106</sup> Bar Joseph, *The Watchman Fell Asleep*, 246; and Ariel Sharon with David Chanoff, *Warrior: The Autobiography of Ariel Sharon* (New York: Simon & Schuster, 2001), 288.

<sup>107</sup> Bar Joseph, *The Watchman Fell Asleep*, 115, 183.

especially important since most analysts do not have first-hand military experience like generals.

Orthodox scholars may argue that in some cases the evidence may fit more than one pattern. Hence, they could argue that pattern recognition is the problem as much as the solution since there is always a risk of seeing a pattern that is not there.<sup>108</sup> If there are indeed multiple possible patterns, is there any formula for choosing which perceived pattern is the correct one?

Analysts can scrutinize the first pattern they notice. They should try to explain and identify their choice of indicators as well as rigorously assess the reliability of their sources. This procedure is necessary in order to make sure that analysts are not cherry-picking intelligence reports in order to build their own coherent intelligence picture.<sup>109</sup> Even though this cannot provide analysts with a foolproof guarantee that they have found the right pattern, recognizing alternative patterns can ultimately help by encouraging a more informed debate and preventing complete delusion by noise. Hence, this talent may prove useful.

### Organizational Parochialism

The Orthodox School holds that the need for dealing with ever increasing amounts of information increases specialization, division of labor, and hierarchy. These increase rivalry and restriction of information, as each unit becomes a guardian of its own mission.<sup>110</sup> This artificial division of reality into many subunits creates narrow-mindedness called “parochialism,” which prevents the analysts from seeing the big picture. Therefore, large intelligence organizations are more conducive to studying trees than forests since they cannot properly integrate different indicators from different areas (for example, political and military).<sup>111</sup>

Yet, Revisionists have argued that the impact of organizational life is not so pervasive since analysts are highly intelligent people who do not just follow rules and SOPs (standard operating procedures).<sup>112</sup>

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<sup>108</sup> I have found no evidence in the Yom Kippur case of analysts seeing an alternative pattern in the military data. The senior analysts who got it wrong (for example, Shalev) gave priority to their political strategic assumptions over an analysis of the tactical information and this led them to dismiss the tactical data as an exercise. *Ibid.*, 91.

<sup>109</sup> For instance, the American Office of Special Plans relied on the unreliable HUMINT source “Curveball” when it formed its estimate of Iraq’s WMD program before the second Gulf War. Jervis, *Reports, Politics and Intelligence Failures*, 30.

<sup>110</sup> Harold Wilensky, *Organizational Intelligence: Knowledge and Policy in Government and Industry* (New York: Basic Books, 1961), 48.

<sup>111</sup> Harold Wilensky, *Organizational Intelligence: Knowledge and Policy in Government and Industry* (New York: Basic Books, 1967); and Jervis, “Reports, Politics and Intelligence Failures,” 41.

<sup>112</sup> Amos Gilboa, “The Four Prophets of The Apocalypse,” (A Special Edition 25 Years for the Yom Kippur War) [in Hebrew] *Maariv*, (29 September 1998), 56.

## WERE ANALYSTS ABLE TO SEE THE BIGGER PICTURE?

There are at least two instances that support the Revisionist argument. In one instance, Luntz looked outside his narrow area of responsibility (maritime threats) in order to fully understand his research subject. He reached the conclusion of an impending Arab attack.<sup>113</sup> In another instance, a non-conformist analyst in the research unit, Lt. Col. Zusia Kanizher, transferred King Hussein's warning to another analyst, Lt. Col. Aviezer Yaari, who was blocked from receiving that piece of information due to compartmentalization restrictions.<sup>114</sup>

We can learn from these cases that on the one hand these organizational pathologies are not as totally pervasive when analysts are highly independent-minded, nonconformist, and curious. However, the aforementioned cases are the exception rather the rule—which supports the Orthodox conclusion that there are few Don Quixotes who are willing to dare challenge the system in the name of truth.<sup>115</sup> Furthermore, even these bold and open-minded analysts could not change the national intelligence estimate. This means that such open-minded analysts must occupy the most influential positions in order to shape the intelligence estimates.

## HOW MUCH CAN REFORMS IMPROVE PREDICTION?

“Reforming intelligence” refers to two main fields: organizational design (that is, the structure and the nature of relations between the different units) and the intelligence process (that is, the modus operandi of the various collection and analysis units). After presenting the debate between the two schools, I examine two specific steps of reform in each of the two fields and show that reforms would not have necessarily improved prediction. I conclude that pursuing reforms is a perilous road to take since every reform often brings with it unexpected complications. Given the great uncertainty that reforms will lead to improvement, intelligence agencies can only try to recruit better people.

## Can Reforms Fix Intelligence?

Every surprise attack spawns new calls to “fix the intelligence” even though Orthodox scholars have repeatedly warned practitioners that there is no real “fix.”<sup>116</sup> They have explained that no amount of procedural or organizational

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<sup>113</sup> Gilboa, “The Naval Intelligence Warned,” 50; and Bar Joseph, *The Watchman that Fell Asleep*, 99-100.

<sup>114</sup> Yaari, *The Road from Merhaviva* [In Hebrew] (Or Yehuda: Kinneret, 2003), 173-74.

<sup>115</sup> Handel, *War, Strategy and Intelligence*, 205-7.

<sup>116</sup> Betts, “Analysis, War and Decision,” 62; and Betts, “Fixing Intelligence,” 43.

tinkering will eliminate errors associated with international uncertainty, normal human psychology, and organizational life. Hence, any remedial action will be palliative at best.<sup>117</sup> Therefore, they argue that military planners should not make assumptions based on intelligence warnings,<sup>118</sup> but must plan for survival in case of error.<sup>119</sup>

Revisionists disagree. They hold that the most important factors that lead to intelligence failures can be addressed by reform. Hence, they usually come up with multiple recommendations for reform after every intelligence surprise.<sup>120</sup>

While Revisionists point to intelligence agencies' dismal records of accurate predictions to suggest that the system is broken,<sup>121</sup> Orthodox scholars respond that we should not expect anything more of intelligence agencies than a batting average with only limited room for improvement.<sup>122</sup> They explain that even on many cases of surprise, the intelligence system is in good shape, and surprise occurs because "the odds are stacked against intelligence to begin with."<sup>123</sup>

Although failures repeat themselves even after numerous reforms, Revisionists could always argue that failures recur because intelligence agencies implement the wrong measures.<sup>124</sup> Hence, I will examine whether the reform steps described by Revisionist scholars would have made a real difference in the Yom Kippur case. Specifically, I examine the recommendations to improve the dialogue between the research and the collection units (organizational design) and to change the method of forming estimates (the intelligence process).

### Strengthening the Collection–Analysis Nexus

Revisionists stress that it was necessary to increase the contact between the collection agency and the research division prior to Yom Kippur. A former head of Aman, and a Revisionist scholar, Maj. Gen. (res.) Shlomo Gazit

<sup>117</sup> Handel, *War, Strategy and Intelligence*, 266–71.

<sup>118</sup> Stein, "Calculation, Miscalculation, and Conventional Deterrence," 84.

<sup>119</sup> Betts, "Surprise Despite Warning," 572.

<sup>120</sup> For instance, see William Odom, *Fixing Intelligence for A More Secure America* (New Haven: Yale University Press, 2004), 1–7.

<sup>121</sup> Ephraim Kahana, "Analyzing Israel's Intelligence Failures," *International Journal of Intelligence and Counterintelligence* 18 (2005): 262–79.

<sup>122</sup> Klaus Knorr, "Failures in National Intelligence Estimates: The Case of the Cuban Missiles," *World Politics* 16 (1964): 460; and Jervis, "What's Wrong with the Intelligence Process?" 28.

<sup>123</sup> Richard Betts, "Don't Expect Perfection from Intelligence Agencies," (An Interview with Bernard Gwertzman) Council of Foreign Relations, 21 June 2004.

<sup>124</sup> See for example, Deborah Barger, "It Is Time to Transform, Not Reform U.S. Intelligence," *SAS Review* 24 (Winter-Spring 2004): 23–31; and Bruce Berkowitz, "Information Age Intelligence," *Foreign Policy* 103 (Summer 1996): 35–50.

concludes “the more intimate this relationship is, the more fruitful the contribution of both to sound estimates.”<sup>125</sup>

Revisionists argue that such a close relationship is vital in order to guide the intelligence collection system regarding the specific questions it should try to answer. Analysts, who see the whole picture, know better than collection officers where the knowledge gaps are and can also extract more relevant information from every source by utilizing their deeper understanding of a particular subject.<sup>126</sup>

#### WOULD GREATER INTERACTION HAVE REALLY IMPROVED THE CHANCES FOR BETTER PREDICTION PRIOR TO YOM KIPPUR?

On the positive side, increased interaction between units might have led analysts to ask the collection agencies to look for concrete information to confirm or refute their interpretation of the Syrian high alert. Once Dayan rejected Aman’s explanation of the Syrian redeployment as a response to the air battle, the analysts should have turned the question to the collection units. According to the head of the SIGINT unit, Brig. Gen. Yoel Ben Porat, they failed to present such a question.<sup>127</sup>

Moreover, increased dialogue could have made analysts much more alert to new tactical developments in the field. This argument is supported by psychological studies about “vividness.” Psychologists Richard Nisbett and Lee Ross point out that vividness of information (that is, its concreteness or its proximity in sensory, temporal, or spatial ways) affects how people assign weights to data. Vivid information is likely to attract our attention and to excite the imagination.<sup>128</sup> Indeed, many of Aman’s analysts admitted that had they gone to the front to see the change in the deployment of forces with their own eyes, it could have made a real difference.<sup>129</sup> Since they were sitting in Tel Aviv and not close to the front, the tactical changes seemed abstract to them.

However, it is highly uncertain that requiring Aman analysts to be in regular contact with their peers from the collection agencies would have actually led them to ask the right questions or become more interested in tactical data. It seems that only their genuine curiosity would have made Aman analysts more sensitive to the (seemingly boring) details of tactical changes. A former commander of Aman’s research unit for several years has noted that all his efforts to teach officers to think or ask questions have failed.

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<sup>125</sup> Shlomo Gazit, “Estimates and Fortune-Telling in Intelligence Work,” *International Security* 4 (Spring 1980): 40-41.

<sup>126</sup> *Ibid.*

<sup>127</sup> Ben Porat, *Neila*, 52-53.

<sup>128</sup> Richard Nisbett and Lee Ross, *Human inference: Strategies and Shortcomings of Social Judgment* (Englewood Cliffs, NJ: Prentice-Hall, 1980), 45-62.

<sup>129</sup> Agranat, *An Additional Partial Report*, 405; and Bar Joseph, *The Watchman that Fell Asleep*, 241.

He concludes that analysts should be “only those who have endless curiosity, who never cease to look for more questions and answers . . . and [who] are never satisfied with what they already know.”<sup>130</sup>

On the negative side, it is possible that greater interaction would have led analysts to look for more information to confirm their ideas, rather than try to refute their interpretations. Jervis argues that analysts usually follow the “confirmation bias.” Cognitive psychologists have found that people seek information that confirms their beliefs and reject what could contradict them.<sup>131</sup> Hence, analysts too often request from the collection agencies only information that would confirm their established preconceptions.<sup>132</sup>

Therefore, more intensive contact between the units might have exposed Aman analysts only to evidence confirming their “no war” interpretation. Zeira systematically resisted looking for alternative intelligence reports that might prove him wrong.<sup>133</sup> Finally, greater interaction between the units brings with it the danger that collection officers would come to believe in the analysts’ interpretation and that this would affect their collection efforts.

### Changing the Intelligence Method of Estimation

Revisionists call for improving the estimation process. They often have an image of intelligence as a social science and argue that adopting rigorous social science methodology can significantly improve the accuracy of predictions.<sup>134</sup>

Orthodox scholars view this aspiration toward scientific prediction as unrealistic.<sup>135</sup> They argue that it is particularly hard to warn of an attack since it means predicting the likelihood of a single event that breaks sharply with the recent past.<sup>136</sup> Hence, they assert that even an improvement of the intelligence process cannot eliminate the limits of the intelligence work.<sup>137</sup> They also argue that the impractical demands of Revisionists for social science methodology will cause reforms to atrophy and to become meaningless tokens.<sup>138</sup>

<sup>130</sup> Amidror, *The Art of Intelligence*, 98.

<sup>131</sup> Raymond Nickerson, “Confirmation Bias: A Ubiquitous Phenomenon in Many Guises,” *Review of General Psychology* 2 (June 1998), 175–220.

<sup>132</sup> Jervis, “Reports, Politics and Intelligence Failures,” 24–25.

<sup>133</sup> For instance, when Ben Porat asked Zeira to allow him to use the necessary means in order to refute Zeira’s “no war interpretation,” Zeira refused. Ben Porat, *Neila*, 55.

<sup>134</sup> Heuer, *Psychology of Intelligence Analysis*, 48; Walter Laquer, “The Question of Judgment: Intelligence and Medicine,” *Journal of Contemporary History* 18, no. 4 (1983): 533; and Sherman Kent, *Strategic Intelligence for American World Policy* (Hamden, CT: Archon Books, 1965).

<sup>135</sup> Jervis notes that analysts cannot use laws couched in statistical terms since “politics is characterized by contingent relationships, accident and exceptional situations.” Jervis, “What’s Wrong with the Intelligence Process?” 29.

<sup>136</sup> Stein, “The 1973 Intelligence Failure,” 50.

<sup>137</sup> Betts, “Analysis, War and Decision,” 87.

<sup>138</sup> *Ibid.*, 71–72.

HAD AMAN USED SOCIAL SCIENCE METHODS, WOULD IT HAVE HELPED PREDICT THE LOOMING ATTACK? TO WHAT EXTENT WOULD REFORM STEPS HAVE BEEN REALISTICALLY USEFUL?

The first recommendation Revisionists make is to formulate alternative interpretations and then see which one better conforms to the evidence.<sup>139</sup> This procedure is designed to help analysts become more open-minded to different alternatives.

This procedure can also help analysts rearrange the data they have available. A common problem in intelligence analysis is that the sequence of the flow of different pieces of information often shapes the final judgment analysts make. This is a well-known phenomenon that psychologists have termed the “primacy effect.” The information that people receive first often has more impact because our initial impressions of events frequently influence how we interpret later information.<sup>140</sup>

Indeed, this new procedure might have helped Aman analysts deal with the problem of primacy effects that existed prior to Yom Kippur. We see that the early evidence framed Sadat’s subsequent actions for Aman analysts. Shalev admits that he formed the “gray image” of Sadat after his “year of decision” speech turned out to be a bluff. Consequently, when Sadat eradicated the pro-Soviet opposition in 1971 and later expelled the Soviet advisers in July 1972, this image colored Shalev’s perception of Sadat’s move. Shalev erroneously considered it as an indicator for Sadat’s decision to give up the military option since war could not be fought without Soviet military assistance.<sup>141</sup>

However, there are at least three main problems with this proposed procedure. First, analysts are often faced with both congruent and incongruent evidence for each potential interpretation. Since different pieces of incongruent information may be attributed different qualitative weight, analysis is not just a simple matter of looking to see which interpretation “has a bigger pile (of confirming evidence).”

Indeed, there was clear evidence in support of the interpretation that Sadat was bluffing and did not really intend to go to war. When Sadat declared 1971 the “year of decision” and nothing happened, it appeared that he did not mean to back up his statements unless Egypt attained a credible war option.<sup>142</sup> This interpretation was also backed up by top-secret intelligence

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<sup>139</sup> Scott Rogers, “Improving Analysis: Dealing with Information Processing Errors,” *International Journal of Intelligence and Counterintelligence* 19, no. 4 (2006): 635-6; and Heuer, *Psychology of Intelligence Analysis*, 43-49, 95-110.

<sup>140</sup> Edward E. Jones and George R. Goethals, *Order Effects in Impression Formation: Attribution Context and the Nature of the Entity* (New York: General Learning, 1971).

<sup>141</sup> Shalev, “Intelligence in a Test,” 19, 21.

<sup>142</sup> Chaim Herzog, *The War of Atonement* [In Hebrew] (Jerusalem: Edanim, 1975), 42

from the top Egyptian spy, stating that Egypt would not go to war unless it acquired Scud missiles and fighter jets.<sup>143</sup>

A second problem is that different pieces of information can be combined in different ways to create equally imperfect jigsaw puzzles (the jigsaw puzzle metaphor is misleading because in the real world even the right arrangement has some pieces that do not coherently fit).<sup>144</sup> The well-known intelligence scholar Walter Laquer has noted that “observation is the art of combination.”<sup>145</sup> However, the German statesman Konrad Adenauer has added that the problem is that “God has created the world unfairly—while there is often only one way to do things right, there are unlimited ways in which to err.”<sup>146</sup>

In fact, prior to Yom Kippur there were some odd facts that did not fit the war interpretation. For instance, unlike previous cases of mobilization, in October 1973 the Egyptian civil defense was not activated.<sup>147</sup> This further provided evidence for the interpretation of a large-scale exercise.

The third problem is the limited scope for validation. On many occasions, intelligence analysts face difficulty in determining whether their predictions are accurate since there is a limited opportunity for validation through feedback (except long after the fact). Therefore, hypotheses and interpretations can never be refuted or confirmed with a high degree of certainty. If the estimate is right for the wrong reasons (the reasoning that generated those predictions that match the outcomes is not true), analysts may be seriously misled in their estimates in the future.<sup>148</sup> Unfortunately, the international environment does not enable easy learning.

This limitation seemed to have had an effect on the effort to gauge Sadat’s political intentions prior to Yom Kippur. Zeira mistakenly inferred from the nonoccurrence of war in May 1973 that Sadat was not serious about his declared intention to initiate war.<sup>149</sup> It was very hard to tell the true reason for Sadat’s decision not to attack (was it his intention to further exhaust the diplomatic channels or a temporary failure to attain the required capabilities?).

The second recommendation Revisionists often make is to reexamine constantly all assumptions. Faulty estimates too often rest on assumptions that were never widely debated since they seemed obvious and were widely shared.<sup>150</sup> Hence, crucial assumptions must be made explicit in order to

<sup>143</sup> Bergman and Meltzar, *Moment of Truth*, 182.

<sup>144</sup> For a standard Revisionist argument that fails to realize this, see Roger Hilsman, “Intelligence and Policymaking in Foreign Affairs,” *World Politics* 5, no. 1 (1952): 3-4.

<sup>145</sup> Laquer, “The Question of Judgment: Intelligence and Medicine,” 541.

<sup>146</sup> Quoted in *ibid.*

<sup>147</sup> *Ibid.*, 67.

<sup>148</sup> Stein, “Calculation, Miscalculation, and Conventional Deterrence,” 84.

<sup>149</sup> Yoel Ben Porat, “The Yom Kippur War, Error in May and Surprise in October,” [In Hebrew] *Ma’arachot* 299 (1985): 2-7.

<sup>150</sup> Kathleen Christison, *Perceptions of Palestine: Their Influence on U.S. Middle East Policy* (Berkeley, CA: University of California Press, 1999), 10-11.

make the analysts more conscious of them. Revisionists assert that greater awareness will make analysts look for information to refute or confirm their assumptions.<sup>151</sup>

Revisionist studies of the Yom Kippur surprise argue that Aman's concept rested on such unexamined assumptions. Aman never questioned the assumption that Egypt would not go to war unless it was militarily capable of winning. Revisionists blame Aman analysts for never considering that military victory was not necessary for Egypt in order to break the diplomatic stalemate. They hold that Aman's mistake was in failing to question its basic assumptions even when tactical information became alarming.<sup>152</sup>

There are two problems with this recommendation that make it impractical. First, it is impossible to implement it on a routine basis.<sup>153</sup> Sherman Kent, who was both a theorist and practitioner of intelligence, compared intelligence estimates to a pyramid based on assumptions and facts at different stages with the most likely scenario or interpretation at the apex.<sup>154</sup> Indeed, often assumptions are built on other more basic assumptions, and so without certain constant basic assumptions no conclusion can ever be reached. It is impossible to shake the whole edifice with every incoming piece of information. For instance, it was impractical for Aman analysts to reexamine basic assumptions such as the following: that Syria would not go to war without Egypt; and that Sadat was hesitant to endanger the stability of his regime by risking military defeat, etc.

Second, it is impossible to know in advance which assumptions look questionable. This is especially true when certain assumptions seem so logical that it is implausible that they would be wrong.<sup>155</sup> The assumption that Sadat needed a military capability to win a war seemed obvious at the time. So even if analysts had reexamined that assumption, they probably would have come to the same conclusion that losing a war would pose a greater threat to the stability of Sadat's regime than doing nothing. This inference would have also been supported by the analysts' assessment that Sadat was not a risk-prone leader.<sup>156</sup>

Empathy might have helped Aman see Sadat's desperation and understand what seems to be a self-defeating behavior, from a military standpoint. It

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<sup>151</sup> Jervis, "Reports, Politics and Intelligence Failures," 24; and Heuer, *Psychology of Intelligence Analysis*, 69.

<sup>152</sup> Abraham Ben Zvi, "Hindsight and Foresight: A Conceptual Framework for the Analysis of Surprise attacks," *World Politics* 28, no. 3 (1976): 381-95; and Abraham Ben Zvi, "Threat Perception and Surprise: In Search of the Intervening Variable," in eds., Frank Harvey and Ben Mor, *Conflict in World Politics: Advances in the Study of Crisis, War and Peace* (New York: St. Martin's Press, 1998), 241-71.

<sup>153</sup> Jervis, "Reports, Politics and Intelligence Failures," 22-24.

<sup>154</sup> Sherman Kent, "Estimates and Influence," in Donald P. Steury, *Sherman Kent and the Board of National Estimates: Collected Essays* (Washington, DC: Center for the Study of Intelligence, 1994), 37-39.

<sup>155</sup> Jervis, "Reports, Politics and Intelligence Failures," 42.

<sup>156</sup> Shalev, *Success and Failure in Early Warning*, 166.

would have helped more than a reexamination of assumptions or systematic comparisons of military indicators. But, such an approach goes against the grain of the Revisionist argument of turning the craft of intelligence into a science. If empathy is necessary, then Revisionists must acknowledge that even the most rigorous scientific methods cannot help too much for gauging intentions.

To conclude, it is impossible to ascertain whether the advantages of reform would have outweighed its potential disadvantages. Since it is impossible to create the perfect intelligence design, the most intelligence agencies can do is recruit better people who would make good judgment to avoid the hazards of intelligence.

### THE MAIN THEORETICAL AND POLICY IMPLICATIONS

Some might draw the inference from the Orthodox School that there is little to be done to prevent surprise attacks, although that is not the intent of the Orthodox scholars. Keeping in mind the inherent constraints on bureaucratic and cognitive capacities, more emphasis should be placed on what can be done. On the other hand, the Revisionist school does not give sufficient weight to the structural obstacles to correct predictions.

The Yom Kippur surprise of 1973 illustrates this idea. Although the excellent available military data could have been used more effectively in this type of strategic situation, Revisionists fail to acknowledge that some of the wrong estimates were not a product of mistakes, but of the limits and uncertainties inherent in this job.

Therefore, from a policy perspective, practitioners must do everything they can to improve the “correctables” while accepting that there are also “noncorrectables.” Recognizing the real limits of intelligence work can lead policy makers to change their expectations and to better design postmortem investigation of surprise attacks. They must avoid automatically blaming analysts for intelligence failure on every occasion of surprise.

From a theoretical perspective, this research has made initial advances toward finding the middle ground between the two schools. First, it has provided criteria for better assessing the varying levels of difficulty in predicting attacks. Second, it has found that the prediction of an attack is hard mainly because of uncertainties inherent in international politics and to a lesser extent because of organizational or psychological pathologies. Even the best military data cannot eliminate these uncertainties. Third, it has found that people matter enormously.

Further research should not restrict the Orthodox-Revisionist debate only to conventional surprise attacks, but must include other types of intelligence targets (for example, WMD programs and insurgency campaigns). This will give us a better understanding of the nature and difficulty of intelligence work

across different fields and improve our understanding of why some agencies perform better in some fields than others. Such a theoretical understanding of different intelligence fields will also allow us to pursue a comparative study to assess the performance of different agencies in coping with similar tasks.