Paradigms and Mindfulness in Decision Making: Why the Israel Defense Force (I.D.F.) failed in the Second Lebanon War.

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Abstract

This paper argues that the Israel Defense Force (I.D.F.) failure in the second Lebanon war can be partly attributed to commanders mindless and insufficiently critical decision making processes at the individual, group and organizational levels, or the platoon/tactical, division/operational and GHQ/strategic levels. Four cases are analyzed. The first three cases confirm the proposition during planning and opening stages of the war. The fourth case tests confirms its validity during the war's second, ground campaign phase. The paper presents an inclusive psychological conceptualization of decision making that is radically different from the calculative conceptualization that underlies mainstream decision research. The descriptive and prescriptive implications of the paper's findings and the model that it presents generalize beyond the second Lebanon War and Military Decision Making to decision making in business and the conduct of decision research.

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One important caveat is in order before I launch into my lecture. The paper that I will present has two parts. Its first part summarizes certain ideas on decision making that I have developed in the course of some 35 years of studying, researching, and consulting on this subject. The second part consists of their empirical demonstration in four short case studies of real world decision making. I will not be surprised if you will find the cases to be far more riveting than the theory. That is also my opinion. Nevertheless, as I am a student of decision making and not a historian or a political scientist, the subject of this paper is not military tactics or current history, but decision making and the study of decision making. I use the stories to illustrate the theory and to demonstrate its relevance to the real world. Once this job is done, I will argue that the lessons that can be learned from the decision making of commanders in the I.D.F. during the second Lebanon war can be generalized to seemingly remote arenas such as decision making in the business world, and the implicit policies that had guided decision research for decades.

Decision making: A broad brush.

I. What is a decision?

In this paper a decision is defined as committing oneself to certain opinion, course of action, or whatever other subject that concerns the decision maker. This, naturally, raises a question: how do decision makers develop their commitment? In other words, how does the decision making process look like?

Traditionally, decision makers are presumed to develop commitment by comparing, and then selecting the best option from a set of alternatives that is available to them. Indeed, that is often how decisions are defined. This raises another question: where do the alternatives, from which decision makers are presumed to choose, come from in the first place?

On some occasions, such as when we walk into a supermarket, the alternatives (in fact too many of them) are presented to us. However, contrary to what most economists seem to believe, the world cannot be really likened to one big supermarket. And while the model of Rational Choice is moot on the subject of alternative generation, the related Rational Problem Solving Phase Model, which subsumes it as one of its phases, does offer an answer: Having identified (phase 1), defined (phase 2), and diagnosed (phase 3) their problems, decision makers generate an exhaustive set of alternative solutions (phase 4), which they proceed next to compare (phase 5) and, based on this comparison, finally choose the best alternative that is available to them (phase 6). Implementation, and hence commitment, is tacitly presumed within this framework to follow automatically and un-problematically from this sequence. As Rational Actors, decision makers are apparently compelled by the neat logical progression from problem identification to solution selection.

The apparently compelling logic of the problem solving phase model proved very useful for training and teaching (Bransford, & Stein, 1984; Kepner & Tregoe, 1997). Empirical tests of its descriptive validity, however did not fair that well (Lipshitz & Bar Ilan, 1996). They also show that the model was rarely employed, because decision makers found it either impractical or unreasonably pedantic considering the alternative: relying on their own unaided wits and skills. Whether this conclusion is sound for decision

makers with sufficient relevant expertise, or another manifestation of real world decision makers' Pollyanna delusions and hubris, is hotly debated between researchers working within the JDM/BDT framework (who take the latter position), and those working within the NDM framework (who espouse the former). Either way, we are still left with our puzzle: How are real world decisions actually made?

II. The three fundamental modes of decision making

Elsewhere, (Lipshitz, 1994) I have argued that close analysis of real world decision making reveals three types of fundamentally different decision making processes, types, or ***modes***, which I labeled as ***consequential choice (CC), matching*** *(**M**)* *and* ***reassessment*** *(**R**)*. To see that the three modes are mutually exclusive, observe their distinctive profiles on the set of 10 basic attributes of decision making processes which, together with the division between the three modes, offers exhaustive conceptual framework that can be used to classify and analyze decision making models and specific decisions at the individual, group, organizational, and trans-organizational levels:

1. **Action Argument**: Decisions are driven by arguments that decision makers conduct with themselves and with others (Barber, Heath, & O'dean, 2003; Lipshitz, 1993; Shafir, Simonson, & Tversky, 1993). The general structure of these "action argument" (***AA***) is "**Do 'A' for reasons 'R'**. Granted this common denominator, each of the three modes has its own characteristic *AA*. The ***CC*** *AA* is "**select A because it is superior to its alternatives**;" the ***M*** *AA* is "**Do a because it is appropriate for the situation**" and the ***R*** *AA* is "**Do A because it survived critical examination**."

2. **Decision Framing**: This parameter specifies the form in which decision problems present themselves or are framed by decision makers, researchers, or consultants. The ***CC*** frame is concurrent choice between options with certain, risky or uncertain outcomes. The ***M*** frame is matching of actions to situations (or solutions to problems) mostly on the basis of past experience: intuitions, habits and training, as well as personal values at the individual level; and standard operating procedures, norms, and professional and ideological doctrines at the group and organizational levels. The ***R*** frame can take either of these forms.

3. **Decision Strategy**: This parameter specifies the way in which the option that to be implemented is selected. ***CC*** strategies describe or prescribe strategies of choice (Gilovich, Griffin, & Kahneman, 2002). ***M*** strategies describe or prescribe matching strategies (March, 1994; Hoffman, 2007; Lipshitz, 1993; Lipshitz & Cohen, 2005). ***R strategies*** describe failures of critical reassessment (Janis & Mann, 1977; Staw & Ross, 1987; but see Lipshitz 1995), or prescribe methods of critical reflection (Cohen, Salas, & Riedel, 2002; Mason & Mitroff, 1981; Wack, 1985).

4. **Deliberateness**: This parameter specifies the degree of intuitiveness vs. deliberateness of strategy execution (Hammond, Hamm, Grassia, & Pearson, 1987).

5. **Commitment**: This parameter specifies the role or function of commitment in the decision making process. ***CC* and *M* are cognition-first modes. They assume that decision makers "look before they leap," that is, think before they act. Commitment, then, is a goal, or an objective**. **The *R*, mode, on the other hand, acknowledges that decision making (i.e., the gathering and processing of information) often take place after**

a decisions have been made (Damasio, 1995; Janis & Mann, 1977; March, 1994; Montgomery, 1988; Svenson, 1999; Zajonc, 1980). For better or worse, and whether we like it or not, many of our decisions are made for us by our upbringing, our habits, our past decisions and obligations, and the myriad constraints that even the holder of that most powerful position in the world, the President of the United States, cannot quite shake off, triggering post-decision processes of posturing and rationalization. **In the R mode, then commitment functions as a handicap** (Brockner & Rubin, 1985; Janis & Mann, 1977; Staw & Ross1987).

6. **Uncertainty**: Uncertainty is defined as sense of doubt that blocks or delays action (Lipshitz & Strauss, 1997). Similar to commitment, uncertainty is at the same time a curse and a blessing for decision makers. Commitment is a blessing because it puts implementation in motion, and energizes perseverance in the face of resistance. It is a curse when decision makers are trapped in tunnel vision, groupthink and escalation of commitment owing to premature or misplaced commitments that are left unexamined. For precisely this reason, uncertainty is a blessing when it triggers vigilance and information search, and a curse when it leads to procrastination, paralysis, and missed opportunities. Thus, *the* ***fundamental dilemma faced by real world decision makers,*** *the rock and the hard place between which they constantly must juggle how to generate sufficient commitment to exhaust every ounce of realistic likelihood of success, while, at the same time, entertaining sufficient doubt so as not to ignore information that flags potential dangers and indicates required changes-in course?*

It is extremely important to recognize that **both** uncertainty **and** commitment are necessary for effective real world decisions. This point is bound to be missed by researchers with excessive rationalistic bent such as

Staw and Ross (1987), who associate generators of commitment uniquely with failed outcomes and so suggest offer prescriptions for their neutralization. It is recognized by Brunsson (1985) who distinguished between "regular" (vigilance driven) rationality and "action" (commitment driven) rationality, that are warranted at the early and late (implementation) stages of the decision making process. I would reformulate Brunsson slightly to the effect that both rationalities are required, albeit in different and varying proportions, throughout the decision making process.

7. **Temporal orientation**: Whereas ***CC*** is future oriented, ***M*** is concerned with matching current situations with appropriate actions, and ***R*** is retrospective or reflective.

8. **Logic**: This parameter specifies the different rationalities that warrant the very different prescriptions that can be formulated consistent with each of the three modes. As its label implies, ***CC*** is predicated on a consequentialist or utilitarian logic, and ***M*** presumes a deontological or obligatory logic, or alternatively, on accumulated individual and collective experience, (Lipshitz & Cohen 2005; March, 1994). The difference between the two logics is captured in a dialogue between an old lady, who is dying from cancer, and her nephew, a theology teacher in David Lodge's novel *Paradise News*. Expressing a cheap consequentialist conception of faith, the old lady complains: "I don't see the point of religion if there's no heaven.... I mean, why be good if you're not going to be rewarded for it? Why be bad, if you're not going to be punished in the long run?" Her nephew answers, significantly with a smile, "They say that virtue is its own reward" (Lodge, 1991, p. 205). This a consequentialist reframing (or rationalization) of the original biblical deontolgical reasoning which was we ought to be good because that's how the Lord **decreed** us to be.

Finally, in stark contrast to the latter form of reasoning, ***R*** rests on the non-foundational logic employed by Schon (1983) in his work on reflective practice, and advocated by Popper (2002/1969) in *Conjectures and refutations*:

"Never mind the source, or the sources, from which [my decisions] may spring—there are many possible sources, and I may not be aware of half of them; and origins or pedigrees have in any case little bearing upon truth. But if you are interested in the problem which I tried to solve by my tentative assertion, you may help me by criticizing it as severely as you can" (p. 35).

The logic is also illustrated by the exchange in the opening scene of Mozart's opera, Cosi fan tutte, between an old gentleman, Don Alfonso, and two young officers. Don Alfonso claims that all women are unfaithful, deeply offending the two young gentlemen's honor, who hold their brides exceptions to this rule. Rejecting dueling and Don Alfonso's superior experience (and hence, deontology) as appropriate methods for adjudicating this dispute, Don Alfonso and the soon-to-be-disillusioned officers decide to conduct an experiment. Thus, critical reasoning based on data supersedes rank, tradition, and, by extension, theory and belief. Below the surface of the light comedy, Mozart, (and his librettist Da Ponte celebrate the dawn of the enlightenment.

9. Handicaps: This parameter specifies obstacles to decision quality that are associated with each mode. Within ***CC***, the JDM literature identifies a variety of biases produced by the judgmental heuristics that decision makers use under risk (Kaneman, Slovic & Tversky, 1982). ***M*** handicaps are obstacles to the development of effective situation awareness (Endsley & Garland, 2000), and ***R*** handicaps are commitment problems that produce

Groupthink (Janis & Mann, 1977), and commitment traps (Brockner & Rubin, ; Elster, 1974; Staw & Ross, 1987).

10. **Therapies:** This parameter specifies solutions for the handicaps specified in the previous paragraph. The JDM literature offers a variety of "de-biasing" techniques to help decision makers, for example, produce probability estimates that conform with the cannons of Probability Theory. ***M*** therapies are empirically based training programs and decision aids that help decision makers approximate the decision processes of experts in their areas of expertise (Lipshitz & Cohen, 2005). ***R*** therapies are training programs and decision aids that help decision makers develop or apply on-line their critical thinking skills (Cohen Salas, & Riedel, 2002; Mason & Mitroff, 1981).

For descriptive purposes, the basic conclusion that emerges from the preceding discussion, is that real world decisions are embedded in networks of paradigmatic assumptions of which decision makers may or may not be aware. These assumptions influence, to varying degrees, both which decisions are made, and even more so, how they are made. For normative and prescriptive purposes this conclusion should be interpreted inclusively to hold not only vis a vis mode-related paradigmatic assumptions. Indeed, it holds even more critically with respect to the substantive and domain specific assumptions that decision makers carry with them in particular situations.

The centrality of underlying assumptions has important theoretical and pragmatic implications. Theories and models are both bolstered and constrained by the paradigmatic assumptions on which they rest. Thus, alth,by its rigor is absolutely justified, applying the cannons of rigor of one paradigm to evaluate studies conducted in another is a gross mistake. In the

same vain, and moving from research to application, ***CC*** models such as EU, SEU and Prospect Theory are abstract, because they are modeled after the rigor and generality of the "hard" physical sciences. On the plus side, these models are rightly admired for their coherence and elegance. On the down side, they are necessarily indifferent to the substantive and domain specific assumptions and contextual variations that, I have just suggested play crucial roles in real world decision making. The upshot is that such models can be expected, at best, to provide very rough approximations of how decisions are made in messy real world situations in which alternatives and preferences are neither orderly nor readily available, and where decision makers are not necessarily clear about either the nature of their situations, or their assumptions, their goals, or their theories of action.

I turn next to present a model that, consistent with the above conclusion, conceptualizes decision making as the product of how decision makers' schemas (where their assumptions and extant knowledge reside), affect both the information to which they attend and collect, and the meanings that they choose to give to it.

Schemas and Mental Models in Recognition Primed Decision Making

Figure 1 presents a re-conceptualization of Klein's ***M*** model of recognition primed decision making as a schema driven process (Lipshitz & Ben Shaul, 1997). Three elements of the model, that I label SRPD for the sake of convenience, require definitions:

Display: Borrowing from Weick (1979) a "display denote[s] information about the situation that is available to the decision maker. In some situations, such as...the control of production processes via instrument

panels, "display" can be used literally. In most situations, however, the term is used figuratively. A fire-fighting commander's "display" consists of whatever he can see, hear, or smell on the scene, and a CEO making a strategic decision "display" consists of all the information that he or she collect on their own or receive from their staff (Lipshitz & Ben Shaul, 1997, p. 7).

Schemas: Following Neisser (1976), schemas are "Situation or domain specific cognitive structures that (a) direct external information search; (b) specify which available information will be attended to and which information will be ignored; (c) organize information in memory; (d) direct the retrieval of information from memory; and (e) become more differentiated as a function of experience" (Lipshitz & Ben Shaul, 1997, p.7).

***Mental Models*:** These are the subjective representations that decision makers construct for their external situations and internal mental states (i.e., thoughts, attitudes and feelings). Whereas schemas are relatively, evolving cumulatively and incrementally across situations, mental models, which are designed to reflect nuanced variations as situations change in dynamic environments, are temporary, fickle, and constructed on the fly.

Owing to its two distinct features, the inclusion of both schemas and mental models and their clear functional and conceptual differentiation, Lipshitz & Ben Shaul (1997), claim that that the SRPD improves the RPD model, on which it is based, in several ways. First, unlike the latter, the SRPD can account for the fact that whereas in generally experts collect more information - and thus take more time - than novices before they act, under conditions of time constraints and sparse information, they respond more quickly and accurately than novices. These findings can be readily

accounted by the superior comprehensiveness and sophistication of the experts' schemas:

When information is sparse and time is constrained, their schemas enable them to notice, quickly and accurately, which information is missing, search for it efficiently internally and externally, and if this fails or is unfeasible, compensate for it effectively, by making plausible assumptions based on sound knowledge and rich net of associations stored in their schemas.

In the second instance, where time is of concern, the experts' more sophisticated schemas can guide them both to conduct particularly thorough information search, as well as on the thoughtful and thorough processing of this information, once it had been obtained. For example, an expert is more likely to note than a novice that a datum is open to several interpretations, or that certain facts or implications are inconsistent with certain others, thereby requiring the re-construction of the mental model to account for these complications.

According to the SRPD model, these performance levels exceed the capabilities of decision makers whose schemas do not contain the requisite knowledge for effective labeling, bracketing, information search, matching displays with meanings, and mental models with actions, and that do not contain that are association nets sufficiently rich to help them improvise, as is necessarily required in order to cope successfully with real world problems of any complexity.

Finally, another advantage of the SRPD model is that **descriptively** it is consistent with or integrates numerous models in addition to the RPD (Klein, 1998). These include Endsley's model of Situation Awareness (Endsley & Garland, 2000), Cohen's model of R/M (Cohen, Freeman, & Wolf, 1996). Meta-

recognition in time stressed decision making: Recognizing, critiquing and correcting. *Human Factors, 38,* 206-219.), and Weick's (1979, 1995) work on Sensemaking. Prescriptively, the SRPD implies that decision makers should be cognizant of their underlying assumptions, consistent with the ***R*** argument and logic that emphasize critical evaluation, and with a burgeoning literature on critical thinking and decision making (Cohen, Adelman, Bresnick, Freeman, Salas, & Riedel, 2007; Cohen, Salas, & Riedel, 2002; Gambrill, 2006; Mason & Mitroff, 1981; Smith, 2003), and the role of "heedful attention," or mindfulness in "high reliability organizations" (Weick & Sutcliff, 2001). The next section discusses accordingly how mindfulness is conceptualized in the present paper.

Mindfulness

Borrowed from Buddhist meditation, mindfulness is being aware of one's internal condition and external situation as fully and as consciously as possible. In this paper mindful awareness is defined as a set of mind that consists of four attributes, a subset of larger list published in an Australian Government Commonwealth Health Notice in 2003:

- Being totally present in the here and now.
- Perceiving things as they are without making more of them in the mind.
- Letting go of wanting things to be a certain way or wishing they were otherwise.
- Paying attention in a relaxed, yet alert manner to what is being experienced.

The fourth attribute, which requires decision makers to be simultaneously ***relaxed yet alert***, highlights the fact that mindful awareness is paradoxical.

Mindful decision making is doubly paradoxical because it requires decision makers, in addition, to be ***nonjudgmental*** ("perceiving things simply as they are") ***yet critical***: "People act heedfully [i.e., mindfully] when they act more or less carefully, ***critically***, [emphasis added, R.L.) consistently, purposefully, attentively, conscientiously, and pertinaciously" (Weick & Roberts, 1993, p. 357).

The tension generated by the additional requirement is somewhat relaxed once we discern that mindful making decision making requires critical reflection primarily for detecting and evaluating underlying assumptions, while alert and nonjudgmental observation is primarily required for scanning the environment on the look out for signs of danger and wake up calls. Expertise coupled with professionalism is another dual requirement characteristic of mindful decision making. Expertise is required for noting subtle and nuanced variations within features of diverse displays, or between features of changing situations, particularly in dynamic environments (Klein & Hoffman, 1993). Professionalism is necessary for its attitude of "doing the job right," without cutting corners, bowing to pressures from interested parties, or prostituting one's professional integrity and standards in any other way (Schwartz, 2001).

Having touched on the role of paradoxical thinking in mindful decision making, I would like to round this subject by noting that we have already encountered it, albeit somewhat veiled, in the observation that both uncertainty and commitment are necessary in real world decision making, and by adding that principle of profound simplicity (which in itself is a paradoxical concept), is also relevant for mindful decision making, owing to a fourth paradoxical aspect of real world decision making: "Although basic principles are all important, God (or the Devil?) is in the details". Because

the burdening decision makers with details may quickly exceed their limited cognitive capacities (Miller, 1956), our principles, i.e., doctrines, standard operating procedures and decision rules, should strive at profound simplicity. Epitomized by Darwin's model of natural selection, (Dennett, 1995), this is the property of being simple and nevertheless capable of accounting or applicable to numerous or complex phenomena and situations.

Finally, moving from individual to group and organizational levels, the norms that facilitate mindful decision making in these settings are identical to the norms that facilitate organizational learning: ***inquiry*** (persisting in investigation until full understanding is achieved), ***integrity*** (collecting and providing information regardless of its implications), ***transparency*** (exposing one's thoughts and actions to others), and ***issue orientation*** (focusing on the relevance of information to the issues regardless of the social standing or rank of the recipient or the source) (Lipshitz, Friedman & Popper, 2006).

Moving from theory to application, mindfulness techniques proved effective for reducing stress and treating depression (Williams, Teasdale, & Segal, 2007) as well as for reducing the risk of accidents in organizations (Weick & Sutcliff, 1999). Based on these findings and the prescriptive implication of the three-mode framework and the SRPD model I propose that ***decision makers are more likely to meet their objectives if they employ mindful decision processes***. ***Consequently, they should be***

(1) critically reflective of their assumptions, and

(2) mindful of the peculiar characteristics of their specific situations and the constraints that these impose on their assumptions, goals, plans, and decisions.

To test this proposition I will examine it in four decision making cases of commanders in the of Israel Defense Force (I.D.F.) in the second Lebanon War. My The first three cases are based on a widely praised and highly credible history of the war (Shelah & Limor, 2007). The fourth case is based on interview that I conducted with retired General Amiram Levin. The first case, of decision making at the platoon-tactical level, "The incident at "reporting point 105," concerns the kidnapping event that triggered the war. The second case, of decision making at the division-operational, level, "Brig. General Gal Hirsch," examines the decision making of the commander in charge of the division responsible for the section where the kidnapping occurred, both in anticipation of this contingency and a large scale confrontation with the Hezbollah, and during the incident itself. The third case, of decision making at the general staff-strategic level, "Leave them to rust," examines discontinuities between the strategy for frustrating the threat posed by Hezbollah's arsenal of rockets that devised by Chief of Staff Moshe Yaalon prior to the war, and subsequent operational plans and the decisions that guide its actual conduct. The fourth and last case "Are you serious or do you come for the sex?" presents a critique of the decision making that guided the efforts to disable the Hezbollah's rocket sites as part of the I.D.F.'s ground campaign. The critique, by a generally admired retired general, is surprisingly consistent with the basic thesis of this paper: The I.D.F. failed, at least in part, because the decision making processes that guided its planning and operations suffered from mindless awareness of the

situation on the ground and uncritical adherence to its plans, assumptions, and paradigms.

The Second Lebanon War

The second Lebanon War lasted 34 days between July 12 and August 14, 2006. This period, in which events repeatedly seemed to elude planners' designs and intentions, partly or largely because calculated risks turned out, in retrospect, to have been risky calculations, can be summarized for present purposes follows:

On July 12 a Hezbollah unit attacks an I.D.F. patrol and kidnaps two soldiers. Concurrently it launches a diversionary rocket attack on civilian settlements along the entire length of Israel's border with Lebanon. A tank which crosses the border in pursuit of the kidnappers hits a huge roadside charge. The tank is destroyed and its crew of four are killed. Altogether, the I.D.F. suffers 8 dead soldiers in the skirmishes that follow the kidnapping incident.

Contrary to Nasrallah's (Hezbollah's charismatic leader) intentions, the I.D.F.'s Chief of Staff, Israel's government, and Israeli public opinion do not interpret the incident as a Hezbollah attempt to force Israel to bargain and free Hezbollah fighters that it holds as prisoners. Rather, the kidnapping is perceived as a strategic threat, engineered by Hezbollah's patrons in Teheran, to further weaken Israel's deterring power which had recently suffered a blow from a recent successful Hamas kidnapping operation in the Gaza Strip.

After first attempting to interdict the kidnapper's routes back north (see case 1 below), the I.D.F. responds on July13 with an extensive air campaign

throughout southern Lebanon. Hezbollah's long-range rockets (capable of reaching Tel Aviv) are destroyed, and civilian installations suspected of serving as Hezbolla supply routes (e.g., Beirut's International Airport and the Beirut–Damascus highway) are also suffer damages. A general sea and air blockade is imposed later on. As the war escalates, life in northern Israel become intolerable for civilians Although the number of casualties is low, they live in fear, and spend long time periods in inadequate underground shelters. The I.D.F.'s air campaign exacts much costlier human and material losses. Nevertheless, it fails to stop the intermittent firing of medium and short range rockets. On July 23 Chief of Staff Halutz is reluctantly forced to replace the I.D.F.'s air-based strategy by a land-based strategy to which its reserve units, in particular, were ill prepared. The results were recurrent equipment shortages, frequently mixed outcomes of the ground force's clashes with Hezbollah units, and disgruntled soldiers and officers who explicitly criticized the I.D.F.'s high command and the government for taking ill advised decisions, and for sending ill trained and under equipped units to war.

On October 1st the I.D.F. has withdrawn all its forces from Lebanon with two minor exceptions where the exact location of the international border is disputed. Hezbollah has moved its units back and does not maintain overt presence along the Israel-Lebanon Border. In contradiction to UN Security Council Resolution 1701 which ended the war, both the Lebanese government and UNIFIL (the UN's observers force in Lebanon) have explicitly stated that they will not disarm Hezbollah. Halutz and Peretz, Israel's wartime minister of defense and Chief of Staff, respectively, have resigned. Prime Minister Olmert hangs on. The situation of the two I.D.F. soldiers and

the Hezbollah prisoners, on whose behalf they were kidnapped, has not changed.

Case I: The incident at report point 105

A simple unfolding of the events of that day at the platoon level reveals recurring manifestations of individual and group mindlessness:

Time-line	Event	Interpretation
Background	Owing to its topography the direct lines of view to report point 105 are blocked. As a consequence it is decided to cover the area by a VCR positioned on an observation pole. The decision is finally implemented – two weeks after the kidnapping incident.	
Background	The attacked patrol belonged to a veteran infantry regiment on its last day of reserve duty on Israel's border with Lebanon. Since it was well known that the Hezbollah was aware of the I.D.F.'s schedule of unit rotation, such dates were supposed to be sensitive.	
08:00	In a chance encounter the patrol's commander, Ehud Goldwasser, is warned by the commander of the previous night's patrol that "this was a scary night. At least 20 Hezbollah fighters must have passed to our side of the border." Goldwasser takes no notice of the warning.	**Goldwasser's Mindlessness**
Later that day	In clear violation of standard operating procedures, and reflecting the expectant mood of reservists on the last day reserve service, the six soldiers on patrol duty where not briefed about the previous night's patrol's lessons learned; and did not review the relevant combat procedures, spots of danger in the planned route, and the report points	**Group and systemic level mindlessness**

	that allowed the patrol to be followed, and if necessary, reinforced.	
8:55	An observation unit in the nearby Zar-it area identifies a Hezbollah fighter armed with an anti-tank missile taking a firing position. No report is sent with this information is sent back.	**Systemic level Mindlessness**
9:01	The Hezbollah opens fire. Two soldiers are killed (the after action review reveals that their personal weapons were not loaded), two, manage to escape, and two are injured, captured and kidnapped.	**Group level Mindlessness**
9:27	The first message the regiment regarding the incident is received by the division commander. The 26 minutes delay + other factors (see case II) preclude an effective response to the kidnapping.	**Systemic level Mindlessness**

Case II: General Gal Hirsch

Brig. General Gal Hirsch commanded Division 162 which was responsible for the sector in Israel's border containing the Hezbollah front. Talented, ambitious and conscientious, Hirsch worked hard on updating the division's operational plans and generally preparing it towards two contingencies which he considered to be highly likely: A large scale confrontation with the Hezbollah, and a kidnapping attempt identical to the one that eventually did trigger the second Lebanon War. What, then went so tragically wrong for this officer?

Hirsch's operational plans were fundamentally flawed owing to two problems that critical evaluation would have revealed: (a) They were based on irrelevant assumptions; and (b) they unfeasible they were ill understood by lower ranks. Hirsh infused his plans with concepts and terminology imbibed from an "advanced" operational doctrine adopted by the I.D.F. in 2005. The doctrine, which remained controversial, used terminology that confused many commanders and staff officers, particularly in the veteran reserve units, to whom it sounded arcane. For example, Hirsch's contingency plan for a large scale confrontation with the Hezbollah was designed to achieve a "shock and awe effect" by conducting a fast "swarm infiltration" deep into Hezbollah controlled areas. Both concepts were borrowed from the operational doctrine of the US Army. Unfortunately, applying them uncritically to the I.D.F., Hirsch failed to notice that they suffered from three glaring limitations:

1. ***It is extremely difficult to gauge whether an abstract effect such as "shock and awe," has in fact been achieved, particularly when the***

effect is supposed to operate on the enemy's mind and is, therefore, not directly observable .

2. ***Novel and arcane sounding concepts, such as "swarm infiltration," are likely to be ill understood and hence ridiculed and rejected by those who are "not in the know***."

3. "***Shock and awe assumes a war between regular armies of which one is technologically more advanced than the other (e.g., operation Iraq Freedom). This was not the case in the Second Lebanon War. The Hezbollah, like all guerrilla organizations, immersed its fighters rocket launchers, and infrastructure within the civilian population. Under these conditions, achieving "shock and awe effects" through massive deployment of force is likely to incur heavy costs in civilian casualties and damaged property. These are neither practical nor conceivable in small states and open democratic societies.***

Moving to Hirsch's decision making during the incident, we find, once again, that Hirch failed to reflect critically on his assumptions coupled, this time, with his mindlessness awareness of the actual situation on the ground:

- Perceiving kidnapping attempts as the Hezbollah's principal threat in his sector, Hirsch ordered his forces to deploy "30% in the front and 70% in the back." He intended the forces to stay away from the border fence in high ground areas, where they could safely concentrate on intelligence gathering. After-action reviews conducted after the war revealed that on the grounds his order was interpreted to mean "devote 30% of the time to operations and 70% to rest."

- The standard operating procedure prepared by Hirsch in case of a suspected border crossing, followed a similar logic. It ordered the deployment of units away from the fence in areas that dominate the suspected crossing point, thereby prudently staying away from the danger of capture close to the fence. Again, while Hirsch was anticipating and preparing to forestall kidnapping attempts that may occur with no advance Intelligence warning, the reservists who held the sector when the incident occurred understood from their brigade commander, that such event was impossible. This gross breach of military doctrine was, provides, in addition to another manifestation of systemic (divisional) and individual (Hirsch's lack of awareness) mindlessness, an additional explanation for mindless decision making analyzed in case 1.

- Hirsch also prepared a standard operating procedure for the type of kidnapping attempt that started war. The procedure, which included a series of actions intended to isolate the incident zone and to interdict the kidnappers' routes back to their base, proved effective when several kidnapping attempts were thwarted prior to the one that succeeded on July 12. The procedure, however, assumed an advance Intelligence warning and certain deployment of forces, particularly artillery units. None of these were satisfied on July 12. In their absence Hirsch's faith in the procedure and his order to enact it as is without taking correcting measures were unwarranted. The attack helicopters that scrambled intercept the kidnappers failed to locate them absent precise intelligence on their location, and with only few batteries deployed, the artillery fire that they opened to interdict the routes north was too sparse to have any effect.

Case III: "Leave them to rust."

The threat posed by the immense arsenal of short, medium and long range Hezbollah rockets deployed across its northern border, preoccupied Israel's strategists for a long time. At the same time, every effort was made to commit every scarce resource to the occupied territories, where demand increased exponentially since the outbreak of the second Palestinian Intifada (uprising). Hovering above was the politicians perennial reluctance to raise taxes (which would have slowed down steadily increasing standard of living), or divert available funds from badly required civil services to badly required security needs.

One consequence of the draining of the I.D.F.'s resources by the protracted conflict in the territories, was that its combat units virtually stopped training. Prior to the second Intifada the basic schedule of these units was "17-17:" 17 weeks spent in Lebanon or the territories, and 17 weeks in training. Following that date regular army units, including elite commando units, received, at most, two weeks of training per year. Worse yet, the experience that they presumably gained in fighting poorly trained Palestinian fighters in the territories proved inapplicable – and sometimes dysfunctional – in the large scale confrontation with the much better trained and, better equipped, Hezbollah units in Lebanon. Furthermore, most reserve units did not gain even that experience, as expediency dictated keeping them away from the politically sensitive territories.

The strategic dilemma between Hezbollah and the territories dictated the restraint with which both Prime Ministers' Barak and Sharon consistently responded to Hezbollah's provocations. Around 2001 the I.D.F.'s Chief of Staff, Lt. General Moshe "Bogi" Yaalon devised a strategy of "containment" that was specifically designed to deal with the dilemma and its associated

constraints in resources and actions. The rationale of the strategy can be summarized as follows:

1. Based on lessons learned in a war game conducted by the I.D.F. GS early in 2001, it will be extremely difficult to neutralize the Hezbollah's short and medium range rockets.
2. There is no point in provoking the Hezbollah to employ its immense arsenal, which, left to rest on its shelves, will simply rust.
3. Hence, response to every Hezbollah action should be forceful but measured, taking care not to ignite the entire front.
4. Applying Liddel Hart's (2003) indirect strategy, Israel should target its response to the real "shareholder" – Syria.

This policy had actually been enacted as of early 2001, when, following a Hezbolla attack, Israel destroyed a Syrian Radar installation in Lebanon.

The consequences of the strategy were obvious – and evident. High ranking officers repeatedly warned in successive General Staff strategic discussions of the deteriorating state of operational preparedness of its combat units.

The I.D.F. had increasingly relied on its Air Force, whose budget was virtually untouched, in both its ground operations against the Palestinians and its operations and plans for Lebanon. As this seemed to keep ground units out large scale confrontation in Lebanon their deteriorating operational preparedness of the combat units were a warranted calculated risk. Operational programs, however, still included ground operations that required the mobilization of reserve units. Admittedly, these units were to receive two days of training in order to compensate for their deficient

preparedness. Sadly, when events disconfirmed Halutz's air-based strategy, forcing him to switch to a ground-based strategy, this provision was also revealed to have been more a product of hope than of sound testing and reasoning.

According to a well known adage, "Man plans and God laughs." A less fatalistic – and more useful – interpretation of this case would point out the errors of mindless awareness and uncritical reasoning committed, first by Gen Yaalon and the officers who planned the mobilization of reserve ground units, and then by Gen. Halutz, (both when he let himself and the government believe that an air-based strategy will be adequate, and when he assumed and assured the government that the I.D.F. was prepared to switch to a ground-based strategy. Remember that on paper units were supposed to have undergone a two-days refresher training prior to receiving their marching orders. We can begin to fathom the extent to which this plan had been founded on untested assumptions from what one of my Ph.D. students heard about the first days of the war, in her interview of a regular army brigade commander, as part of her dissertation on "the rhetoric and practice of learning from experience".

The brigade was sent northward piecemeal, with its last regiment arriving only three weeks after the outbreak of hostilities. The training facility to which the soldiers were sent for their refresher course was designed for fighting in open-fields. The brigade, however, ended up fighting mostly in densely populated urban areas. These two examples just represent the tip of the iceberg. Otherwise how do you explain the following quote from the commander's report of an after-action review that was conducted by a veteran retired general "…the question was why the tanks were hit by

missiles at that point and then I realized that there is a SOP for this [particularly complex] maneuver of one force moving through another that explicitly spells out a series of operations of who requests authorization and who grants it; however, since no one knew about it, it was not executed."

Years of engaging small irregular forces in the territories produced I.D.F. officers who are ignorant of some of the basic rules of their trade. A two-days refresher course – to be administered in the perennially chaotic environment of a pre-war period – is more of a fig leaf than a sign that the problem has been recognized and given serious consideration. Ironically, in the final analysis it was Yaalon's own combat units, rather then the Hezbollah's rockets, that his strategy left to rust.

Case IV: Are you serious or do you come for the sex?

Retired major general Amiram Levin was a past commanding officer of the I.D.F.'s northern command. Contrary to his diminutive figure, Levin enjoyed an almost legendary status among the I.D.F.s officer corps. Thus, when as a troubled civilian, he decided to find out why the ground campaign was failing to stop the barrage of Hezbollah rockets, Hirsch's colleague, Brigadier Gen. Erez Zuckerman, welcomed him to his Division.

"They were poring bombs and artillery fire" says Levin, "as if there was no tomorrow. In fact, during this war they used more bombs and artillery than during the [1973] Yom Kippur War, in which the I.D.F. engaged the Egyptian and Syrian regular Armies, and on what? on suspected areas marked on their maps. I went to the Fire Center (where aerial and artillery support activities are coordinated), assessed the situation for 45 minutes and concluded that they were badly off mark. I went to Zuckerman, received his permission, and met with the staff of the Center. ' You guys,' I told them,

don't even know on what you are wasting your fire. You claim to have no Intelligence. Let's then proceed on the basis of a simple Pareto analysis. If we forego small villages and kibbutzim with 100-400 inhabitants, we are left with 4 large cities and towns. I will be surprised if the Hezbollah targets them from more than 3 or 4 sites, which will account for roughly 80% of the rockets landing in Israel.' They checked, and came up with 4 sites. 'Now,' I said, 'since Kiryat Shmona [a badly hit town on the Lebanon border] is of greatest concern, your first target should be the site in which your action is likely to be most effective.'

Turning to examine the ordnance that they were firing at the Hezbollah. I discovered that the Air Force used only [expensive] smart bombs, which left a huge surplus of "dumb" bombs. This made absolutely no sense. It turned out that the Air Force would not bomb unless the target could be marked for precision bombing. That was a misapplication of an SOP originally devised to disable heavily fortified stationary Syrian positions. Now it was used to disable Hezbollah launching sites from which two guerrilla fighters fired Katyusha rockets, disregarding the fact that by the time the bombs hit the ground, the fighters were long gone only to return and shoot again.....

Examining aerial photographs I discovered that the launching sites were typically small sized, about 100 X 300 square meters, and that they were operating on a more or less fixed, and known schedules. It was amazing. [Contrary to their claim], the people at the Fire Center possessed every [required] datum.

Based on this analysis, I proposed that an hour before the Hezbollah's scheduled rocket attack, four I.D.F. fighter bombers should carpet-bomb the launching site with dumb bombs. Although their effectiveness is known to

be 10%, the psychological effect is horrendous, as we know from on an incident in which convoys was bombed by mistake during the 1982 Lebanon War. Then, 15 minutes before the schedule attack, a complete artillery group should open with every type of ordnance that it has in its ordnance – T.N.T, Phosphor, and smoke and delayed action ordnance. And now repeat the exercise four times per day. No fighting unit in the universe can withstand this inferno.

Working systematically, disabling one site and then moving to the next, they could have solved the problem of the Hezbollah rockets in four days. I went from one General to another, they all said that I was right, meetings and video-conferences were held -- and nothing happened. It was beyond belief. All they really had to do was to notice that (1) our civilian population is under fire and (2) we fail to stop it."

At this point you are probably wondering about the connection between the case and its title. The title comes from the following anecdote which Levin used to convey his lessons from this experience:

"A Wall Street investment banker decided to supplement the excitements of the derivatives market by travelling to Kodiak Island to hunt a big Grizzly. After purchasing a large-caliber "bear-stopper" rifle, he set out to the wild, and when an immense male ambled between his gun sights, took careful aim, and hit its skull with a loud thud. To his amazement, the bear just shook its head, and stormed the banker's hiding spot, catching the hapless hunter-turned prey between its huge paws in no time at all.

'Well Mac,' said the bear to the even more surprised banker, 'I give you two options. Either we have sex or you are history. What's your choice?'

That was no problem for an investment banker specializing in derivatives. Figuring that whereas death is final there is life after sex, the banker had the experience of joyless sex with a male bear. Humiliated and furious, the vengeful banker flew back to the city, bought an even larger caliber bear stopper, returned to the island post haste, and – to cut a sad story short – found himself, not once, but twice more, peeing at the bear's head from real close -- that is -- from between its paws. On the third time, the bear eyed him quizzically and said: 'I don't get it: are you serious, or do you come for the sex?'""

The moral of Levin's story, which also summarizes the lessons of the fifth case, is packed into the term "being serious." In my opinion, unpacking the term reveals : four components: "Be *mindful* (e.g., of the effectiveness or ineffectiveness the methods that you choose to achieve your objectives) and *critical* (e.g., of their underlying assumptions); use *profound simplicity* and *common sense* as guiding principles when no theory or doctrine are available; and the principles of *evidence-based management*" wherever these hold. While I cannot vouch that Levin would agree with this interpretation, his actions -- as I will shortly show – provide their excellent demonstration. This is not surprising. After all, the concepts on which the careers – and occasional fame – of some outstanding past social scientists were built by listening to accomplished and thoughtful practitioners, and carefully observing how they practiced their skills.

Mindful awareness: The Fire Center continued to pour ineffective fire, blissfully ignoring, or as if blissfully unaware of their poor output. Their MO (mode of operation) can be characterized as "more of the same" (Watzlawick,

Weakland, & Fisch, 1974). In contrast, Levin's point of departure is the plain fact that the adopted solution simply does not deliver.

Critical evaluation of assumptions: The procedure which the Fire Center used assumes a heavily fortified stationary target. Knowing this, Levin immediately realized its inappropriate application to the Hezbollah movable targets. Ignorant, I suspect, of the historical pedigree of the procedure which they were using, and following procedures unthinkingly, the Fire Center staff failed to recognize its inappropriateness altogether. This example highlights the contribution of expertise to mindful awareness in non-therapeutic settings.

Common sense & simplicity: Basically, Levin's MO amounts to common sense. The basic rule is: "Define your objective, find or design means (i.e. solution) to achieve it, and if one solution does not work, try another." To this we can add some auxiliary rules, such as "stay within your means," or, "use whatever, or everything that you've got." Now, even though this may seem simple or simplistic, I think it's actually quite deep, perhaps even profound, because one of the best kept secrets about common sense is that it is not at all common. And the corollary to this secret is that the best, or at least the most useful social science theories are those that make (common) sense. These are the theories to which Lewin referred in his famous dictum "nothing is more practical than a good theory," and to which Mintzberg (1982) refers in the title of his paper "If you are not serving Bill and Barbara, then you are not serving leadership," in which calls for more useful theories of leadership.

In other parts of my interview with Levin he is explicit on the importance of simplicity that is implicit in his reasoning and action in the fourth case. "The

strong tendency to formalize procedures in the I.D.F. drives away straightforward reasoning and people's ability to separate the wheat from the chaff. As a consequence, instead of having a simple, logically sound basic procedure that is applicable, with proper adjustments, to myriad situations, we have a multitude of procedures that are hardly applicable in real situations.... On the one hand, the emphasis on procedures pushes people away from the real issues to filling check lists; at the same time, owing to their number, complexity, and impracticality, nobody really reads them. Catch 22.... In my opinion, there are no fundamental differences between process of situation assessment at the Division, Corps, Command, and GHQ levels. Whatever differences that do exist lie in the perspective from which the commander views or applies the same set of basic principles and rules at each level. In my days in the northern command we used the same simple procedure that I had used as a division commander which I have originally learned and adapted from the procedure for platoon commanders that I've learned in officer's school. In contrast, the I.D.F.'s current procedure is not only inherently intricate, its complex terminology makes things worse. In place of the simple traditional terms 'objectives', and means ('tasks', and 'available forces') [which can be defined objectively], now we have 'resources', 'constraints', and 'effects' [which are entirely open to interpretation]. They were all imported from the business world, to be used by officers who don't really understand them. The only thing that I added in my procedure, based on common sense, was a test phase, in which the commander tests, at the end of the process, that the plan that resulted from several iterations and the deliberations of different groups of people was compatible with your intentions.

An important idea that is implicit in Levin's prescription for a simple but pliable basic core procedure is training decision makers to adapt the core procedure to their changing situations. Requiring sound grasp of the procedure's essential features, on the one hand, and astute analysis of the situation's specific requirements, on the other hand, this ability which Levin clearly had and the Center's staff just as clearly lacked, can be observed in exemplary cases of organizational consultation, such as Emery's adaptation of the socio-technical systems model, conceived and designed for production systems, to the analysis and design of maximum security prisons (Emery, 1970), or in Weisbord's and Jannof's (2003) adaptation of the Future Search method, originally designed for long range planning, to organizational re-design.

Evidence-based management: Evidence based management (EBM, Pfeffer & Sutton, 2006) can be interpreted either as basing managerial decisions on the best available relevant scientific knowledge, or, as simulating scientific practice under the assumption that "using better, deeper logic and employing facts to the extent possible permits [decision makers] do their jobs better" (Peffer & Sutton, 2006, p. 13.) Levin's MO is clearly consistent with the latter interpretation. In contrast, the eagerness in which the I.D.F. imported uncritically and ill advisedly some business methods and concepts is entirely consistent with one of the dysfunctional practices that EBM is designed to correct: The glorification and adoption of "new" ideas, particularly if they are in vogue, or advocated by a charismatic popular guru.

Finally, the fourth case is also a throw-back to the third case, "leave to them to rust." Whether Levin's solution would have worked is a moot question. It is also of no importance, given that the quality of single decisions made

under uncertainty should not be judged by their outcome. (Lipshitz, 1995). What is important is that the I.D.F.'s high command had known – or should have known – that the tactics which he criticized were ineffective, as a large scale war game conducted before war had clearly shown. That was probably one of the reasons why Lt, Gen. Halutz was so reluctant to adopt a ground-based strategy. Nevertheless, the operational plans included a significant ground element that, in turn, relied on these manifestly ineffective tactics instead of looking for feasible potentially effective ground alternatives (e.g., Levin's solution). A starker manifestation of mindless awareness and uncritical reasoning is hard to imagine.

Discussion

The first three cases analyzed in this paper confirm the proposition that the I.D.F.'s failure in the second Lebanon war can be partly attributed to commanders' mindless and insufficiently critical decision making processes at the individual, group and organizational, or the platoon/tactical, division/operational and GHQ/strategic levels during its planning and opening stages. The fourth case shows that the proposition also holds for the decision processes that guided operations in its following phases.

At the outset of my Discussion I wish to substantiate the claim that this proposition and the associated findings and lessons from the four cases, are generalizable to decision making in general, and to the policies that guide mainstream decision research in particular. The basic similarity between the prescriptive ideas developed in the present paper and EBM, and the suitability of the latter framework for the analysis of the present cases, support proposition's generalizability to the business world. And although a pure conjecture on my part at the present point, I am willing to bet my wife's

last dollar that analysis of the decision making that led to the US' unhappy entanglement in Iraq, would reveal similar, if not precisely identical errors of mindlessness and uncritical reasoning.

This leads the discussion to the applicability of the proposition to the conduct of decision research. Decision researchers who stepped out of the lab consistently noticed that real world decisions were rarely made on the basis of concurrent choice. Instead, they are based on processes best captured by the matching mode (Alexander, 1979; Beach & Mitchell, 1987; Carrol, 1980; Cyert & March, 1963; Lindblom, 1959; March & Simon, 1958; Simon, 1955). Even a thoughtful decision analyst (Keeney, 1999) revised, based on 25 years of practice, his understanding of what Decision Analysis is all about: not a tool for solving decision problems but an aid for decision makers to figure out what the decision problem is. Consequently, it is the qualitative structuring of organizing thoughts rather then the quantitative analysis that is most important. Nevertheless, in descriptive JDM and BDT texts this fact was conveniently ignored for years by relegating the observed behavior to a preliminary "screening" stage that presumably paves the road for the "real stuff " that occurs later on at some "choice point. In prescriptive texts the behavior is practically dismissed as "decision making by the sits of the pants." Thankfully, the situation today is not as bad as it used to be, say, in 1988, when one of my ex-teachers, a very prominent JDM researcher informed, his colleagues upon my joining the department, that "what Raanan does is not at all Decision Making."

Owing primarily to Gary Klein's work on recognition primed decision making (Klein, 1998; Klein, Calderwood, & MacGregor, 1989) and the bi-annual international NDM conferences that he initiated (Klein Orasanu, Calderwood,

& Zsambok. 1993; Flin, Salas, Strub, & Martin, 1997; Montgomery, Lipshitz, & Brehmenr, 2000; Salas $ Klein, 2001; Zsambok, & Klein, 1997). NDM in general, and the role of intuition-based recognitional processes and expert knowledge are universally recognized and integrated into JDM models (Kahneman, 2003). While this, happily opens the avenues for fruitful dialogue between the two sub-disciplines (Kahneman & Klein, in preparation), I, can only feel sad given the substantial resources and massive talent and brain power that were constrained by limiting decision research to problems of choice, considering that persons whose decisions really matter can use every bit of relevant advice -- as the four cases that I have analyzed show.

A well known philosopher, Abraham Kaplan, who authored *The conduct of inquiry,* (1964), advised me not to advertise my own work but write, instead, in such a way that "the gems will glint through the slits in the pauper's rags." What Kaplan meant, I guess is that that a well crafted work's merits speak for themselves, assuming, that the reader is at least somewhat of a "maven" (i.e., connoisseur). Years later, however, his student, Don Schon, told me, that "good work is eventually recognized, but it needs to be helped along." Hoping to have done at least a decent level work, and to be on the safe side, I will help my work along on my own, by point out its modest contributions to decision making research:

1. The paper presents an inclusive and basically psychological conceptualization of decision making. It is ***inclusive*** in that although it is radically different from the calculative conceptualization that underlies mainstream decision research, it does not reject it altogether specifying, instead, the conditions under which its

premises are suitable for understanding decision behavior and improving decision quality. It is ***psychological*** in that its guiding metaphor, Man as a sensemaker naturally aligns it psychological theories (i.e., schema theory) in contrast to the gamble metaphor which aligns CDM and JDM/BDT with Economics and Bayesian Statistics.

2. Pursuant to this distinction, the descriptive facet of the model is strongly ***historical*** and ***context*** related: Real world decision cannot be properly understood outside their historical and social contexts. At the individual level, this aspect is captured by the schema component of the SRPD model. At the organizational level, this aspect is captured by requiring analysts to shun narrow focusing on single choice points, looking instead to the evolution or emergence of decision from the interaction between different players, past commitments, and other contextual constraints.

3. By linking decision making to history – and hence, to learning, the present paper corrects, in my opinion, an improper understanding of the term "bounded rationality" which emphasized that human decision makers compensate for their modest information processing capacity by learning from experience, and dealing with problems according to their order of priority.

4. From a prescriptive perspective, the paper places mindful awareness and critical reflection (as distinct from compatibility with Utility and Probability Theories) at the center of prescriptive decision making. This seems more suitable given the nature of the problems that real world decision makers actual face, and the problems associated with

quantitative estimation in many real world situations (Fischhoff, Goitein, & Shapira, 1982; Grandori, 1984; Lipshitz & Strauss, 1997).

5. Finally, the paper proposes that mindful decision making is embedded in sound substantive expertise. This conjecture may be of minor interest to practitioners who advocate specific techniques applying mindful awareness to solve a variety of problems that affect the quality of daily life. My hunch, based on theories of expertise, is that, in professional domains mindful awareness contributes primarily not as a main effect, but as a domain knowledge x awareness interaction effect.

I will conclude with a wonderful story that my good friend Micha Popper tells from his experience as a reservists during the 1973 Yom Kippur War. On one of the furloughs Micha hitched a ride home. sit of a car. Micha, who was dead tired, dozed on the back sit, while the kind civilian who offered to take him kept a running "conversation, "apparently mistaking Micha's constant nodding for agreement or encouragement to proceed. When Micha departed, the driver said: "You are a true conversationalist, I really enjoyed your company." In the same spirit I wish to thank you for your patient listening and to tell you that I truly enjoyed our conversation.

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